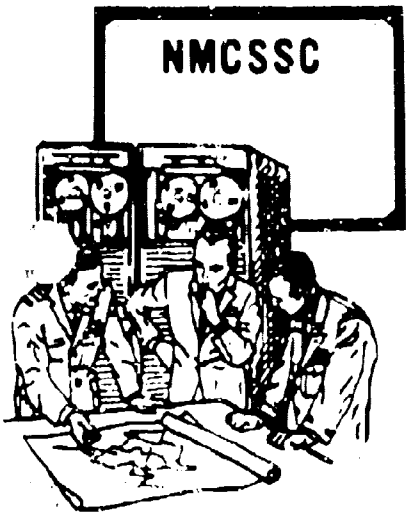
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COMPUTER SYSTEM MANUAL
CSM PSM 9A-67
VOLUME II, PART E
29 FEBRUARY 1972

THE NMCSSC QUICK-REACTING GENERAL WAR GAMING SYSTEM (QUICK)

PLAN GENERATION SUBSYSTEM

Vol II - RD
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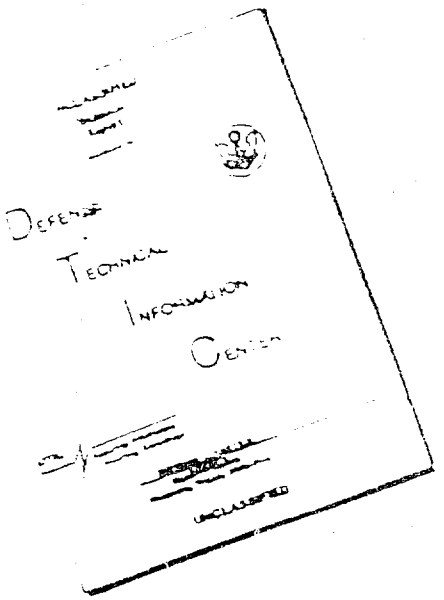
PROGRAMMING SPECIFICATIONS MANUAL

NATIONAL TECHNICAL INFORMATION SERVICE

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13. ABSTRACT

This is one of three volumes describing computer programs of the QUICK-Reacting General War Gaming System (QUICK). These volumes complement other NMCSSC Computer System Manuals on QUICK by discussing the programs from a computer programming point of view. This volume, in six parts, concentrates on the Plan Generation Subsystem of QUICK. Other volumes are available for the Input Subsystem and Simulation Subsystem. Collectively, these volumes provide a good basis for maintenance activity on the QUICK System.

Based upon a suitable data base, and user control parameters, QUICK will generate individual bomber and missile plans suitable for war gaming. The generated plans are of a form suitable for independent review and revision. Subsequently, execution of the planned events can be simulated. Various statistical summaries can be produced to reflect the results of the war game. A variety of force postures and strategies can be accommodated.

QUICK is documented extensively in a set of Computer System Manuals (series 9-67) published by the National Military Command System Support Center (NMCSSC), Defense Communications Agency (DCA), The Pentagon, Washington, DC 20301.

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Computer System Manual Number CSM PSM 9A-67

29 February 1972

THE NMCSSC QUICK-REACTING GENERAL WAR GAMING SYSTEM (QUICK)

Programming Specifications Manual

Volume II - Plan Generation Subsystem

Part I

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CONTENTS

Part A

Chapter		Page
1	Introduction	1
2	Program PLANSET	10
3	Program PREPALOC	94
4	Program ALOC	182
5	Program ALOCOUT	371

Part B

6	Program FOOTPRNT	453
7	Program POSTALOC	606
8	Program PLNTPLAN	780
9	Program EVALALOC	982
10	Program INTRFACE	1036
11	Program TABLE	1084

Part C

Program	PLANSET	1119
Program	PREPALOC	1253

Part D

Program	ALOC	1415
Program	ALOCOUT	1720

Part E

Program/Subroutine	Page
ACKNOWLEDGMENT	ii
ABSTRACT	vii
FOOTPRNT	1853
ADDRV	1881
ASSIGN	1889
BOOSTIN	1894
BOOSTOUT	1906
CHKSEQ	1909
CRSTODWN	1914
EVAL	1919
FLYDIST	1929
FOOTEST	1932
FUELSAVE	1944
GOPRINT	1948
HITIT	1967
IMPROVE	1972
INITASGN	1980
INPOT	1985
LOADREAD	1992
LREORDER	1995
NEWCOOR	1998
OPTBOOST	2004
PRINTSET	2016
PRNTREQ	2020
RDCARDF	2023
REMOVE	2033
SETDATA	2038
TABLINPT	2045
TEST	2056
TRANSFER	2061

Program/Subroutine	Page
FOOTPRNT (cont.)	
UPTODOWN	2066
VALF	2070
POSTALOC	2075
CENTROID	2088
CHGPLAN	2091
CORRPARM	2099
DIFF	2104
DUMPSRT	2111
EVALB	2116
EVALOA	2127
EVALOB	2136
FLTPLAN	2146
FLTROUTE	2165
GENRAID	2173
GETGROUP	2183
GETSORT	2197
INITOPT	2209
INPOTGT	2218
MISASGN	2224
NEXTFLT	2237
NOCORR	2242
OPTRAID	2246
OUTPOTGT	2251
OUTSRT	2255
POSIT	2267
PRERAID	2271
PRINTIT	2279
PRNTF	2302
REFABORT	2314
SETFLAG	2322
SORTOPT	2326
TGTASGN	2337

Program/Subroutine	Page
DISTRIBUTION	2345
DD Form 1473	2346
Part F	
Program PLNTPLAN	2347
Program EVALALOC	2597
Program INTRFACE	2701
Program TABLE	2782

ABSTRACT

The computerized Quick Reacting General War Gaming System (QUICK) will accept input data, automatically generate global strategic nuclear war plans, simulate the planned events, and provide statistical output summaries. QUICK has been programmed in FORTRAN for use on the NMCSSC CDC 3800 computer system.

The QUICK Programming Specifications Manual (PSM) consists of three volumes: Volume I, Data Input Subsystem; Volume II, Plan Generation Subsystem; Volume III, Simulation and Data Output Subsystems. The Programming Specifications Manual complements the other QUICK Computer System Manuals to facilitate maintenance of the war gaming system. This volume, Volume II, provides the programmer/analyst with a technical description of the purpose, functions, general procedures, and programming techniques applicable to the programs of the Plan Generation Subsystem. This volume is in six parts: Parts A and B provide a description of the programs which make up the subsystem; Part C through F contain the associated program listings. Companion documents are:

1. GENERAL DESCRIPTION
   Computer System Manual CSM GD 9A-67
   A nontechnical description for senior management personnel

2. ANALYTICAL MANUAL
   Computer System Manual CSM AM 9A-67 (three volumes)
   Provides a description of the system methodology for the nonprogrammer analysts

3. USER'S MANUAL
   Computer System Manual CSM UM 9-67
   Provides detailed instructions for applications of the system

4. OPERATOR'S MANUAL
   Computer System Manual CSM OM 9A-67
   Provides instructions and procedures for the computer operators

```
      PROGRAM FOOTPRNT                                                  1000
CSUBR      FOOTPRNT  1JUN71    ********************************************  1000
C                                                                       2000
CUSE       MASTER    1JUN71    ********************************************  3000
      COMMON /MASTER/ IMDATE, IDENTNO, ISIDE, NRTPT, NCORRX, NOPEN,     1000
     1NRECOVER, NREF, NBNDRY, NREG, NTYPE, NGROUP, NTOTBAS, NPAYLOAD,   2000
     2NASMTYPE, NWHDTYPE, NTANKBAS, NCOMPLEX, NCLASS, NALERT, NTGTS,    3000
     3NCORTYPE, NCNTRY                                                  4000
CEND       MASTER    ********************************************************  3000
C                                                                       4000
C     USED BY FOOTPRNT, GOPRINT                                         5000
C                                                                       6000
C                                                                       7000
C     IMDATE    DATE OF RUN                                             8000
C     IDENTNO   RUN IDENTIFICATION NUMBER                               9000
C     ISIDE     SIDE                                                    10000
C     NRTPT     NUMBER OF ROUTE POINTS                                  11000
C     NCORRX    NUMBER OF CORRIDORS                                     12000
C     NOPEN     NUMBER OF PENETRATION POINTS                            13000
C     NRECOVER  NUMBER OF RECOVERY POINTS                               14000
C     NREF      NUMBER OF REFUELING AREAS                               15000
C     NBNDRY    NUMBER OF BOUNDARIES                                    16000
C     NREG      NUMBER OF REGIONS                                       17000
C     NTYPE     NUMBER OF WEAPON TYPES                                  18000
C     NGROUP    NUMBER OF WEAPON GROUPS                                 19000
C     NTOTBAS   TOTAL NUMBER OF WEAPON BASES                            20000
C     NPAYLOAD  NUMBER OF WEAPON PAYLOADS                               21000
C     NASMTYPE  NUMBER OF TYPES OF AIR TO SURFACE MISSILES              22000
C     NWHDTYPE  NUMBER OF TYPES OF WARHEADS                             23000
C     NTANKBAS  NUMBER OF BASES FOR TANKERS                             24000
C     NCOMPLEX  NUMBER OF COMPLEX TARGETS                               25000
C     NCLASS    NUMBER OF WEAPON CLASSES                                26000
C     NALERT    NUMBER OF ALERT STATUSES                                27000
C     NTGTS     NUMBER OF TARGETS                                       28000
C     NCORTYPE  NUMBER OF TYPES OF CORRIDORS                            29000
C                                                                       30000
C     NCNTRY NUMBER OF COUNTRY CODE                                     31000
C     ********************************************************************  32000
C                                                                       33000
CUSE       TAPES     1JUN71    ********************************************  34000
C                                                                       1000
      COMMON/FILES/ TGTFILE(2), BASFILE(2), MSLTIME(2), ALOCTAR(2),     2000
     1     TMPALOC(2), ALOCGRP(2), STRKFIL(2), EVENTAPE, PLANTAPE       3000
C                                                                       4000
      TYPE INTEGER TGTFILE, BASFILE, MSLTIME, ALOCTAR, TMPALOC,         5000
     1     ALOCGRP, STRKFIL, EVENTAPE, PLANTAPE                         6000
C                                                                       7000
      COMMON/TSCRATCH/ ISCR, ITARL                                      8000
C                                                                       9000
CEND       TAPES     ********************************************************  34000
C                                                                       35000
C     USED BY FOOTPRNT, NEWCOOR                                         36000
C                                                                       37000
      DATA (ISCR = 5), (ITARL = 6)                                      38000
C                                                                       39000
C     BASFIL  DATA TAPE FROM PRECOMP                                    40000
```

```
C     TMPALOC  OUTPUT FROM ALOCOUT TO THIS PROGRAM                          41000
C     ISCR     SCRATCH FILE USED BY THIS PROGRAM                            42000
C     ALOCGRP  OUTPUT FROM THIS PROGRAM TO POSTALOC                         43000
C                                                                           44000
C     IN ARRAYS, FIRST WORD IS LOGICAL UNIT NUMBER,SECOND WORD IS           45000
C     MAXIMUM FILE LENGTH                                                   46000
C                                                                           47000
C                                                                           48000
C     ********************************************************************* 49000
C                                                                           50000
CUSE      WPNGRPX   1JUN71    ************************************************ 51000
      COMMON /WPNGRPX/ NWPNS(200), NVEHGRP(200), WLAT(200), WLONG(200),     1000
     1                 ITYPE(200), IPAY(200), ICLASS(80), ISIMTYPE(80),     2000
     2                 IMIRV(40)                                            3000
CEND      WPNGRPX   ************************************************************ 51000
C                                                                           52000
C     USED BY FOOTPRNT, GOPRINT, NEWCOOR                                    53000
C                                                                           54000
C     NWPNS      NUMBER OF WEAPONS IN THE GROUP                             55000
C     NVEHGRP    NUMBER OF VEHICLES IN GROUP                                56000
C     WLAT       LATITUDE OF GROUP CENTROID                                 57000
C     WLONG      LONGITUDE OF GROUP CENTROID                                58000
C     ITYPE      WEAPON TYPE IN GROUP                                       59000
C     IPAY       PAYLOAD INDEX FOR GROUP                                    60000
C     ICLASS     CLASS NUMBER FOR TYPE                                      61000
C     ISIMTYPE   HOLLERITH NAME FOR TYPE                                    62000
C     IMIRV      POINTER TO FOOTPRINT PARAMETER TABLE FOR TYPE              63000
C                                                                           64000
C     ********************************************************************* 65000
C                                                                           66000
CUSE      STRKSUM   1JUN71    ************************************************ 67000
C                                                                           1000
      COMMON/STRKSUM/ KGROUP, NTSTRK, NCORR, NSTRK(30), LSTRKSUM            2000
C                                                                           3000
CEND      STRKSUM   ************************************************************ 67000
C                                                                           68000
C     USED BY FOOTPRNT, GOPRINT, OPTBOOST, PRINTSET                         69000
C                                                                           70000
      DATA (LSTRKSUM = 33)                                                  71000
C                                                                           72000
C     KGROUP     GROUP NUMBER                                               73000
C     NTSTRK     TOTAL NUMBER OF STRIKES FOR THIS GROUP                     74000
C     NCORR      NUMBER OF CORRIDORS ASSIGNED TO THIS GROUP                 75000
C     NSTRK      NUMBER OF STRIKES ASSIGNED TO EACH CORRIDOR FOR GROUP      76000
C     LSTRKSUM   LENGTH OF STRKSUM BLOCK                                    77000
C                                                                           78000
C     ********************************************************************* 79000
C                                                                           80000
CUSE      RAIDATA   1JUN71    ************************************************ 81000
C                                                                           1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)         2000
     1           , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)      3000
     2                 , IRAID, NTMAX, LLFIX(1500)                         4000
C                                                                           5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(16)     6000
C                                                                           7000
```

```
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK-      A080
     1DLONG), (IDUM, INDEX)                                                 A090
C                                                                           A100
      TYPE LOGICAL LLFIX                                                    A110
C                                                                           A120
      COMMON/A/ DESIG(1500), TASK(1500), CNTRYLOC(1500), FLAG(1500)         A130
C                                                                           A140
CEND      RAIDATA  ***************************************************     A150
C                                                                           A200
C     USED BY FOOTPRNT, ASSIGN, BOOSTIN, EVAL, GOPRINT, INITASGN,          A300
C           INPOT, NEWCOOR, OPTBOOST, REMOVE, SKIP, TABLIRPT, BDCARDF       A400
C                                                                           A500
      DATA (LRAID = 9003), (NTMAX = 1500)                                   A600
C                                                                           A700
C     NT        TOTAL NUMBER OF TARGETS ASSIGNED TO THIS CORRIDOR AND       A800
C               GROUP                                                       A900
C     JGROUP    GROUP NUMBER                                              90000
C     JCORR     CORRIDOR NUMBER                                           91000
C     INDEX     TARGET INDEX NUMBER                                       92000
C     TGTLAT    TARGET LATITUDE                                           93000
C     TGTLONG   TARGET LONGITUDE                                          94000
C     RVAL      RELATIVE VALUE OF THIS TARGET                             95000
C     DLAT      DGZ OFFSET LATITUDE                                       96000
C     DLONG     DGZ OFFSET LONGITUDE                                      97000
C     LRAID     LENGTH OF RAIDATA BLOCK                                   98000
C     NTMAX     MAXIMUM NUMBER OF TARGET ASSIGNMENTS FOR ONE GROUP        99000
C     LLFIX     FIXED ASSIGNMENT INDICATOR                               100000
C                                                                        101000
C     R         DISTANCE FROM GROUP CENTROID TO TARGET                 102000
C     THETA     LAUNCH AZIMUTH OF WEAPON FROM CENTROID TO TARGET       103000
C     IFOR      FORWARD POINTER FOR BOOSTER ASSIGNMENTS                104000
C     IBACK     BACKWARD POINTER FOR BOOSTER ASSIGNMENTS               105000
C               NOTE - IBACK FOR THE FIRST TARGET ASSIGNED TO BOOSTER  106000
C                      IS SET TO MINUS THE INDEX OF THE TARGET ASSIGNED 107000
C                      TO THIS BOOSTER WITH THE GREATEST AZIMUTH        108000
C                                                                       109000
C                                                                       110000
C     DESIG     TARGET DESIGNATOR CODE                                111000
C     TASK      TARGET TASK-SUBTASK CODE                              112000
C     CNTRYLOC  TARGET COUNTRY LOCATION CODE                          113000
C     FLAG      TARGET FLAG CODE                                      114000
C                                                                     115000
C     ***************************************************************116000
C                                                                     117000
CUSE      CONTROL   (JUNIT)  ****************************************118000
      COMMON /CONTROL/ NV, NARV, NEXTRA, PEXTRA, NPASS, FRACLOOK,        100
     1                 MAXFOOT, DELAGE, PURGE, PN, EXTRAB, NOK           200
     2               ,IGSTART,IGEND                                      300
CEND      CONTROL   ***************************************************118000
C                                                                       119000
C     USED BY FOOTPRNT, BOOSTIN, EVAL, GOPRINT, IMPROVE, INITASGN,     120000
C           INPOT, OPTBOOST, PRINTSET, BDCARDF                          121000
C                                                                       122000
C     NV        NUMBER OF BOOSTERS FOR THE GROUP                      123000
C     NARV      AVERAGE NUMBER OF TARGETS TO BE ASSIGNED TO EACH BOOSTER 124000
C     NEXTRA    NUMBER OF BOOSTERS WITH INITIAL ASSIGNMENTS CONTAINING  125000
```

```
C                    (NARV + 1) REENTRY VEHICLES                          128000
C     PEXTRA     FRACTION OF TOTAL STRIKES THAT ARE EXCESS STRIKES         129000
C                    ASSIGNED BY ALLOCATE                                 130000
C     NPASS      NUMBER OF THE PASS OVER THE BOOSTERS DURING PROCESSING    131000
C     FRACLOOK   FRACTION OF NEXT BOOSTER LOAD TO LOOK AHEAD               132000
C     MAXFOOT    INPUT PARAMETER GOVERNING DEGREE OF EFFORT TO BE          133000
C                EXPENDED IN SUBROUTINE OBTMOST                            134000
C     DELAGE     MULTIPLIER FOR AGE IN POTENTIAL TARGET ARRAYS             135000
C     PURGE      FRACTION OF TARGETS IN POTENTIAL TARGET ARRAYS TO BE      136000
C                REMOVED IN BOOSTIN                                        137000
C     PX         FRACTION OF DISTANCE FROM MINLOAD TO NARV THAT            138000
C                DETERMINES INTERCEPT OF VALUE LINE FOR FUNCTION VALF      139000
C     EXTRAB     NUMBER OF EXTRA BOOSTER LOADS ADDED TO THE NUMBER OF      140000
C                WEAPONS IN PREALLOC                                       141000
C     NOK        ACTUAL NUMBER OF RVS FOR THIS GROUP IN DATA BASE          142000
C                NOTE - NT = NOK * (1 + PEXTRA + EXTRAB / NV)              143000
C     IGSTART    FIRST GROUP TO BE PROCESSED                               144000
C     IGEND      LAST GROUP TO BE PROCESSED                                145000
C                                                                          146000
C     ***************************************************************      147000
C                                                                          148000
CUSE      DSQUARE    1JUNT1    ***************************************     149000
      COMMON /DSQUARE/ CD2, UD2, DEL2, DZ2, VMIN                            1000
CEND      DSQUARE    ***************************************************  150000
C                                                                          151000
C     USED BY FOOTPRNT, BOOSTIN, EVAL, FLYDIST                             152000
C                                                                          153000
C     CD2        SQUARE OF CROSSDWN                                        154000
C     UD2        SQUARE OF UPDOWN                                          155000
C     DEL2       SQUARE OF DELMIN                                          156000
C     DZ2        SQUARE OF DZ                                              157000
C     VMIN       = VALF(DELMIN/07, TNZ)                                    158000
C                                                                          159000
C     ***************************************************************      160000
C                                                                          161000
CUSE      EARTH      1JUNT1    ***************************************     162000
      COMMON /EARTH/ RADIUS, DEGTORAD, PI, PIDIV2                           1000
CEND      EARTH      ***************************************************  163000
C                                                                          164000
C     USED BY FOOTPRNT, NEWCOOR                                            165000
C                                                                          166000
      DATA (RADIUS = 3437.746771), (DEGTORAD = .0174533292S2),             167000
     1     (PI = 3.141592636), (PIDIV2 = 1.5707963181)                     168000
C                                                                          169000
C     RADIUS     RADIUS OF EARTH IN NAUTICAL MILES                         170000
C     DEGTORAD   CONSTANT TO CONVERT DEGREES TO RADIANS                    171000
C     PI         PI                                                        172000
C     PIDIV2     PI / 2                                                    173000
C                                                                          174000
C     ***************************************************************      175000
C                                                                          176000
CUSE      FOOTIC     1JUNT1    ***************************************     177000
      COMMON /FOOTIO/ MAXRV, ISYS, NTAR, RIN(20), TMIN(20), IFEAS,          1000
     1 DELRSTAT, DELRAFT(20), FUELEFT                                       2000
CEND      FOOTIC     ***************************************************  178000
C                                                                          179000
```

```
C     USED BY FOOTPRNT, RCOSTIN, EVAL, FCOTEST, FUELSAVE, GOPRINT,          175000
C           IMPROVE, OPTBOOST, TEST                                         176000
C                                                                           177000
      DATA (MAXRV = 20)                                                     178000
C                                                                           179000
C     MAXRV      MAXIMUM NUMBER OF RE-ENTRY VEHICLES THAT CAN BE ASSIGNED   180000
C     ISYS       SYSTEM NUMBER                                              181000
C     NTAR       NUMBER OF RE-ENTRY VEHICLES ASSIGNED                       182000
C     RIN        RANGE OF TARGET                                            183000
C     THIN       AZIMUTH OF TARGET                                          184000
C     IFEAS      NUMBER OF TARGETS THAT CAN BE HIT WITH FUEL AVAILABLE      185000
C     DELRSTRT   MAXIMUM ADDITIONAL FLYING DISTANCE ALLOWED IF FIRST        186000
C                TARGET IN FOOTPRINT IS TO BE CHANGED                       187000
C     DELRAFT    MAXIMUM ADDITIONAL FLYING DISTANCE ALLOWED IF NEW          188000
C                TARGET IS TO BE ADDED AFTER THIS TARGET IN FOOTPRINT       189000
C     FUELEFT    FUEL LEFT AFTER COMPLETION OF WEAPON DELIVERIES            190000
C                                                                           191000
C     ********************************************************************* 192000
C                                                                           193000
CUSE       FOOTSAVE  1JUN71     ********************************************* 194000
      COMMON/FOOTSAVE/ IFOTSAVE(20), NWITOLD, VWITOLD, IF2SAVE(20),           1000
     1 N2SAVE                                                                 2000
CEND       FOOTSAVE  ********************************************************* 194000
C                                                                           195000
C     USED BY FOOTPRNT, GOPRINT, OPTBOOST                                   196000
C                                                                           197000
C                                                                           198000
C     IFOTSAVE   POTENT INDEX OF TARGETS IN FIRST FOOTPRINT                 199000
C     NWITOLD    NUMBER OF TARGETS IN FIRST FOOTPRINT                       200000
C     VWITOLD    VALUE OF TARGETS IN FIRST FOOTPRINT                        201000
C     IF2SAVE    POTENT INDEX OF TARGETS IN SECOND FOOTPRINT                202000
C     N2SAVE     NUMBER OF TARGETS IN SECOND FOOTPRINT                      203000
C                                                                           204000
C     ********************************************************************* 205000
C                                                                           206000
CUSE       INDEX     1JUN71     ********************************************* 207000
      COMMON /INDEX/ JINR, JINP, JOUTR, JOUTP, JSAVE(20), NJSAVE,             1000
     1 JSAVOPT                                                                2000
CEND       INDEX     ********************************************************* 207000
C                                                                           208000
C     USED BY FOOTPRNT, RCOSTIN, GOPRINT, INPOT, OPTBOOST                   209000
C                                                                           210000
C                                                                           211000
C     JINR       RADATA INDEX OF TARGET TO BE PUT INTO POTENT ARRAYS         212000
C     JINP       POTENT INDEX OF TARGET TO BE PUT INTO POTENT ARRAYS         213000
C     JOUTR      RADATA INDEX OF TARGET TO BE TAKEN OUT OF POTENT ARRAYS     214000
C     JOUTP      POTENT INDEX OF TARGET TO BE TAKEN OUT OF POTENT ARRAYS     215000
C     JSAVE      POTENT INDEX OF TARGETS BROUGHT IN ON A LOOK-AHEAD          216000
C     NJSAVE     NUMBER OF TARGETS BROUGHT IN ON LOOK-AHEAD                  217000
C     JSAVOPT    ZERO FOR NO LOOK-AHEAD - ONE FOR LOOK-AHEAD                 218000
C                                                                           219000
C     ********************************************************************* 220000
C                                                                           221000
CUSE       LOADATA   1JUN71     ********************************************* 222000
C                                                                             1000
      COMMON /LOADATA/ LOADOPT, NRVACO(1500), NADDED, NTOACO, NONTAR(20)      2000
```

```
     1              , NADDOLD                                                  3000
C                                                                              4000
CEND      LOADATA   ***********************************************************  5000
C                                                                              6000
C     USED BY FOOTPRNT, ADDRV, GOPRINT, OPTRCOST, TEST, RDCARDF                7000
C                                                                              8000
      DATA (NRVADD = 5HADDON, 6HVARIED, 8HMINLOAD)                             9000
C                                                                             10000
C     LOADATA   BOOSTER LOADING OPTION                                        11000
C                  = 0 - FREE LOADINGS                                        12000
C                  = 1 - ADD RVS TO MEET MINLOAD                              13000
C                  = 2 - SPECIFIED VARIABLE LOADINGS                          14000
C                  = 3 - GUARANTEED MINLOAD CONSTRAINT                        15000
C     NRVADD    NUMBER OF EXTRA REENTRY VEHICLES ADDED TO THIS TARGET          16000
C     NADDED    TOTAL NUMBER OF RVS ADDED IN A PASS                            17000
C     NTOADD    NUMBER OF RVS TO BE ADDED TO THE CURRENT FOOTPRINT             18000
C     NONTAR    TOTAL NUMBER OF RVS ON EACH TARGET IN HIT LIST                 19000
C     NADDOLD   NUMBER OF RVS ADDED IN FIRST PASS                              20000
C                                                                              21000
C     ***********************************************************************  22000
C                                                                              23000
CUSE      PARAMETR  1JUN71    ***************************************          24000
      COMMON /PARAMETR/ MAXSYS, IHNAME(40), MINLOAD(40), MAXLOAD(40),          1000
     1  OSPACE(40), THROWMAX(40), MTYPE(40), IDATA(40)                         2000
CEND      PARAMETR  ***********************************************************  3000
C                                                                              4000
C     USED BY FOOTPRNT, FOOTEST, GOPRINT, IMPROVE, OPTRCOST, TARLIMPT          5000
C           TEST                                                               6000
C                                                                              7000
      DATA (MAXSYS = 40), (IHNAME = 40(8HNOT USED))                            8000
C                                                                              9000
C     MAXSYS    MAXIMUM NUMBER OF SYSTEMS ALLOWED IN FOOTPRINT TABLE           10000
C     IHNAME    HOLLERITH NAME OF MIRV SYSTEM                                  11000
C     MINLOAD   MINIMUM ALLOWED NUMBER OF RVS PER BOOSTER                      12000
C     MAXLOAD   MAXIMUM NUMBER OF RVS ALLOWED PER BOOSTER                      13000
C     OSPACE    MINIMUM SPACING BETWEEN CONSECUTIVE DGTS IN A FOOTPRINT        14000
C     THROWMAX  MAXIMUM DISTANCE ONE RV CAN BE CARRIED                         15000
C     MTYPE     FUNCTIONAL FORM DESIGNATOR                                     16000
C     IDATA     INDEX TO FOOTPRINT PARAMETER DATA SET                          17000
C                                                                              18000
C     ***********************************************************************  19000
C                                                                              20000
CUSE      PERFORM   1JUN71    ***************************************          21000
      COMMON /PERFORM/ NASGN, VALASGN, TVAL, NOLD, VALOLD                      1000
CEND      PERFORM   ***********************************************************  2000
C                                                                              3000
C     USED BY FOOTPRNT, ASSIGN, GOPRINT, INITASGN, REMOVE                      4000
C                                                                              5000
C                                                                              6000
C     NASGN     TOTAL NUMBER OF TARGETS ASSIGNED TO BOOSTERS                   7000
C     VALASGN   TOTAL VALUE OF TARGETS ASSIGNED TO BOOSTERS                    8000
C     TVAL      TOTAL VALUE OF ALL TARGETS                                     9000
C     NOLD      NUMBER OF TARGETS ASSIGNED IN FIRST PASS                       10000
C     VALOLD    VALUE OF TARGETS ASSIGNED IN FIRST PASS                        11000
C                                                                              12000
C     ***********************************************************************  13000
```

```
C                                                                       271000
CUSE      POTENT    1JUN71    ********************************************  272000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), TOFLY(20   1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50)    2000
     2, AGE(50)                                                             3000
CEND      POTENT    ********************************************************  272050
C                                                                       273000
C     USED BY FOOTPRNT, ASSIGN, BOOSTIN, BOOSTOUT, CHKSEQ, EVAL,       274000
C             FOOTEST, FUELSAVE, GOPRINT, HITIT, IMPROVE, INITASGN,     275000
C             INPOT, OPTBOOST, TEST                                     276000
C                                                                       277000
      DATA (MAXPOT = 50), (MAXHIT = 20), (AGE = 50(0.0))                278000
C                                                                       279000
C     MAXPOT    MAXIMUM NUMBER OF POTENTIAL TARGETS                     280000
C     MAXHIT    MAXIMUM NUMBER OF TARGETS IN HIT LIST                   281000
C     IPOT      RADATA INDEX OF POTENTIAL TARGET                        282000
C     NHIT      NUMBER OF TARGETS IN HIT LIST                           283000
C     IHIT      POTENT INDEX OF TARGET IN HIT LIST                      284000
C     TOFLY     DISTANCE FROM LAST TARGET IN HIT LIST TO THIS TARGET    285000
C     NMISS     NUMBER OF TARGETS IN MISS LIST                          286000
C     MISS      POTENT INDEX OF TARGET IN MISS LIST                     287000
C     NFREE     NUMBER OF AVAILABLE SPACES IN POTENTIAL TARGET ARRAY    288000
C     IFREE     POTENT INDEX OF AVAILABLE SPACES                        289000
C     NLOST     NUMBER OF #LOST# TARGETS                                1000
CSUBR     FOOTPRNT  7JUN71    ********************************************  26000
C     LOST      RADATA INDEX OF LOST TARGETS                            2000
C     INVERSE   SHOWS POSITION IN HIT OR MISS LIST                      3000
C     AGE       PARAMETER TO MODIFY VALUE ACCORDING TO LENGTH OF TIME   4000
C               THAT TARGET HAS BEEN IN POTENTIAL TARGET ARRAY          5000
C                                                                       6000
C     ********************************************************************  7000
C                                                                       8000
CUSE      RANGE     1JUN71    ********************************************  9000
      COMMON /RANGE/ CROSSDWN, UPDOWN, DELMIN, DEFAULT                  10000
CEND      RANGE     ********************************************************  9000
C                                                                       10000
C     USED BY FOOTPRNT, BOOSTIN, EVAL, FLYDIST, FOOTEST, GOPRINT       11000
C                                                                       12000
      DATA (DEFAULT = 1.0)                                              13000
C                                                                       14000
C     CROSSDWN  RATIO OF DOWNRANGE TO CROSSRANGE DISTANCE               15000
C     UPDOWN    RATIO OF DOWNRANGE TO UPRANGE DISTANCE                  16000
C     DELMIN    MINIMUM SPACING BETWEEN CONSECUTIVE DGZ#S IN A FOOTPRINT 17000
C     DEFAULT   MINIMUM SPACING ALLOWED FOR COMPUTATION                 18000
C                                                                       19000
C     ********************************************************************  20000
C                                                                       21000
CUSE      VALPARM   1JUN71    ********************************************  22000
      COMMON /VALPARM/ DZ, TNZ, SLZ                                     1000
CEND      VALPARM   ********************************************************  22050
C                                                                       23000
C     USED BY FOOTPRNT, BOOSTIN, EVAL, GOPRINT                          24000
C                                                                       25000
C                                                                       26000
C     DZ        SET EQUAL TO MAXIMUM THROW DISTANCE FOR SYSTEM          27000
C     TNZ       INTERCEPT FOR VALUE LINE (DETERMINED BY PN IN /CONTROL/)  28000
```

```
C     SLZ        SLOPE OF VALUE LINE FOR FUNCTION VALF                    29000
C                                                                         30000
C     ************************************************************      31000
C                                                                         32000
CUSE      WPNTGT    1JUN71    ********************************************  33000
      COMMON /WPNTGT/ IPOTGT, JAFT, JTGTD, NUMBOOST                        1000
CEND      WPNTGT    ********************************************************  33000
C                                                                         34000
C     USED BY FOOTPRNT, BOOSTIN, CHKSEQ, FUELSAVE, GOPRINT, HITIT,       35000
C             IMPROVE, INPOT, OPTBOOST, PRINTSET, REMOVE                  36000
C                                                                         37000
C                                                                         38000
C     IPOTGT     POTENT INDEX OF TARGET TO BE ADDED/DELETED TO HIT LIST    39000
C     JAFT       POTENT INDEX OF TARGET AFTER WHICH NEW TARGET IS TO BE    40000
C                ADDED                                                    41000
C     JTGTD      RAIDATA INDEX OF TARGET TO BE REMOVED FROM A BOOSTER      42000
C                ASSIGNMENT                                               43000
C     NUMBOOST   BOOSTER NUMBER CURRENTLY BEING PROCESSED                 44000
C                                                                         45000
C     ************************************************************      46000
C                                                                         47000
CUSE      IEVAL     1JUN71    ********************************************  48000
      COMMON /1/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),           1000
     1 D(50, 50)                                                           2000
CEND      IEVAL     ********************************************************  48000
C                                                                         49000
C     USED BY FOOTPRNT, BOOSTIN, BOOSTOUT, CHKSEQ, EVAL, FLYDIST,        50000
C             FUELSAVE, GOPRINT, HITIT, IMPROVE, OPTBOOST, TEST           51000
C                                                                         52000
C                                                                         53000
C     COMMON /1/ OR /IEVAL/                                               54000
C                                                                         55000
C     VAL        VALUE OF TARGET IF ADDED TO FOOTPRINT                    56000
C     JAFTER     POTENT INDEX OF TARGET PRECEEDING NEW TARGET IN FOOTPRIN  57000
C     VALFIRST   VALUE OF TARGET IF IT IS FIRST TARGET IN FOOTPRINT       58000
C     COSTEFF    INVERSE OF ADDITIONAL FUEL NEEDED TO REACH THIS TARGET   59000
C     D          DISTANCE MATRIX.   D(I,J) DEFINED AS FOLLOWS             60000
C                I .LT. J      SQUARE OF DOWNRANGE DISTANCE FROM I TO J   61000
C                                  (NEGATIVE IF J IS UPRANGE OF I)        62000
C                I .EQ. J      VALUE OF RETAINING THIS TARGET IN POTENT   63000
C                                  ARRAYS AFTER AGE CONSIDERATION         64000
C                I .GT. J      SQUARE OF CROSSRANGE DISTANCE FROM I TO J  65000
C                                                                         66000
C     ************************************************************      67000
C                                                                         68000
CUSE      2STATUS   1JUN71    ********************************************  69000
C                                                                          100
      COMMON/ 2/ MAXBOOST, IBOOST(500), NTR(500)                           200
     1         , ISTATUS(1500), NDEX(1500)                                 300
C                                                                         400
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                         500
C                                                                         600
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(151), NDEXR),(NDEX(201), NDEXT)  700
C                                                                         800
CEND      2STATUS   ********************************************************  69000
C                                                                         70000
```

```
C     USED BY FOOTPRNT, ASSIGN, BOOSTIN, EVAL, GOPRINT, IMPROVE,
C             INITASGN, INPUT, NEWCOOR, OPTBOOST, REMOVE
C
C
C
C     COMMON /2/ OR /2STATUS/
C
C     MAXBOOST  MAXIMUM NUMBER OF BOOSTERS ALLOWED IN ONE GROUP
C     IBOOST    MAIDATA INDEX OF FIRST TARGET ASSIGNED TO BOOSTER
C     NTB       NUMBER OF TARGETS ASSIGNED TO BOOSTER
C     ISTATUS   STATUS OF TARGET,  DEFINED AS FOLLOWS
C                    -2 NOT ASSIGNED TO A BOOSTER AND NOT IN POTENT
C                    -1 IN LOST TARGET ARRAY
C                     0 IN POTENT ARRAY
C                   .GT. 0 NUMBER OF BOOSTER TO WHICH TARGET IS ASSIGNED
C     NDEX      TEMPORARY STORAGE FOR VARIOUS INDICES DURING PROCESSING
C
C     ***************************************************************
CUSE      3COMP     1JUN71    ***************************************
      COMMON /3/ RP(50), TP(50), RVALP(50), SINES(50), COSINES(50),
     1 AVRP, AVTHP, RMIT, TMIT, SINAV, COSAV, SINMIT, COSINMIT, THOLD
CEND      3COMP     ***************************************************
C
C     USED BY FOOTPRNT, BOOSTIN, EVAL, GOPRINT, IMPROVE, INPUT,
C             OPTBOOST, TEST
C
C
C
C
C     COMMON /3/ OR /3COMP/
C
C     RP        RANGE OF TARGET          (INDEXED BY POTENT)
C     TP        AZIMUTH OF TARGET        (INDEXED BY POTENT)
C     RVALP     RELATIVE VALUE OF TGT    (INDEXED BY POTENT)
C     SINES     SINE OF AZIMUTH          (INDEXED BY POTENT)
C     COSINES   COSINE OF AZIMUTH        (INDEXED BY POTENT)
C     AVRP      AVERAGE RANGE OF ALL POTENTIAL TARGETS
C     AVTHP     AVERAGE AZIMUTH OF ALL POTENTIAL TARGETS
C     RMIT      RANGE OF FIRST TARGET IN FOOTPRINT
C     TMIT      AZIMUTH OF FIRST TARGET IN FOOTPRINT
C     SINAV     SINE OF AVERAGE AZIMUTH
C     COSAV     COSINE OF AVERAGE AZIMUTH
C     SINMIT    SINE OF FIRST TARGET AZIMUTH
C     COSINMIT  COSINE OF FIRST TARGET AZIMUTH
C     THOLD     AZIMUTH USED TO COMPUTE ENTRIES IN DISTANCE MATRIX
C
C     ***************************************************************
C
CUSE      DEBUG     1JUN71    ***************************************
      COMMON /DEBUG/ IOTA, ICAMFROM(20)
CEND      DEBUG     ***************************************************
C
C     IOTA      INDEX TO ICAMFROM ARRAY
C     ICAMFROM  ARRAY CONTAINING COMPLETE SUBROUTINE CALLING SEQUENCE
C
C     ***************************************************************
C
CUSE      PRINT     1JUN71    ***************************************
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```
      COMMON /PRINT/ ICALL, IMUST                                          1000
CEND      PRINT     ***************************************************** 121000
      DATA (IMUST = 0)                                                     122000
C                                                                          123000
C     ICALL      PRINT REQUEST NUMBER                                      124000
C     IMUST      SET TO ONE ON ERROR CONDITIONS TO FORCE PRINT              125000
C                                                                          126000
C     ***************************************************************      127000
C                                                                          128000
C                                                                          129000
C     TAPEHANDLER COMMONS                                                  130000
C                                                                          131000
CUSE      TAPEHANR 1JUN71   ********************************************** 132000
      COMMON /ITP/ ITP                                                     1000
      COMMON /TWORD/ TWORD                                                 2000
      EQUIVALENCE (ITWORD, TWORD)                                          3000
      COMMON /MYIDENT/ MYIDENT                                             4000
      COMMON /NOPRINT/ NOPRINT                                             5000
      COMMON /IFTPRNT/ IFTPRNT(18)                                         6000
      COMMON/FILABEL/ INIDENT, INRUNNO, INDATE, INFORM, INSECR,            7000
     1      INTIME, INLNGTH, INCOMM(5)                                     8000
      COMMON/ MYLABEL/ MYFORM, MYSECR, MYLNGTH, MYCOMM(5)                  9000
C                                                                          10000
CEND      TAPEHANR  ****************************************************** 132000
C                                                                          133000
C     ***************************************************************      134000
C                                                                          135000
      IOTA=1                                                               136000
      ICAMFROM(IOTA)=8HFOOTPRNT                                            137000
      CALL WFOOTPRN                                                        137100
      CALL STWRARE                                                         138000
      MAXBOOST = 500                                                       139000
      TWOLD = 1.E+300                                                      140000
      NOPRINT=1                                                            141000
      MYIDENT=8HFOOTPRNT                                                   142000
      CALL INITAPE                                                         143000
      CALL RDCARDF                                                         144000
      MPASS=1                                                              145000
      KGROUP=1                                                             146000
      NUMBOOST=1                                                           147000
      CALL PRINTSET                                                        148000
      ITP = -8                                                             149000
      MYIDENT = 8HBASFILE                                                  150000
      CALL SETREAD                                                         151000
      ITEST = 8HNOV 78                                                     152000
      IF (ITEST-INFORM) 1,3,1                                              153000
    1 PRINT 2, ITEST, INFORM                                               154000
    2 FORMAT(///1X, I5(1H*),5X,33H WRONG BASFILE FORMAT, REQUESTED ,A8,    155000
     15H BUT ,A8)                                                          156000
      STOP                                                                 157000
    3 CALL RDARRAY(INDATE,23)                                              158000
      CALL SKIP( 545)                                                      159000
      CALL RDARRAY(TSTFILE,16)                                             160000
      CALL SKIP(1861)                                                      161000
      CALL RDARRAY(INIRV,46)                                               162000
      CALL SKIP( 843)                                                      163000
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      CALL RDARRAY(ICLASS,88)                                          164000
      CALL SKIP( 320)                                                  165000
      CALL RDARRAY(ISIMTYPE,88)                                        166000
      CALL SKIP(  80)                                                  167000
      CALL RDARRAY(NAMES, 888)                                         168000
      CALL SKIP( 200)                                                  169000
      CALL RDARRAY(ITYPE,200)                                          170000
      CALL SKIP( 400)                                                  171000
      CALL RDARRAY(IPAY,200)                                           172000
      CALL SKIP(6403)                                                  173000
      CALL RDWORD     S       PEXTRA = TWORD                           174000
      CALL RDWORD     S       EXTRA8 = TWORD                           175000
      CALL TERMTAPE                                                    176000
      ITP = TMPALOC(1)                                                 177000
      MYIDENT = BMTMPALOC                                              178000
      CALL SETREAD                                                     179000
      CALL TMYTRANS(ALOCBRP(1))                                        180000
      ITP = ALOCBRP(1)                                                 181000
      MYIDENT = BMALOCBRP                                              182000
      MYLNGTH = ALOCBRP(2)                                             183000
      CALL SETWRITE                                                    184000
      ICALL=1                                                          185000
      CALL BOPRINT(1)                                                  186000
      ICALL=2                                                          187000
      CALL BOPRINT(2)                                                  188000
      ICALL=3                                                          189000
      CALL BOPRINT(3)                                                  190000
      ICALL=4                                                          191000
      CALL BOPRINT(4)                                                  192000
   50 ITP = TMPALOC(1)                                                 193000
      CALL RDARRAY(KGROUP,LSTRKSUM)                                    194000
      NUMBOOST = 1                                                     195000
      NCASS=1                                                          196000
      CALL PRINTSET                                                    197000
      ICALL=5                                                          198000
      CALL BOPRINT(5)                                                  199000
      IF ((KGROUP .EQ. 3HEOT) .OR. (KGROUP .GT. IBEND)) 9000, 70       200000
C                                                                      201000
C     GET LENGTH OF LOGICAL RECORD                                     202000
C                                                                      203000
   70 LLOGICAL=0                                                       204000
      DO 80 I=1,NCORR                                                  205000
   80 LLOGICAL=LLOGICAL+(((NSTRK(I)-1)/32)+1)                          206000
      IF(NCORR.GT.1)90,100                                             207000
C                                                                      208000
C     ROMMEX GROUP WITH MORE THAN ONE CORRIDOR                         209000
C                                                                      210000
   90 ITP = ALOCBRP(1)                                                 211000
      CALL WRARRAY(KGROUP,LSTRKSUM)                                    212000
      ITP = TMPALOC(1)                                                 213000
      L = (30*NCORR) + (15*NTSTRK) + LLOGICAL                          214000
      CALL TRANSFER(L)                                                 215000
      GO TO 50                                                         216000
  100 ITP = TMPALOC(1)                                                 217000
      CALL RDARRAY(NT,3)                                               218000
      IF(JCORR.EQ.0)120,110                                            219000
```

```
C                                                                       220000
C     BOMBER GROUP WITH ONE CORRIDOR                                    221000
C                                                                       222000
  110 ITP = ALOCGRP(1)                                                  223000
      CALL WRARRAY(KGROUP,LSTRKSUM)                                     224000
      CALL WRARRAY(NT,3)                                                225000
      ITP = TMPALOC(1)                                                  226000
      L = (15*NT) + LLOGICAL                                            227000
      CALL TRANSFER(L)                                                  228000
      GO TO 50                                                          229000
  120 IF(KGROUP.LT.IGSTART)160,130                                      230000
  130 IF(INIRV(IPAY(JGROUP)))160,160,140                                231000
  140 IF(NT.GT.NTMAX)150,170                                            232000
  150 PRINT 902,JGROUP,NT,NVEHGRP(JGROUP)                               233000
  902 FORMAT(1H1,20(1H*),7H GROUP ,I2,32H HAS TOO MANY ASSIGNMENTS, NT = 234000
     1 ,I10,13H  MAXIMUM =,I10)                                         235000
C                                                                       236000
C     MISSILE GROUP  -  NO MIRV OR TOO MANY TARGETS                     237000
C                                                                       238000
  160 ITP = ALOCGRP(1)                                                  239000
      CALL WRARRAY(KGROUP,LSTRKSUM)                                     240000
      CALL WRARRAY(NT,3)                                                241000
      ITP = TMPALOC(1)                                                  242000
      L = (18 * NT ) + LLOGICAL                                         243000
      CALL TRANSFER(L)                                                  244000
      GO TO 50                                                          245000
C                                                                       246000
C     MIRV GROUP                                                        247000
C                                                                       248000
  170 ISYS = INIRV(IPAY(JGROUP))                                        249000
      IF(IMNAME(ISYS).NE.ISIMTYPE(ITYPE(JGROUP)))171,172                250000
  171 K = ITYPE(JGROUP)                                                 251000
      PRINT 904, IMNAME(ISYS), ISIMTYPE(K)                              252000
  904 FORMAT(////1X,50(1H*),9H WARNING ,50(1H*)//1X,51H NAME CONFLICT - 253000
     1FOOTPRINT PARAMETER TABLE NAME IS ,A8,30H.   QUICK SYSTEM TYPE NAM 254000
     2E IS ,A8)                                                         255000
  172 DELMIN=AMAX1F(DSPACE(ISYS),DEFAULT)                               256000
      DEL2 = DELMIN * DELMIN                                            257000
      NV=NVEHGRP(JGROUP)                                                258000
      IF(NV.GT.MAXBOOST)150,180                                         259000
  180 NARV=NT/NV                                                        260000
      DZ=THROWMAX(ISYS)                                                 261000
      DZ2 = DZ * DZ                                                     262000
      TNZ=MINLOAD(ISYS)+(NARV-MINLOAD(ISYS))*PN                         263000
      TMAXZ = MAXLOAD(ISYS)                                             264000
      TNZ = MINIF(TNZ, TMAXZ)                                           265000
      ALPHA = DELMIN / DZ                                               266000
      VMIN = VALF(ALPHA, TNZ)                                           267000
      SLZ=TNZ/PAYLOAD(ISYS)                                             268000
      ICALL = 44                                                        269000
      CALL BOPRINT(23)                                                  270000
      NEXTRA=NT-NV*NARV                                                 271000
      NOK = IMPRS(JGROUP)                                               272000
      ALPH = 1.000 + PEXTRA * (EXTPAB / NV)                             273000
      IF (ALPH - 1.000000) 200, 200, 190                                274000
  190 NOK = (NOK + 1.) / ALPH                                           275000
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      200 ICALL = 6*                                                    27600
          CALL GOPRINT(12)                                              27700
      210 CALL SETDATA(ISYS)                                            27800
          ITP = TMPALOC(1)                                              27900
          CALL RDARRAY(INDEX,NT)                                        28000
          CALL RDARRAY(TGTLAT,NT)                                       28100
          CALL RDARRAY(TGTLONG,NT)                                      28200
          CALL RDARRAY(RVAL,NT)                                         28300
          CALL RDARRAY(OLAT,NT)                                         28400
          CALL RDARRAY(OLONG, NT)                                       28500
          CALL RDARRAY(LLFIX, LLOGICAL)                                 28600
          CALL RDARRAY(DEST8, NT)                                       28700
          CALL RDARRAY(TASK, NT)                                        28800
          CALL RDARRAY(CNTRYLOC, NT)                                    28900
          CALL RDARRAY(FLAG, NT)                                         1000
     CSUBR     FOOTPRN2  1JUN71  ************************************** 27000
          ICALL=5                                                       2500
          CALL GOPRINT(6)                                               3000
          ITP=ISCR                                                      4000
          MYIDENT=6HSCRATCH                                             5000
          CALL SETWRITE                                                 6000
          CALL WRARRAY(INDEX,NT)                                        7000
          CALL WRARRAY(TGTLAT,NT)                                       8000
          CALL WRARRAY(TGTLONG,NT)                                      9000
          CALL WRARRAY(RVAL,NT)                                        10000
          CALL WRARRAY(OLAT,NT)                                        11000
          CALL WRARRAY(OLONG,NT)                                       12000
          TVAL=0.0                                                     13000
          DO 220 I=1,NT                                                14000
          NRVADD(I) = 0                                                15000
      220 TVAL=TVAL+RVAL(I)                                            16000
          CALL NEWCOOR(JGROUP)                                         17000
          CALL INITASGN                                                18000
C                                                                      19000
C     CLEAN POTENTIAL TARGET ARRAYS                                    20000
C                                                                      21000
          DO 230 I=1,MAXMIT                                            22000
          IFOTSAVE(I)=0                                                23000
          IF2SAVE(I)=0                                                 24000
          JSAVE(I)=0                                                   25000
          COSTEFF(I)=0.                                                26000
          TOFLY(I)=0.0                                                 27000
      230 INIT(I)=0                                                    28000
          DO 240 I=1,MAXPOT                                            29000
          IPOT(I)=0                                                    30000
          MISS(I)=0                                                    31000
          IFREE(I)=MAXPOT+1-I                                          32000
          LOST(I)=0                                                    33000
          INVERSE(I)=0                                                 34000
          ABE(I)=0.0                                                   35000
          VAL(I)=0.                                                    36000
          JAFTER(I)=-1                                                 37000
          VALFIRST(I)=0.                                               38000
          RP(I)=0.                                                     39000
          VP(I)=0.                                                     40000
          RVALP(I)=0.                                                  41000
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```
      SINES(I)=0.                                                       42000
      COSINES(I)=1.0                                                    43000
      DO 240 J=1,MAXPOT                                                 44000
  240 D(I,J)=0.0                                                        45000
      NFREE=MAXPOT                                                      46000
      NHIT=NISS=NLOST=NJSAVE=JINR =JINP=0                               47000
      JOUTR=JOUTP=JSAVOPT=IPOTGT=JAFT=JTGTO=0                           48000
      NADDED = NADDOLD = NOLD = 0                                       49000
      VALOLD = 0.0                                                      50000
C                                                                       51000
C     FIRST PASS OVER TARGETS                                           52000
C                                                                       53000
      NPASS=1                                                           54000
      DO 1999 I=1,NV                                                    55000
      NUMBOOST=I                                                        56000
      CALL PRINTSET                                                     57000
      CALL BOOSTIN                                                      58000
      CALL OPTBOOST                                                     59000
      CALL BOOSTOUT                                                     60000
 1999 CONTINUE                                                          61000
      ICALL=11                                                          62000
      CALL GOPRINT(9)                                                   63000
      ICALL=12                                                          64000
      CALL GOPRINT(14)                                                  65000
      CALL GOPRINT(24)                                                  66000
C                                                                       67000
C     SAVE THIS PLAN ON SCRATCH TAPE                                    68000
C                                                                       69000
      NOLD=NASGN                                                        70000
      VALOLD=VALASGN                                                    71000
      CALL ORDER(AVAL,INDEX,NT)                                         72000
      ASSIGN 2000 TO NEXT                                               73000
      GO TO 3000                                                        74000
 2000 NOLD=NASGN                                                        75000
      VALOLD=VALASGN                                                    76000
      ITP=ISCR                                                          77000
      MYIDENT = TWSCRATCH                                               78000
      CALL WRARRAY(IFOR,NT)                                             79000
      CALL WRARRAY(IBOOST,NV)                                           80000
      CALL WRARRAY(NTB,NV)                                              81000
      CALL WRARRAY(NRVADD, NT)                                          82000
      DO 2010  I = 1, NT                                                83000
 2010 NRVADD(I) = 0                                                     84000
      NADDOLD = NADDED                                                  85000
      NADDED = 0                                                        86000
      CALL TERMTAPE                                                     87000
C                                                                       88000
C     SECOND PASS OVER TARGETS                                          89000
C                                                                       90000
      NPASS=2                                                           91000
      DO 2999 I=1,NV                                                    92000
      NUMBOOST=NV-I+1                                                   93000
      CALL PRINTSET                                                     94000
      CALL BOOSTIN                                                      95000
      CALL OPTBOOST                                                     96000
      CALL BOOSTOUT                                                     97000
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 2999 CONTINUE                                                          98000
      ICALL=11                                                          99000
      CALL GOPRINT(8)                                                   100000
      ICALL=12                                                          101000
      CALL GOPRINT(14)                                                  102000
      CALL GOPRINT(24)                                                  103000
      ASSIGN 3500 TO NEXT                                               104000
 3000 IF (NASGN + NADDED - NOK)  3040, 3040, 3010                       105000
C                                                                       106000
C     OMIT LEAST VALUABLE TARGETS IF THERE IS AN EXCESS ASSIGNMENT      107000
C                                                                       108000
 3010 NOMIT = NASGN + NADDED - NOK                                      109000
      IOMIT=0                                                           110000
      I=6                                                               111000
 3020 I=I+1                                                             112000
      IF (I .GT. NT) 3022, 3020                                         113000
 3022 PRINT 3024                                                        114000
 3024 FORMAT(1X,15(1H*),27H TOO MANY FIXED ASSIGNMENTS)                 115000
      IMUST = 1                                                         116000
      CALL GOPRINT(7)                                                   117000
      CALL GOPRINT(12)                                                  118000
      CALL GOPRINT(14)                                                  119000
      CALL GOPRINT(8)                                                   120000
      IMUST = 0                                                         121000
      GO TO NEXT                                                        122000
 3020 J = INDEX(I)                                                      123000
      IF((ISTATUS(J) .LE. 0) .OR. LLFIX(J))  3020, 3030                 124000
 3030 IF (MTB(ISTATUS(J)) - MINLOAD(ISYS))  3020, 3020, 3035            125000
 3035 IOMIT = IOMIT + 1                                                 126000
      JTGTG = J                                                         127000
      CALL REMOVE                                                       128000
      IF(IOMIT.LT.NOMIT)3020,3040                                       129000
 3040 GO TO NEXT                                                        130000
C                                                                       131000
C     SAVE POINTERS IN SECOND PLAN                                      132000
C                                                                       133000
 3500 DO 3600 I=1,NT                                                    134000
 3600 ISTATUS(I)=ISON(I)                                                135000
C                                                                       136000
C     RETRIEVE GROUP DATA FROM SCRATCH TAPE                             137000
C                                                                       138000
 4000 IT=ISCR                                                           139000
      MYIDENT=@SCRATCH                                                  140000
      CALL SETREAD                                                      141000
      CALL RDARRAY(INDEX,NT)                                            142000
      CALL RDARRAY(TGTLAT,NT)                                           143000
      CALL RDARRAY(TGTLONG,NT)                                          144000
      CALL RDARRAY(RVAL,NT)                                             145000
      CALL RDARRAY(DLAT,NT)                                             146000
      CALL RDARRAY(DLONG,NT)                                            147000
      CALL RDARRAY(NDEX,NT)                                             148000
      CALL REORDER(NDEX,NT,6,INDEX,TGTLAT,TGTLONG,RVAL,DLAT,DLONG,0)   149000
      CALL REORDER(NDEX, NT, 4, DESIG, TASK, CNTRYLOC, FLAG, 0,0,0)     150000
C                                                                       151000
C     SELECT BETTER PLAN                                                152000
C                                                                       153000
```

```
      WEIGHT1 = 2.0                                                    154000
      NP1 = (WEIGHT1 * NOLD) + NADDOLD                                 155000
      NP2 = (WEIGHT1 * NASGN) + NADDED                                 156000
      IF (NP1 - NP2)  4030, 4010, 4020                                 157000
 4010 IF (VALASGN - VALOLD)  4020, 4030, 4030                          158000
C                                                                      159000
C     FIRST PLAN IS BETTER                                             160000
C                                                                      161000
 4020 ITP=ISCR                                                         162000
      MYIDENT = THSCRATCH                                              163000
      CALL RDARRAY(ISTATUS,NT)                                         164000
      CALL RDARRAY(IBOOST,NV)                                          165000
      CALL RDARRAY(NTB,NV)                                             166000
      NASGN=NOLD                                                       167000
      VALASGN=VALOLD                                                   168000
      CALL RDARRAY(NRVADD, NT)                                         169000
      NADDED = NADDOLD                                                 170000
C                                                                      171000
C     SECOND PLAN IS BETTER                                            172000
C                                                                      173000
 4030 ITP=ISCR                                                         174000
      MYIDENT = THSCRATCH                                              175000
      CALL TERMTAPE                                                    176000
C                                                                      177000
C     SET UP PLAN-FIRST ORDER BOOSTERS BY VALUE                        178000
C                                                                      179000
      ICALL = 65                                                       180000
      CALL GOPRINT(22)                                                 181000
      DO 4060 I=1,NV                                                   182000
      D(I)=0.0                                                         183000
      J=IBOOST(I)                                                      184000
      IF(J)4060,4060,4040                                              185000
 4040 K=NTB(I)                                                         186000
      DO 4050 K=1,N                                                    187000
      D(I) = D(I) - RVAL(J) * (NRVADD(J) + 1)                          188000
 4050 J=ISTATUS(J)                                                     189000
 4060 CONTINUE                                                         190000
      CALL ORDER(D,NDEX,NV)                                            191000
C                                                                      192000
C     NOW SET UP PLAN BY ORDERING STRIKES                              193000
C                                                                      194000
      LASTRY = 1                                                       195000
      DO 4090 II = 1, NV                                               196000
      I = NDEX(II)                                                     197000
      J=IBOOST(I)                                                      198000
      IF(J)4090,4090,4070                                              199000
 4070 INDEX(J)=-INDEX(J)                                               200000
      INC = 1000. * II                                                 201000
      K=NTB(I)                                                         202000
      K = 0                                                            203000
      DO  4080  KK = 1, N                                              204000
      K = K + 1                                                        205000
      L = ISTATUS(J)                                                   206000
      ISTATUS(J) = INC + K                                             207000
C                                                                      208000
C     ADD EXTRA RVS NEEDED TO MEET MINLOAD                             209000
```

```
C                                                                       210000
      IF (NRVADD(J)) 4068, 4080, 4071                                   211000
 4071 NTOADD = NRVADD(J)                                                212000
      INEED = IABSF(INDEX(J))                                           213000
      K = K + 1                                                         214000
      INEED2 = INC * K                                                  215000
      DO  4074  LLLL = 1, NTOADD                                        216000
C     FIND AVAILABLE CELL                                               217000
      DO 4072  LL = LASTRY, NT                                          218000
      IF (ISTATUS(LL))  4072, 4073, 4072                                219000
 4072 CONTINUE                                                          220000
      GO TO 4088                                                        221000
 4073 LLL = LL                                                          222000
      LASTRY = LLL + 1                                                  223000
      NTR(I) = NTR(I) + 1                                               224000
      INDEX(LLL) = INEED                                                225000
      TGTLAT(LLL) = TGTLAT(J)                                           226000
      TGTLONG(LLL) = TGTLONG(J)                                         227000
      RVAL(LLL) = RVAL(J)                                               228000
      DLAT(LLL) = DLAT(J)                                               229000
      DLONG(LLL) = DLONG(J)                                             230000
      DESIG (LLL) = DESIG(J)                                            231000
      TASK (LLL) = TASK(J)                                              232000
      CNTRYLOC (LLL) = CNTRYLOC(J)                                      233000
      FLAG (LLL) = FLAG(J)                                              234000
      LLFIX(LLL) = 0                                                    235000
 4074 ISTATUS(LLL) = INEED2                                             236000
 4080 J = L                                                             237000
 4090 CONTINUE                                                          238000
      ICALL = 76                                                        239000
      CALL GOPRINT(22)                                                  240000
      LARGE=1000*INV+10)                                                241000
      DO 4110 I=1,NT                                                    242000
      IF(ISTATUS(I))4100,4100,4110                                      243000
 4100 ISTATUS(I)=LARGE                                                  244000
 4110 CONTINUE                                                          245000
      CALL ORDER(ISTATUS,NDEX,NT)                                       246000
      CALL REORDER(NDEX,NT,6,INDEX,TGTLAT,TGTLONG,RVAL,DLAT,DLONG,6)    247000
      CALL REORDER(NDEX, NT, 4, DESIG, TASK, CNTRYLOC, FLAG, 0,0,0)     248000
      CALL LREORDER(NDEX, NT, LLFIX)                                    249000
C                                                                       250000
C     OUTPUT PLAN                                                       251000
C                                                                       252000
 5000 RT = NTSTRK = NSTRK(I) = NASGN + NADDED                           253000
      ITP = ALOCGRP(I)                                                  254000
      CALL WRARRAY(KGROUP,LSTRK+SUM)                                    255000
      ICALL=9                                                           256000
      CALL GOPRINT(5)                                                   257000
      CALL WRARRAY(NT,3)                                                258000
      CALL WRARRAY(I, TX,NT)                                            259000
      CALL WRARRAY(TGTLAT,NT)                                           260000
      CALL WRARRAY(TGTLONG,NT)                                          261000
      CALL WRARRAY(RVAL,NT)                                             262000
      CALL WRARRAY(DLAT,NT)                                             263000
      CALL WRARRAY(DLONG,NT)                                            264000
      LLOGICAL = ((NT - 1) / 32) + 1                                    265000
```

```
      CALL WRARRAY(LLFIX, LLOGICAL)                                    266000
      CALL WRARRAY(DESIG, NT)                                          267000
      CALL WRARRAY(TASK, NT)                                           268000
      CALL WRARRAY(ENTRYLOC, NT)                                       269000
      CALL WRARRAY(FLAG, NT)                                           270000
      ICALL = 15                                                       271000
      CALL FOOPRINT(2)                                                 272000
      GO TO 56                                                         273000
C                                                                      274000
 9000 KGROUP=3HOUT                                                     275000
      ITP = ALOCGRP(1)                                                 276000
      CALL WRARRAY(KGROUP,LSTRKSUM)                                    277000
      ITP = TYPALOC(1)                                                 278000
      CALL TERMTAPE                                                    279000
      ITP = ALOCGPP(1)                                                 280000
      CALL TERMTAPE                                                    281000
      PRINT 9001                                                       282000
 9001 FORMAT(1H1)                                                      283000
      PRINT 9002                                                       284000
 9002 FORMAT(43H ***** PROCESSOR FOOTPRINT COMPLETED *****)            285000
      WRITE(44,9002)                                                   286000
      IOTA=IOTA-1                                                      287000
      STOP                                                             288000
      END                                                              289000
```

IDENT FOOTPRNT

PROGRAM LENGTH		02430
ENTRY POINTS	FOOTPRNT	00161
BLOCK NAMES		
	MASTER	00027
	FILES	00020
	TSCRATCH	00002
	WPNORPX	02570
	STRKSUM	00042
	RAIDATA	21534
	4	13560
	CONTROL	00016
	DSQUARE	00005
	EARTH	00004
	FOOTIO	00102
	FOOTSAVE	00053
	INDEX	00032
	LOADATA	02764
	PARAMETR	00431
	PERFORM	00005
	POTENT	00532
	RANGE	00004
	VALPARM	00003
	UPNTGT	00004
	1	05156
	2	07641
	3	00403
	DEBUG	00025
	PRINT	00002
	ITP	00001
	TWORD	00001
	MYIDENT	00001
	WORPRINT	00001
	IFTPRNT	00012
	FILABEL	00014
	MYLABEL	00010
EXTERNAL SYMBOLS		
	QBQENTRY	
	THEMO.	
	QBQSTOPS	
	Q1002180	
	Q1005180	
	Q1010180	
	Q1008040	
	Q1004180	
	Q3010040	
	QBQDICT.	
	VFOOTPRN	
	STORAGE	
	INITAPE	
	RDCARDF	
	PRINTSET	
	SETREAD	
	RDARRAY	
	SKIP	
	RDWORD	

TERMTAPE
INITRANS
SETWRITE
GOPRINT
WRARRAY
TRANSFER
VALF
SETDATA
NEWCOOR
INITASGN
BOOSTIN
OPTBOOST
BOOSTOUT
ORDER
REMOVE
REORDER
LRECRDER
MINIF
MAXIF
STM.
OPSINGL.

C00450	AGE	C00002	01144									
C00012	ALOCCAP	00352	00353	00353	00357	00357	C0455	00455	00507	00507	00561	00561
		02134	02135	02231	02231	02242	02242					
C00006	ALOCTAB											
P02375	ALPH	00743	00752									
P02376	ALPHA	00713	00716									
C01372	AVRP											
C00373	AVTHP											
C00002	BASFILE											
X00036	BOOSTIN	01226	01342									
X00040	BOOSTOUT	01237	01346									
C00000	CDZ											
C05670	CNTRYLOC	01024	01562	02031	02032	02121	02215					
P02276	CNVRTL.	00240	00242	00553	00556	00558	00631	00624				
C00377	COSAV											
C00310	COSINES	01157	01158									
C00401	COSINHIT											
C00226	COSTEFF	01123	01124									
P02377	COUNT.	00440	00441	01073	01074	01115	01116	01165	01164	01315	01316	01507
		01510	01672	01673	02072	02073						
P00003	CRCNT.	00245	00561	00637	01421	02254	02262					
C00000	CROSSOVR											
C00252	D	01167	01170	01657	01660	01704	01704	01705	01721			
C00003	DEFAULT	00007	00644									
C00001	DEGTORAD	C00001										
C00002	DEL2	00644	00647									
C00007	DELAGE											
C00007	DELMIN	00645	00645	00646	00711	00711						
C00055	DELRAFT											
C00054	DELRSTRT											
C00000	DESIG	01014	01561	02027	02027	02030	02120	02207				
P00001	DICT.	00163	00165	00174	00176	00207	00211	00220	00226	00235	00244	00247
		00251	00254	00257	00262	00265	00270	00273	00276	00301	00304	00307
		00312	00315	00320	00323	00326	00331	00335	00341	00347	00351	00362
		00366	00372	00376	00402	00407	00415	00421	00460	01474	00502	00512
		00515	00526	00550	00560	00564	00567	00600	00625	00636	00643	00706
		00715	00726	00760	00763	00770	00773	00776	01001	01004	01007	01012
		01015	01020	01023	01026	01033	01042	01044	01047	01052	01055	01060
		01063	01104	01107	01225	01227	01231	01233	01243	01247	01252	01260
		01275	01300	01303	01304	01326	01341	01343	01345	01347	01357	01363
		01364	01415	01420	01424	01427	01432	01435	01473	01521	01523	01526
		01531	01534	01537	01542	01545	01550	01557	01617	01622	01625	01633
		01644	01650	01720	02060	02103	02107	02110	02125	02140	02145	02150
		02153	02156	02161	02164	02167	02172	02203	02206	02211	02214	02217
		02224	02234	02241	02245	02250	02253	02256	02261	02264	02267	02274
C17563	DLAT	01005	01061	01540	01554	02025	02025	02113	02170			
C16417	DLONG	01010	01064	01543	01555	02026	02026	02114	02173			
C00171	DSPACE	00640	00644									
C00000	DZ	00663	00664	00664	00712	00712						
C00003	DZP	00665	00665									
P02324	ENDINP.	00247	02274									
C03016	ENTAPE											
P01000	EXIT.	02324										
C00012	EXTRAP	00337	00337	00734								

```
-(00624 FLAG        01027  01563  02032  02033  02122  02228
P00161  FOOTPRNT    00161
P00003  FORMAT.     00170  00204  00223  00227  00344  00355  00423  01037  01272  01516  01514
                    01641  02727
C00355  FRACLOOK
C00101  FUELEFT
P00245  6600000.    00233
P00561  6600001.    00546
P00637  6600002.    00623
P01421  6600003.    01413
P02254  6600004.    02244
P02262  6600005.    02254
P02276  6600006.    02262
X00027  GOPRINT     00365  00371  00375  00401  00429  00435  00757  01032  01242  01246  01251
                    01356  01362  01365  01423  01426  01431  01434  01647  02057  02144  02223
P02480  I           00434  00441  01067  01074  01111  01116  01132  01136  01142  01172  01217
                    01222  01234  01311  01316  01331  01335  01350  01402  01405  01406  01410
                    01443  01503  01510  01553  01557  01645  01673  01713  01730  01732  01707
                    02013  02064  02073  02305
C10517  IBACK
C00001  IBOOST      01301  01623  01668  01661  01732  01733
C00000  ICALL       00363  00364  00370  00374  00400  00416  00417  00724  00724  00755  00756
                    01038  01031  01240  01241  01245  01354  01355  01361  01645  01646  02155
                    02056  02142  02143  02221  02222
C00001  ICAMFROM    00172
C02268  ICLASS      00274
C00367  IDATA
C00001  IDESTNO
C00003  IDUM
P00426  IF00001.
P01452  IF00002.
C00026  IFESAVE     01121
C00053  IFETS
C13563  IFOR        01274  01511  01511
C00400  IFOTSAVE    01117  01120
C00221  IFREE       01142  01143
C00000  IFTPRNT
C00015  IGEND       00427  00427
C00014  IGSTART     00532  00532
C00000  IHDATE      00252
C00065  IHIT        01124  01127
C00001  IHNAME      C00001 00614  00615  00630  00630
P02401  II          01725  01726  01744  02052
C07520  IHIRV       00266  00541  00541  00607  00607
C00001  IMUST       00003  01421  01422  01437
P02277  IN00006.    01164  02300  02310  02312  02324
P02402  INC         01746  01760  01774
C00007  INCOMM
C00002  INDATE
C00003  INDEX       00771  01045  01261  01444  01444  01524  01552  01740  01740  01741  01767
                    01770  02017  02020  02111  02154
P02403  INFIN       01772  02016
P02404  INFIN2      01775  02036
C01003  INFORM      00230  00231  00241  00241
```

```
C0C300  INIDENT
X00015  INITAPE   00206
X00035  INITASSN  01106
X00625  INITRANS  00359
C00006  INLNGTH
C00001  INRUN-O
C00004  INSECR
C00005  INTIME
C00366  INVERSE   01145
P02405  IOMIT     01402  01466  01467  01476
C00000  IOTA      00166  00167  00171  00171  02270  02270  02271
C01750  IPAY      00324  00536  00536  00404  00404
C00002  IPCT      01136  01137
C00000  IPOTGT    01285
C00000  ISCR      00007  01035  01035  01267  01270  01514  01514  01612  01612  01637  01637
C00002  ISIDE
C00348  ISIMTYPE  00362  00416  00617  00633  00633
C01751  ISTATUS   01447  01450  01457  01457  01512  01512  01620  01707  01707  01754  01757
                  01761  01762  02003  02003  02037  02040  02074  02074  02100  02100  02104
C00001  ISYS      00610  00610  00613  00614  00627  00627  00637  00637  00661  00662  00764
                  01463  01463
C00001  IT-SL     C00021
P02406  ITEST     00230  00237
C00000  ITP       00221  00222  00343  00343  00354  00354  00405  00405  00456  00456  00463
                  00463  00500  00500  00510  00510  00520  00520  00562  00562  00572  00572
                  00766  00766  01036  01036  01270  01271  01515  01515  01413  01613  01640
                  01640  02135  02136  02232  02232  02237  02237  02243  02243
C00000  ITWORD
C01440  ITYPE     00316  00611  00611  00621  00621
P00233  .1        00232
P00477  .100      00453  00454
P00507  .110      00505
P00531  .120      00506
P00535  .130      00533  00533
P00543  .140
P00546  .150      00655
P00561  .160      00534  00542  00542
P00603  .170      00544  00545
P00620  .171
P00637  .172      00617
P00656  .180      00654  00654
P00746  .190
P01234  .1990
P00755  .200      00744  00745
P01265  .2000     01263
P01317  .2010
P00762  .210
P01077  .220
P01126  .230
P01167  .240
P01350  .2990
P00250  .3        00231
P01372  .3000     01264
P01376  .3010
```

```
P01405  .3622-      01451   01451   01455   01465   01485   01474
P01419  .3622
P01443  .3624       01411   01412
P01454  .3631       01456
P01464  .3635
P01477  .3640       01375   01375   01475   01476
P01502  .3644       01377
P01511  .3650
P01514  .4000
P01487  .4010       01605
P01412  .4020       01604   01611
P01437  .4030       01615   01610   01611
P01444  .4040
P01704  .4050
P01713  .4060       01464   01654
P01737  .4070
P01765  .4071
P02005  .4072       02004
P02011  .4073       02004
P02034  .4074
P02044  .4080       01763   01764   02010
P02052  .4090       01734   01734
P02077  .4100       02075   02075
P02101  .4110       02074
P00404  .50         00474   00530   00602   02226
P02130  .5000
P00432  .70         00430   00430
P00447  .80
P00455  .90
P02227  .9000       00425   00431
P02338  .FRASER.    00444   00466   00447   00450   00466   00470   00471   00471   00523   00575   00673
                    01702   02064   02065   02176   02200
P00003  ..100000    00170
P00004  ..100001    00204
P00005  ..100002    00223
P00006  ..100003    00227
P00032  ..100004    00344
P00033  ..100005    00355
P00034  ..100006    00424
P00127  ..300007    01037
P00123  ..100008    00272
P00140  ..100009    01514
P00160  ..100010    01614
P00162  ..100011    01641
P00163  ..100012    02227
P00037  ..2         00236
P00124  ..3024      01414
P00144  ..9001      02251
P00152  ..9002      02257   02265
P00035  ..903       02551
P00062  ..904       00426
P02327  .ASTER.     00540   00540   00606   00606   00513   00516   01401   01461
P00644  .ZOOOO1.    01641
P02407  .           01161   01445   01447   01452   01456   01470   01662   01674   01706   01710   01734
```

```
                        01737   01756   01765   02021   02045   02320
C00001  JAFT            01205
C00342  JAFTER          01150
C00002  JCORE           00504   00504
C00021  JGROUP          00535   00535   00552   00552   00555   00603   00603   00620   00628   00647   00650
                        00733   00734   01105
C00001  JINF            01177   01200
C00003  JINT            01200
C00007  JOUTP           01207
C00002  JOUTP           01207
C00004  JSAVE           01122   01122
C00031  JSAVOPT         01206   01206
C00002  JTGTO           01204   01204   01470   01471
P02411  K               00622   00632   01670   01752   01754   01795   01761   01773   01774   01775
C00000  KGROUP          00214   00214   00410   00423   00423   00426   00426   00461   00513   00531   00531
                        00565   02141   02230   02230   02235
P02411  KK              01753   02047
P02412  L               00472   00475   00524   00527   00576   00601   01760   02044
P02413  LARGE           02065   02077
P02414  LASTRV          01724   02000   02013
P02415  LL              02001   02002   02005   02011
C21455  LLFIX           01013   01454   02035   02127   02204
P02416  LLL             02012   02017   02037
P02417  LLLL            01776   02041
P02420  LLOGICAL        00433   00447   00458   00472   00523   00575   01613   02201   02204
C00000  LOADOPT
C00304  LOST            01144
C21452  LRAID           00003
X00044  LRECORDER        02124
C00041  LSTRKSUM        00003   00418   00461   00513   00565   02141   02235
X00046  MAXIF           00042
C00130  MAXHOST          00177   00200   00653   00653
C00006  MAXFOOT
C00001  MAXMIT           C00001  01113   01113
C00121  MAXLOAD          00700   00700   00722   00722
C00000  MAXPOT           00303   01140   01163   01163   01174   01174   01176
C00000  MAXRV            00003
C00000  MAXSYS           00003
X00045  MINIF            00705
C00051  MINLOAD          00667   00667   00676   00676   01464   01464
C00136  MISS             01140
C00004  MSLTIME
C00011  MTYPE
C00003  MYCOMM
C00000  MYFORM
C00000  MYIDENT          00205   00205   00224   00224   00345   00345   00356   00356   01640   01640   01273
                        01273   01517   01517   01615   01615   01642   01642
C00002  MYLNGTH          00360   00360
C00001  MYSEGM
P02421  N               01667   01671   01751   02050
C00052  N2SAVE
C02735  NADDED          01212   01322   01322   01324   01373   01373   01377   01377   01401   01401   01636
                        02131   02131
C02743  NADDOLD          01211   01212   01323   01572   01572   01635   01635
```

C00023	NALERT											
C00001	NARY	00661	00666	00666	00731							
C00000	NASGN	01254	01254	01265	01265	01372	01372	01376	01376	01577	01577	01638
		02130	02130									
C00016	NASMTYPE											
C00010	NBNDRY											
C00022	NCLASS											
C00024	NCNTRY											
C00021	NCOMPLEX											
C00002	NCORE	00434	00436	00452	00452	00464	00465					
C00004	NCORRX											
C00025	NCORTYPE											
C04705	NDEX	01546	01551	01560	01721	01727	01727	02104	02110	02117	02125	
C05051	NDEXR											
C05215	NDEXT											
C04705	NDEAVAL											
C00005	NDPEN											
K00034	NEPCOOR	01103										
P02422	NEXT	01264	01371	01440	01477							
C00002	NEXTRA	00732	00733									
C01220	NFREE	01176										
C00013	NGROUP											
C01064	NHIT	01203										
C00024	NHITOLD											
C00030	NJSAVE	01201										
C00302	NLOST	01201	01202									
C00135	NMISS	01202										
C00013	NOK	00735	00736	00746	00746	00754	00754	01374	01374	01400	01400	
C00003	NOLD	01210	01211	01255	01264	01570	01570	01627	01627			
P02427	NOMIT	01401	01475									
C02737	NONTAR											
C00001	NOPRINT	00203	00203									
P02424	NPI	01576	01604									
P02425	NPP	01603	01604									
C00004	NPASS	00212	00213	00413	00413	01215	01215	01327	01330			
C00015	NPAYLOAD											
C00036	NRECOVER											
C00007	NREF											
C00011	NREG											
C00023	NRTRT											
C01001	NSLOT	00803	01075	01076	01307	01317	01320	01634	01675	01675	01762	01763
		01764	01766									
C00033	NSTAK	00442	00442	02132	02132							
C00000	NT	00503	00516	00521	00522	00543	00543	00556	00570	00573	00574	00656
		00656	00731	00732	00771	00774	00777	01002	01005	01010	01010	01021
		01024	01027	01045	01050	01053	01056	01061	01064	01071	01071	01262
		01274	01307	01313	01313	01410	01411	01505	01505	01524	01527	01532
		01535	01540	01543	01546	01551	01560	01620	01634	02046	02046	02070
		02070	02105	02110	02117	02126	02133	02134	02151	02154	02157	02162
		02165	02170	02173	02174	02174	02207	02212	02215	02220		
C00020	NTARGRAS											
C00002	NTAR											
C00765	NTP	01304	01462	01462	01626	01644	01644	01747	01750	02014	02014	02015
C00024	NTTS											

```
C21454  NTMAX       00544  C21454
C02736  NTOARR      01747  02042  02062
C00014  NTOTMASF
C00001  NTSTAM      00467  00467  02133
C00012  NTYPE
C00003  NUMHOOST    00216  00216  00411  00432  01233  01233  01336  01337
C00000  NV          00651  00652  00652  00660  00660  00730  00730  00760  00760  01234  01236
                    01301  01304  01334  01336  01350  01352  01524  01525  01715  01715  01722
                    02053  02053  02062  02062
C00310  NXFORM      00555  00564  00450  00651
C00000  NxPNS       00731  00734  00735
X00037  OBTHOOST    01331  01344
X00041  OBTP3       01353  01717  02102
C00303  PAGE        01372
P02313  PARAM1      02315
C00003  PEXT=1      00333  00742  00742
C00002  PI          C00003
C00003  PITIV2      C00103
C00017  PLASTAPE
C00011  PN          00473  00474
X00037  PRINTSET    00217  00434  01224  01346
C00010  PURGE
X00004  Q1C03100    00675  01571  01600
X00010  Q1C04100    01567  01576  01743
X00005  Q1C06100    00721  00737
X00004  Q1C10100    00753  01573  01602  01745
X00007  Q3C00040    01453
X00011  Q3D1FFAR    02236
X00012  Q4C01CT=    00000  00162
X00001  QRCSATE=    00164
X00003  Q4CSTOPS    01344  02273
X00004  Q_STOP=     02275
C02737  R
C00000  RATIOS      01313
X0003   RECEIVE     00250  00254  00264  00272  01326  00324  00330  00332  00406  00501  00747
                    00772  00775  01000  01003  01066  01011  01014  01017  01032  01035  01522
                    01526  01530  01533  01536  01541  01544  01616  01621  01624  01632
X00014  RECARDS     00211
X00023  RELOC       00330  01334
X00043  REMOVE      01432
X00043  RESTORE     01547  01554  02106  02116
C00376  R-IT
C00003  RTN
C00000  RP          01153  01153
C10437  RVAL        01053  01054  01100  01100  01241  01536  01554  01742  01743  02024  02024
                    02113  02165
C00144  RVALP       01155
X01033  SETBITS     01742
X00020  SETBEAT     00225  00246  01520
X00024  SETxBITS    01341  01341
C0 376  SINGU
C01224  STARS       01154
C00400  STSHIFT
```

X00022	SWTB	00263	00261	00267	00275	00303	00311	00317	00325		
C00002	SWT	00324									
X00047	SYM.	00344	00547	00624	01414	02247	02285	02293			
X00014	SYMBOL	00352									
C00014	SYMBOL										
C00034	TASK	00381	01562	02030	02031	02121	02212				
X00021	TASKTAB	00341	01325	01443	02242	02244					
C00000	TASKLOC	00344									
C00247	TASLAT	00774	01450	01527	01553	02221	02222	02222	02115	02157	
C00473	TASLOC	01777	01053	01532	01553	02223	02223	02112	02142		
X00012	TASN.	00263	00557	00635	01417	02252	02258	02260			
C00473	TASTB										
C00027	TASN										
C00375	TAST										
C00452	TBOLD	00201	00202								
C00241	TBRSAVE	00463	00463								
P02426	TVAR	00734	03707								
C00010	TWBALOC	00342	00342	00404	00404	00462	00462	00477	00477	00517	00517	00571
		00571	00765	00765	02236	02236					
C00001	TXZ	00677	00677	00707	00710	00711	00716	00720	00720		
C00111	TELE	01125	01125								
C00042		00154									
X00031	TWAKEUP	01473	00525	00577							
P00452	TSP	00437									
P01103	TS	01073									
P01131	TS	01114									
P01174	TS	01134									
P01172	TS	01154									
P01236	TS	01221									
P01322	TS	01314									
P01352	TS	01351									
P01514	TS	01514									
P01715	TS	01655									
P01713	TS	01673									
P02053	TS	01725									
P02052	TS	01753									
P02042	TS	01777									
P02006	TS	02021									
P02100	TS	02071									
C00002	TVAL	01065	01066	01077	01077	01101	01101				
C00000	TWORD	00332	00332	00336	00336						
C00001	U02										
P02304	UP00000.	00475	01070	01112	01133	01173	01220	01235	01312	01332	01351	01404
		01407	01504	01654	01714	01731	02047	02300	02305	02306	02307	02311
		02311										
P02317	UP00001.	01102	01446	01663	01711	01735	02046	02313	02320	02321	02322	02326
		02325										
C00001	UPTOP											
C00000	VAL	01147	01147									
C00001	VALASM	01255	01266	01607	01607	01631						
X00032	VALP	00714										
C00144	VALFIRST	01151										
C00004	VALOLD	01213	01214	01256	01267	01610	01630					
X00019	VARTBD	00273										

```
C00026  =PUTOLD
C00034  =MEA        00717   00717
P02427  =FIGHT;     01566   01575
C00620  =LAT
C01130  =LONG
X00030  =FARRAY     00457   00511   00514   00563   00566   01043   01046   01051   01054   01057   01062
                    01274   01277   01302   01305   02137   02147   02152   02155   02160   02163   02164
                    02171   02202   02205   02210   02213   02214   02233
P00442  =S00001.    00451
P01075  =S00002.    01102
P01117  =S00003.    01130
P01135  =S00004.    01175   01175
P01167  =S00005.    01177
P01222  =S00006.    01237   01237
P01317  =S00007.    01321
P01334  =S00010.    01353   01353
P01511  =S00011.    01513
P01656  =S00012.    01716   01716
P01674  =S00013.    01712
P01726  =S00014.    02054   02054
P01756  =S00015.    02055   02051
P02003  =S00016.    02043   02043
P02102  =S00017.    02007   02007
P02174  =S00020.    02101
   00A23 SYMBOLS
```

```
      SUBROUTINE ADDRV                                                  1000
CSUBR      ADDRV     1,JUNTI    ********************************       5700
C                                                                       2000
C     ADDS REENTRY VEHICLES TO TARGETS ALREADY IN THE FOOTPRINT IN      3000
C     ORDER TO MEET THE MINLOAD CONSTRAINT                              4000
C                                                                       5000
CUSE       FOOTIC    1,JUNTI    ********************************       6000
      COMMON /FOOTIC/ MAXRV, ISYS, NTAR, RIN(20), THIN(20), IFEAS,      1000
     1 DELRSTRY, DELRAFT(20), FUELEFT                                   2000
CEND       FOOTIC    ********************************                 6000
CUSE       LOADATA   1,JUNTI    ********************************       7000
C                                                                       1000
      COMMON /LOADATA/ LOADOPT, NRVADD(1500), NADDED, NTOADD, NONTAR(20)2000
     1               , NADDOLD                                          3000
C                                                                       4000
CEND       LOADATA   ********************************                 7000
CUSE       PARAMETR  1,JUNTI    ********************************       8000
      COMMON /PARAMETR/ MAXSYS, IPNAME(40), MINLOAD(40), MAXLOAD(40),   1000
     1  DSPACE(40), THROWMAX(40), MTYPE(40), IDATA(40)                   2000
CEND       PARAMETR  ********************************                 8000
CUSE       POTENT    1,JUNTI    ********************************       9000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), TOFLY(20 1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50)2000
     2, AGE(50)                                                         3000
CEND       POTENT    ********************************                 9000
CUSE       3COMP     1,JUNTI    ********************************       10000
      COMMON /3/ RP(50), TP(50), RVALP(50), SINFS(50), COSINFS(50),     1000
     1 AVRP, AVTHP, MHIT, THIT, SINAV, COSAV, SINMIT, COSINMIT, THOLD   2000
CEND       3COMP     ********************************                 10000
CUSE       DEBUG     1,JUNTI    ********************************       11000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                 1000
CEND       DEBUG     ********************************                 11000
CUSE       PRINT     1,JUNTI    ********************************       12000
      COMMON /PRINT/ ICALL, IMUST                                       1000
CEND       PRINT     ********************************                 12000
C                                                                       13000
      IOTA = IOTA + 1                                                   14000
      ICAMFROM(IOTA) = SHADDRV                                          15000
      ICALL = 25                                                        16000
      CALL GOPRINT(13)                                                  17000
C                                                                       18000
      IF (NHIT)  100, 100, 5                                            19000
    5 ICANT = 0                                                         20000
      DO 70  I = 1, NHIT                                                21000
   70 MONTAR(I) = 1                                                     22000
      NTOADD = MINLOAD(ISYS) - NHIT                                     23000
C                                                                       24000
C     PUT AS MANY AS POSSIBLE ON THE FIRST TARGET                       25000
C                                                                       26000
   10 IF (NTOADD)   900,  900, 20                                       27000
   20 J = IHIT(I)                                                       28000
      RI = RP(J)                                                        29000
      TI = TP(J)                                                        30000
      ICALL = 71                                                        31000
      CALL GOPRINT(13)                                                  32000
      DO 30  I = 1, NTOADD                                              33000
```

```
      RIN(I) = R1                                                       34000
   30 TMIN(I) = T1                                                      35000
      DO 40 I = 1, NMIT                                                 36000
      J = IMIT(I)                                                       37000
      K = NTOADD + I                                                    38000
      RIN(K) = RP(J)                                                    39000
   40 TMIN(K) = TP(J)                                                   40000
      NTAR = K                                                          41000
      CALL FORTEST                                                      42000
      ICALL = 72                                                        43000
      CALL SOPRINT(13)                                                  44000
      IF (IFFAS - 6) 50, 60, 60                                         45000
   50 ICANT = 1                                                         46000
      NTOADD = NTOADD + 1                                               47000
      GO TO 10                                                          48000
C                                                                       49000
C     SET UP NONTAR ARRAY                                               50000
C                                                                       51000
   60 NONTAR(1) = NONTAR(1) + NTOADD                                    52000
      IF (ICANT) 80, 80, 900                                            53000
C                                                                       54000
C     MOVE RVS TO OTHER TARGETS IF POSSIBLE                             55000
C                                                                       56000
   80 IF ((NTOADD - 1) * (NMIT - 1)) 900, 900, 90                       57000
   90 LASTT = NMIT - 1                                                  58000
C                                                                       59000
C     FIND FIRST DECREASING STEP                                        60000
C                                                                       61000
  100 ICALL = 73                                                        62000
      CALL SOPRINT(24)                                                  63000
      IFSTEP = 0                                                        64000
      DO 110 I = 1, LASTT                                               65000
      IF (NONTAR(I) - NONTAR(I+1)) 150, 110, 120                        66000
  110 CONTINUE                                                          67000
C                                                                       68000
C     UNIFORM DISTRIBUTION                                              69000
C                                                                       70000
      GO TO 900                                                         71000
C                                                                       72000
C      FOUND FIRST STEP                                                 73000
C                                                                       74000
  120 IFSTEP = I                                                        75000
      NONTAR(IFSTEP) = NONTAR(IFSTEP) - 1                               76000
C                                                                       77000
C     FIND LAST DECREASING STEP                                         78000
C                                                                       79000
      LL = LASTT + 1                                                    80000
      DO 130 II = 1, LASTT                                              81000
      I = LL - II                                                       82000
      IF (NONTAR(I) - NONTAR(I+1)) 150, 130, 140                        83000
  130 CONTINUE                                                          84000
C                                                                       85000
C     NO STEPS - UNIFORM DISTRIBUTION EXCEPT FOR ONE TARGET             86000
C                                                                       87000
      NONTAR(IFSTEP) = NONTAR(IFSTEP) + 1                               88000
      GO TO 900                                                         89000
```

```
C                                                                       97000
C     EQUAL LAST STEP                                                   98000
C                                                                       99000
  [0] ILSTEP = I + 1                                                    100000
      NCNTAR(ILSTEP) = NCNTAR(ILSTEP) + 1                               101000
      ICALL = 7                                                         102000
      CALL DBPRINT(2)                                                   103000
C     CHECK TO SEE IF THIS CHANGES ALLOCATION                           104000
      IF (IFSTEP - ILSTEP) 140, 900, 140                                105000
C                                                                       106000
C     ERROR IN ALLOCATING RVS                                           107000
C                                                                       108000
  150 PRINT 151                                                         109000
  151 FORMAT(1H0,15(1HF),31H ERROR IN ADDING REENTRY VEHICLES)           110000
      IMJST = 1                                                         111000
      CALL DBPRINT(4)                                                   112000
      NCNTAR(I+1) = NCNTAR(I+1) - 1                                     113000
      NCNTAR(I) = NCNTAR(I) + 1                                         114000
      IF (IFSTEP) 170, 170, 160                                         115000
  160 NCNTAR(IFSTEP) = NCNTAR(IFSTEP) + 1                               116000
  170 CALL DBPRINT(2)                                                   117000
      IMJST = 0                                                         118000
      GO TO 900                                                         119000
C                                                                       120000
C     TEST ALLOCATION                                                   121000
C                                                                       122000
  180 K = 0                                                             123000
      DO 190 I = 1, NMIT                                                124000
      J = IMIT(I)                                                       125000
      NN = NCNTAR(I)                                                    126000
      DO 190 II = 1, NN                                                 127000
      K = K + 1                                                         128000
      RTN(K) = RR(J)                                                    129000
  190 TMIN(K) = TR(J)                                                   130000
      NTAR = K                                                          131000
      ICALL = 71                                                        132000
      CALL DBPRINT(1)                                                   133000
      CALL FOOTEST                                                      134000
      ICALL = 72                                                        135000
      CALL DBPRNT(1)                                                    136000
      IF (IFESS - K) 200, 100, 100                                      137000
C                                                                       138000
C     NO LONGER FEASIBLE.  REDUCE POSSIBLE LIST AND TRY AGAIN           139000
C                                                                       140000
  200 NCNTAR(ILSTEP) = NCNTAR(ILSTEP) - 1                               141000
      NCNTAR(IFSTEP) = NCNTAR(IFSTEP) + 1                               142000
      LASTT = ILSTEP - 2                                                143000
      IF (LASTT) 900, 600, 210                                          144000
C                                                                       145000
C     TERMINATION                                                       146000
C                                                                       147000
  210 NMISS = NMISS + NTOBJ                                             148000
      DO 211 I = 1, NMIT                                                149000
      K = IMIT(I)                                                       150000
      J = JMIT(K)                                                       151000
  211 NRVAR(J) = NCNTAR(I) - 1                                          152000
```

```
      ICALL = 75                                                  146000
      CALL GOPRINT(24)                                            147000
      CALL GOPRINT(13)                                            148000
 1000 IOTA = IOTA - 1                                             149000
      RETURN                                                      150000
      END                                                         151000
```

IDENT ADDRV

PROGRAM LENGTH		00455
ENTRY POINTS	ADDRV	00022
BLOCK NAMES		
	FOOTIO	00102
	LOADATA	02764
	PARAMETR	00431
	POTENT	00532
	3	00403
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	THET.	
	GRADTST.	
	GOPRINT	
	FOOTEST	
	STH.	

```
P00022  ARRAY.          00022
C00455  BLE
C00372  BLR
C00376  BLTZ
P00426  BRANCH.         00427
C00377  CALL
C00310  CONTINUE
C00401  CONTINUE
P00440  DO.             00046  00047  00100  00101  00113  00114  00317  00321  00376  00377
P00004  DREAL.          00040
C00455  DSIGNF
C00456  DSIGNF
P00001  DIM.            00024  00035  00072  00136  00142  00174  00246  00255  00260  00264  00301
                        00342  00345  00350  00415  00420
C00113  EXPAND
P00130  FAILING.        00025  00424  00425  00426  00426
P00000  EXIT.           00000
K00004  FORMAT          00135  00344
P00003  FORMAT.         00030
C00101  FUNCT
P00241  GENERAL.        00053
K00003  GOBACK          00034  00071  00141  00175  00245  00263  00300  00341  00347  00414  00417
P00441  I               00043  00046  00075  00100  00110  00113  00120  00136  00202  00203  00207
                        00213  00224  00225  00237  00264  00307  00310  00332  00373  00376
C00001  IABS            00033  00033  00070  00070  00137  00140  00173  00174  00244  00264  00337
                        00340  00344  00412  00413
C00001  ICAMODM         00032
P00442  IDAT            00042  00151  00156
C00341  IDCT4
C00053  IFEAS           00144  00144  00352  00352
C00221  IFREE
P00443  IFSTEP          00211  00214  00214  00234  00259  00273  00275  00341
C00065  IHIT            00061  00061  00115  00115  00311  00311  00400  00400
C00001  INTERN
P00444  II              00222  00224  00231  00315
P00445  ILOOPS          00240  00241  00251  00356  00344
C00001  IWIDT           00241  00242  00303  00304
P00425  INITIAL.        00026
C00366  INVERSE
C00000  IOTA            00024  00024  00027  00031  00031  00422  00422  00423
C00002  IPRT            00422  00423
C00001  ISYS            00053  00053
P00057  .1              00151
P00173  .100            00354  00355  00357
P00422  .1000           00040  00040
P00207  .110            00305
P00213  .120            00304
P00231  .130            00307
P00237  .140            00220
P00253  .150            00224  00227
P00275  .160
P00300  .170            00273  00274
P00305  .180            00252  00252
P00324  .190
```

```
P00861  .20
P00356  .200        00354
P00104  .30
P00125  .40
P00041  .5
P00150  .50         00146
P00154  .60         00146   00147
P00056  .70
P00161  .80         00157   00157
P00170  .90
P00378  .900        00060   00063   00160   00167   00167   00212   00236   00251   00304   00366   00366
P00405  .910
P00433  .ERASER.    00163   00165   00166   00166
P00003  ..100000    00030
P00004  ..151       00256
P00446  J           00062   00063   00116   00121   00125   00312   00328   00404   00407
P00447  K           00121   00123   00127   00133   00145   00306   00321   00322   00324   00327   00335
                    00353   00401   00402
P00456  LASTT       00172   00213   00217   00232   00365
P00451  LL          00220   00223
C00000  LOADDPT
C00304  LOST
C00061  MAXHIT
C00121  MAXLOAD
C00000  MAXPOT
C00000  MAXRW
C00000  MAXSYS
C00051  MINLOAD     00054   00054
C00136  MISS
C00311  MTYPE
C02735  NADDER      00370   00370   00371
C02763  NADDOLD
C00220  NFREE
C00064  NHIT        00037   00037   00043   00044   00055   00095   00110   00111   00163   00164   00170
                    00170   00333   00333   00373   00374
C00303  NLOST
C00135  NMISS
P00452  NN          00314   00316
C02737  NOWTAR      00050   00051   00154   00154   00195   00204   00204   00205   00215   00215   00216
                    00225   00226   00226   00234   00235   00236   00241   00242   00243   00267   00267
                    00270   00271   00272   00276   00276   00277   00313   00313   00357   00357   00360
                    00362   00363   00405   00405
C00001  NRVADD      00407   00410
C00002  NTAR        00134   00134   00336   00336
C02736  NTOADD      00056   00056   00057   00057   00075   00078   00117   00117   00151   00152   00153
                    00155   00161   00161   00371
X00002  OPPOICT.    00008   00023
P00453  P1          00065   00102
C00374  PHIT
C00003  RIN         00103   00103   00124   00124   00325   00325
C00004  RP          00063   00064   00122   00122   00323   00323
C00000  RVALP
C00376  SINAV
C00226  SINES
```

C00400	SIMPIT						
XP0005	STM.	00254					
P00456	T1	00067	00104				
X00001	TMEMR.	00257					
C00027	TWIN	00105	00105	00130	00130	00330	00330
C00375	TWIT						
C00402	TWORLD						
C00241	TWROWMAX						
C00111	TOFLY						
C00062	TP	00065	00066	00120	00126	00326	00326
P00053	TS00001.	00045					
P00107	TS00002.	00077					
P00133	TS00003.	00112					
P00210	TS00004.	00207					
P00232	TS00005.	00222					
P00333	TS00006.	00307					
P00332	TS00007.	00317					
P00412	TS00010.	00375					
C00050	WS00001.	00052					
P00102	WS00002.	00106					
P00115	WS00003.	00137					
P00203	WS00004.	00211	00211				
P00223	WS00005.	00233	00233				
P00310	WS00006.	00334	00334				
P00321	WS00007.	00331					
P00400	WS00010.	00411					

00175 SYMBOLS

```
      SUBROUTINE ASSIGN                                                 1000
CSUBR      ASSIGN   1JUN71  ********************************************  2000
C                                                                       2000
CUSE       RAIDATA  1JUN71  ********************************************  3000
C                                                                       1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)     2000
     1          , TGTLONG(1500), ZVAL(1500), DLAT(1500), DLONG(1500)    3000
     2               , LRAID, NTMAX, LLFIX(1500)                        4000
C                                                                       5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(10) 6000
C                                                                       7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK,  8000
     1DLONG), (IDUM, INDEX)                                             9000
C                                                                       10000
      TYPE LOGICAL LLFIX                                                11000
C                                                                       12000
      COMMON/A/ DESIG(1500), TASK(1500), COUNTYLOC(1500), FLAG(1500)    13000
C                                                                       14000
CEND       RAIDATA  ********************************************************  3000
CUSE       PERFORM  1JUN71  ********************************************  4000
      COMMON /PERFORM/ MISSN, VALASGN, TVAL, WORLD, VALOLD              1000
CEND       PERFORM  ********************************************************  4000
CUSE       POTENT   1JUN71  ********************************************  5000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), TOFLY(20 1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INCREASE(50) 2000
     2, AGE(50)                                                         3000
CEND       POTENT   ********************************************************  5000
CUSE       WPNTGT   1JUN71  ********************************************  6000
      COMMON /WPNTGT/ IPOTGT, JAFT, JTGTD, NUMBOOST                     1000
CEND       WPNTGT   ********************************************************  6000
CUSE       ZSTATUS  1JUN71  ********************************************  7000
C                                                                       1000
      COMMON/ Z/ MAXCOST, IBOOST(500), NTG(500)                         2000
     1          , ISTATUS(1500), NDEX(1500)                            3000
C                                                                       4000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                       5000
C                                                                       6000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXR),(NDEX(201), NDEXT) 7000
C                                                                       8000
CEND       ZSTATUS  ********************************************************  7000
CUSE       DEBUG    1JUN71  ********************************************  8000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                 1000
CEND       DEBUG    ********************************************************  8000
CUSE       PRINT    1JUN71  ********************************************  9000
      COMMON /PRINT/ ICALL, IMUST                                       1000
CEND       PRINT    ********************************************************  9000
C                                                                       10000
C     ASSIGN ENTIRE HIT LIST TO BOOSTER NUMBOOST                        11000
C                                                                       12000
      IOTA=IOTA+1                                                       13000
      ICAMFROM(IOTA)=6HASSIGN                                           14000
      ICALL=21                                                          15000
      CALL GOPRINT(10)                                                  16000
C                                                                       17000
      IF(NHIT)900,900,100                                               18000
  100 NB=NUMBOOST                                                       19000
```

```
      NTR(NR)=NNIT                                                      20000
      ITOP=IPOT(IHIT(1))                                                21000
      IROOST(NR)=ITOP                                                   22000
      IFOR(ITOP)=-1                                                     23000
      ISTATUS(ITOP) = NR                                                24000
      VALASGN=VALASGN+RVAL(ITOP)                                        25000
      ITEST=-ITOP                                                       26000
      JLAST=ITOP                                                        27000
      DO 110 I=2,NHIT                                                   28000
      J=IPOT(IHIT(I))                                                   29000
      IF( =-J                                                           30000
      ITEST=KWINOF(ITEST,NEGJ)                                          31000
      ISTATUS(J)=NR                                                     32000
      IFOR(JLAST)=J                                                     33000
      IBACK(J)=JLAST                                                    34000
      IFOR(J)=-1                                                        35000
      VALASGN=VALASGN+RVAL(J)                                           36000
  110 JLAST=J                                                           37000
      IBACK(ITOP)=ITEST                                                 38000
      NASGN=NASGN+NNIT                                                  39000
      ICALL=38                                                          40000
      CALL GOPRINT(16)                                                  41000
      CALL GOPRINT(8)                                                   42000
  900 ICALL=42                                                          43000
      CALL GOPRINT(11)                                                  44000
      ICALL = 52                                                        45000
      CALL GOPRINT(14)                                                  46000
      IOTA=IOTA-1                                                       47000
      RETURN                                                            48000
      END                                                               49000
```

IDENT ASSIGN

PROGRAM LENGTH		00161
ENTRY POINTS	ASSIGN	00004
BLOCK NAMES		
	BAIDATA	21534
	4	13560
	PERFORM	00005
	POTENT	00532
	KPNTST	00004
	2	07641
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	ORGDICT.	
	ZOPRINT	
	XMIMOF	

```
C00458  ADE
P00004  ASSIGN      01004
P00135  BEGIN.      00137
C05679  CNTRYLOC
P00151  COUNT.      00053   00054
C00000  DESIG
P03001  DICT.       00004   00017   00064   00114   00117   00124   00130
C13563  DLAT
C16517  DLONG
P00140  ENDING.     00007   00134   00135   00135   00136
P00000  EXIT.       00142
C16624  FLAG
P00003  FORMAT.     00012
X00002  GOPRINT     00016   00113   00114   00125   00127
P00152  I           00050   00054
C16517  IBACK       00074   00074   00105   00106
C00001  IBOGST      00035   00035
C00002  ICALL       00015   00015   00112   00112   00121   00122   00126
C00001  ICAMFROM    00010
C00003  IDUM
C12563  IFOR        00037   00040   00072   00072   00075
C04221  IFREE
C00005  INIT        00030   00030   00055   00055
C00001  INUST
C00003  INDEX
P00135  INITIAL.    00007
C00366  INVERSE
C00000  IOTA        00010   00010   00011   00013   00013   00132   00132   00133
C00002  IPOT        00033   00033   00041   00060
C00000  IPOTGT
C01751  ISTATUS     00041   00042   00067   00070
P00153  ITEST       00046   00065   00066   00104
P00154  ITOP        00034   00037   00040   00047   00105
P00023  .100
P00101  .110
P00121  .900        00022   00022
P03003  ..100000    00012
P00143  .NETIFF.    00032   00032   00057   00057
P00155  J           00061   00062   00067   00071   00101
C00001  JAFT
C00002  JCONR
C00001  JGROUP
P00156  JLAST       00047   00071   00073   00102
C00002  JTGTO
C21455  LLFIX
C00304  LOST
C21453  LRAID
C00000  MAXBOOST
C00001  MAXMIT
C00003  MAXPOT
C00136  MISS
C00000  MASON       00104   00107   00110   00111
P00157  NB          00024   00026   00041   00066
C04705  NDEX
```

C05051	NDEXR								
C05215	NDEXT								
C04705	NDEXVAL								
P03160	NEGJ	00062	00065						
C00220	NFREE								
C00064	NHIT	00021	00021	00025	00025	00051	00051	00107	00110
C00303	NLOST								
C00135	NMISS								
C00003	NOLD								
C00000	NT								
C00705	NTR	00027	00027						
P21454	NTMAX								
P30063	NUMBOOST	00023	00023						
P00001	OBJDICT.	00000	00005						
C02737	R								
C10627	RVAL	00043	00044	00077	00077				
C02734	TASK								
C02737	TOTLAT								
C05673	TOTLOAD								
C05673	THETA								
C00111	TOFLY								
P00104	TS00001.	00052							
C00002	TVAL								
C00001	VALASGN	00042	00043	00044	00045	00076	00076	00100	00100
C00004	VALOLD								
P00055	WS00001.	00103							
X00003	XMINOF	00063							

00121 SYMBOLS

```
      SUBROUTINE ROOSTIN                                                    1000
CSUBR      ROOSTIN   7SEP71    ••••••••••••••••••••••••••••••••••••••••••  29000
C                                                                           2000
CUSE       RAIDATA   1JUN71    ••••••••••••••••••••••••••••••••••••••••••  3000
C                                                                           1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)         2000
     1           , TGTLONG(1500), RVAL(1500), PLAT(1500), PLONG(1500)       3000
     2               , LRAID, NTMAX, LLFIX(1500)                            4000
C                                                                           5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(10)     6000
C                                                                           7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, PLAT), (IBACK,      8000
     1DLONG), (IDUM, INDEX)                                                 9000
C                                                                           10000
      TYPE LOGICAL*1 LLFIX                                                  11000
C                                                                           12000
      COMMON/A/ DESIG(1500), MASK(1500), CNTRYLOC(1500), FLAG(1500)         13000
C                                                                           14000
CEND       RAIDATA   ••••••••••••••••••••••••••••••••••••••••••••••••••••  3000
CUSE       CONTROL   1JUN71    ••••••••••••••••••••••••••••••••••••••••••  4000
      COMMON /CONTROL/ NV, NARV, NEXTRA, PEXTRA, NPASS, FRACLOOK,           1000
     1                 MAXFOOT, DELAGE, RANGE, PN, EXTRAR, NDX            2000
     2               ,I START,IGEND                                       3000
CEND       CONTROL   ••••••••••••••••••••••••••••••••••••••••••••••••••••  4000
CUSE       DSQUARE   1JUN71    ••••••••••••••••••••••••••••••••••••••••••  5000
      COMMON /DSQUARE/ CD2, UD2, DFL2, AZZ, VMIN                            1000
CEND       DSQUARE   ••••••••••••••••••••••••••••••••••••••••••••••••••••  5000
CUSE       FOOTIO    1JUN71    ••••••••••••••••••••••••••••••••••••••••••  6000
      COMMON /FOOTIO/ MAXNV, ISYS, NTAR, MIN(20), IMIN(20), IFEAS,          1000
     1 DELRSTRT, DELRAFT(20), FUELEFT                                       2000
CEND       FOOTIO    ••••••••••••••••••••••••••••••••••••••••••••••••••••  6000
CUSE       INDEX     1JUN71    ••••••••••••••••••••••••••••••••••••••••••  7000
      COMMON /INDEX/ JINR, JINP, JOUTR, JOUTP, JSAVE(20), NJSAVE,           1000
     1 JSAVCPT                                                              2000
CEND       INDEX     ••••••••••••••••••••••••••••••••••••••••••••••••••••  7000
CUSE       PARAMETR  1JUN71    ••••••••••••••••••••••••••••••••••••••••••  8000
      COMMON /PARAMETR/ MAXSYS, IFNAME(40), MINLOAD(40), MAXLOAD(40),       1000
     1  DSPACE(40), TMP[illegible](40), MTYPE(40), IDATA(40)                2000
CEND       PARAMETR  ••••••••••••••••••••••••••••••••••••••••••••••••••••  8000
CUSE       POTENT    1JUN71    ••••••••••••••••••••••••••••••••••••••••••  9000
      COMMON /POTENT/ MAXPOT, MAXMIT, IPOT(50), NMIT, IMIT(20), TOPLY(20    1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50)    2000
     2, AGE(50)                                                             3000
CEND       POTENT    ••••••••••••••••••••••••••••••••••••••••••••••••••••  9000
CUSE       RANGE     1JUN71    ••••••••••••••••••••••••••••••••••••••••••  10000
      COMMON /RANGE/ CROSSDWN, UPDOWN, DELMIN, DEFAULT                      1000
CEND       RANGE     ••••••••••••••••••••••••••••••••••••••••••••••••••••  10000
CUSE       VALPARM   1JUN71    ••••••••••••••••••••••••••••••••••••••••••  11000
      COMMON /VALPARM/ DZ, TNZ, SLZ                                         1000
CEND       VALPARM   ••••••••••••••••••••••••••••••••••••••••••••••••••••  11000
CUSE       WPNTGT    1JUN71    ••••••••••••••••••••••••••••••••••••••••••  12000
      COMMON /WPNTGT/ IPOTGT, JAFT, JTGTU[illegible]PROCST                  1000
CEND       WPNTGT    ••••••••••••••••••••••••••••••••••••••••••••••••••••  12000
CUSE       IEVAL     1JUN71    ••••••••••••••••••••••••••••••••••••••••••  13000
      COMMON /I/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),             1000
     1 C(50, 50)                                                            2000
```

```
CEND      1EVAL     ********************************************************  13000
CUSE      2STATUS   1JUN71    ***************************************************  14000
C                                                                                 15000
      COMMON/ 2/ MAXBOOST, IBOOST(500), NTB(500)                                  20000
     1          , ISTATUS(1500), NDEX(1500)                                      30000
C                                                                                 40000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                                 50000
C                                                                                 60000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXR),(NDEX(201), NDEXT)         70000
C                                                                                 80000
CEND      2STATUS   ********************************************************  14000
CUSE      3COMP     1JUN71    ***************************************************  15000
      COMMON /3/ RP(50), TP(50), RVALP(50), SINES(50), COSINES(50),               16000
     1 AVRP, AVTHP, RHIT, THIT, SINAV, COSAV, SINHIT, COSINHIT, THOLD             20000
CEND      3COMP     ********************************************************  15000
CUSE      DEBUG     1JUN71    ***************************************************  16000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                           18000
CEND      DEBUG     ********************************************************  16000
CUSE      PRINT     1JUN71    ***************************************************  17000
      COMMON /PRINT/ ICALL, IMUST                                                 18000
CEND      PRINT     ********************************************************  17000
C                                                                                 18000
      IOTA=IOTA+1                                                                 19000
      ICAMFROM(IOTA)=NUMBOOSTIN                                                   20000
      ICALL=16                                                                    21000
      CALL GOPRINT(16)                                                            22000
C                                                                                 23000
      NB=NUMBOOST                                                                 24000
C                                                                                 25000
C     LOOK FOR LOST TARGETS ON SECOND PASS                                        26000
C                                                                                 27000
      GO TO (10,70),NPASS                                                         28000
   10 IF (NB .EQ. 0) 100, 20                                                      29000
   20 IF (NB .EQ. 1) 30, 40                                                       30000
   30 IFIRST = 1                                                                  31000
      GO TO 45                                                                    32000
   40 IFIRST = -IBACK(IBOOST(NB))                                                 33000
   45 ILAST = -IBACK(IBOOST(NB+1))                                                34000
      DO 80 J=IFIRST,ILAST                                                        35000
      IF(ISTATUS(J).EQ.-2)50,80                                                   36000
   50 NLOST=NLOST+1                                                               37000
      IF(NLOST.GT.MAXPOT)60,70                                                    38000
   60 PRINT 61,NLOST,LOST                                                         39000
   61 FORMAT(///13,15(1H*),27H TOO MANY LOST TARGETS N = ,I3,24H THE TARG         40000
     1ET INDICES ARE /(20(1X,I4)))                                                41000
      NLOST=NLOST-1                                                               42000
      GO TO 100                                                                   43000
   70 LOST(NLOST)=J                                                               44000
      ISTATUS(J)=-1                                                               45000
   80 CONTINUE                                                                    46000
C                                                                                 47000
C     DROP LEAST VALUABLE FRACTION OF TARGETS IN POTENTIAL TARGET ARRAYS          48000
C                                                                                 49000
  100 JSAVOPT=0                                                                   50000
      NDROP = NKISS - NJSAVE                                                      51000
      NIP=NTB(NB)                                                                 52000
```

```
      IF (NDROP .LE. NARV) 155, 163                                    530
  163 NDROP = NDROP - PURGE                                            540
      IF(NMISS.LE.9)155,165                                            550
  165 DO 110 I=1,NJSAVE                                                560
      JPOT=JSAVE(I)                                                    570
  110 D(JPOT,JPOT)=1.E+300                                             580
      DO 120 IT=1,NMISS                                                590
      I=MISS(IT)                                                       600
  120 VAL(IT)=D(J,J)                                                   610
      CALL ORDER(VAL,NDEXVAL,NMISS)                                    620
      DO 125 I = 1, NMISS                                              630
  125 NDEXVAL(I) = MISS(NDEXVAL(I))                                    640
      IDROP=0                                                          650
  130 DO 150 I=1,NDROP                                                 660
      IDROP=IDROP+1                                                    670
      J = NDEXVAL(IDROP)                                               680
      IF(D(J,J).GE.1.E+300)170,140                                     690
  140 JOUTP=J                                                          700
      CALL OUTPUT                                                      710
      ICALL=43                                                         720
      CALL GOPRINT(11)                                                 730
  150 CONTINUE                                                         740
C                                                                      750
C     DROP MORE TARGETS IF NEEDED                                      760
C                                                                      770
  155 IF(NFREE.LT.NIN)160,200                                          780
  160 IF(NMISS.GT.0)180,170                                            790
  170 PRINT 171                                                        800
  171 FORMAT(//1X,15(1H*),44H NOT ENOUGH ROOM IN POTENTIAL TARGET ARRAYS 810
     1 ,15(1H*))                                                       820
      IMUST=1                                                          830
      CALL GOPRINT(16)                                                 840
      CALL GOPRINT(18)                                                 850
      CALL GOPRINT(11)                                                 860
      IMUST=0                                                          870
      STOP                                                             880
  180 NDROP=1                                                          890
      GO TO 130                                                        900
C                                                                      910
C     BRING IN TARGETS FOR THIS BOOSTER                                920
C                                                                      930
  200 DO 210 I=1,NJSAVE                                                940
  210 JSAVE(I)=0                                                       950
      NJSAVE=0                                                         960
      J=IBOOST(NB)                                                     970
      NRV=NTR(J)                                                       980
      DO 220 I=1,NRV                                                   990
      JTN=J                                                           1000
      J=IFOR(J)                                                       1010
  220 CALL INPUT                                                      1020
C                                                                     1030
C     NOW ADD LOST TARGETS FROM END OF LIST                           1040
C                                                                     1050
      NADD=MIN(NFREE,NLOST)                                           1060
      DO 240 I=1,NADD                                                 1070
      JTN=LOST(NLOST)                                                 1080
```

```
      NLOST=NLOST-1                                                     140000
      IF(ISTATUS(JJOR).NE.-1)240,230                                    110000
  230 CALL INPUT                                                        111000
  240 CONTINUE                                                          112000
      CALL ORDER (MISS, NDEXVAL, NMISS)                                 113000
      DO 250 I = 1, NMISS                                               114000
  250 NDEXVAL(I) = MISS(NDEXVAL(I))                                     115000
      ICALL=64                                                          116000
      CALL GOPRINT(11)                                                  117000
C                                                                       118000
C     NOW COMPUTE ALL PARAMETERS                                        119000
C                                                                       120000
      CALL ORDER(RP,NDEXR,NMISS)                                        121000
      CALL ORDER(TP,NDEXT,NMISS)                                        122000
      AVRP=AVTMP=0.0                                                    123000
      RMIT = TMIT = SINMIT = COSINMIT = 0.0                             124000
      DO 310 J=1,NMISS                                                  125000
      I = MISS(J)                                                       126000
      AVRP=AVRP+RP(I)/NMISS                                             127000
  310 AVTMP = AVTMP + TP(I) / NMISS                                     128000
      SINAV=SINF(AVTMP)                                                 129000
      COSAV=COSF(AVTMP)                                                 130000
      IS = MTYPE(ISYS)                                                  131000
      CROSSDWN=CRSTODWN(IS,AVRP,AVTMP,NARV)                             132000
      CD2 = CROSSDWN * CROSSDWN                                         133000
      UPDOWN=UPTODWN(IS,AVRP,AVTMP,NARV)                                134000
      UD2 = UPDOWN * UPDOWN                                             135000
      ICALL=65                                                          136000
      CALL GOPRINT(17)                                                  137000
C                                                                       138000
C     COMPUTE DISTANCE MATRIX                                           139000
C                                                                       140000
      TMOLD = AVTMP                                                     141000
      DO 320 KI=1,NMISS                                                 142000
      I = NDEXVAL(KI)                                                   143000
      D(I,I)=0.0                                                        144000
      KII=KI+1                                                          145000
      DO 320 KJ=KII,NMISS                                               146000
      J = NDEXVAL(KJ)                                                   147000
C                                                                       148000
C     DOWN RANGE                                                        149000
C                                                                       150000
      TDIST=(RP(J)*(COSAV*COSINES(J)+SINAV*SINES(J))) -                 151000
     1       (RP(I)*(COSAV*COSINES(I)+SINAV*SINES(I)))                  152000
      D(I,J) = TDIST * TDIST                                            153000
      IF (TDIST) 312, 314, 314                                          154000
  312 D(I,J) = -D(I,J)                                                  155000
C                                                                       156000
C     CROSS RANGE                                                       157000
C                                                                       158000
  314 TDIST =     (RP(J)*(SINAV*COSINES(J)-COSAV*SINES(J))) -           159000
     1            (RP(I)*(SINAV*COSINES(I)-COSAV*SINES(I)))             160000
      D(J,I) = TDIST * TDIST                                            161000
  320 CONTINUE                                                          162000
C                                                                       163000
C     COMPUTE VALUE SCHEME FOR KEEPING IN POTENTIAL TARGET ARRAYS       164000
```

```
C       NOTE THAT TARGETS REMAIN IN ARRAYS FOR THE BOOSTER PROCESSED      165000
C       IMMEDIATELY AFTER THE ONE WHICH ENTERED THEM IN THE ARRAYS        166000
C                                                                         167000
      DELIN = -1. / DEL2                                                  168000
      DO 340 KI=1,NMISS                                                   169000
      J1=MISS(KI)                                                         170000
      D(J1,J1) = 1.E+10                                                   171000
      IF (AGE(J1) .LE. 1.00) 340  324                                     172000
  324 TDOWN = DELIN                                                       173000
      DO 330 KI=1,NMISS                                                   174000
      J2=MISS(KI)                                                         175000
      IF (J1 - J2) 321, 322, 323                                          176000
  321 FLY = ABSF(D(J1,J2)) * CD2 * D(J2,J1)                               177000
      GO TO 330                                                           178000
  322 FLY = DEL2                                                          179000
      GO TO 330                                                           180000
  323 FLY = ABSF(D(J2,J1)) * CD2 * D(J1,J2)                               181000
  330 TDOWN = TDOWN + RVALP(J2) / FLY                                     182000
      D(J1,J1)=TDOWN/AGE(J1)                                              183000
  340 AGE(J1)=AGE(J1)+DELAGE                                              184000
      ICALL=46                                                            185000
      CALL GOPRINT(20)                                                    186000
C                                                                         187000
C     COMPUTE VALFIRST ARRAY                                              188000
C                                                                         189000
      DO 400 KI=1,NMISS                                                   190000
      J=MISS(KI)                                                          191000
      UPDOWN=UPTODOWN(IS  ,RP(J),TP(J),NARV)                              192000
      CROSSDWN=CRSTODWN(IS  ,RP(J),TP(J),NARV)                            193000
      TDOWN = RVALP(J) * (1.0 - VMIN)                                     194000
      SINEX = SINES(J)                                                    195000
      COSX=COSINES(J)                                                     196000
      DO 390 KII=1,NMISS                                                  197000
      K=MISS(KII)                                                         198000
      DOWNT = RP(K) * (COSX * COSINES(K) + SINEX * SINES(K)) - RP(J)      199000
      IF(DOWNT)350,360,360                                                200000
  350 DOWNT= DOWNT*UPDOWN                                                 201000
  360 DOWNT = DOWNT * DOWNT                                               202000
      TDIST = RP(K) * (SINEX * COSINES(K) - COSX * SINES(K)) * CROSSDWN   203000
      DOWNT = DOWNT + TDIST * TDIST                                       204000
      IF (DOWNT - DEL2) 370, 370, 380                                     205000
  370 TDOWN = TDOWN + VMIN * RVALP(K)                                     206000
      GO TO 390                                                           207000
  380 IF (DOWNT - DZ2) 385, 390, 390                                      208000
  385 ALPHA = SQRTF(DOWNT) / DZ                                           209000
      TDOWN = TDOWN + VALF(ALPHA, TNZ) * RVALP(K)                         210000
  390 CONTINUE                                                            211000
      VAL(KI) = -TDOWN                                                    212000
  400 VALFIRST(J)=TDOWN                                                   213000
      CALL ORDER(VAL, NDEXVAL, NMISS)                                     214000
      ICALL=64                                                            215000
      CALL GOPRINT(11)                                                    216000
      IOTA=IOTA-1                                                         217000
      RETURN                                                              218000
      END                                                                 219000
```

IDENT BOOSTIN

PROGRAM LENGTH		01350
ENTRY POINTS	BOOSTIN	00040
BLOCK NAMES		
	RAIDATA	21534
	4	13560
	CONTROL	00816
	OSQU&RE	00005
	FOOTIO	03102
	INDEX	00032
	PARAMETR	00431
	POTENT	00532
	RANGE	00004
	VALPARM	00002
	WPNTGT	0000[illegible]
	1	05156
	2	07641
	3	00403
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	TMEND.	
	01210108	
	00STOPS	
	01005100	
	0'00ICT.	
	GOPRINT	
	GRDER	
	OUTPOT	
	INPOT	
	CRSTODWN	
	UPTONOWN	
	VALF	
	XRINGF	
	SQRTF	
	SINF	
	COSF	
	STN.	
	SLO.	
	BNSI=BL.	

```
C00458  AGE       00711  00714  00765  00766  00772  00772  00774  00774
P01313  ALPHA     01124  01127
C00372  AVRP      00505  00526  00526  00551  00546
C00373  AVTHP     00504  00505  00533  00533  00535  00535  00548  00552  00561  00571  00571
P01264  BEGIN.    01266
P00060  BOOSTIN   00060
C00000  CDS       00554  00555  00736  00736  00752  00752
C05470  CNTRYLOC
P01162  CNVRTI.   00144
C00377  COSAV     00543  00616  00616  00626  00627  00652  00652  00641  00641
X00028  COSF      00541
C00310  COSINFS   00620  00620  00627  00650  00650  00657  01041  01041  01054  01054  01073
                  01073
C00401  COSINWIT  00506
C00226  COSTEFF
P01314  COSI      01042  01053  01075
P01315  COUNT.    00220  00221  00235  00236  00257  00263  00366  00367  00457  00460  00515
                  00516  00610  00612  00722  00723  01044  01050
P00003  CRFNT.    00153  00340
C00000  CROSSDWN  00552  00553  00554  01032  01032  01180  01191
X00012  CRSTODWN  00547  01026
C00252  D         00226  00227  00243  00243  00303  00304  00402  00402  00637  00640  00644
                  00644  00645  00667  00670  00707  00707  00733  00733  00740  00740  00747
                  00747  00754  00754  00767  00770
C00003  DEFAULT
C00002  DEL2      00676  00676  00743  00743  01104  01104
C00007  DELAGE    00773  00773
P01316  DELIN     00677  00715
C00002  DELMIN
C00055  DELRAFT
C00034  DELRSTAT
C00000  DESIG
P00001  DICT.     00062  00073  00141  00147  00152  00247  00312  00316  00334  00337  00343
                  00346  00351  00356  00415  00423  00442  00450  00472  00475  00501  00537
                  00542  00550  00557  00567  01003  01017  01027  01122  01126  01145  01154
C13543  DLAT
C10517  DLONG
P01317  DOWNT     01062  01065  01067  01070  01071  01071  01103  01103  01114  01120
C00171  DSPACE
C00000  DZ        01123  01123
C00003  DZ2       01115  01115
P01267  ENDING.   00003  00356  01100  01264  01265  01265  01265
P00000  EXIT.     01271
C00012  EXTRAB
C13624  FLAG
P01320  FLY       00742  00744  00756  00761
P00003  FORMAT.   00066
C00005  FRACLOOK
C00101  FUELEFT
P00153  0000000.  00137
P00340  0000001.  00332
X00004  GOPRINT   00072  00315  00342  00345  00350  00471  00566  01002  01153
P01321  I         00214  00221  00253  00260  00272  00320  00362  00367  00403  00416  00426
                  00443  00453  00460  00520  00522  00527  00577  00611  01221
```

C16517	IBACK	00115	00115	00123	00123							
C00001	IBOOST	00112	00112	00120	00120	00375	00376					
C00008	ICALL	00071	00071	00313	00314	00467	00470	00565	00565	01600	01601	01151
		01152										
C00001	ICAMFROM	00070										
C00361	IDATA											
P01322	IDROP	00270	00275	00276	00277							
C00003	IDUM											
C00053	IFEAS											
P01323	IFIRST	00110	00116	00125								
C13563	IFOR	00411	00411									
C00221	IFREE											
C00015	IGEND											
P01324	IGOTO.	00100										
C00014	IGSTART											
C00065	INIT											
C00001	INNAME											
P01325	ILAST	00124	00165									
C00001	IMUST	00340	00341	00353								
P01163	IN00006.	00226	01251									
P01164	IN00010.	00242	00202	01173	01210							
P01165	IN00015.	00601	01214	01227								
P01166	IN00017.	00037	00043	01170	01207	01212	01224					
P01167	IN00020.	00667	01173	01205	01213	01226						
P01170	IN00021.	00706	00767	01241								
P01171	IN00024.	00732	00753	01230	01262							
P01172	IN00025.	00737	00746	01240	01260							
C00003	INDEX											
P01264	INITIAL.	00063										
X00411	INPUT	00413	00441									
C00366	INVERSE											
C00000	IOTA	00064	00064	00065	00067	00067	01156	01156	01157			
C00002	IPUT											
C00000	IPUTAT											
P01326	IS	00546	00551	00560	01020	01030						
C01751	ISTATUS	00131	00131	00162	00162	00436	00437					
C00001	ISYS	00543	00544									
P01327	IT	00232	00235									
P00102	.10											
P00107	.100	00101	00104	00155								
P00201	.103	00200										
P00213	.105	00212										
P00225	.110											
P00242	.120											
P00261	.125											
P00271	.130	00360										
P00307	.140	00306										
P00320	.150											
P00324	.155	00177	00200	00211	00212							
P00327	.160											
P00332	.170	00305	00306	00330	00331							
P00357	.180	00331										
P00105	.20	00104										
P00361	.200	00325	00326									

```
P00370  .210
P00414  .220
P00441  .230      00440
P00443  .240      00440
P00481  .250
P00107  .30
P00527  .310
P00643  .312      00642
P00646  .314      00641   00642
P00671  .320
P00732  .321      00730
P00743  .322      00738
P00746  .323      00731
P00715  .324      00713
P00757  .330      00742   00745
P00771  .340      00713   00714
P01065  .350      01063
P01074  .360      01063   01064
P01107  .370      01105   01105
P01110  .380      01106
P01120  .385      01116
P01133  .390      01113   01116   01117
P00111  .40       00106
P01137  .400
P00117  .45       00110
P00133  .50
P00137  .60
P00156  .70       00136   00136
P00163  .80       00132
P01273  .ERASER.  00621   00624   00626   00630   00633   00635   00651   00654   00656   00660   00663
                  00665   00735   00741   00751   00755   01095   01060   01074   01077
P00003  ..1E00009 00066
P00035  ..171     00335
P00004  ..61      00142
P01272  .NSTIFF.  00114   00114   00122   00122   00263   00263   00463   00463
P01029  .Z00001.  01014   01015
P01030  .Z00002.  01024   01025
P01230  J         00125   00139   00156   00161   00163   00200   00301   00307   00377   00406   00410
                  00412   00511   00516   00614   00617   00647   01011   01013   01047   01140   01202
P01331  J1        00704   00710   00727   00765   00771   01233
P01332  J2        00725   00727   00757   01255
C0G001  JAFT
C00002  JAFTER
C00002  JCORR
C00031  JGROUP
C00001  JINP
C00000  JINR      00407   00407   00432   00411   00435   00436
C00003  JOUTP     00310   00310
C00002  JOUTR
P01333  JPOT      00223   01245
C00004  JSAVE     00222   00222   00370   00371
C00031  JSAVOPT   00167   00170
C00002  JTOTO
P01334  K         01052   01053   01072   01110   01130
```

P01335	KI	00573	00575	00683	00672	00708	00702	00775	01006	01007	01135	01142
P01336	KII	00604	00605	00607	00717	00722	01043	01047				
P01337	KJ	00695	00811									
C21455	LLFIX											
C00304	LOST	00155	00160	00432								
C21453	LRFID											
C00330	MAXBOOST											
C00304	MAXBOT											
C00001	MAXMIT											
C00101	MAXLOAD											
C00000	MAXPOT	00135										
C00007	MAXSW											
C00003	MAXSYS											
C00051	MINLOAD											
C00136	MISS	00237	00237	00264	00264	00451	00444	00464	00517	00517	00703	00703
		00724	00724	01010	01010	01051	01051					
C00313	MTYPE	00544	00545									
P01340	NADC	00425	00445									
C00001	NARX	00174	00177	00552	00561	01021	01031					
P01341	NB	00176	00182	00105	00111	00117	00173	00375				
C04705	NDFX											
C00051	NDFXR	00476										
C00215	NDFXT	00552										
C04705	NDFXVAL	00250	00261	00261	00265	00265	00277	00308	00451	00461	00461	00465
		00465	00576	00576	00613	00613	01147					
P01342	NDROP	00173	00176	00201	00207	00322	00340					
C00002	NEXTRA											
C00220	NFREE	00324	00324	00424								
C00064	NHIT											
P01343	NIN	00175	00325									
C00035	NJSAVE	00171	00172	00210	00216	00364	00364	00373	00374			
C00303	NLOST	00133	00133	00134	00135	00143	00143	00153	00153	00154	00157	00157
		00424	00431	00431	00433	00434	00435					
C00135	NMISS	00170	00171	00210	00210	00232	00233	00251	00255	00255	00327	00327
		00452	00455	00455	00477	00503	00513	00513	00525	00525	00532	00532
		00606	00606	00673	00673	00717	00720	00776	00779	01044	01044	01143
		01143	01158									
C00513	NOK											
C00004	NPASS	00077	00077									
P01344	NSV	00403	00420									
C00000	NT											
C00002	NTAR											
C00765	NTS	00174	00174	00401	00401							
C21454	NTWAX											
C00003	NUMBOOST	00675	00675									
C00006	NV	00103	00103									
X00007	ORDER	00246	00447	00474	00500	01145						
X00010	OUTPUT	00411										
P01173	P00003.U	01177										
P01212	P00001.U	01216										
C00003	PEXTRA											
C00011	PN											
C00010	PURGE	00205	00205									
X00004	Q10045150	00524	00531									

X00002	21010100	00206									
X00005	DDDDICT.	00000	00061								
X00003	DDDSYDPS	00355									
X00023	DNSINGL.	01161									
C02737	R										
C00374	RHIT	00518									
C00003	RIN										
C00000	RP	00476	00522	00523	00624	00625	00633	00634	00654	00655	00662	00644
		01013	01020	01023	01030	01060	01061	01061	01077	01130		
C10627	RVAL											
C00144	RVALP	00760	00760	01035	01035	01111	01111	01130	01131			
C00376	SINAV	00540	00622	00622	00631	00631	00646	00646	00656	00657		
C00226	SINES	00623	00632	00653	00662	01037	01037	01052	01057	01075	01076	
P01345	SINEX	01040	01056	01072								
X00317	SINF	00536										
C00400	SINHIT	00507										
X00022	SLO.	00146										
C00002	SLZ											
X00016	SORTF	01121										
X00021	STH.	00140	00333									
C02734	TASK											
P01346	TDIST	00636	00636	00641	00666	00666	01102	01102				
P01347	TDOWN	00716	00762	00762	00764	01036	01112	01113	01132	01132	01134	01137
C02737	TGTLAT											
C05673	TGTLONG											
X00001	THEND.	00151	00336									
C05673	THETA											
C00027	THIN											
C00375	THIT	00507										
C00402	THOLD	00572										
C00241	THROWMAX											
C00001	TNZ	01127										
C00111	TOFLY											
C00062	TP	00502	00530	00530	01014	01021	01024	01031				
P00165	TS00001.	00127										
P00231	TS00002.	00217										
P00244	TS00003.	00234										
P00267	TS00004.	00256										
P00322	TS00005.	00274										
P00373	TS00006.	00365										
P00420	TS00007.	00405										
P00445	TS00010.	00436										
P00467	TS00011.	00456										
P00535	TS00012.	00510										
P00573	TS00013.	00574										
P00672	TS00014.	00010										
P00776	TS00015.	00701										
P00764	TS00016.	00721										
P01143	TS00017.	01006										
P01134	TS00020.	01045										
C00001	UDZ	00563	00564									
P01201	UP00000.	00126	00164	00241	00302	00400	00413	00512	00615	01012	01175	01202
		01203	01204	01211	01211							
P01220	UP00001.	00215	00254	00273	00321	00363	00404	00417	00427	00446	00454	00521

		00600	01214	01221	01222	01223	01230	01230
P01232	UP00014.	00705	01233	01234	01235	01242	01242	
P01244	UP00015.	00724	01245	01246	01247	01251	01252	
P01254	UP00016.	00726	01255	01256	01257	01262	01263	
C00881	UPDOWN	00562	00562	00563	01022	01022	01044	01044
X00013	UPTODOWN	00556	01016					
C00000	VAL	00244	00250	01135	01136	01147		
X00014	VALF	01125						
C00144	VALFIRST	01140	01141					
C00004	VMI*	01034	01034	01107	01107			
P00130	WS00001.	00166	00166					
P00222	WS00002.	00230						
P00237	WS00003.	00245						
P00261	WS00004.	00266						
P00275	WS00005.	00323	00323					
P00370	WS00006.	00372						
P00406	WS00007.	00421	00421					
P00431	WS00010.	00446	00446					
P00461	WS00011.	00466						
P00517	WS00012.	00534						
P00575	WS00013.	00674	00674					
P00613	WS00014.	00671						
P00702	WS00015.	00777	00777					
P00724	WS00016.	00763						
P01007	WS00017.	01144	01144					
P01051	WS00020.	01133						
X00015	XXINDF	00422						

00426 SYMBOLS

```
      SUBROUTINE BOOSTOUT                                                1000
CSUBR      BOOSTOUT  1JUN71  ************************************************ 3000
C                                                                        2000
CUSE       POTENT    1JUN71  ************************************************ 3000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), TOFLY(20 1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50) 2000
     2, AGE(50)                                                          3000
CEND       POTENT    ************************************************** 3000
CUSE       IEVAL     1JUN71  ************************************************ 4000
      COMMON /1/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),         1000
     1 D(50, 50)                                                         2000
CEND       IEVAL     ************************************************** 4000
CUSE       3COMP     1JUN71  ************************************************ 5000
      COMMON /3/ RP(50), TP(50), RVALP(50), SINES(50), COSINES(50),      1000
     1 AVRP, AVTHP, RHIT, THIT, SINAV, COSAV, SINHIT, COSINHIT, THOLD    2000
CEND       3COMP     ************************************************** 5000
CUSE       DEBUG     1JUN71  ************************************************ 6000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                  1000
CEND       DEBUG     ************************************************** 6000
CUSE       PRINT     1JUN71  ************************************************ 7000
      COMMON /PRINT/ ICALL, IMUST                                        1000
CEND       PRINT     ************************************************** 7000
C                                                                        8000
C     REMOVES TARGETS FROM HIT LIST AND RETURN INDICES TO USE            9000
C                                                                        10000
      IOTA=IOTA+1                                                        11000
      ICAMFROM(IOTA)=$HBOOSTOUT                                          12000
      ICALL=18                                                           13000
      CALL GOPRINT(10)                                                   14000
C                                                                        15000
C     GET BOOSTER ASSIGNMENT ENTERED                                     16000
C                                                                        17000
      CALL ASSIGN                                                        18000
C                                                                        19000
C     RESET INDICES                                                      20000
C                                                                        21000
      DO 10 I=1,NHIT                                                     22000
      J=IHIT(I)                                                          23000
      AGE(J)=0.0                                                         24000
      INVERSE(J)=0                                                       25000
      VALFIRST(J) = 0.                                                   26000
      JAFTER(J) = -1                                                     27000
      RP(J) = TP(J) = RVALP(J) = SINES(J) = 0.0                          28000
      COSINES(J) = 1.0                                                   29000
      IPOT(J) = 0                                                        30000
      NFREE=NFREE+1                                                      31000
   10 IFREE(NFREE)=J                                                     32000
      NHIT=0                                                             33000
      ICALL=47                                                           34000
      CALL GOPRINT(11)                                                   35000
      IOTA=IOTA-1                                                        36000
      RETURN                                                             37000
      END                                                                38000
```

IDENT BOOSTOUT

PROGRAM LENGTH		00180
ENTRY POINTS	BOOSTOUT	00004
BLOCK NAMES		
	POTENT	00532
	1	05156
	3	00403
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	QAQNICT.	
	QOPRINT	
	ASSIGN	

```
C00A5C  ASE         00034   00034
X00003  ASSIGN      00021
C00372  AVRP
C00373  AVTHP
P00066  BEGIN.      00067
P00004  BOOSTOUT    00004
C00377  COSAV
C00316  COSINFS     00044   00045
C00401  COSINHIT
C00226  COSTEFF
P00075  COUNT.      00027   00030
C00252  D
P00001  DICT.       00006   00017   00022   00061
P00070  ENDING.     00067   00065   00066   00067
P00000  EXIT.       00071
P00003  FORMAT.     00012
X00002  GOPRINT     00016   00060
P00076  I           00024   00027
C00000  ICALL       00015   00015   00057   00057
C00001  ICAMFROM    00014
C00221  ICPEE       00053
C00065  IHIT        00031   00031
C00001  IMUST
P00006  INITIAL.    00007
C00366  INVERSE     00035
C00058  IOTA        00010   00010   00011   00013   00013   00063   00063   00064
C00032  IPOT        00044   00046
P00051  .10
P00003  ..100000    00012
P00077  J           00032   00033   00051
C00062  JAFTER      00040
C00304  LOST
C00001  MAXHIT
C00000  MAXPOT
C00136  MISS
C00220  MPEE        00047   00051   00052   00052
C00064  MHIT        00024   00025   00055   00056
C00303  MLOST
C00135  MMISS
X00001  QBODICT.    00003   00005
C00376  RHIT
C00000  RP          00043
C00144  RVALP       00042
C00376  SINAV
C00226  SINES       00041   00041
C00400  SINHIT
C00375  THIT
C00402  THOLD
C00111  TOFLY
C00062  TP          00042
P00055  TS00001.    00026
C00000  VAL
C00144  VALFIRST    00033   00037
P00031  WS00001.    00054
   00066 SYMBOLS
```

```
      SUBROUTINE CHKSEQ                                                 1000
CSUBR      CHKSEQ    1JUN71    ********************************************* 31000
C                                                                       2000
CUSE       FOOTIO    1JUN71    ********** ****************************** 3000
      COMMON /FOOTIO/ MAXRV, ISYS, NTAR, RIN(20), THIN(20), IFEAS,      1000
     1 DELRSTRT, DELRAFT(20), FUELEFT                                   2000
CEND       FOOTIO    ********************************************************* 5000
CUSE       POTENT    1JUN71    ********************************************* 6000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), TOFLY(20 1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVENSE(50) 2000
     2, AGE(50)                                                         3000
CEND       POTENT    ********************************************************* 4000
CUSE       HPNTGT    1JUN71    ********************************************* 5000
      COMMON /HPNTGT/ IPOTGT, JAFT, JTGTD, NUMBOOS                      1000
CEND       HPNTGT    ********************************************************* 5000
CUSE       IEVAL     1JUN71    ********************************************* 6000
      COMMON /I/ VAL(50), JAFTER(50), VALLAST(50), COSTEFF(20),         1000
     1 D(50, 50)                                                        2000
CEND       IEVAL     ********************************************************* 6000
CUSE       DEBUG     1JUN71    ********************************************* 7000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                 1000
CEND       DEBUG     ********************************************************* 7000
CUSE       PRINT     1JUN71    ********************************************* 8000
      COMMON /PRINT/ ICALL, IMUST                                       1000
CEND       PRINT     ********************************************************* 8000
C                                                                       9000
C     CHECK SEQUENCE OF TARGETS IN HIT LISY                             10000
C                                                                       11000
      IOTA=IOTA+1                                                       12000
      ICAMFROM(IOTA)=8HCHKSEQ                                           13000
      ICALL=34                                                          14000
      CALL GOPRINT(10)                                                  15000
C                                                                       16000
      IPR = -1                                                          17000
      IF(NHIT.LE.1)900,10                                               18000
   10 ICHANGE = 0                                                       19000
      N = NHIT - 1                                                      20000
      I = 0                                                             21000
      DO 70 IT=1,N                                                      22000
      DELTA=0.0                                                         23000
      J=IHIT(IT)
      K=IHIT(IT+1)
      IF(IT.EQ.1)30,20
   20 I=IHIT(IT-1)                                                      24000
      DELTA=FLYDIST(I,K)-FLYDIST(I,J)+DELTA                             25000
   30 IF(IT.EQ.N)50,40                                                  26000
   40 L=IHIT(IT+2)                                                      27000
      DELTA=DELTA+FLYDIST(J,L)-FLYDIST(K,L)                             28000
   50 DELTA=DELTA+FLYDIST(K,J)-FLYDIST(J,K)                             29000
      IF(DELTA.LT.-.001)60,70                                           30000
   60 IF (IPR) 61, 61, 65                                               31000
   61 IPR = +1                                                          32000
      ICALL = 63                                                        33000
      CALL GOPRINT(11)                                                  34000
   65 ICHANGE = ICHANGE + 1                                             35000
      FSAVE = FUELEFT                                                   36000
```

```
      JAFT=K                                                        40000
      IPOTST=J                                                      41000
      COSTSAVE = COSTEFF(I).                                        42000
      CALL MISSIT                                                   43000
      CALL HITIT                                                    44000
      CALL TEST                                                     45000
      IF (FUELEFT - FSAVE) 66, 6 , 67                               46000
   66 CALL MISSIT                                                   47000
      JAFT = I                                                      48000
      CALL HITIT                                                    49000
      ICHANGE = ICHANGE - 1                                         50000
      GO TO 70                                                      51000
   67 COSTEFF(INVERSE(J)) = COSTSAVE                                52000
      ICALL = 63                                                    53000
      CALL GOPRINT(11)                                              54000
   70 CONTINUE                                                      55000
      IF (ICHANGE .GT. 0) 10, 900                                   56000
  900 IOTA=IOTA-1                                                   57000
      RETURN                                                        58000
      END                                                           59000
```

IDENT CHKSEQ

PROGRAM LENGTH		00231
ENTRY POINTS	CHKSEQ	00004
BLOCK NAMES		
	FOOTIC	04102
	PATENT	00532
	WENTGT	00004
	1	05156
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	QRGDICT,	
	GOPRINT	
	FLYDIST	
	MISSIT	
	HITIT	
	TEST	

C00450	AGE											
P00205	BEGIN.	00206										
P00004	CHKSEQ	00004										
C00236	COSTEFF	00134	00135	00166	00167							
P00216	COSTSAVE	00134	00165									
C00252	D											
C00055	DELRAFT											
C00054	DELRSTRT											
P00217	DELTA	00036	00060	00060	00072	00077	00103	00111				
P00001	DICT.	00004	00017	00051	00055	00070	00074	00101	00106	00122	00140	00142
		00144	00152	00154	00172							
P00207	ENDING.	00007	00204	00205								
P00000	EXIT.	00210										
X00003	FLYDIST	00050	00054	00067	00073	00100	00105					
P00003	FORMAT.	00012										
P00220	FSAVE	00127	00144									
C00101	FUELEFF	00124	00125	00145	00145							
X00002	GOPRINT	00016	00121	00171								
X00005	HITIT	00141	00155									
P00221	I	00032	00047	00052	00056	00153						
C00000	ICALL	00015	00015	00126	00126	00170	00170					
C00001	ICAMFROM	00014										
P00222	ICHANGE	00027	00124	00125	00157	00160	00177					
C00053	IFFAS											
C00221	IFREF											
C00005	IHIT	00037	00037	00041	00041	00046	00046	00085	00085			
C00001	IMUST											
P00205	INITIAL.	00007										
C00366	INVERSE	00163	00163									
C00000	IOTA	00010	00010	00012	00013	00013	00202	00202	00203			
C00002	IPCT											
C00000	IPOTGT	00132	00133									
P00223	IPR	00022	00113	00117								
C00001	ISYS											
P00224	IT	00033	00036	00043	00045	00061	00064	00134	00174			
P00026	.10	00024	00201									
P00045	.20	00044										
P00061	.30	00044										
P00064	.40	00062										
P00100	.50	00063										
P00113	.60											
P00116	.61	00114	00114									
P00124	.65	00115										
P00151	.66	00147										
P00162	.67	00147	00150									
P00174	.70	00112	00112	00161								
P00202	.900	00024	00025	00200	00200							
P00217	.ERASER.	00053	00057	00072	00076	00104	00110					
P00001	..100000	00012										
P00211	.NSTIFF.	00165	00166									
P00225	J	00040	00056	00071	00102	00107	00132	00162				
C00001	JAFT	00130	00131	00154	00154							
C00002	JAFTCP											
C00002	JTGTO											

```
P00226  K          00042   00052   00075   00102   00107   00130
P00227  L          00066   00071   00075
C00304  LOST
C00001  MAXHIT
C00000  MAXPOT
C00000  MAXPW
C00134  MISS
X00004  MISSIT     00137   00151
P00230  N          00031   00062   00175
C00220  NFREE
C00064  NHIT       00022   00023   00027   00030
C00303  NLOST
C00135  NMISS
C00002  NTAB
C00003  NUMBOOST
X00001  QBOOICT.   00000   00005
C00033  RIN
X00006  TEST       00143
C00027  THIN
C00111  TOPLY
P00175  TS00001.   00034
C00000  VAL
C00144  VALFIRST
P00035  WS00001.   00176   00176
   00115 SYMBOLS
```

```
      FUNCTION CRSTODWN(I,R,AZ,N)                                          1000
CSUBR      CRSTODWN  1JUN71    ***********************************          32000
C                                                                          2000
CUSE       FOOTDATA  1JUN71    ***********************************          3000
      COMMON /FOOTDATA/ GAS(2),RX(2,2),RAX(2,2),TOSSC1(2,2,2),TOSSC2(2,    1000
     12,2),TEONE(2,2),TETWO(2,2),TDENOM(2),RBASIC(2,2),RADD(2,2),ECONE(2)  2000
     2,ETWO(2), DENOM, CONE(2,2), CTWO(2,2), LLNGDAT                       3000
C                                                                          4000
      COMMON /SHRTDAT/ ALPHAZ(16),ALPHA1(16),ALPHA2(16),BETAZ(16),BETA1    5000
     1(16),BETA2(16),MAXRBOST(16),GTWO,GONE,GZERO,DONE,DZERO,LSHTDAT       6000
C                                                                          7000
      TYPE REAL MAXRBOST                                                   8000
C                                                                          9000
      COMMON /PENADD/ TOTFUEL, SRFC1(2), SRFC2(2), SRFEXP1(2)              10000
     1            , SRFEXP2(2), SRFDEN, LPENDAT                            11000
C                                                                          12000
C                                                                          13000
C                                                                          14000
      DATA (LLNGDAT = 57)                                                  15000
     1       , (LSHTDAT = 117)                                             16000
     2       , (LPENDAT = 67)                                              17000
C                                                                          18000
CEND       FOOTDATA  ***********************************                   3000
C                                                                          4000
      GO TO (1000, 2000, 1000, 11000), I                                   5000
C                                                                          6000
C     LONG RANGE SYSTEM                                                    7000
C                                                                          8000
 1000 JSIGN=1                                                              9000
      IF(AZ.LT.0)1010,1020                                                 10000
 1010 JSIGN=2                                                              11000
 1020 GO TO (1100,1100,1200),N                                             12000
C                                                                          13000
C     TWO RVS                                                              14000
C                                                                          15000
 1100 JRV=1                                                                16000
      GO TO 1900                                                           17000
C     THREE RVS                                                            18000
 1200 JRV=2                                                                19000
 1900 SINAZ=SINF(AZ)                                                       20000
      RM = RBASIC(JRV,JSIGN) + (RADD(JRV,JSIGN) * SINAZ)                   21000
      RC = (RM - R) / DENOM                                                22000
      RC = MAXIF(RC, 0.)                                                   23000
      G = EXPF(EONE(JRV)  * (RC ** ETWO(JRV)))                             24000
      CRSTODWN=G*(CONE(JRV,JSIGN)+CTWO(JRV,JSIGN)*SINAZ)                   25000
      RETURN                                                               26000
C                                                                          27000
C     SHORT RANGE SYSTEM                                                   28000
C                                                                          29000
 2000 R2=R*R                                                               30000
      CRSTODWN=(GTWO*R2)+(GONE*R)+GZERO                                    31000
      RETURN                                                               32000
C                                                                          33000
11000 PRINT 11001,I                                                        34000
11001 FORMAT(///1X,15(1H*),38H THERE IS NO DATA FOR MIRV SYSTEM NO. ,I4)    35000
      CRSTODWN = 1.E+7                                                     36000
```

```
      RETURN                                    37000
      END                                       38000
```

IDENT CRSTODWN

PROGRAM LENGTH		00260
ENTRY POINTS	CRSTODWN	00022
BLOCK NAMES		
	FJOTDATA	00072
	SHRTDAT	00166
	PENADD	00013
EXTERNAL SYMBOLS		
	Q2007111	
	THEND.	
	Q8D01CT.	
	SINF	
	MAXIF	
	EXPF	
	STM.	
	QJSINGL.	

C00920	ALPHA1									
C00040	ALPHA2									
C00000	ALPHAZ									
P00003	AZ	00036	00057							
P00164	BEGIN.	00226	00235	00241						
C00100	BETA1									
C00120	BETA2									
C00060	BETAZ									
P00144	CNVRTI.	00135								
C00061	CONE	00111	00112							
P00093	CRFMT.	00140								
P00022	CRSTCDWN	00022								
C00065	CTWO	00107	00110							
C00060	DENOM	00070	00071							
P00001	DICT.	00074	00061	00074	00100	00106	00132	00137	00167	00170
C00163	DONE									
C00164	DZERO									
P00227	ENDING.	00025	00114	00127	00141	00164	00165	00165	00166	00166
C00054	EONE	00103	00103							
C00056	ETWO	00102	00102							
P00000	EXIT.	00233								
X00004	EXPF	00105								
P00003	FORMAT.									
P00026	FP00001.	00176	00177							
P00036	FP00002.	00216	00217							
P00044	FP00003.	00224	00225							
P00057	FP00004.	00220	00221							
P00067	FP00005.	00210	00211							
P00115	FP00006.	00206	00207							
P00115	FP00007.	00204	00205							
P00123	FP00010.	00217	00213							
P00134	FP00011.	00203	00201							
P00250	G	00107	00113							
C00000	GAS									
P00244	GETPL.	00171	00202	00222						
P00234	GETPU.	00174	00214	00243						
P00140	G600000.	00130								
C00161	GONE	00122	00123							
C00140	GTWO	00120	00120							
C00162	GZERO	00125	00126							
P00003	I	00026	00134							
P00251	IGOTO.	00027	00045							
P00145	IN00001.	00063	00153	00162						
P00164	INITIAL.	00025								
P00033	.1000	00030	00032							
P00041	.1010									
P00044	.1020	00040	00040							
P00050	.1100	00046	00047							
P00130	.11000	00032								
P00054	.1200	00047								
P00057	.1900	00053								
P00115	.2000	00031								
P00245	.ERASER.	00104	00122	00125						
P00003	..11001	00133								

```
P00252  JRV         00051   00055   00076   00157
P00253  JSIEN       00034   00042   00150
C00071  LLNGDAT     00003
C00012  LPENDAT     C00166
C00165  LSMTDAT     C00072
X00005  MAXIF       00073
C00140  MAXPROST
P00003  N           00044
P00202  PF000002.   00175
P00214  PF000003.   00203
P00222  PF000004.   00215
P00226  PF000005.   00223
X00001  QZ007111    00077
X00003  QRQCICT.    00000   00023
X00010  QRSINGL.    00143
P00003  R           00070   00115   00118   00124
P00254  R2          00117   00121
C00050  RADD        00063   00064
C00006  RAX
C00044  RBASIC      00065   00066
P00255  RC          00072   00075   00076   00101
P00256  RM          00067
C00002  RX
P00257  SIN47       00062   00065   00111
X00004  SIWF        00060
C00001  SPEC1
C00003  SPEC2
C00011  SPENEW
C00005  SPEXP1
C00007  SPEXP2
X00007  STM.        00131
C00042  TDENOM
C00032  TDONE
C00036  TETWO
X00002  TWENO.      00136
C00012  TOSSC1
C00022  TOSSC2
C00030  TOTFUEL
P00147  UP000000.   00035   00043   00150   00151   00152   00154   00154
P00150  UP000001.   00052   00056   00157   00160   00161   00163   00163
P00142  VALUE.      00113   00127   00141   00232
   00137 SP480
```

```
      SUBROUTINE EVAL                                                    1000
CSUBR      EVAL      7SEP71    ************************************      3400
C                                                                        2000
C     THIS ROUTINE EVALUATES THE VALUE MATRICES WHENEVER THE POTENTIAL   3000
C     TARGET ARRAYS ARE CHANGED. ENTRY REVAL IS USED WHEN THERE IS A NEW 4000
C     FIRST TARGET IN THE FOOTPRINT                                      5000
C                                                                        6000
CUSE       RAIDATA   1JUN71    ************************************      7000
C                                                                        1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)      2000
     1           , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)    3000
     2                 , LRAID, NTMAX, LLFIX(1500)                       4000
C                                                                        5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(16)  6000
C                                                                        7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK,   8000
     1DLONG), (IDUM, INDEX)                                              9000
C                                                                        10000
      TYPE LOGICAL LLFIX                                                 11000
C                                                                        12000
      COMMON/A/ DESIG(1500), TASK(1500), CNTRYLOC(1500), FLAG(1500)      13000
C                                                                        14000
CEND       RAIDATA   ************************************************  7000
CUSE       CONTROL   1JUN71    ************************************      8000
      COMMON /CONTROL/ NV, NARV, NEXTRA, PEXTRA, NPASS, FRACLOOK,        1000
     1                 MAXFOOT, DELAGE, PURGE, PN, EXTRAR, NGK           2000
     2               ,IGSTART,IGEND                                      3000
CEND       CONTROL   ************************************************  8000
CUSE       DSQUARE   1JUN71    ************************************      9000
      COMMON /DSQUARE/ CD2, UD2, DEL2, DZ2, VMIN                         1000
CEND       DSQUARE   ************************************************  9000
CUSE       FOOTIO    1JUN71    ************************************      10000
      COMMON /FOOTIO/ MAXRV, ISYS, NTAR, RIN(20), THIN(20), IFEAS,       1000
     1 DELSTRT, DELRAFT(20), FUELEFT                                     2000
CEND       FOOTIO    ************************************************  10000
CUSE       PARAMETR  1JUN71    ************************************      11000
      COMMON /PARAMETR/ MAXSYS, IPNAME(40), MINLOAD(40), MAXLOAD(40),    1000
     1  DSPACE(40), THROWMAX(40), MTYPE(40), IDATA(40)                    2000
CEND       PARAMETR  ************************************************  11000
CUSE       POTENT    1JUN71    ************************************      12000
      COMMON /POTENT/ MAXPOT, MAXMIT, IPOT(50), NMIT, IMIT(20), TOFLY(20 1000
     1), CMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50) 2000
     2, AGE(50)                                                          3000
CEND       POTENT    ************************************************  12000
CUSE       RANGE     1JUN71    ************************************      13000
      COMMON /RANGE/ CROSSDWN, UPDOWN, DELMIN, DEFAULT                   1000
CEND       RANGE     ************************************************  13000
CUSE       VALPARM   1JUN71    ************************************      14000
      COMMON /VALPARM/ DZ, TNZ, SLZ                                      1000
CEND       VALPARM   ************************************************  14000
CUSE       IEVAL     1JUN71    ************************************      15000
      COMMON /I/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),         1000
     1 D(50, 50)                                                         2000
CEND       IEVAL     ************************************************  15000
CUSE       ZSTATUS   1JUN71    ************************************      16000
C                                                                        1000
```

```
      COMMON/ 2/ MAXBOOST, IBOOST(500), NTR(500)                          2000
     1          , ISTATUS(1500), NDEX(1500)                               3000
C                                                                         4000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                         5000
C                                                                         6000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXR),(NDEX(201), NDEXT)  7000
C                                                                         8000
CEND      2STATUS    ********************************************        16000
CUSE      3COMP      1JUN71     ********************************        17000
      COMMON /3/ RP(50), TP(50), RVALP(50), SINES(50), COSINES(50),       1000
     1 AVRP, AVTHP, RHIT, THIT, SINAV, COSAV, SINHIT, COSINHIT, THOLD     2000
CEND      3COMP      ********************************************        17000
CUSE      DEBUG      1JUN71     ********************************        18000
      COMMON /DEBUG/ IOTA, ICAMEFROM(20)                                  1000
CEND      DEBUG      ********************************************        18000
CUSE      PRINT      1JUN71     ********************************        19000
      COMMON /PRINT/ ICALL, IMUST                                         1000
CEND      PRINT      ********************************************        19000
C                                                                         20000
      DIMENSION IVAL(50)                                                  21000
      EQUIVALENCE(IVAL,VAL)                                               22000
      DATA (AZDIFF = .01)                                                 23000
      DIMENSION DEN(20)                                                   24000
C                                                                         25000
C     ENTRY EVAL                                                          26000
      IOTA=IOTA+1                                                         27000
      ICAMEFROM(IOTA)=8HEVAL                                              28000
      ICALL=30                                                            29000
      CALL BOPRINT(10)                                                    30000
      ICSAVE = 54                                                         31000
C                                                                         32000
 1000 IS = NTYPE(ISYS)                                                    33000
      IF (NMISS) 9000, 9000, 1005                                         34000
 1005 IF(NHIT.LT.1)1010,1020                                              35000
 1010 RE=AVRP                                                             36000
      TE=AVTHP                                                            37000
      NRV=NARV                                                            38000
      GO TO 1030                                                          39000
 1020 RE=RHIT                                                             40000
      TE=THIT                                                             41000
      NRV=NHIT+1                                                          42000
 1030 CROSSDWN=CRSTODWN(IS,RE,TE,NRV)                                     43000
      UPDOWN=UPTODOWN(IS,RE,TE,NRV)                                       44000
      CD2 = CROSSDWN * CROSSDWN                                           45000
      UD2 = UPDOWN * UPDOWN                                               46000
C                                                                         47000
C     FIND SEQUENCE FOR NEW TARGET AND VALUE                              48000
C                                                                         49000
      FN = TNZ + SLZ * NHIT                                               50000
      DO 1040 I = 1, NHIT                                                 51000
 1040 DEN(I) = I. / DELRAFT(I)                                            52000
      DSEN = I. / DELRSTRT                                                53000
      CALL CHKSEQ                                                         54000
      DO 1200 II=1,NMISS                                                  55000
      J = MISS(II)                                                        56000
      IF (NHIT .LT. 1) 1180, 1200                                         57000
```

```
 1100 JAFTER(J) = 0                                                    58000
      DMAX = DZ                                                        59000
      GO TO 1265                                                       60000
 1200 JAF = -1                                                         61000
      DMAX=0.                                                          62000
      FMAX = 0.                                                        63000
      L=IHIT(1)                                                        64000
      DLEFT=DELRSTRT-FLYDIST(J,L)                                      65000
      FTEST = DLEFT * DSEN                                             66000
      IF (FTEST .GT. FMAX) 1210, 1220                                  67000
 1210 JAF=0                                                            68000
      DMAX=DLEFT                                                       69000
      FMAX = FTEST                                                     70000
 1220 NN=NHIT-1                                                        71000
      DO 1240 I=1,NN                                                   72000
      K=L                                                              73000
      L=IHIT(I+1)                                                      74000
      DLEFT=DELRAFT(I)-(FLYDIST(K,J)-FLYDIST(J,L)-TOFLY(I))            75000
      FTEST = DLEFT * DEN(I)                                           76000
      IF (FTEST .GT. FMAX) 1230, 1240                                  77000
 1230 JAF=K                                                            78000
      DMAX=DLEFT                                                       79000
      FMAX = FTEST                                                     80000
 1240 CONTINUE                                                         81000
      DLEFT=DELRAFT(NHIT)-FLYDIST(L,J)                                 82000
      FTEST = DLEFT * DEN(NHIT)                                        83000
      IF (FTEST .GT. FMAX) 1250, 1260                                  84000
 1250 JAF=L                                                            85000
      DMAX=DLEFT                                                       86000
 1260 JAFTER(J)=JAF                                                    87000
      TV = 0.0                                                         88000
      IF (JAF .LT. 0) 1280, 1265                                       89000
 1265 TV = RVALP(J) * (1.0 - VALF(DELMIN/DMAX, FN))                    90000
      DO 1270  IJ = 1, NMISS                                           91000
      K=MISS(IJ)                                                       92000
      ALPHA=FLYDIST(J,K)/DMAX                                          93000
 1270 TV = TV + VALF(ALPHA, FN) * RVALP(K)                             94000
 1280 VAL(II)=-TV                                                      95000
      CALL ORDER(VAL,NDEXVAL,NMISS)                                    96000
      DO 1290 I=1,NMISS                                                97000
 1290 VAL(I)=-VAL(I)                                                   98000
 9000 ICALL = ICSAVE                                                   99000
      CALL GOPRINT(15)                                                100000
      ICALL=ST                                                        101000
      CALL GOPRINT(9)                                                 102000
      IOTA=IOTA-1                                                     103000
      RETURN                                                          104000
C                                                                     105000
      ENTRY REVAL                                                     106000
      IOTA=IOTA+1                                                     107000
      ICAMFROM(IOTA)=8HREVAL                                          108000
      ICALL =31                                                       109000
      CALL GOPRINT(10)                                                110000
C                                                                     111000
C     RECOMPUTE ALL PARAMETERS                                        112000
      IF(NHIT.LT.1)1000,10
```

```
   10 IFIRST=IHIT(1)                                                    113000
      RHIT=RP(IFIRST)                                                   114000
      THIT=TP(IFIRST)                                                   115000
      IF (ABSF(THIT - THOLD) .GT. AZDIFF) 15, 50                        116000
   15 SINNHIT=SINES(IFIRST)                                             117000
      COSINHIT=COSINES(IFIRST)                                          118000
      N=0                                                               119000
      DO 20 I=1,NHIT                                                    120000
      N=N+1                                                             121000
   20 IVAL(N)=IHIT(I)                                                   122000
      DO 30 I=1,NMISS                                                   123000
      N=N+1                                                             124000
   30 IVAL(N)=MISS(I)                                                   125000
      CALL ORDER(IVAL,NDEXVAL,N)                                        126000
      CALL REORDER(NDEXVAL,N,1,IVAL,0,0,0,0,0,0)                        127000
   35 DO 40 K=1,N                                                       128000
      I=IVAL(K)                                                         129000
      KI=K+1                                                            130000
      DO 40 KJ=KI,N                                                     131000
      J=IVAL(KJ)                                                        132000
C                                                                       133000
C     DOWNRANGE                                                         134000
C                                                                       135000
      TDIST = (RP(J) * (COSINHIT * COSINES(J) + SINNIT * SINES(J))) -   135000
     1        (RP(I) * (COSINHIT * COSINES(I) + SINNIT * SINES(I)))     137000
      D(I,J) = TDIST * TDIST                                            138000
      IF (TDIST) 37, 38, 38                                             139000
   37 D(I,J) = -D(I,J)                                                  140000
C                                                                       141000
C     CROSS RANGE                                                       142000
C                                                                       143000
   38 TDIST = (RP(J) * (SINNHIT * COSINES(J) - COSINHIT * SINES(J))) -  144000
     1        (RP(I) * (SINNHIT * COSINES(I) - COSINHIT * SINES(I)))     145000
      D(J,I) = TDIST * TDIST                                            146000
   40 CONTINUE                                                          147000
      THOLD=THIT                                                        148000
   50 ICALL=55                                                          149000
      CALL GOPRINT(20)                                                  150000
      ICSAVE = 55                                                       151000
      GO TO 1000                                                        152000
C                                                                       153000
      END                                                               154000
```

IDENT EVAL

PROGRAM LENGTH		00677
ENTRY POINTS	EVAL	00032
	REVAL	00382
BLOCK NAMES		
	RAIDATA	21531
	A	13560
	CONTROL	00016
	DSQUARE	00088
	ECOTIO	00102
	PARAMETR	00431
	POTENT	00532
	RANGE	00004
	VALPARM	00003
	1	05156
	2	07641
	3	00463
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	G1204100	
	QAUDICT.	
	GOPRINT	
	CHSTODWN	
	UPTODOWN	
	CHKSEG	
	CLYCIST	
	VALF	
	ORDER	
	REORDER	

```
C00450  AGE
P00644  ALPHA       00311   00314
C00372  AVRP        00061   00061
C00373  AVTMP       00063   00063
P00027  AZDIFF      00412
P00624  BEGIN.      00626
C00000  CDZ         00111   00112
X00006  CHKSEG      00137
C03670  CNTRYLOC
C00377  COSAV
C00310  COSINES     00416   00506   00506   00515   00536   00536   00545
C00401  COSINHIT    00417   00504   00504   00514   00515   00543   00540   00547   00547
C00226  COSTEFF
P00645  COUNT.      00126   00127   00210   00211   00302   00303   00341   00342   00425   00426   00442
                    00443   00477   00500
C00003  CROSSDWN    00103   00103   00110   00111
X00004  CRSTODWN    00077
C00252  D           00525   00526   00532   00537   00533   00555   00556
C00003  DEFAULT
C00002  DELZ
C00007  DELAGE
C00002  DELMIN      00265   00265
C00055  DELREFT     00131   00131   00227   00227   00245   00246
C00054  DELRSTRT    00135   00135   00170   00171
P00003  DEN         00132   00231   00247
C00000  DESIG
P00001  DICT.       00034   00045   00100   00105   00146   00146   00217   00223   00242   00271   00387
                    00313   00331   00351   00355   00364   00375   00453   00457   00570
C13563  DLAT
P00646  DLEFT       00172   00177   00230   00235   00247   00254
C15517  DLONG
P00647  DMAX        00156   00161   00200   00236   00255   00266   00311
P00650  DSEN        00136   00172
C00171  DSPACE
C00000  DZ          00154   00155
C00003  DZZ
P00627  ENDING.     00335   00361   00365   00624   00625   00625   00626
P00032  EVAL        00032
P00000  EXIT.       00631
C00012  EXTRAR
C10624  FLAG
X00007  FLYDIST     00165   00216   00223   00241   00306
P00651  FMAX        00182   00174   00201   00232   00237   00251
P00652  FN          00121   00272   00314
P00030  FORMAT.     00046   00378
C00005  FRACLOOK
P00653  FTEST       00173   00173   00200   00231   00232   00235   00250   00252
C00101  FUELEFT
X00003  GOPRINT     00044   00350   00354   00374   00567
P00654  I           00122   00127   00205   00211   00335   00342   00421   00426   00436   00443   00471
                    00506   00604
C16517  IBACK
C00001  IBOOST
C00000  ICALL       00043   00043   00347   00347   00353   00373   00373   00565   00566
```

C00071	IOAMESS	00042	00372								
P00466	IOSAVE	00050	00346	00573							
C00361	IOATA										
C00003	IOUM										
C00053	IPEAS										
P00452	IPIRST	00403	00404	00414							
C13581	IPOR										
C00221	IPREF										
C00015	ISEND										
C00101	ISSTART										
C00045	IWIT	00102	00169	00213	00214	00402	00402	00431	00431		
C00001	IWNAME										
P00657	IX	00141	00143	00323	00335						
P00660	IY	00277	00302								
C00001	IWUST										
P00574	INDOOI4.	00525	00531	00576	00607	00622					
P00575	INDOOI5.	00555	00577	00611	00628						
C00003	INDEX										
P00624	INITIAL.	00035	00365								
00366	INVERSE										
C00002	IOTA	00036	00036	00037	00041	00041	00357	00357	00360	00366	00366	00367
		00371	00371								
C00002	IPOT										
P00651	IS	00053	00101	00106							
C01751	ISTATUS										
C00001	ISYS	00051	00051								
C00000	IVAL	00433	00433	00450	00450	00454	00441	00470	00470	00501	00501	
P00051	.1000	00401	00573								
P00402	.10	00408	00401								
P00056	.1005										
P00061	.1010										
P00070	.1020	00057	00060								
P00077	.1030	00067									
P00130	.1040										
P00152	.1105										
P00157	.1200	00150	00151								
P00176	.1210										
P00202	.1220	00174	00175								
P00234	.1230										
P00240	.1240	00233	00233								
P00253	.1250										
P00256	.1260	00251	00252								
P00265	.1265	00158	00263	00263							
P00312	.1270										
P00322	.1280	00264									
P00343	.1290										
P00414	.15										
P00431	.20										
P00446	.30										
P00447	.35										
P00531	.37	00530									
P00534	.38	00527	00530								
P00557	.40										
P00565	.50	00413	00413								

```
P00346  .9000    00055   00055
P00433  .PHASER. 00221   00225   00267   00272   00410   00507   00512   00514   00516   00521   00523
                 00537   00542   00544   00548   00551   00553
P00030  ..1..0000 00040
P00031  ..100001 00070
P00662  J        00145   00153   00167   00220   00224   00243   00257   00274   00310   00502   00505
                 00535   00615
P00663  JAF      00160   00177   00235   00254   00256   00262
C00062  JAFTR    00150   00154   00257   00263
C00002  JCOPR
C00001  JGROUP
P00664  K        00213   00220   00234   00305   00310   00315   00466   00467   00473   00560
P00665  KI       00474   00476   00476
P00666  KJ       00475   00477
P00667  L        00164   00167   00212   00215   00224   00243   00253
C21455  LLFIX
C00304  LOST
C21453  LPAIR
C00003  MAXBOOST
C00006  MAXFOOT
C00001  MAXHIT
C00121  MAXLOAD
C00000  MAXPOT
C00002  MAXRV
C00003  MAXSYS
C00051  MINLOAD
C00136  MISS     00144   00144   00304   00304   00446   00446
C00311  MTYPE    00052   00052
P00670  N        00420   00427   00430   00432   00444   00445   00447   00455   00460   00475   00561
C00001  NARV     00065   00065
C14705  NDEX
C05051  NDEXP
C05215  NDEXT
C04705  NDEXVAL  00332   00454   00450
C00002  NEXTRA
C00223  NFREE
C00044  NHIT     00056   00056   00074   00074   00117   00117   00124   00124   00147   00147   00202
                 00202   00244   00245   00377   00377   00423   00423
C00303  NLOST
C00135  NMISS    00054   00054   00277   00300   00326   00328   00333   00337   00337   00440   00440
P00671  NN       00204   00207
C00013  NOK
C00004  NPASS
P00672  NPV      00066   00076   00102   00107
C00000  NT
C00002  NTAR
C03765  NTP
C21454  NTMAX
C00003  NW
X00011  ORDER    00330   00452
P00576  P00000.0 00601
C00003  PEXTRA
C00011  P.
C00010  PURGE
```

X00001	$1024100	00116									
X00002	$PROFILE.	00000	00033	00363							
C00737	$										
P00673	$F	00062	00071	00151	00166						
X00012	$FOR=FR	00456									
P00362	$EVAL	00342									
C00374	$EXIT	00070	00072	00405							
C00003	$IN										
C00000	$P	00404	00405	00512	00513	00521	00522	00542	00543	00551	00552
C01627	$VAL										
C00144	$VALUP	00276	00275	00316	00316						
C00376	SINAV										
C00226	SINES	00415	00415	00511	00520	00541	00550				
C00400	SINEXT	00418	00510	00510	00517	00517	00534	00534	00544	00545	
C00002	SLZ	00115	00115								
C02736	TASK										
P00674	TDIST	00524	00524	00527	00554	00554					
P00675	TF	00044	00073	00102	00103						
C02737	TGTLAT										
C05673	TGTLONG										
C05673	THETA										
C00027	THIN										
C00375	THIT	00072	00072	00406	00563	00563					
C00402	THTLP	00407	00564								
C00241	THRO=MAX										
C00301	TKZ	00120									
C00111	TOFLY	00225	00224								
C01062	TP	00406									
P00134	TS00001.	00125									
P00328	TS00002.	00142									
P00241	TS00003.	00210									
P00322	TS00004.	00301									
P00344	TS00005.	00346									
P00435	TS00006.	00424									
P00452	TS00007.	00441									
P00561	TS00010.	00466									
P00569	TS00011.	00476									
P00076	TV	00261	00276	00317	00320	00322					
C00001	UP2	00114	00114								
P00603	UPD3000.	00123	00206	00336	00422	00437	00472	00577	00604	00605	00606	00611
		00617									
P00614	UP00012.	00144	00503	00615	00516	00617	00622	00623			
C00001	UP00=A	00110	00112	00113	00113						
X00005	UPTO00=A	00104									
C00000	VAL	00323	00324	00332	00343	00343	00344				
X00010	VALF	00270	00312								
C00144	VALFIRST										
C00004	VMIN										
P00136	=S00001.	00133									
P00143	=S00002.	00327	00327								
P00212	=S00003.	00260									
P00304	=S00004.	00321									
P00343	=S00005.	00345									
P00427	=S00006.	00434									

```
P0F444  =S00007.   00451
P00467  =S00010.   00562   00562
P00521  =S00011.   00557
   00323 SYMBOLS
```

```
      FUNCTION FLYDIST(N,M)                                              1000
CSUBR      FLYDIST   1,UNIT   ***********************************       3500
C                                                                        2000
CUSF       DSQUARE   1,UNIT   ***********************************       3000
      COMMON /DSQUARE/ DD2, UD2, DEL2, DZ2, VMIN                         1000
CEND       DSQUARE   ***************************************************3000
CUSF       RANGE     1,UNIT   ***********************************       4000
      COMMON /RANGE/ CROSSDWN, UPDOWN, DELMIN, DEFAULT                   1000
CEND       RANGE     ***************************************************4000
CUSF       IEVAL     1,UNIT   ***********************************       5000
      COMMON /I/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),         1000
     1 D(50, 50)                                                         2000
CEND       IEVAL     ***************************************************5000
C                                                                        6000
      I = N                                                              7000
      J = M                                                              8000
      D1 = D(I,J)                                                        9000
      D2 = D(J,I)                                                       10000
      IF (I-J) 10, 23, 30                                               11000
   10 DOWN = D1                                                         12000
      CROSS = D2 * DD2                                                  13000
      GO TO 40                                                          14000
   23 FLYDIST = DELMIN                                                  15000
      RETURN                                                            16000
   30 DOWN = - D2                                                       17000
      CROSS = D1 * DD2                                                  18000
   40 IF(DOWN) 53, 60, 63                                               19000
   53 DOWN = -DOWN * UD2                                                20000
   63 DOWN = DOWN + CROSS                                               21000
      IF (DOWN - DEL2) 73, 20, 70                                       22000
   70 FLYDIST = SQRTF( DOWN)                                            23000
      RETURN                                                            24000
      END                                                               25000
```

IDENT FLYDIST

PROGRAM LENGTH		00152
ENTRY POINTS	FLYDIST	00003
BLOCK NAMES		
	DSQUARE	00005
	RANGE	00004
	I	05156
EXTERNAL SYMBOLS		
	GRODICT.	
	SORTF	

```
P00104  BEGIN.      00128   00133   00137
C00000  CD2         0002    00027   00037   00037
C00224  COSTEFF
P00144  CROSS       00[illegible]   00040   00050
C00036  CROSSDWN
C00252  D           000[illegible]   00016   00020   00020
P00145  D1          00[illegible]   00025   00036
P00146  D2          00[illegible]   00026   00035
C00013  DEFAULT
C00002  DELZ        00051   00051
C00002  DELMIN      00032   00032
P00001  DICT.       00005   00055   00107   00110
P00147  DOWN        00036   00036   00041   00044   00046   00047   00050   00053
C00003  DZZ
P00125  ENDING.     00036   00034   00056   00104   00105   00105   00106   00106
P00000  EXIT.       00[illegible]
P00003  FLYDIST     00003
P00007  FP00001.    00116   00117
C00012  FP00002.    00122   00123
P00142  GETPL.      00[illegible]   00120
P00132  GETPU.      00[illegible]   00136
P00150  I           00010   00022   00064
P00060  IN00001.    00[illegible]   00067   00102
P00061  IN00002.    00[illegible]   00071   00100
P00134  INITIAL.    00006
P00025  .10         00023
P00032  .20         00[illegible]   00052   00052
P00035  .30         00024
P00041  .40         00031
P00044  .50         000[illegible]
P00047  .60         000[illegible]   00043
P00053  .70
P00151  J           000[illegible]   00022   00075
C00062  JAFTER
P00003  M           00002
P00003  N           00[illegible]
P00120  PF00002.    00[illegible]
P00124  PF00003.    00[illegible]
X00001  SPROJCT.    00[illegible]   00004
X00002  SQRTF       00[illegible]
C00001  UD2         00[illegible]   00005
P00063  UP00000.    0[illegible]   00064   00065   00066   00071   00072
P00074  UP00001.    00[illegible]   00075   00076   00077   00102   00103
C00001  UPDOWN
C00000  VAL
C00144  VALFIRST
P00057  VALUE.      00033   00056   00130
C00004  VMIS
   00060 SYMBOLS
```

```
      SUBROUTINE FOOTEST                                                1000
CSUBR      FOOTEST   1JUN71    ***************************************** 35000
C                                                                       2000
C     TEST FOOTPRINT FEASABILITY                                        3000
C                                                                       4000
CUSE       FOOTIO    1JUN71    ***************************************** 5000
      COMMON /FOOTIO/ MAXRV, ISYS, NTAR, RIN(20), THIN(20), IFFAS,      1000
     1 DELRSTRT, DELRAFT(20), FUELEFT                                   2000
CEND       FOOTIO    ***************************************************** 5000
CUSE       PARAMETR  1JUN71    ***************************************** 6000
      COMMON /PARAMETR/ MAXSYS, IHNAME(40), MINLOAD(40), MAXLOAD(40),   1000
     1  DSPACE(40), THROWMAX(40), MTYPE(40), IDATA(40)                  2000
CEND       PARAMETR  ***************************************************** 6000
CUSE       POTENT    1JUN71    ***************************************** 7000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), TOFLY(20 1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50) 2000
     2, AGE(50)                                                         3000
CEND       POTENT    ***************************************************** 7000
CUSE       RANGE     1JUN71    ***************************************** 8000
      COMMON /RANGE/ CROSSDWN, UPDOWN, DELMIN, DEFAULT                  1000
CEND       RANGE     ***************************************************** 8000
CUSE       IEVAL     1JUN71    ***************************************** 9000
      COMMON /I/ VAL(50), DAFTER(50), VALFIRST(50), COSTEFF(2*          1000
     1 D(50, 50)                                                        2000
CEND       IEVAL     ***************************************************** 9000
CUSE       FOOTDATA  1JUN71    ***************************************** 10000
      COMMON /FOOTDATA/ GAS(2),RX(2,2),RAX(2,2),TOSSC1(2,2,2),TOSSC2(2, 1000
     *2,2),TFONE(2,2),TETWO(2,2),TDENOM(2),RBASIC(2,2),RADD(2,2),EONE(2) 2000
     2,ETWO(2), DENOM, CONE(2,2), CTWO(2,2), LLNGDAT                    3000
C                                                                       4000
      COMMON /SHRTDAT/ ALPHAZ(16),ALPHA1(16),ALPHA2(16),BETAZ(16),BETA1 5000
     1(16),BETA2(16),MAXPROST(16),GTWO,GONE,GZERO,DONE,DZERO,LSHTDAT    6000
C                                                                       7000
      TYPE REAL MAXPROST                                                8000
C                                                                       9000
      COMMON /PENADD/ TOTFUEL, SREC1(2), SREC2(2), SREXP1(2)            10000
     1            , SREXP2(2), SRFDEN, LPENDAT                         11000
C                                                                       12000
C                                                                       13000
C                                                                       14000
      DATA (LLNGDAT = 57)                                               15000
     1      , (LSHTDAT = 117)                                          16000
     2      , (LPENDAT = 67)                                           17000
C                                                                       18000
CEND       FOOTDATA  ***************************************************** 10000
C                                                                       11000
      DIMENSION XOLD(10),AZOLD(10),CSAVE(16),TGAS(16),                  12000
     1RMSAVE(2,2),REXSAVE(2,2),RSAVE(2,2,2)                             13000
      DIMENSION CH(20), EXTRA(20), DT(20)                               14000
      EQUIVALENCE(DT,TOFLY)                                             15000
      DATA (EPSILON = .000000001),                                      16000
     1(IERR = 0), (XOLD = 10(.000000001)), (AZOLD = 10(.000000001))     17000
      DATA (PDIFF = .001)                                               18000
C                                                                       19000
C     EPSILON   MINIMUM DELRAFT                                         20000
C     PDIFF     MAXIMUM FRACTIONAL DIFFERENCE BETWEEN SUCCESSIVE RANGES 21000
```

```
C                (OR AZIMUTHS) WITHOUT FORCING RECOMPUTATION OF FUEL      22000
C                CONSUMPTION PARAMETERS.                                  23000
C                                                                         24000
      IFEAS=0                                                             25000
      DO 10 I=1,20                                                        26000
   10 DELRAST(I)=EPSILON                                                  27000
      DELRSTRT=EPSILON                                                    28000
      IS = MTYPE(ISYS)                                                    29000
      CD = CRSTODWN(IS, RIN(1), THIN(1), NTAR)                            30000
      UD = UPTODOWN(IS, RIN(1), THIN(1), NTAR)                            31000
      CD = CD * CD                                                        32000
      UD = UD * UD                                                        33000
      CTO = CBASE = COSF(THIN(1))                                         34000
      STO = SBASE = SINF(THIN(1))                                         35000
      NN=NTAR-1                                                           36000
      DO 40 I=1,NN                                                        37000
      CFROM = CTO                                                         38000
      SFROM = STO                                                         39000
      CTO=COSF(THIN(I+1))                                                 40000
      STO=SINF(THIN(I+1))                                                 41000
C                                                                         42000
C     DOWN RANGE                                                          43000
C                                                                         44000
      DD = (RIN(I+1) * (CBASE * CTO + SBASE * STO)) -                     45000
     1     (RIN(I  ) * (CBASE * CFROM + SBASE * SFROM))                   46000
      DDD = DD * DD                                                       47000
      IF(DD.LT.0)20,30                                                    48000
   20 DDD = DDD * UD                                                      49000
C                                                                         50000
C     CROSSRANGE                                                          51000
C                                                                         52000
   30 C =       (RIN(I+1) * (SBASE * CTO - CBASE * STO)) -                53000
     1          (RIN(I) * (SBASE * CFROM - CBASE * SFROM))                54000
      C = C * C                                                           55000
      DD = SQRTF(DDD + (C * CD))                                          56000
   40 DT(I)=AMAX1F(DELMIN,DD)                                             57000
      DT(NTAR) = 0.                                                       58000
C                                                                         59000
      GO TO (1000, 2000, 1000, 11000), IS                                 60000
C                                                                         61000
C     LONG  RANGE SYSTEM                                                  62000
C                                                                         63000
 1000 GO TO (1110,1110,1120),NTAR                                         64000
 1110 JRV=1                                                               65000
      GO TO 1200                                                          66000
 1120 JRV=2                                                               67000
      NTAR=KMINOF(NTAR,3)                                                 68000
 1200 JSIGN=1                                                             69000
      AZ=THIN(1)                                                          70000
      IF(AZ.LT.0)1210,1300                                                71000
 1210 JSIGN=2                                                             72000
 1300 R=RIN(1)  $ SINAZ=SINF(AZ)                                          73000
      IF((ABSF((AZOLD(1) - AZ) / AZOLD(1)) .LT. PDIFF) .AND.              74000
     1          (ABSF((XOLD(1) - R) / XOLD(1)) .LT. PDIFF)) 1308, 1301    75000
 1301 DO 1305 I=1,2                                                       76000
      J = JSIGN                                                           77000
```

```
      RFXSAVE(I,J) = RX(I,J) * RAX(I,J) * SINAZ                          78000
      RMSAVE(I,J) = RBASIC(I,J) + RADD(I,J) * SINAZ                      79000
      RT = RMSAVE(I,J) - R                                               80000
      RT = MAXIF(RT, 0.)                                                 81000
      DO 1335 K=1,2                                                      82000
      RC = RT / TDENOM(M)                                                83000
      G = EXPF(TEONE(I,K)  * (RC ** TETHO(I,K)))                         84000
 1335 RSAVE(I,J,K)=G*(TOSSC1(I,J,K)+TOSSC2(I,J,K)*SINAZ)                 85000
      XOLD(I) = R                                                        86000
      AZOLD(I) = AZ                                                      87000
      IF (IS - 3)  1308, 3000, 1308                                      88000
C                                                                        89000
C     RECOMPUTATION OF FUEL LOAD FOR MTYPE = 3 (LONG RANGE WITH PENAIDS) 90000
C                                                                        91000
 3000 DO 3100  I = 1, 2                                                  92000
      RT = (RMSAVE(I,JSIGN) - R) / SREDEN                                93000
      RT = MAXIF(RT,0.0)                                                 94000
      G = EXPF(SREEXP2(I) * (RT ** SREEXP2(I)))                          95000
 3100 GAS(I) = TOTFUEL - (G * (SREC1(I) + SREC2 * SINAZ))                96000
 1308 RM=RMSAVE(JRV,JSIGN)                                               97000
      TOTIME = GAS(JRV)                                                  98000
      EX=0                                                               99000
      IF(R.LT.RM)1350,1310                                              100000
C                                                                       101000
C     USE RANGE EXTENSION                                               102000
C                                                                       103000
 1310 DTOGO=R-RM                                                        104000
      RRSAVE = RFXSAVE(JRV,JSIGN)                                       105000
      EX = DTOGO / RRSAVE                                               106000
 1350 EXCESS = TOTIME - EX                                              107000
      IF(EXCESS.LT.0)19999,1360                                         108000
 1360 IFEAS=1                                                           109000
      NR=NTAR-1                                                         110000
      NTOGO=NTAR-1                                                      111000
      DO 1370 I=1,NR                                                    112000
      CR(I)=RSAVE(JRV,JSIGN,NTOGO)                                      113000
      FUEL=RT(I)/CR(I)                                                  114000
      EXTRA(I)=FUEL                                                     115000
      IF (EXCESS - FUEL) 1365, 1370, 1370                               116000
C                                                                       117000
C     NO LONGER FEASIBLE                                                118000
C                                                                       119000
 1365 FUELEFT = 0.0                                                     120000
      GO TO 19999                                                       121000
C                                                                       122000
C     YES FEASIBLE                                                      123000
C                                                                       124000
 1370 EXCESS = EXCESS-FUEL                                              125000
      IFEAS=I+1                                                         126000
 1375 NTOGO=NTOGO-1                                                     127000
C                                                                       128000
C     NOW COMPUTE HOW FAR EXCESS WOULD TAKE US                          129000
C                                                                       130000
 1390 FUELEFT=EXCESS                                                    131000
      IF (NTAR .LT. MAXLOAD(ISYS))  1396, 19999                         132000
 1396 NTX = IFEAS + 1                                                   133000
```

```
      NTOGO=IFEAS                                                       134000
      RRM = 0.                                                          135000
      IF (NTAR .GT. 1) 1397, 1398                                       136000
 1397 JRV = JRV + 1                                                     137000
 1398 RM = RMSAVE(JRM,JSIGN)                                            138000
      EXCESS = EXCESS - (TOTIME - BAS(JRV))                             139000
      FUEL=0                                                            140000
      IF(R .LT. RM)1410,1400                                            141000
 1400 NTOGO=R-RM                                                        142000
      FUEL=NTOGO/REXSAVE(JRV,JSIGN)                                     143000
      EXADD = (RRM - RM) / RRSAVE                                       144000
      EXCESS = EXCESS - EXADD                                           145000
      FX = FX + EXADD                                                   146000
 1410 FX=FUEL+FX                                                        147000
      DO 1420 I=1,NTX                                                   148000
      C=RSAVE(JRV,JSIGN,NTOGO)                                          149000
      EXTRA(I)=(DT(I)/C)-EXTRA(I)                                       150000
 1420 NTOGO=NTOGO-1                                                     151000
C                                                                       152000
C     NO. COMPUTE EXCESS AT EACH STAGE                                  153000
C                                                                       154000
      T = FX                                                            155000
      FX = EXCESS                                                       156000
      EXCESS = EXCESS + T                                               157000
      DO 1430 I=1,NTX                                                   158000
      T = EXTRA(I)                                                      159000
      EXTRA(I) = EXCESS                                                 160000
 1430 EXCESS = EXCESS - T                                               161000
C                                                                       162000
C     COMPUTE MAXIMUM POSSIBLE DISTANCE ON THIS FUEL                    163000
C                                                                       164000
      NTOGO=IFEAS                                                       165000
      C=RSAVE(JRV,JSIGN,NTOGO)                                          166000
      DELRSTRT=C*FX                                                     167000
      DELRSTRT=AMAX1F(EPSILON,DELRSTRT)                                 168000
      DO 1440 I=1,NTX                                                   169000
 1440 DELRAFT(I)=CR(I)*EXTRA(I)                                         170000
      DELRAFT(IFEAS) = RSAVE(JRV,JSIGN,1) * EXCESS                      171000
      DO 1450 I=1,NTOGO                                                 172000
 1450 DELRAFT(I)=AMAX1F(EPSILON,DELRAFT(I))                             173000
      GO TO 19999                                                       174000
C                                                                       175000
C     SHORT RANGE SYSTEM                                                176000
C                                                                       177000
 2000 NRV=NTAR                                                          178000
      X=RIN(1)                                                          179000
      IF (ABSF((XOLD(2) - X) / XOLD(2)) .LT. POIFF)  2008, 2001         180000
 2001 XOLD(2)=X                                                         181000
      XX=X*X                                                            182000
      DO 2005 I=1,16                                                    183000
      CSAVE(I)=ALPHAZ(I)+XX+ALPHAZ1(I)+X+ALPHAZ(I)                      184000
 2005 TSAS(I)=BETAZ(I)+XX+BETAZ1(I)+X+BETAZ(I)                          185000
 2008 TOTIME=TSAS(NRV)                                                  186000
      FX=0                                                              187000
      IF(X .GT. MAXRBST(NRV))2010,2020                                  188000
 2010 RR = X - MAXRBST(NRV)                                             189000
```

```
      FX = DD / CSAVE(NRV)                                              190000
 2020 EXCESS=TOTIME-FX                                                  191000
      IF(EXCESS.LT.0)19999,2030                                         192000
 2030 IFEAS=1                                                           193000
      NN=NRV-1                                                          194000
      NTOGO=NN                                                          195000
      DO 2050 I=1,NN                                                    196000
      CR(I)=CSAVE(NTOGO)                                                197000
      EXTRA(I)=DT(I)/CR(I)                                              198000
      IF (EXCESS - EXTRA(I))  1365, 2040, 2040                          199000
 2040 EXCESS=EXCESS-EXTRA(I)                                            200000
      IFEAS=I+1                                                         201000
 2050 NTOGO=NTOGO-1                                                     202000
C                                                                       203000
C     DETERMINE USE OF EXCESS FUEL                                      204000
C                                                                       205000
 2060 FUELEFT=EXCESS                                                    206000
      IF (NRV .LT. MAXLOAD(ISYS))  2070, 19999                          207000
 2070 NTX = IFEAS - 1                                                   208000
      NTOGO=IFEAS                                                       209000
      NRV=NRV+1                                                         210000
      EXCESS = EXCESS - (TOTIME - TBAS(NRV))                            211000
      FUEL=0                                                            212000
      IF(X.GT.MAXRBOST(NRV))2080,2090                                   213000
 2080 DD=X-MAXRBOST(NRV)                                                214000
      FUEL=DD/CSAVE(NRV)                                                215000
      EXADD = (MAXRBOST(NRV - 1) - MAXRBOST(NRV)) / CSAVE(IFEAS)        216000
      EXCESS = EXCESS - EXADD                                           217000
      FX = FX + EXADD                                                   218000
 2090 FX=FUEL-FX                                                        219000
      DO 2100 I=1,NTX                                                   220000
      EXTRA(I)=(DT(I)/CSAVE(NTOGO1)-EXTRA(I)                            221000
 2100 NTOGO=NTOGO-1                                                     222000
C                                                                       223000
C     COMPUTE EXTRA AT EACH STAGE                                       224000
C                                                                       225000
      T = FX                                                            226000
      FX = EXCESS                                                       227000
      EXCESS = EXCESS - T                                               228000
      DO 2110 I=1,NTX                                                   229000
      T = EXTRA(I)                                                      230000
      EXTRA(I) = EXCESS                                                 231000
 2110 EXCESS = EXCESS - T                                               232000
C                                                                       233000
C     COMPUTE MAXIMUM POSSIBLE DISTANCE ON THIS FUEL                    234000
C                                                                       235000
      NTOGO=IFEAS                                                       236000
      DELRSTRT=FX*CSAVE(NTOGO)                                          237000
      DELRSTRT=MAXIF(EPSILON,DELRSTRT)                                  238000
      DO 2120 I=1,NTX                                                   239000
      DD=CR(I)*EXTRA(I)                                                 240000
 2120 DELRAFT(I)=MAXIF(EPSILON,DD)                                      241000
      DD = CSAVE(1) * EXCESS                                            242000
      DELRAFT(IFEAS)=MAXIF(EPSILON,DD)                                  243000
      GO TO 19999                                                       244000
C                                                                       245000
```

```
      SUBROUTINE ERROR                                                  246000
C                                                                       247000
      SUBROUTINE ERROR                                                  248000
      PRINT 11001, IS                                                   249000
11001 FORMAT('//1X,15(1H*),56H FOOTPRINT TEST ERROR  THERE IS NO SYSTEM #  250000
     1IT= NUMBER = ',I10)                                               251000
      IERR=IERR+1                                                       252000
      IF(IERR.GT.5)11002,19999                                          253000
11002 CALL ABORT                                                        254000
C                                                                       255000
19999 RETURN                                                            256000
      END
```

IDENT FOOTEST

PROGRAM LENGTH 01A51
ENTRY POINTS FOOTEST 00B53
BLOCK NAMES
FOOTIO 00102
PARAMETR 00A31
FOTEXT 00532
RANGE 00004
I 05156
FOOTDATA 00072
SHRTCAT 00166
PENARR 00013
EXTERNAL SYMBOLS
0200711[]
THEND.
ORGOICT.
CRSTCOMN
URTCOMN
ABORT
XMINUF
SQRTF
SINF
MAXIF
EXPF
COSF
STH.
GASINGL.

```
X00006  ABORT       01253
C00450  AGE
C00020  ALPHA1      01015  01016
C00040  ALPHA2      01013  01013
C00060  ALPHA7      01020  01020
P01400  AZ          00375  00405  00411  00502
P00015  AZOLD       00015  00410  00411  00502
P01366  BEGIN.      01370
C00100  BETA1       01024  01025
C00120  BETA2       01022  01022
C00060  BETA7       01027  01027
P01401  C           00330  00330  00331  00701  00703  00734
P01402  CBASE       00244  00275  00302  00317  00324
P01403  CD          00230  00235  00236  00236  00331
P01404  CFROM       00263  00302  00323
P01257  CNVRTI.     01244
C00061  CONE
X00014  COSF        00242  00266
C00226  COSTEFF
P01405  COUNT.      00260  00261  00676  00677  00720  00721  00745  00746  00762  00763  01151
                    01152  01172  01173  01217  01220
P00107  CR          00601  00603  00747  01043  01065  01221
P00162  CREMT.      01247
C00000  CROSSOWN
X00004  CRSTOOWN    00224
P00027  CSAVE       01021  01043  01062  01133  01137  01155  01206  01230
P01406  CTO         00245  00262  00270  00275  00316
C00065  CTWO
C00252  D
P01407  DD          00307  00310  00311  00335  00340  01043  01133  01222  01225  01231  01234
P01410  DDD         00310  00313  00314  00332
C00003  DEFAULT
C00002  DELMIN      00340
C00055  DELRAFT     00215  00215  00750  00751  00756  00764  00770  00771  00771  01226  01226
                    01236
C00054  DELRSTRT    00220  00220  00735  00735  00740  00741  01206  01207  01212  01213
C00060  DENOM
P00001  DICT.       00205  00225  00232  00243  00255  00267  00273  00334  00337  00366  00407
                    00445  00460  00466  00520  00524  00532  00737  00767  01211  01224  01233
                    01241  01246  01254
C00163  DONE
C00171  DSPACE
C00111  DT          00341  00341  00344  00345  00601  00602  00702  00702  01063  01084  01153
                    01153
P01411  DTO60       00555  00557  00661
C00154  DZERO
P01371  ENDING.     00206  01255  01366  01367  01367
C00054  EONE
P00157  EPSILON     00214  00217  00740  00770  01212  01225  01234
C00056  ETWO
P01412  EXCESS      00562  00604  00611  00612  00624  00653  00653  00665  00666  00712  00713
                    00714  00723  00725  00725  00754  01144  01066  01070  01072  01104  01123
                    01124  01140  01141  01164  01165  01166  01175  01177  01200  01231
P00000  EXIT.       01373
```

X00013	EXPF	00465	00531								
P00133	EXTRA	00604	00704	00704	00722	00724	00750	01065	01066	01071	01155	01156
		01174	01176	01222								
P00203	FOOTEST	00203										
P00162	FORMAT.											
P01413	FUEL	00603	00605	00612	00654	00663	00671	01125	01134	01144		
C00101	FUELEFT	00607	00610	00625	00525	01105	01105					
P01414	FX	00551	00550	00562	00667	00670	00672	00672	00711	00713	00734	01034
		01044	01046	01142	01143	01145	01145	01163	01165	01205		
P01415	FXADD	00665	00666	00667	01140	01141	01142					
P01416	G	00467	00473	00533	00537							
C00000	GAS	00541	00542	00546	00547	00651	00651					
P01247	G000000.	01237										
C00161	GONE											
C00160	GTWO											
C00162	GZERO											
P01417	I	00211	00213	00255	00261	00425	00476	00507	00511	00574	00680	00813
		00820	00873	00877	00715	00721	00742	00746	00757	00763	01010	01012
		01056	01062	01071	01072	01100	01146	01152	01167	01173	01214	01220
		01275										
C00361	IDATA											
P00160	IERR	01247	01250	01251								
P00416	IF00001.											
C00053	IFEAS	00207	00210	00565	00566	00614	00614	00631	00631	00533	00634	00730
		00730	00755	00755	01051	01052	01073	01074	01112	01112	01114	01115
		01136	01136	01202	01202	01235	01235					
C00221	IFREE											
P01420	IGOTO.	00346	00353									
C00065	IHIT											
C00001	IHNAME											
P01260	IN00004.	00432	01266	01301	01331							
P01261	IN00006.	00452	01267	01303	01305	01317						
P01262	IN00007.	00452	01266	01300	01306	01321	01332					
P01263	IN00010.	00511	01267	01302	01342							
P01264	IN00011.	00544	00556	00646	00662	00753	01343	01353				
P01265	IN00013.	00577	00700	00733	01344	01354	01344					
P01366	INITIAL.	00206										
C00366	INVERSE											
C00002	IPOT											
P01421	IS	00223	00226	00233	00346	00503	01243					
C00001	ISYS	00221	00626	01107	01107							
P00214	.10											
P00352	.1000	00347	00351									
P01237	.11000	00351										
P01253	.11002											
P00356	.1110	00354	00355									
P00362	.1120	00355										
P00371	.1200	00361										
P00400	.1210											
P00403	.1300	00376	00377									
P00424	.1301	00414	00415	00422	00423							
P00470	.1305											
P00544	.1308	00423	00504	00505								
P00554	.1310	00552	00553									

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P00561  .1350       00553
P00565  .1360       00563   00564
P00607  .1365       00606   01067
P00611  .1370       00605   00606
P00615  .1380
P00624  .1390
P00631  .1396
P00643  .1397
P00646  .1398       00641   00642
P00660  .1400       00656   00656
P00671  .1410       00657
P00705  .1420
P00725  .1430
P00747  .1440
P00764  .1450
P01255  .19999      00564   00610   00630   00630   00773   01050   01111   01111   01234   01252   01252
P00774  .2000       00350
P00313  .20
P01005  .2001       01003   01004
P01022  .2005
P01032  .200M       01004
P01040  .2010
P01045  .2020       01036   01037
P01051  .2030       01047   01050
P01070  .2040       01067
P01075  .2050
P01104  .2060
P01112  .2070
P01138  .2080
P01144  .2090       01127   01127
P01157  .2100
P01177  .2110
P01223  .2120
P00586  .3000       00584
P00315  .30         00312   00312
P00534  .3100
P00336  .40
P01374  .ERASER.    00276   00277   00301   00303   00304   00307   00316   00320   00322   00323   00325
                    00327   00332   00412   00420   00464   00530   01001   01015   01017   01024   01026
P00162  ..11001     01242
P00770  .Z00001.    00765
P01422  J           00430   01325
C00062  JAFTER
P01423  JRV         00357   00363   00546   00643   00644   00650   01350
P01424  JSIGN       00372   00401   00427   01336
P01425  X           00450   00453   01314
C00071  LLNBDAT     00157
C00304  LOST
C00012  LPENDAT     C00166
C00165  LSWTDAT     C00072
X00012  MAXIF       00334   00444   00517   00736   00766   01210   01223   01232
C00001  MAXHIT
C00121  MAXLOAD     00627   00627   01110   01110
C00000  MAXPOT
```

C00148	MAXPOST	01035	01034	01041	01042	01126	01126	01131	01132	01134	01135	01135
C00000	MAXRV											
C00000	MAXSYS											
C00005	MINLOAD											
C01136	MISS											
C00311	MTYPE	00221	00222									
C00220	NFREE											
C00064	NHIT											
C00303	NLOST											
C00135	NMISS											
P01426	NA	00254	00257	00570	00622	01054	01142					
P01427	NRV	00775	01032	01041	01053	01106	01120	01121	01122	01131		
C00002	NTAU	00227	00234	00252	00253	00343	00344	00352	00352	00367	00370	00370
		00566	00570	00571	00626	00640	00648	00774	00774			
P01430	NTOSO	00572	00515	00616	00635	00705	00706	00731	00761	01054	01061	01075
		01076	01114	01154	01157	01160	01203	01205	01240			
P01431	NTX	00633	00675	00717	00744	01114	01150	01171	01216			
P01266	P00000.U	01272										
P01305	P00001.U	01311										
P00161	PDIFF	00414	00422	01003								
X00001	Q2007111	00457	00523									
X00003	Q4PRICT.	00000	00204									
X00014	QASINGL.	01254										
P01432	R	00404	00417	00442	00501	00514	00551	00554	00655	00660		
C00050	RAND	00436	00437									
C00006	RAX	00432	00433									
C00044	RBASIC	00440	00441									
P01433	RC	00456	00461									
P00073	RFXSAVE	00536	00556	00662								
C00003	RIN	00226	00233	00300	00300	00305	00305	00320	00321	00325	00326	00463
		00403	00776	00776								
P01434	RM	00545	00552	00555	00637	00647	00655	00661	00664			
P00047	RMSAVE	00442	00513	00545	00647							
P01435	RRM	00637	00663									
P01436	RRSAVE	00557	00560	00664								
P00077	RSAVE	00474	00600	00701	00733	00754						
P01437	RT	00443	00446	00447	00454	00516	00521	00522	00525			
C00002	RX	00434	00435									
P01440	SBASE	00251	00276	00303	00315	00322						
P01441	SERROR	00264	00304	00324								
P01442	SINAZ	00410	00434	00440	00471	00535						
C00011	SINE	00247	00272	00406								
X00010	SQRTE	00333										
C00001	SREC1	00536	00536									
C00003	SREC2	00534	00534									
C00011	SREDEN	00514	00515									
C00005	SREEXP1	00527	00527									
C00007	SREEXP2	00526	00526									
X00015	STH.	01240										
P01443	STO	00252	00263	00274	00277	00317						
P01444	T	00712	00714	00723	00726	01164	01144	01175	01210			
C00042	TDENOM	00455	00455									
C00032	TENE	00463	00463									
C00036	TETWO	00462	00462									

```
P00047  T6AS        01030   01033   01122
X00002  THEND.      01245
C00027  THIA        00227   00234   00240   00241   00245   00246   00264   00265   00271   00271   00374
                    00374
C00241  THROWMAX
C00111  TOFLY
C00012  TOSSC1      00472   00472
C00022  TOSSC2      00479   00479
C00000  TOTFUEL     00540   00541
P01445  TOTIMF      00550   00561   00650   01033   01045   01121
P00343  TS00002.    00240
P00622  TS00006.    00576
P00711  TS00007.    00676
P00730  TS00010.    00720
P00753  TS00011.    00745
P00773  TS00012.    00792
P01102  TS00014.    01060
P01163  TS00015.    01151
P01202  TS00016.    01172
P01238  TS00017.    01217
P01446  UO          00235   00237   00237   00240   00314
P01274  UP03000.    00212   00256   00426   00477   00510   00575   00621   00674   00716   00743   00760
                    01011   01057   01101   01147   01170   01215   01270   01275   01276   01277   01304
                    01304
P01313  UP00001.    00451   01307   01314   01315   01316   01321   01322
P01324  UP00003.    00431   01325   01326   01327   01332   01333
P01335  UP00005.    00373   00402   01330   01337   01340   01344   01345
P01347  UP00006.    00360   00364   00645   01350   01351   01352   01355   01355
P01357  UP00007.    00573   00617   00636   00707   00732   01055   01077   01117   01161   01204   01360
                    01361   01362   01364   01365
C00001  UPDOWN
X00005  UPTODOWN    00231
C00000  VAL
C00144  VALFIRST
P00214  WS00001.    00216
P00262  WS00002.    00342
P00427  WS00003.    00500
P00454  WS00004.    00476
P00513  WS00005.    00543
P00577  WS00006.    00623   00623
P00700  WS00007.    00710
P00722  WS00010.    00727
P00747  WS00011.    00752
P00764  WS00012.    00772
P01013  WS00013.    01031
P01061  WS00014.    01103   01103
P01153  WS00015.    01142
P01174  WS00016.    01201
P01221  WS00017.    01227
P01447  X           00777   01000   01005   01008   01007   01017   01026   01035   01040   01125   01130
X00007  XKINF       00365
P00003  XOLD        00161   00416   00417   00501   01308   01001   01006
P01450  XX          01007   01014   01023
   00367 SYMBOLS
```

```
      SUBROUTINE FUELSAVE                                                1000
CSUBR      FUELSAVE  1JUN71    ***********************************************  3700
C                                                                        2000
C     COMPUTES FUELSAVED BY OMITTING WEAPONS                             3000
C                                                                        4000
CUSE       FOOTIO    1JUN71    ***********************************************  5000
      COMMON /FOOTIO/ MAXRV, ISIS, NTAR, RIN(20), THIN(20), IFEAS,       1000
     1 DELRSTRT, DELRAFT(20), FUELEFT                                    2000
CEND       FOOTIO    ***********************************************************  5000
CUSE       POTENT    1JUN71    ***********************************************  6000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), IOFLY(20 1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50) 2000
     2, AGE(50)                                                          3000
CEND       POTENT    ***********************************************************  6000
CUSE       WPNTGT    1JUN71    ***********************************************  7000
      COMMON /WPNTGT/ IPOTGT, JAFT, JTGTO, NUMBOOST                      1000
CEND       WPNTGT    ***********************************************************  7000
CUSE       IEVAL     1JUN71    ***********************************************  8000
      COMMON /1/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),         1000
     1 D(50, 50)                                                         2000
CEND       IEVAL     ***********************************************************  8000
CUSE       DEBUG     1JUN71    ***********************************************  9000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                  1000
CEND       DEBUG     ***********************************************************  9000
CUSE       PRINT     1JUN71    ***********************************************  1000
      COMMON /PRINT/ ICALL, IMUST                                        1000
CEND       PRINT     ***********************************************************  1000
C                                                                        1100
      IOTA=IOTA+1                                                        1200
      ICAMFROM(IOTA)=8HFUELSAVE                                          1300
      ICALL=33                                                           1400
      CALL GOPRINT(10)                                                   1500
C                                                                        1600
      CALL TEST                                                          1700
      FOLD=FUELEFT                                                       1800
      JLAST=0                                                            1900
      DO 10 I=1,NHIT                                                     2300
      J=IHIT(I)                                                          2100
      JAFOLD=JLAST                                                       2200
      JLAST=J                                                            2300
      IPOTGT=J                                                           2400
      CALL MISSIT                                                        2500
      CALL TEST                                                          2600
      FUELSAVD=FUELEFT-FOLD                                              2700
      FUELSAVD=MAXIF(FUELSAVD,.000001)                                   2800
      IPOTGT=J                                                           2900
      JAFT=JAFOLD                                                        3000
      CALL HITIT                                                         3100
      COSTEFF(I)=1./FUELSAVD                                             3200
   10 CONTINUE                                                           3300
      ICALL=61                                                           3400
      CALL GOPRINT(15)                                                   3500
      IOTA=IOTA-1                                                        3600
      RETURN                                                             3700
      END                                                                3800
```

IDENT FUELSAVE

PROGRAM LENGTH		0011
ENTRY POINTS	FUELSAVE	00004
BLOCK NAMES		
	FOOTIO	00102
	POTENT	00532
	*PNTGT	00004
	1	05154
	DEBUG	00025
	PRINT	03002
EXTERNAL SYMBOLS		
	QMODICT.	
	GOPRINT	
	TEST	
	MISSIT	
	HITIT	
	MAXIF	

C00450	AGE								
P00075	BEGIN.	00075							
C00226	COSTEFF	00061	00061						
C00252	D								
C00055	DELRAFT								
C03054	DELRSTRT								
C00001	DICT.	00006	00017	00022	00030	00042	00047	00055	00070
P00076	ENDING.	00007	00074						
P00000	EXIT.	00076							
P00103	FOLD	00024	00044						
P00003	FORMAT.	00012							
C00101	FUELEFT	00023	00023	00043	00043				
P00104	FUELSAVD	00045	00050	00051	00060				
P00004	FUELSAVE	00034							
X00002	GOPRINT	00016	00067						
X00005	HITIT	00055							
P00105	I	00024	00030	00060	00062				
C00000	ICALL	00015	00015	00065	00066				
C00001	ICAMEROM	00014							
C00053	IFEAS								
C00221	IFREE								
C00065	IHIT	00031	00031						
C00031	IMUST								
P00075	INITIAL.	00007							
C00368	INVERSE								
C00000	IOTA	00010	00010	00011	00013	00013	00072	00072	00073
C00002	IPOT								
C00000	IPOTST	00035	00036	00052	00052				
C00001	ISYS								
P00062	+10								
P00003	+.100000	00012							
P00106	J	00032	00034	00035	00051				
P00107	JAFOLD	00033	00053						
C00001	JAFT	00054	00054						
C00062	JAFTER								
P00110	JLAST	00025	00033	00034					
C00002	JTGTO								
C00304	LOST								
X00006	MAXIF	00044							
C00001	MAXHIT								
C00000	MAXPOT								
C00100	MAXRV								
C00136	MISS								
X00004	MISSIT	00047							
C00220	NFREE								
C00064	NHIT	00063	00063						
C00303	NLOST								
C00135	NMISS								
C00002	NTAR								
C00003	NUMBOOST								
X00001	ORDICT.	00000	00005						
C00003	RIN								
X00003	TEST	00021	00041						
C00027	THIN								

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C03111  TCFLY
P00063  TS00001.    00027
C04000  VAL
C03144  VALFIRST
P00030  WS00001.    00064    00064
   00073 SYMBOLS
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      SUBROUTINE GDPRINT(IX)                                                    1000
CSUBR      GDPRINT   1JUN71    ********************************************     2000
C                                                                               2000
CUSE       MASTER    1JUN71    ********************************************     3000
      COMMON /MASTER/ IHDATE, IDENTNO, ISIDE, NRTPT, NCORRX, NOPEN,             1000
     1NRECOVER, AREF, NRNDRY, NREG, NTYPE, NGROUP, NTOTBASE, NPAYLOAD,          2000
     2NASNTYPE, NWHDTYPE, NTANKBAS, NCOMPLEX, NCLASS, NALERT, NTGTS,            3000
     3NCORTYPE, NCNTRY                                                          4000
CEND       MASTER    ********************************************************3000
CUSE       WPNGRPX   1JUN71    ********************************************     4000
      COMMON /WPNGRPX/ NWPNS(200), NVEHGRP(200), NLAT(200), NLONG(200),         1000
     1                 ITYPE(200), IPAY(200), ICLASS(80), ISIMTYPE(80),         2000
     2                 INTRY(80)                                                3000
CEND       WPNGRPX   ********************************************************4000
CUSE       STRKSUM   1JUN71    ********************************************     5000
C                                                                               1000
      COMMON/STRKSUM/ KGROUP, NTSTRK, NCORR, NSTRK(30), LSTRKSUM                2000
C                                                                               3000
CEND       STRKSUM   ********************************************************5000
CUSE       RAIDATA   1JUN71    ********************************************     6000
C                                                                               1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)             2000
     1           , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)           3000
     2                 , LRAID, NTMAX, LLFIX(1500)                              4000
C                                                                               5000
      DIMENSION R(1500), THETA(1500), IFCR(1500), IBACK(1500), IDUM(16)         6000
C                                                                               7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFCR, DLAT), (IBACK,          8000
     1DLONG), (IDUM, INDEX)                                                     9000
C                                                                               10000
      TYPE LOGICAL LLFIX                                                        11000
C                                                                               12000
      COMMON/A/ DESIG(1500), TASK(1500), ENTRYLOC(1500), FLAG(1500)             13000
C                                                                               14000
CEND       RAIDATA   ********************************************************6000
CUSE       CONTROL   1JUN71    ********************************************     7000
      COMMON /CONTROL/ NV, NARV, NEXTRA, PEXTRA, NPASS, FRACLOCK,               1000
     1                 MAXFOOT, DELAGE, PURGE, PN, EXTRAR, NOK                  2000
     2               ,IGSTART,IGEND                                             3000
CEND       CONTROL   ********************************************************7000
CUSE       FOOTIO    1JUN71    ********************************************     8000
      COMMON /FOOTIO/ MAXRV, ISYS, NTAR, RIN(20), THIN(20), IFEAS,              1000
     1 DELRSTRT, DELRAFT(20), FUELEFT                                           2000
CEND       FOOTIO    ********************************************************8000
CUSE       FOOTSAVE  1JUN71    ********************************************     9000
      COMMON/FOOTSAVE/ IFOTSAVE(20), XHITOLD, YHITOLD, IF2SAVE(20),             1000
     1 X2SAVE                                                                   2000
CEND       FOOTSAVE  ********************************************************9000
CUSE       INDEX     1JUN71    ********************************************     10000
      COMMON /INDEX/ JINR, JINP, JOUTR, JOUTP, JSAVE(20), NJSAVE,               1000
     1 JSAVOPT                                                                  2000
CEND       INDEX     ********************************************************10000
CUSE       LOADATA   1JUN71    ********************************************     11000
C                                                                               1000
      COMMON /LOADATA/ LOADOPT, NRVAIC(1500), NJSTEP, NTOACC, NOSTAR(20)        2000
     1                , NADDOLD                                                3000

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C                                                                       4000
CEND      LOADATA   ********************************************************  11000
CUSE      PARAMETR  1JUN71    ********************************************    12000
      COMMON /PARAMETR/ MAXSYS, IDNAME(40), MINLOAD(40), MAXLOAD(40),       1000
     1  DSPACE(40), THROWMAX(40), MTYPE(40), IDATA(40)                      2000
CEND      PARAMETR  ********************************************************  12000
CUSE      PERFORM   1JUN71    ********************************************    13000
      COMMON /PERFORM/ NASGN, VALASGN, TVAL, NOLD, VALOLD                   1000
CEND      PERFORM   ********************************************************  13000
CUSE      POTENT    1JUN71    ********************************************    14000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), TOFLY(20    1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50      2000
     2, AGE(50)                                                             3000
CEND      POTENT    ********************************************************  14000
CUSE      RANGE     1JUN71    ********************************************    15000
      COMMON /RANGE/ CROSSOVR, UPDOWN, DELMIN, DEFAULT                      1000
CEND      RANGE     ********************************************************  15000
CUSE      VALPARM   1JUN71    ********************************************    16000
      COMMON /VALPARM/ BZ, TNZ, SLZ                                         1000
CEND      VALPARM   ********************************************************  16000
CUSE      WPNTGT    1JUN71    ********************************************    17000
      COMMON /WPNTGT/ IPGTGT, JAFT, JTGTD, NUMBCOST                         1000
CEND      WPNTGT    ********************************************************  17000
CUSE      IEVAL     1JUN71    ********************************************    18000
      COMMON /1/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),            1000
     1 D(50, 50)                                                            2000
CEND      IEVAL     ********************************************************  18000
CUSE      ZSTATUS   1JUN71    ********************************************    19000
C                                                                           1000
      COMMON/ 2/ MAXHCOST, IHOST(500), NTR(500)                             2000
     1          , ISTATUS(1500), NDEX(1500)                                3000
C                                                                           4000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                           5000
C                                                                           6000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXR),(NDEX(201), NDEXT)   7000
C                                                                           8000
CEND      ZSTATUS   ********************************************************  19000
CUSE      3COMP     1JUN71    ********************************************    20000
      COMMON /3/ RP(50), TP(50), NVALP(50), SINES(50), COSINES(50),         1000
     1 AVRP, AVTHP, RHIT, THIT, SINAV, COSAV, SINHIT, COSINHIT, THOLD       2000
CEND      3COMP     ********************************************************  20000
CUSE      FLAG      1JUN71    ********************************************    21000
      COMMON/FLAG/NFLAG,IFLAG(100),NC,IPRNT(60),IFG(60),IFP(60),IFB(60),    1000
     1 ILG(60), ILP(60), ILB(60), MYPRT(60), IDUMP                          2000
      TYPE LOGICAL IFLAG                                                    3000
      DIMENSION IDUMPR(60,8)                                                4000
      EQUIVALENCE(IDUMPR, IPRNT)                                            5000
CEND      FLAG      ********************************************************  21000
CUSE      DEBUG     1JUN71    ********************************************    22000
      COMMON /DEBUG/ IOTA, ICAMEFROM(20)                                    1000
CEND      DEBUG     ********************************************************  22000
CUSE      PRINT     1JUN71    ********************************************    23000
      COMMON /PRINT/ ICALL, IMUST                                           1000
CEND      PRINT     ********************************************************  23000
C                                                                           24000
      DIMENSION IOX(50), DTEMP(10)                                          25000
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C                                                                       26000
      IF(IMUST.GT.0)2,1                                                 27000
    1 IF(IFLAG:ICALL())2,1000                                           28000
    2 PRINT 3,ICALL,ICAMEFROM(IOTA),XGROUP,NUMBOOST,NPASS,IMUST         29000
    3 FORMAT(10H0PRINT NO.,I3,6H FROM ,A8,10X,6HGROUP ,I2,5X,8HBOOSTER  30000
     1I3,5X,5HPASS I1,5X,8HIMUST = ,I1)                                 31000
    4 GO TO (10,20,30,40,50,60,70,80,90,100,110,120,130,140,150,160,    32000
     1170,180,190,200,210,220,230,240,                        900),IX  33000
C                                                                       34000
C     COMMON/WPNGRPX/                                                   35000
C                                                                       36000
   10 PRINT 11                                                          37000
   11 FORMAT(1H0,WPNGRPX,10X,72H GROUP  NWPNS  NO. VEHICLES  LATITUDE  LO 38000
     INGITUDE  CLASS    TYPE     IMIRV)                                 39000
      DO 14 J = 1, NGROUP                                               40000
      K=ITYPE(J)                                                        41000
      IC=ICLASS(K)                                                      42000
      IS=ISIMTYPE(K)                                                    43000
      IM=0                                                              44000
      IF(IC.EQ.1)12,14                                                  45000
   12 IF(IMIRV(IPAY(J)))14,14,13                                        46000
   13 IM=IMIRV(IPAY(J))                                                 47000
   14 PRINT 15, J, NWPNS(J), NVEHGRP(J), WLAT(J), WLONG(J), IC, IS, IM  48000
   15 FORMAT(21X,I2,4X,I3,7X,I3,8X,F6.2,6X,F6.2,6X,I1,4X,A8,3X,I2)      49000
      GO TO 900                                                         50000
C                                                                       51000
C     /PARAMETR/                                                        52000
C                                                                       53000
   20 PRINT 21                                                          54000
   21 FORMAT(1H0,SYSTEM PARAMETERS,4X,5HIMIRV,4X,6HNAME,4X,7HMINLOAD,   55000
     1X1H  MAXLOAD  DSPACE  THROWMAX  MTYPE  IDATA)                     56000
   22 FORMAT(23X,I2,4X,A8,4X,I2,7X,I2,4X,F7.2,3X,F7.2,3X,I2,5X,I2)      57000
      DO 24 K=1,MAXSYS                                                  58000
      IF(IHNAME(K).EQ.8HNOT USED)24,23                                  59000
   23 PRINT 22,K,IHNAME(K),MINLOAD(K),MAXLOAD(K),DSPACE(K),THROWMAX(K)  60000
     1         , MTYPE(K), IDATA(K)                                     61000
   24 CONTINUE                                                          62000
      GO TO 900                                                         63000
C                                                                       64000
C     FOOTPRINT PARAMETER TABLES   (USER SUPPLIED SUBROUTINE)           65000
C                                                                       66000
   30 CALL PRNTABLE      $       GO TO 900                              67000
C                                                                       68000
C     BOOSTER LOADING TABLES       (USER SUPPLIED SUBROUTINE)           69000
C                                                                       70000
   40 CALL PRNTLOAD      $       GO TO 900                              71000
C                                                                       72000
C     COMMON/STRKSUM/                                                   73000
C                                                                       74000
   50 PRINT 51,NGROUP,NTSTRK,NCORR,(I,I=1,NCORR)                        75000
      PRINT 52,(NSTRK(I),I=1,NCORR)                                     76000
   51 FORMAT(8H0STRKSUM/10X,9HKGROUP = ,I3,8X,9HNTSTRK = ,I4,8X,       77000
     1HNCORR = ,I2/4X,4HCORR,4X,20(I2,3X))                              78000
   52 FORMAT(4X,5HNSTRK,2X,20(I4,1X))                                   79000
      GO TO 900                                                         80000
C                                                                       81000
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C     COMMON/RAIDATA/                                                    82000
C                                                                        83000
   69 PRINT 61,JGROUP,JCORR,NT                                           84000
      PRINT 63                                                           85000
   61 FORMAT(1HO,RAIDATA,4X,9HJGROUP = ,I2,5X,8HJCORR = ,I2,            86000
     1          5X, 5HNT = ,I4)                                         87000
   63 FORMAT(11X,7HINDEXNO,3X,8HLATITUDE,2X,9HLONGITUDE,3X,4HDLAT,7X,   88000
     1     5HDLONG, 4X, DESIG    TASK  CNTRYLOC  FLAG      RVAL    LLFIX*)  89000
      PRINT 62,(K,INDEX(K),TGTLAT(K),TGTLONG(K),DLAT(K),DLONG(K),       90000
     1DESIG(K),TASK(K),CNTRYLOC(K),FLAG(K),RVAL(K),LLFIX(K),K, K=1,NT)   91000
   62 FORMAT(5X,I4,3X,I5,3X,F8.3,3X,F8.3,1X,F8.3,3X,F8.3,2X,4H,2X,A2,   92000
     1  6X, A2, 6X, I2, 3X, F10.3, 3X, L1, 2X, I4)                       93000
      GO TO 900                                                          94000
C                                                                        95000
C     R AND THETA                                                        96000
C                                                                        97000
   79 PRINT 71, (K, R(K), THETA(K), NDEX(K), LLFIX(K), K = 1, NT)        98000
   71 FORMAT(1H0POLAR COORDINATES,2(16X,5HRANGE,5X,7HAZIMUTH,5X,4HNDEX,  99000
     1 2X,3HFIX)//(1HX,2(5X,I4,5X,F7.1,4X,F8.5,5X,I4,3X,L1,1X)))        100000
      GO TO 900                                                          101000
C                                                                        102000
C     /STATUS/ , ISTATUS , IFOR , IBACK                                  103000
C                                                                        104000
   80 PRINT 81                                                           105000
   81 FORMAT(14H STATUS ARRAYS,4X,6HTARGET,4X,6HSTATUS,4X,7HFORWARD,4X,  106000
     1 4HBACK,3X,6HNRVADD,4X,7HROOSTER,3X,5HSTART,5X,6HNUMBER)           107000
      PRINT 82, (J, ISTATUS(J), IFOR(J), IBACK(J), NRVADD(J), J,         108000
     1        IROOST(J), NTM(J), J = 1, NV)                              109000
   82 FORMAT(23X,2(I4,6X),I5,4X,I5,5X,I2,10X,I4,5X,I4,7X,I3)            110000
      K=NV+1                                                             111000
      PRINT 83, (J, ISTATUS(J), IFOR(J), IBACK(J), NRVADD(J), J = K, NT) 112000
   83 FORMAT(23X,2(I4,6X),I5,4X,I5,5X,I2)                               113000
      GO TO 900                                                          114000
C                                                                        115000
C     /RANGE/                                                            116000
C                                                                        117000
   90 PRINT 91,CROSSDWN,UPDOWN,DELMIN,DEFAULT                           118000
   91 FORMAT(6HRANGE,10X,15HDOWN / CROSS = ,E10.3,5X,12HDOWN / UP = ,   119000
     1E10.3,5X,9HDELMIN = ,F7.2,5X,10HDEFAULT = ,F7.2)                  120000
      GO TO 900                                                          121000
C                                                                        122000
C     /DEBUG/                                                            123000
C                                                                        124000
  100 PRINT 101,(ICAMEFROM(K),K=1,IOTA)                                  125000
  101 FORMAT(21H PRINT REQUESTED FROM/(10(3X,A8)))                       126000
      GO TO 900                                                          127000
C                                                                        128000
C     /POTENT/*/IEVAL/                                                   129000
C                                                                        130000
  110 PRINT 111                                                          131000
  111 FORMAT(24H0POTENTIAL TARGET ARRAYS//3X,1HJ,2X,12HPOT INVERSE,2X,   132000
     13HAGE,3X,8HVALFIRST,2X,4HJAFT,2X,7HJ  IMIT,4X,5HTOFLY,6X,7HCOSTEFF 133000
     2,4X,8HJ   MISS,3X,3HVAL,3X,7HNOFVAL,2X,5HIFREE,2X,6HLOST,4X,1HJ)   134000
      DO 154 J=1,MAXPOT                                                  135000
      IF(J.LE.NLOST)112,114                                              136000
  112 PRINT 113,LOST(J),J                                                137000
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  113 FORMAT(1H+,10X,I4,2X,I3)                                          138000
  114 IF(J.LE.NFREE)115,117                                             139000
  115 PRINT 116,IFREE(J)                                                140000
  116 FORMAT(1H+,102X,I3)                                               141000
  117 IF(J.LE.NMISS)118,151                                             142000
  118 PRINT 119,J, MISS(J),          VAL(J),NDEXVAL(J)                  143000
  119 FORMAT(1H+,74X,I3,2X,I3,      2X,F7.3,3X,I3)                      144000
  151 IF(J.LE.NMIT)152,154                                              145000
  152 PRINT 153,J,IMIT(J),TOFLY(J),COSTEFF(J)                           146000
  153 FORMAT(1H+,41X,I3,2X,I2,2(2X,E18.3))                              147000
  154 PRINT 155,J,IPOT(J),INVERSE(J),AGE(J),VALFIRST(J),JAFTER(J)       148000
  155 FORMAT(1X,I3,2X,I4,2X,I4,2X,F6.1,3X,F7.3,3X,I3)                   149000
      GO TO 900                                                         150000
C                                                                       151000
C     /CONTROL/                                                         152000
C                                                                       153000
  120 PRINT 121,NV,NARV,NEXTRA,PEXTRA,NPASS,MAXFOOT,DELAGE,FRACLOOK,PN  154000
     1 , PURGE, EXTRAR, NOK                                             155000
  121 FORMAT(9H0CONTROL,9X,5HNV = ,I3,4X,7HNARV = ,I3,4X,9HNEXTRA = ,I3,  156000
     14X,9HPEXTRA = ,F4.2,4X,8HNPASS = ,I1,4X,10HMAXFOOT = ,I2,4X,       157000
     29HDELAGE = ,F6.2/17X,11HFRACLOOK = ,F4.2,5X,5HPN = ,F5.2,5X,       158000
     38HPURGE = ,F5.2,5X,9HEXTRAR = ,F4.1,5X,6HNOK = ,I4)               159000
      GO TO 900                                                         160000
C                                                                       161000
C     /FOOTIO/                                                          162000
C                                                                       163000
  130 PRINT 131,ISYS,NTAR,IFEAS,FUELEFT,DELRSTRT                        164000
  131 FORMAT(23H0FOOTPRINT INPUT/OUTPUT,5X,10HSYSTEM NO.,I3,5X,         165000
     120HNUMBER OF TARGETS = ,I3//10X,7HIFEAS = ,I3,5X,10HFUELEFT = ,   166000
     2F9.3,5X,11HDELRSTRT = ,F9.4)                                      167000
      PRINT 132, (K, RIN(K), THIN(K), DELRAFT(K), TOFLY(K), K, K=1,NTAR)  168000
  132 FORMAT(1H0,18X,5HRANGE,5X,7HAZIMUTH,6X,7HDELRAFT,6X,5HTOFLY//(12X,  169000
     112,3X,F7.1,4X,F8.5,2(4X,F9.4),2X,I2))                             170000
      GO TO 900                                                         171000
C                                                                       172000
C     COMMON/PERFORM/                                                   173000
C                                                                       174000
  140 PRINT 141, NASGN, VALASGN, TVAL, NOLD, VALOLD                     175000
  141 FORMAT(23H0PERFORMANCE PARAMETERS,6X,8HNASGN = ,I4,3X,            176000
     110HVALASGN = ,F10.3,3X,7HTVAL = ,F10.3,3X,7HNOLD = ,I4,3X,        177000
     29HVALOLD = ,E10.3)                                                178000
      GO TO 900                                                         179000
C                                                                       180000
C     /IEVAL/ + /POTENT/                                                181000
C                                                                       182000
  150 GO TO 116                                                         183000
C                                                                       184000
C     /WPNTGT/                                                          185000
C                                                                       186000
  160 PRINT 161,IPOTGT,JAFT,JTGTO,NUMROOST                              187000
  161 FORMAT(7H0WPNTGT,10X,9HIPOTGT = ,I3,5X,7HJAFT = ,I3,5X,8HJTGTO = ,  188000
     1I4,5X,11HNUMROOST = ,I3)                                          189000
      GO TO 900                                                         190000
C                                                                       191000
C     COMMON /3/ OR /3COMP/ + NDEXB + NDEXT + COMMON /RANGE/            192000
C                                                                       193000
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      170 PRINT 171,AVRP,AVTHP,SINAV,COSAV,THOLD,RHIT,THIT,SINHIT,COSINHIT
      171 FORMAT(24H0/3/ - TEMPORARY STORAGE/5X,7HAVRP = ,F7.1,5X,8HAVTHP =
         1,F8.5,5X,8HSINAV = ,F8.5,7X,8HCOSAV = ,F8.5,5X,8HTHOLD = ,E10.3/54
         2,7HRHIT = ,F7.1,6X,7HTHIT = ,F8.5,4X,9HSINHIT = ,F8.5,4X,11HCOSINH
         3IT = ,F8.5/10X,7HJ  IPOT,4X,5HRANGE,4X,7HAZIMUTH,4X,5HRVALP,6X,5HS
         4INES,4X,7HCOSINES,5X,4HJ,3X,5HNDEXR,2X,5HNDEXT)
          PRINT 172,(K,IPOT(K),RP(K),TP(K),RVALP(K),SINES(K),COSINES(K),K,
         1          NDEXR(K),NDEXT(K),K = 1, MAXPOT)
      172 FORMAT(8X,I3,2X,I4,3X,F7.1,4X,F8.5,2X,E10.3,2(1X,F8.5,1X),2X,I3,
         I2(3X,I4))
          GO TO 90
C
C     COMMON INDEX
C
      180 PRINT 181,JINP,JINP,JOUTR,JOUTP,NJSAVE,JSAVOPT,(JSAVE(K),K=1,NJSAV
         1E)
      181 FORMAT(/4H0INDEX,5X,7HJINR = ,I4,5X,7HJINP = ,I4/10X,8HJOUTR = ,I4,
         14X,8HJOUTP = ,I4/9X,9HNJSAVE = ,I4,2X,10HJSAVOPT = ,I4/5X,8HJSAVE
         2= ,(20(1X,I4)))
          GO TO 900
C
C     COMMON /FOOTSAVE/
C
      190 PRINT 191, NHITOLD, VHITOLD, (IFOTSAVE(K), K = 1, NHITOLD)
      191 FORMAT(/3H0FOOTSAVE,10X,10HNHITOLD = ,I2,5X,10HVHITOLD = ,E10.3/1X,
         111HIFOTSAVE = ,(20(1X,I4)))
          PRINT 192,N2SAVE,(IF2SAVE(K),K=1,N2SAVE)
      192 FORMAT(10H N2SAVE = ,I2/10H IF2SAVE = (20(1X,I4)))
          GO TO 900
C
C     DISTANCE MATRIX
C
      200 N=0
          PRINT 201, THOLD
      201 FORMAT(16H0DISTANCE MATRIX,10X,8HTHOLD = ,E10.3)
          DO 203 K=1,MAXPOT
          IF(INVERSE(K),NE.0)202,203
      202 N=N+1
          IOK(N)=K
      203 CONTINUE
          NTIMES=N/10
          IEND=0
          DO 205 K=1,NTIMES
          IBEG=IEND+1      $  IEND=IEND+10
          PRINT 204, (IOK(J),J=IBEG,IEND)
      204 FORMAT(//5X,10(9X,I2))
          DO 205 L = 1, N
          IC = IOK(L)
          IS = 0
          DO 207 J = IBEG, IEND
          IS = IS + 1
      207 DTEMP(IS) = D(IC, IOK(J))
      205 PRINT 206, IC, (DTEMP(J), J = 1, IS)
      206 FORMAT(3X,I3,3X,10(1X,E10.3))
          IBEG=IEND+1
          IF (IBEG .GT. N) 900, 99201
```

```
99201 PRINT 204, (IOK(J), J = IREG, N)                                  250000
      DO 209 L = 1, N                                                   251000
      IC = IOK(L)                                                       252000
      IS = 0                                                            253000
      DO 208 J = IREG, N                                                254000
      IS = IS + 1                                                       255000
  208 DTEMP(IS) = D(IC, IOK(J))                                         256000
  209 PRINT 206, IC, (DTEMP(J), J = 1, IS)                              257000
      GO TO 900                                                         258000
C                                                                       259000
C     FINAL PLAN                                                        260000
C                                                                       261000
  210 IS = ITYPE(JGROUP)                                                262000
      PRINT 211, ISIMTYPE(IS), JGROUP, NT, NV                           263000
  211 FORMAT( 20FINAL PLAN FOR ,A8,2O GROUP NO. ,I3/10X,2HTHERE ARE ,   264000
     1I4,2O TARGETS ASSIGNED TO ,I3,2O BOOSTERS)                        265000
      J = 0                                                             266000
      K = 0                                                             267000
  212 J = J +1                                                          268000
      IF(J - NT) 213, 213, 900                                          269000
  213 IF (INDEX(J)) 214, 216, 216                                       270000
  214 K = K +1                                                          271000
      PRINT 215,K                                                       272000
  215 FORMAT (20BOOSTER, I4)                                            273000
      PRINT 63                                                          274000
      L = 0                                                             275000
  216 L = L + 1                                                         276000
      ITEMP = NAMSF(INDEX(J))                                           277000
      PRINT 82,L, ITEMP, TGTLAT(J), TGTLONG(J), DLAT(J), DLONG(J),      278000
     1     OFSIG(J), TASK(J), CNTRVLOC(J), FLAG(J), RVAL(J), LLFIX(J), L 279000
      GO TO 212                                                         280000
C                                                                       281000
C     DISTRIBUTION OF RV'S TO BOOSTERS                                  282000
C                                                                       283000
  220 IOK(50) = 0                                                       284000
      IC = MAXLOAD(ISYS)                                                285000
      DO 221 J = 1, IC                                                  286000
  221 IOK(J) = 0                                                        287000
      DO 223 J = 1, NV                                                  288000
      K = NTR(J)                                                        289000
      IF (K) 222, 222, 223                                              290000
  222 K = 50                                                            291000
  223 IOK(K) = IOK(K) + 1                                               292000
      PRINT 224                                                         293000
  224 FORMAT(33H0DISTRIBUTION OF REENTRY VEHICLES/6X,2HRV,5X,6HNUMBER,6X  294000
     1,7HPERCENT)                                                       295000
      IF (IOK(50) .GT. 0) 225, 226                                      296000
  225 J = 0                                                             297000
      P = (100. * IOK(50)) / NV                                         298000
      PRINT 228, J, IOK(50), P                                          299000
  226 DO 229 J = 1, IC                                                  300000
      IF (IOK(J) .GT. 0) 227, 229                                       301000
  227 P = (100. * IOK(J)) / NV                                          302000
      PRINT 228, J, IOK(J), P                                           303000
  228 FORMAT(4X,I2,6X,I3,6X,F6.2)                                       304000
  229 CONTINUE                                                          305000
```

```
      GO TO 900                                                          306000
C                                                                        307000
C     COMMON /VALPARM/                                                   308000
C                                                                        309000
  230 PRINT 231, DZ, TNZ, SLZ                                            310000
  231 FORMAT(9H0VALPARM,10X,5HDZ = ,F6.1,10X,6HTNZ = ,F6.1,10X,6HSLZ = ,  311000
     1F6.3)                                                              312000
      GO TO 900                                                          313000
C                                                                        314000
C     COMMON /LOADATA/ EXCEPT NRVADD WHICH IS PRINTED WITH /2/           315000
C                                                                        316000
  240 PRINT 241, LOADOPT, NADDED, NTOADD, NADOOLD, (NONTAR(J), J=1,NHIT) 317000
  241 FORMAT(9H0LOADATA,5X,9HLOADOPT =,I2,5X,8HNADDED =,I4,5X,8HNTOADD =  318000
     1,I3,5X,9HNADDOLD =,I4/13X,8HNONTAR =,20I3)                         319000
      GO TO 900                                                          320000
C                                                                        321000
C     ABORT RUN                                                          322000
C                                                                        323000
  900 IF (IMUST .GT. 0) 1000, 910                                        324000
  910 IF (ICALL .EQ. IDUMP) 920, 1000                                    325000
  920 CALL ABORT                                                         326000
C                                                                        327000
 1000 RETURN                                                             328000
      END                                                                329000
```

IDENT GOPRINT

PROGRAM LENGTH		03653
ENTRY POINTS	GOPRINT	01727
BLOCK NAMES		
	MASTER	00627
	WPNGGPX	02570
	STRKSUM	00042
	RAIDATA	21534
	A	13550
	CONTROL	00016
	FOOTIO	00102
	FOOTSAVE	00053
	INDEX	00032
	LOADATA	02764
	PARAMETR	00431
	PERFORM	00005
	POTENT	00532
	RANGE	00004
	VALPERM	00003
	WPNTGT	00004
	1	05156
	2	07641
	3	00403
	FLAG	00747
	DEBUG	00025
	PRINT	00007
EXTERNAL SYMBOLS		
	G3000040	
	THEND.	
	Q00FVALL	
	Q1004100	
	Q1005100	
	QRCOICT.	
	PRNTABLE	
	PRNTLOAD	
	ABORT	
	STH.	
	QRQOUTA	
	QNSINGL.	

000011	ABORT	03571										
C06458	AGE	02553										
C00372	AVRP	02711	02711									
C00373	AVTMP	02713										
P03576	BEGIN.	03612	03620	03624								
C05670	CNTRYLOC	02243	03371									
P03575	CNVRTI.	01747	01751	01753	01755	01757	01761	02054	02056	02057	02060	02061
		02063	02064	02065	02115	02117	02120	02121	02122	02123	02124	02125
		02147	02150	02151	02155	02173	02207	02210	02211	02231	02233	02234
		02235	02236	02237	02241	02242	02243	02244	02246	02255	02273	02275
		02276	02300	02332	02334	02336	02337	02341	02343	02345	02346	02346
		02370	02372	02373	02375	02411	02412	02413	02414	02430	02446	02462
		02476	02511	02513	02515	02517	02532	02534	02535	02537	02547	02551
		02552	02553	02555	02556	02572	02573	02574	02575	02576	02577	02606
		02601	02602	02603	02604	02605	02616	02617	02620	02621	02622	02634
		02636	02637	02640	02642	02644	02646	02661	02662	02663	02664	02676
		02677	02700	02701	02712	02713	02714	02715	02716	02717	02720	02721
		02722	02734	02736	02740	02741	02742	02743	02744	02746	02750	02751
		02765	02766	02767	02770	02771	02772	02777	03013	03014	03021	03034
		03041	03057	03121	03160	03164	03213	03252	03256	03300	03302	03303
		03305	03332	03357	03360	03362	03363	03364	03365	03367	03370	03371
		03372	03374	03403	03467	03476	03471	03514	03515	03516	03532	03533
		03534	03545	03546	03547	03550	03555					
C00377	COSAV	02715										
C00316	COSINES	02744										
C00401	COSINMIT	02722										
C00226	COSTEFF	02534	02536									
P03434	COUNT.	03066	03067	03136	03137	03230	03231	03416	03417	03427	03430	
P00077	CRFNT.	01764	02017	02073	02102	02102	02201	02201	02222	02222	02253	02314
		02323	02354	02463	02617	02436	02445	02465	02501	02522	02542	02564
		02610	02625	02652	02667	02744	02725	02757	03005	03027	03047	03062
		03127	03200	03310	03335	03451	03521	03537	03563			
C00000	CROSSDWN	02410	02410									
C00252	D	03147	03147	03241	03241							
C00003	DEFAULT	02416										
C00007	DELAGE	02600										
C00002	DELMIN	02413										
C00055	DELRAFT	02640										
C00054	DELRSTRT	02622										
C00006	DESIG	02240	02240	03364	03366							
P00061	DICT.	01731	01744	01763	02013	02016	02051	02067	02076	02101	02112	02127
		02135	02140	02144	02142	02165	02200	02204	02213	02216	02221	02224
		02253	02262	02266	02305	02313	02317	02322	02325	02353	02361	02402
		02406	02416	02427	02435	02441	02444	02454	02464	02472	02505	02506
		02521	02527	02541	02544	02560	02567	02607	02613	02624	02627	02651
		02655	02666	02673	02703	02707	02724	02727	02750	02762	03004	03010
		03026	03031	03044	03054	03061	03114	03126	03155	03171	03206	03226
		03247	03263	03275	03307	03230	03334	03337	03342	03355	03401	03405
		03445	03450	03465	03473	03512	03520	03527	03536	03542	03562	03572
		03601	03602									
C13563	DLAT	02236	03564									
C10417	DLONG	02237	03365									
C00171	DSPACE	02172										
P00065	DTEMP	03151	03164	03243	03256							

C00000	OZ	03531	03531					
P03613	ENDING.	01732	03573	03576	03577	03577	03600	03600
P00000	EXIT.	03616						
C00012	EXTRAR	02604						
C10624	FLAG	02244	03372					
P00077	FORMAT.	02102						
P01764	FP00001.	03610	03611					
C00605	FRACLOOX	02001						
C00101	FUELEFT	02621						
P03627	GETPL.	03603						
P03617	GETPU.	03606	03623					
P01764	G0000000.	01742						
P02017	G0000001.	02011						
P02070	G0000002.	02047						
P02102	G0000003.	02074						
P02130	G0000004.	02110						
P02163	G0000005.	02142						
P02201	G0000006.	02163						
P02214	G0000007.	02202						
P02222	G0000010.	02214						
P02263	G0000011.	02222						
P02314	G0000012.	02264						
P02323	G0000013.	02315						
P02354	G0000014.	02323						
P02403	G0000015.	02357						
P02417	G0000016.	02404						
P02436	G0000017.	02420						
P02445	G0000020.	02437						
P02465	G0000021.	02452						
P02501	G0000022.	02470						
P02522	G0000023.	02504						
P02542	G0000024.	02525						
P02561	G0000025.	02542						
P02610	G0000026.	02565						
P02625	G0000027.	02611						
P02652	G0000030.	02625						
P02667	G0000031.	02653						
P02704	G0000032.	02671						
P02725	G0000033.	02705						
P02757	G0000034.	02725						
P03005	G0000035.	02760						
P03027	G0000036.	03006						
P03047	G0000037.	03027						
P03062	G0000040.	03052						
P03127	G0000041.	03112						
P03172	G0000042.	03153						
P03221	G0000043.	03204						
P03264	G0000044.	03245						
P03310	G0000045.	03273						
P03335	G0000046.	03326						
P03343	G0000047.	03335						
P03406	G0000050.	03353						
P03451	G0000051.	03443						
P03474	G0000052.	03463						

P03521	GG00053.	03513										
P03537	GG00054.	03525										
P03563	GG00055.	03548										
P01727	GOPRINT	01727										
P03635	I	02153	02154	02156	02170	02171	02174					
C16517	IBACK	02337	02373									
P03636	IBEG	03107	03116	03134	03135	03201	03201	03210	03224	03227		
C00001	IBOOST	02344	02344									
P03637	IC	02024	02031	02062	03132	03145	03157	03224	03237	03251	03413	03414
		03522										
C00000	ICALL	01736	01736	01746	01746	03566	03566					
C00001	ICAMFROM	01751	02427	02427								
C02264	ICLASS	02024	02025									
C00361	IDATA	02125										
C00001	IDENTNO											
C00003	IDUM											
C00746	IDUMP	03567	03567									
C00006	IDUMPR											
P03640	IEND	03103	03106	03110	03111	03123	03135	03200				
C00026	IF2SAVE	03040	03040									
C00272	IFB											
C00053	IFEAS	02020										
C00102	IFG											
C00001	IFLAG	01740										
C13563	IFOR	02335	02335	02371	02371							
C00000	IFOTSAVE	03020	03020									
C00176	IFP											
C00221	IFREE	02475	02475									
C00015	IGEND											
P03641	IGOTO.	01765										
C00014	IGSTART											
C00000	IHDATE											
C00005	IHIT	02533	02534									
C00001	IHNAME	02105	02105	02116	02117							
C00556	ILB											
C00366	ILG											
C00462	ILP											
P03642	IM	02031	02046	02065								
C02520	IMIRV	02037	02037	02045	02045							
C00001	IMUST	01733	01733	01760	01760	03563	03563					
C00003	INDEX	02232	02233	03321	03321	03347	03356					
P03576	INITIAL.	01732										
C00366	INVERSE	02552	03070	03070								
P00003	IOK	03075	03121	03132	03142	03213	03224	03234	03410	03421	03440	03441
		03451	03457	03470	03477	03504	03513					
C00300	IOTA	01750	01750	02432	02432							
C01750	IPAY	02034	02034	02042	02042							
C00002	IPOT	02550	02551	02735	02736							
C00000	IPOTOT	02675	02675									
C00004	IPRNT											
P03643	IS	02030	02064	03133	03140	03141	03150	03166	03225	03232	03233	03242
		03260	03272	03277								
C00002	ISIDE											
C02400	ISINTYPE	02026	02027	03277	03360							

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C01751  ISTATUS   02333  02334  02367  02370
C00001  ISYS      02615  02615  03410  03411
P03644  ITEMP     03352  03360
C01440  ITYPE     02022  02022  03271  03271
P00077  IX        01764
P01736  .1        01734  01735
P02011  .10       01766
P02428  .100      01775
P03573  .1000     01741  03565  03570
P02437  .110      01776  02670
P02452  .112      02451
P02465  .114      02451
P02470  .115      02467
P02501  .117      02467
P02504  .118      02503
P02033  .12
P02565  .120      01776
P02641  .13
P02611  .130      01777
P02047  .14       02032  02048  02049
P02653  .140      02000
P02670  .150      02001
P02522  .151      02503
P02525  .152      02524
P02542  .154      02524
P02671  .160      02001
P02705  .170      02002
P02760  .180      02303
P03066  .190      02004
P01742  .2        01735  01741
P02074  .20       01767
P03050  .200      02004
P03072  .202
P03076  .203      03071
P03153  .205
P03142  .207
P03234  .208
P03245  .209
P03270  .210      02005
P03313  .212      03406
P03320  .213      03316  03316
P03324  .214      03322
P03345  .216      03322  03323
P03407  .220      02004
P03420  .221
P03435  .222      03433  03433
P03437  .223      03434
P03454  .225
P03474  .226      03452  03453
P03501  .227
P03521  .229      03500  03500
P02110  .23       02107
P03525  .230      02007
P02130  .24       02107
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P03548  .240        02007
P02134  .30         01770
P01784  .4
P02137  .40         01770
P02142  .50         01771
P02202  .60         01772
P02264  .70         01773
P02315  .80         01773
P02484  .90         01774   02757
P03563  .900        02010   02973   02153   02136   02141   02201   02263   02314   02403   02417   02436
                    02564   02610   02652   02667   02704   03005   03047   03203   03267   03317   03524
                    03537
P03566  .910        03564   03565
P03571  .920
P03204  .99201      03202   03203
P03631  .ERASER.    03143   03144   03235   03236
P00241  ..100000    02106
P00687  ..101       02423
P00130  ..11        02014
P00824  ..111       02442
P03706  ..113       02455
P00716  ..116       02473
P00724  ..119       02507
P00772  ..121       02578
P01065  ..131       02614
P01125  ..132       02630
P01164  ..141       02656
P00147  ..15        02052
P00746  ..153       02538
P00754  ..155       02545
P01220  ..161       02674
P01246  ..171       02718
P01360  ..172       02736
P01407  ..181       02763
P01461  ..191       03011
P01513  ..192       03032
P01533  ..201       03055
P01544  ..204       03115   03207
P01554  ..206       03156   03250
P00171  ..21        02077
P01565  ..211       03276
P01615  ..215       03331
P00217  ..22        02113
P01522  ..224       03446
P01644  ..228       03446   03513
P01654  ..231       03530
P01674  ..241       03543
P00077  ..3         01745
P00242  ..51        02145
P00276  ..52        02166
P00318  ..61        02205
P00363  ..62        02225   03356
P00331  ..63        02217   03340
P00417  ..71        02267
```

P00464	..01	02320										
P00521	..02	02326										
P00543	..03	02362										
P00557	..91	02497										
P03630	.WSTIFF.	02036	02036	02044	02044	03146	03146	03240	03240			
P02254	.Z00001.	02251										
P02306	.Z00002.	02303										
P03402	.Z00003.	03377										
P03645	J	02020	02021	02033	02041	02053	02055	02070	02330	02331	02333	02342
		02347	02363	02365	02367	02376	02446	02447	02456	02461	02465	02474
		02501	02510	02512	02522	02531	02533	02546	02550	02561	03116	03120
		03122	03134	03137	03161	03163	03165	03211	03212	03214	03226	03231
		03253	03255	03257	03311	03313	03314	03320	03347	03414	03416	03424
		03427	03455	03467	03475	03476	03502	03514	03521	03552	03553	03556
C00001	JAFT	02077										
C00002	JAFTER	02556										
C00002	JCORR	02210										
C00001	JGROUP	02206	02206	03270	03270	03301	03301					
C00001	JIMP	02766										
C00000	JINR	02764	02764									
C00003	JOUTP	02770										
C00002	JOUTR	02767										
C00004	JSAVE	02776	02776									
C00031	JSAVOPT	02772										
C00002	JTGTD	02700										
P03646	K	02023	02024	02103	02104	02114	02116	02130	02227	02230	02232	02255
		02256	02271	02272	02274	02307	02356	02363	02425	02426	02431	02632
		02633	02635	02643	02645	02732	02733	02735	02745	02752	02774	02775
		03000	03016	03017	03022	03036	03037	03042	03063	03064	03074	03077
		03104	03175	03312	03324	03325	03332	03432	03435	03437		
C00000	KGROUP	01752	01752	02146	02146							
P03647	L	03130	03131	03172	03222	03223	03264	03344	03345	03348	03357	03403
C21455	LLFIX	02250	02302	03376								
C00000	LOADOPT	03544	03544									
C00304	LOST	02457	02457									
C21453	LRAID											
C00641	LSTRKSUM											
C00000	MAXBOOST											
C00006	MAXFOOT	02577										
C00001	MAXMIT											
C00121	MAXLOAD	02121	03411	03412								
C00000	MAXPOT	02562	02562	02753	02753	03063	03064					
C00000	MAXRV											
C00000	MAXSYS	02131	02131									
C00051	MINLOAD	02120										
C00136	MISS	02512	02513									
C00311	MTYPE	02124										
C00652	MYPRT											
P03650	N	03051	03072	03073	03074	03100	03173	03202	03215	03227	03265	
C00052	N2SAVE	03033	03033	03043	03043							
C02735	NADDED	03546										
C02763	NADDOLD	03550										
C00023	NALERT											
C00001	NARV	02573										

C00080	NASSN	02637	02657									
C00816	NASMTYPE											
C00010	NBNDRY											
C00005	NC											
C00022	NCLASS											
C00026	NCNTRY											
C00021	NCOMPLEX											
C00002	NCORR	02151	02157	02157	02175	02175						
C00004	NCORRX											
C00025	NCORTYPE											
C04705	NDFX	02277	02277									
C05051	NDEXR	02747	02747									
C05215	NDEXT	02751										
C04705	NDEXVAL	02516	02516									
C00005	NDPEN											
C03002	NEXTRA	02574										
C00090	NFLAG											
C00220	NFREE	02466	02466									
C00013	NGROUP	02071	02071									
C00064	NHIT	02523	02523	03557	03557							
C00064	NHITOLD	03012	03012	03023	03023							
C00030	NJSAVE	02771	03001	03001								
C00304	NLOST	02450	02450									
C00135	NMISS	02502	02502									
C00813	NOK	02605										
C00003	NOLD	02663										
C02737	NONTAR	03554	03554									
C00004	NPASS	01756	01756	02576								
C00815	NPAYLOAD											
C00006	NRECOVER											
C00007	NREF											
C00011	NREG											
C00003	NRTPT											
C00001	NRVADD	02340	02340	02374	02374							
C00003	NSTRK	02172	02172									
C00000	NT	02211	02257	02257	02310	02310	02377	02377	03303	03315	03315	
C00620	NTANXRAS											
C00002	NTAR	02617	02646	02646								
C00765	NTR	02346	03431	03431								
C00024	NTGTS											
P03651	NTIMES	03102	03176									
C21454	NTMAX											
C02736	NTOADD	03547										
C00814	NTOTBASE											
C00001	NTSTRK	02150										
C00012	NTYPE											
C00003	NUMBOOST	01754	01754	02781								
C00000	NV	02350	02350	02354	02354	02571	02571	03304	03304	03424	03425	03461
		03431	03506	03506								
C20310	NVEHGRP	02057										
C00817	NVEHTYPE											
C00000	NWPNS	02055	02056									
P03652	P	03462	03471	03507	03516							
C00003	PEXTRA	02575										

P03612	PFOOOO2.	03607										
C00011	PN	02602										
X00007	PRNTABLE	02134										
X00010	PRNTLOAD	02137										
C00016	PURGE	02603										
X00004	Q1004100	03456	03503									
X00005	Q1005100	03460	03505									
X00001	Q3000040	01737										
X00006	Q80DICT.	00000	01730									
X00013	Q80OUT4	02252	02304	03400								
X00003	Q90EVALL	02247	02301	03375								
X00014	QNSINGL.	03574										
C02737	R	02274	02275									
C00374	RHIT	02717										
C00003	RIN	02635	02636									
C00000	RP	02737	02737									
C10627	RVAL	02245	02245	03373	03373							
C00144	R'AL*	02742										
C00376	SINAV	02714										
C00226	SINES	02743										
C00400	SINHIT	02721										
C00002	SLZ	03534										
X00012	STH.	01743	02012	02050	02075	02111	02143	02164	02203	02215	02223	02265
		02316	02324	02340	02405	02421	02440	02453	02471	02505	02526	02543
		02566	02612	02626	02654	02672	02706	02726	02761	03007	03030	03053
		03113	03154	03205	03246	03274	03327	03336	03354	03444	03464	03511
		03526	03541									
C02734	TASK	02242	03370									
C02737	TGTLAT	02234	03361	03361								
C05673	TGTLONG	02235	03463									
X00002	THEND.	01762	02015	02066	02100	02126	02161	02177	02212	02228	02241	02312
		02321	02352	02401	02415	02434	02443	02463	02477	02520	02540	02557
		02666	02623	02659	02565	02702	02723	02755	03003	03025	03045	03060
		03125	03170	03217	03262	03306	03333	03341	03404	03447	03472	03517
		03535	03561									
C05673	THETA	02276										
C00627	THIN	02737										
C00375	THIT	02720										
C00402	THOLD	02716	03056	03056								
C00241	THROWMAX	02123										
C00001	TNZ	03533										
C00111	TOFLY	02535	02641	02641								
C00662	TP	027?1										
P02071	TS00001-	020										
P02131	TS00002.	02103										
P02137	TS00003.	02153										
P02175	TS00004.	02170										
P02257	TS00005.	02227										
P02310	TS00006.	02271										
P02350	TS00007.	02330										
P02377	TS00010.	02304										
P02432	TS00011.	02425										
P02562	TS00012.	02446										
P02644	TS00013.	02632										

```
P02753  TS00014.  02732
P03001  TS00015.  02774
P03023  TS00016.  03016
P03043  TS00017.  03036
P03100  TS00020.  03065
P03176  TS00021.  03149
P03123  TS00022.  03117
P03173  TS00023.  03138
P03153  TS00024.  03136
P03166  TS00025.  03162
P03215  TS00026.  03211
P03265  TS00027.  03222
P03245  TS00030.  03230
P03260  TS00031.  03254
P03423  TS00032.  03415
P03443  TS00033.  03426
P03522  TS00034.  03475
P03557  TS00035.  03552
C00002  TVAL      02662
C00001  UPDOWN    02412
C00000  VAL       02514  02514
C00001  VALASGN   02461
C00144  VALFIRST  02554  02554
C00004  VALOLD    02464
C00025  VWITOLD   03014
C00020  WLAT      02060
C01130  WLONG     02061
P02021  WS00001.  02072  02072
P02104  WS00002.  02132  02132
P02154  WS00003.  02160  02160
P02171  WS00004.  02176  02176
P02230  WS00005.  02260  02260
P02272  WS00006.  02311  02311
P02331  WS00007.  02331  02351
P02365  WS00010.  02400  02400
P02426  WS00011.  02433  02433
P02447  WS00012.  02563  02563
P02633  WS00013.  02647  02647
P02733  WS00014.  02754  02754
P02775  WS00015.  03002  03002
P03017  WS00016.  03024  03024
P03037  WS00017.  03044  03044
P03076  WS00020.  03077
P03104  WS00021.  03177  03177
P03120  WS00022.  03124  03124
P03131  WS00023.  03174  03174
P03140  WS00024.  03152
P03163  WS00025.  03167  03167
P03212  WS00026.  03216  03216
P03223  WS00027.  03264  03264
P03232  WS00030.  03244
P03255  WS00031.  03261  03261
P03420  WS00032.  03422
P03431  WS00033.  03442
```

```
P03476  WS00034.   03523   03523
P03553  WS00035.   03560   03560
   00665 SYMBOLS
```

```
      SUBROUTINE MITIT                                                  1800
CSUBR      MITIT     1JUN71    ********************************************  4000
C                                                                       2000
C     MOVE FROM MISS TO MIT                                             3000
C                                                                       4000
CUSE       POTENT    1JUN71    ********************************************  5000
      COMMON /POTENT/ MAXPOT, MAXMIT, IPOT(50), NMIT, IMIT(20), TOFLY(20  1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50)  2000
     2, AGE(50)                                                         3000
CEND       POTENT    ********************************************  5000
CUSE       WPNTGT    1JUN71    ********************************************  6000
      COMMON /WPNTGT/ IPOTGT, JAFT, JTGTD, NUMCOST                      1000
CEND       WPNTGT    ********************************************  6000
CUSE       IEVAL     1JUN71    ********************************************  7000
      COMMON /I/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),        1000
     1 D(50, 50)                                                        2000
CEND       IEVAL     ********************************************  7000
CUSE       DEBUG     1JUN71    ********************************************  8000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                 1000
CEND       DEBUG     ********************************************  8000
CUSE       PRINT     1JUN71    ********************************************  9000
      COMMON /PRINT/ ICALL, IMUST                                       1000
CEND       PRINT     ********************************************  9000
C                                                                       10000
      IOTA=IOTA+1                                                       11000
      ICAMFROM(IOTA)=8HMITIT                                            12000
      ICALL=19                                                          13000
      CALL GOPRINT(10)                                                  14000
C                                                                       15000
      ICALL =36                                                         16000
      IT=IPOTGT                                                         17000
      JAF=JAFT                                                          18000
      IMERE=INVERSE(JAF)+1                                              19000
      IF(JAF)9999,10,20                                                 20000
   10 IMERF=1                                                           21000
   20 INOW=-INVERSE(IT)                                                 22000
      NMISS=NMISS-1                                                     23000
      DO 30 I=INOW,NMISS                                                24000
      MISS(I)=MISS(I+1)                                                 25000
      VAL(I)=VAL(I+1)                                                   26000
   30 INVERSE(MISS(I))=-I                                               27000
      DO 40 I = IMERF, NMIT                                             28000
      J=IMERE+NMIT-I                                                    29000
      INVERSE(IMIT(J))=J+1                                              30000
      COSTEFF(J+1)=COSTEFF(J)                                           31000
   40 IMIT(J+1)=IMIT(J                                                  32000
      INVERSE(IT)=IMER                                                  33000
      IMIT(IMERF)=IT                                                    34000
      COSTEFF(IMERE)=0.0                                                35000
      NMIT=NMIT+1                                                       36000
      TOFLY(NMIT) = 0.                                                  37000
      GO TO 9999                                                        38000
C                                                                       39000
C     REMOVE FROM MIT LIST AND PUT IN MISS LIST                         40000
C                                                                       41000
      ENTRY MISSIT                                                      42000
```

```
      IOTA=IOTA+1                                                       43000
      ICAPFROM(IOTA)=NNISSIT                                            44000
      ICALL=28                                                          45000
      CALL SOPRINT(10)                                                  46000
C                                                                       47000
      ICALL=37                                                          48000
      IT=IPOTB(                                                         49000
      INOW=INVERSE(IT)                                                  50000
      NNISS=NNISS+1                                                     51000
      NISS(NNISS)=IT                                                    52000
      INVERSE(IT) = -NNISS                                              53000
      VAL(NNISS)=0.0                                                    54000
      NMIT=NMIT-1                                                       55000
      DO 110 I=INOW,NMIT                                                56000
      COSTEFF(I)=COSTEFF(I+1)                                           57000
      IMIT(I)=IMIT(I+1)                                                 58000
  110 INVERSE(IMIT(I))=I                                                59000
C                                                                       60000
 9999 CALL SOPRINT(16)                                                  61000
      CALL SOPRINT(11)                                                  62000
      IOTA = IOTA - 1                                                   63000
      RETURN                                                            64000
      END                                                               65000
```

IDENT MITIT

PROGRAM LENGTH		00225
ENTRY POINTS	MITIT	00005
	MISSIT	00122
BLOCK NAMES		
	POTENT	00532
	WPNTGT	00004
	1	05154
	DEBUG	00425
	PRINT	00002
EXTERNAL SYMBOLS		
	@@@DICT.	
	@@PRINT	

```
C00459  ABE
P00236  BEGIN.      00257
C00224  COSTEFF     00191   00181   00182   00114   00115   00163   00163   00164
P00216  COUNT.      00047   00059   00067   00067   00161   00162
C00252  D
P00001  DICT.       00007   00020   00124   00135   00176   00201
P00218  ENDING.     00010   00125   00205   00266   00207
P00000  EXIT.       00211
P00003  FORMAT.     00013   00130
X00002  GOPRINT     00017   00134   00175   00208
P00005  HITIT       00005
P00217  I           00044   00047   00056   00061   00064   00072   00106   00156   00162   00170   00173
C00000  ICALL       00016   00016   00022   00133   00133   00137
C00001  ICAMFROM    00015   00132
C00221  IFREE
P00220  IHERE       00031   00035   00063   00066   00070   00107   00112
C00005  IMIT        00074   00074   00104   00104   00105   00113   00113   00164   00165   00165   00166
                    00166
C00001  IMUST
P00296  INITIAL.    00010   00125
P00221  INOW        00040   00043   00046   00144   00156   00160
C00366  INVERSE     00027   00030   00037   00037   00057   00040   00100   00100   00110   00111   00142
                    00143   00151   00171   00172
C00006  IOTA        00011   00011   00012   00014   00014   00126   00126   00127   00131   00131   00203
                    00203   00204
C00002  IPOT
C00006  IPOTBT      00023   00023   00140   00140
P00222  IT          00024   00036   00110   00112   00141   00142   00147
P00034  .10         00032
P00166  .110
P00036  .20         00033
P00054  .30
P00103  .40
P00175  .9999       00033   00121
P00033  ..100000    00013
P00004  ..100001    00130
P00212  .NSTIFF.    00056   00057   00074   00077   00170   00171
P00223  J           00073   00073   00076   00103
P00224  JAF         00026   00027   00032
C00001  JAFT        00025   00025
C00042  JAFTER
C00002  JTOTO
C00304  LOST
C00001  MAXMIT
C00000  MAXPOT
C00134  MISS        00051   00051   00052   00054   00054   00150
P00122  MISSIT      00122
C00220  MFREE
C00004  MMIT        00064   00065   00071   00071   00115   00116   00117   00120   00153   00154   00155
                    00157   00157
C00303  MLOST
C00135  MMISS       00041   00041   00042   00043   00045   00144   00145   00146   00147   00150   00151
C00003  MUMBOOST
X00001  OBOOICT.    00000   00004   00123
```

```
C00111  TOFLY      00120
P00063  TS00001.   00046
P00107  TS00002.   00066
P00175  TS00003.   00161
C00000  VAL        00052   00053   00053   00152   00153
C00144  VALFIRST
P00051  WS00001.   00062
P00070  WS00002.   00156
P00163  WS00003.   00174
   00073 SYMBOLS
```

```
      SUBROUTINE IMPROVE                                                    1000
CSUBR      IMPROVE   1,JUN71  ***************************************      41000
C                                                                           2000
CUSE       CONTROL   1,JUN71  ***************************************      3000
      COMMON /CONTROL/ NV, NARV, NEXTRA, PEXTRA, NPASS, FRACLOOK,           1000
     1                 MAXFOOT, DELAGE, PURGE, PN, EXTRAG, NOK              2000
     2                ,IGSTART,IGEND                                        3000
CEND       CONTROL   ***************************************               3000
CUSE       FOOTIO    1,JUN71  ***************************************      4000
      COMMON /FOOTIO/ MAXRV, ISYS, NTAR, RIN(20), THIN(20), IFEAS,          1000
     1 DELRSTRT, DELRAFT(20), FUELEFT                                       2000
CEND       FOOTIO    ***************************************               4000
CUSE       PARAMETR  1,JUN71  ***************************************      5000
      COMMON /PARAMETR/ MAXSYS, IMNAME(40), MINLOAD(40), MAXLOAD(40),       1000
     1  OSPACE(40), THROWMAX(40), MTYPE(40), IDATA(40)                       2000
CEND       PARAMETR  ***************************************               5000
CUSE       POTENT    1,JUN71  ***************************************      6000
      COMMON /POTENT/ MAXPOT, MAXMIT, IPOT(50), NMIT, IMIT(20), TOFLY(20    1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50)    2000
     2, AGE(50)                                                             3000
CEND       POTENT    ***************************************               4000
CUSE       WPNTGT    1,JUN71  ***************************************      7000
      COMMON /WPNTGT/ IPOTET, JAFT, JTGTD, NUMBOOST                         1000
CEND       WPNTGT    ***************************************               7000
CUSE       IEVAL     1,JUN71  ***************************************      8000
      COMMON /I/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),            1000
     1 D(50, 50)                                                            2000
CEND       IEVAL     ***************************************               8000
CUSE       ZSTATUS   1,JUN71  ***************************************      9000
C                                                                           1000
      COMMON/ Z/ MAXBOOST, IBOOST(500), NTB(500)                            2000
     1         , ISTATUS(1500), NDEX(1500)                                  3000
C                                                                           4000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                           5000
C                                                                           6000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXR),(NDEX(201), NDEXT)   7000
C                                                                           8000
CEND       ZSTATUS   ***************************************               9000
CUSE       3COMP     1,JUN71  ***************************************      10000
      COMMON /3/ RP(50), TP(50), RVALP(50), SINES(50), COSINES(50),         1000
     1 AVRP, AVTHP, RMIT, TMIT, SINAV, COSAV, SINMIT, COSMMIT, THOLD        2000
CEND       3COMP     ***************************************               10000
CUSE       DEBUG     1,JUN71  ***************************************      11000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                     1000
CEND       DEBUG     ***************************************               11000
CUSE       PRINT     1,JUN71  ***************************************      12000
      COMMON /PRINT/ ICALL, IMUST                                           1000
CEND       PRINT     ***************************************               12000
C                                                                           13000
C     THIS ROUTINE IMPROVES THE FOOTPRINT BY REMOVING THE TARGET THAT       14000
C     USES THE MOST ADDITIONAL FUEL AND ADDING OTHER TARGETS IF POSSIBLE    15000
C                                                                           16000
      IOTA = IOTA + 1                                                       17000
      ICAMFROM(IOTA) = 8HIMPROVE                                            18000
      ICALL = 20                                                            19000
      CALL GOPRINT(16)                                                      20000
```

```
      C                                                                 21000
            IF (NMISS .LT. 1) 9999, 5                                   22000
          5 IF (NMIT .LE. 1) 10, 100                                    23000
      C                                                                 24000
      C     FIND SINGLE MOST VALUABLE TARGET                            25000
      C                                                                 26000
         10 IMAX = IMIT(1)                                              27000
            JAFT = 0                                                    28000
            VTEST = RVALP(IMAX)                                         29000
            IPOTBT = IMAX                                               30000
            CALL MISSIT                                                 31000
            DO 50 I = 1, NMISS                                          32000
            J = MISS(I)                                                 33000
            V = RVALP(J)                                                34000
            IF (V .GT. VTEST) 20, 50                                    35000
         20 IPOTBT = J                                                  36000
            CALL HITIT                                                  37000
            CALL TEST                                                   38000
            IF (IFEAS .GT. 0) 30, 40                                    39000
         30 VTEST = V                                                   40000
            IMAX = J                                                    41000
         40 IPOTBT = J                                                  42000
            CALL MISSIT                                                 43000
         50 CONTINUE                                                    44000
            IPOTBT = IMAX                                               45000
            CALL HITIT                                                  46000
            GO TO 9999                                                  47000
      C                                                                 48000
      C     SEARCH FOR CHANGES THAT INCREASE NUMBER OF TARGETS IN FOOTPRINT 49000
      C                                                                 50000
        100 JOLD = JNEW = JAFTOLD = 0                                   51000
        110 CALL FUELSAVE                                               52000
            VTEST = COSTEFF(1)                                          53000
            JOO = IMIT(1)                                               54000
            NMITOX = NMIT                                               55000
        120 DO 140 I = 1, NMIT                                          56000
            J = IMIT(I)                                                 57000
            IF (COSTEFF(I) .LT. VTEST) 130, 140                         58000
        130 VTEST = COSTEFF(I)                                          59000
            JOO = J                                                     60000
        140 CONTINUE                                                    61000
            IF (JOO .EQ. JNEW) 9999, 150                                62000
        150 IPOTBT = JOO                                                63000
            I = INVERSE(JOO)                                            64000
            JAFTOLD = 0                                                 65000
            IF (I .GT. 1) 152, 156                                      66000
        152 JAFTOLD = IMIT(I-1)                                         67000
        156 JOLD = JOO                                                  68000
            CALL MISSIT                                                 69000
            CALL TEST                                                   70000
            IF (JAFTOLD .LT. 1) 160, 170                                71000
        160 CALL REVAL                                                  72000
            GO TO 100                                                   73000
        170 CALL EVAL                                                   74000
      C                                                                 75000
      C     FIND BEST TARGET TO REPLACE OMITTED ONE                     76000
```

```
C                                                                       77000
  135 JADD = 0                                                          78000
      DO 190 I = 1, NMISS                                               79000
  190 MDEXVAL(I) = MISS(MDEXVAL(I))                                     80000
  200 JADD = JADD + 1                                                   81000
      IF (JADD .GT. NMISS) 350, 210                                     82000
  210 J = MDEXVAL(JADD)                                                 83000
      IF (J .EQ. JOLD) 200, 250                                         84000
  250 JAFT = JAFTER(J)                                                  85000
  260 IF (JAFT .LT. 0) 200, 270                                         86000
  270 IPOTGT = J                                                        87000
      CALL MITIT                                                        88000
      CALL TEST                                                         89000
      IF (IFEAS .LT. NHIT) 280, 300                                     90000
  280 CALL MISSIT                                                       91000
      GO TO 200                                                         92000
  300 IF (JAFT .LE. 0) 310, 320                                         93000
  310 CALL REVAL                                                        94000
      GO TO 330                                                         95000
  320 CALL EVAL                                                         96000
  330 JADD = 0                                                          97000
      JNEW = J                                                          98000
      DO 340 I = 1, NMISS                                               99000
  340 MDEXVAL(I) = MISS(MDEXVAL(I))                                     100000
      IF (NHIT .LT. MAXLOAD(ISYS)) 200, 350                             101000
C                                                                       102000
C     CHECK THAT THIS CHANGE HAS INCREASED NUMBER OF TARGETS HIT        103000
C                                                                       104000
  350 IF (NHIT .GT. NHITOX) 110, 360                                    105000
  360 IF (NHIT .EQ. NHITOX) 370, 300                                    106000
  370 IF (RVALP(JNEW) .GE. RVALP(JOLD)) 9999, 380                       107000
  380 IPOTGT = JNEW                                                     108000
      CALL MISSIT                                                       109000
      CALL TEST                                                         110000
      CALL REVAL                                                        111000
  390 IPOTGT = JOLD                                                     112000
      JAFT = JAFTER(JOLD)                                               113000
      CALL MITIT                                                        114000
      CALL TEST                                                         115000
      IF (IFEAS .LT. NHIT) 400, 9999                                    116000
  400 PRINT 410                                                         117000
  410 FORMAT(///15(1H*), 26H ADDITION ERROR IN IMPROVE)                 118000
      IMUST = 1                                                         119000
      CALL GOPRINT(13)                                                  120000
      CALL GOPRINT(11)                                                  121000
      IMUST = 0                                                         122000
C                                                                       123000
 9999 ICALL = 53                                                        124000
      CALL GOPRINT(11)                                                  125000
      IOTA = IOTA - 1                                                   126000
      RETURN                                                            127000
      END                                                               128000
```

IDENT IMPROVE

PROGRAM LENGTH		08424
ENTRY POINTS	IMPROVE	00020
BLOCK NAMES		
	CONTROL	00016
	FOOTIO	00102
	PARAMETR	00431
	POTENT	00532
	WRITST	00004
	1	05156
	2	07641
	3	00403
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	THEN0.	
	0000ICT.	
	GOPRINT	
	MISSIT	
	HITIT	
	TEST	
	FUELSAVE	
	REVAL	
	EVAL	
	STH.	

C00450	AGE											
C00372	AVRP											
C00373	AVTMP											
P00400	BEGIN.	00401										
C00377	COSAV											
C00310	COSINES											
C00401	COSINUIT											
C00226	COSTEFF	00124	00124	00142	00142	00145	00145					
P00410	COUNT.	00136	00137	00211	00212	00273	00274					
P00003	CRFMT.	00357										
C00252	D											
C00007	DELAGE											
C00055	DELRAFT											
C00054	DELRSTRT											
P00001	DICT.	00022	00033	00054	00072	00074	00104	00115	00123	00172	00174	00200
		00203	00244	00246	00253	00261	00264	00330	00332	00334	00343	00345
		00353	00356	00362	00365	00373						
C00171	DSPACE											
P00402	ENDING.	00023	00377	00400	00401							
X00011	EVAL	00202	00263									
P00000	EXIT.	00403										
C00012	EXTRAP											
P00003	FORMAT.	00026										
C00005	FRACLOOK											
C00101	FUELEFT											
XC0007	FUELSAVE	00122										
P00357	0000000.	00351										
X00003	GOPRINT	00032	00361	00364	00372							
X00005	MITIT	00007	00114	00243	00342							
P00411	I	00056	00057	00107	00133	00136	00140	00142	00164	00206	00211	00270
		00273										
C00001	IBOOST											
C00000	ICALL	00031	00031	00370	00371							
C00301	ICAMFROM	00030										
C00361	IDATA											
C00053	IFEAS	00075	00075	00247	00247	00346	00346					
C00221	IFREE											
C00015	IGEND											
C00314	IGSTART											
C00005	IMIT	00043	00043	00126	00126	00140	00140	00165	00165			
C00001	IMNAME											
P00412	IMAX	00044	00047	00051	00132	00112						
P00020	IMPROVE	00020										
C00001	IMUST	00357	00360	00367								
P00400	INITIAL.	00023										
C00346	INVERSE	00157	00157									
C00000	IOTA	00024	00024	00025	00027	00027	00375	00375	00376			
C00002	IPCT											
C00000	IPJTST	00052	00052	00070	00070	00104	00104	00113	00113	00155	00155	00242
		00242	00326	00326	00336	00336						
C01751	ISTATUS											
C00001	ISYS	00384	00384									
P00343	.10	00041										
P00117	.100	00042										

```
P00122  .110        00313
P00132  .120
P00145  .130
P00150  .140        00144   00144
P00154  .150        00152
P00164  .152
P00167  .156        00163   00163
P00177  .160
P00202  .170        00176   00176
P00204  .180        00201
P00213  .190
P00067  .20
P00221  .200        00232   00240   00254   00307
P00226  .210        00224   00225
P00233  .250        00231
P00236  .260
P00241  .270        00237   00240
P00252  .280
P00100  .30
P00255  .300        00251   00251
P00260  .310        00256
P00263  .320        00257
P00265  .330        00262
P00275  .340
P00310  .350        00225   00306   00306
P00314  .360        00312   00312
P00317  .370
P00325  .380        00323
P00335  .390        00316
P00103  .40         00076   00077
P00351  .400
P00040  .5          00036   00037
P00107  .50         00065   00066
P00370  .9999       00037   00116   00153   00323   00324   00350   00350
P00003  ..100000    00024
P00004  ..410       00354
P00404  .#STIFF.    00215   00215   00277   00277
P00413  J           00061   00062   00067   00101   00103   00141   00147   00230   00233   00241   00264
P00414  JADD        00205   00221   00222   00223   00226   00246
C00031  JAMT        00045   00046   00235   00235   00236   00236   00255   00255   00341   00341
C00062  JAFTER      00234   00234   00340   00340
P00415  JAFTOLD     00120   00161   00166   00175
P00416  JGO         00127   00147   00151   00154   00156   00167
P00417  JNEW        00120   00152   00267   00317   00325
P00420  JOLD        00121   00170   00231   00321   00335   00337
C00002  JTGTO
C00304  LOST
C00000  MAXBOOST
C00006  MAXFOOT
C00001  MAXMIT
C00121  MAXLOAD     00305   00305
C00000  MAXPOT
C00000  MAXRV
C00000  MAXSYS
```

C00051	MIMLOAD											
C03136	MISS	00060	00060	00216	00216	00308	00308					
X03004	MISSIT	00053	00105	00171	00252	00327						
C00311	MTYPE											
C00001	NARV											
C04705	NDEX											
C05051	NDEXR											
C05215	NDEXT											
C04705	NDEXVAL	00213	00213	00217	00217	00227	00227	00275	00275	00301	00301	
C00002	NEXTRA											
C00226	NFREE											
C00064	NHIT	00040	00040	00130	00130	00133	00134	00250	00250	00303	00303	00310
		00310	00314	00314	00347	00347						
P00421	NHITOX	00131	00311	00315								
C00303	NLOST											
C00135	NMISS	00035	00035	00110	00110	00204	00297	00223	00224	00270	00271	
C00013	NOK											
C00004	NPASS											
C00002	NTAR											
C04765	NTB											
C00003	NUMBCOST											
C00000	NV											
C01003	PEXTRA											
C00011	PN											
C00010	PURGE											
X00092	QBOOICT.	00000	00021									
X00010	REVAL	00177	00260	00333								
C00374	RHIT											
C00003	RIN											
C00000	RP											
C00144	RVALP	00047	00050	00062	00063	00328	00328	00322	00322			
C00376	SINAV											
C00226	SINES											
C00400	SINMIT											
X00012	STA.	00352										
X00004	TEST	00073	00173	00245	00331	00344						
X00001	TH[illegible]	00355										
C00027	TH											
C00375	THI.											
C00402	THOLD											
C00241	THROWMAX											
C00111	TOFLY											
C00062	TP											
P00110	TS00001.	00056										
P00151	TS00002.	00135										
P00221	TS00003.	00210										
P00303	TS00004.	00272										
P00422	V	00064	00064	00190								
C00000	VAL											
C00144	VALFIRST											
P00423	VTEST	00051	00065	00101	00125	00143	00146					
P00057	WS00001.	00111	00111									
P00143	WS00002.	00136										
P00213	WS00003.	00220										

P01275 WS00004. 00362
00234 SYMBOLS

```
      SUBROUTINE INITASGN                                                1000
CSUBR      INITASGN  1JUN71    ***************************************   4200
C                                                                        2000
CUSE       RAIDATA   1JUN71    ***************************************   3000
C                                                                        1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)      2000
     1           , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)    3000
     2                 , LNAID, NTMAX, LLFIX(1500)                       4000
C                                                                        5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(16)  6000
C                                                                        7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK,   8000
     1DLONG), (IDUM, INDEX)                                              9000
C                                                                        10000
      TYPE LOGICAL LLFIX                                                 11000
C                                                                        12000
      COMMON/4/ DESIG(1500), TASK(1500), CNTRYLCC(1500), FLAG(1500)      13000
C                                                                        14000
CEND       RAIDATA   ***************************************************  3000
CUSE       CONTROL   1JUN71    ***************************************   4000
      COMMON /CONTROL/ NV, NARY, NEXTRA, PEXTRA, NPASS, FRACLOOK,        1000
     1                 MAXPOT, DELARE, PURGE, PN, EXTRAB, NOK            2000
     2               ,IGSTART,IGEND                                      3000
CEND       CONTROL   ***************************************************  4000
CUSE       PERFORM   1JUN71    ***************************************   5000
      COMMON /PERFORM/ NASGN, VALASGN, TVAL, NOLD, VALOLD                1000
CEND       PERFORM   ***************************************************  5000
CUSE       POTENT    1JUN71    ***************************************   6000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), TOFLY(20 1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50; 2000
     2, AGE(50)                                                          3000
CEND       POTENT    ***************************************************  6000
CUSE       ZSTATUS   1JUN71    ***************************************   7000
C                                                                        1000
      COMMON/ Z/ MAXACOST, IMOOST(500), NTG(500)                         2000
     1          , ISTATUS(1500), NDEX(1500)                             3000
C                                                                        4000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                        5000
C                                                                        6000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXR),(NDEX(201), NDEXT) 7000
C                                                                        8000
CEND       ZSTATUS   ***************************************************  7000
CUSE       DEBUG     1JUN71    ***************************************   8000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                  1000
CEND       DEBUG     ***************************************************  8000
CUSE       PRINT     1JUN71    ***************************************   9000
      COMMON /PRINT/ ICALL, IMUST                                        1000
CEND       PRINT     ***************************************************  9000
C                                                                        10000
      IOTA=IOTA+1                                                        11000
      ICAMFROM(IOTA)=LOCMINITASGN                                        12000
      ICALL=27                                                           13000
      CALL BOPRINT(10)                                                   14000
C                                                                        15000
C     SET UP INITIAL VALUES IN /Z/ AND /RAIDATA/                         16000
C                                                                        17000
```

```
      NASGN=0                                                          18000
      VALASGN=0.                                                       19000
      DO 10 I=1,NV                                                     20000
   10 IBOOST(I)=NTB(I)=0                                               21000
      DO 20 I=1,NT                                                     22000
      ISTATUS(I)=-2                                                    23000
   20 IFOR(I)=IBACK(I)=0                                               24000
C     SET UP INITIAL ASSIGNMENT                                        25000
      IP=0                                                             26000
      DO 200 I=1,NV                                                    27000
      IP=IP+1                                                          28000
      ISTATUS(IP)=I                                                    29000
      NASGN=NASGN+1                                                    30000
      VALASGN=VALASGN+RVAL(IP)                                         31000
      NTB(I)=1                                                         32000
      ITOP = IP                                                        33000
      IBOOST(I)=IP                                                     34000
      IBACK(IP) = -IP                                                  35000
      IFOR(IP) = -1                                                    36000
      DO 100 J=2,NARV                                                  37000
      IP=IP+1                                                          38000
      ISTATUS(IP)=I                                                    39000
      NASGN=NASGN+1                                                    40000
      VALASGN=VALASGN+RVAL(IP)                                         41000
      NTB(I)=NTB(I)+1                                                  42000
      IBACK(IP)=IP-1                                                   43000
      IBACK(ITOP) = -IP                                                44000
      IFOR(IP-1)=IP                                                    45000
  100 IFOR(IP)=-1                                                      46000
      IF(NEXTRA)200,200,110                                            47000
  110 NEXTRA = NEXTRA-1                                                48000
      IP=IP+1                                                          49000
      ISTATUS(IP)=I                                                    50000
      NASGN=NASGN+1                                                    51000
      VALASGN=VALASGN+RVAL(IP)                                         52000
      NTB(I)=NTB(I)+1                                                  53000
      IBACK(IP)=IP-1                                                   54000
      IBACK(ITOP) = -IP                                                55000
      IFOR(IP-1)=IP                                                    56000
      IFOR(IP)=-1                                                      57000
  200 CONTINUE                                                         58000
      ICALL=10                                                         59000
      CALL GCPRINT(P)                                                  60000
      IOTA=IOTA-1                                                      61000
      RETURN                                                           62000
      END                                                              63000
```

IDENT INITASBN

PROGRAM LENGTH		00205
ENTRY POINTS	INITASBN	00034
BLOCK NAMES		
	RAIDAYA	21534
	4	13560
	CONTROL	00016
	PERFORM	00005
	POTENT	00532
	2	07641
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	00DICT.	
	02PRINT	

```
C00458  AGE
P00170  BEGIN.      00172
C05670  CNTRYLCC
P00208  COUNT.      00027   00038   00040   00041   00077   00188
C00007  DELAGE
C00008  DESIG
P00001  DICT.       00086   00017   00183
C13563  DLAT
C16517  DLONG
P00173  ENDING.     00007   00167   00170   00171   00171
P00000  EXIT.       00175
C00012  EXTRAB
C10624  FLAG
P00003  FORMAT.     00012
C00005  FRACLOOK
X00002  OOPRINT     00016   00162
P00201  I           00024   00030   00035   00040   00051   00054   00063   00077   00193   00133   00142
                    00155
C14517  IBACK       00044   00045   00071   00071   00115   00115   00117   00117   00144   00144   00150
                    00151
C00001  IBOOST      00032   00067   00067
C00000  ICALL       00015   00015   00160   00161
C00001  ICAMFROM    00014
C00003  IDUM
C13563  IFOR        00045   00072   00121   00121   00123   00126   00152   00153   00154
C00221  IFREE
C00015  IGEND
C00014  IGSTART
C00065  INIT
C00001  INUST
C00003  INDEX
P00004  INITASGN    00004
P00170  INITIAL.    00007
C00346  INVERSE
C00006  IOTA        00010   00010   00011   00013   00013   00105   00105   00164
P00202  IP          00050   00052   00053   00054   00065   00066   00070   00101   00102   00103   00114
                    00116   00120   00123   00131   00132   00133   00145   00147   00152
C00002  IPOT
C01751  ISTATUS     00042   00043   00035   00055   00134   00104   00134   00134
P00203  ITOP        00066   00100   00150
P00031  .10
P00122  .100
P00127  .110
P00044  .20
P00155  .200        00126   00126
P00003  ..I00000    00012
P00204  J           00074
C00002  JCORR
C00001  JGROUP
C21455  LLFIX
C00304  LOST
C21453  LRAID
C00000  MAXBOOST
C00006  MAXFOOT
```

```
C03001  MAXHIT
C03000  MAXPOT
C00136  MISS
C00001  MAZV      00074  00075
C00000  MASGN     00021  00022  00056  00056  00057  00105  00105  00106  00135  00135  00136
C04705  MDEX
C05051  MDEXR
C05215  MDEXT
C04795  MDEXVAL
C00002  MEXTRA    00125  00125  00127  00127  00130
C00220  MFREE
C00064  MHIT
C00303  MLOST
C00135  MMISS
C00013  MOK
C00003  MOLD
C00004  MPASS
C00000  MT        00035  00036
C00765  MTB       00031  00032  00064  00064  00111  00112  00113  00142  00143  00144
C21454  MTMAX
C00000  MV        00025  00025  00156  00156
C00003  PEXTRA
C00011  PN
C00010  PURGE
X00001  QQCOICT.  00000  00005
C02737  R
C10627  RVAL      00000  00041  00107  00110  00137  00140
C22734  TASK
C02737  TETLAT
C05673  TETLONG
C05673  THETA
C00111  TOFLY
P00034  TS00001.  00026
P00047  TS00002.  00037
P00156  TS00003.  00051
P00125  TS00004.  00076
C00002  TVAL
C00001  VALASGN   00023  00000  00041  00042  00107  00110  00111  00137  00140  00141
C00004  VALOLD
P00031  WS00001.  00033
P00042  WS00002.  00044
P00052  WS00003.  00157  00157
P00101  WS00004.  00124
   00136 SYMBOLS
```

```
      SUBROUTINE INPOT                                                  1000
CSUBR      INPOT     1,JUN71  ********************************************  4300
C                                                                       2000
CUSE       RAIDATA   1,JUN71  ********************************************  3000
C                                                                       1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)     2000
     1           , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)   3000
     2                 , LRAID, NTMAX, LLFIX(1500)                      4000
C                                                                       5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(10) 6000
C                                                                       7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK,  8000
     1DLONG), (IDUM, INDEX)                                             9000
C                                                                       10000
      TYPE LOGICAL LLFIX                                                11000
C                                                                       12000
      COMMON/4/ DESIG(1500), TASK(1500), ENTRYLOC(1500), FLAG(1500)     13000
C                                                                       14000
CEND       RAIDATA   ********************************************  3000
CUSE       CONTROL   1,JUN71  ********************************************  4000
      COMMON /CONTROL/ NV, NARV, NEXTRA, PEXTRA, NPASS, FRACLOOK,       1000
     1                 MAXFOOT, DELAGE, PURGE, PN, EXTRAB, NOK          2000
     2                ,IGSTART,IGEND                                    3000
CEND       CONTROL   ********************************************  4000
CUSE       INDEX     1,JUN71  ********************************************  5000
      COMMON /INDEX/ JINR, JINP, JOUTR, JOUTP, JSAVE(26), NJSAVE,       1000
     1 JSAVOPT                                                          2000
CEND       INDEX     ********************************************  5300
CUSE       POTENT    1,JUN71  ********************************************  6000
      COMMON /POTENT/ MAXPOT, MAXMIT, IPOT(50), NMIT, IMIT(20), TOFLY(20 1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50)  2000
     2, AGE(50)                                                         3000
CEND       POTENT    ********************************************  6000
CUSE       WPNTGT    1,JUN71  ********************************************  7000
      COMMON /WPNTGT/ IPOTGT, JAFT, JTGTD, NUMBOOST                     1000
CEND       WPNTGT    ********************************************  7000
CUSE       IEVAL     1,JUN71  ********************************************  8000
      COMMON /1/ VAL(50), JAFTER(50), VALFIAS(50), COSTEFF(20),         1000
     1 O(50, 50)                                                        2000
CEND       IEVAL     ********************************************  8000
CUSE       2STATUS   1,JUN71  ********************************************  9000
C                                                                       1000
      COMMON/ 2/ MAXBCOST, IBOOST(500), NTB(500)                        2000
     1          , ISTATUS(1500), NDEX(1500)                            3000
C                                                                       4000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                       5000
C                                                                       6000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXR),(NDEX(201), NDEXT) 7000
C                                                                       8000
CEND       2STATUS   ********************************************  9000
CUSE       3COMP     1,JUN71  ********************************************  10000
      COMMON /3/ RP(50), TP(50), RVALP(50), SINES(50), COSINES(50),     1000
     1 AVRP, AVTMP, NMIT, TMIT, SINAV, COSAV, SINMIT, COSINMIT, TNOLO   2000
CEND       3COMP     ********************************************  10000
CUSE       DEBUG     1,JUN71  ********************************************  11000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                 1000
```

```
CEND      DEBUG     ********************************************************  11000
CUSE      PRINT     IJUNTI    ********************************************  12000
      COMMON /PRINT/ ICALL, IMUST                                             1000
CEND      PRINT     ********************************************************  12000
C                                                                             13000
C     ADDS TARGETS TO MISS LIST                                               14000
C                                                                             15000
      IOTA = IOTA + 1                                                         16000
      ICAMFROM(IOTA) = 8HINPOT                                                17000
      ICALL = 23                                                              18000
      CALL 8OPRINT(10)                                                        19000
C                                                                             20000
      JR = JINR                                                               21000
      JINP = IFREE(NFREE)                                                     22000
      NFREE = NFREE - 1                                                       23000
      JP = JINP                                                               24000
      IF (ISTATUS(JR)) 200, 9000, 100                                         25000
  100 IF (JSAVOPT .GT. 0) 110, 120                                            26000
  110 NJSAVE = NJSAVE + 1                                                     27000
      JSAVE(NJSAVE) = JP                                                      28000
  120 JTOTO = JR                                                              29000
      CALL REMOVE                                                             30000
C                                                                             31000
  200 ISTATUS(JR) = 8                                                         32000
      NMISS = NMISS + 1                                                       33000
      MISS(NMISS) = JP                                                        34000
      INVERSE(JP) = - NMISS                                                   35000
      RP(JP) = R(JR)                                                          36000
      TP(JP) = THETA(JR)                                                      37000
      AGE(JP) = 1.0                                                           38000
      RVALP(JP) = RVAL(JR)                                                    39000
      SINES(JP) = SINF(TP(JP))                                                40000
      COSINES(JP) = COSF(TP(JP))                                              41000
      VAL(JP) = 0.                                                            42000
      IPOT(JP) = JR                                                           43000
      ICALL = 48                                                              44000
      GO TO 9999                                                              45000
C                                                                             46000
C                                                                             47000
      ENTRY OUTPOT                                                            48000
C                                                                             49000
C     THIS ENTRY REMOVES TARGETS FROM MISS LIST                               50000
C                                                                             51000
      IOTA = IOTA + 1                                                         52000
      ICAMFROM(IOTA) = 8HOUTPOT                                               53000
      ICALL = 24                                                              54000
      CALL 8OPRINT(10)                                                        55000
C                                                                             56000
      JP = JOUTP                                                              57000
      JR = IPOT(JP)                                                           58000
      JOUTR = JR                                                              59000
      IF (ISTATUS(JR)) 9000, 300, 9000                                        60000
  300 INOW = -INVERSE(JP)                                                     61000
      IF (INOW .LE. 0) 9000, 310                                              62000
  310 NMISS = NMISS - 1                                                       63000
      DO 320 I = INOW, NMISS                                                  64000
```

```
      VAL(I) = VAL (I+1)                                                  65000
      MISS(I) = MISS(I+1)                                                 66000
  320 INVERSE(MISS(I)) = -I                                               67000
      NFREE = NFREE + 1                                                   68000
      IFREE(NFREE) = JP                                                   69000
      INVERSE(JP) = 0                                                     70000
      ABE(JP) = 0.0                                                       71000
      VALFIRST(JP) = 0.                                                   72000
      JAFTER(JP) = -1                                                     73000
      RP(JP) = TP(JP) = RVALP(JP) = SINES(JP) = 0.0                       74000
      COSINES(JP) = 1.0                                                   75000
      IPOT(JP) = 3                                                        76000
      ISTATUS(JP) = -2                                                    77000
      ICALL = 41                                                          78000
      GO TO 9999                                                          79000
C                                                                         80000
 9000 PRINT 9001                                                          81000
 9001 FORMAT(///1X,15(1H*),42H STATUS OR INCIDENCE ERROR IN INPOT/OUTPOT ,  82000
     1 15(1H*))                                                           83000
      IMUST = 1                                                           84000
C                                                                         85000
 9999 CALL GOPRINT(18)                                                    86000
      CALL GOPRINT(11)                                                    87000
      IMUST = 0                                                           88000
      CALL GOPRINT(17)                                                    89000
      IOTA = IOTA + 1                                                     90000
      RETURN                                                              91000
      END                                                                 92000
```

IDENT I'POT

PROGRAM LENGTH		00[illegible]2
ENTRY POINTS	INPOT	00[illegible]
	OUTPOT	0[illegible]31
BLOCK NAMES		
	BAIDATA	21534
	4	13560
	CONTROL	00014
	INDEX	00032
	POTENT	00532
	WPNTRT	00004
	1	05156
	2	07641
	3	00401
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	THEND.	
	GOGTICT.	
	GOPRINT	
	REMOVE	
	SINF	
	COSF	
	STH.	

C00450	AGE	00112	00113	00214							
C00372	AVRP										
C00373	AVTMP										
P00263	BEGIN.	00264									
C00378	CNTRYLOC										
C00377	COSAV										
X00004	COSF	00121									
C00310	COSINFS	00123	00225	00226							
C00401	COSINNIT										
C00226	COSTEFF										
P00275	COUNT.	00173	00174								
P00003	CRFMT.	00243									
L00252	D										
C00007	DELAOF										
C00008	DESIG										
P00001	DICT.	00032	00043	00073	00117	00122	00133	00144	00237	00242	00246	00251
		00256									
C13563	DLAT										
C16517	DLONG										
P00265	ENDING.	00033	00134	00262	00263	00264					
P00000	EXIT.	00266									
C00012	EXTRAR										
C10624	FLAG										
P00303	FORMAT.	00036	00137								
C03005	FRACLOOK										
P00243	GGGGGG4.	00235									
X00003	GOPRINT	00042	00143	00245	00250	00255					
P00276	I	00178	00173	00202	00205						
C16517	IBACK										
C00001	IBOOST										
C00000	ICALL	00041	00041	00127	00130	00142	00142	00233	00233		
C00001	ICAMFROM	00040	00141								
C00003	IDUM										
C13563	IFOR										
C00221	IFREE	00050	00213								
C00015	IGEND										
C00014	IGSTART										
C00005	IHIT										
C00001	IMUST	00243	00244	00253	00254						
C00003	INDEX										
P00263	INITIAL.	00033	00134								
P00277	INOW	00141	00142	00167	00172						
P00030	INPOT	00030									
C03366	INVERSE	00104	00105	00108	00140	00203	00204	00215	00215		
C00000	IOTA	00034	00034	00035	00037	00037	00135	00135	00136	00140	00140	00240
		00240	00241								
C00002	IPOT	00126	00126	00150	00151	00227	00227				
C00000	IPOTGT										
C01751	ISTATUS	00056	00056	00075	00076	00154	00155	00231	00232		
P00060	.100										
P00063	.110										
P00070	.120	00041	00042								
P00074	.200	00057									
P00157	.300	00155									

```
P00165  .319        00163
P00200  .320
P00235  .9000       00057   00156   00156   00163   00164
P00245  .9999       00130   00234
P00003  ..100000    00036
P00004  ..100001    00137
P00005  ..9001      00240
P00267  .NSTIFF.    00202   00203
C00001  JAFT
C00002  JAFTER      00221
C00002  JCORR
C00001  JGROUP
C00001  JINP        00050   00051   00053   00054
C00000  JINR        00045   00045
C00003  JOUTP       00144   00146
C00002  JOUTR       00152   00153
P00300  JP          00095   00095   00101   00104   00147   00150   00157   00211   00214
P00301  JR          00044   00055   00070   00075   00125   00152   00156   00231
C00004  JSAVE       00067
C00031  JSAVOPT     00060   00060
C00002  JTOTD       00071   00071
C21495  LLFIX
C00304  LOST
C21453  LRAID
C00000  MAXBOOST
C00006  MAXFOOT
C00001  MAXHIT
C00000  MAXPOT
C00136  MISS        00102   00176   00177   00177   00200   00200
C00001  MARV
C04705  MDEX
C05051  MDEXR
C05215  MDEXT
C04705  MDEXVAL
C00002  MEXTRA
C00220  MFREE       00047   00047   00051   00052   00053   00207   00207   00210   00212   00212
C00004  MHIT
C00030  MJSAVE      00063   00063   00064   00066   00066
C00303  MLOST
C00135  MMISS       00076   00077   00100   00101   00102   00133   00165   00165   00166   00170   00171
C00013  MOK
C00004  MPASS
C01000  MT
C00755  MTB
C21454  MTMAX
C00003  NUMBOOST
C00000  MV
P00131  OUTPOT      00131
C00003  PEXTRA
C00011  PN
C00010  PURGE
X00002  QBODICT.    00000   00031   00102
C02737  R           00105   00106
X00004  REMOVE      00072
```

```
C00374  RHIT
C00030  RP          00106   00107   00224
C10627  RVAL        00113   00114
C00144  RVALP       00114   00115   00223
C00376  SINAV
C00226  SINFS       00120   00222   00222
X00005  SINS        00116
C00400  SINMIT
X00007  STH.        00236
C02734  TASK
C02737  TGTLAT
C05673  TGTLONG
X00001  THEMO.      00241
C05673  THETA       00107   00110
C00375  THIT
C00492  THOLD
C00111  TOFLY
C00062  TP          00110   00111   00115   00120   00223
P00207  TS00001.    00172
C00000  VAL         00124   00124   00175   00175   00176
C00144  VALFIRST    00217   00220
P00175  VS30E01.    00206
   00230 SYMBOLS
```

```
      SUBROUTINE LOADREAD                                              10
CSUBR     LOADREAD  1JUN71 ********************************************  44
      ENTRY PRNTLOAD                                                   20
      X = 1.                                                           30
      RETURN                                                           40
      END                                                              50
```

IDENT LOADREAD

PROGRAM LENGTH 00022
ENTRY POINTS LOADREAD 00003
PRNTLOAD 00010
EXTERNAL SYMBOLS
OBJECT.

```
P00016  BEGIN.      00016
P00005  DICT.       00005   00012
P00017  ENDING.     00017   00013   00015
P00019  EXIT.       00019
P00006  INITIAL.    00006   00013
P00003  LOADREAD    00003
P00010  PSYLOAD     00010
X00001  SYSDICT.    00010   00004   00011
P00021  X           00018
   00011 SYMBOLS
```

```
      SUBROUTINE LREORDER(ISEQ, N, LOGAR)                                1000
CSUBR     LREORDER  1JUN71  ****************************************      5500
C                                                                        2000
C     THIS ROUTINE REORDERS A LOGICAL ARRAY ACCORDING TO THE SEQUENCE    3000
C     ARRAY, ISEQ.  THE ALGORITHM IS THE SAME AS USED IN SUBROUTINE      4000
C     REORDER.                                                           5000
C                                                                        6000
      DIMENSION LOGAR(N), ISEQ(N)                                        7000
      TYPE LOGICAL LOGAR, L                                              8000
C                                                                        9000
   10 I = 1                                                              10000
   20 IF (I - ISEQ(I)) 30, 70, 30                                        11000
   30 IF (ISEQ(I))  70, 70, 40                                           12000
   40 ITEMP = I                                                          13000
      L = LOGAR(I)                                                       14000
   50 NEXT = ISEQ(I)                                                     15000
      ISEQ(I) = -ISEQ(I)                                                 16000
      LOGAR(I) = LOGAR(NEXT)                                             17000
      I = NEXT                                                           18000
      IF (ISEQ(I) - ITEMP)  50, 60, 50                                   19000
   60 ISEQ(I) = -ISEQ(I)                                                 20000
      LOGAR(I) = L                                                       21000
      GO TO 10                                                           22000
C                                                                        23000
   70 IF (I - N)  80, 90, 90                                             24000
   80 I = I + 1                                                          25000
      GO TO 20                                                           26000
   90 DO 100 J = 1, N                                                    27000
  100 ISEQ(J) = XABSF(ISEQ(J))                                           28000
      RETURN                                                             29000
      END                                                                30000
```

IDENT LREORDER

PROGRAM LENGTH 00175
ENTRY POINTS LREORDER 00003
EXTERNAL SYMBOLS
03000040
23010040
000DICT.

```
P00100  BEGIN.      00132   00160   00164
P00170  COUNT.      00070   00071
P00001  DICT.       00005   00103   00104
P00153  ENDING.     00006   00076   00100   00101   00101   00102   00102
P00006  EXIT.       00156
P00012  FP000001.   00132   00133
P00016  FP000002.   00114   00115
P00023  FP000003.   00146
P00027  FP000004.   00116   00117
P00031  FP000005.   00120   00121
P00032  FP000006.   00122   00123
P00035  FP000007.   00147
P00037  FP000010.   00150
P00041  FP000011.   00134   00135
P00046  FP000012.   00126   00127
P00047  FP000013.   00130   00131
P00053  FP000014.   00151
P00054  FP000015.   00140   00141
P00062  FP000016.   00142   00143
P00072  FP000017.   00112   00113
P00074  FP000020.   00124   00125
P00167  GETPL.      00105   00136
P00157  GETPU.      00110   00144   00163
P00171  I           00010   00011   00012   00015   00020   00021   00026   00040   00041   00045   00055
                    00061   00062
P00100  INITIAL.    00006
P00003  ISEQ        00013   00016   00027   00031   00032   00042   00046   00047   00072   00074
P00172  ITEMP       00021   00043
P00072  .100
P00007  .10         00054
P00011  .20         00063
P00015  .30         00314
P00020  .40
P00026  .50         00044   00044
P00045  .60         00043
P00055  .70         00013   00017   00017
P00061  .80         00057
P00064  .90         00057   00060
P00173  J           00005   00071
P00077  L           00025   00051
P00003  LOGAR       00023   00035   00037   00053
P00003  LREORDER    00003
P00003  N           00056   00066
P00174  NEXT        00030   00033   00040
P00136  PF000002.   00111
P00144  PF000003.   00137
P00152  PF000004.   00145
X00001  03000040    00022   00034   00050
X00002  03010040    00024   00036   00052
X00003  00000ICY.   00000   00004
P00076  TS00001.    00067
P00072  WS00001.    00075
   00039 SYMBOLS
```

```
      SUBROUTINE NEWCOOR(I8)                                                    1000
CSUBR      NEWCOOR   1JUN71  ********************************************     4500
C                                                                               2000
CUSE       TAPES     1JUN71  ********************************************     3000
C                                                                               1000
      COMMON/FILES/ TGTFILE(2), BASFILE(2), MSLTIME(2), ALOCTAR(2),             2000
     1      TMPALOC(2), ALOCSRP(2), STRKFIL(2), EVENTAPE, PLANTAPE             3000
C                                                                               4000
      TYPE INTEGER TGTFILE, BASFILE, MSLTIME, ALOCTAR, TMPALOC,                 5000
     1      ALOCSRP, STRKFIL, EVENTAPE, PLANTAPE                               6000
C                                                                               7000
      COMMON/TSCRATCH/ ISCR, ITARL                                              8000
C                                                                               9000
CEND       TAPES     ********************************************************  3000
CUSE       WPNGRPX   1JUN71  ********************************************     4000
      COMMON /WPNGRPX/ NWPNS(200), NVEHGRP(200), WLAT(200), WLONG(200),         1000
     1                 ITYPE(200), IPAT(200), ICLASS(80), ISINTYPE(80),         2000
     2                 INIRV(40)                                              3000
CEND       WPNGRPX   ********************************************************  4000
CUSE       RAIDATA   1JUN71  ********************************************     5000
C                                                                               1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)             2000
     1          , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)           3000
     2               , LRAID, NTMAX, LLFIX(1500)                               4000
C                                                                               5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(16)         6000
C                                                                               7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK,          8000
     1DLONG), (IDUM, INDEX)                                                     9000
C                                                                               10000
      TYPE LOGICAL LLFIX                                                        11000
C                                                                               12000
      COMMON/4/ DESIG(1500), TASK(1500), CNTRYLOC(1500), FLAG(1500)             13000
C                                                                               14000
CEND       RAIDATA   ********************************************************  5000
CUSE       EARTH     1JUN71  ********************************************     6000
      COMMON /EARTH/ RADIUS, DEGTORAD, PI, PIDIV2                               1000
CEND       EARTH     ********************************************************  6000
CUSE       ZSTATUS   1JUN71  ********************************************     7000
C                                                                               1000
      COMMON/ Z/ MAXBOST, IBOST(500), NTR(500)                                  2000
     1          , IST&TUS(1500), NDEX(1500)                                    3000
C                                                                               4000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                               5000
C                                                                               6000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXR), (NDEX(201), NDEXT)      7000
C                                                                               8000
CEND       ZSTATUS   ********************************************************  7000
CUSE       DEBUG     1JUN71  ********************************************     8000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                         1000
CEND       DEBUG     ********************************************************  8000
CUSE       PRINT     1JUN71  ********************************************     9000
      COMMON /PRINT/ ICALL, IMUST                                               1000
CEND       PRINT     ********************************************************  9000
CUSE       TAPEMANR  1JUN71  ********************************************     10000
      COMMON /ITP/ ITP                                                          1000
```

```
      COMMON /TWORD/ TWORD                                                  2000
      EQUIVALENCE (ITWORD, TWORD)                                           3000
      COMMON /MYIDENT/ MYIDENT                                              4000
      COMMON /NOPRINT/ NOPRINT                                              5000
      COMMON /IFTPRNT/ IFTPRNT(10)                                          6000
      COMMON/FILABL/ INIDENT, INFORMO, INDATE, INFORM, INSECR,              7000
     1       INTIME, INLNGTH, INCOMM(5)                                     8000
      COMMON/ MYLABEL/ MYFORM, MYSECR, MYLNGTH, MYCOMM(5)                   9000
C                                                                           10000
CEND      TAPEMANR  ***************************************************     10000
C                                                                           11000
      IOTA=IOTA+1                                                           12000
      ICAMFROM(IOTA)=@WHEWCOOR                                              13000
      ICALL=26                                                              14000
      CALL GOPRINT (10)                                                     15000
C                                                                           16000
      WEST=WLONG(IG)+180.                                                   17000
      EAST=WLONG(IG)-180.                                                   18000
      DO 100 I=1,NT                                                         19000
      TLAT=TGTLAT(I)+DLAT(I)                                                20000
      TLONG=TGTLONG(I)+DLONG(I)                                             21000
      R(I)=DISTF(WLAT(IG),WLONG(IG),TLAT,TLONG)                             22000
      A=PIDIV2-(TLAT*DEGTORAD)                                              23000
      C=PIDIV2-(WLAT(IG)*DEGTORAD)                                          24000
      B=R(I)/RADIUS                                                         25000
      ANGLE =(COSF(A) - (COSF(B) * COSF(C)) / (SINF(B) * SINF(C))           26000
      IF (ABSF(ANGLE) .GT. 1.00) 2, 4                                       27000
    2 ANGLE = 1.00                                                          28000
    4 THETA(I) = ACOSF(ANGLE)                                               29000
      IF(((TLONG.LT.WLONG(IG)).AND.(TLONG.GT.EAST)).OR.((TLONG.GT.WLONG(    30000
     1IG)).AND.(TLONG.GT.WEST)))100,10                                      31000
   10 THETA(I)=-THETA(I)                                                    32000
  100 CONTINUE                                                              33000
      CALL ORDER(THETA,NDEX,NT)                                             34000
      ICALL=7                                                               35000
      CALL GOPRINT(7)                                                       36000
      ITP=ISCR                                                              37000
      MYIDENT = 7HSCRATCH                                                   38000
      CALL MRARRAY(NDEX,NT)                                                 39000
      CALL REORDER(NDEX,NT,3,R,THETA,RVAL,0.0,0.0,0.0)                      40000
      CALL LREORDER(NDEX, NT, LLFIX)                                        41000
      ICALL=8                                                               42000
      CALL GOPRINT(7)                                                       43000
      IOTA=IOTA-1                                                           44000
      RETURN                                                                45000
      END                                                                   44000
```

IDENT NEWCOOR

PROGRAM LENGTH		00263
ENTRY POINTS	NEWCOOR	000035
BLOCK NAMES		
	FILES	00020
	TSCRATCH	00002
	MPWORPX	02570
	RAIDATA	21534
	4	13:00
	EARTH	00:04
	2	07.41
	DEBUG	00[25
	PRINT	00[02
	ITP	00 01
	TWORD	00 01
	MYIDENT	00[01
	NOPRINT	00'01
	IFTPRNT	00 12
	FILABEL	00014
	MYLABEL	00010
EXTERNAL SYMBOLS		
	GADDICT.	
	GOPRINT	
	DISTF	
	ORDER	
	VRADRAY	
	REORDER	
	LAEORDER	
	SINF	
	COSF	
	ACOSF	

```
P00251  A          00056   00066
X00012  ACOSF      00120
C00012  ALOCGRP
C00006  ALOCTAR
P00252  ANGLE      00111   00116   00117
P00253  R          00065   00071   00101
C00002  BASFILE
P00255  BEGIN.     00223   00231   00235
P00254  C          00062   00074   00104
C05670  CNTRYLOC
X00011  COSF       00067   00072   00075
P00255  COUNT.     00033   00036
C00001  DESTORAD   00054   00056   00060   03060
C00000  DESIG
P00001  DICT.      00007   00020   00047   00070   00073   00076   00103   00106   00121   00143   00151
                   00140   00163   00172   00200   00210   00211
X00003  DISTF      00046
C10000  DLAT       00046
C16517  DLONG      00052
P00256  EAST       00027   00127
P00224  ENDING.    00010   00204   00205   00206   00207   00207
C00014  EVENTAPE
P00000  EXIT.      00227
C10424  FLAG
P00003  FORMAT.    00013   00155
P00022  FP03001.   00217   00220
P00034  FP00002.   00221   00222
P00240  GETPL.     00212
P00230  GETPU.     00215   00234
X00002  GOPRINT    00017   00150   00177
P00257  I          00030   00034
C16517  IBACK
C00001  IBOOST
C00000  ICALL      00016   00016   03144   00147   00175   00176
C00001  ICAMFROM   00015
C02260  ICLASS
C00003  IDUM
P00126  IF00001.
P00131  IF00002.   00125   00125   00127
P00134  IF00003.
C13563  IFOR
C00006  IFTPRNT
P00003  IG         00022   00035
C02520  INIRV
C00001  INUST
C00007  INCOMM
C00002  INDATE
C00003  INDEX
C00003  INFORM
C00020  INIDENT
P06205  INITIAL.   00010
C06006  INLNGTH
C00001  INRUNNO
C00004  INSECR
```

C00005	INTIME										
C00000	IOTA	00011	00011	00012	00014	00014	00202	00202	00203		
C01750	IPAY										
C02000	ISCR	00153	00153								
C02400	ISINTYPE										
C01751	ISTATUS										
C00001	ITABL										
C00000	ITP	00154	00154								
C00000	ITWORD										
C01440	ITYPE										
P00137	.10	00133	00133	00135	00136						
P00141	.100	00130	00136								
P00115	.2										
P00117	.4	00114	00114								
P00241	.ERASER.	00071	00074	00077	00100	00100	00104	00107	00107	00110	00110
P00003	..100000	00013									
P00004	..100001	00155									
P00050	.Z00001.	00044	00045								
C00002	JCORR										
C00001	JGROUP										
C21455	LLFIX	00174									
C21453	LRAID										
X00007	LREORDER	00171									
C00000	MAXBOOST										
C00004	MSLTIME										
C00003	MYCONN										
C00000	MYFORM										
C00000	MYIDENT	00156	00156								
C00002	MYLNGTH										
C00001	MYSECR										
C04705	NDEX	00144	00161	00164	00173						
C05051	NDEXR										
C05215	NDEXT										
C04705	NDEXVAL										
P00005	NEWCOOR	00005									
C00009	NOPRINT										
C00000	NT	00031	00031	00145	00161	00164	00173				
C00765	NTB										
C21454	NTMAX										
C09310	NVEMBAP										
C00000	NWPNS										
X00004	ORDER	00142									
P00223	PF00002.	00216									
C00002	PI										
C00003	PIDIV2	00055	00 31								
C00017	PLANTAPE										
X00001	QBODICT.	00000	00006								
C02737	R	00052	00052	00063	00063	00165					
C00000	RADIUS	00064	00064								
X00006	REORDER	00162									
C10627	RVAL	00166									
X00010	SINF	00107	00109								
C00014	STRKFIL										
C02734	TASK										

```
C00008  TGTFILE
C02737  TGTLAT     00037   00037
C05673  TGTLONG    00041   00042
C05673  THETA      00122   00122   00137   00137   00140   00144   00166
P00260  TLAT       00041   00051   00053
P00261  TLONG      00043   00051   00123   00126   00131   00134
C00618  TMPALOC
P00142  TS00001.   00032
C05000  TWORD
P00262  WEST       00025   00135
C00628  WLAT       00044   00056   00057   00057
C01130  WLONG      00023   00023   00025   00026   00045   00050   00124   00124   00132   00132
X00005  WRARRAY    00157
P00037  WS00001.   00141
   00171 SYMBOLS
```

```
      SUBROUTINE OPTRCOST                                                    1000
CSUBR      OPTRCOST  )JUN71    ************************************************ 46000
C                                                                            2000
CUSE       STRKSUM   1JUN71    ************************************************ 3000
C                                                                            1000
      COMMON/STRKSUM/ KGROUP, NTSTRK, NCORR, NSTRK(30), LSTRKSUM             2000
C                                                                            3000
CEND       STRKSUM   ************************************************       3000
CUSE       RAIDATA   1JUN71    ************************************************ 4000
C                                                                            1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)          2000
     1            , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)      3000
     2                 , LRAID, NTMAX, LLFIX(1500)                          4000
                                                                             5000
C                                                                            6000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(16)      7000
C                                                                            8000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK,       9000
     1DLONG), (IDUM, INDEX)                                                  10000
C                                                                            11000
      TYPE LOGICAL LLFIX                                                     12000
C                                                                            13000
      COMMON/A/ DESIG(1500), TASK(1500), CNTRY_LOC(1500), FLAG(1500)         14000
C                                                                            4000
CEND       RAIDATA   ************************************************       5000
CUSE       CONTROL   1JUN71    ************************************************ 1000
      COMMON /CONTROL/ NV, NARV, NFXTRA, PEXTRA, NPASS, FRACLOOK,            2000
     1                 MAXFOOT, DELAGE, PURGE, PN, EXTRAS, NOK               3000
     2               ,IGSTART,IGEND                                          5000
CEND       CONTROL   ************************************************       6000
CUSE       FOOTIO    1JUN71    ************************************************ 1000
      COMMON /FOOTIO/ MAXRV, ISYS, NTAP, RIN(20), THIN(20), IFEAS,           2000
     1 DELRSTRT, DELRAFT(20), FUELEFT                                        6000
CEND       FOOTIO    ************************************************       7000
CUSE       FOOTSAVE  1JUN71    ************************************************ 1000
      COMMON/FOOTSAVE/ IFCISAVE(20), NWITOLD, VWITOLD, IF2SAVE(20),          2000
     1 N2SAVE                                                                7000
CEND       FOOTSAVE  ************************************************       8000
CUSE       INDEX     1JUN71    ************************************************ 1000
      COMMON /INDEX/ JINR, JINP, JOUTR, JOUTP, JSAVE(20), NJSAVE,            2000
     1 JSAVOPT                                                               8000
CEND       INDEX     ************************************************       9000
CUSE       LOADATA   1JUN71    ************************************************ 1000
C                                                                            2000
      COMMON /LOADATA/ LOADOPT, NRVADD(1500), NADDED, NTOADD, CONTAR(20)     3000
     1                , NADDOLD                                               4000
C                                                                            9000
CEND       LOADATA   ************************************************       10000
CUSE       PARAMETR  1JUN71    ************************************************ 1000
      COMMON /PARAMETR/ MAXSYS, IMNAME(40), MINLOAD(40), MAXLOAD(40),        2000
     1  DSPACE(40), THROWMAX(40), MTYPE(40), IDATA(40)                        3000
CEND       PARAMETR  ************************************************       10000
CUSE       POTENT    1JUN71    ************************************************ 11000
      COMMON /POTENT/ MAXPOT, MAXNIT, IPOT(50), NWIT, IWIT(20), TOFLY(20     1000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50)     2000
     2, AGE(50)                                                              3000
CEND       POTENT    ************************************************       11000
```

```
CUSE      WPNTGT    1JUN71    ********/    *****************************   12000
      COMMON /WPNTGT/ IPOTGT, JAFT, JTG     NUMBOOST                          1600
CEND      WPNTGT    ********************************************************  12000
CUSE      IEVAL     1JUN71    ********************************************    13000
      COMMON /1/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),              1000
     1 D(50, 50)                                                              2000
CEND      IEVAL     ********************************************************  13000
CUSE      2STATUS   1JUN71    ********************************************    14000
C                                                                             1000
      COMMON/ 2/ MAXBOOST, IBOOST(500), NTR(500)                              2000
     1          , ISTATUS(1500), NDEX(1500)                                  3000
C                                                                             4000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                             5000
C                                                                             6000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXP),(NDEX(201), NDEXT)      7000
C                                                                             8000
CEND      2STATUS   ********************************************************  14000
CUSE      3COMP     1JUN71    ********************************************    15000
      COMMON /3/ RP(50), TP(50), RVALP(50), SINES(50), COSINES(50),           1000
     1 AVRP, AVTHP, RHIT, THIT, SINAV, COSAV, SINHIT, COSINHIT, TMOLD         2000
CEND      3COMP     ********************************************************  15000
CUSE      DEBUG     1JUN71    ********************************************    16000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                       1000
CEND      DEBUG     ********************************************************  16000
CUSE      PRINT     1JUN71    ********************************************    17000
      COMMON /PRINT/ ICALL, IMUST                                             1000
CEND      PRINT     ********************************************************  17000
C                                                                             1800
C                                                                             1900
C     CALCULATES OPTIMAL FOOTPRINT FOR THIS BOOSTER                           2000
C                                                                             2000
      IOTA = IOTA + 1                                                         2100
      ICAMFROM(IOTA) = BHOPTBOOST                                             2200
      ICALL = 17                                                              2300
      CALL GOPRINT(18)                                                        2400
C                                                                             2500
C     FIND BEST INITIAL POINT                                                 2600
C                                                                             
      IFOOT = 1
      IF (NMISS .LT. 1) 9000, 10
   10 DO 20 I = 1, NMISS
   20 NDEXVAL(I) = MISS(NDEXVAL(I))
      NOLD = NMISS                                                            
      JONE = 0                                                                3300
   30 JONE = JONE + 1                                                         3400
      JAFT = 0                                                                3500
      IPOTGT = NDEXVAL(JONE)                                                  3600
      CALL HITIT                                                              3700
      CALL TEST                                                               3800
      IF (IFEAS .LT. 1) 40, 60                                                3900
   40 CALL MISSIT                                                             4000
      IF (JONE .GE. NOLD) 50, 30                                              4100
   50 IF (IFOOT .GT. 1) 100, 51                                               4200
   51 PRINT 52, NUMBOOST, KGROUP                                              4300
   52 FORMAT(//1X, 15(1H*),23H WARNING - BOOSTER NO. ,I3,1H OF GROUP ,        4400
     1  I2,36H CAN REACH NO TARGETS IN ITS SECTOR ,15(1H*))                   4500
      IMUST = 1                                                               4600
```

```
      GO TO 9999                                                        47000
   60 CALL REVAL                                                        48000
      ICALL = 13                                                        49000
      CALL GOPRINT(15)                                                  50000
      CALL GOPRINT(20)                                                  51000
      JADD = 0                                                          52000
      DO 65 I = 1, NMISS                                                53000
   65 NDEXVAL(I) = MISS(NDEXVAL(I))                                     54000
C                                                                       55000
C     FIND BEST TARGET TO ADD NEXT                                      56000
C                                                                       57000
   70 JADD = JADD + 1                                                   58000
      IF (JADD .GT. NMISS) 170, 80                                      59000
   80 J = NDEXVAL(JADD)                                                 60000
      JAFT = JAFTER(J)                                                  61000
      IF (JAFT .LT. 0) 70, 110                                          62000
  110 IPOTGT = J                                                        63000
      CALL MITIT                                                        64000
      CALL TEST                                                         65000
      IF (IFEAS .LT. NMIT) 120, 130                                     66000
  120 IPOTGT = J                                                        67000
      CALL MISSIT                                                       68000
      GO TO 70                                                          69000
  130 IF (JAFT .LE. 0) 140, 150                                         70000
  140 CALL PEVAL                                                        71000
      GO TO 160                                                         72000
  150 CALL EVAL                                                         73000
  160 JADD = 0                                                          74000
      DO 165 I = 1, NMISS                                               75000
  165 NDEXVAL(I) = MISS(NDEXVAL(I))                                     76000
      IF (NMIT .LT. MAXLOAD(ISYS)) 70, 170                              77000
C                                                                       78000
C     IMPROVE PRESENT FOOTPRINT                                         79000
C                                                                       80000
  170 GO TO (180, 180, 9999), IFOOT                                     81000
  180 CALL IMPROVE                                                      82000
  190 GO TO (200, 300, 9999), IFOOT                                     83000
C                                                                       84000
C     FIRST FOOTPRINT - SAVE IF MORE TO COME                            85000
C                                                                       86000
  200 ICALL = 48                                                        87000
      CALL GOPRINT(11)                                                  88000
      IFOOT = IFOOT + 1                                                 89000
      IF ((IFOOT .LE. XABSF(MAXFOOT)) .AND. (NMISS .GE. NMIT)) 210, 370 90000
  210 VMITOLD = 0.                                                      91000
      DO 220 I = 1, NMIT                                                92000
      VMITOLD = VMITOLD + RVALP(IMIT(I))                                93000
  220 IFOTSAVE(I) = IMIT(I)                                             94000
      NMITOLD = NMIT                                                    95000
      NMIT = 0                                                          96000
      N2SAVE = 0                                                        97000
      ICALL = 67                                                        98000
      CALL GOPRINT(19)                                                  99000
      IF (NMISS .GT. 0) 230, 190                                       100000
  230 CALL EVAL                                                        101000
      GO TO 10                                                         102000
```

```
C                                                                       103000
C     SECOND FOOTPRINT                                                  104000
C                                                                       105000
  300 ICALL = 49                                                        106000
      CALL GOPRINT(11)                                                  107000
      IF (NHIT .LT. NHITOLD) 330, 310                                   108000
  310 IF (NHIT .GT. NHITOLD) 352, 312                                   109000
  312 VHIT = 0.                                                         110000
      DO 320 I = 1, NHIT                                                111000
  320 VHIT = VHIT + RVALP(IHIT(I))                                      112000
      IF (VHIT .GT. VHITOLD) 352, 330                                   113000
C                                                                       114000
C     RETURN AND USE FIRST PLAN                                         115000
C                                                                       116000
  330 NHITX = NHIT                                                      117000
      DO 340 I = 1, NHITX                                               118000
      IPOTGT = IHIT(I)                                                  119000
  340 CALL MISSIT                                                       120000
      DO 350 I = 1, NHITOLD                                             121000
  350 IHIT(I) = IFOTSAVE(I)                                             122000
      NHIT = NHITOLD                                                    123000
      CALL TEST                                                         124000
      CALL REVAL                                                        125000
      GO TO 360                                                         126000
C                                                                       127000
C     USE SECOND PLAN                                                   128000
C                                                                       129000
  352 DO 353 I = 1, NHIT                                                130000
  353 IF2SAVE(I) = IHIT(I)                                              131000
      N2SAVE = NHIT                                                     132000
      ICALL = 68                                                        133000
      CALL GOPRINT(16)                                                  134000
      DO 354 I = 1, NHITOLD                                             135000
  354 IHIT(I) = IFOTSAVE(I)                                             136000
      NHIT = NHITOLD                                                    137000
      NHITX = NHIT                                                      138000
      DO 355 I = 1, NHITX                                               139000
      IPOTGT = IHIT(I)                                                  140000
  355 CALL MISSIT                                                       141000
      DO 356 I = 1, N2SAVE                                              142000
  356 IHIT(I) = IF2SAVE(I)                                              143000
      NHIT = N2SAVE                                                     144000
C                                                                       145000
  360 IF (NHIT .LT. MAXLOAD(ISYS)) 370, 9999                            146000
  370 IFOOT = IFOOT + 1                                                 147000
      IF (MAXFOOT .LT. 0) 9999, 380                                     148000
C                                                                       149000
C     LOOK AHEAD TO NEXT ROOSTER SECTOR                                 150000
C                                                                       151000
  380 IF (NHIT .LT. 1) 9999, 385                                        152000
  385 JSAVOPT = 1                                                       153000
      NRNEW = NUMROOST + 1                                              154000
      IF (NPASS .EQ. 2) 390, 400                                        155000
  390 NRNEW = NUMROOST - 1                                              156000
  400 IF ((NRNEW .LE. 0) .OR. (NRNEW .GT. NV)) 9999, 405                157000
  405 STOP = IROOST(NRNEW)                                              158000
```

```
      NRV = NTR(NAME+) - 1                                                  159000
      IFOTSAVE(1) = ITOP                                                    160000
      DO 410 I = 1, NRV                                                     161000
  410 IFOTSAVE(I+1) = IFOR(IFOTSAVE(I))                                     162000
      NRV = NRV + 1                                                         163000
      IF (NRV .LE. 0) 440, 420                                              164000
  420 CALL ORDER(IFOTSAVE, NOEXVAL, NRV)                                    165000
      GO TO (426, 422), MPASS                                               166000
  422 J = NRV / 2                                                           167000
      L = NRV - 1                                                           168000
      DO 424 I = 1, J                                                       169000
      K = L - I                                                             170000
      M = NOEXVAL(I)                                                        171000
      NOEXVAL(I) = NOEXVAL(K)                                               172000
  424 NOEXVAL(K) = M                                                        173000
  426 MIN = NRV / FRACLOOK                                                  174000
      NADD = XMINOF(MIN, NFREE, NRV)                                        175000
      DO 430 I = 1, NADD                                                    176000
      JTAR = IFOTSAVE(NOEXVAL(I))                                           177000
  430 CALL INPOT                                                            178000
  440 THOLD = 1.E300                                                        179000
      CALL REVAL                                                            180000
      ICALL = 50                                                            181000
      CALL GOPRINT(11)                                                      182000
      CALL GOPRINT(18)                                                      183000
      CALL GOPRINT(17)                                                      184000
      CALL GOPRINT(20)                                                      185000
      JADD = 0                                                              186000
      DO 450 I = 1, NMISS                                                   187000
  450 NOEXVAL(I) = MISS(NOEXVAL(I))                                         188000
      GO TO 70                                                              189000
C                                                                           190000
C     EMPTY MISS LIST AT FIRST CALL                                         191000
C                                                                           192000
 9000 PRINT 9001, NUMBOOST, NGROUP                                          193000
 9001 FORMAT(///1X,15(1H*),8H BOOSTER,I4,10H IN GROUP ,I2,41H HAS NO POTE   194000
     1NTIAL TARGETS TO INVESTIGATE ,15(1H*))                                195000
      IMUST = 1                                                             196000
C                                                                           197000
 9999 ICALL = 51                                                            198000
      CALL GOPRINT(11)                                                      199000
      IMUST = 0                                                             200000
      CALL TEST                                                             201000
      IF (IFEAS .LT. NHIT) 9996, 9998                                       202000
 9996 PRINT 9997                                                            203000
 9997 FORMAT(1X,15(1H*),28H FOOTPRINT ERROR IN CMTBOOST)                    204000
      IMUST = 1                                                             205000
      CALL GOPRINT(11)                                                      206000
 9998 ICALL = 70                                                            207000
      CALL GOPRINT(13)                                                      208000
      IMUST = 0                                                             209000
      IF (LOADOPT * (NHIT - MINLOAD(ISYS))) 9994, 9995, 9995                210000
 9994 CALL ADDRV                                                            211000
 9995 ICTA = ICTA - 1                                                       212000
      RETURN                                                                213000
      END                                                                   214000
```

IDENT OPTBOOST

PROGRAM LENGTH		01131
ENTRY POINTS	OPTBOOST	00105
BLOCK NAMES		
	STRKSUM	00042
	RAIDATA	21534
	&	13560
	CONTROL	00016
	FOOTIO	00102
	FOOTSAVE	00053
	INDEX	00032
	LOADATA	32764
	PARAMETR	00431
	POTENT	00532
	WPNTGT	00004
	1	05156
	2	07641
	3	00403
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	THEND.	
	Q1010100	
	QBOOICT.	
	GOPRINT	
	HITIT	
	TEST	
	MISSIT	
	REVAL	
	EVAL	
	IMPROVE	
	ORDER	
	INPOT	
	ADDRV	
	XMINOF	
	STM.	
	QNSINGL.	

X00015 ADDRV 01055
C00458 AGE
C00372 AVRO
C00373 AVTMP
P01064 BEGIN. 01065
C05670 CNTRYLOC
P01063 CNVRTI. 00201 00203 01002 01004
C00377 COSAV
C00310 COSINES
C00401 COSINMIT
C00226 COSTEFF
P01107 COUNT. 00133 00134 00227 00230 00307 00310 00362 00363 00440 00441 00473
00474 00513 00514 00533 00534 00557 00560 00634 00635 00667 00670
00764 00765
P00003 CRFMT. 00206 01007 01032
C00252 D
C00007 DELAGE
C00055 DELRAFT
C00054 DELRSTRT
C00000 DESIG
P00001 DICT. 00107 00120 00156 00160 00165 00176 00205 00211 00215 00270 00257
00261 00270 00276 00301 00331 00341 00406 00414 00421 00464 00503
00505 00525 00550 00652 00714 00731 00740 00744 00747 00752 00755
00777 01006 01014 01020 01026 01031 01035 01042 01054
C13563 DLAT
C16517 DLONG
C00171 DSPACE
P01066 ENDING. 00110 01061 01064 01065
X00011 EVAL 00300 00413
P00000 EXIT. 01067
C00012 EXTRAB
C10624 FLAG
P00003 FORMAT. 00113
C00005 FRACLOOK 00710 00710
C00101 FUELEFT
P00206 GGG0000. 00174
P01007 GGG0001. 00775
P01032 GGG0002. 01024
X00004 GOPRINT 00117 00214 00217 00340 00405 00420 00524 00743 00746 00751 00754
01013 01034 01041
X00005 HITIT 00155 00256
P01110 I 00130 00133 00224 00227 00304 00307 00357 00363 00435 00440 00457
00465 00470 00474 00510 00513 00530 00533 00543 00551 00554 00560
00632 00634 00665 00667 00672 00702 00720 00722 00732 00761 00764
C16517 IBACK
C00331 IBOOST 00623 00623
C00000 ICALL 00116 00116 00212 00213 00336 00337 00403 00404 00416 00417 00522
00523 00741 00742 01011 01012 01037 01040
C00001 ICAMFROM 00115
C00361 IDATA
C00003 IDUM
P00352 IF00001. 00351
P00616 IF00002.
C00026 IF2SAVE 00516 00516 00561 00561

C00053	IFEAS	00161	00161	00262	00262	01021	01021					
P01111	IFOOT	00123	00171	00324	00332	00343	00344	00350	00572	00573		
C13563	IFOR	00641	00641									
C00000	IFOTSAVE	00374	00374	00475	00475	00535	00535	00638	00638	00636	00636	00642
		00642	00653	00726	00726							
C00221	IFREE											
C00015	IGEND											
P01112	IGOTO.	00325	00333	00656								
C00014	IGSTART											
C00365	IMIT	00364	00364	00373	00373	00442	00442	00461	00461	00476	00476	00515
		00515	00536	00536	00545	00545	00542	00542				
C00001	IMNAME											
X00012	IMPROVE	00333										
C00001	IMUST	00206	00207	01007	01010	01014	01022	01033	01044			
C00003	INDEX											
P01064	INITIAL.	00110										
X00014	INPOT	00730										
C00366	INVERSE											
C00000	IOTA	00111	00111	00112	00114	00114	01057	01057	01048			
C00002	IPOT											
C00000	IPOTBT	00153	00154	00255	00255	00266	00266	00462	00462	00546	00544	
C01751	ISTATUS											
C00001	ISYS	00320	00320	00567	00567	01046	01046					
P01113	ITOP	00624	00627									
P00127	.10	00125	00125	00415								
P00254	.110	00252	00252									
P00265	.120											
P00272	.130	00264	00264									
P00275	.140	00273										
P00300	.150	00274										
P00302	.160	00277										
P00311	.165											
P00324	.170	00243	00322	00322								
P00330	.180	00326	00326									
P00332	.190	00173	00411	00412								
P00135	.20											
P00335	.200	00334										
P00355	.210	00353										
P00373	.220											
P00413	.230											
P00146	.30	00170										
P00416	.300	00334										
P00427	.310	00425	00425									
P00433	.312	00431	00431									
P00442	.320											
P00455	.330	00426	00453	00453								
P00463	.340											
P00475	.350											
P00507	.352	00472	00454									
P00515	.353											
P00535	.354											
P00547	.355											
P00561	.356											
P00566	.360	00506										

```
P00572  .370        00331   00354
P00577  .380        00575   00576
P00602  .385        00600   00601
P00615  .390
P00164  .40
P00613  .400        00607
P00622  .405        00620   00628
P00636  .410
P00651  .420        00647
P00660  .422
P00677  .424
P00704  .426        00657
P00730  .430
P00735  .440        00647   00650
P00766  .450
P00171  .50         00167
P00174  .51         00172   00173
P00210  .60         00162   00163
P00231  .65
P00237  .70         00253   00271   00323   00774
P00244  .90         00242   00243
P00775  .9000       00126
P01055  .9994       01053
P01057  .9995       01053   01054
P01024  .9996
P01037  .9998       01023   01023
P01011  .9999       00207   00327   00335   00571   00571   00576   00601   00614   00615   00621
P01071  .ERASER.    00347   00350   01050   01052
P00003  ..100000    00113
P00304  ..52        00177
P00037  ..9001      01000
P00071  ..9997      01027
P01070  .ASTIFF.    00137   00137   00233   00233   00313   00313   00366   00370   00444   00445   00448
                    00640   00725   00725   00770   00770
P01114  J           00246   00247   00254   00265   00662   00665
P01115  JADD        00223   00237   00240   00241   00244   00303   00760
C00001  JAFT        00150   00151   00250   00251   00272   00272
C00062  JAFTER      00247   00250
C00002  JCORR
C00001  JGROUP
C00001  JINP
C00000  JINR        00727   00727
P01116  JOWE        00145   00146   00147   00152   00166
C00003  JOUTP
C00002  JOUTR
C00004  JSAVE
C00031  JSAVOPT     00602   00603
C00002  JTGTO
P01117  K           00672   00675   00700
C03600  KGROUP      00202   00202   01003   01003
P01120  '           00664   00671
C21455  LLFIX
C00000  LOADOPT     01051   01051
C00304  LOST
```

C21453	LRAID										
C00041	LSTRKSUM										
P01121	M	00674	00677								
C00000	MAXBOOST										
C00006	MAXFOOT	00345	00345	00574	00574						
C00001	MAXHIT										
C00121	MAXLOAD	00321	00321	00570	00570						
C00000	MAXPOT										
C00003	MAXRV										
C00000	MAXSYS										
C00051	MINLOAD	01047	01047								
C00136	MISS	00140	00140	00234	00234	00314	00314	00771	00771		
C00007	MISSIT	00164	00267	00463	00547						
C00311	MTYPE										
C00052	NZSAVE	00402	00402	00521	00521	00555	00555	00564	00564		
P01122	NADD	00717	00733								
C02735	NADDED										
C02763	NADDOLD										
C00001	NARV										
P01123	NBNEW	00605	00612	00613	00516	00622					
C00002	NCORR										
C04705	NDEX										
C05051	NDEXR										
C05215	NDEXT										
C04705	NDEXVAL	00135	00135	00141	00141	00152	00153	00231	00231	00235	00235	00245
		00245	00311	00311	00315	00315	00653	00673	00673	00675	00676	00676
		00700	00701	00723	00723	00766	00766	00772	00772			
C00002	NEXTRA											
C00220	NFSSE	00715										
C00064	NHIT	00263	00263	00317	00317	00353	00340	00366	00376	00378	00486	00401
		00423	00423	00427	00427	00435	00436	00455	00455	00501	00501	00518
		00511	00520	00520	00541	00541	00565	00565	00566	00566	00577	00577
		01022	01022	01045	01045							
C00024	NHITOLD	00377	00377	00424	00424	00430	00430	00471	00471	00500	00500	00530
		00531	00540	00540								
P01124	NHITX	00456	00466	00542	00552							
P01125	NIK	00712	00715									
C00030	NJSAVE											
C00303	NLOST											
C00135	NMISS	00123	00124	00130	00131	00143	00143	00224	00225	00241	00242	00304
		00305	00352	00352	00410	00410	00761	00762				
C00013	NOK											
P01126	NOLD	00144	00167									
C02737	NONTAR											
C00004	NPASS	00604	00606	00655	00655							
P01127	NRV	00627	00632	00644	00645	00646	00654	00660	00663	00704	00716	
C00001	NRVADD											
C00003	NSTRK											
C00000	NT											
C00002	NTAR											
C00766	NTR	00625	00625									
C21454	NTMAX											
C02736	NTOADD											
C00001	NTSTRK											

C00003	NUMBOOST	00200	00200	00603	00604	00610	00610	01001	01001
C00000	NV	00617	00517						
P00105	OPTROOST	00105							
X00013	ORDER	00451							
C00003	PEXTRA								
C00011	PN								
C00010	PURGE								
X00002	QIQIA16C	00711							
X00003	QSQDICT.	00000	00106						
X00020	QNSINGL.	01062							
C02737	R								
X00010	REVAL	00210	00275	00504	00737				
C00374	RHIT								
C00003	RIN								
C00000	RP								
C10627	RVAL								
C00144	RVALP	00370	00371	00445	00446				
C00376	SINAV								
C00226	SINES								
C00400	SINHIT								
X00017	STM.	00175	00776	01025					
C02734	TASK								
X00006	TEST	00157	00260	00502	01017				
C02737	TGTLAT								
C05673	TGTLONG								
X00001	THENO.	00204	01005	01030					
C05673	THETA								
C00027	THIN								
C00375	THIT								
C00402	THOLD	00736	00736						
C00124	THROWMAX								
C00111	TOFLY								
C00002	TP								
P00143	TS00001.	00132							
P00237	TS00002.	00226							
P00317	TS00003.	00306							
P00376	TS00004.	00361							
P00451	TS00005.	00437							
P00466	TS00006.	00460							
P00500	TS00007.	00472							
P00520	TS00010.	00512							
P00540	TS00011.	00532							
P00552	TS00012.	00544							
P00564	TS00013.	00556							
P00644	TS00014.	00633							
P00704	TS00015.	00666							
P00733	TS00016.	00721							
P00774	TS00017.	00763							
C00000	VAL								
C00144	VALFIRST								
P01130	VHIT	00434	00444	00447	00451				
C00025	VHITOLD	00355	00356	00366	00367	00371	00372	00452	00452
P00135	WS. 001.	00142							
P00231	WS.0002.	00236							

```
P00311  WS00003.   00316
P00364  WS00004.   00375
P00442  WS00005.   00450
P00461  WS00006.   00467   00467
P00475  WS00007.   00477
P00515  WS00010.   00517
P00535  WS00011.   00537
P00545  WS00012.   00553   00553
P00561  WS00013.   00563
P00636  WS00014.   00643
P00671  WS00015.   00703
P00722  WS00016.   00734   00734
P00766  WS00017.   00773
X00816  XMINOF     00713
   00411 SYMBOLS
```

```
      SUBROUTINE PRINTSET                                                1000
CSUBR      PRINTSET  1JUN71    ***************************************    4700
C                                                                        2000
CUSE       STRKSUM   1JUN71    ***************************************    3000
C                                                                        1000
      COMMON/STRKSUM/ NGROUP, NTSTRK, NCORR, NSTRK(30), LSTRKSUM         2000
C                                                                        3000
CEND       STRKSUM   ***************************************************  3000
CUSE       CONTROL   1JUN71    ***************************************    4000
      COMMON /CONTROL/ NV, NARV, NEXTRA, PEXTRA, NPASS, FRACLOOK,        1000
     1                 MAXFOOT, DELAGE, PURGE, PN, EXTRAB, NOK           2000
     2                ,IGSTART,I3END                                     3000
CEND       CONTROL   ***************************************************  4000
CUSE       WPNTGT    1JUN71    ***************************************    5000
      COMMON /WPNTGT/ IPOTGT, JAFT, JTGTO, NUMBOOST                      1000
CEND       WPNTGT    ***************************************************  5000
CUSE       FLAG      1JUN71    ***************************************    6000
      COMMON/FLAG/NFLAG,IFLAG(100),NC,IPRNT(60),IFG(60),IFP(60),IFB(60),  1000
     1 ILG(60), ILP(60), ILB(60), MYPRT(60), IDUMP                       2000
      TYPE LOGICAL IFLAG                                                 3000
      DIMENSION IDUMPR(60,8)                                             4000
      EQUIVALENCE(IDUMPR, IPRNT)                                         5000
CEND       FLAG      ***************************************************  6000
C                                                                        7000
      DO 1 I=1,NFLAG                                                     8000
    1 IFLAG(I)=0                                                         9000
      DO 40 J=1,NC                                                      10000
      IF(KGROUP.GE.IFG(J).OR.IFG(J).EQ.0)5,40                           11000
    5 IF(KGROUP.LE.ILG(J).OR.ILG(J).EQ.0)10,40                          12000
   10 IF(NPASS.GE.IFP(J).OR.IFP(J).EQ.0)15,40                           13000
   15 IF(NPASS.LE.ILP(J).OR.ILP(J).EQ.0)20,40                           14000
   20 IF(NUMBOOST.GE.IFB(J).OR.IFB(J).EQ.0)25,40                        15000
   25 IF(NUMBOOST.LE.ILB(J).OR.ILB(J).EQ.0)30,40                        16000
   30 IFLAG(IPRNT(J))=1                                                 17000
   40 CONTINUE                                                          18000
      IF(IFLAG(14))50,60                                                19000
   50 DO 55 I=16,35                                                     20000
   55 IFLAG(I)=I                                                        21000
   60 RETURN                                                            22000
      END                                                               23000
```

IDENT PRINTSET

PROGRAM LENGTH		00117
ENTRY POINTS	PRINTSET	00003
BLOCK NAMES		
	STRKSUM	00042
	CONTROL	00016
	WPWTGT	00004
	FLAG	00747
EXTERNAL SYMBOLS		
	Q3010040	
	Q3000040	
	Q000ICT.	

```
P00107  BEGIN.      00110
P00114  COUNT.      00013   00014   00025   00026
C00007  DELAGF
P00001  DICT.       00005
P00111  ENDING.     00006   00106   00107   00110
P00000  EXIT.       00112
C00012  EXTRAR
C00005  FRACLOOK
P00[illegible]  I           00010   00013   00100   00100
C0[illegible]  [illegible]
C[illegible]  [illegible]
[illegible]  IF00001.
P00037  IF00002.
P00044  IF00003.
P00051  IF00004.
P00056  IF00005.
P00063  IF00006.
C00272  IFP         00054   00054   00056   00056
C00102  IFS         00030   00030   00032   00032
C00001  IFLAG       00017   00072   00075   00106
C00176  IFP         00042   00042   00044   00044
C00015  IGEAR
C00014  IGSTART
C00556  ILR         00061   00061   00063   00063
C00364  ILG         00035   00035   00037   00037
C00462  ILP         00047   00047   00051   00051
P00107  INITIAL.    00006
C00000  IPOTGT
C00006  IPRNT       00065   00065
P00015  .1
P00041  .10         00036   00036
P00046  .15         00043   00043
P00053  .20         00050   00050
P00060  .25         00055   00055
P00065  .30         00062   00062
P00073  .40         00033   00040   00045   00052   00057   00064
P00034  .5          00031   00031
P00077  .50         00076
P00102  .55
P00106  .60         00076
P00113  .NSTIFF.    00067   00070
P00116  J           00022   00025
C00001  JAFT
C00002  JTGID
C00000  KGROUP      00027   00027   00034   00034
C00041  LSTRKSUM
C00006  MAXFOOT
C00652  MYPRT
C00001  NARW
C00005  NC          00022   00023
C00002  NCURR
C00002  NEXTRA
C00000  NFLAG       00010   00011
C00013  NOK
```

```
C00004  NPASS       00041   00041   00046   00046
C00003  NSTRK
C00001  NTSTRK
C00003  NUMBOOST    00053   00053   00060   00060
C00C00  NV
C00003  PEXTRA
C00011  PS
P00003  PRINTSET    00003
C00010  PURGE
X00002  Q3C00040    00074
X00001  Q3Q10040    00016   00071   00103
X00003  Q8QDICT.    00000   00004
P00021  TS00003.    00012
P00074  TS00002.    00024
P00015  WS00001.    00070
P00027  WS00002.    00073
P00102  WS00003.    00105
   00107 SYMBOLS
```

```
      SUBROUTINE PRNTREQ                                                    1000
CSUBR      READPRNT  1JUN71    ***********************************************  4R00
C                                                                           2000
CUSE       FLAG      1JUN71    ***********************************************  3000
      COMMON/FLAG/NFLAG,(FLAG(100),NC,IPRNT(60),IFG(60),IFP(60),IFB(60),    1000
     1 ILG(60), ILP(60), ILB(60), MYPRT(60), IDUMP                          2000
      TYPE LOGICAL IFLAG                                                    3000
      DIMENSION IDUMPP(60,8)                                                4000
      EQUIVALENCE(IDUMPP, IPRNT)                                            5000
CEND       FLAG      ***********************************************       3000
C                                                                           4000
C     NFLAG      LENGTH OF FLAG ARRAY                                       5000
C     IFLAG      SET TO 1 IF PRINT IS ACTIVE                                6000
C     NC         NUMBER OF PRINT REQUESTS                                   7000
C     IPRNT      PRINT REQUEST NUMBER                                       8000
C     IFG        FIRST GROUP FOR PRINT                                      9000
C     IFP        FIRST PASS FOR PRINT                                       10000
C     IFB        FIRST BOOSTER FOR PRINT                                    11000
C     ILG        LAST GROUP FOR PRINT                                       12000
C     ILP        LAST PASS FOR PRINT                                        13000
C     ILB        LAST BOOSTER FOR PRINT                                     14000
C     IDUMP      PRINT NUMBER TO ABORT RUN WITH MEMORY DUMP                 15000
C                                                                           16000
      DATA (NFLAG = 100)                                                    17000
C                                                                           18000
C     ENTRY READPRNT                                                        19000
C                                                                           20000
      ENTRY READPRNT                                                        21000
C                                                                           22000
      PRINT 1                                                               23000
    1 FORMAT(// 20X,15H PRINT REQUESTS//10X,7H NUMBER,6X,11HFIRST GROUP     24000
     1,5X,10HFIRST PASS,2X,13HFIRST BOOSTER,5X,10HLAST GROUP,6X,9HLAST P    25000
     2ASS,3X,12HLAST BOOSTER)                                               26000
      DO 3 N=1,NC                                                           27000
      PRINT 4, (IDUMPP(N,J), J = 1, 8)                                      28000
    3 CONTINUE                                                              29000
    4 FORMAT(7(5X,I10),5X,A8)                                               30000
      RETURN                                                                31000
      END                                                                   32000
```

IDENT READPRNT

PROGRAM LENGTH 00163
ENTRY POINTS PRNTREQ 00063
READPRNT 00096
BLOCK NAMES
FLAG 00747
EXTERNAL SYMBOLS
THEND.
OBJDICT.
STH.
ONSINGL.

```
P00156  BEGIN.      00156
P00126  CNVRTI.     00112
P00003  CHFMT.      00075   00124
P00031  DICT.       00060   00065   00071   00074   00103   00117
P00157  ENDING.     00061   00066   00124
P00000  EXIT.       00157
P00003  FORMAT.
P00075  G000000.    00067
P00120  G000001.    00101
C00746  IDUMP
C00006  IDUMPR      00111   00111
C00272  IFB
C00102  IFG
C00001  IFLAG
C00176  IFP
C00556  ILB
C00366  ILG
C00462  ILP
P00127  IN00001.    00110   00130   00140   00142   00154
P00156  INITIAL.    00067   00066
C00036  IPRNT
P00120  .3
P00003  ..1         00072
P00046  ..4         00104
P00161  J           00108   00113   00150
C00652  MYPRT
P00162  N           00076   00120   00135
C00005  NC          00122   00122
C00004  NFLAG       00003
P00130  P00000.U    00132
P00142  P00001.U    00145
P00063  PRNTREQ     00063
X00002  QBQTCT.     00000   00057   00064
X00004  QNSINGL.    00125
P00056  READPRNT    00056
X00003  STH.        00070   00102
X00001  THEND.      00073   00116
P00122  TS00001.    00100
P00134  UP00000.    00077   00121   00130   00135   00136   00137   00141   00141
P00147  UP00001.    00107   00114   00143   00150   00151   00152   00154   00155
P00101  =S00001.    00123   00123
P00110  =S00002.    00115
   35052 SYMBOLS
```

```
      SUBROUTINE RDCARDF                                                1000
CSUBR      RDCARDF   1.0(71)    ***************************************** 5000
C                                                                       2000
C     THIS SUBROUTINE CONTROLS READING OF ALL USER INPUT PARAMETERS.    3000
C                                                                       4000
CUSE       PARDATA   1.0(71)    ***************************************** 5000
C                                                                       1000
      COMMON/ RADATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)      2000
     1          , TGTLONG(1500), RVAL(1500), OLAT(1500), OLONG(1500)    3000
     2               , LRAID, NIMAX, LLFIX(1500)                        4000
C                                                                       5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(16) 6000
C                                                                       7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, OLAT), (IBACK,  8000
     1OLONG), (IDUM, INDEX)                                             9000
C                                                                       10000
      TYPE LOGICAL LLFIX                                                11000
C                                                                       12000
      COMMON/A/ OFSIG(1500), TASK(1500), CNTRYLOC(1500), FLAG(1500)     13000
C                                                                       14000
CEND       PARDATA   ***************************************************  5000
CUSE       CONTROL   1.0(71)    ***************************************** 6000
      COMMON /CONTROL/ NV, NAPV, NEXTRA, PEXTRA, NPASS, FRACLOOK,       1000
     1                 MAXFOOT, DELAGE, PURGE, PN, EXTRAP, NOK          2000
     2               ,IGSTART,IGEND                                     3000
CEND       CONTROL   ***************************************************  6000
CUSE       FLAG      1.0(71)    ***************************************** 7000
      COMMON/FLAG/NFLAG,IFLAG(100),NC,IPRNT(60),IFG(60),IFP(60),IFR(60),  1000
     1 IFS(60), ILP(60), ILR(60), MYPRT(60), IDUMP                      2000
      TYPE LOGICAL IFLAG                                                3000
      DIMENSION IDUMPR(60,8)                                            4000
      EQUIVALENCE(IDUMPR, IPRNT)                                        5000
CEND       FLAG      ***************************************************  7000
CUSE       LOADATA   1.0(71)    ***************************************** 8000
C                                                                       1000
      COMMON /LOADATA/ LOADOPT, NRVADD(1500), NADDED, NTOADD, NONTAR(20) 2000
     1               , NADDCLD                                          3000
C                                                                       4000
CEND       LOADATA   ***************************************************  8000
C                                                                       9000
      DIMENSION MYNAME(100), MYTYPE(100), MYFORM(100),                  10000
     1     MYVAL(100), FVAL(100)                                        11000
      EQUIVALENCE (MYNAME, INDEX), (MYTYPE, TGTLAT),                    12000
     1     (MYFORM, TGTLONG), (MYVAL, FVAL, RVAL)                       13000
C                                                                       14000
      DIMENSION INCARD(10), NAMEVAR(20), IVALUE(2,20), INDX1(20)        15000
     1        , INDX2(20), INDX3(20)                                    16000
      EQUIVALENCE (INCARD, OLAT), (NAMEVAR, OLAT(101))                  17000
      EQUIVALENCE (IVALUE, OLAT(201)), (INDX1, OLAT(401))               18000
      EQUIVALENCE (INDX2, OLAT(501)), (INDX3, OLAT(601))                19000
C                                                                       20000
      DIMENSION IFORMAT(5)                                              21000
      DATA (IFORMAT = 8H(1HC,3A,,6H= *,,1H ,8H,* BY *,,3HA8))           22000
C                                                                       23000
      DIMENSION NAMPRNT(8)                                              24000
      DATA (NAMPRNT = 8HGSTARTD, 8HPASSTART, 8HROOSTART, 8HGENDP,       25000
```

```
      1     7HPASSEND, 8HBOOSTEND)                                    26000
                                                                      27000
C                                                                     28000
C     SET DEFAULTS                                                    29000
C                                                                     30000
      NDATA = 0                                                       31000
      NORF = 0                                                        32000
      DO 10 I = 1, 100                                                33000
   10 MYTYPE(I) = 7HDEFAULT                                           34000
C                                                                     35000
      MYNAME(1) = 7HIGSTART                                           36000
      MYFORM(1) = 2HI8                                                37000
      MYVAL(1) = 1                                                    38000
C                                                                     39000
      MYNAME(2) = 5HIGEND                                             40000
      MYFORM(2) = 2HI8                                                41000
      MYVAL(2) = 200                                                  42000
C                                                                     43000
      MYNAME(3) = 7HLOADOPT                                           44000
      MYFORM(3) = 2H4A                                                45000
      MYVAL(3) = 4HFREE                                               46000
C                                                                     47000
      MYNAME(4) = 7HMAXFOCT                                           48000
      MYFORM(4) = 2HI8                                                49000
      MYVAL(4) = 2                                                    50000
C                                                                     51000
      MYNAME(5) = 8HFRACLOOK                                          52000
      MYFORM(5) = 4HF5.2                                              53000
      FVAL(5) = .9                                                    54000
C                                                                     55000
      MYNAME(6) = 8HDELAGE                                            56000
      MYFORM(6) = 4HF8.2                                              57000
      FVAL(6) = 2.0                                                   58000
C                                                                     59000
      MYNAME(7) = 2HPN                                                60000
      MYFORM(7) = 4HF8.2                                              61000
      FVAL(7) = 1.0                                                   62000
C                                                                     63000
      MYNAME(8) = 5HPURGE                                             64000
      MYFORM(8) = 4HF8.2                                              65000
      FVAL(8) = .5                                                    66000
C                                                                     67000
      MYNAME(9) = 5HIDUMP                                             68000
      MYFORM(9) = 2HI8                                                69000
      MYVAL(9) = 0                                                    70000
C                                                                     71000
      NDEFLT = 9                                                      72000
C                                                                     73000
C     SET PRINT DEFAULTS                                              74000
C                                                                     75000
      DO 30 I = 1,60                                                  76000
      IPRNT(I) = 0                                                    77000
      IFG(I) = 1                                                      78000
      IFP(I) = 1                                                      79000
      IFR(I) = 1                                                      80000
      ILG(I) = 200                                                    81000
      ILP(I) = 2
```

```
      IL9(I) = 500                                                    82000
   30 MYPRT(I) = 7HDEFAULT                                            83000
C                                                                     84000
      DO 40 I = 1,6                                                   85000
   40 IPRNT(I) = I                                                    86000
      IPRNT(5) = 12                                                   87000
      IFP(5) = 2                                                      88000
      IPRNT(6) = 15                                                   89000
      IPRNT(7) = 76                                                   90000
      NC = 7                                                          91000
C                                                                     92000
C     READ PARAMETER CARDS                                            93000
      PRINT 101                                                       94000
  101 FORMAT(*1USER INPUT PARAMETER CARDS FOR PROGRAM FOOTPRNT *)      95000
  100 READ 102, INCARD                                                96000
  102 FORMAT(10A8)                                                    97000
      PRINT 103, INCARD                                               98000
  103 FORMAT(/1X,10A8)                                                99000
      CALL GETVALU (INCARD, NDATA, NAMEVAR, IVALUE, INDX1, INDX2,    100000
     1          INDX3, MORE )                                        101000
      IF (NDATA) 2000, 2000, 110                                      102000
  110 DO 1000 I = 1, NDATA                                            103000
      KKK = I                                                         104000
      ITEST = NAMEVAR(1)                                              105000
      IAM = ITLE (ITEST, MYNAME, NDEFLT)                              106000
      IF (IAM) 120, 120, 150                                          107000
C     CHECK FOR PRINT OR NOPRINT                                      108000
  120 IF (ITEST - 5HPRINT) 130, 200, 130                              109000
  130 IF (ITEST - 7HNOPRINT) 140, 300, 140                            110000
C     ERROR - NO MATCH                                                111000
  140 PRINT 141, ITEST                                                112000
  141 FORMAT (//25X, * UNABLE TO DECIPHER VARIABLE NAME *, A8, *, INPUT 113000
     1REQUEST IGNORED *)                                              114000
      GO TO 1000                                                      115000
C     INPUT PARAMETER                                                 116000
  150 MYTYPE (IAM) = 6H INPUT                                         117000
      GO TO (151, 151, 152, 151, 153, 153, 153, 153, 151), IAM        118000
  151 MYVAL(IAM) = NUMGET(IVALUE(1,KKK), 10)                          119000
      GO TO 1000                                                      120000
  152 MYVAL(IAM) = IVALUE(1, KKK)                                     121000
      GO TO 1000                                                      122000
  153 DECODE(16,1001,IVALUE(1,KKK)) FVAL(IAM)                         123000
      GO TO 1000                                                      124000
C                                                                     125000
C     PRINT REQUEST                                                   126000
C                                                                     127000
  200 ITEST = NUMGET (IVALUE (1,KKK), 10)                             128000
      IF (ITEST) 1000, 1000, 210                                      129000
  210 NC = NC + 1                                                     130000
      IF (NC .LE. 60) GO TO 215                                       131000
      PRINT 1002                                                      132000
 1002 FORMAT(//25X,*MORE THAN 60 PRINT REQUESTS,  REMAINDER IGNORED*) 133000
      NC = NC - 1                                                     134000
      GO TO 1000                                                      135000
  215 IPRNT(NC) = ITEST                                               136000
      MYPRT (NC) = 6H INPUT                                           137000
```

```
  220 I = I + 1                                                          138000
      IF (I-NDATA) 230, 230, 1000                                        139000
  230 IAM = ITLE (NAMEVAR(I), NAMPRNT, 6)                                140000
      IF (IAM) 240, 240, 250                                             141000
C     END OF PRINT INFORMATION                                           142000
  240 I = I - 1                                                          143000
      GO TO 1000                                                         144000
C     PRINT INFORMATION                                                  145000
  250 IAMPL = IAM + 1                                                    146000
      KKK = I                                                            147000
      IDUMPP (NC, IAMPL) = NUMGET (IVALUE (1,KKK), 16)                   148000
      GO TO 220                                                          149000
C                                                                        150000
C     PRINT CANCELLATION                                                 151000
C                                                                        152000
  300 ITEST = NUMSET (IVALUE (1,KKK),                                    153000
      IAM = ITLE (ITEST, IPRNT, NC)                                      154000
      IF (IAM ) 1000, 1000, 310                                          155000
  310 IFG (IAM) = 9999                                                   156000
      IFB (IAM) = 9999                                                   157000
      IFP (IAM) = 9999                                                   158000
      MYPRT (IAM) = &REMOVED                                             159000
      GO TO 1000                                                         160000
C                                                                        161000
 1000 CONTINUE                                                           162000
 1001 FORMAT (F16.8)                                                     163000
      IF (MORE) 2000, 2000, 100                                          164000
C                                                                        165000
C     PRINT RESULTS                                                      166000
C                                                                        167000
 2000 PRINT 2001                                                         168000
 2001 FORMAT (*1USER INPUT PARAMETERS FOR PROGRAM FOOTPRNT *)            169000
C     PRINT REQUEST                                                      170000
      CALL PRNTREQ                                                       171000
C                                                                        172000
C     LOAD INPUT PARAMETERS                                              173000
C                                                                        174000
      I6START = MYVAL(1)                                                 175000
      I6END = MYVAL(2)                                                   176000
      LOADOPT = ITLE (MYVAL(3), NRVADD, 3)                               177000
      MAXFOOT = MYVAL(4)                                                 178000
      FRACLOOK = FVAL(5)                                                 179000
      DELAGE = FVAL(6)                                                   180000
      PN = FVAL(7)                                                       181000
      PURGE = FVAL(8)                                                    182000
      IDUMP = MYVAL(9)                                                   183000
C                                                                        184000
C     PRINT INPUT PARAMETERS                                             185000
C                                                                        186000
      DO 2100 I = 1, NDEFLT                                              187000
      IFORMAT(3) = MYFORM(I)                                             188000
 2100 PRINT IFORMAT, MYNAME(I), MYVAL(I), MYTYPE(I)                      189000
      CALL EARLINPT                                                      190000
      IF (LOADOPT)  2200, 2300, 2200                                     191000
 2200 CALL LOADREAD                                                      192000
 2300 RETURN                                                             193000
```

END

194000

IDENT RDCARDF

PROGRAM LENGTH		00733
ENTRY POINTS	RDCARDF	00140
BLOCK NAMES		
	RADATA.	21534
	A	13560
	CONTROL	00016
	FLAG	00747
	LOADATA	02764

EXTERNAL SYMBOLS

THEND.
RDRDICT.
GETVALU
ITLE
NUMGET
PRNTREQ
TABLIAPT
LOADREAD
TSH.
DEC.
STH.
SLO.
SLI.
ONSINGL.

P00427	AN00004.	00423									
P00705	BEGIN.	00707									
C05670	CNTRYLOC										
P00450	CNVRT1.	00370	00430	00620	00627	00630					
P00816	CRFMT.	00301	00312	00325	00373	00461	00553	00563			
X00012	DEC.	00425									
C00007	DELAGE	00604	00604								
C00000	DESIG										
P00001	DICT.	00142	00275	00300	00303	00307	00312	00315	00321	00324	00326	00350
		00365	00372	00411	00426	00434	00441	00455	00460	00501	00521	00530
		00534	00557	00562	00564	00573	00622	00632	00637	00644		
C13563	DLAT											
C16517	DLONG											
P00710	ENDING.	00143	00646	00706								
P00300	EXIT.	00711										
C00012	EXTPAR											
C10624	FLAG											
P00015	FORMAT.	00147	00154	00156	00161	00163	00166	00170	00172	00174	00176	00201
		00203	00207	00211	00215	00217	00523	00225	00231	00233	00240	00337
		00374	00470	00546								
C00005	FRACLOOK	00602	00602									
C10627	FVAL	00204	00206	00214	00214	00222	00222	00230	00230	00432	00432	00601
		00601	00603	00603	00605	00605	00607	00607				
X00003	GETVALU	00325										
P00301	GG00000.	00273										
P00313	GG00001.	00301										
P00325	GG00002.	00313										
P00373	GG00003.	00363										
P00435	GG00004.	00424										
P00461	GG00005.	00453										
P00543	GG00006.	00555										
P00633	GG00007.	00620										
P00722	I	00147	00150	00240	00241	00256	00256	00260	00263	00340	00341	00344
		00472	00473	00476	00506	00507	00514	00550	00614	00615	00624	00633
P00723	IAM	00353	00375	00377	00413	00417	00431	00504	00511	00537	00542	
P00724	IAMOL	00512	00677									
C16517	IBACK											
C00003	IDUM											
C00746	IDUMP	00612	00612									
C00006	IDUMPR	00623	00624									
C00272	IFB	00246	00544									
C00102	IFG	00244	00542	00543								
C00001	IFLAG											
C13563	IFOR											
P00003	IFORMAT	00014	00617	00623								
C00176	IFP	00245	00266	00545								
C00015	IGEND	00571	00571									
P00725	IGOTO.	00377										
C00014	IGSTART	00567	00567									
C00556	ILR	00251										
C00306	ILG	00247										
C00462	ILP	00250										
P00651	IN00003.	00406	00415	00422	00436	00516	00525	00663				
P00652	IN00005.	00523	00673	00703								

```
C13563  INCARD      00310   00322   00327
C00003  INDEX
C14403  INDX1       00331
C14547  INDX2       00331
C14713  INDX3       00332
P0 706  INITIAL.    00143
C00006  IPRAT       00242   00243   00261   00261   00264   00265   00267   00270   00467   00535
P00726  ITEST       00346   00351   00355   00360   00367   00443   00465   00532   00535
X00004  ITLE        00347   00500   00533   00572
C14073  IVALUE      00330   00407   00412   00416   00416   00423   00427   00437   00442   00516   00522
                    00526   00531
P00151  .10
P00301  .100        00554
P00550  .1000       00373   00414   00421   00435   00443   00444   00464   00475   00510   00537   00540
P00452  .100001     00451
P00453  .100002     00451
P00337  .110        00336
P00355  .120        00353   00354
P00360  .130        00357
P00363  .140        00362
P00374  .150        00354
P00406  .151        00400   00401   00402
P00415  .152        00402
P00422  .153        00403   00404   00405   00465
P00436  .200        00356
P00555  .2000       00335   00335   00553   00554
P00445  .210
P00620  .2100
P00465  .215        00452
P00472  .220        00524
P00643  .2200       00642
P00476  .230        00474   00475
P00646  .2300       00642
P00506  .240        00504   00505
P00511  .250        00505
P00252  .30
P00525  .300        00361
P00541  .310
P00260  .40
P00016  ..100000    00151
P00017  ..100001    00154
P00020  ..100002    00156
P00021  ..100003    00161
P00022  ..100004    00163
P00023  ..100005    00166
P00024  ..100006    00170
P00025  ..100007    00172
P00026  ..100008    00174
P00027  ..100009    00176
P00030  ..100010    00201
P00031  ..100011    00203
P00032  ..100012    00207
P00033  ..100013    00211
P00034  ..100014    00215
```

```
P00035  ..100015   00217
P00036  ..100016   00223
P00037  ..100017   00225
P00040  ..100018   00231
P00041  ..100019   00233
P00042  ..100020   00252
P00065  ..100021   00356
P00066  ..100022   00361
P00106  ..100023   00374
P00122  ..100024   00475
P00123  ..100025   00546
P00124  ..1001     00427
P00137  ..1002     00456
P00043  ..101      00276
P00055  ..102      00304
P00060  ..103      00316
P00067  ..141      00364
P00127  ..2001     00560
P00412  .Z00001.   00407
P00442  .Z00002.   00437
P00502  .Z00003.   00477
P00522  .Z00004.   00517
P00531  .Z00005.   00526
C00002  JCOPR
C00001  JGROUP
P00727  KKK        00342   00514   00660
C21455  LLFIX
C00005  LOADOPT    00576   00576   00641   00641
K00010  LOADREAD   00643
C21453  LRATE
C00006  MAXROOT    00600   00600
P00730  MORE       00146   00332   00553
C05673  MYERRM     00157   00157   00164   00164   00171   00171   00177   00177   00204   00204   00212
                   00212   00220   00220   00226   00226   00234   00234   00616   00616
C00003  MYNAME     00155   00155   00162   00162   00167   00167   00175   00175   00202   00202   00210
                   00210   00216   00216   00224   00224   00232   00232   00351   00625   00625
C00652  MYPRT      00253   00253   00471   00471   00547   00547
C02737  MYTYPE     00152   00152   00375   00376   00630
C10627  MYVAL      00160   00165   00173   00173   00200   00235   00413   00414   00420   00420   00566
                   00566   00570   00570   00574   00577   00577   00611   00611   00627
C02735  NADDED
C02763  NADOLD
C13727  NAMEVAR    00336   00344   00345   00477   00502
P00010  NAMPRT     00016   00502
C00001  NARN
C00005  NC         00271   00445   00445   00446   00450   00461   00461   00462   00466   00466   00536
                   00667   00667
P00731  NDATA      00145   00327   00334   00474   00551
P00732  NDELT      00237   00352   00634
C00002  NEXTRA
C00006  NFLAG
C00013  NOR
C02737  NONTAR
C00004  NPASS
```

```
C00001  %RVADS      00574
C00000  AT
C21454  ATMAX
C02736  ATOADS
X00005  %LMOST      00410   00440   00520   00527
C00000  AV
C00003  BEXTRA
C00011  BS          00604   00606
X00006  BUXTOEC     00563
C00010  BUBOF       00610   00610
X00002  CBCHTCT.    00000   00141
X00014  CHSIGNL.    00447
C02737  D
F00140  DCCARDS     00140
P00456  DFLOAT..    0011    00565   00640   00645   00705
C10627  EVAL
X00015  SCI.
X00016  SLOC        1   0
X00013  STM.        00274   00314   00364   00454   00556   00621
X00007  TAPE(INST   00636
C02734  TAST
C02737  TGTLAT
C00673  TGTLOAD
X00001  TMEAT.      00277   00311   00323   00371   00433   00457   00561   00631
C00673  TMETA
P00551  TSTORDA.    00540
P00634  TSTORDS.    00614
X00011  TSW.        00302
P00657  UP00002.    00343   00515   00660   00661   00662   00664   00664
P00666  UP00003.    00272   00447   00483   00653   00670   00671   00672   00674   00674
P00678  UP00004.    00513   00677   00700   00701   00703   00704
P00151  W500001.    00155
P00242  W500002.    00254
P00260  W500003.    00263
P00341  W500004.    00553   00552
P00615  W500005.    00635   00635
   00273 SYMBOLS
```

```
      SUBROUTINE REMOVE                                                 1000
CS,RR     REMOVE   1,UNIT]    ***************************************** 49000
C                                                                       2000
C     REMOVES TARGET JTGT0 FROM ASSIGNMENT TO ITS BOOSTER               3000
C                                                                       4000
CSE       RAIDATA  1,UNIT]    ***************************************** 5000
C                                                                       1000
      COMMON/ RAIDATA/ AT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)     2000
     1           , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)   3000
     2                 , LRAIC, NTMAX, LLFIX(1500)                      4000
C                                                                       5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), ICUM(16) 6000
C                                                                       7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK,  8000
     1ICUM), (ICUM, INDEX)                                              9000
C                                                                       10000
      TYPE LOGICAL LLFIX                                                11000
C                                                                       12000
      COMMON/A/ DESIG(1500), TASK(1500), CNTRYLOC(1500), FLAG(1500)     13000
C                                                                       14000
CEND      RAIDATA  ***************************************************** 5000
CUSE      PERFORM  1,UNIT]    ***************************************** 6000
      COMMON /PERFORM/ NASGN, VALASGN, IVAL, NOLD, VALOLD               1000
CEND      PERFORM  ***************************************************** 6000
CUSE      #ENTGT   1,UNIT]    ***************************************** 7000
      COMMON /#PNTGT/ IPOINT, JAFT, JTGTO, SUM#COST                     1000
CEND      #PNTGT   ***************************************************** 7000
CUSE      STATUS   1,UNIT]    ***************************************** 8000
C                                                                       1000
      COMMON/ B/ MAXBOOST, IBOOST(500), NTR(500)                        2000
     1          , ISTATUS(1500), NDEX(1500)                            3000
C                                                                       4000
      DIMENSION NDEXVAL(50), NDEXR(50), NDEXT(50)                       5000
C                                                                       6000
      EQUIVALENCE (NDEX, NDEXVAL), (NDEX(101), NDEXR), (NDEX(201), NDEXT) 7000
C                                                                       8000
CEND      STATUS   ***************************************************** 9000
CUSE      DEBUG    1,UNIT]    ***************************************** 9000
      COMMON /DEBUG/ IOTA, ICAMEFOM(20)                                 1000
CEND      DEBUG    ***************************************************** 9000
CUSE      PRINT    1,UNIT]    ***************************************** 10000
      COMMON /PRINT/ ICALL, IMUST                                       1000
CEND      PRINT    ***************************************************** 10000
C                                                                       11000
      IOTA=IOTA+1                                                       12000
      ICAMEFOM(IOTA) = 5HREMOVE                                         13000
      ICALL=22                                                          14000
      CALL DEBPRINT(1)                                                  15000
C                                                                       16000
      JTGT=JTGT0                                                        17000
      IF(ISTATUS(JTGT))900,900,100                                      18000
  100 NS=ISTATUS(JTGT)                                                  19000
      ISTATUS(JTGT)=-2                                                  20000
      JFRONT=IFOR(JTGT)                                                 21000
      JBACK=IBACK(JTGT)                                                 22000
      IFOR(JTGT)=IBACK(JTGT)=0                                          23000
```

```
      NASSN=NASSN+1                                                     24000
      VALASN=VALASN-RVAL(JTGT)                                          25000
      IF(NTR(NR)-1)110,110,120                                          26000
  110 NTR(NR)=0                                                         27000
      IROOT(NR)=0                                                       28000
      GO TO 999                                                         29000
  120 ITOP=IROOT(NR)                                                    30000
      NRV = NTR(NR  : NTR(NR) - 1                                       31000
      IF(JTGT-ITOP)150,130,150                                          32000
C                                                                       33000
C     THIS IS FIRST TARGET                                              34000
C                                                                       35000
  130 ITOP=JFRONT                                                       36000
      IROOT(NR)=ITOP                                                    37000
      IF(JBACK-JTGT)140,160,150                                         38000
C                                                                       39000
C     MAXIMUM INDEX IN ASSIGNMENT REMAINS THE SAME                      40000
C                                                                       41000
  140 IBACK(ITOP)=JBACK                                                 42000
      GO TO 999                                                         43000
C                                                                       44000
C     SET FIRST TARGET IN FOOTPRINT                                     45000
C                                                                       46000
  150 IFOR(JBACK)=JFRONT                                                47000
      IF(JFRONT)170,170,160                                             48000
  160 IBACK(JFRONT)=JBACK                                               49000
  170 IF(IBACK(ITOP)-JTGT)999,180,180                                   50000
C                                                                       51000
C     FIND NEW MAXIMUM INDEX                                            52000
C                                                                       53000
  180 J=ITOP                                                            54000
      MAXDEX=ITOP                                                       55000
      DO 190 I=1,NRV                                                    56000
      J=IFOR(J)                                                         57000
  190 MAXDEX=MAX0F(MAXDEX,J)                                            58000
      IBACK(ITOP)=-MAXDEX                                               59000
      GO TO 999                                                         60000
C                                                                       61000
  900 PRINT 901                                                         62000
  901 FORMAT(//1X,15(1H*),24H STATUS ERROR IN REMOVE ,15(1H*)//)        63000
      IRUST=1                                                           64000
  999 ICALL=39                                                          65000
      CALL GOPRINT (16)                                                 66000
      CALL GOPRINT(8)                                                   67000
      IRUST=0                                                           68000
      IOTA=IOTA-1                                                       69000
      RETURN                                                            70000
      END                                                               71000
```

IDENT REMOVE

PROGRAM LENGTH		00222
ENTRY POINTS	REMOVE	00025
BLOCK NAMES		
	RAIDATA	21534
	4	13560
	PERFORM	00005
	WPNTGT	00004
	2	07641
	DEBUG	00025
	PRINT	00002
EXTERNAL SYMBOLS		
	THEND.	
	QBQDICT.	
	GOPRINT	
	XMAXQF	
	STH.	

```
P00201  BEGIN.      00202
C05670  CNTRYLOC
P00210  COUNT.      00141   00141
P00003  CREMT.      00163
C00000  DESIG
P00001  DICT.       00027   00040   00146   00157   00162   00170   00173
C13563  DLAT
C16517  DLONG
P00203  ENDING.     00030   00200   00201
P00000  EXIT.       00204
C10624  FLAG
P00003  FORMAT.     00033
P00163  GGOOOOO.    00155
X00003  GOPRINT     00037   00167   00172
P00211  I           00137
C16517  IBACK       00055   00056   00060   00060   00116   00117   00126   00127   00131   00131   00153
                    00154
C00001  IBOOST      00075   00077   00077   00111   00111
C00000  ICALL       00036   00036   00165   00166
C00001  ICAMFROM    00035
C00003  IDUM
C13563  IFOR        00053   00054   00061   00121   00122   00143   00143
C00001  IMOST       00163   00164   00175
C00003  INDEX
P00201  INITIAL.    00030
C00000  IOTA        00031   00031   00032   00034   00034   00176   00176   00177
C00000  IPOTGT
C01751  ISTATUS     00044   00045   00050   00050   00052   00053
P00212  ITOP        00100   00104   00110   00116   00130   00134   00135   00153
P00047  .100
P00072  .110        00070   00071
P00076  .120        00071
P00107  .130        00105
P00115  .140        00114
P00120  .150        00105   00106   00114
P00125  .160
P00130  .170        00123   00124
P00134  .180        00113   00133
P00145  .190
P00155  .900        00045   00046
P00165  .999        00075   00117   00133   00154
P00003  ..100000    00033
P00004  ..901       00160
P00213  J           00135   00142   00144   00147
C00001  JAFT
P00214  JBACK       00057   00112   00115   00121   00125
C00002  JCORR
P00215  JFRONT      00055   00107   00120   00123   00126
C00001  JGROUP
P00216  JTGT        00043   00044   00047   00104   00113   00132
C00002  JTGTD       00042   00042
C21455  LLFIX
C21453  LRAID
C00000  MAXBOOST
```

```
P00217  MAXDEX      00136   00147   00150   00152
C00009  NASGN       00061   00062   00063
P00220  NB          00051   00066   00073   00076   00110
C04705  NDEX
C05851  NDEXR
C05215  NDEXT
C04705  NDEXVAL
C00003  NOLD
P00221  NRV         00103   00137
C00000  NT
C00765  NTB         00067   00067   00073   00074   00101   00101   00102
C21454  NTMAX
C00003  NUMBOOST
X00002  OBJECT.     00000   00026
C02737  R
P00025  REMOVE      00025
C10627  RVAL        00064   00064
X00005  STH.        00156
C02734  TASK
C02737  TGTLAT
C05673  TGTLONG
X00001  THEND.      00161
C05673  THETA
P00152  TS00001.    00140
C00002  TVAL
C00001  VALASGN     00063   00065   00065
C00004  VALOLD
P00142  WS00001.    00151
X00004  XMSXOF      00145
   00122 SYMBOLS
```

```
      SUBROUTINE SETDATA(I)                                              1000
CSUBR      SETDATA   1JUN71    ***********************************       5600
C                                                                        2000
C     LOADS CORRECT FOOTPRINT PARAMETER TABLE DATA SET INTO APPROPRIATE   3000
C             AREA IN STORAGE                                            4000
C                                                                        5000
CUSE       TAPES     1JUN71    ***********************************       6000
C                                                                        1000
      COMMON/FILES/ TGTFILE(2), BASFILE(2), MSLTIME(2), ALOCTAB(2),      2000
     1     TMPALOC(2), ALOCGRP(2), STRKFIL(2), EVENTAPE, PLANTAPE        3000
C                                                                        4000
      TYPE INTEGER TGTFILE, BASFILE, MSLTIME, ALOCTAB, TMPALOC,          5000
     1     ALOCGRP, STRKFIL, EVENTAPE, PLANTAPE                         6000
C                                                                        7000
      COMMON/TSCRATCH/ ISCR, ITABL                                       8000
C                                                                        9000
CEND       TAPES     ***********************************************   6000
C                                                                        7000
C                                                                        8000
CUSE       PARAMETR  1JUN71    ***********************************       9000
      COMMON /PARAMETR/ MAXSYS, THNAME(40), MINLOAD(40), MAXLOAD(40),    1000
     1  DSPACE(40), THROWMAX(40), MTYPE(40), IDATA(40)                   2000
CEND       PARAMETR  ***********************************************    9000
C                                                                       10000
CUSE       FOOTDATA  1JUN71    ***********************************      11000
      COMMON /FOOTDATA/ GAS(2),PX(2,2),PAX(2,2),TOSSC1(2,2,2),TOSSC2(2,  1000
     12,2),TFONE(2,2),TFTWO(2,2),TDENOM(2),PBASIC(2,2),PADD(2,2),EONE(2  2000
     2,2),ETWO(2), DENOM, CONE(2,2), CTWO(2,2), LLNGDAT                  3000
C                                                                        4000
      COMMON /SHRTDAT/ ALPHAZ(16),ALPHA1(16),ALPHA2(16),BETAZ(16),BETA1  5000
     1(16),BETA2(16),MAXPBOST(16),GTWO,GONE,GZERO,DONE,DZERO,LSHTDAT     6000
C                                                                        7000
      TYPE REAL MAXPBOST                                                 8000
C                                                                        9000
      COMMON /PENADD/ TOTFUEL, SFEC1(2), SFEC2(2), SFEXP1(2)            10000
     1           , SFEXP2(2), SFDEN, LPENDAT                            11000
C                                                                       12000
C                                                                       13000
C                                                                       14000
      DATA (LLNGDAT = 57)                                               15000
     1     , (LSHTDAT = 117)                                            16000
     2     , (LPENDAT = 67)                                             17000
C                                                                       18000
CEND       FOOTDATA  ***********************************************   11000
C                                                                       12000
CUSE       TAPEMANR  1JUN71    ***********************************      13000
      COMMON /ITP/ ITP                                                  1000
      COMMON /TWORD/ TWORD                                              2000
      EQUIVALENCE (ITWORD, TWORD)                                       3000
      COMMON /MYIDENT/ MYIDENT                                          4000
      COMMON /NOPRINT/ NOPRINT                                          5000
      COMMON /IFTPRNT/ IFTPRNT(10)                                      6000
      COMMON/FILABEL/ INIDENT, INRUNNO, INDATE, INFORM, INSECR,         7000
     1       INTIME, INLNGTH, INCOMM(5)                                 8000
      COMMON/ MYLABEL/ MYFORM, MYSECR, MYLNGTH, MYCOMM(5)               9000
C                                                                       10000
```

```
      CEND      TAPEMANR  ***********************************************************  13000
      C                                                                                 14000
            DATA (ILASTS = 0), (ILASTL = 0), (ILASTP = 0)                               15000
      C                                                                                 16000
            ITP = ITAHL                                                                 17000
            MYIDAT = 7HSCRATCH                                                          18000
            CALL SETREAD                                                                19000
            IMTX = MTYPE(I)                                                             20000
            INEW = IDATA(I)                                                             21000
       100 GO TO (1000, 2000, 3000, 11000), IMTX                                        22000
      C                                                                                 23000
      C     LONG RANGE SYSTEM                                                           24000
      C                                                                                 25000
       1000 IF (INEW - ILASTL) 1100, 10000, 1100                                        26000
       1100 ILASTL = INEW                                                               27000
            GO TO 90000                                                                 28000
       1200 CALL RDARRAY(GAS, LLNGDAT)                                                  29000
            GO TO 10000                                                                 30000
      C                                                                                 31000
      C     SHORT RANGE SYSTEM                                                          32000
      C                                                                                 33000
       2000 IF (INEW - ILASTS)  2100, 10000, 2100                                       34000
       2100 ILASTS = INEW                                                               35000
            GO TO 90000                                                                 36000
       2200 CALL RDARRAY (ALPHAZ, LSHTDAT)                                              37000
            GO TO 10000                                                                 38000
      C                                                                                 39000
      C     LONG RANGE SYSTEM WITH PENAIDS                                              40000
      C                                                                                 41000
       3000 IF (INEW - ILASTP)  3100, 10000, 3100                                       42000
       3100 ILASTP = INEW                                                               43000
            GO TO 90000                                                                 44000
       3200 CALL RDARRAY(GAS, LLNGDAT)                                                  45000
            NOW = LPENDAT - LLNGDAT                                                     46000
            CALL RDARRAY( TOTFUEL, NOW)                                                 47000
            GO TO 10000                                                                 48000
      C                                                                                 49000
      10000 CALL TERMTAPE                                                               50000
            RETURN                                                                      51000
      C                                                                                 52000
      C     ERROR                                                                       53000
      C                                                                                 54000
      11000 PRINT 11001, IMTX, INEW                                                     55000
      11001 FORMAT(//1X,15(1H*),57H FOOTPRINT DATA ERROR, NO FORMULA DEFINITIO          56000
           1N FOR MTYPE = ,I10,9H IDATA = ,I10)                                         57000
            CALL ABORT                                                                  58000
      C                                                                                 59000
      C     FIND DATA SET                                                               60000
      C                                                                                 61000
      90000 CALL RDWORD                                                                 62000
            MTEST = ITWORD                                                              63000
            IF(MTEST) 11000, 11000, 90005                                               64000
      90005 IF (MTEST - IMTX) 90010, 90030, 90010                                       65000
      90010 CALL RDWORD                                                                 66000
      90020 CALL RDWORD                                                                 67000
            LNG = ITWORD                                                                68000
```

```
      CALL SKIP(LNG)                                          65000
      GO TO 90000                                             70000
90030 CALL RDWORD                                             71000
      MTEST = ITWORD                                          72000
      IF(MTEST - IMEW) 90020, 90040, 90020                    73000
90040 CALL RDWORD                                             74000
      LNG = ITWORD                                            75000
      GO TO (1200, 2200, 3200, 11000), IMTX                   76000
      END                                                     77000
```

```
                                        INENT     SETDATA
PROGRAM LENGTH                  00242
ENTRY POINTS        SETDATA     00035
BLOCK NAMES
                    FILES       00020
                    TSCRATCH    00002
                    PARAMETR    00431
                    FOOTDATA    00072
                    SHRTDAT     00166
                    PENADD      00013
                    ITP         00001
                    TWORD       00001
                    MYIDENT     00001
                    NOPRINT     00001
                    IFTPRNT     00012
                    FILABEL     00014
                    MYLABEL     00010
EXTERNAL SYMBOLS
                    THEAD.
                    QMODICT.
                    SETREAD
                    RDARRAY
                    TERMTAPE
                    ABORT
                    RDWORD
                    SKIP
                    STH.
                    QNSINGL.
```

```
X00006 ABORT      00135
C00012 ALCCGRP
C00006 ALOCTAS
C00020 ALPHA1
C00040 ALPHA2
C00000 ALPHAZ     00101
C00002 BASFILE
P00231 BEGIN.     00215   00223   00227
C00100 BETA1
C00120 BETA2
C00060 BETAZ
P00200 CNVRT1.    00131   00132
C00061 CONE
P00006 CREMT.     00135
C00065 CTWO
C00060 DENOM
P00001 DICT.      00037   00046   00067   00100   00111   00117   00122   00126   00134   00136   00140
                  00150   00152   00156   00162   00170   00204   00205
C00163 DONE
C00171 DSPACE
C00164 DZERO
P00216 ENDING.    00046   00123   00201   00202   00202   00203   00203
C00054 ECNE
C00056 ETWO
C00016 EVENTAPE
P00000 EXIT.      00221
P00006 FORMAT.    00043
P00047 FP00001.   00213   00214
C00000 GAS        00070   00112
P00232 GETPL.     00206
P00222 GETPU.     00211   00226
P00135 GG00000.   00124
C00161 GONE
C00160 GTWO
C00162 GZERO
P00006 I          00047
C00361 IDATA      00052   00052
C00000 IFTPRNT
P00233 IGOTO.     00055   00173
C00001 IHNAME
P00004 ILASTL     00062   00065
P00005 ILASTP     00104   00107
P00003 ILASTS     00073   00076
P00234 IMTX       00051   00054   00130   00145   00173
C00007 INCOMM
C00002 INDATE
P00235 INEW       00053   00061   00064   00072   00075   00103   00106   00132   00165
C00003 INFORM
C00000 INIDENT
P00201 INITIAL.   00040
C00006 INLNGTH
C00001 INRUNNO
C00004 INSECP
C00005 INTIME
```

```
C00000  ISCR
C00001  ITABL       00041   00041
C00000  ITP         00042   00042
C00000  ITWORD      00141   00141   00153   00153   00163   00163   00171   00171
P00054  .100
P00061  .1000       00056
P00121  .10000      00062   00071   00073   00102   00104
P00064  .1100       00063
P00124  .11000      00060   00143   00145   00174
P00066  .1200       00174
P00072  .2000       00056
P00075  .2100       00074
P00077  .2200       00175
P00103  .3000       00057
P00106  .3100       00165
P00110  .3200       00176
P00137  .90000      00065   00076   0010'   00160
P00144  .90005
P00147  .90010      00146
P00151  .90020      00166   00166
P00161  .90030      00145
P00167  .90040      00165
P00006  ..100000    00043
P00007  ..11001     00127
C00071  LLNGDAT     00003   00070   00112   00114   00114
P00236  LNG         00154   00157   00172
C00012  LPENDAT     00113   00113   C00166
C00165  LSHTDAT     C00072  00101
C00121  MAXLOAD
C00140  MAXPROST
C00000  MAXSYS
C00051  MINLOAD
C00004  MSLTIME
P00237  MTEST       00142   00144   00164
C00311  MTYPE       00050   00050
C00003  MYCORE
C00000  MYFORM
C00006  MYIDENT     00044   00044
C00002  MYLNGTH
C00001  MYSECP
C00000  NOPRINT
P00240  NOW         00115   00120
P00215  PF00002.    00212
C00017  PLANTAPE
X00002  QMODICT.    00000   00036
X00012  QNSINGL.    00177
C00050  RADD
C00006  RAX
C00344  RBASIC
X00004  RDARRAY     00066   00077   00110   00114
X00007  RDWORD      00137   00147   00151   00151   00167
C00002  RX
P00035  SETDATA     00035
X00003  SETREAD     00045
```

```
X60010  SKIP        00155
C00001  SRFC1
C00003  SRFC2
C00011  SRFDEN
C00005  SRFEXP1
C00007  SRFEXP2
X00011  STM.        00125
C00014  STRKFIL
C00042  TDENOM
C00032  TEONE
X00005  TERMTAPE    00121
C00036  TETWO
C00080  TGTFILE
X00001  TMEND.      00133
C00241  TMROWMAX
C00010  TMPALOC
C00012  TOSSC1
C00022  TOSSC2
C00000  TOTFUEL     00120
C00003  TWORD
   00177 SYMBOLS
```

```
      SUBROUTINE TABLINPT                                                    1000
CSUBR      TABLINPT  1JUN71    ***************************************      51000
C                                                                            2000
C     READ DATA INTO FOOTPRINT PARAMETER TABLES                              3000
C                                                                            4000
C     MTYPE = 1          -  LONG  RANGE SYSTEM                               5000
C     MTYPE = 2          -  SHORT RANGE SYSTEM                               6000
C     MTYPE = 3          -  LONG RANGE SYSTEM WITH PENETRATION AIDS          7000
C                                                                            8000
C                                                                            9000
CUSE       TAPES     1JUN71    ***************************************      10000
C                                                                            1000
      COMMON/FILES/ TGTFILE(2), BASFILE(2), MSLTIME(2), ALOCTAB(2),          2000
     1      TMPALOC(2), ALOCGRP(2), STRKFIL(2), EVENTAPE, PLANTAPE           3000
C                                                                            4000
      TYPE INTEGER TGTFILE, BASFILE, MSLTIME, ALOCTAB, TMPALOC,              5000
     1      ALOCGRP, STRKFIL, EVENTAPE, PLANTAPE                             6000
C                                                                            7000
      COMMON/TSCRATCH/ ISCR, ITABL                                           8000
C                                                                            9000
CEND       TAPES     ***************************************************   10000
C                                                                            11000
CUSE       RAIDATA   1JUN71    ***************************************      12000
C                                                                            1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)          2000
     1           , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)       3000
     2                , LRAID, NTMAX, LLFIX(1500)                           4000
C                                                                            5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(16)      6000
C                                                                            7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK,       8000
     1DLONG), (IDUM, INDEX)                                                  9000
C                                                                            10000
      TYPE LOGICAL LLFIX                                                     11000
C                                                                            12000
      COMMON/4/ DESIG(1500), TASK(1500), CNTRYLOC(1500), FLAG(1500)          13000
C                                                                            14000
CEND       RAIDATA   ***************************************************   12000
CUSE       PARAMETR  1JUN71    ***************************************      13000
      COMMON /PARAMETR/ MAXSYS, IPNAME(40), MISLOAD(40), MAXLOAD(40),        1000
     1  DSPACE(40), THROWMAX(40), MTYPE(40), IDATA(40)                       2000
CEND       PARAMETR  ***************************************************   13000
CUSE       FOOTDATA  1JUN71    ***************************************      14000
      COMMON /FOOTDATA/ BAS(2),RX(2,2),RAX(2,2),TOSSC1(2,2,2),TOSSC2(2,      1000
     12,2),TEONE(2,2),TETWO(2,2),TDENOM(2),RBASIC(2,2),RADD(2,2),EONE(2      2000
     2,2),ETWO(2), DENOM, CONE(2,2), CTWO(2,2), LLNBDAT                      3000
C                                                                            4000
      COMMON /SHRTDAT/ ALPHAZ(16),ALPHA1(16),ALPHA2(16),BETAZ(16),BETA1      5000
     1(16),BETA2(16),MAXRBOST(16),GTWO,GONE,GZERO,DONE,DZERO,LSHTDAT         6000
C                                                                            7000
      TYPE REAL MAXRBOST                                                     8000
C                                                                            9000
      COMMON /PENADD/ TGTFUEL, SRFC1(2), SRFC2(2), SRFEXP1(2)                10000
     1           , SRFEXP2(2), SRFDEN, LPENDAT                               11000
C                                                                            12000
C                                                                            13000
```

```
C                                                                       14000
      DATA (LLNGDAT = 57)                                               15000
     1       , (LSHTDAT = 117)                                          16000
     2       , (LPENDAT = 67)                                           17000
C                                                                       18000
CEND       FDDTDATA  ***************************************************** 14000
CUSE       TAPEHANR  UNUNIT    ******************************************** 15000
      COMMON /ITP/ ITP                                                   1000
      COMMON /TWORD/ TWORD                                               2000
      EQUIVALENCE (ITWORD, TWORD)                                        3000
      COMMON /MYIDENT/ MYIDENT                                           4000
      COMMON /NOPRINT/ NOPRINT                                           5000
      COMMON /IFTPRNT/ IFTPRNT(10)                                       6000
      COMMON/FILABEL/ INIDENT, INRUNNO, INDATE, INFORM, INSECR,          7000
     1       INTIME, INLNGTH, INCOMM(5)                                  8000
      COMMON/ MYLABEL/ MYFORM, MYSECR, MYLNGTH, MYCOMM(5)                9000
C                                                                       10000
CEND       TAPEHANR  ***************************************************** 15000
C                                                                       16000
C                                                                       17000
      DIMENSION IGOT(40)                                                18000
C     SET UP SCRATCH FILE TO STORE DATA                                 19000
      ITP = ITAPL                                                       20000
      MYIDENT = THSCRATCH                                               21000
      CALL SETWRITE                                                     22000
      NGOT=0                                                            23000
C     READ SYSTEM CONTROL CARD                                          24000
    1 READ 100,IDUM                                                     25000
  100 FORMAT(8(A8,A2))                                                  26000
      I=NUMGET(IDUM(1),10)                                              27000
      IF (I) 9999, 9999, 2                                              28000
    2 NGOT=NGOT+1                                                       29000
      IGOT(NGOT)=I                                                      30000
      IHNAME(I)=IDUM(3)                                                 31000
      MINLOAD(I)=NUMGET(IDUM(5),10)                                     32000
      MAXLOAD(I)=NUMGET(IDUM(7),10)                                     33000
      DECODE(32,3,IDUM(9)) DSPACE(I), THROWMAX(I)                       34000
    3 FORMAT(2(F10.0,6X))                                               35000
      IMT = MTYPE(I) = NUMGET(IDUM(13), 10)                             36000
      IMRVSYS = IDATA(I) = NUMGET(IDUM(15), 10)                         37000
C                                                                       38000
C     SEE IF THIS TYPE ALREADY READ                                     39000
      K = NGOT - 1                                                      40000
      DO 5 J = 1, K                                                     41000
      L = IGOT(J)                                                       42000
      IF (IMT - MTYPE(L)) 5, 4, 5                                       43000
    4 IF (IMRVSYS - IDATA(L)) 5, 1, 5                                   44000
    5 CONTINUE                                                          45000
C     NOT YET READ                                                      46000
      ITWORD = IMT                                                      47000
      CALL MRWORD                                                       48000
      ITWORD = IMRVSYS                                                  49000
      CALL MRWORD                                                       50000
      GO TO (1000, 2000, 3000), IMT                                     51000
C     LONG RANGE SYSTEM                                                 52000
 1000 READ 101,GAS                                                      53000
```

```
  101 FORMAT(8F10.8)                                                    5400C
      READ 101,RBASIC,RADD,RX,RAX,TOSSC1,TOSSC2,TEONE,TETWO,TDENOM      5500C
      READ 101,EONE,ETWO,DENOM                                          5600C
      READ 101,CONE,CTWO                                                5700C
      ITWORD = LLNGDAT                                                  5800C
      CALL WRWORD                                                       5900C
      CALL WRARRAY(GAS, LLNGDAT)                                        6000C
      GO TO 1                                                           6100C
C     SHORT RANGE SYSTEM                                                6200C
 2000 READ 101,ALPHAZ,ALPHA1,ALPHA2,BETAZ,BETA1,BETA2,MAXRBOST,GTWO,    6300C
     1GONE,GZERO,DONE,DZERO                                             6400C
      ITWORD = LSHTDAT                                                  6500C
      CALL WRWORD                                                       6600C
      CALL WRARRAY(ALPHAZ, LSHTDAT)                                     6700C
      GO TO 1                                                           6800C
C                                                                       6900C
C     LONG RANGE SYSTEM WITH PENETRATION AIDS                           7000C
C                                                                       7100C
 3000 READ 101, TOTFUEL, SRFDEN                                         7200C
      READ 101, SRFC1, SRFC2, SRFEXP1, SRFEXP2                          7300C
      READ 101, RBASIC, RADD, RX, RAX, TOSSC1, TOSSC2, TEONE, TETWO     7400C
     1      , TDENOM                                                    7500C
      READ 101, EONE, ETWO, DENOM                                       7600C
      READ 101, CONE, CTWO                                              7700C
      ITWORD = LPENDAT                                                  7800C
      CALL WRWORD                                                       7900C
      NOW = LPENDAT - LLNGDAT                                           8000C
      CALL WRARRAY(GAS, LLNGDAT)                                        8100C
      CALL WRARRAY(TOTFUEL, NOW)                                        8200C
      GO TO 1                                                           8300C
C                                                                       8400C
 9999 ITWORD = 0                                                        8500C
      CALL WRWORD                                                       8600C
      CALL TERMTAPE                                                     8700C
      RETURN                                                            8800C
C                                                                       8900C
      ENTRY PRNTABLE                                                    9000C
      PRINT 10                                                          9100C
   10 FORMAT(1H1,10X,27H FOOTPRINT PARAMETER TABLES)                    9200C
      DO 20000 I=1,NGOT                                                 9300C
      NCHAFF = 0                                                        9400C
      J=IGOT(I)                                                         9500C
      PRINT 20,J,IHNAME(J),MINLOAD(J),MAXLOAD(J),DSPACE(J),THROWMAX(J)  9600C
   20 FORMAT(///12H SYSTEM NO. ,I2,10X,A8,10X,11H MINLOAD = ,I2,11H MAXL 9700C
     1OAD = ,I2,41H MINIMUM SPACING EXPLICITLY CONSIDERED = ,F10.5,/A1H,  9800C
     224H MAXIMUM THROW DISTANCE = ,F7.2)                               9900C
      CALL SETDATA(J)                                                   10000C
      IMT = MTYPE(J)                                                    10100C
      GO TO (1500, 2500, 3500), IMT                                     10200C
C                                                                       10300C
C     LONG  RANGE SYSTEM                                                10400C
C                                                                       10500C
 1500 IDUM(1) = 8HPOSITIVE                                              10600C
      IDUM(2) = 8HNEGATIVE                                              10700C
      IDUM(3) = 8H                                                      10800C
      IDUM(4) = 8H %D/LB =                                              10900C
```

```
      IDUM(5) = 8H OR/CR =                                              110000
      DO 1700 N=1,2                                                     111000
      NRV=N+1                                                           112000
      PRINT 30, NPV, NCHARF                                             113000
   30 FORMAT(//11H0TABLES FOR,I2,3H-0-,I2,14H CONFIGURATION/,22H0MAXIMUM 114000
     1 BOOSTER RANGE)                                                   115000
      PRINT 31,(IDUM(K),RBASIC(N,K),RADO(N,K),K=1,2)                    116000
   31 FORMAT( 25X,AR,15H LAUNCH AZIMUTH,5X,5H R = ,F8.1,3H + ,FR.1,     117000
     114H * SINE(AZIMUTH))                                              118000
      PRINT 32,GAS(N)                                                   119000
   32 FORMAT(/36H FUEL LOAD AT BOOSTER SEPARATION IS ,F6.1,8H POUNDS.// 120000
     1)                                                                 121000
      IF (IMT - 3)  1520, 1510, 1520                                    122000
 1510 PRINT 42                                                          123000
   42 FORMAT(10X,50HMINUS SPACING AND RELEASE FUEL COMPUTED AS FOLLOWS) 124000
      PRINT 35, (IDUM(K), IDUM(6), SREC1(N), SREC2(N),K = 1,2), IDUM(3) 125000
     1, SREXP1(N), SREDEN, SREXP2(N)                                    126000
 1520 PRINT 43                                                          127000
   43 FORMAT(24H0RANGE EXTENSION EQUATIONS)                             128000
      PRINT 35, (IDUM(K), IDUM(6), RX(N,K), RAX(N,K), K = 1, 2)         129000
      PRINT 33                                                          130000
   33 FORMAT(//18H RV TOSS EQUATIONS)                                   131000
      DO 1600 L=1,N                                                     132000
      PRINT 34,L                                                        133000
   34 FORMAT(/25X, 8H TO TOSS,I2,12H WARHEAD(S),)                       134000
      PRINT 35,(IDUM(K),IDUM(6),TOSSC1(N,K,L),TOSSC2(N,K,L),K=1,2)      135000
     1,IDUM(3),TECNE (N,L),TOENOM(L),TETHO(N,L)                         136000
   35 FORMAT(2(//25X,FR,15H LAUNCH AZIMUTH,5X,AR,1X,F6.2,3H + ,FA.2,16H + 137000
     1 SINE(AZIMUTH)) // A8,42H BOTH OF THESE EQUATIONS ARE MULTIPLIED B 138000
     2Y THE FACTOR G, WHERE//10X,9H G = EXP(,F5.2, 39H * ((MAXRANGE - RA 139000
     3NGE TO FIRST TARGET)/,FA.1,5H) ** ,F5.2,1H)) )                    140000
 1600 CONTINUE                                                          141000
      PRINT 36                                                          142000
   36 FORMAT(//33H RATIO OF DOWNRANGE TO CROSSRANGE)                    143000
      PRINT 35,(IDUM(K),IDUM(5),CONE(N,K),CTHO(N,K),K=1,2),IDUM(3),     144000
     1ECNE(N),DENOM,ETHO(N)                                             145000
 1700 CONTINUE                                                          146000
      PRINT 37                                                          147000
   37 FORMAT(/1X,119(1H*)//)                                            148000
      GO TO 20000                                                       149000
C     SHORT RANGE SYSTEM                                               150000
 2500 MIN = 1                                                           151000
      MAX=MXLOAD(J)                                                     152000
      PRINT 38, (K, MAXBOOST(K), K = MIN, MAX)                          153000
   38 FORMAT(///22H MAXIMUM BOOSTER RANGE,5X,6HRV#S,5X,5HRANGE/(32X,I2, 154000
     16X,F7.1))                                                         155000
      PRINT 39, (K, BETA2(K), BETA1(K), BETA7(K), K = MIN, MAX)         156000
   39 FORMAT(//43H FUEL LOAD AT BOOSTER SEPARATION PARAMETERS,10X,7HBETA 157000
     1TWO,10X,7HBETAONE,10X,8HBETAZERO/(47X,I2,1X,E12.5,2(5X,E12.5)))   158000
      PRINT 40,(K,ALPHA2(K),ALPHA1(K),ALPHA7(K),K=MIN,MAX)              159000
   40 FORMAT(//29H FUEL CONSUMPTION PARAMETERS ,10X,8HALPHATWO,10X,     160000
     1AHALPHAONE,10X,9HALPHAZERO/(33X,I2,3X,E10.3,8X,E10.3,8X,E10.3))   161000
      PRINT 41,GTWO,GONE,GZERO,DONE,DZERO                               162000
   41 FORMAT(//26H DOWNRANGE / CROSSRANGE = ,E10.3,13H * X ** 2  + ,    163000
     1E10.3,8H * X  + E10.3/3X,23H DOWNRANGE / LORANGE = ,23X,E10.3,    164000
     2BH * X  + ,E10.3)                                                 165000
```

```
C
      PRINT 37                                                          166000
      GO TO 20000                                                       167000
C                                                                       168000
C     LONG RANGE SYSTEM WITH PENETRATION AIDS                           169000
C                                                                       170000
 3500 IDUM(6) = 8HPOUNDS =                                              171000
      GAS(1) = GAS(2) = TOTFUEL                                         172000
      NCHAFF = 15                                                       173000
      GO TO 1500                                                        174000
C                                                                       175000
20000 CONTINUE                                                          176000
C                                                                       177000
      RETURN                                                            178000
      END                                                               179000
                                                                        180000
```

IDENT TABLINPT

PROGRAM LENGTH		02141
ENTRY POINTS	PRNTABLE	01321
	TABLINPT	00555
BLOCK NAMES		
	FILES	00020
	TSCRATCH	00002
	RAIDATA	21534
	4	13560
	PARAMETR	00431
	FOOTDATA	00072
	SHRTDAT	00164
	PENADD	00013
	ITP	00001
	TWORD	00001
	MYIDENT	00001
	NOPRINT	00001
	IFTPRNT	00012
	FILABEL	00014
	MYLABEL	00010
EXTERNAL SYMBOLS		
	THEND.	
	DADDICT.	
	SETWRITE	
	NUMGET	
	WRWORD	
	WRARRAY	
	TERMTAPE	
	SETDATA	
	TSH.	
	DEC.	
	STH.	
	SLI.	
	ONSINGL.	

C00012	ALOCSRP										
C00006	ALOCTAB										
C00020	ALPHA1	01056	01772								
C00040	ALPHA2	01062	01770	01771							
C00000	ALPHA3	01052	01122	01773							
C00052	BASFILE										
P02116	BEGIN.	02117									
C00100	BETA1	01072	01746								
C00[illegible]	BETA2	01076	01744	01745							
C00064	BETA3	01066	01767								
C05670	CNTRYLOC										
P02041	CNVRT1.	00633	00634	01011	01103	01105	01106	01107	01110	01130	01132	01252
		01344	01346	01347	01350	01351	01352	01411	01412	01426	01431	01432
		01446	01473	01474	01477	01500	01505	01510	01511	01512	01534	01535
		01540	01541	01566	01602	01603	01606	01607	01614	01617	01622	01623
		01651	01652	01655	01656	01663	01666	01667	01670	01721	01723	01743
		01745	01746	01747	01767	01771	01772	01773	02007	02010	02011	02012
		02013										
C00061	CONE	01024	01265	01654	01654							
P00053	CRFMT.	00603	00640	00723	01333	01355	01415	01440	01451	01462	01523	01555
		01571	01626	01640	01704	01732	01756	02002	02016			
C00065	CTWO	01030	01271	01656								
X00012	DEC.	00630										
C00060	DENOM	01012	01012	01253	01253	01667						
C00000	DESIG											
P00001	DICT.	00557	00566	00573	00577	00602	00604	00620	00624	00631	00637	00641
		00646	00700	00704	00713	00717	00722	00725	00731	00735	00741	00745
		00751	00755	00761	00765	00771	00774	00777	01003	01007	01014	01017
		01023	01027	01032	01036	01040	01045	01051	01055	01061	01065	01071
		01075	01101	01113	01117	01121	01126	01135	01140	01144	01150	01154
		01160	01163	01166	01172	01176	01202	01206	01212	01216	01222	01226
		01232	01235	01240	01244	01250	01255	01260	01264	01270	01273	01277
		01304	01307	01315	01317	01323	01327	01332	01342	01354	01356	01407
		01414	01417	01437	01442	01450	01456	01461	01464	01514	01517	01522
		01525	01546	01551	01554	01563	01570	01573	01625	01634	01637	01642
		01672	01700	01703	01713	01731	01734	01755	01760	02001	02004	02015
		02020	02023									
C13563	DLAT											
C16517	DLONG											
C00163	DONE	01110	02012									
C00171	DSPACE	00634	01351									
C00164	DZERO	01111	02013									
P02120	ENDING.	00560	01320	01324	02037	02116						
C00054	EONE	01004	01245	01665	01665							
C00056	ETWO	01010	01251	01670								
C00016	EVENTAPE											
P00009	EXIT.	02121										
C17624	FLAG											
P00053	FORMAT.	00563	01366	01370	01372	01374	01376	02025				
C00000	GAS	00720	01041	01305	01445	01445	02030	02030	02031			
P00603	GC00000.	00571										
P00640	GG00001.	00627										
P00723	GG00002.	00711										
P00775	GG00003.	00723										

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P01315  GG00004.   00775
P01033  GG00005.   01015
P01114  GG00006.   01043
P01136  GG00007.   01124
P01164  GG00010.   01136
P01236  GG00011.   01164
P01256  GG00012.   01234
P01274  GG00013.   01254
P01333  GG00014.   01325
P01355  GG00015.   01340
P01415  GG00016.   01405
P01440  GG00017.   01415
P01451  GG00020.   01440
P01462  GG00021.   01454
P01515  GG00022.   01462
P01523  GG00023.   01515
P01547  GG00024.   01523
P01555  GG00025.   01547
P01571  GG00026.   01561
P01626  GG00027.   01571
P01640  GG00030.   01632
P01673  GG00031.   01640
P01704  GG00032.   01676
P01732  GG00033.   01711
P01756  GG00034.   01732
P02002  GG00035.   01756
P02016  GG00036.   02002
P02024  GG00037.   0201A
C00161  GONE       01106  02010
C00160  GTWO       01104  01104  02006  02006
C00162  GZERO      01107  02011
P02123  I          00606  00612  00615  01334  01336  02034
C16517  IBACK
C00361  IDATA      00650  00650  00667  00670
C00003  IDUM       00600  00605  00613  00614  00621  00625  00632  00642  00647  01367  01367
                   01371  01371  01373  01373  01375  01375  01377  01377  01425  01425  01472
                   01472  01474  01504  01504  01533  01533  01535  01601  01601  01603  01613
                   01613  01650  01650  01652  01662  01662  02026  02026
C13563  IFOR
C00000  IFTPRNT
P00003  IGOT       00613  00660  01337
P02124  IGOTO.     00706  01363
C00001  IHNAME     00615  00614  01345  01346
P02125  IHSYSYS    00651  00686  00701
P02126  IHT        00644  00662  00675  00705  01362  01451
P02042  IN00008.   01427  01536  01653  02045  02058  02062  02075
P02043  IN00010.   01604  02046  02060  02063  02076  02101  02114
P02044  IN00011.   01615  02045  02057  02100  02112
C00007  INCOMM
C00002  INDATE
C00003  INDEX
C00003  INFORM
C00003  INTDENT
P02116  INITIAL.  00560  01324
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C00006  INLNGTH
C00001  INRUNNO
C00004  INSECR
C00005  INTIME
C00000  ISCR
C00001  ITAPE       00561   00561
C00000  ITP         00562   00562
C00000  ITWORD      00675   00676   00702   00702   01034   01034   01115   01115   01275   01275   01312
                    01313
P00571  .1          00679   01042   01123   01311
P00711  .1000       00707
P01366  .1500       01364   02033
P01454  .1510       01452
P01515  .1520       01453   01453
P01626  .1600
P01673  .1700
P00410  .2
P01043  .2000       00707
P02034  .20000      01704   02024
P01765  .2500       01364
P01126  .3000       00710
P02025  .3500       01365
P00666  .4          00664
P00672  .5          00664   00665   00671
P01312  .9999       00607   00607
P00073  ..10        01330
P00053  ..100000    00563
P00054  ..100       00574
P00147  ..100001    01366
P00150  ..100002    01370
P00151  ..100003    01372
P00152  ..100004    01374
P00153  ..100005    01376
P00554  ..100006    02025
P00070  ..101       00714   00726   01000   01020   01046   01127   01141   01167   01201   01261
P00105  ..20        01343
P00062  ..3         00632
P00154  ..30        01410
P00176  ..31        01420
P00217  ..32        01443
P00256  ..33        01552
P00265  ..34        01564
P00277  ..35        01465   01526   01574   01643
P00330  ..36        01635
P00371  ..37        01701   02021
P00462  ..38        01714
P00426  ..39        01735
P00464  ..40        01761
P00521  ..41        02005
P00234  ..42        01457
P00247  ..43        01520
P02127  J           00655   00657   00672   01337   01344   01345   01357   01360   01706
C00002  JCORE
C00001  JGROUP
```

P02130	K	00653	00673	01422	01424	01433	01447	01471	01531	01530	01532	01542
		01576	01600	01610	01645	01647	01657	01715	01720	01722	01724	01737
		01742	01744	01750	01763	01766	01770	01774	02071			
P02131	L	00660	00662	00667	01556	01585	01620	01626	02107			
C21455	LLFIX											
C00071	LLNKDAT	00653	01033	01033	01041	01301	01301	01305				
C00312	LPFRDAT	C00166	01274	01274	01300	01300						
C21453	LRATD											
C00165	LSMTDAT	C00072	01114	01114	01122							
P02132	MAX	01710	01726	01752	01776							
C00121	MAXLOAD	00626	01350	01707	01707							
C00149	MAXPROST	01102	01722	01723								
C00000	MAXSYS											
P02133	MIN	01706	01715	01736	01762							
C00051	MINLOAD	00622	01347									
C00004	MSLTIME											
C00311	MTYPE	00643	00643	00663	00662	01361	01361					
CC0003	MYCOMM											
C00016	MYFORM											
C00003	MYIDENT	00564	00564									
C00002	MYLNGTH											
C00001	MYSECR											
P02134	N	01401	01403	01444	01475	01506	01630	01664	01673	02053		
P02135	NCHAFF	01336	01412	02032								
P02136	NGOT	00570	00610	00611	00612	00652	02035					
C00000	NOPRINT											
P02137	NOW	01302	01310									
P02140	NRV	01404	01411									
C00000	NT											
C21454	NTMAX											
X00004	NUMSET	00603	00617	00623	00640	00645						
P02045	P00002.U	02050										
P02062	P00003.U	02066										
P02100	P00004.U	02104										
C00017	PLATAPE											
P01321	PRNTABLE	01321										
X01302	QBOOICT.	00000	00556	01322								
X00015	QNSINGL.	02040										
C02737	R											
C00050	RADD	00736	01177	01432								
C00006	RAX	00746	01207	01541								
C00044	RBASIC	00732	01173	01430	01536							
C10627	RVAL											
C00002	RX	00742	01203	01537	01537							
X00010	SETDATA	01355										
X00003	SETWRITE	00565										
X00014	SLI.	00576	00716	00730	00734	00740	00744	00750	00754	00760	00764	00770
		01002	01006	01022	01026	01050	01054	01060	01064	01070	01074	01100
		01143	01147	01153	01157	01171	01175	01201	01205	01211	01215	01221
		01225	01231	01243	01247	01263	01267					
C00001	SRFC1	01145	01476	01476								
C00003	SRFC2	01151	01500									
C00011	SRFDEN	01133	01511									
C00005	SRFEXP1	01155	01507	01507								

```
C00007  SAFEXP2    01161  01512
X00013  STM.       01324  01341  01406  01416  01441  01455  01483  01516  01524  01550  01562
                   01572  01633  01641  01677  01712  01733  01757  02003  02017
C00014  STRKFIL
P00555  TARLINPT   00555
C02734  TASK
C00042  TOFROM     00772  01233  01621  01621
C00032  TFONF      00762  01223  01616  01616
X00007  TERMTAPE   01316
C00036  TETWO      00764  01227  01623
C00000  TGTFILE
C02737  TGTLAT
C05673  TGTLONG
X00001  THEND.     00601  00636  00721  00773  01013  01031  01112  01134  01162  01234  01254
                   01272  01331  01353  01413  01436  01447  01460  01513  01521  01545  01553
                   01567  01624  01636  01671  01702  01730  01754  02000  02014  02022
C05673  THETA
C00241  THROWMAX   00635  01352
C00010  THPALOC
C00012  TOSSC1     00752  01213  01605  01505
C00022  TOSSC2     00756  01217  01607
C00000  TOTFUEL    01131  01131  01310  02027  02027
P00673  TS00001.   0065A
P02035  TS00002.   01334
P01630  TS00007.   01560
P01726  TS00012.   01717
P01752  TS00013.   01741
P01776  TS00014.   01765
X00011  TSM.       00572  00712  00724  00774  01016  01044  01125  01137  01165  01237  01257
C00000  TWORD
P02052  UP00002.   01402  01574  02046  02053  02054  02055  02061  02061
P02070  UP00003.   00654  01423  01434  01478  01502  01531  01543  01577  01611  01646  01660
                   01716  01725  01740  01751  01764  01775  02064  02071  02072  02073  02076
                   02077
P02106  UP00004.   00661  01557  01627  02102  02107  02110  02111  02114  02115
X00006  WRARRAY    01037  01120  01303  01306
X00005  WRWORD     00677  00703  01035  01116  01276  01314
P00657  WS00001.   00674  00674
P01335  WS00002.   02036  02036
P01403  WS00003.   01675
P01424  WS00004.   01435
P01471  WS00005.   01503
P01532  WS00006.   01544
P01561  WS00007.   01631  01631
P01600  WS00010.   01612
P01647  WS00011.   01661
P01720  WS00012.   01727  01727
P01742  WS00013.   01753  01753
P01766  WS00014.   01777  01777
   00351 SYMBOLS
```

```
      SUBROUTINE TEST                                                    10000
CSUBR      TEST      1JUN71  ********************************************  52000
C                                                                        20000
C     LOADS ARRAYS FOR USE BY FOOTEST                                    30000
C                                                                        40000
CUSE       FOOTIO    1JUN71  ********************************************  50000
      COMMON /FOOTIO/ MAXRY, ISYS, NFAR, RIN(20), TMIN(20), IFEAS,       10000
     1 DELRSTRT, DELRAFT(20), FUELEFT                                    20000
CEND       FOOTIO    ********************************************  50000
CUSE       LOADATA   1JUN71  ********************************************  60000
C                                                                        10000
      COMMON /LOADATA/ LOADOPT, NRYADD(1500), NADDED, NTOADD, KONTAR(20) 20000
     1               , NADDOLD                                           30000
C                                                                        40000
CEND       LOADATA   ********************************************  60000
CUSE       PARAMETR  1JUN71  ********************************************  70000
      COMMON /PARAMETR/ MAXSYS, IHNAME(40), MINLOAD(40), MAXLOAD(40),    10000
     1  DSPACE(40), TMROWMAX(40), NTYPE(40), IDATA(60)                    20000
CEND       PARAMETR  ********************************************  70000
CUSE       POTENT    1JUN71  ********************************************  80000
      COMMON /POTENT/ MAXPOT, MAXHIT, IPOT(50), NHIT, IHIT(20), TOFLY(20 10000
     1), NMISS, MISS(50), NFREE, IFREE(50), NLOST, LOST(50), INVERSE(50) 20000
     2, AGE(50)                                                          30000
CEND       POTENT    ********************************************  80000
CUSE       IEVAL     1JUN71  ********************************************  90000
      COMMON /I/ VAL(50), JAFTER(50), VALFIRST(50), COSTEFF(20),         10000
     1 D(50, 50)                                                         20000
CEND       IEVAL     ********************************************  90000
CUSE       3COMP     1JUN71  ********************************************  10000
      COMMON /3/ RP(50), TP(50), RVALP(50), SINES(50), COSINES(50),      10000
     1 AVRP, AVTHP, RHIT, THIT, SINAV, COSAV, SINHIT, COSINHIT, THOLD    20000
CEND       3COMP     ********************************************  10000
CUSE       DEBUG     1JUN71  ********************************************  11000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                  10000
CEND       DEBUG     ********************************************  11000
CUSE       PRINT     1JUN71  ********************************************  12000
      COMMON /PRINT/ ICALL, IMUST                                        10000
CEND       PRINT     ********************************************  12000
C                                                                        13000
      IOTA = IOTA + 1                                                    14000
      ICAMFROM(IOTA) = RHTEST                                            15000
      ICALL = 32                                                         16000
      CALL GOPRINT(10)                                                   17000
C                                                                        18000
C     IF LOADOPT GREATER THAN 2, ADD RVS DELIVERED TO FIRST TARGET       19000
C                                                                        20000
      NOFFSET = 0                                                        21000
      IF (LOADOPT - 3)  40, 20, 20                                       22000
   20 NN = MINLOAD(ISYS) - NHIT                                          23000
      IF (NN) 40, 40, 21                                                 24000
   21 NOFFSET = NN                                                       25000
      J = IHIT(1)                                                        26000
      RPJ = RP(J)                                                        27000
      TPJ = TP(J)                                                        28000
      DO 30  I = 1, NN                                                   29000
      RIN(I) = RPJ                                                       30000
```

```
      30 THIN(I) = TPJ                                                    31000
      40 DO 10  II = 1, NHIT                                              32000
         J = IHIT(II)                                                     33000
         I = II + NOFFSET                                                 34000
         RIN(I) = RP(J)                                                   35000
      10 THIN(I) = TP(J)                                                  36000
         NTAR = NHIT + NOFFSET                                            37000
         IFEAS = 0                                                        38000
         ICALL = 58                                                       39000
         CALL GOPRINT(13)                                                 40000
         ICALL = 62                                                       41000
         CALL GOPRINT(11)                                                 42000
         CALL FOOTEST                                                     43000
         ICALL = 59                                                       44000
         CALL GOPRINT(13)                                                 45000
         IF (LOADOPT - 3)  70, 50, 50                                     46000
      50 IFSAVE = IFEAS - NOFFSET                                         47000
C        RETURN IF NO RVS ADDED                                           48000
         IF (NOFFSET .LE. 0)  60 TO 70                                    49000
C        IF THIS TEST WAS SUCCESSFUL, RESET LIST TO OMIT ONE OF THE ADDED 50000
C        RVS TO OBTAIN CORRECT DELRSTRT AND DELRAFT.                      51000
         IF (IFSAVE - NHIT)  59, 51, 51                                   52000
      51 NOFFSET = NOFFSET - 1                                            53000
         NTAR = NTAR - 1                                                  54000
         DO 55  I = 1, NTAR                                               55000
         RIN(I) = RIN(I+ 1)                                               56000
      55 THIN(I) = THIN(I + 1)                                            57000
         CALL FOOTEST                                                     58000
         ICALL = 59                                                       59000
         CALL GOPRINT(13)                                                 60000
      59 IFEAS = IFSAVE                                                   61000
         DO 60 I = 1, NHIT                                                62000
         TOFLY(I) = TOFLY(I + NOFFSET)                                    63000
      60 DELRAFT(I) = DELRAFT(I + NOFFSET)                                64000
      70 CONTINUE                                                         65000
         ICALL = 60                                                       66000
         CALL GOPRINT(15)                                                 67000
         IOTA = IOTA - 1                                                  68000
         RETURN                                                           69000
         END                                                              70000
```

IDENT TEST

PROGRAM LENGTH		00243
ENTRY POINTS	TEST	00004
BLOCK NAMES		
	FOOTIO	00102
	LOADATA	02764
	PARAMETR	00431
	FCTENT	00532
	1	05156
	3	00403
	DEBUG	00025
	PRINT	00007
EXTERNAL SYMBOLS		
	DRDICT.	
	GOPRINT	
	FOO"EST	

```
C00450  AGE
C00372  AVRP
C00373  AVTMP
P00217  BEGIN.      00221
C00377  COSAV
C00318  COSIMFS
C00401  COSINMIT
C00226  COSTEFF
P00232  COUNT.      00044   00045   00057   00060   00145   00146   00171   00172
C00252  C
C00055  DELRAFT     00203   00203   00204
C00054  DELRSTRT
P00301  DICT.       00006   00017   00105   00111   00114   00117   00155   00161   00212
C00171  DSPACE
P00222  ENDING.     00007   00216   00217   00220   00220
P00080  EXIT.       00224
X00003  FOOTEST     00113   00154
P00093  FORMAT.     00012
C00101  FUELEFT
X00002  GOPRINT     00016   00104   00110   00116   00160   00211
P00233  I           00042   00045   00064   00066   00072   00142   00145   00166   00171   00173   00200
                    00205
C00000  ICALL       00015   00015   00102   00102   00107   00115   00156   00157   00207   00210
C00001  ICAMFROM    00014
C00361  IDATA
C00053  IFEAS       00101   00124   00124   00164   00164
C00221  IFREE
P00234  IFSAVE      00126   00132   00163
C00065  IHIT        00033   00034   00061   00061
C00001  IHNAME
P00235  II          00054   00057   00063   00075
C00001  IMUST
P00217  INITIAL.    00007
C00366  INVERSE
C00000  IOTA        00010   00010   00011   00013   00013   00214   00214   00215
C00002  IPOT
C00001  ISYS        00025   00025
P00070  .10
P00131  .100001     00127
P00132  .100002     00130
P00025  .20         00024
P00032  .21
P00050  .30
P00053  .40         00024   00031   00031
P00124  .50         00127
P00135  .51         00134
P00151  .55
P00163  .59         00134
P00200  .60
P00207  .70         00123   00131
P00003  ..100000    00012
P00225  .NSTIFF.    00175   00175   00202   00202
P00236  J           00035   00035   00062   00064   00070
C00062  JAFTER
```

```
C00000  LOADOPT    00022   00023   00121   00121
C00304  LOST
C00001  MAXMIT
C00121  MAXLOAD
C00000  MAXPOT
C00000  MAXRV
C00060  MAXSYS
C00051  MINLOAD    00026   00026
C00136  MISS
C00311  MTYPE
C02735  NADDED
C02763  NADDOLD
C00220  NFREE
C00064  NHIT       00027   00027   00054   00055   00076   00076   00133   00133   00166   00167
C00303  NLOST
C00135  NMISS
P00237  NN         00030   00032   00043
P00260  NOFFSET    00022   00033   00063   00077   00125   00126   00135   00136   00174   00201
C02737  NONTAR
C00001  NRVADD
C00002  NTAR       00100   00100   00137   00137   00140   00142   00143
C02736  NTOADD
XC0001  OBJECT.    00000   00005
C00374  PHIT
C00003  RIN        00047   00047   00067   00067   00147   00147   00150
C00000  RP         00036   00036   00065   00065
P00241  RPJ        00037   00046
C00144  PVALP
C00376  SINAV
C00226  SINES
C00400  SIMMIT
P00004  TEST       00004
C00027  THIN       00051   00051   00073   00073   00151   00151   00152
C00375  THIT
C00402  THOLD
C00241  THROWMAX
C00111  TOFLY      00176   00176   00177
C00062  TP         00040   00040   00071   00071
P00242  TPJ        00041   00050
P00053  TS00001.   00044
P00076  TS00002.   00056
P00154  TS00003.   00144
P00207  TS00004.   00170
C00000  VAL
C00144  VALFIRST
P00046  WS00001.   00052
P00061  WS00002.   00075
P00147  WS00003.   00153
P00173  WS00004.   00206
   00146 SYMBOLS
```

```
      SUBROUTINE TRANSFER(N)                                                1000
CSUBR      TRANSFER  1JUN71    ****  ********************************      50000
C                                                                           2000
C     THIS ROUTINE TRANSFERS DATA FROM TMPALOC FILE TO THE ALOCBRP FILE.    3000
C                                                                           4000
CUSE       RAIDATA   1JUN71    ********************************************  5000
C                                                                           1000
      COMMON/ RAIDATA/ NT, JGROUP, JCORR, INDEX(1500), TGTLAT(1500)         2000
     1           , TGTLONG(1500), RVAL(1500), DLAT(1500), DLONG(1500)       3000
     2                 , LPAID, NTMAX, LLFIX(1500)                          4000
C                                                                           5000
      DIMENSION R(1500), THETA(1500), IFOR(1500), IBACK(1500), IDUM(16)     6000
C                                                                           7000
      EQUIVALENCE (R, TGTLAT), (THETA, TGTLONG), (IFOR, DLAT), (IBACK,      8000
     1DLONG), (IDUM, INDEX)                                                 9000
C                                                                           10000
      TYPE LOGICAL LLFIX                                                    11000
C                                                                           12000
      COMMON/4/ DESIG(1500), TASK(1500), CNTRYLOC(1500), FLAG(1500)         13000
C                                                                           14000
CEND       RAIDATA  ********************************************************  5000
CUSE       TAPEHANR  1JUN71    ********************************************  6000
      COMMON /ITP/ ITP                                                      1000
      COMMON /TWORD/ TWORD                                                  2000
      EQUIVALENCE (ITWORD, TWORD)                                           3000
      COMMON /MYIDENT/ MYIDENT                                              4000
      COMMON /NOPRINT/ NOPRINT                                              5000
      COMMON /IFTPRNT/ IFTPRNT(10)                                          6000
      COMMON/FILABEL/ INIDENT, INRUNNO, INDATE, INFORM, INSECR,             7000
     1       INTIME, INLNGTH, INCOMM(5)                                     8000
      COMMON/ MYLABEL/ MYFORM, MYSECR, MYLNGTH, MYCOMM(3)                   9000
C                                                                           10000
CEND       TAPEHANR  ********************************************************  6000
CUSE       DEBUG     1JUN71    ********************************************  7000
      COMMON /DEBUG/ IOTA, ICAMFROM(20)                                     1000
CEND       DEBUG     ********************************************************  7000
CUSE       PRINT     1JUN71    ********************************************  8000
      COMMON /PRINT/ ICALL, IMUST                                           1000
CEND       PRINT     ********************************************************  8000
C                                                                           9000
      IOTA=IOTA+1                                                           10000
      ICAMFROM(IOTA) = 8HTRANSFER                                           11000
      ICALL = 26                                                            12000
   10 CALL GOPRINT(10)                                                      13000
      IREAD=ITP                                                             14000
      IF(N.GT.LRAID)40,20                                                   15000
   20 CALL RDARRAY(NT,N)                                                    16000
   30 ITP=IWRITE                                                            17000
      CALL WRARRAY(NT,N)                                                    18000
      ITP=IREAD                                                             19000
      GO TO 9999                                                            20000
   40 NTIMES=N/LRAID                                                        21000
      NEW  N=LRAID*NTIMES                                                   22000
      DO 60 I=1,NTIMES                                                      23000
      CALL RDARRAY(NT,LRAID)                                                24000
   50 ITP=IWRITE                                                            25000
```

```
      CALL WRARRAY(NT,LRAID)                                    26000
      ITP=IREAD                                                 27000
   66 CONTINUE                                                  28000
      CALL RDARRAY(NT,NEX)                                      29000
   75 ITP=IWRITE                                                30000
      CALL WRARRAY(NT,NEX)                                      31000
      ITP=IREAD                                                 32000
 9999 IOTA=IOTA-1                                               33000
      RETURN                                                    34000
C                                                               35000
      ENTRY INITRANS                                            36000
      IWRITE=4                                                  37000
      RETURN                                                    38000
      END                                                       39000
```

IDENT TRANSFER

PROGRAM LENGTH 00165
ENTRY POINTS INITRANS 00106
TRANSFER 00004
BLOCK NAMES
BLANK 21534
4 13560
ITB 00001
TWOBUF 00002
MYIDENT 00001
NOPRINT 00001
IFTPRNT 00012
FILABEL 00014
MYLABEL 00010
DEBUG 00025
PRINT 00002
EXTERNAL SYMBOLS
GPROJCT.
GOPRINT
RDARRAY
WRARRAY

```
P00115  BEGIN.      00141   00147   00153
C00470  CNTRYLOC
C00000  DESIG
P00001  DICT.       00006   00017   00030   00035   00055   00042   00072   00077   00110   00120   00121
C13563  DLAT
C15517  DLOAS
P00142  ENDING.     00007   00105   00111   00114   00115   00116   00116   00117   00117
P00000  EXIT.       00145
C14624  FLAG
P00503  FORMAT.     00012
P00523  FP000001.   00127   00130
P00031  FP000002.   00137
P00036  FP000003.   00140
P00242  FP000004.   00135   00136
P00050  FP000005.   00131   00132
P00112  FP000006.   00133   00134
P00156  GETPL.      00122
P00146  GETPU.      00125   00152
X00002  GOPRINT     00016
P00150  I           00052   00066
C14517  IBACK
C00000  ICALL       00015   00015
C00001  ICAMEFROM   00014
C00003  IDUM
C13563  IFOR
C00000  IFTHRNT
C00001  INUST
C00007  INCOMM
C00002  INDATE
C00003  INDEX
C00003  INFORM
C00000  INIDENT
P00215  INITIAL.    00007   00111
P00106  INITRANS    00106
C00006  INLNGTH
C00001  INPUNNO
C00004  INSEC
C00005  INTIME
C00000  IOTA        00010   00010   00011   00013   00013   00103   00103   00104
P00161  IREAD       00022   00037   00064   00101
C00000  ITP         00021   00021   00033   00033   00040   00040   00040   00065   00065   00075
                    00075   00102   00102
C00000  ITWORD
P00162  IWRITE      00032   00057   00074   00113
P00016  .10
P00027  .20         00025   00025
P00032  .30
P00042  .40         00026
P00057  .50
P00066  .60
P00074  .70
P00103  .9999       00041
P00003  ..100000    00012
C00002  JCOMM
```

```
C00001  JGROUP
C21455  LLFIX
C21453  LRAID      00024   00024   00044   00044   00046   00046   00056   00063
C00003  MYCOMM
C00000  MYFORM
C30000  MYIDENT
C00002  MYLNGTH
C00001  MYSECR
P00003  N          00023   00031   00036   00042   00050   00112
P00163  NEX        00051   00073   00100
C00000  NOPRINT
C00009  NT         00031   00036   00056   00063   00073   00100
P00164  NTIMES     00045   00047   00047
C21454  NTMAX
P00141  PF00002.   00126
X00001  QPRODICT.  00000   00005   00107
C02737  R
X00053  RCARRAY    00027   00054   00071
C10627  RVAL
C02734  TASK
C02737  T6TLAT
C05673  T6TLONG
C05673  THETA
P00004  TRANSFER   00004
P00067  TS00001.   00053
C00000  TWORD
X00004  WRARRAY    00034   00061   00078
P00054  WS00001.   00070   00070
   00121 SYMBOLS
```

```
      FUNCTION UPTODOWN(I,R,AZ,M)                                          1000
CSUBR      UPTODOWN  1,UNIT]    ********************************************  5300
C                                                                          2000
CUSE       FOOTDATA  1,UNIT]    ********************************************  3000
      COMMON /FOOTDATA/ GAS(2),RX(2,2),RAX(2,2),TOSSC1(2,2,2),TOSSC2(2,    4000
     12,2,,TECNE(2,2),TETWO(2,2),TDENOM(2),RBASIC(2,2),RADD(2,2),ECNE(2)   5000
     2,ETWO(2), DENOM, CONE(2,2), CTWO(2,2), LLNGDAT                       6000
C                                                                          7000
      COMMON /SHRTDAT/ ALPHAZ(16),ALPHA1(16),ALPHA2(16),BETAZ(16),BETA1    8000
     1(16),BETA2(16),MAXPBOST(16),GTWO,GONE,GZERO,DONE,DZERO,LSHTDAT       9000
C                                                                          10000
      TYPE REAL MAXPBOST                                                   11000
C                                                                          12000
      COMMON /PENADD/ TOTFUEL, SAFC1(2), SAFC2(2), SAFEXP1(2)              13000
     1           , SAFEXP2(2), SAFDEN, LPENDAT                             14000
C                                                                          15000
C                                                                          16000
C                                                                          17000
      DATA (LLNGDAT = 57)                                                  18000
     1     , (LSHTDAT = 117)                                               19000
     2     , (LPENDAT = 67)                                                20000
C                                                                          21000
CEND       FOOTDATA  ********************************************************  3000
C                                                                          4000
      GO TO (1000, 2000, 1000, 11000), I                                   5000
C     LONG  RANGE SYSTEM                                                   6000
 1000 UPTODOWN = 1.E+7                                                     7000
      RETURN                                                               8000
C                                                                          9000
C     SHORT RANGE SYSTEM                                                   10000
C                                                                          11000
 2000 UPTODOWN=(DONE*R)+DZERO                                              12000
      RETURN                                                               13000
C                                                                          14000
11000 PRINT 11001,I                                                        15000
11001 FORMAT(///1X,15(1H*),3FM THERE IS NO DATA FOR MIRV SYSTEM NO. ,I4)   16000
      UPTODOWN = 1.E+7                                                     17000
      RETURN                                                               18000
      END                                                                  19000
```

IDENT UPTODOWN

PROGRAM LENGTH		00122
ENTRY POINTS	UPTODOWN	00022
BLOCK NAMES		
	FOOTDATA	00072
	SWRTDAT	00164
	PENADD	00013
EXTERNAL SYMBOLS		
	TMEND.	
	0000ICT.	
	STM.	
	ONSINGL.	

```
C00020  ALPHA1
C00040  ALPHA2
C00000  ALPHA7
P00003  AZ
P00057  BEGIN.      00131   00110   00114
C00100  BETA1
C00120  BETA2
C00140  BETAZ
P00058  CNVRTI.     00047
C00061  CONE
P00003  CRCMT.      00052
C00065  CTWO
C00060  DENOM
P00001  DICT.       00024   00044   00051   00062   00063
C00163  DONE        00035   00035
C00164  DZERO      00037   00037
P00102  ENDING.     00025   00034   00041   00053   00057   00040   00060   00041   00061
C00054  FONE
C00056  FTWO
P00000  EXIT.       00106
P00003  FORMAT.
P00026  FP00001.    00071   00072
P00036  FP00002.    00077   00100
P00046  FP00003.    00073   00074
C00000  GAS
P00117  GETPL.      00064   00075
P00127  GETPU.      00067   00113
P00052  GG00000.    00042
C00161  GONE
C00160  GTWO
C00162  GZERO
P00053  I           00024   00046
P00121  IGOTO.      00027
P00057  INITIAL.    00025
P00033  .1000       00031   00032
P00042  .11000      00032
P00035  .2000       00031
P00003  ..11001     00045
C00071  LLNGDAT     00003
C00012  LRENDAT     C00166
C00165  LSHTDAT     C00072
C00168  MAXERRST
P00003  N
P00075  PF00002.    00070
P00101  PF00003.    00076
X00002  QRODICT.    00000   00023
X00004  QNSINGL.    00055
P00003  R           00036
C00050  RADC
C00006  RAX
C00044  RBASIC
C00002  RX
C00001  SREC1
C00003  SREC2
```

```
C00011  SAFDEA
C00005  SAFEXP1
C00007  SAFEXP2
X00003  STH.        00043
C00042  TMEMOM
C00032  TEOME
C00036  TFTWO
X00001  THEMM.      00050
C00012  TOSSC1
C00022  TOSSC2
C00000  TOTFUEL
P00022  UPTOOOM     00027
P00054  VALUE.      00034   00040   00053   00105
   00183 SYMBOLS
```

```
      FUNCTION VALF(X,FN)                                                1000
CSUPR      VALF       1JUN71  ****************************************** 5400
C                                                                        2000
C     COMPUTES VALUE                                                     3000
C                                                                        4000
      IF(X.GT.1)10,20                                                    5000
   10 VALF=0.0                                                           6000
      RETURN                                                             7000
   20 VALF=(1.-X)/(1.+FN*X)                                              8000
      RETURN                                                             9000
      END                                                               10000
```

PROGRAM LENGTH 00074 IDENT VALF
ENTRY POINTS VALF 00003
EXTERNAL SYMBOLS
ORGDICT.

```
P00026  BEGIN.      00052   00061   00065
P00001  DICT.       00055   00531   00032
P00053  ENDING.     00004   00013   00024   00026   00027   00029   00030   00030
P00000  EXIT.       00057
P00003  FN          00017
P00107  FP000001.   00040   00041
P00015  FP000002.   00042   00043
P00017  FP000003.   00050   00051
P00020  FP000004.   00044   00045
P00070  GETPL.      00033   00046
P00060  GETPU.      00034   00064
P00026  INITIAL.    00006
P00012  .10
P00014  .20         00011   00011
P00071  .ERASER.    00014   00022   00022   00023
P00044  PF00002.    00037
P00052  PF00003.    00047
I00001  QUOTIENT.   00000   00004
P00003  VALF        00003
P00025  VALUE.      00013   00023   00056
P00003  X           00007   00015   00020
   00025 SYMBOLS
```

```
      PROGRAM POSTALOC                                                  1000
CSUBR    POSTALOC  10:49:71   ***********************************      1100
C     COMMON/MASTER/  1=RATE,1=PTRT,ISIDE,=NTRT,=COMP,=OPER, =RECOVER  2000
C    1                =RREF,=PREF,=PREG,=TYPE,=GROUP,=TOT=ASE, PAYLOAD  3000
C    2                =RASMTYPE, =MOVTYPE, =TANKHAS,=COMPLEX,=CLASS     4000
C    3                =RALERT, =TGTS, =CONTYPE                          5000
C     EQUIVALENCE(=RGROUP,=G),(=RLENT,=OTHER)                          6000
C     RESTART COMMON BLOCK                                             7000
C        IHDATE       =OLLERITH DATE                                   8000
C        IDENTNO      DATA INPUT IDENTIFICATION NUMBER                 9000
C        ISIDE        SIDE                                             10000
C        =PTRT        NUMBER OF ROUTE POINTS                           11000
C        =COMP        NUMBER OF COMBINATIONS                           12000
C        =OPER        NUMBER OF REPENETRATION COMBINES                 13000
C        =RECOVER     NUMBER OF RECOVERY POINTS                        14000
C        =REF         NUMBER OF REFUEL POINTS                          15000
C        =RBNDRY      NUMBER OF BOUNDARY POINTS                        16000
C        =REG         NUMBER OF REGIONS                                17000
C        =TYPE        NUMBER OF WEAPON TYPES                           18000
C        =GROUP       NUMBER OF WEAPON GROUPS                          19000
C        =TOT=ASE     NUMBER OF PHASES, TOTAL                          20000
C        =PAYLOAD     NUMBER OF ENTRIES IN PAYLOAD INDEX TABLE         21000
C        =ASMTYPE     NUMBER OF ASM TYPES                              22000
C        =MOVTYPE     NUMBER OF WARHEAD TYPES                          23000
C        =TANKHAS     NUMBER OF TANKER PHASES                          24000
C        =COMPLEX     NUMBER OF COMPLEX TARGETS                        25000
CUSE      FILES     10:49:71   ***********************************    25300
C                                                                       1000
      COMMON/FILES/TGTFILE(2),=ASFILE(2),=SLTIME(2),=LOCTAM(2),         2000
     1TMPALOC(2),ALOCGRP(2),STRKFIL(2),EVENTAPE,PLANTAPE               3000
C                                                                       4000
      TYPE INTEGER TGTFILE,=ASFILE,=SLTIME,ALOCTAM,TMPALOC,ALOCGRP,     5000
     1STRKFIL,EVENTAPE,PLANTAPE                                         6000
C                                                                       7000
      COMMON/INPUTFI/IMPTFL,=YIELDFL                                    8000
C                                                                       9000
CEND      FILES     ***************************************************25300
C        =CLASS       NUMBER OF WEAPON CLASSES(=MAXSIZE 2)             26000
C        =ALERT       NUMBER OF ALERT CONDITIONS(=MAXSIZE 2)           27000
C        =TGTS        NUMBER OF TARGETS                                28000
C        =CONTYPE     NUMBER OF CORRIDOR TYPES                         29000
C                                                                       30000
C***********************************************************************31000
C                                                                       32000
C     COMMON /TAPES/ TGTAPE, =IMTAPE, IGITAPE, POSTDATA, RESTAPE,      33000
C    1               =PNTGT1, =PNTGT2, =PNTGT3, =PNT=T4, ALOCT1, ALOCT2,34000
C    2               TMPALOC, ALOCTAPE, STRKTAPE, EVENTAPE, =LANTAPE   35000
C     TYPE INTEGER   TGTAPE, =IMTAPE, IGITAPE, POSTDATA, RESTAPE,      36000
C    1               =PNTGT1, =PNTGT2, =PNTGT3, =PNT=T4, ALOCT1, ALOCT2,37000
C    2               TMPALOC, ALOCTAPE, STRKTAPE, EVENTAPE, =LANTAPE   38000
C        TGTAPE       TARGET DATA/PLANDATA TO PREALOC                  39000
C        =IMTAPE      =EAPON,POINT,COMPLEX TARGET DATA/FLIGHT DATA TO  40000
C                     PREALOC                                          41000
C        IGITAPE      TARGET DATA/PREALOC TO ALLOCATE                  42000
C        POSTDATA     COMPLEX TARGET,=EAPON,POINT DATA/OPERATIONS      43000
C                     TO ALLOCATE,POSTALOC,PLANPLAN                    44000
```

```
C       [illegible]      [illegible]
C       [illegible]      STATIC [illegible] CONT
C       [illegible]      STATIC [illegible] CATE,ALLOCUT
C       [illegible]      STATIC [illegible] CATE
C       [illegible]      STATIC [illegible] CATE
C       [illegible]      [illegible] CAT
C       [illegible]      [illegible] ALLOCATE
C       [illegible]      STATKE [illegible]
C       [illegible]      STATKE [illegible] STATIC
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C
C*****************************************************************
C
C     [illegible]
C   1                    [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible] LTK
C       [illegible]      [illegible] LATIONS
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C
C*****************************************************************
C
C     [illegible]
C   1                    [illegible]
C     [illegible]        [illegible]
C       [illegible]      [illegible] TYPES
C       [illegible]      [illegible] TYPE]
C       [illegible]      [illegible] TYPE 1
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C*****************************************************************
C
C
C     [illegible]
C   1                    [illegible]
C     [illegible]        [illegible]
C       [illegible]      [illegible] TYPES
C       [illegible]      [illegible] TYPE [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C       [illegible]      [illegible]
C*****************************************************************
C
C
C     [illegible]
```

```
C     1                 *,(,(,(,),*,(,(,(,),*,(,(,(,),*,(,(,(,),*,(,(,(,)
C     2                 *,(,(,(,),*,(,(,(,),*,(,(,(,),*,(,(,(,),*,(,(,(,)
C     3                 *,(,(,(,),*,(,(,(,),*,(,(,(,),*,(,(,(,),*,(,(,(,)
C     4                 *,(,(,(,),*,(,(,(,),*,(,(,(,),*,(,(,(,),*,(,(,(,)
C      IMPLICIT INTEGER (A-Z)
C      DATA (DUMMY=0)
C          ACLAT         LATITUDE OF ACCELERATION POINT
C          ACLONG        LONGITUDE OF ACCELERATION POINT
C          ACRATE        RATE OF CHANGE OF ACCELERATION
C          ACRLAT        LATITUDE OF ACCELERATION POINT
C          ACRLONG       LONGITUDE OF ACCELERATION POINT
C          ALTRAT        LATITUDE OF ACCELERATION RATE
C          ALTLONG       LONGITUDE OF ACCELERATION RATE
C          CALCSIG       DISTANCE CONVERSION FACTOR TO CIRCLES
C          CHKSIZE       POWER OF 2 VS X USED TO CALCULATE THIS PAT
C          CLTHIGH       HIGH ALTITUDE ALTITUDE PER NM IN CLOSURE RESET
C          CLTLOW        HIGH ALTITUDE ALTITUDE PER NM IN CLOSURE RESET
C          CLRATIO       RATIO FOR HIGH ALTITUDE CLEARANCE (LESS THAN 1)
C          DEPARTURE       DEPARTURE EXISTENCE FLAG OF CLIMB/DESCENT RATE SET
C          FUELOFF       NUMBER OF PREFERRED REFUELING AREAS
C          FREFIST(I)    LOCATION OF I-TH PREFERRED PRE-CONTACT AREA
C          ALTPREF(I)    ALTITUDE OF I-TH PREFERRED PRE-CONTACT AREA
C            ATA         NUMBER OF SECONDS OF DATA PER EACH CHANGE
C*****************************************************************
C
C
C      COMMON/GRPDATA/ IGRP,NPASS,NVEHGRP,IREG,ITYPE,IALERT,IREFUEL
C     1                ,ISTART,NBASE,IBASE(NBASE),NLEG(NBASE)
C     2                ,NLONG(NBASE),IRAYLOAD(NBASE),VOLBASE(NBASE)
C          MAXBASE10     MAX. NUMBER BASES PER GROUP
C          IGRP          GROUP INDEX
C          NPASS         TOTAL NO PASSES IN GROUP
C          NVEHGRP       NO. OF VEHICLES IN GROUP
C          IREG          REGION INDEX
C          ITYPE         TYPE INDEX USED BY ALLOCATOR
C          IALERT        ALERT INDICATOR 1=ALERT,2=NONALERT
C          IREFUEL       INDEX OF REFUELING DATA, ZERO FOR NO REFUELING
C                        FOR MIDDAY REFUELING
C          ISTART        STARTING INDEX
C          NBASE         NUMBER OF BASES IN GROUP
C      DATA              BASE AIR SQUADRON ARE SYNCHRONOUS
C          IBASE         INDEX NO OF BASE
C          BASLAT        BASE LATITUDE
C          BASELONG      BASE LONGITUDE
C          IRAYLOAD      BASE PAYLOAD INDEX
C          VOLBASE       NUMBER OF VEHICLES AT BASE
C*****************************************************************
C
C
C      COMMON/CURTYPE/ ISITYPE,RANGE,CEP,SPEED,ALERTLY,CALOTLY
C     1                ,RALSPEED,ICLASS,NPASS,NOSHOT,SPOLD,SPBASE
C     2                ,CRUISESPEED,NMOSITE,IREF,IREGION,IREFNOW
C      TYPE REAL RALERTOLY
C      EQUIVALENCE     (RANGEKFT,RANGEFT)
C          ISITYPE       TYPE INDEX USED BY SIMULATOR
C          RANGE         UNREFUELED RANGE OF VEHICLES
```

```
C         CEP            CIRCULAR ERROR PROBABLE                          155000
C         SPEED          SPEED OF VEHICLES                                156000
C         ALERTDLY       ALERT DELAY                                      157000
C         LAUNCHDLY      LAUNCH-ALERT DELAY                               158000
C         RANGEDEC       RANGE DECREMENT AT LOW ALTITUDE                  159000
C         ICLASS         WEAPON CLASS                                     160000
C         NUMVEHCL       NUMBER OF VEHICLES PER SQUADRON                  161000
C         SPEEDH         SPEED AT HIGH ALTITUDE                           162000
C         SPEEDI         SPEED AT HIGH ALTITUDE                           163000
C         SPEEDSM        DASH SPEED                                       164000
C         MAXSPEED       MAXIMUM RANGE OF MISSILES                        165000
C         NUMSITE        NUMBER OF VEHICLES PER SITE                      166000
C         IMEP           REPROGRAMMING INDEX (FOR MISSILES)               167000
C         IRECOVPB       RECOVERY INDEX (1 FOR HIGH RECOVERY PROBABILITY  168000
C                        (NORMAL), 0 FOR NO RECOVERY,-1 FOR LOW           169000
C                        PROBABILITY OF RECOVERY)                         170000
C         IPENDOFF       1 FOR NORMAL USE OF COMMITMENTS, 0 COMMITMENTS   171000
C                        NOT USED                                         172000
C*****************************************************************       173000
C     COMMON/STRKS1/ KGROUP,NTSTRK,NKORD,NSTRK(MC)                         174000
C         MC=20          MAX. NO. CORRIDORS                               175000
C         KGROUP         GROUP INDEX                                      176000
C         NTSTRK         TOTAL NO. STRIKES ASSIGNED GROUP                 177000
C         NKORD          NO. CORRIDORS ACTUALLY USED BY GROUP             178000
C         NSTRK(ICORR)   NO. STRIKES ASSIGNED GROUP IN CORRIDOR ICORR     179000
C*****************************************************************       180000
C     COMMON/MAIDSTRK/MT,JGROUP,JCORR,INDEXMD(MT),TLAT(MT),TLONG(MT)       181000
C    1                ,ITYPEREF(MT),IDPEN(MT),DISTOUT(MT),DISTREC(MT)     182000
C    2                ,ATTRLOC(MT),RVAL(MT),DELAT(MT),DELONG(MT)          183000
C         MT=500         MAXIMUM NO. TARGETS PER GROUP                    184000
C         MT=NSTRK(ICORR) TOTAL NUMBER OF STRIKES THIS CORRIDOR           185000
C         JGROUP         GROUP INDEX,IGROUP                               186000
C         JCORR          CORRIDOR INDEX FOR ALL MAIDSTRK COMMON           187000
C                        ASSIGNED                                         188000
C         INDEXMD        TARGET INDEX (FROM TARGET TAPE) FOR(IT) THE ONE  189000
C         TLAT           TARGET LATITUDE AND LONGITUDE                    190000
C         TLONG          TARGET LATITUDE AND LONGITUDE                    191000
C         RVAL           RELATIVE TARGET VALUE                            192000
C         ITYPEREF       =1, IF INCLASS = INCATOR,DEFCO, OR COMPLEAD,     193000
C                        OTHERWISE = 0,                                   194000
C         IDPEN          DEPENETRATION CORRIDOR CLOSEST TO TARGET         195000
C         DISTOUT        DISTANCE TARGET TO DEPEN CORR                    196000
C         DISTREC        DISTANCE TARGET TO RECOVERY BASE                 197000
C         ATTRLOC        LOCAL ATTRITION(-LOG) AT TARGET                  198000
C         DELAT,DELONG   DEVIATION IN DEGREES FROM TLAT, TLONG OF OFFSET  199000
C                        AIM POINT                                        200000
C*****************************************************************       201000
C                                                                         202000
C                                                                         203000
C     COMMON /DISTSRT/ IDISTSRT,MYGROUP,MYCORR,INCYEM,JREF,JDPE ,XPAYLOAD 204000
C    1                ,ISCHRASE,ITYP,RASELAT,RASELONG,XMAP,MAPTYPE(MM)   205000
C    2                ,TMLAT(MM),DELONG(MM),DLAT(MM),DLONG(MM)           206000
C    3                ,DPROJECT(MM),ATTNOUT(MM),SURVOUT(MM),DSTL=1,DSTLO=2 207000
C    4                ,DSTLO=3,SPDLO=,SPDHIGH,MAXSEA,RANGEREF,DELAY,IRG=  208000
C    5                ILAT,IDUMMYEM                                      209000
C         MM=10          MAX. NO. OF MAPPINGS                             210000
```

```
C        IDUTSNT      SORTIE INDEX NUMBER                                  211000
C        MYGROUP      GROUP INDEX                                          212000
C        MYCORR       CORRIDOR INDEX OF BASE                               213000
C        INDVEH       VEHICLE INDEX                                        214000
C        JREF         REFUEL INDEX                                         215000
C        JREPR        REPRESENTATION INDEX                                 216000
C        KPAYLOAD     PAYLOAD INDEX                                        217000
C        LOCBASE      BASE INDEX                                           218000
C        ITYP         WEAPON TYPE                                          219000
C        BASELAT      BASE LATITUDE                                        220000
C        BASELONG     BASE LONGITUDE                                       221000
C        NHAP         NUMBER OF HAPPENINGS                                 222000
C        HAPTYPE(IHAP)TYPE OF HAPPENING                                    223000
C        OHLAT(IHAP)  LATITUDE OF HAPPENING                                224000
C        OHLONG(IHAP) LONGITUDE OF HAPPENING                               225000
C        IOHJECT(IHAP)PLACE OF HAPPENING                                   226000
C        ATTRIST(IHAP)LOCAL ATTRITION ENCOUNTERED                          227000
C        SURVCUM(IHAP)CUMULATIVE SURVIVAL PROBABILITY                      228000
C        OSTLO#1      LOW ALTITUDE RANGE AVAILABLE FOR USE IN CORRIDOR     229000
C                     PRIOR TO ORIGIN                                      230000
C        OSTLO#2      LOW ALTITUDE RANGE AVAILABLE FOR USE BEFORE FIRST    231000
C                     TARGET                                               232000
C        OSTLO#3      LOW ALTITUDE RANGE AVAILABLE FOR USE AFTER FIRST     233000
C                     TARGET                                               234000
C        SPOLOW       SPEED AT LOW ATITUDE                                 235000
C        SPOHIGH      SPEED AT HIGH ALTITUDE                               236000
C        MAXM         RANGE OF VEHICLE                                     237000
C        DELAY        DELAY                                                238000
C        IRG          IREG                                                 239000
C        ILRT         ILERT                                                240000
C        IDMORE       INDICATES  OUTPUT NEEDED FOR NEXT GROUP              241000
C*************************************************************************242000
C                                                                          243000
C                                                                          244000
C     COMMON/ARRAYSIZE/                                                    245000
C        MBASEPG      MAXIMUM NUMBER OF BASES(OR SQUADRONS) PER GROUP      246000
C        MC           MAXIMUM NUMBER OF CORRIDORS                          247000
C        MT           MAXIMUM NUMBER OF TARGETS PER MROUP                  248000
C        ML           MAXIMUM SEPARATE DEFENDED ZONES PER TARGET           249000
C        MSTMX        MAXIMUM STRIKES PER SORTIE                           250000
C        MSORTY       MAXIMUM SORTIES PER GROUP                            251000
C        MSRT         MAXIMUM SORTIES PER GROUP PER CORRIDOR               252000
C        MPLY         MAXIMUM NUMBER OF POINTS IN UNIT AND IPLY LISTS      253000
C        MAXPA        MAXIMUM NUMBER OF POINTS ALLOWED BY ARRAY SIZE       254000
C*************************************************************************255000
C     COMMON/CORRIDOR/                                                     256000
C        CLAT         LATITUDE OF CORRIDOR ORIENTATION POINT               257000
C        CLONG        LONGITUDE OF CORRIDOR ORIENTATION POINT              258000
C        CZONE        DEFENSE ZONE FOR CORRIDOR ORIGIN                     259000
C        PLAT         LATITUDE OF CORRIDOR ORIGIN(ROUTE POINT)             260000
C        PLONG        LONGITUDE OF CORRIDOR ORIGIN(ROUTE POINT)            261000
C        ELAT         LATITUDE OF CORRIDOR ENTRY POINT                     262000
C        ELONG        LONGITUDE OF CORRIDOR ENTRY POINT                    263000
C        CLENGTH      DISTANCE FROM ENTRY TO CORRIDOR ORIGIN               264000
C        KCORR        POWER OF Y VS. X IN CALC OF PHI                      265000
C        CORRITY      ATTRITION OF CORRIDOR WITH UNSUPPRESSED DEFENSES AT  266000
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C                       HIGH ALTITUDE                                   267000
C       COMSATTN        ATTRITION OF CORRIDOR AT HIGH ALTITUDE WITH     268000
C                       DEFENSES SUPPRESSED                             269000
C       ATTRATIO        RATIO OF LOW TO HIGH ALTITUDE ATTRITION         270000
C       RANGEF          CHARACTERISTIC RANGE OF DEFENSE OPERATIONS      271000
C       NPROFF          NUMBER OF SEPARATE DEFENDED ZONES PRIOR TO      272000
C                       CORRIDOR                                        273000
C       DISTOFF(L)      LENGTH OF L-TH DEFENDED ZONE                    274000
C       PKILLTP(L)      ATTRITION IN L-TH DEFENDED ZONE                 275000
C*************************************************************************276000
C     COMMON/I/                                                         277000
C       X(I),Y(I)       TEMPORARY STORAGE FOR VALUES USED IN COMPUTING  278000
C                       RHO AND PHI.                                    279000
C*************************************************************************280000
C     COMMON/2                                                          281000
C       PHI(I),RHO(I)VALUE OF CURVILINEAR COORDINATES PHI AND RHO FOR   282000
C                       ITH TARGET                                      283000
C*************************************************************************284000
C     COMMON/RAIDSMY/                                                   285000
C       NVEH            NUMBER OF VEHICLES FROM CURRENT WEAPONS GROUP   286000
C                       ASSIGNED TO RAID IN THIS CORRIDOR               287000
C       NAVEH(IH)       NUMBER OF VEHICLES IN GROUP ON IB-TH BASE WHICH 288000
C                       ARE STILL UNASSIGNED                            289000
C       DISTR(IH)       RELATIVE FLIGHT DISTANCE FROM IH-TH BASE          1000
CSUPR    POSTAL01  20APR71 ***************************************        2000
C                       TO CORRIDOR ENTRY.                              3000
C       NB              NUMBER OF BASES IN GROUP                        3800
C       VPRBASE         AVERAGE NUMBER OF VEHICLES PER BASE             4000
C       NWPV(IH)        NUMBER OF WARHEADS PER VEHICLE ON IH-TH BASE    5000
C       NWPC            TOTAL NUMBER OF WARHEADS TO ENTER BY THIS CORRIDOR 6000
C       TGTSPWHD        TARGETS PER WARHEAD(=NT/NWPC)                   7000
C       NASWPV(IH)      NUMBER OF ASWS PER VEHICLE ON IB-TH BASE        8000
C*************************************************************************9000
C     COMMON/TGTASGN/                                                   10000
C       TGTSASGN        CUMULATIVE TARGETS NOW ASSIGNED TO RAID         11000
C       TGTLIM          VALUE OF TGTSASGN NOT TO BE EXCEEDED FOR SORTIE 12000
C       NTGT            NUMBER OF TARGETS ALLOCATED TO RAID--EQUALS NT  13000
C*************************************************************************14000
C     COMMON/NEXTFLT/                                                   15000
C       NTAILS          NUMBER OF VEHICLES ASSIGNED TO NEXT FLIGHT      16000
C       JB              INDEX OF LAUNCH BASE OF NEXT FLIGHT             17000
C       SPLIT           EQUALS 1 IF LESS THAN 4 BASES IN GROUP, OTHERWISE 18000
C                       =0. IF 1, CAUSES EACH BASE TO SPLIT, I.E., SEND 19000
C                       TWO FLIGHTS RATHER THAN ONE.                    20000
C*************************************************************************21000
C     COMMON/FLTPASS/                                                   22000
C       IPPASS          INDEX OF SORTIE PROCESSING PASS(LIMITED TO 100  23000
C                       SORTIES PER PASS)                               24000
C       NVEHPASS        NUMBER OF SORTIES THIS PASS(EQUALS 100, OR ALL  25000
C                       REMAINING SORTIES)                              26000
C       NPASS           TOTAL NUMBER OF PASSES NECESSARY                27000
C*************************************************************************28000
C     COMMON/CURRAID/                                                   29000
C       MYBASE(ISRT) BASE INDEX IB ASSIGNED TO SORTIE                   30000
C       NASGN(ISRT)  NUMBER OF TARGETS ASSIGNED TO SORTIE               31000
C       JTGT(ISTRK,ISRT) INDEX(IT) TO TARGET FOR ISTRK-TH STRIKE IN     32000
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C                     ISRT-TH SORTIE IN PRESENT RAID. NEGATIVE FOR ASMS.   33000
C        MYASGN(I)    ASSIGNMENT STATUS OF TARGET.                         34000
C        INDEXVEH(ISRT)INDEX OF ISRT-TH VEHICLE ON MASE                    35000
C*************************************************************************36000
C     COMMON/INITOPT/                                                      37000
C        FLYLOW(L)    LOW ALTITUDE DISTANCE FLOWN IN L-TH PRE-CORRIDOR     38000
C                     LEG                                                  39000
C        IMPORTO(L)   ORDER OF IMPORTANCE OF ATTRITION PER MILE IN L-TH    40000
C                     PRECORRIDOR LEG                                      41000
C        ATPDIST(L)   AVERAGE ATTRITION PER DISTANCE IN LTH L-G            42000
C        DISTINK      DISTANCE FROM REFUEL POINT OR ENTRY POINT TO          43000
C                     CORRIDOR ORIGIN                                      44000
C        TDEFDIST     TOTAL PRE-CORRIDOR DEFENDED DISTANCE                 45000
C        NNGE         RANGE OF VEHICLES IN THIS GROUP(=RANGE /# RANGREF)   46000
C*************************************************************************47000
C     COMMON/INDEX/                                                        48000
C        ISORTY       INDEX TO SORTIE CURRENTLY BEING PROCESSED            49000
C        IORIG        SORTYTGT INDEX FOR CORRIDOR ORIGIN(=1)               50000
C        IRECOVER     SORTYTGT INDEX FOR RECOVERY POINT(=2)                51000
C        IDITCH       SORTYTGT INDEX FOR DITCH POINT(=3)                   52000
C        IT           TARGET INDEX                                         53000
C        ICORR        CORRIDOR INDEX                                       54000
C        JTGTIN       SORTYTGT INDEX OF THE LATEST TARGET ADDED IN         55000
C                     MY INPUTGT                                           56000
C*************************************************************************57000
C     COMMON/SORTYTGT/                                                     58000
C        MAXPT        MAXIMUM NUMBER OF POINTS PERMITTED IN POTENTIAL      59000
C                     TARGET ARRAY.                                        60000
C        MYPOTGT(J)   MAINSTEM INDEX OF TARGET J                           61000
C        D(J1,J2)     FLIGHT DISTANCE FROM TARGET(J1) TO (J2)              62000
C        VALR(J)      ASSUMED VALUE OF BOMB ON TARGET J--EQUALS BVAL(J)    63000
C        VALA(J)      ASSUMED VALUE (FOR DEFENDED TARGETS) OF ASM          64000
C                     VERSUS BOMB.                                         65000
C        V(J)         VALUE OF TARGET AS HIT IN SORTIE                     66000
C        PHOJ(J)      VALUE OF PHO(MYPOTGT(J)), FOR TARGET J               67000
C        ATLOCHT(J)   ASSUMED VALUE OF LOCAL ATTRITION TO TARGET           68000
C                     (ATTRLOC(MYPOTGT(J)))                                69000
C        DISTLEG(J)   DISTANCE OF FLIGHT LEG TO TARGET FROM PRECEDING      70000
C                     FLIGHT POINT.                                        71000
C        DISTLOW(J)   PART OF ABOVE DISTANCE FLOWN AT LOW ALTITUDE.        72000
C        S(J)         ESTIMATED BOMBER SURVIVAL PROBABILITY O  PRECEDING   73000
C                     LEG.                                                 74000
C        SURV(J)      ESTIMATED TOTAL SURVIVAL PROBABILITY TO TARGET.      75000
C        VALDONE(J)   ESTIMATED SORTIE VALUE TO AND INCLUDING TARGET J.    76000
C        VALON(J)     ESTIMATED SORTIE VALUE TARGET J AND BEYOND IF        77000
C                     SURV(J) WERE 1.0.                                    78000
C        DVALR(J)     ESTIMATED SORTIE VALUE ADDED BY BOMB PLANNED ON      79000
C                     TARGET J.                                            80000
C        DVALA(J)     ESTIMATED SORTIE VALUE ADDED BY PLANNED ASM ON       81000
C                     TARGET J.                                            82000
C        DREC(J)      DISTANCE FROM PENETRATION TO RECOVERY FOR TARGET     83000
C                     J AS LAST TARGET.                                    84000
C*************************************************************************85000
C     COMMON/CURSORTY/                                                     86000
C        NUMHIT       TOTAL TARGETS HIT BY CURRENT SORTIE PLAN.            87000
C        NUMBOMB      NUMBER OF TARGETS BOMBED.                            88000
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C        NUMASM      NUMBER OF TARGETS HIT WITH ASMS.                    94000
C        NHIT        NUMBER OF SORTIE POINTS--NHIT=(CRUISE,              96000
C                    RECOVERY, DITCH).                                   97000
C        IHIT(I)     SORTYTGT INDEX TO I-TH ROUTE POINT ON TARGET.       98000
C        IFLY(I)     SORTYTGT INDEX TO I-TH FLIGHT POINT--NOT THE SAME   99000
C                    AS IHIT FOR ASMS.                                   100000
C        LASTPAY     SORTIE POSITION OF LAST PAYING SORTIE POINT.        101000
C                    PRE-DITCH.                                          102000
C        LASTTGT     SORTIE POSITION (FROM=IT=I) FOR LAST TARGET.        103000
C        NOMIT       NUMBER OF TARGETS IN POTENTIAL TARGET ARRAY NOT     104000
C                    CURRENTLY IN SORTIE.                                105000
C        IOMIT(I)    SORTYTGT INDEX OF I-TH OMITTED TARGET               106000
C        NAVAIL      NUMBER OF SPACES IN POTENTIAL TARGET ARRAYS         107000
C                    AVAILABLE FOR NEW TARGETS.                          108000
C        IAVAIL(I)   SORTYTGT INDEX OF I-TH AVAILABLE SPACE.             109000
C        LMTMT(J)    LINK FOR TARGET J TO SORTIE HIT LIST IF POSITIVE    110000
C                    •OMIT LIST IF NEGATIVE.                             111000
C        ITOLD       ROTATED USED IN FINDING LOST TARGETS.               112000
C        LOSTTGT(I)  SORTYTGT INDEX TO I-TH LOST TARGET                  113000
C        NLOSTTGT    NUMBER OF LOST TARGETS.                             114000
C        NBOMBS      NUMBER OF WARHEADS CARRIED ON THIS SORTIE.          115000
C        NASMS       NUMBER OF ASMS AMONG WARHEADS ON THIS SORTIE.       116000
C        RNGASM      RANGE OF ASMS THIS SORTIE.                          117000
C        DSTN        DISTN(IT)=DISTANCE FROM TARGET TO ENTRY POINT.      118000
C*************************************************************************119000
C     COMMON/EVAL/                                                       120000
C        MINR        THE LOWEST PAYOFF FOR A BOMB IN THE SORTIE, FOUND   121000
C                    BY EVALE.                                           122000
C        JOELR       THE SORTYTGT INDEX OF THE BOMB WITH LOWEST PAYOFF   123000
C                    MINR                                                124000
C        MAXDA       THE MAXIMUM PAYOFF INCREMENT BY USING ASM ON        125000
C                    OMITTED TARGETS.                                    126000
C        JAOD        THE SORTYTGT INDEX OF THE TARGET WITH MAXIMUM       127000
C                    INCREMENT, MAXDA.                                   128000
C        MINDA       THE MINIMUM PAYOFF FOR AN ASM IN THE SORTIE.        129000
C        JOEL        THE SORTYTGT INDEX OF THE TARGET FOR AN ASM WITH    130000
C                    MINIMUM PAYOFF, MINDA.                              131000
C        MAXDR       THE MAXIMUM PAYOFF INCREMENT FOR A BOMB ON AN       132000
C                    OMITTED TARGET.                                     133000
C        JAODR       THE SORTYTGT INDEX OF THE TARGET SHOWING MAXIMUM    134000
C                    PAYOFF, MAXDR.                                      135000
C        MAXDAM      MAXIMUM PAYOFF INCREMENT OBTAINABLE BY USE OF       136000
C                    ASM INSTEAD OF BOMB.                                137000
C        JBODA       THE SORTYTGT INDEX OF BOMB TARGET SHOWING MAXIMUM   138000
C                    PAYOFF INCREMENT, MAXDAM.                           139000
C        VALSORTY    ESTIMATED TOTAL SORTIE VALUE. (=VALDONE(LASTPAY))   140000
C        JAF         INDEX OF TARGET TO PRECEDE INSERTION.               141000
C        KALC        SIGNAL TO EVAL ROUTINES TO SKIP REPETITION OF       142000
C                    CALCULATIONS.                                       143000
C        VALDIST     VALUE PER UNIT DISTANCE OF EXTRA RANGE AS           144000
C                    CALCULATED BY FLTPLAN.                              145000
C        VALMAX      MAXIMUM POSSIBLE VALUE OF SORTIE AS CURRENTLY       146000
C                    DEFINED.                                            147000
C        JSEQERR     INDEX OF TARGET IN SORTIE SHOWING LARGEST SEQUENCE  148000
C                    ERROR.                                              149000
C        ISPARE      NOT CURRENTLY IN USE                                150000
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C*****************************************************************  145000
C     COMMON/CHGPLAN/                                                146000
C     (IN EFFECT, PART OF CALLING SEQUENCE FOR SUBROUTINE CHGPLAN)   147000
C        JDO          SORTYTGT INDEX FOR TARGET TO BE ADDED OR DELETED 148000
C                     BY CHGPLAN.                                    149000
C        IAIM         SORTYTGT INDEX TO FLIGHT POINT FOR ASW LAUNCH. 150000
C        ISCAN        CONTROLS NUMBER OF SORTIE POINTS SCANNED BY EVAL 151000
C                     ROUTINES.                                      152000
C        JAFT         SORTYTGT INDEX TO TARGET TO PRECEDE INSERTION. 153000
C        CTH          CALLING PARAMETER FOR CHGPLAN                  154000
C        BTC          CALLING PARAMETER FOR CHGPLAN                  155000
C        DTA          CALLING PARAMETER FOR CHGPLAN                  156000
C        ATO          CALLING PARAMETER FOR CHGPLAN                  157000
C*****************************************************************  158000
C     COMMON/FIXRANGE/                                               159000
C        CENTLAT      LATITUDE AND LONGITUDE OF CENTROID OF LAUNCH BASES 160000
C        CENTLONG     IN GROUP.                                      161000
C*****************************************************************  162000
C     COMMON/PRNTF/                                                  163000
C        ATLEGHI      NOT CURRENTLY USED.                            164000
C        ATLEG        ATTRITION ON LEG.                              165000
C        RNGSURP      RANGE SURPLUS WHEN WHOLE FLIGHT IS HIGH ALTITUDE. 166000
C        DISTANCE     TOTAL LENGTH OF CURRENT FLIGHT ROUTE.          167000
C        RSVLOW       AMOUNT OF INCREMENTAL RANGE RESERVED FOR LOW   168000
C                     ALTITUDE PRIOR TO THE FIRST TARGET.            169000
C        AVAILOW      TOTAL AMOUNT OF INCREMENTAL LOW ALTITUDE RANGE 170000
C                     (I.E., SURPLUS HIGH ALTITUDE RANGE CONVERTED TO 171000
C                     THE NUMBER OF MILES OF POTENTIAL LOW ALTITUDE). 172000
C        VALIT        VALUE OF SORTIE REMAINING, AFTER FIRST TARGET HAS 173000
C                     BEEN REACHED.                                  174000
C                                                                    175000
C        FSTATTR      ATTRITION RATE AT POINT WHERE SORTIE GOES LOW ON 176000
C                     LEG TO FIRST TARGET, OR HIGHEST RATE IF SORTIE 177000
C                     DOESN'T GO LOW.                                178000
C        VALTOTT      TOTAL VALUE OF SORTIE.                         179000
C        PRATRATE     ATTRITION RATE IN CURRENT PRE-CORRIDOR LEG.    180000
C        VALONT       VALUE OF SORTIE FROM CURRENT LEG(AFTER FIRST   181000
C                     TARGET) TO RECOVERY.                           182000
C        CURVAL       HIGHEST PRODUCT OF VALUE-ON AND ATTRITION OF AREAS 183000
C                     COMPETING FOR LOW ALTITUDE. USED IN COMPUTING  184000
C                     VALUE PER UNIT DISTANCE OF LOW ALTITUDE RANGE. 185000
C        CRITATT      HIGHER OF THE TWO PRODUCTS OF VALUE-ON AND     186000
C                     ATTRITION FOR PRE-CORRIDOR LEGS AND LEGS AFTER 187000
C                     FIRST TARGET. USED IN DETERMINING THE AMOUNT   188000
C                     OF LOW ALTITUDE RANGE(ADDLOW) TO BE PUT IN THE 189000
C                     FIRST TARGET LEG.                              190000
C        ADDLOW       AMOUNT OF LOW ALTITUDE RANGE CURRENTLY BEING   191000
C                     ALLOCATED.                                     192000
C        JHOME        SORTYTGT INDEX OF FIRST TARGET IN SORTIE.      193000
C        DISTSV       DISTANCE SAVED BY OMITTING A TARGET JM.        194000
C        ATAREA       DIFFERENCE IN AREA ATTRITION IF A TARGET JM IS 195000
C                     OMITTED.                                       196000
C        ATLOCAL      LOCAL ATTRITION OF TARGET JM.                  197000
C        VALO         VALUE OF OMITTING TARGET JM, DUE TO DECREASED  198000
C                     ATTRITION AND RANGE SAVED.                     199000
C        JX2          INDEX USED IN EVALOB FOR DETERMINING POSITION  200000
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C                       OF INSERTION FOR NEW TARGET.                    201000
C          DISTAD       DISTANCE ADDED BY INSERTING TARGET JX I. NORMAL  202000
C                       POSITION                                        203000
C          ADDTEST      DISTANCE ADDED BY INSERTING TARGET JX IN ALTER-  204000
C                       NATIVE POSITION.                                205000
C          ATTRNEW      ATTRITION ADDED BY INSERTING TARGET JX IN SORTIE. 206000
C          ATNEWLEG     ESTIMATED ATTRITION ON LEG TO NEW TARGET JX BEING 207000
C                       INSERTED.                                       208000
C          DVALO        DIFFERENTIAL VALUE OF LEAVING NEW TARGET IN THE  209000
C                       OMIT LIST RATHER THAN INSERTING IT.             210000
C          JX1          INDEX USED IN EVALOR FOR DETERMINING POSITION    211000
C                       OF INSERTION FOR NEW TARGET.                    212000
C          DIST1        LENGTH OF LEG PRECEDING TARGET JM.              213000
C          DIST2        LENGTH OF LEG FROM TARGET JM TO NEXT TARGET      214000
C*****************************************************************      215000
C      COMMON/CONTROL/                                                   216000
C          EPSILON      SET TO .001. USED IN TEST OF SIGNIFICANCE.       217000
C          KWALSKT      SET TO 1. NOT CURRENTLY USED.                    218000
C*****************************************************************      219000
C      COMMON/DEBUG/                                                     220000
C          IOTA         INDEX TO CELL CONTAINING HOLLERITH NAME OF       221000
C                       SUBROUTINE CURRENTLY IN CONTROL.                222000
C          ICAMFROM(I)  HOLLERITH NAME OF I-TH SUBROUTINE IN CALLING     223000
C                       HIERARCHY.                                      224000
C*****************************************************************      225000
C      COMMON/SKIP/                                                      226000
C          KOLD         CONTAINS HOLLERITH IDENT OF LAST CALL ON PRNTF.  227000
C          ISKIP        SET TO 1 TO AVOID PRINTING HEADER BETWEEN EACH   228000
C                       LINE OF THE SAME PRINT.                         229000
C*****************************************************************      230000
C      COMMON/FLAG/                                                      231000
C          IFLAG(ICALL) SET TO 1 IF ICALL-TH PRINT IS ACTIVE. 0. IF NOT. 232000
C*****************************************************************      233000
C      COMMON/PCALL/                                                     234000
C          IPASS        OPTRAIN PASS IN PROCESS(1 OR 2).                 235000
C          ICALL        PRINT REQUEST NUMBER                             236000
C*****************************************************************      237000
C      COMMON/A/                                                         238000
C          ISED(500)    TEMPORARY STORAGE USED BY SUBROUTINE ORDER.      239000
CUSE       BEGIN     9/10/69  ***************************************** 240000
       COMMON/BEGIN/BEGIN                                                 1000
       EQUIVALENCE(TAMFAC,BEGIN)                                          2000
CEND       BEGIN     ***************************************************** 240000
CUSE       PLANTYPE  9/10/69  ***************************************** 241000
       COMMON/PLANTYPE/INITSTRK,COMMSL,CORNMR                             1000
CEND       PLANTYPE  ***************************************************** 241000
CUSE       OPENREF   26AUG71  ***************************************** 242000
       COMMON /OPENREF/ OPLIN(50),OPLAT(50),OPLONG(50),REFLAT(20),        1000
     1                  REFLONG(20)                                      2000
CEND       OPENREF   ***************************************************** 242000
CUSE       PAYLOAD   9/26/69  ***************************************** 244000
       COMMON/PAYLOAD/NORDMB1(40),IHMO1(40),                              1000
     1 NORDMB2(40),IHMO2(40),NASM(40),IASM(40),                           2000
     2 NCM(40),NDECOYS(40),NADECOYS(40),IMIRV(40)                         3000
CEND       PAYLOAD   ***************************************************** 244000
CUSE       ASMTABLE  IFER71  ***************************************** 246000
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      COMMON/ASPTABLE/I=MDASM(20),RANGEASM(20),RELASM(20),CEPASM(20),      1000
     1SPEEDASM(20)                                                        2000
CEND       ASSTABLE  ********************************************************  246000
CUSE       CORRCHAR  1FEB71  ************************************************  248000
      COMMON/CORRCHAR/PCLAT(30),PCLONG(30),PCZONE(30),RPLAT(30),           1000
     1RPLONG(30),ENTLAT(30),ENTLONG(30),CRLENGTH(30),KORSTYLE(30),         2000
     2ATTRCORR(30),ATTRSUPP(30),MILOATTK(30),DEFRANGE(30),NPRCRDEF(30),    3000
     3DEFDIST(30,3),ATTRPRE(30,3),MDATA                                    4000
      TYPE INTEGER PCZONE                                                  6000
      TYPE REAL KORSTYLE                                                   7000
CEND       CORRCHAR  ********************************************************  248000
CUSE       MASTER    1FEB71  ************************************************  250000
      COMMON/MASTER/IMDATE,IDENTNO,ISIDEN,MRTPT,MCOMRN,MOPEN,MRECOVER      1000
     1,MREF,MMEMORY,MREG,MTYPE,MGROUP,MTOTBASE,MPAYLOAD,MASMTYPE,MMMOTYPE  2000
     2,MTANKBAS,MCOMPLEX,MCLASS,MALERT,MTGTS,MCORTYPE,MCNTRY               3000
CEND       MASTER    ********************************************************  250000
CUSE       SETAPE    9/10/69  *********************************************  262000
      COMMON/SETAPE/ICKSM,LARTAP,LENGDT,MRECLG                             1000
CEND       SETAPE    ********************************************************  262000
CUSE       ARAYSIZE  9/10/69  *********************************************  264000
      COMMON/ARAYSIZE/MHASEPG,MC,MT,ML,MSTRK,MSORTY,MSRT,MFLY,MAXPA        1000
CEND       ARAYSIZE  ********************************************************  264000
      DATA                                                                 265000
     1(MHASEPG=150),(MC=30),(MT=1100),(ML=3),(MSTRK=10),(MSORTY=100)       266000
     2  ,(MSRT=100),(MFLY=15),(MAXPA=25)                                   267000
CUSE       PRINTOPT  9/10/69  *********************************************  268000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURPRAID,INSTRCPR,IEVAL,         1000
     1        TRAIDSM,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,                   2000
     2        IGRPTYPE,IGRPDATA,ICORCAN,ISTRESUM,ICOMRSHR,                 3000
     3        ICONIDCH,INEXTFLT,IDEBUG,JREFUEL,JOUTSRT,JPAYLOAD            4000
CEND       PRINTOPT  ********************************************************  268000
CUSE       DEBUG     9/10/69  *********************************************  272000
      COMMON/DEBUG/IOTA,ICAMFROM(20)                                       1000
CEND       DEBUG     ********************************************************  272000
CUSE       PCALL     9/10/69  *********************************************  273000
      COMMON/PCALL/IPASS,ICALL                                             1000
CEND       PCALL     ********************************************************  273000
      CALL $POSTALG                                                        273500
      CALL STORAGE                                                         274000
      CALL TIMEME(-1)                                                      275000
      IOTA=1                                                               276000
      ICAMFROM(IOTA)=$H POSTALT                                            277000
      CALL SETFLAG                                                         278000
      ICALL=122                                                            279000
      ##=PRNTF(-12,0,MHARAYSIZE)                                           280000
      NTAPE=3                                                              281000
      CALL GETGROUP                                                        283000
      IOTA=IOTA-1                                                          284000
      WRITE (44,7777)                                                      285000
 7777 FORMAT(41H ***** PROCESSOR POSTALUC COMPLETED *****)                 286000
      STOP                                                                 287000
      END                                                                  288000
```

IDENT POSTALOC

PROGRAM LENGTH		00677
ENTRY POINTS	POSTALOC	00016
BLOCK NAMES		
	FILES	00020
	INPUTFL	00007
	BEGIN	00001
	PLANTYPE	00003
	DPEAKEF	00274
	PAYLOAD	00420
	ASMTABLE	00144
	CORRCKAR	01131
	MASTER	00027
	SETAPE	00004
	ARAYSIZE	00011
	PRINTOPT	00025
	DEBUG	00025
	PCALL	00007
EXTERNAL SYMBOLS		
	QBQENTRY	
	THEN.	
	QBQSTOPS	
	QBQUICT.	
	VPOSTALO	
	STORAGE	
	TIMEME	
	SETFLAG	
	PRNTF	
	GETGROUP	
	STM.	

```
C00012  ALOCGRP
C00006  ALOCTAB
C00416  ATTRCOPY
C00776  ATTRPRE
C00454  ATTRSUPP
C00002  BASFILE
C00008  BEGIN
C00074  CEPASM
C00002  CORBOMB
C00001  CORMSL
P00303  CPFMT.      00067
C00322  CRLENGTH
C00644  DEFDIST
C00559  DEFRANGE
P00001  DICT.       00020  00022  00024  00026  00032  00042  00050  00056  00063  00066  00071
C00062  DPLAT
C00088  DPLINK
C00144  DPLONG
P00072  ENDIMB.     00071
C00226  ENTLAT
C00264  ENTLONG
C00016  EVENTAPE
P00000  EXIT.       00072
P00003  FORMAT.     00036  00045
X00012  GETGROUP    00055
P00067  GGB0000.    00061
C00512  HILOATTR
C00310  IASM
C03001  ICALL       00043  00044
C00001  ICAMFROM    00040
C00036  ICMGPLAN
C00008  ICKSW
C00014  ICONCAN
C00017  ICORIDOR
C00016  ICONRSHR
C00002  ICURRAID
C00001  ICURSQTY
C00021  IDENUE
C00001  IDENTNO
C00004  IEVAL
C00013  IGRPDATA
C00012  IGRPTYPE
C00060  IMDATE
C00010  IINDEX
C00007  IINITOPT
C00558  INIAV
C00020  INEXTFLT
C00008  INITSTRM
C00003  INPTFL
C00030  IOTA        00034  00035  00037  00037  00057  00057  00060
C00008  IPASS
C00005  IRAIDSHR
C00003  IRSTKCPM
C00002  ISIDEM
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C00000  ISRTYTGT
C00015  ISTRKSUM
C00011  ITGTASGN
C0C050  IWMD1
C00178  IWMD2
C00000  IWQASM
P00073  .ERASER.   00030   00033   00046   00051
P00003  ..100000   00036
P00004  ..100001   00052
P00005  ..7777     00064
C00023  JOUTSRT
C00024  JPAYLOAD
C00022  JREFUEL
C00360  KORSTYLE
C00001  LABTAP
C00002  LENGDT
C00010  MAXPA      C00010
C00000  MBASEPG    00003
C00001  MC         C00001
C00007  MFLY       C00007
C00003  ML         C00003
C00004  MSLTIME
C00005  MSORTY     C00005
C00006  MSRT       C00006
C00004  MSTRK      C00004
C00002  MT         C00002
C00001  MVIOIMFL
C00500  NADECOYS
C00023  NALERT
C00240  NASM
C00016  NASMTYPE
C00010  NBNDRY
C00022  NCLASS
C00360  NCM
C00026  NCNTRY
C00021  NCOMPLEX
C00004  NCORRM
C00025  NCORTYPE
C01130  NDATA
C00430  NDECOYS
C00005  NOPEN
C00013  NGROUP
C00008  NOBOMB1
C00120  NOBOMB2
C00015  NPAYLOAD
C00006  NPRCRDEF
C00003  NRECLG
C00006  NRECOVER
C00007  NREF
C00011  NREG
C00003  NRTPT
C00020  NTANKBAS
P00075  NTAPE      00054
C00024  NTGTS
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```
C00014  NTOTBASE
C00012  NTYPE
C00017  NWHCTYPE
C00000  PCLAT
C00036  PCLONG
C00074  PCZONE
C00017  PLANTAPE
P00016  POSTALOC    00016
X00011  PRNTF       00047
X00004  QRQDICT.    00000   00017
X00001  QRQENTRY    00021
X00003  QRQSTOPS    00070
C00024  RANGEASM
C00226  REFLAT
C00252  REFLONG
C00050  RELASM
C00132  RPLAT
C00170  RPLONG
X00010  SETFLAG     00041
C00128  SPEEDASM
X00013  STM.        00062
X00006  STORAGE     00025
C00014  STRKFIL
C00000  TARFAC
C00000  TGTFILE
X00002  THEND.      00065
X00007  TIMEME      00031
C00010  TMPALOC
X00005  VPOSTALO    00023
P00076  ww          00053
   00212 SYMBOLS
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```
      SUBROUTINE CENTROID(NP,XLAT,XLONG,CXLAT,CXLONG)                    1000
CSUBR     CENTROID  START     ****************************************  2000
      DIMENSION XLAT(1),XLONG(1)                                         3000
      CXLAT = XLAT(1)                                                    4000
      CXLONG = XLONG(1)                                                  5000
      DO 100 N=2,NP                                                      6000
      X = XLONG(N)-CXLONG                                                7000
      DIF = ABSF(X)                                                      8000
      S = X/DIF                                                          9000
      IF(DIF.GT.180.0)2,3                                               10000
    2 S = -S                                                            11000
      DIF = 360.0-DIF                                                   12000
    3 DIF = DIF/2.                                                      13000
      CXLONG=CXLONG+S*DIF                                               14000
      IF(CXLONG)10,100,20                                               15000
   10 CXLONG = CXLONG+360.                                              16000
      GO TO 100                                                         17000
   20 IF(CXLONG.GT.360.0)30,100                                         18000
   30 CXLONG = CXLONG-360.0                                             19000
  100 CXLAT = CXLAT+XLAT(N)                                             20000
      CXLAT = CXLAT/NP                                                  21000
      RETURN                                                            22000
      END
```

IDENT CENTROID

PROGRAM LENGTH 00207
ENTRY POINTS CENTROID 00003
EXTERNAL SYMBOLS
SIGSIOP
OBJECT.

```
P00077  BEGIN.      00162   00179   00174
P00000  CENTROID    00003
P00202  COUNT.      00017   00020
P00003  CXLAT       00010   00056   00060   00063   00066
P00003  CXLONG      00012   00022   00041   00042   00044   00046   00050   00053   00055
P00001  DICT.       00005   00073   00074
P00203  DIF         00025   00026   00027   00033   00033   00034   00037   00042
P00163  ENDING.     00006   00067   00070   00071   00071   00072   00072
P00000  EXIT.       00166
P00007  FP00001     00110   00111
P00010  FP00002.    00124   00125
P00011  FP00003.    00116   00117
P00012  FP00004.    00140   00141
P00015  FP00005.    00102   00103
P00021  FP00006.    00120   00121
P00022  FP00007.    00142   00143
P00040  FP00010.    00156   00157
P00041  FP00011.    00160   00161
P00044  FP00012.    00150   00151
P00046  FP00013.    00152   00153
P00050  FP00014.    00154   00155
P00053  FP00015.    00144   00145
P00055  FP00016.    00146   00147
P00056  FP00017.    00126   00127
P00057  FP00020.    00112   00113
P00060  FP00021.    00130   00131
P00063  FP00022.    00132   00133
P00065  FP00023.    00104   00105
P00066  FP00024.    00134   00135
P00177  GETPL.      00075   00104   00122
P00167  GETPU.      00100   00114   00136   00173
P00070  INITIAL.    00006
P00056  .100        00042   00047   00052   00052
P00044  .10         00043
P00050  .20         00043
P00031  .2
P00034  .3          00030   00030
P00053  .30
P00204  %           00014   00020   00036   00062
P00003  NP          00015   00065
P00106  PF00002.    00101
P00114  PF00003.    00107
P00122  PF00004.    00115
P00136  PF00005.    00123
P00162  PF00006.    00137
X00001  CIOCS100    00035   00064
X00002  GAGDICT.    00000   00004
P00205  S           00026   00031   00032   00037
P00063  TS00001.    00016
P00021  =S00001.    00062
P00206  X           00023   00025
P00003  XLAT        00007   00057
P00003  XLONG       00011   00021
   00065 SYMBOLS
```

```
      SUBROUTINE CHGPLAN (IOP)                                          1000
CSUBR      CHGPLAN   31JUL71  ********************************************* 27000
CUSE       PRINTOPT  9/10/69  ********************************************* 2000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,IRSTKCPM,IEVAL,       1000
     1        IRAIDSHR,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,               2000
     2        IGRPTYPE,IGRPDATA,ICORCAP,ISTRKSUM,ICORRSHR,              3000
     3        ICORIDOR,INEXTFLT,IDEBUG,JREFUEL,JOUTSRT,JPAYLOAD         4000
CEND       PRINTOPT  ********************************************* 2000
C          CHANGES PLAN AS SPECIFIED BY SORTOPT                      6000
C                                                                    7000
CUSE       SORTYTGT  9/10/69  ********************************************* 8000
      COMMON/SORTYTGT/MAXPT,MYPOTGT(25),P(25,25),VALB(25),VALA(25),     1000
     1      V(25),GROUP(25),ATLOCHI(25),DISTLEE(25),DISTLOW(25),S(25),  2000
     2      SURV(25),VALDONE(25),VALON(25),DVALB(25),DVALA(25),DREC(25) 3000
CEND       SORTYTGT  ********************************************* 8000
CUSE       CURSORTY  9/10/69  ********************************************* 11000
      COMMON/CURSORTY/NUMHIT,NUMROWS,NUMASM,NHIT,IFLY(13),IMIT(13)      1000
     1      ,LASTPAY,LASTTGT,NOMIT,IOMIT(25),NAVAIL,IAVAIL(25)          2000
     2      ,LKHITMT(25),ITOLD,LOSTTGT(25),NLOSTTGT,NWRDS,NASMS,RNGASM  3000
     3       DSTR                                                       4000
CEND       CURSORTY  ********************************************* 11000
CUSE       CHGPLAN   9/10/69  ********************************************* 15000
      COMMON/CHGPLAN/JDO,IAIM,ISCAN,JAFT,ATO,OTA,BTO,OTB                1000
      TYPE INTEGER ATO,OTA,BTO,OTB                                      2000
CEND       CHGPLAN   ********************************************* 15000
CUSE       GRPTYPE   IFER71  ********************************************* 16000
      COMMON/GRPTYPE/ISITYPE,RANGE,CEP,SPEED,ALERTDLY,NALRTDLY,RANGEDEC 1000
     1    ,ICLASS,NOPERSON,SPDMI,SPDLO,SPDASH,RANGREF,NUMSITE,IREP      2000
     2    ,IRECMODE,IPENMODE,FUNCTION                                   3000
      TYPE INTEGER FUNCTION                                             3500
      TYPE REAL NALRTDLY                                                4000
CEND       GRPTYPE   ********************************************* 16000
      DATA(IRECOVER=2)                                                  20000
CUSE       DEBUG     9/10/69  ********************************************* 21000
      COMMON/DEBUG/IOTA,ICAMFROM(20)                                    1000
CEND       DEBUG     ********************************************* 21000
CUSE       PCALL     9/10/69  ********************************************* 22000
      COMMON/PCALL/IPASS,ICALL                                          1000
CEND       PCALL     ********************************************* 22000
      IOTA=IOTA+1                                                       23000
      ICAMFROM(IOTA)=8H CHGPLAN                                         24000
      ICALL=6P                                                          25000
      CALL PRINTIT (IDEBUG)                                             26000
C*** IOP ALTERATIVES,  IOP= 1-ATO, 2-OTA, 3-BTO, 4-OTB                  27000
      NORMAL=1                                                          28000
      GO TO (600,500,900,700),IOP                                       29000
C                                                                       30000
C     LOCAL SUBROUTINE ADD ASM ( OTA ) --ADD JADD IN POSITION IADD      31000
C                                                                       32000
  500 JADD=JDO   $   IADD=LKHITMT(JAFT)+1   $IS=-LKHITMT(JADD)          33000
      ATLOCHI(JDO)=ATLOCHI(JDO)/1.E+50                                  34000
      NOMIT=NOMIT-1                                                     35000
      DO 510 I2=IS,NOMIT                                                36000
        JX=IOMIT(I2+1)  $ IOMIT(I2)=JX                                  37000
  510   LKHITMT(JX)=-I2                                                 38000
C                                                                       39000
```

```
      DO 520 II=IADD,NMIT                                                  40000
        I1=NMIT+IADD-II                                                    41000
      LKMITMT(XABSF(IMIT(II)))=I1+1                                        42000
        IMIT(I1+1)=IMIT(I1)                                                43000
  520   IFLY(I1+1)=IFLY(I1)                                                44000
      IMIT(IADD)=JADD                                                      45000
      IFLY(IADD)=IAI=                                                      46000
      NUMAS=NUMAS+1        $ NMIT=NMIT +1                                  47000
      NUMMIT=NUMMIT+1      $ LASTPAY=LASTPAY+1   $ LASTTGT=LASTTGT+1       48000
      LKMITMT(JADD)=IADD                                                   49000
      IF(NORMAL)1000,990                                                   50000
C                                                                          51000
C     LOCAL SUBROUTINE REMOVE ASM  (ATO) -- REMOVE JOEL  IN POSITION  IO   52000
C                                                                          53000
  600 NOMIT=NOMIT+1          $JOEL=JDO $ IDEL=LKMITMT(JOEL)                54000
      ATLOCMI(JDO)=ATLOCMI(JDO)+1.0E+50                                    55000
      IOMIT(NOMIT)=JOEL                                                    56000
      NMIT=NMIT-1                                                          57000
      DO 610 II=IDEL,NMIT                                                  58000
      LKMITMT(XABSF(IMIT(II+1)))=II                                        59000
        IMIT(I1)=IMIT(I1+1)                                                60000
  610   IFLY(II)=IFLY(I1+1)                                                61000
      NUMAS=NUMAS-1                                                        62000
      NUMMIT=NUMMIT-1   $ LASTPAY=LASTPAY-1   $ LASTTGT=LASTTGT-1          63000
      LKMITMT(JOEL)=-NOMIT                                                 64000
      IF(NORMAL)1000,960                                                   65000
C     LOCAL SUBROUTINE ADD BOMB (DTM) -- ADD JADD IN POSITION IADD         66000
C                                                                          67000
  700 JADD=JDO   $      IADD=LKMITMT(JABS(I+1)      $ IS=-LKMITMT(JADD)    68000
      NOMIT=NOMIT-1                                                        69000
      DO 710 I2=IS,NOMIT                                                   70000
      JX=IOMIT(I2+1)  $  IOMIT(I2)=JX                                      71000
  710 LKMITMT(JX)=-I2                                                      72000
      DO 720 II=IADD,NMIT                                                  73000
        I1=IADD+NMIT-II                                                    74000
      LKMITMT(XABSF(IMIT(I1)))=I1+1                                        75000
        IMIT(I1+1)=IMIT(I1)                                                76000
  720   IFLY(I1+1)=IFLY(I1)                                                77000
      IMIT(IADD)=JADD                                                      78000
      IFLY(IADD)=JADD      $NMIT=NMIT+1      $ LASTPAY=LASTPAY+1           79000
      IF(JADD.EQ.IRECOVER) 740,730                                         80000
  730 NUMMIT=NUMMIT+1   $  $ NUMBOMB=NUMBOMB+1  $ LASTTGT=LASTTGT+1       81000
  740 LKMITMT(JADD)=IADD                                                   82000
      GO TO 1000                                                           83000
C                                                                          84000
C     LOCAL SUBROUTINE REMOVE BOMB  ( RTO ) REMOVE JOEL IN POSITION IDEL   85000
C                                                                          86000
  900 NOMIT=NOMIT+1      $ JOEL=JDO   $ IDEL=LKMITMT(JOEL)                87000
      IOMIT(NOMIT)=JOEL                                                    88000
      NMIT=NMIT-1                                                          89000
      DO 910 II=IDEL,NMIT                                                  90000
      IMIT(II)=IMIT(II+1)  $  LKMITMT(XABSF(IMIT(II)))=II                  91000
  910   IFLY(II)=IFLY(II+1)                                                92000
      ICALL=90                                                             93000
      CALL PRINTIT(ICONSTY)                                                94000
      LASTPAY=LASTPAY-1                                                    95000
```

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      IF(JDEL.EQ.IRECOVER) 930,920                                        96000
  920 NUMIT=NUMIT-1 $ NUMPRO=NUMPRO-1  $  LASTTGT=LASTTGT-1               97000
  930 LKMITMT(JDEL)=-NOMIT                                                98000
      ITEMP=IDEL                                                          99000
C IF IAIM NEG,NOMS WILL BE OWN AIM PT.SKIP RELOCATION OF ASSOC. ASMS      100000
      IF(IAI)999,940,940                                                  101000
  940 IF(IFLY(ITEMP).EQ.JDO)945,1000                                      102000
C  IF ASM NOW IN VACATED POSITION,DELETE AND REINSERT WITH NEW AIM POINT   103000
C                  (SAVE INPUT PARAMETERS)                              104000
  945 K1=JDO  $  K2=JAFT  $  K3=IAIM  $  NORMAL=0                         105000
  950 JMASM=LOCIT(ITEMP)                                                  106000
      JDO=JMASM                                                           107000
C     DELETE ASM                                                          108000
      GO TO 600                                                           109000
  960 IAIMT=ITEMP-1                                                       110000
  965 IAIMT=IAIMT+1                                                       111000
C     DO NOT REINSERT IF NO AIM POINT AVAILABLE                           112000
      IF(IAIMT.GT.LASTTGT)985,970                                         113000
C     SKIP OVER ANY OTHER ASSOCIATED ASMS                                 114000
  970 IF(IFLY(IAIMT).EQ.K1) 965,975                                       115000
  975 JAT=IFLY(IAIMT)                                                     116000
      IF(DIFF(JAT,JMASM).LE.RNGASM) 980,965                               117000
  980 JAFT=JAT  $  IAIM=JAT                                               118000
C     REINSERT ASM TGT JDO                                                119000
      GO TO 600                                                           120000
  985 IF(NUMPRO.EQ.1) 991,990                                             121000
  991 JAFT=XABSF(IMIT(LASTTGT))  $  IAIM=JMASM                            122000
      GO TO 600                                                           123000
  990 IF(IFLY(ITEMP).EQ.K1)950,995                                        124000
  995 JDO=K1  $  JAFT=K2  $  IAIM=K3  $  GO TO 1000                       125000
  999 IAIM=-IAIM                                                          126000
 1000 CONTINUE                                                            127000
      ICALL=69                                                            128000
      CALL PRINTIT(ICHGPLAN)                                              129000
      ICALL=70                                                            130000
      CALL PRINTIT(ICURSRTY)                                              131000
      IOTA = IOTA - 1                                                     131500
      RETURN                                                              132000
      END                                                                 133000
```

IDENT CHGPLAN

PROGRAM LENGTH		00540
ENTRY POINTS	CHGPLAN	00005
BLOCK NAMES		
	PRINTOPT	00025
	SORTYTGT	01751
	CURSORTY	00214
	CHGPLAN	00010
	SRPTYPE	00022
	DEBUG	00025
	PCALL	00102
EXTERNAL SYMBOLS		
	QBQDICT.	
	PRINTIT	
	DIFF	

C00004	ALERTDLY											
C01357	ATLCCMI	00042	00042	00044	00044	00142	00143	00144	00145			
C00004	ATD											
P00500	BEGIN.	00514	00522	00526								
C00006	BTD											
C00002	CEP											
P00005	CHGPLAN	00005										
P00535	COUNT.	00053	00054	00071	00071	00155	00156	00223	00224	00241	00241	00322
		00323										
C00032	D											
P00001	DICT.	00007	00020	00342	00424	00467	00473	00503	00504			
X00003	DIFF	00423										
C01410	DISTLEG											
C01441	DISTLOW											
C01720	DREC											
C00213	DSTR											
C01667	DVALA											
C01636	DVALF											
P00515	ENDING.	00010	00477	00500	00501	00501	00502	00502				
P00000	EXIT.	00520										
P00004	FORMAT.	00013										
P00524	FP00001.	00512	00513									
C00021	FUNCTION											
P00531	GETPL.	00505										
P00521	GETPL.	00510	00525									
P00536	I1	00074	00075	00102	00106	00152	00156	00163	00170	00245	00245	00252
		00256	00317	00322	00331	00335						
P00537	I2	00050	00053	00060	00063	00220	00223	00230	00233			
P00540	IADD	00036	00065	00070	00073	00113	00126	00212	00235	00240	00242	00263
		00301										
C00001	IAIM	00114	00115	00362	00363	00375	00375	00434	00434	00445	00445	00460
		00460	00462	00462	00463							
P00541	IAIMT	00406	00407	00410	00411	00414	00420					
C00073	IAVAIL											
C00001	ICALL	00016	00016	00337	00340	00464	00465	00471				
C00001	ICAMFROM	00015										
C00006	ICHGPLAN	00470										
C00007	ICLASS											
C00014	ICORCAR											
C00017	ICORIOOR											
C00C16	ICORRSHR											
C00002	ICURRAID											
C00001	ICURSCTY	00343	00474									
C00021	IDEBUG	00021										
P00542	IDEL	00141	00152	00154	00312	00316	00321	00361				
C00004	IEVAL											
C00004	IFLY	00107	00107	00110	00115	00116	00146	00146	00157	00257	00257	00260
		00265	00266	00333	00333	00334	00346	00346	00415	00415	00421	00421
		00450	00450									
P00543	IGOTO.	00025										
C00013	IGRPDATA											
C00012	IGRPTYPE											
C00021	IMIT	00075	00076	00104	00105	00113	00114	00157	00157	00165	00165	00244
		00246	00254	00255	00263	00264	00324	00324	00325	00325	00401	00401

		00441									
P00544	II	00066	00074	00111	00236	00244	00261				
C00010	IINDEX										
C00007	IINITOPT										
C00020	INEXTFLT										
P00500	INITIAL.	00010									
C00041	IOMIT	00055	00055	00057	00057	00147	00225	00225	00227	00227	00314
P00004	IOP	00024									
C00060	IOTA	00011	00011	00012	00014	00014	00475	00475	00476		
C00000	IPASS										
C00020	IPENMODE										
C00005	IRAINSW										
C00017	IRECMODE										
P00003	IRECOVER	00272	00347								
C00016	IREP										
C00003	IRSTRCPW										
P00545	IS	00040	00047	00052	00214	00217	00222				
C00002	ISCAN										
C00008	ISIMTYPE										
C00000	ISRTYTGT										
C00015	ISTRXSJM										
P00546	ITEMP	00362	00365	00400	00405	00447					
C00311	ITGT&SGA										
C00155	ITOLD										
P00464	.1000	00131	00204	00303	00370	00461					
P00031	.500	00027	00435	00446							
PC0060	.510										
P00106	.520										
P00133	.600	00046	00404								
P00166	.610										
P00205	.700	00030									
P00238	.710										
P00256	.720										
P00274	.730	00273									
P00301	.740	00273									
P00304	.900	00030									
P00333	.910										
P00351	.920	00347									
P00356	.930	00350									
P00365	.940	00363									
P00371	.945										
P00400	.950	00452									
P00405	.960	00204									
P00407	.965	00417	00430								
P00414	.970	00412	00413								
P00420	.975	00417									
P00431	.980	00427									
P00436	.985	00413									
P00447	.990	00132	00437								
P00440	.991										
P00453	.995	00452									
P00462	.999	00364									
P00533	.ERASER.	00160	00161	00250	00327						
P00004	..100000	00013									

P00532	.NSTIFF.	00161	00163	00162	00163	00251	00253	00330	00331			
P00547	JADD	00032	00036	00112	00127	00206	00212	00262	00265	00272	00382	
C00003	JAFT	00033	00033	00207	00207	00373	00373	00432	00432	00443	00443	00456
		00456										
P00550	JAT	00422	00425	00431	00433							
P00551	JDEL	00136	00137	00146	00201	00307	00316	00312	00346	00357		
C00000	JDO	00031	00031	00041	00041	00135	00135	00141	00142	00205	00205	00306
		00306	00367	00367	00371	00371	00403	00403	00454	00454		
P00552	JHASN	00402	00425	00444								
C00023	JOUTSAT											
C00024	JPAYLOAD											
C00022	JREFUEL											
P00553	JX	00056	00061	00226	00231							
P00554	K1	00372	00416	00451	00453							
P00555	K2	00374	00455									
P00556	K3	00376	00457									
C00036	LASTPAY	00123	00124	00175	00176	00270	00271	00344	00344	00345		
C00037	LASTTGT	00124	00125	00177	00200	00277	00300	00354	00355	00411	00412	00440
		00440										
C00124	LKHITMT	00034	00034	00037	00037	00061	00062	00103	00104	00127	00130	00137
		00140	00164	00164	00202	00202	00210	00210	00213	00213	00231	00232
		00253	00254	00302	00303	00310	00311	00332	00332	00360	00360	
C00156	LOSTTGT											
C00000	MAXPT											
C00001	MYPCTGT											
C00005	NALRTCLY											
C00211	NASMS											
C00072	NAVAIL											
C00003	NHIT	00066	00067	00072	00072	00120	00121	00150	00151	00153	00153	00236
		00237	00243	00243	00266	00267	00314	00315	00317	00320		
C00207	NLOSTTGT											
C00015	NMPSITE											
C00040	NOMIT	00045	00045	00046	00050	00053	00133	00133	00134	00146	00147	00200
		00215	00215	00216	00220	00221	00304	00304	00305	00313	00313	00356
		00356										
C00010	NOPERSON											
P00557	NORMAL	00023	00131	00203	00377							
C00002	NUMASM	00116	00117	00172	00172	00173						
C00001	NUMDOMB	00276	00277	00353	00354	00436	00436					
C00000	NUMMIT	00121	00122	00174	00175	00274	00274	00275	00351	00351	00352	
C00210	NWMOS											
C00005	OYA											
C00007	OTS											
P00514	PERIOD2.	00511										
X00002	PRINTIT	00017	00341	00466	00472							
X00001	SPOTCT.	00000	00006									
C00001	RANGE											
C00034	RANGEREC											
C00014	RANGREF											
C00320	RHOJ											
C00212	RNGASM	00424	00427									
C01472	S											
C00813	SPDASM											
C00601	SPDMT											

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C00012  SPOLO
C00003  SPEED
C01523  SUBV
P00065  TS00001.    00052
P00112  TS00002.    00070
P00172  TS00003.    00155
P00235  TS00004.    00222
P00262  TS00005.    00240
P00337  TS00006.    00321
C01275  V
C01244  VALA
C01213  VALB
C01554  VALGOAE
C01605  VALON
P00055  WS00001.    00064
P00072  WS00002.    00111
P00157  WS00003.    00171
P00225  WS00004.    00234
P00242  WS00005.    00261
P00324  WS00006.    00336
   00246 SYMBOLS
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```
      SUBROUTINE CORRPARM(KORP,TLAT,TLONG,IST,IFN)                          1000
CSUBR      CORRPARM  IFEATI    ********************************************* 12000
CUSE       PRINTOPT  9/10/69   ********************************************* 2000
      COMMON/PRINTOPT/ ISRTYTGT,ICUMSRTY,ICURRAID,IMSTRCPM,ISVAL,           1000
     1        IRAIDSHP,ICHGPLAN,IIMITOPT,IINDEX,ITGTASGN,                   2000
     2        IGRPTYPE,IGRPDATA,ICORCAR,ISTRKSUM,ICOMMSHR,                  3000
     3        ICORIDOR,INEXTFLT,IDEBUG,JREFUEL,JOUTSHT,JPAYLOAD             4000
CEND       PRINTOPT  ********************************************* 2000
      COMMON/2/PHI(1100),RHO(1100)                                          6000
      COMMON/1/X(1100),Y(1100)                                              7000
      DIMENSION TLAT(1),TLONG(1)                                            8000
CUSE       CORRIDOR  9/19/69   ********************************************* 9000
      COMMON/CORRIDOR/CLAT,CLONG,CZONE,PLAT,PLONG,ELAT,ELONG,CLENGTH,       1000
     1    KORPWR,CORSATTR,CORSATTR,ATTRHILO,NUMREDEF,                       2000
     2    DISTDEF(3),PREATTR(3)                                             3000
      TYPE INTEGER CZONE                                                    4000
      TYPE REAL KORP=R                                                      5000
CEND       CORRIDOR  ********************************************* 9000
      EQUIVALENCE (R,RNGDEF),(N,KORPWR)                                     12000
CUSE       DEBUG     9/10/69   ********************************************* 13000
      COMMON/DEBUG/IOTA,ICAMFROM(20)                                        1000
CEND       DEBUG     ********************************************* 13000
CUSE       PCALL     9/10/69   ********************************************* 14000
      COMMON/PCALL/IPASS,ICALL                                              2000
CEND       PCALL     ********************************************* 14000
      IOTA=IOTA+1                                                           15000
      ICAMFROM(IOTA)=8HCORRPARM                                             16000
      ICALL=16                                                              17000
      CALL PRINTIT(IDEBUG)                                                  18000
      S=DISTF(PLAT,PLONG,CLAT,CLONG)                                        19000
      CL=COSF(PLAT*.01745329)                                               20000
      F=3600./(2*R*S)                                                       21000
C                                                                           22000
      DO 40 I = IST,IFN                                                     23000
C                                                                           24000
      A=PLAT-TLAT(I)                                                        25000
      B=PLAT-CLAT                                                           26000
      C = (DELLONG(PLONG,TLONG(I)))*CL                                      27000
      D = (DELLONG(PLONG,CLONG))*CL                                         28000
      X(I)=F*(A*D-B*C)                                                      29000
      Y(I)=F*(A*B+C*D)                                                      30000
      IF(Y(I).LT.0.0) 30,10                                                 31000
   10 PHI(I)=X(I)/(ABSF(Y(I)))**2                                           32000
      R2 = Y(I)*Y(I)                                                        33000
      IF(ABSF(PHI(I)).GT.1.) 30,40                                          34000
   30 RECN=1.0/N                                                            35000
      IF(X(I).LT.0.) 32,31                                                  36000
   31 SX= 1.                                                                37000
      GO TO 33                                                              38000
   32 SX = -1.                                                              39000
   33 AX=ABSF(X(I))                                                         40000
      YO=AX**RECN                                                           41000
      PHI(I) = (1.5*YO-Y(I))*SX                                             42000
      R2 = YO*YO                                                            43000
   40 RHO(I) = R2*X(I)*X(I)*N                                               44000
      IOTA=IOTA-1                                                           45000
```

END

46000

IDENT CORRPARM

PROGRAM LENGTH		00266
ENTRY POINTS	CORRPARM	00004
BLOCK NAMES		
	PRINTOPT	00025
	2	04230
	1	04230
	CORRIDOR	0002A
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	02007110	
	01005100	
	22007111	
	01004100	
	GADDICT.	
	PRINTIT	
	DISTF	
	DELLONG	
	COSF	

```
P00250  A          00051   00066   00073
C00013  ATTRHILO
P00251  AX         00141   00144
P00252  B          00054   00067   00073
P00167  BEGIN.     00224   00232   00236
P00253  C          00061   00070   00074
P00254  CL         00033   00061   00065
C00000  CL-T       00024   00053
C00007  CLENGTH
C00001  CLONG      00024   00064
C00011  COMATTR
P00004  COMPARM    00004
C00012  COMSATTR
X00011  COSF       00031
P00255  COUNT.     00045   00046
C00002  CZONE
P00256  D          00065   00066   00075
X00010  DBLLONG    0005B   00042
P00001  DICT.      00004   00017   00022   00032   00057   00063   00106   00143   00172   00173
C00014  DISTDEF
X00007  DISTF      00021
C00005  ELAT
C00006  ELONG
P00225  ENDING.    00007   00166   00167   00170   00170   00171   00171
P00000  EXIT.      00230
P00257  F          00037   00071   00076
P00003  FORMAT.    00012
P00040  FP00001.   00214   00215
P00042  FP00002.   00222   00223
P00043  FP00003.   00216   00217
P00059  FP00004.   00203   00204
P00054  FP00005.   00207
P00060  FP00006.   00210   00211
P00241  GETFL.     00174   00201   00212
P00231  GETPU.     00177   00205   00220   00235
P00260  I          00041   00045
C00001  ICALL      00015   00015
C00001  ICAMFROM   00014
C00006  ICHGPLAN
C00014  ICORCBR
C00017  ICORTCOM
C00016  ICORRSNB
C00002  ICURRAID
C00001  ICUWSRTY
C00021  IDENTG     00020
C00004  IFVAL
P00003  IFW        00042
C00013  IGRPDATA
C00012  IGRTYPE
C00010  IIMEX
C00007  IIMITOPT
C00020  IMFATFLT
P00167  INITIAL.   00007
C00000  IOTA       00010   00011   00013   00013   00164   00164   00165
```

```
C00000  IPASS
C00005  IFBIOSHS
C00003  IFSTSCPM
C00000  ISRTYTGT
P00003  IST          00040   00042
C00015  ISTFRSHM
C00011  ITGTASGN
P00102  .0           00100   00103
P00124  .30          00101
P00133  .31          00131   00132
P00135  .32          00133
P00137  .33          00134
P00155  .40          00122   00143
P00242  .BASER.      00036   00036   00037   00067   00075   00076   00075   00104   00107   00111   00113
P00003  ..100000     00012
P00060  .J00001.     00055
C00023  JOBISPT
J00024  .PAYLOAD
C00032  JREFUEL
C00010  KORPWG
P00005  KOWP
C00010  L            00110   00110   00120   00125   00143   00140
C00015  LERRFREE
P00201  PF00002.     00200
P00205  PF00003.     00202
P00212  PF00004.     00206
P00220  PF00005.     00213
P00226  PF00006.     00221
C00000  PHI          00113   00114   00117   00117   00151   00152
C00003  PLAT         00023   00024   00026   00047   00047   00052   00052
C00006  PLONG        00023   00060   00064
C00021  PREATTR
X00006  PRINTIT      00016
X00004  Q1004100     00157
X00002  Q1005100     00125
X00001  Q2007110     00105
X00003  Q2007111     00142
X00005  QRUNICT.     00030   00035
C00014  R            00034   00034
P00261  R2           00114   00154   00161
P00262  RECA         00127   00145
C02114  RF0          00142   00142
C00014  RKGUFF
P00263  S            00025   00035
P00264  SX           00134   00134   00151
P00003  SLAT         00056
P00003  SLONG        00054   00060
P00164  TS00001.     00044
P00047  WS00001.     00163
C00300  X            00071   00072   00111   00112   00127   00130   00137   00137   00155   00155   00156
C02114  Y            00074   00077   00102   00102   00114   00115   00115   00147   00150
P00265  YC           00144   00147   00153   00153
    00152 SYMBOLS
```

```
      FUNCTION   DIFF(I1,J1)                                                1000
CSUBR      DIFF       22NOV71   ** ********************************          31000
CUSE       PRINTOPT   9/10/69   ***************************************       2000
      COMMON/PRINTOPT/ ISRTYTGT,ICOMSHTY,ICORRAID,IMSTKCPY,TEVAL,           1000
     1        IRAIDSHR,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,                   2000
     2        IGRPTYPE,IGRPDATA,ICORCAR,ISTRKSUM,ICOMPSHR,                  3000
     3        ICOMIDOM,IMXTPLT,IDEBUG,JREFUEL,JOUTSHT,JPAYLOA               4000
CEND       PRINTOPT   ***************************************************** 2000
CUSE       RAIDSTRK   1FEB71    ********************************************* 6000
      COMMON/3/NT,JGRPOUP,JCORR,INDEXNO(1100),TLAT(1100),TLONG(1100),       1000
     1TIMEPREM(1100),IOPEN(1100),DISTGOT(1100),DISTREC(1100),               2000
     2ATTRLOC(1100),TVAL(1100),DFLAT(1100),DFLONG(1100),DESTG(1100),        3000
     3TASK(1100),CNTRLOC(1100),FLAG(1100)                                   4000
CEND       RAIDSTRK   ***************************************************** 6000
C     CHANGED COMMON/RAIDSTRK/ TO COMMON/3/                                 9000
CUSE       SORTYTGT   9/10/69   ***************************************** 10000
      COMMON/SORTYTGT/MAXFT,MYPOTGT(25),D(25,25),VALH(25),VALR(25),         1000
     1     V(25),RMOU(25),ATLOCNT(25),DISTLEG(25),DISTLO(25),S(25),         2000
     2     SURV(25),VALDOF(25),VALON(25),DVALR(25),DVALA(25),DREC(25)       3000
CEND       SORTYTGT   ***************************************************** 10000
CUSE       STRKSUM    1FEB71    ********************************************* 13000
      COMMON/STRKSUM/KGROUP,JTSTRK,NCORR,NSTRK(30)                          1000
CEND       STRKSUM    ***************************************************** 13000
CUSE       DEBUG      9/10/69   ***************************************** 15000
      COMMON/DEBUG/IOTA,ICAMFROM(20)                                        1000
CEND       DEBUG      ***************************************************** 15000
CUSE       PCALL      9/10/69   ***************************************** 16000
      COMMON/PCALL/IPASS,ICALL                                              1000
CEND       PCALL      ***************************************************** 16000
CUSE       INDEX      9/10/69   ***************************************** 16300
      COMMON/INDEX/ISORTY,IORIG,IRECOVER,IDISCH,IT,ICORR,JTGTIN             1000
CEND       INDEX      ***************************************************** 16300
CUSE       CURSORTY   9/10/69   ***************************************** 16500
      COMMON/CURSORTY/NUMHIT,NUMHOMB,NUMASM,NHIT,IPLY(13),IHIT(13)          1000
     1        ,LASTPAY,LASTTGT,NOWIT,IOWIT(25),NAVAIL,IAVAIL(25)            2000
     2        ,LIMITMT(25),ITOLD,LUSTTGT(25),NLOSTTGT,NUMHOS,NASMS,RNGASM   3000
     3        ,LSTR                                                         4000
CEND       CURSORTY   ***************************************************** 16500
CUSE       CORRIDOR   9/10/69   ***************************************** 16700
      COMMON/CORRIDOR/CLAT,CLONG,CZONE,PLAT,PLONG,ELAT,ELONG,CLENGTH,       1000
     1    NCORNR,CORATTR,CORSATTR,ATTRHILO,LNGDEF,NUMEDEF,                  2000
     2    DISTDEF(3),PREATTR(3)                                             3000
      TYPE INTEGER CZONE                                                    4000
      TYPE REAL NCORNR                                                      5000
CEND       CORRIDOR   ***************************************************** 16700
CUSE       OPENREF    26AUG71   ***************************************** 16800
      COMMON /OPENREF/ OPLINK(50),OPLAT(50),OPLONG(50),REFLAT(20),          1000
     1                 REFLONG(20)                                          2000
CEND       OPENREF    ***************************************************** 16800
      IOTA=IOTA+1                                                           17000
      ICAMFROM(IOTA)=8H    DIFF                                             18000
C IF DISTANCE SOUGHT IS FROM ORIGIN TO RECOVERY, CHECK FOR TARGETS          18100
      IF((II-IORIG)*(JJ-IRECOVER))4,6,4                                     18200
    4 IF((II-IRECOVER)*(JJ-IORIG))8,6,8                                     18300
    6 IF (LASTPAY - 2) 75,75,72                                             18400
   72 JOPN = IOPEN(MYPOTGT(XABSF(IMIT(LASTTGT))))                           18500
```

```
      DRECOV = DISTF(PLAT,PLONG,DPLAT(JDPN),DPLONG(JDPN))                18600
      GO TO 78                                                           18700
   75 DRECOV = 20000.                                                    18800
   78 D(ICRIG,IRECOVER) = DRECOV                                         18900
C                                                                        18950
    8  IF(II-JJ)10,15,15                                                 19000
   10  DST=D(II,JJ)                                                     20000
       IF(DST) 30, 20, 20                                               21000
   15  DST=D(JJ,II)                                                     22000
       IF(DST) 40, 20 ,20                                               23000
   20  DIFF =DST                                                        24000
       GO TO 60                                                         25000
   30    I=II                                                           26000
         J=JJ                                                           27000
         GO TO 50                                                       28000
   40    I=JJ                                                           29000
         J=II                                                           30000
   50    IT=MYPOTGT(I)                                                  31000
      JT=MYPOTGT(J)                                                     32000
        DIFF=DISTF(TLAT(IT) ,TLONG(IT),TLAT(JT),TLONG(JT))              33000
        D(I,J)=DIFF                                                     34000
   60 CONTINUE                                                          35000
      IOTA=IOTA-1                                                       36000
      RETURN                                                            37000
      END                                                               38000
```

IDENT DIFF

PROGRAM LENGTH		00350
ENTRY POINTS	DIFF	00004
BLOCK NAMES		
	PRINTOPT	00025
	3	40167
	SORTYTGT	01751
	STRKSUM	00041
	DEBUG	00025
	PCALL	00002
	INDEX	00007
	CURSORTY	05214
	CORRIDOR	00024
	OPENREF	00276
EXTERNAL SYMBOLS		
	GBGDICT.	
	DISTF	

```
C01357  ATLOCHI
C00013  ATTRHILO
C17027  ATTRLOC
P00250  BEGIN.      00315   00324   00330
C00000  CLA
C00007  CLENGTH
C00001  CLONG
C33737  CNTRYLOC
C00011  CORATTR
C00012  CORSATTR
C00002  CZONE
C00032  D           00064   00067   00075   00075   00102   00102   00145   00145
C23257  DELAT
C25373  DELONG
C27507  DESIG
P00001  DIFF.       00006   00057   00141   00254   00255
P00004  DIFF        00004
C00016  DISTDEF
X00002  DISTF       00056   00140
C01410  DISTLEG
C01441  DISTLOW
C12577  DISTOUT
C14743  DISTREC
C00062  DPLAT       00054   00061
C00000  DPLINK
C00144  DPLONG      00055   00061
C01720  DREC
P00342  DRECOV      00062   00064   00065
P00343  DST         00076   00103   00105
C00213  DSTR
C01667  DVALA
C01636  DVALB
C00005  ELAT
C00006  ELONG
P00316  ENDING.     00007   00150   00251   00252   00252   00253   00253
P00000  EXIT.       00322
C36053  FLAG
P00063  FORMAT.     00312
P00014  FP00001.    00275   00276
P00017  FP00002.    00313   00314
P00025  FP00003.    00265   00266
P00030  FP00004.    00303   00304
P00070  FP00005.    00267   00270
P00071  FP00006.    00305   00306
P00107  FP00007.    00271   00272
P00112  FP00010.    00307   00310
P00116  FP00011.    00311   00312
P00121  FP00012.    00273   00274
P00207  FP00013.    00301   00302
P00221  FP00014.    00263   00264
P00333  GETPL.      00256   00277
P00323  GETPU.      00261   00327
P00344  I           00110   00117   00120   00233
C00073  IAVAIL
```

```
C00001  ICALL
C00001  ICAMERO*  00014
C00006  ICHGPLAX
C00014  ICORCAR
C00017  ICORIDOR
C00005  ICORR
C00016  ICORRSHP
C00002  ICURRAIC
C00001  ICURSRTT
C00021  IDEBUG
C00003  IDITCH
C10463  IOPEN     00051   00052
C00004  IEVAL
C00004  IFLY
C00013  IGRPDATA
C00012  IGRPTYPE
C00021  IHIT      00042
P00003  II        00015   00025   00070   00107   00121   00221
C00010  IINDEX
C00007  IINITCPT
P00152  IN00004.  00066   00173   00203
P00153  IN00005.  00074   00215   00225
P00154  IN00006.  00101   00213   00227
P00155  IN00013.  00144   00236   00246
C00003  INDEXNO
C00020  INEXTFLT
P00251  INITIAL.  00007
C00041  IOMIT
C00001  IORIG     00015   00016   00031   00031   00177   00177
C00000  IOTA      00010   00010   00011   00013   00013   00146   00146   00147
C00000  IPASS
C00005  IRAINSHP
C00002  IRECOVER  00020   00021   00025   00026   00166   00166
C00003  IRSTKCPM
C00000  ISORTY
C00000  ISHIYTGT
C00015  ISTRKSUM
*  C00004  IT        00126   00126   00132   00132
*  C00011  ITGTASGN
*  C00155  ITOLD
*  P00074  .10       00072
*  P00101  .15       00072   00073
*  P00105  .20       00077   00100   00104
*  P00107  .30       00077
*  P00025  .4        00024
*  P00114  .40       00104
*  P00124  .50       00115
*  P00036  .6        00023   00034
*  P00146  .60       00106
*  P00041  .72
*  P00063  .75       00037   00040
*  P00065  .78       00062
*  P00070  .8        00034   00035
*  P00336  .ERASEM.  00017   00022   00024   00023   00027   00032   00033   00033   00044
```

P00003	..100000	00012					
P00334	.NSTIFF.	00045	00046	00050	00051		
P00060	.Z00001.	00054	00055				
P00142	.Z00002.	00134	00135	00136	00137		
P00345	J	00113	00122	00127	00242		
C00002	JCORR						
P00346	JDPN	00053	00053				
C00001	JGROUP						
P00003	JJ	00020	00030	00071	00112	00116	00207
C00023	JOUTSAT						
C00024	JPAYLOAD						
C00022	JREFUEL						
P00347	JT	00131	00135				
C00006	JTGTIN						
C00000	KGROUP						
C00010	KORPWR						
C00036	LASTPAY	00036	00036				
C00037	LASTTGT	00041	00041				
C03124	LKHITMT						
C00156	LOSTTGT						
C00000	MAXPT						
C00001	MYPOTGT	00044	00047	00125	00125	00130	00138
C00211	NASMS						
C00072	NAVAIL						
C00002	NCORR						
C00003	NMIT						
C00207	NLOSTTGT						
C00040	NOMIT						
C00015	NPREDEF						
C00003	NSTRK						
C00000	NT						
C00001	NTSTRK						
C00002	NUMASM						
C00001	NUMBOMB						
C00000	NUMMIT						
C00210	NWMDS						
P00277	PF00002.	00262					
P00315	PF00003.	00300					
C00003	PLAT	00060					
C00004	PLONG	00060					
C00021	PREATTR						
X00001	Q800ICT.	00000	00005				
C00226	REFLAT						
C00252	REFLONG						
P00162	RELCON..	00250					
C01326	RHOJ						
C00212	RNGASM						
C00014	RNGDEF						
C21143	RVAL						
C01472	S						
C01523	SURV						
C31623	TASK						
C06347	TIMEPREM						
C02117	TLAT	00133	00136	00142	00143		

```
C04233  TLONG     00134   00137   00142   00143
P00165  UP00003.  00156   00167   00170   00171   00173   00174
P00176  UP00004.  00157   00200   00201   00202   00204   00204
P00206  UP00005.  00160   00210   00211   00212   00215   00216
P00220  UP00006.  00161   00222   00223   00224   00227   00230
P00232  UP00007.  00111   00120   00233   00234   00235   00237   00237
P00241  UP00010.  00114   00123   00242   00243   00244   00246   00247
C01275  V
C01244  VALA
C01213  VALB
C01554  VALDONE
C01605  VALON
P00151  VALUE.    00106   00144   00321
   00257 SYMBOLS
```

```
      SUBROUTINE  DUMPSRT                                                1000
CSUBR      DUMPSRT   31JUL71   ***********************************        29000
CUSE       PRINTOPT  9/10/69   ***********************************        2000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,INSTKCPM,IEVAL,        1000
     1        IRAIDSHR,ICHGPLAN,IINTTOPT,IINDEX,ITGTASGN,                2000
     2        IGRPTYPE,IGRPDATA,ICORCAR,ISTRKSUM,ICORRSHR,               3000
     3        ICORIDOM,INEXTFLT,IDEBUG,JREFUEL,JOUTSRT,JPAYLOAD          4000
CEND       PRINTOPT  ***********************************                2000
C          STORES SORTIE DATA IN COMMON CURRAID                         6000
CUSE       INDEX     9/10/69   ***********************************        7000
      COMMON/INDEX/ISORTY,IORIG,IRECOVER,IDITCH,IT,ICORR,JTGTIN          1000
CEND       INDEX     ***********************************                7000
CUSE       CURRAID   1FEB71    ***********************************        8000
      COMMON/CURRAID/MYBASE(100),NASGN(100),JTGT(10,100),MYASGN(1100),   1000
     1INDEXVEH(100)                                                      2000
CEND       CURRAID   ***********************************                8000
CUSE       SORTYTGT  9/10/69   ***********************************        10000
      COMMON/SORTYTGT/MAXPT,MYPOTGT(25),D(25,25),VALH(25),VALS(25),      1000
     1     V(25),RHOJ(25),ATLOCHI(25),DISTLEG(25),DISTLOM(25),S(25),     2000
     2     SURV(25),VALDONE(25),VALON(25),DVALB(25),DVALA(25),DREC(25)   3000
CEND       SORTYTGT  ***********************************                10000
CUSE       CURSORTY  9/10/69   ***********************************        13000
      COMMON/CURSORTY/NUMHIT,NUMROOM,NUMASM,NHIT,IFLY(13),IHIT(13)       1000
     1       ,LASTPAY,LASTTGT,NOMIT,IOMIT(25),NAVAIL,IAVAIL(25)          2000
     2       ,LKHITMT(25),ITOLD,LOSTTGT(25),NLOSTTGT,NUMOS,NASMS,RNGASM  3000
     3       ,OST8                                                       4000
CEND       CURSORTY  ***********************************                13000
CUSE       DEBUG     9/10/69   ***********************************        17000
      COMMON/DEBUG/IOTA,ICAMEFROM(20)                                    1000
CEND       DEBUG     ***********************************                17000
CUSE       PCALL     9/10/69   ***********************************        18000
      COMMON/PCALL/IPASS,ICALL                                           1000
CEND       PCALL     ***********************************                18000
      IOTA=IOTA+1                                                        19000
      ICAMEFROM(IOTA)=@H DUMPSRT                                         20000
      ICALL=71                                                           21000
      CALL PRINTIT(IDEBUG)                                               22000
C***  SUBROUTINE  DUMPSRT  ENTRY                                         23000
      ISRT=ISORTY                                                        24000
      DO  10  I1=2,LASTTGT                                               25000
        ISTRK=I1-1                                                       26000
        J=XABSF(IHIT(I1))                                                27000
        JTGT(ISTRK,ISRT) = MYPOTGT(J)                                    28000
      IF(IHIT(I1).LT.0) 5,6                                              29000
    5   JTGT(ISTRK,ISRT)=-JTGT(ISTRK,ISRT)                               30000
    6   NAVAIL=NAVAIL+1     $  LKHITMT(J)=0                              31000
   10   IAVAIL(NAVAIL) = J                                               32000
      NASGN(ISRT)=LASTTGT-1                                              33000
C     CHECK FOR INCLUSION OF RECOVERY IN FLIGHT PLAN                     34000
      IF (LASTPAY.EQ.LASTTGT) 20, 40                                     35000
   20 NASGN(ISRT)=-NASGN(ISRT)                                           36000
C     RESET RECOVERY FOR NEXT SORTIE IF NECESSARY                        37000
      K=-LKHITMT(IRECOVER)                                               38000
      NOMIT=NOMIT-1                                                      39000
C     REMOVE RECOVERY FROM OMIT LIST                                     40000
      DO  30  I2=K,NOMIT  $  I3=IOMIT(I2+1)                             41000
```

```
      LKMITMT(I3)=-I2                                              42000
   30 IOMIT(I2)=I3                                                 43000
   40 CONTINUE                                                     44000
      ICALL=72                                                     45000
      CALL PRINTIT(ICURSRTY)                                       46000
      ICALL=73                                                     47000
      CALL PRINTIT(ICURRAID)                                       48000
      IOTA = IOTA - 1                                              49500
      RETURN                                                       49000
      END                                                          50000
```

IDENT DUMPSRT

PROGRAM LENGTH		00170
ENTRY POINTS	DUMPSRT	00004
BLOCK NAMES		
	PRINTOPT	00025
	INDEX	00007
	CURRAID	04540
	SORTYTGT	01751
	CURSORTY	02214
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	OBJOICT.	
	PRINTIT	

```
C01357  ATLOCHI
P00151  BEGIN.      00153
P00160  COUNT.      00027   00030   00103   00104
C00032  D
P00001  DICT.       00005   00017   00120   00124
C01410  DISTLEG
C01441  DISTLOW
C01720  DREC
C00213  DSTH
P00004  DUMPSRT     00004
C01667  DVALA
C01636  DVALR
P00154  ENDING.     00007   00130   00151   00152   00152
P00000  EXIT.       00156
P00003  FORMAT.     00012
P00161  I1          00024   00030   00031   00060
P00162  I2          00100   00104   00107   00114
P00163  I3          00106   00107   00111
C00073  IAVAIL      00057
C00001  ICALL       00015   00015   00115   00116   00122
C00001  ICAMFROM    00014
C00006  ICHGPLAN
C00014  ICORCAR
C00017  ICORIDOR
C00005  ICORR
C00016  ICORRSHR
C00002  ICURRAID    00125
C00001  ICURSRTY    00121
C00021  IDEBUG      00020
C00003  IDITCH
C00004  IEVAL
C00004  IFLY
C00013  IGRPDATA
C00012  IGRPTYPE
C00021  IHIT        00034   00034   00042   00043
C00010  IINDEX
C00007  IINITOPT
P00131  IN00003.    00041   00045   00140   00147
C04374  INDEXVEH
C00020  INEXTFLT
P00151  INITIAL.    00007
C00041  IOHIT       00105   00105   00112   00112
C00001  IORIG
C00030  IOTA        00010   00010   00011   00013   00013   00126   00126   00127
C00000  IPASS
C00005  IRAIDSHR
C00002  IRECOVER    00072   00073
C00003  IRSTKCPH
C00000  ISORTY      00021   00021
P00164  ISRT        00022   00064   00070   00134
C00003  ISRTYTGT
P00165  ISTRK       00032   00144
C00015  ISTRKSUM
C00004  IT
```

```
C00011  ITGTASGN
C00155  ITGLD
P00055  .10
P00070  .20
P00111  .30
P00115  .40          00067
P00045  .5
P00050  .6           00044   00044
P00003  ..I00000     00012
P00166  J            00036   00037   00053   00055
C00023  JOUTSRT
C00024  JPAYLOAD
C00022  JREFUEL
C00310  JTGT         00041   00042   00046   00046   00047
C00006  JTGTIN
P00167  K            00075   00100   00102
C00036  LASTPAY      00065   00066
C00037  LASTTGT      00025   00025   00062   00062   00066
C00124  LKHITMT      00053   00054   00073   00074   00110   00110
C00156  LOSTTGT
C00000  MAXPT
C02260  MYASGN
C00009  MYBASE
C00001  MYPOTGT      00037   00040
C00144  NASGN        00064   00065   00071   00071   00072
C00211  NASMS
C00072  NAVAIL       00050   00050   00051   00056   00056
C00003  NHIT
C00207  NLOSTTGT
C00040  NOMIT        00075   00076   00077   00101   00101
C00002  NUMASM
C00001  NUMBOMB
C00000  NUMHIT
C00210  NWMDS
X00002  PRINTIT      00016   00117   00123
X00001  OBJECT.      00000   00005
C01326  PROJ
C00212  RNGASM
C01472  S
C01523  SURV
P00062  TS00001.     00026
P00115  TS00002.     00103
P00133  UP00002.     00023   00134   00135   00136   00140   00141
P00143  UP00003.     00033   00144   00145   00146   00150   00150
C01275  V
C01244  VALA
C01213  VALB
C01554  VALDONE
C01605  VALON
P00031  WS00001.     00061
P00105  WS00002.     00114
   00151 SYMBOLS
```

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      SUBROUTINE EVALB                                                  1000
CSUBR      EVALB     31JUL71   ********************************************  24000
CUSE       PRNTF     9/10/69   ********************************************  2000
      COMMON/PRNTF/ATLEGMI,ATLEG,RNGSURP,DISTANCE,RSVLOW,AVAILOW,       1000
     1   VALIT,FSTATTR,VALTOTT,PWATRATE,VALCNT,                         2000
     2   CUMVAL,CPITATT,ADDLOW,JHONE,DISTSV,ATAREA,ATLOCAL,             3000
     3   VALO,JX2,DTSTAD,ADDTEST,ATTRNEP,ATNEWLG,DVALC,JX1,             4000
     4   DIST1,DIST2                                                    5000
CEND       PRNTF     ********************************************  2000
CUSE       PRINTOPT  9/10/69   ********************************************  7000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,IRSTKCPM,IEVAL,       1000
     1       IPAIDSM,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,                 2000
     2       IGRPTYPE,IGRPDATA,ICORCAR,ISTRKSUM,ICORRSMR,               3000
     3       ICORRIDOR,INEXTFLT,IDEBUG,JREFUEL,JOUTSPT,JPAYLOAD         4000
CEND       PRINTOPT  ********************************************  7000
CUSE       EVAL      9/10/69   ********************************************  11000
      COMMON/EVAL/MINB,JDELB,MAXDA,JADD,MINDA,JDEL,MAXDB,JADDB,MAXDAB   1000
     1     ,JADDA,VALSORTY,JAF,KALC,VALDIST,VALMAX,JSECERR,ISFINPLN     2000
      TYPE REAL MINB,MAXDA,MINDA,MAXDB,MAXDAB                           3000
CEND       EVAL      ********************************************  11000
CUSE       GRPTYPE   1FEB71    ********************************************  14000
      COMMON/GRPTYPE/ISIMTYPE,RANGE,CEP,SPEED,ALERTDLY,NALRTDLY,RANGEDEC 1000
     1   ,ICLASS,NUPERSON,SPDMI,SPDLO,SPDASM,MANGREF,NMPSITE,INEP        2000
     2   ,IREFMODE,IREFMODE,FUNCTION                                    3000
      TYPE INTEGER FUNCTION                                             3500
      TYPE REAL NALRTDLY                                                4000
CEND       GRPTYPE   ********************************************  14000
CUSE       CORRIDOR  9/19/69   ********************************************  18000
      COMMON/CORRIDOR/CLAT,CLONG,CZONE,PLAT,PLONG,ELAT,ELONG,CLENGTH,   1000
     1    KORRWR,CORATTR,CORSATTR,ATTRHILO,AVGDEF,APPEDEF,               2000
     2    DISTDEF(3),PREATTR(3)                                          3000
      TYPE INTEGER CZONE                                                4000
      TYPE REAL KORRWR                                                  5000
CEND       CORRIDOR  ********************************************  18000
      DIMENSION DUMM(18)                                                21000
      EQUIVALENCE (DUMM,CLAT)                                           22000
CUSE       CHGPLAN   9/10/69   ********************************************  23000
      COMMON/CHGPLAN/JDD,IAIM,ISCAN,JAFT,ATD,DTA,RTC,DTB                1000
      TYPE INTEGER ATD,DTA,RTD,DTB                                      2000
CEND       CHGPLAN   ********************************************  23000
CUSE       INDEX     9/10/69   ********************************************  25000
      COMMON/INDEX/ISORTY,ICHIG,IRECOVER,IDITCH,IT,ICORR,JTGTIN         1000
CEND       INDEX     ********************************************  25000
CUSE       CURSORTY  9/10/69   ********************************************  26000
      COMMON/CURSORTY/NUMHIT,NUMBOMB,RUMASM,NHIT,IFLY(13),IHIT(13)      1000
     1       ,LASTPAY,LASTTGT,NOMIT,IOMIT(25),NAVAIL,IAVAIL(25)         2000
     2       ,LKHITMT(25),ITOLD,LOSTTGT(25),NLOSTTGT,NWHDS,NASM5,RNGASM 3000
     3       ,DSTR                                                      4000
CEND       CURSORTY  ********************************************  26000
CUSE       SORTYTGT  9/10/69   ********************************************  30000
      COMMON/SORTYTGT/MAXPT,MYPOTGT(25),D(25,25),VALB(25),VALA(25),     1000
     1     V(25),PHOD(25),ATLOCHI(25),DISTLEG(25),DISTLOW(25),S(25),    2000
     2     SURV(25),VALDONE(25),VALON(25),DVALB(25),DVALA(25),DREC(25)  3000
CEND       SORTYTGT  ********************************************  30000
CUSE       FIXALL    2FEB71    ********************************************  32500
      COMMON/FIXALL/IJFIX(1100),IJFIXR(1100),IMFIX(25)                  1000
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      TYPE LOGICAL IJFIX,IJFIXR,IKFIX                                    2000
CEND      FIXALL     ***********************************************     32500
      COMMON/CERJG/IOTA,ICAMER(20)                                       33000
CUSE      PCALL     9/10/69   ***********************************       34000
      COMMON/PCALL/IPASS,ICALL                                           1000
CEND      PCALL     ***********************************************     34500
      IOTA=IOTA+1                                                        35000
      ICAMER(IOTA)=RH   FVALH                                            34000
      ICALL=53                                                           37000
      CALL PRINTIT(ICERUG,                                               38000
C         EVALUATES ROMRS IN ROMR LIST,    FINDS LEAST VALUABLE ROMRS    39000
C         AND MOST VALUABLE ASMS                                         40000
      ICALL=103                                                          41000
      CALL PRINTIT(ISRTYTGT)                                             42000
      CALL PRINTIT(ICURSRTY)                                             43000
      MTYP=IF2(0  $  MAXDAB=1.0  $  IALM=JEF=0                           44000
C     INITIALIZE ASM LAUNCH POINT                                        45000
      LADDA=0                                                            46000
      JM1=0    $ J=1    $ I=1  $ JM2=IFLY(I1)  $ JA=1  $ JA=IFLY(IA)     47000
      CLOSAVE=0.0                                                        48000
      JSAGEHR=0                                                          49000
      SCFRMAX = 1.0                                                      50000
    5 II=I                                                               51000
C *** CYCLE OVER ROUTE POINTS                                            52000
   10 II=I1                                                              53000
      IF(IF( (I1).EQ.IFLY(I1+1)) 10,20                                   54000
   20 JM1=JM    $ JM=JM2    $ JM2=IFLY(I1)                                55000
      IF(JM1.EQ.0) 5,25                                                  56000
   25 IF(IRHITT(JM).GT.ISCAT) 200,26                                     57000
C     DONT  PROCEED  UNTIL  JM1 REACHES ORIGIN                           58000
   26 CONTINUE                                                           59000
   28 ATLOCAL=ATLOCH(JM)                                                 60000
      ICALL=104                                                          61000
      CALL PRINTIT(ISRTYTGT)                                             62000
      CALL PRINTIT(ICURSRTY)                                             63000
      IF(JM1.EQ.IORIG) 29,3                                              64000
   29 IF(ISTLOC(JM1).NE.0) 31,310                                        65000
   30 IF(ISTLOC(JM).EQ.ISTLEG(JM)) 31,310                                66000
   31 ATLOCAL=ATLOCAL+ATTRHILO                                           67000
  310 IF(JM2.EQ.IORIG) 311,3,2                                           68000
  311 IF(JM1.EQ.IORIG) 312,3110                                          69000
 3110 DIST=ISTLEG(JM)+ ISTLEG(JM2)+ERG(JM)/2                             70000
      DISTSV=(IST-(IFF(JM1,JM2) + ERG(JM)/2)                             71000
      GO TO 313                                                          72000
  312 DIST=ISTLEG(JM) + ISTLEG(JM2)                                      73000
      DISTSV=(IST-(IFF(JM1,JM2)                                          74000
  313 IF(DISTSV)313,313,3131                                             75000
 3130 DISTSV=0                                                           76000
 3131 DIST=ISTLEG(JM) + DIST (JM,JM2)                                    77000
C *** TEST  WHAT RHR M IS SEEING (FROGHT PROCEEDING/ITGH)                78000
      IF(JM  0,THEN,314,315                                              79000
  314 SPEED =FLSAVE+DISTSV+0.5 *ISTLEG(JM)                               80000
      GO SAVE=DISTSV                                                     81000
      IF(SPEED.GT.S REGEAR 315,316                                       82000
  315 IX=(RHITGT(JM1+1                                                   83000
C     (NIT FIRST SLEG(JM1) IF NO ASM ATTACHED                            84000
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                IF(TP.NE.IX(IX)+ISTSV+1) 314,316                                  85000
            314 IX(IX+1)=ITMT(JM,1)                                               86000
C           ...EXIT SEARCH LOOP, IF NO MORE ASMS ARE NOT RECOVERED                87000
                IF(IX(IX+1).EQ.0) 316,317                                         88000
             31 JS(JS+1)=JM  *  STEP=MAX=STEP+R  *  GO TO 316                     89000
            315 ...                                                               90000
            316 JS(JS+1)=JM  *  STEP=MAX=STEP                                     91000
            317 ATTRIB,JM ISTSV=POP+LITB*(I-1)+1,0=ATT(I)*JM/ 1ST)                92000
C                                       SAVE EVAL IF ASM                          93000
                IF (ITT(II) .GT. 0) 3164,100                                      94000
           3164 CONTINUE                                                          95000
                PUT,JS,DELTMAX=V(JM)+VALSTOTV                                     96000
                IF(PTR.ALT.LE.1.0) 322,321                                        97000
            321 VALUE=... * 1.0 TO 322                                            98000
            322 TEMP=...  ISTV=ISTSV/POTVALC                                      99000
                TEMPB=LTV&LOG(1.0-1.0/(1.0+TEMP))                                 100000
C           TEMP=VALUE ISTV IF ISTSV SMALL NOT MORE(TEMP).LT.POTVALC              101000
                TEMP=ALOG(1.0+TEMP)*EV(JM)                                        102000
                VALUE=VALUE+TEMP * (EXP(TEMP)+1.0)                                103000
                IF(ISTSV+1.0+ATL*CALC.GT.1.0) 322,322                             104000
            323 STOP                                                              105000
            322 ITEMP=ITEMP+1                                                     106000
             33 ITEMP=ITEMP+1                                                     107000
                ICALC=ICALC                                                       108000
                CALL PRINT(ISTV,TOT)                                              109000
                CALL PRINT(ISTSV,TOT)                                             110000
                IF(IEV.NE.TEMP.OR.JM.EQ.1) 34                                     111000
C           CHECK FOR ASSIGNED ASMS                                               112000
             34 VALUE(JM)=VALUE(JM)*STEP(JM)+VALUE                                113000
                IF(VALUE(JM).LT.VALUE(JM)) 36,40                                  114000
             35 IF(VAR(JM).EQ.0) 37                                               115000
             36 VALUE(JM)=0.0                                                     116000
                JCALC=JM                                                          117000
             37 IF(NUMASM.LT.1) 42,100                                            118000
C *** NOW EVALUATE POTENTIAL AS ASM TGT                                          119000
             42 IF(VALUE.LT.0) 43,45                                              120000
             45 IF(JA.GT.1) 44,50                                                 121000
C           ...ASM ADD POINT ONE (IF,THEN MOVE FROM...) AS ABOVE                  122000
             44 IA=IA-1                                                           123000
                ICALC=06                                                          124000
                CALL PRINT(ISTV,TOT)                                              125000
                CALL PRINT(ISTSV,TOT)                                             126000
             47 IF(IFLY(IA).EQ.0.0) 44,48                                         127000
             48 JA=IFLY(IA)                                                       128000
             50 ISTAS=IFF(JA,JM)                                                  129000
                IF(ISTAS.GT.0.0) 47,47                                            130000
             47 IA=IA+1                                                           131000
                IF(IFLY(IA).EQ.0.0) 47,77                                         132000
             77 JA=IFLY(IA)                                                       133000
                GO TO 47                                                          134000
C           ... POINT VALUE MESSAGE ENTERED, CALC EVALA                           135000
             47 IF(LEQ) 5  *  ...PRINTF(IA,JM,JA)                                136000
                VALUE(JM)=STAS*(JA)*(VALUE(JM)+VALUE(JM))                         137000
                IF(JA.EQ.JM) 48,48                                                138000
C           IF NOT IS CURRENT POINT THEN SUCC. TOT                                139000
             48 IA=IA+1  *  JA=IFLY(IA)                                           140000
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      IF(JA.EQ.1.AND.I.EQ.1.AND.JH.EQ.1.AND.IIAIM.EQ.1) 135,305                 137000
  305 ICALL=17                                                                  138000
      CALL PRINTIT(ISRTYTGT)                                                    139000
      CALL PRINTIT(IICUMSPTY)                                                   140000
      IF(JA.E.JH) 81,82                                                         141000
   82 IF(IFF(JA,JH).LT.RNGASM) 85,83                                            142000
C     MUST USE THIS AIM PT--CALC SCALE ALG PRINGLE                              143000
   83 JH=JH + IABS(ITMT(JH))                                                    144000
      SFACT=REF(ATL,CAL)                                                        145000
      SCALA(JH)=DVALA(JH)+SUPV(JH)*(SFACT*VALA(JH)+VALCA(JH)*(SFACT-1.))        146000
C *** ESTIMATE IMPROVEMENT JAM TO SCATTR VALUE IF ASM IS USED                   147000
   85 CONTINUE                                                                  148000
   86 ICALL=9A  $  CALL PRNTF(-A,JH,JA)                                         149000
      DA=DVALA(JH)-ARIF(DVALA(JH),0.)                                           150000
      IF(DA.GT.MAX(1E-1,90.1E                                                   151000
   90 IIIM=JA  $  JAF=JA  $  JAFDA = JH                                         152000
   93 ICALL=93  $  CALL PRINTIT(IFVAL)                                          153000
      IF(JAF.EQ.JA)94,97                                                        154000
C     IF USED OWN AIM POINT CHG JAF SET FLAG                                    155000
   94 JAF=ABSF(I-IT(IIA-1))                                                     156000
      IAIM=-IAIM                                                                157000
   97 MAXFAR=DAR                                                                158000
  100 CONTINUE                                                                  159000
      ICALL=100                                                                 160000
      CALL PRINTIT(ISRTYTGT)                                                    161000
      CALL PRINTIT(IICUMSPTY)                                                   162000
      ICALL=5A                                                                  163000
      *** PRNTF(-A,JH,JA)                                                       164000
      IF(LMTTMT(JH).GE.ISCAN) 200,5                                             165000
C     CALC COST TO ASSOCIATED ASMS FOR ALT. AIM PT.(IIAIM)                      166000
  150 J=ASM=IMIT(IIAMP)  $  IIAIM=I1                                            167000
  155 JATP=IFLY(IIAT )                                                          168000
      IF(IIAIM.LE.LASTRAY) 157,170                                              169000
  157 IF(IFF(J=ASM,JATP).GT.RNGASM) 160,180                                     170000
  160 IIAIM=IIAIM+1  $  GO TO 155                                               171000
  170 VALC=VALC-V(JH,ASM)*SUPV(JH,ASM)  $  GO TO 190                            172000
C     CHARGE FULL VALUE OF ASM IF NO OTHER AIM PT.                              173000
  180 VALC=VALC+V(J=ASM)*(SUPV(JATP)-SUPV(JH,ASM))                              174000
C     ADD CHECK FOR MORE ASMS                                                   175000
  190 GO TO 33                                                                  176000
  200 CONTINUE                                                                  177000
      ICALL=55                                                                  178000
      CALL PRINTIT(IFVAL)                                                       179000
      ICTA = ICTA - 1                                                           179500
      RETURN                                                                    179600
      END                                                                       180000
```

IDENT EVALH

PROGRAM LENGTH		00736
ENTRY POINTS	EVALH	00004
BLOCK NAMES		
	PRNTF	00034
	PRINTOPT	00025
	EVAL	00021
	GRPTYPE	00022
	CORRIDOR	00024
	CHSPLAN	00010
	INDEX	00007
	CURSORTY	00214
	SORTYIST	01751
	FIXALL	00107
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	QRQSTOPS	
	Q3000040	
	QHQDICT.	
	PRINTIT	
	DIFF	
	PRNTF	
	MAXIF	
	EXPF	

```
C00015  ADDLOW
C00025  ADDTEST
C00004  ALERTMLY
C00020  ATANFA      00262   00263   00312   00313   00321
C00001  ATLEG
C00000  ATLEGMI
C00021  ATLOCAL     00104   00104   00131   00131   00133   00133   00313   00322   00520   00520
C01357  ATLOCMI     00103   00103
C00027  ATNEWLG
C00004  ATO
C00013  ATTWHILC    00132   00132   00255   00255
C00026  ATTWNEW
C00005  AVAILOW
P00674  BEGIN.      00675
C00004  BTO
C00002  CBP
C00006  CLAT
C00007  CLENGTH
C00001  CLONG
C00011  COMATTH     00261   00262
C00012  CONSATTR
C00014  CRITATT
C00013  CURVAL
C00002  CZONE
C00032  D
P00706  DAH         00551   00551   00577
P00001  DICT.       00006   00017   00023   00026   00110   00113   00152   00170   00316   00327   00337
                    00342   00407   00412   00424   00450   00476   00501   00507   00522   00537   00545
                    00565   00604   00607   00615   00640   00567
X00005  DIFF        00151   00167   00423   00506   00637
P00707  DIST        00150   00160   00166   00172   00257
C00032  DIST1
C00033  DIST2
C00024  DISTAB
C00003  DISTANCE
P00710  DISTASM     00424   00427
C00016  DISTOFF
C01410  DISTLFG     00127   00127   00145   00145   00147   00147   00163   00163   00165   00165   00212
                    00213
C01441  DISTLOW     00121   00121   00125   00125   00202   00202   00204   00204
C00017  DISTSV      00160   00161   00173   00173   00174   00174   00177   00200   00214   00215   00216
                    00217   00260   00261   00301   00301
P00711  DLOW        00205   00256
C01720  DPEC        00143   00143   00155   00155
C00213  DSTH
C00000  DUMY
C01657  DVALA       00457   00532   00547   00553
C01636  DVALB       00353   00354   00364   00364   00532   00543   00546
C00030  DVALC
C00005  ELAT
C00006  ELONG
P00676  ENDING.     00007   00327   00673   00674   00675
P00004  EVALA       00004
P00000  EXIT.       00677
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X00010	EXPF	00315	00521								
P00003	FORMAT.	00012									
C01007	FSTATTR										
C00021	FUNCTION										
P00712	II	00042	00043	00055	00057	00060	00061	00070	00630		
P00713	IIOLD	00056	00063	00264	00330						
P00714	IN	00046	00048	00402	00403	00414	00420	00432	00433	00434	00440	00462
		00463	00464	00517	00571						
C00001	IAIM	00035	00035	00555	00555	00575	00575	00576			
C00073	IAVAIL										
C00001	ICALL	00015	00015	00021	00105	00106	00334	00335	00404	00405	00444	00445
		00473	00474	00533	00534	00562	00563	00601	00602	00611	00664	00665
C00001	ICAMFROM	00014										
C00006	ICHGPLAN											
C00037	ICLASS											
C00014	ICORCAR											
C00017	ICORIDOR											
C00005	ICORR											
C00016	ICORRSHP											
C00002	ICURRAID											
C00001	ICURSRTY	00027	00114	00343	00413	00502	00510					
C00021	ICRHIG	00020										
C00003	IDITCH	00466	00467									
C00004	IEVAL	00566	00670									
P00470	IFCODE1											
C00004	IFLY	00043	00044	00047	00047	00061	00062	00063	00064	00071	00071	00227
		00227	00234	00238	00345	00345	00415	00421	00421	00434	00435	
		00441	00441	00464	00465	00532	00532					
C00013	IGRDATE											
C00012	IGRPTYPE											
C00021	IHIT	00264	00265	00572	00572	00624	00626					
P00715	IIAIM	00630	00631	00634	00645	00645						
C00010	IINDEX											
C00007	IINITOPT											
C00000	IJFIX											
C00043	IJFIXR											
C00106	IKFIX	00361										
C00020	ILEXTFLT											
P00674	INITIAL.	00007										
C00041	IONIT											
C00001	IORIG	00116	00116	00140	00140	00246	00246					
C00000	IRTN	00010	00010	00011	00013	00013	00671	00671	00672			
C00000	IPASS											
C00020	IPERMODE											
C00005	IRAIDSHP											
C00017	IRECMODE											
C00002	IRECOVER	00135	00135	00206	00207	00471	00471					
C00014	IRFP											
C00003	IRSTORE											
C00002	ISCAN	00077	00077	00622	00622							
C00021	ISFINPLN											
C00003	ISIMTYPE											
C00003	ISQRTY											
C00000	ISRTMTGT	00024	00111	00340	00410	00477	00605					

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C00015  ISTMKSUM
C00004  IT
P00714  ITEMP       00331   00332   00333   00344   00625
C00011  ITGTASG
C00155  ITOLD
P00717  I4          00226   00226   00235   00235
P00357  .10         00065
P00601  .100        00266   00266   00371   00372   00553   00553
P00625  .150        00347
P00631  .155        00647
P00637  .157        00635
P00645  .160
P00650  .170        00636
P00655  .180        00643   00644
P00661  .190        00654
P00066  .20         00064
P00664  .200        00131   00623   00624
P00075  .25         00074
P00102  .26         00100   00100
P00102  .26
P00120  .29
P00124  .30         00127
P00131  .31         00123
P00134  .310        00123   00130
P00137  .311
P00142  .3110       00141
P00163  .312        00134   00141
P00174  .313        00161
P00177  .3130       00175
P00200  .3131       00175   00175
P00211  .314        00207
P00223  .315
P00232  .316
P00241  .317        00240
P00245  .3170       00231
P00250  .318        00247
P00254  .319        00210   00221   00226   00240   00244   00247
P00267  .3190
P00276  .321        00275
P00300  .322        00275
P00330  .324        00277   00323   00324
P00325  .323
P00332  .33         00663
P00350  .34         00347
P00357  .35
P00363  .36
P00370  .40         00355   00356   00362
P00373  .42
P00377  .45         00375   00375
P00402  .46         00417
P00414  .47
P00420  .48         00417
P00055  .5          00071   00623
P00423  .50         00401   00401   00443
```

P00432	.60	00437									
P00440	.70	00436									
P00444	.80	00439	00431	00513							
P00473	.805	00472									
P00442	.81	00505									
P00506	.82	00504									
P00514	.83	00376	00467	00472	00512	00512					
P00533	.85	00461									
P00532	.86										
P00554	.89										
P00562	.93										
P00571	.95										
P00577	.97	00570									
P00700	.EPASER.	00154	00157	00304	00305	00314	00446	00451	00526	00530	00535	00540
		00613	00616								
P00003	..100000	00012									
P00546	.7000001.	00543									
P00720	J#	00050	00377	00416	00422	00425	00436	00442	00452	00456	00460	00466
		00470	00503	00510	00515	00541	00554	00556	00617			
C00003	J&DC											
C00011	J&DDA	00036	00037	00561	00561	00570						
C00007	J&DDB											
C00013	J&E	00034	00557	00557	00567	00567	00574	00574				
C00003	J&FT											
P00721	J&TP	00633	00641	00655								
C00005	J&EL											
C00001	J&ELB	00367	00367									
C00000	J&O											
P00722	J=	00041	00066	00070	00075	00102	00120	00124	00126	00142	00162	00201
		00205	00212	00232	00237	00241	00270	00346	00350	00357	00363	00366
		00425	00451	00453	00461	00504	00510	00514	00515	00540	00542	00560
		00616	00620									
P00723	J=1	00040	00067	00073	00115	00137	00153	00154	00171	00223	00230	00245
		00250										
P00724	J=2	00045	00067	00072	00134	00146	00153	00164	00171	00203	00307	
P00725	J=ASM	00627	00641	00650	00657							
C00016	J=ONE											
C00023	JOUTSRT											
C00024	JPAYLOAD											
C00022	JREFUEL											
C00017	JSECERR	00052	00053	00242	00242	00251	00251					
C00006	JTGTIN											
C00031	J#1											
C00023	J#2											
C00014	KALC											
C00010	KORPWR											
C00036	LASTPAY	00634	00635									
C00037	LASTTGT											
C00124	LKHITMT	00076	00076	00224	00224	00233	00233	00516	00516	00621	00621	
C00156	LOSTTGT											
X00007	MAXIF	00544										
C00002	MAXDA											
C00010	MAXDAB	00033	00033	00552	00552	00600	00600					
C00006	MAXDB											

C00000	MAXPT											
C00000	MINP	00031	00031	00354	00355	00365	00365					
C00004	MINDA											
C00001	MYPOTGT											
C00005	MYPTDLY											
C00211	NASMS	00371										
C00072	NAVAIL											
C00003	NBIT											
C00207	NLOSTTGT											
C00015	NMPSITE											
C00040	NOMIT											
C00010	NOPERSON											
C00015	NPREDEF											
C00002	NUMASM	00370	00370									
C00001	NUMBOMB											
C00000	NUMHIT											
C00210	NWHDS											
P00726	OLDSAVE	00051	00214	00220								
C00005	OTA											
C00007	OTA											
C00003	PLAT											
C00004	PLONG											
P00727	POTVALO	00273	00274	00302	00306							
C00011	PRATRATE											
C00021	PREATTR											
X00004	PRINTIT	00016	00022	00025	00107	00112	00335	00341	00406	00411	00475	00500
		00564	00603	00606	00666							
X00006	PRNTF	00447	00535	00514								
X00002	Q3000040	00360										
X00003	QRQDICT	00000	00005									
X00001	QRQSTOPS	00376										
C00301	RANGE											
C00006	RANGEDEC											
C00014	RANGREF											
C01326	RHOJ											
C00212	RNGASM	00427	00430	00511	00511	00542	00543					
C00014	RNGDEF											
C00002	RNGSURF											
C00004	RSYLOW											
C01472	S											
P00730	SEQERR	00216	00220	00243	00252							
P00731	SFACT	00523	00526									
C00013	SPDASM											
C00011	SPDMI											
C00012	SPDLO											
C00003	SPEED											
P00732	SQERMAX	00054	00221	00244	00253							
C01523	SURV	00311	00352	00456	00457	00531	00531	00652	00656	00656	00660	00660
P00733	TEMP	00303	00304	00307	00320							
P00734	TEMP2	00312	00317									
C01275	V	00271	00271	00351	00351	00651	00651	00661				
C00006	VALIT											
C01244	VALA	00455	00527	00527								
C01213	VALP	00454	00454									

C01015	VALPIST	00360	00360								
C01556	VALCOLE										
C00016	VALFAX	00267	00267								
C00022	VALID	00276	00277	00320	00321	00352	00353	00373	00373	00652	00653	00653
		00661	00662	00662							
C01505	VALOW	00310	00310	00524	00525						
C00012	VALORT										
C00012	VALSORTY	00272	00272								
C00010	VALTOTT										
P01735	**	00453	00542	00620							

00410 SYMBOLS

```
      SUBROUTINE EVALOA                                                 1000
CSUBR      EVALOA    2?0CT71  ********************************************** 2600?
CUSE       PRNTF     9/10/69  ********************************************** 2??0
      COMMON/PRNTF/ATLERM,ATLRS,MAXSUBR,DISTANCE,MSALOM,AVAILOM,        1000
     1   VALIT,FSTATTR,VALTOTT,PRATHAYE,VALCNT,                         2000
     2   CURVAL,CRITATT,ADDLOM,JHONE,DISTSV,ATAHEA,ATLOCAL,             3000
     3   VALO,JXP,DISTAD,ADDYEST,ATYPNEM,ATYPALG,OVALG,JXI,             4000
     4   DIST1,DIST2                                                    5000
CEND       PRNTF     ********************************************************** 2000
CUSE       PRINTOPT  9/10/69  ********************************************** 7000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,IMSTKOPM,IEVAL,       1000
     1        IRAIDSHR,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,               2000
     2        IGRPTYPE,IGRPDATE,ICOMCAR,ISTRKSUM,ICOMMSHR,              3000
     3        ICOMINDX,INEXTELT,IDEBUG,JREFUEL,JOUTSRT,JPAYLOAD         4000
CEND       PRNTOPT   ********************************************************** 7000
CUSE       MAINSTRK  IFEB71  ********************************************** 11000
      COMMON/MAINSTRK/ JMSGLEN,JCORR,IMAXRAD(1100),ILAT(1100),ILONG(1100),  1000
     1IALTRAD(1100),IOPEN(1100),ISTOUT(1100),ISTREC(1300),                  2000
     2ATTLOC(1100),AVAL(1100),RELAT(1100),RELONG(1100),DEST(1100),          3000
     3TASK(1100),CNTRLOC(1100),FLAG(1100)                                   4000
CEND       MAINSTRK  ********************************************************** 11000
C     CHANGE COMMON/MAINSTRK/ TO COMMON/3/                                 14000
CUSE       SRTYTGT   9/10/69  ********************************************** 15000
      COMMON/SRTYTGT/MAXRT,CVRTGT(25),R(25,25),VAL1(25),VAL2(25),       1000
     1   V(25),RMOU(25),ATLOCMI(25),DISTLEG(25),DISTLOC(25),S(25),      2000
     2   SRV(25),VALMONE(25),VALON(25),RVALR(25),VALA(25),IREC(25)      3000
CEND       SRTYTGT   ********************************************************** 15000
CUSE       FIXALL    IFEB71  ********************************************** 17500
      COMMON/FIXALL/IJFIX(1100),IJFIXR(1100),IMFIX(25)                  1000
      TYPE LOGICAL IJFIX,IJFIXR,IMFIX                                   2000
CEND       FIXALL    ********************************************************** 17500
CUSE       CURSORTY  9/10/69  ********************************************** 18000
      COMMON/CURSORTY/NUMHIT,NUMRAD,NUMASM,NMIT,IFLY(13),IMIT(13)       1000
     1   ,LASTMAY,LASTTGT,NOMIT,IOMIT(25),NAVAIL,IAVAIL(25)            2000
     2   ,IKHITAT(25),ITGLOC,LASTTGT(25),LASTTGT,NUMRS,NABES,RNGASM    3000
     3   ,ISTH                                                          4000
CEND       CURSORTY  ********************************************************** 18000
CUSE       SRTYPE    IFEB71  ********************************************** 22000
      COMMON/SRTYPE/ISMTYPE,NAONE,CER,SPEED,ALGHTOLY,RANGELEC           1000
     1   ,ITCLASS,NUMERSON,SPDMI,SPMLO,SPDASM,MAXSHEF,NMPSITE,IMFP      2000
     2   ,IMFSMOVE,IMFMXDF,FUSTOTO                                      3000
      TYPE INTEGER FUNCTION                                             3500
      TYPE REAL MALTOLY                                                 4000
CE         SMSTYPE   ********************************************************** 22000
CUSE       S.AL      9/10/69  ********************************************** 24000
      COMMON/FSL/MTS,JDELM,MAXTA,JADD,MINTA,TEL,MAXAD,JADD,MAXDAB       1000
     1   ,APTA,VELSORTY,JDF,MSLO,VALSORT,VALMAX,JSECDEP,ISPINPLN        2000
      TYPE REAL MINVEL,MAXDA,MINDA,MAXDA,MAXDP                          3000
CE         FSL       ********************************************************** 26000
CUSE       INDEX     9/10/69  ********************************************** 29000
      COMMON/INDEX/INDEX,IOMIN,IMFOVER,IOTCH,IT,ICORR,JTEST             1000
CEN        INDEX     ********************************************************** 29000
CUSE       CHGPLAN   9/10/69  ********************************************** 32000
      COMMON/CHGPLAN/LEN,IAIR,ISCAN,JAFT,AT,JT,MT,JTM                   1000
      TYPE INTEGER AIR,ISCAN,JT                                         2000
CEN        CHGPLAN   ********************************************************** 32000
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      CUSP       PE=JG      9/10/69  ********************************************  31000
           COMMON/PEAJG/IOTA,ICAMPRO(27)                                          1000
      CE=D       PEND       ********************************************************  31000
      CUSP       PCALL      9/10/69  ********************************************  32000
           COMMON/PCALL/IPASS,ICALL                                               1000
      CE=D       PCALL      ********************************************************  32000
           IOTA=IOTA+1                                                           33000
           ICAMPRO(IOTA)=PH  EVALOA                                              34000
           ICALL=56                                                              35000
           CALL PRINTIT(IPROG)                                                   36000
      C***  ENTRY EVALOA                                                        37000
      C          EVALUATE  ASMS NOW ASSIGNED                                   38000
           MINVA=1E200   *  JOEL=0                                             39000
           IF(NUMASN.NE.NASMS) R=G                                               40000
         A MINVA=0.  *  GO TO 31                                                 41000
         9 DO 30 II=2,LASTTGT                                                    42000
             IF(I-IT(II).LT. 0       ) 10,30                                   43000
        10   JM=I-IT(II)          * JA=IFLY(II)                                 44000
      C       SKIP IF USED AS AIM POINT                                         45000
           IF(JA.EQ.JM) 30,15                                                    46000
        15   OVALA(JM)=V(JM)*SURV(JA)                                          47000
           ICALL=79                                                              48000
           ***PRINTF(-6,JM,JA)                                                   49000
        16 IF(OVALA(JM).LT.MINOA)18,30                                           50000
        18 IF(IKFIX(JM))30,20                                                    51000
        20   MINVA=OVALA(JM)                                                     52000
             JOEL=JM                                                             53000
           ICALL=57                                                              54000
           *** PRINTF(-6,JM,JA)                                                  55000
        30   CONTINUE                                                          56000
        31 MAXDA=0.0  *  IAIM=JAD=JAFE=0                                         57000
           DO 60 I2=1,NUMIT                                                      58000
             JX=IOTA-IT(I2)                                                      59000
           IF (JX .EQ.IMECOVER) 60,33                                            60000
        33 IF (KALC .NE. 0) 65+35                                                61000
        35   DO 40 I3=IOTG+1,LASTTGT                                             62000
               J =IFLY(I3)                                                       63000
             IF(IFF(JX,JA).GT.HNGASM)40,40                                       64000
        40     CONTINUE                                                          65000
               OVALA(JX)=0.0                                                     66000
             GO TO 60                                                            67000
        60 V(JX)=VEL0(JX)+VALA(JX)                                               68000
           VALA(JX)=SURV(JA)*V(JX)                                               69000
        65 IF(VALA(JX).GT.MAXDA) 70,60                                           70000
      C  CHECK FOR TARGET IDENTITY                                               71000
        70 II= IABS(MYPCTNT(JX))                                                 72000
           DO 71 I3=2,LASTTGT                                                    73000
             III=XAMSF(I-IT(I3))                                                 74000
             I=INDEXNO(MYPCTGT(I3))                                              75000
             IF(II.EQ.I)=0.71                                                    76000
        71   CONTINUE                                                          77000
           MAXDA=OVALA(JX)                                                       78000
           JAFD=JX  *  IAIM=JA  *  JAFE=JA                                       79000
           IF(JAFD.EQ.JA) 75,80                                                  80000
        75 JAF=XAMSF(I-IT(IA-1))                                                 81000
        80 ICAL=58                                                               82000
```

```
      ***PRINTF(-6,J1,JA)                                          A2000
   91 CONTINUE                                                     A3000
      ICALL=99                                                     A4000
      CALL PRINTIT(TEVAL)                                          A5000
      ICALL=ICALL-1                                                A6000
      RETURN                                                       A7000
      END                                                          A8000
```

IDENT EVALOA

PROGRAM LENGTH		00302
ENTRY POINTS	EVALOA	00004
BLOCK NAMES		
	PRNTF	0003A
	PRINTOPT	00025
	3	00167
	SORTFIST	00151
	FIXALL	00107
	CURSORTY	00214
	GRPTYPE	00022
	EVAL	00021
	INDEX	00007
	CHGPLAN	00010
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	030000	
	060001	
	PRINTIT	
	PRNTF	
	DIFF	

C00015 ADDLOW
C00025 ADDTEST
C00004 ALEWTELY
C00020 ATAREA
C00001 ATLEG
C00000 ATLEGMI
C00021 ATLOCAL
C01357 ATLOCWI
C00027 ATNEWLG
C00004 ATO
C17027 ATTRLOC
C00026 ATTRNEW
C00005 AVAILOW
P00255 BEGIN. 00257
C00006 BTO
C00002 CEP
C33737 CATHYLOC
P00266 COUNT. 00034 00035
C00014 CRITATT
C00013 CURVAL
C00032 D
C23257 DELAT
C25373 DELONG
C27507 DESIG
P00001 DICT. 00006 00017 00060 00105 00137 00238 00250
X00005 DIFF 00136
C00032 DIST1
C00033 DIST2
C00024 DISTAD
C00003 DISTANCE
C01410 DISTLEG
C01441 DISTLOW
C12577 DISTOUT
C14713 DISTREC
C00017 DISTSV
C01720 DREC
C00213 DSTH
C01667 DVALA 00053 00065 00065 00075 00075 00150 00151 00160 00162 00162 00214
00214
C01636 DVALB
C00030 DVALD
P00260 ENDING. 00007 00254 00255 00256 00256
P00004 EVALOA 00004
P00000 EXIT. 00262
C36053 FLAG
P00003 FORMAT. 00012
C00007 FSTATTR
C00021 FUNCTION
P00267 I1 00031 00034
P00270 I2 00117 00120 00242
P00271 IA 00131 00133 00144 00228
C00001 IAIM 00115 00115 00221 00221
C00073 IAVAIL
C00031 ICALL 00015 00015 00054 00054 00101 00102 00232 00233 00245 00246

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C00001  ICAMFROM   00014
C00006  ICHGPLAN
C00007  ICLASS
C00014  ICORCAN
C00017  ICORIDOR
C00005  ICORR
C00016  ICORRSHR
C00002  ICURRAID
C00001  ICURSRTY
C00021  IDEBUG     00020
C00003  IDITCH
C10463  IDPEN
C00004  IEVAL      00251
C00004  IFLY       00043   00043   00134   00134
C00013  IGRPDATA
C00012  IGRPTYPE
C00021  IHIT       00036   00036   00041   00041   00176   00176   00227   00227
P00272  II         00173   00175   00210
C00010  IINDEX
C00007  IINITOPT
P00273  IIT        00200   00201
C00000  IJFIX
C00043  IJFIXR
P00274  IK         00204
C00104  IKFIX      00072
P00275  IN         00172   00204
C00003  INDEXNO    00171   00171   00204   00205
C00020  INFXTFLT
P00255  INITIA_.   00007
C00041  ICMIT      00121   00121
C00001  IORIG      00130   00130
C00000  IOTA       00010   00010   00011   00013   00013   00252   00252   00253
C00000  IPASS
C00020  IPENMODE
C00005  IRAIDSHR
C00017  IRECMODE
C00002  IRECOVER   00123   00123
C00016  IREP
C00003  IRSTKCPY
C00002  ISCAN
C00020  ISFINPLN
C00000  ISIMTYPE
C00000  ISORTY
C00000  ISRTYTGT
C00015  ISTRKSUM
C00004  IT
C00011  ITGTASGN
C00155  ITOLD
P00041  .10
P00047  .15        00045
P00064  .1A
P00070  .1P
P00074  .20
P00111  .30        00037   00040   00046   00067   00067   00073
```

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P00112  .31         00027
P00125  .33         00124
P00130  .35         00124
P00144  .40
P00152  .50
P00153  .60         00142   00143
P00161  .65         00127
P00165  .70
P00210  .71         00207
P00226  .75
P00024  .8
P00232  .80         00152   00164   00164   00207   00225
P00030  .9          00025
P00242  .90         00124
P00264  .FWASE2.    00056   00061   00103   00106   00234   00237
P00083  ..100000    00012
P00263  .KSTIFF.    00170   00170   00203   00204
P00276  JA          00044   00051   00062   00107   00135   00140   00156   00220   00222   00225   00240
C00003  JADD        00114   00217   00217   00224
C00011  JADDA
C00007  JADDH
C00013  JAF         00114   00223   00223   00231   00231
C00003  JAFT
C00002  JCOPR
C00005  JDEL        00023   00100   00100
C00001  JDELR
C00030  JEQ
C00001  JGROUP
P00277  JH          00062   00065   00067   00061   00064   00070   00074   00077   00106
C00014  JHOME
C00023  JOUTSRT
C00024  JPAYLOAD
C00002  JREFUEL
C00017  JSPCEHH
C00004  JTGTTA
P00300  JX          00122   00140   00150   00153   00161   00165   00213   00216   00237
C00031  JX1
C00023  JX2
C00014  KALC        00125   00125
C00036  LASTPAY
C00037  LASTTGT     00031   00032   00145   00145   00211   00211
C00124  LPHITMT
C00156  LOSTTGT
C00002  MAXDA       00112   00113   00163   00163   00215   00215
C00010  MAXDAH
C00004  MAXDH
C00000  MAXPT
C00000  MINH
C00004  MINDA       00022   00022   00025   00027   00064   00066   00076   00074
C00001  MYPOTGT     00166   00166   00201   00202
C00005  NALNTRLY
C00211  NASMS       00025
C00022  NAVAIL
C00003  NHIT
```

C00207	ALOSTTGT				
C00015	ARSTTF				
C00040	SUMIT	00243	00243		
C00010	AOPERSOA				
C00000	AT				
C00002	SUMESM	00024	00024		
C00001	SUMFORM				
C01000	SUMHIT				
CC1210	SEBUS				
C00005	STA				
CL0007	STR				
C00011	BRATRATF				
X00003	BRIMTTT	00014	00247		
X00004	BRNTF	00057	00104	00235	
X00001	03000040	00071			
X00002	BREDICT.	00000	00005		
C00001	BANGE				
CC0006	BAN-GEDEC				
C00014	BANGREF				
C01326	BMOJ				
C00212	BNGASM	00141	00142		
C00002	BNGSUBP				
C00004	BSVLOW				
C21143	BVAL				
C01472	S				
C00013	SPDASH				
C00011	SPDHI				
C00012	SPDLO				
C00003	SPEED				
C01523	SUPV	00052	00052	00157	00157
C31623	TASK				
C06347	TIMEBREF				
C02117	TLAT				
C04233	TLONG				
P00112	TS00001.	00033			
P00243	TS00002.	00117			
P00145	TS00003.	00132			
P00211	TS00004.	00174			
CC1275	V	00050	00050	00155	00140
C00006	VALIT				
C01244	VALA	00155			
C01213	VALB	00154	00154		
C00015	VALDIST				
C01554	VALOONE				
C00016	VALMAX				
C00022	VALO				
C01605	VALON				
C00012	VALONT				
C00012	VALSORTY				
C00010	VALTOTT				
P00036	WS00001.	00111			
P00123	WS00002.	00244	00244		
P00133	WS00003.	00146	00146		
P03175	WS00004.	00212	00212		

```
Pgm301 -W          00063   00110   00241
  00330 SYMBOLS
```

```
      SUBROUTINE EVALOR                                                 1000
CSUBP      EVALOR    20APR71  ********************************************* 25000
CUSE       PRNTF     9/10/69  ********************************************* 2000
      COMMON/PRNTF/ATLEGHI,ATLEG,RNGSURP,DISTANCE,HSVLOW,AVAILCM,       1000
     1   VALIT,FSTATTR,VALTOTT,PRATDATE,VALONT,                         2000
     2   CURVAL,CRITATT,ADDLOW,JHONE,DISTSV,ATAREA,ATLOCAL,             3000
     3   VALO,JX2,DISTAD,ADDTEST,ATTRNEW,ATSEMLE,DVALO,JX1,             4000
     4   DIST1,DIST2                                                    5000
CEND       PRNTF     ********************************************* 2000
CUSE       PRINTOPT  9/10/69  ********************************************* 7000
      COMMON/PRINTOPT/ ISRTYTST,ICURSRTY,ICURRAID,IKSTRCPN,IEVAL,       1000
     1       IRAIDSHR,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,               2000
     2       IGRPTYPE,IGRPDATA,ICORCAR,ISTRKSUM,ICORRSHR,              3000
     3       ICORIDOR,INEXTFLT,IOFRUG,JREFUEL,JOUTSRT,JPAYLOA          4000
CEND       PRINTOPT  ********************************************* 7000
CUSE       RAIDSTRK  1FEB71    ********************************************* 11000
      COMMON/3/NT,JGROUP,JCORP,INDEXNO(1100),TLAT(1100),TLONG(1100),    1000
     1TIMEPREM(1100),IOPEN(1100),DISTOUT(1100),DISTREC(1100),           2000
     2ATTRLOC(1100),RVAL(1100),DELAT(1100),DELONG(1100),DESIG(1100),    3000
     3TASK(1100),CNTRYLOC(1100),FLAG(1100)                              4000
CEND       RAIDSTRK  ********************************************* 11000
C     CHANGED COMMON/RAIDSTRK/ TO COMMON/3/                             14000
CUSE       SORTYTGT  9/10/69  ********************************************* 15000
      COMMON/SORTYTGT/MAXPT,MYPOTGT(25),D(25,25),VALM(25),VALA(25),     1000
     1     V(25),RHOJ(25),ATLOCH(25),DISTLEG(25),DISTLOW(25),S(25),     2000
     2     SURV(25),VALDONE(25),VALON(25),DVALR(25),DVALA(25),DREC(25)  3000
CEND       SORTYTGT  ********************************************* 15000
CUSE       CURSORTY  9/10/69  ********************************************* 18000
      COMMON/CURSORTY/NUMHIT,NUMHOR,NUMASW,NMIT,IFLY(13),IMIT(13)       1000
     1       ,LASTPAY,LASTTGT,NOMIT,IOMIT(25),NAVAIL,IAVAIL(25)         2000
     2       ,LKHITMT(25),ITOLD,LOSTTGT(25),NLOSTTGT,NRHOS,NASHS,RNGASM 3000
     3       ,DSTR                                                      4000
CEND       CURSORTY  ********************************************* 18000
CUSE       EVAL      9/10/69  ********************************************* 22000
      COMMON/EVAL/MINR,JGELR,MAXDA,JADD,MINDA,JCEL,MAXOR,JADDR,MAXDAR   1000
     1     ,JADDA,VALSORTY,JAF,KALC,VALDIST,VALMAX,JSECFWR,ISFINPLN     2000
      TYPE REAL MINR,MAXDA,MINDA,MAXOR,MAXDAR                           3000
CEND       EVAL      ********************************************* 22000
CUSE       CORRIDOR  9/19/69  ********************************************* 25000
      COMMON/CORRIDOR/CLAT,CLONG,CZONE,PLAT,PLONG,ELAT,ELONG,CLENGTH,   1000
     1     KORPWR,CORATTR,CORSATTR,ATTRHILO,RNGDEF,NPHELEF,              2000
     2     DISTDEF(3),PREATTR(3)                                         3000
      TYPE INTEGER CZONE                                                4000
      TYPE REAL KORPWR                                                  5000
CEND       CORRIDOR  ********************************************* 25000
CUSE       VAL       9/10/69  ********************************************* 26000
      COMMON/VAL/VALRECVR,MUSTREC,VIRNLOAD                              1000
CEND       VAL       ********************************************* 26000
      DIMENSION DUMM(18)                                                28000
      EQUIVALENCE (DUMM,CLAT)                                           29000
CUSE       INDEX     9/10/69  ********************************************* 30000
      COMMON/INDEX/ISORTY,IORIG,IRECOVER,IDITCH,IT,ICORR,JTGTIN         1000
CEND       INDEX     ********************************************* 30000
CUSE       DEBUG     9/10/69  ********************************************* 31000
      COMMON/DEBUG/IOTA,ICANFROM(20)                                    1000
CEND       DEBUG     ********************************************* 31000
```

```
CUSE      PCALL     9/19/69  ********************************************  32000
      COMMON/PCALL/IPASS,ICALL                                              1000
CEND      PCALL     ********************************************************  32000
      IOTA=IOTA+1                                                           33000
      ICALL=FROM(IOTA):8H  EVALOB                                           34000
      ICALL=60                                                              35000
      CALL PRINTIT(IDEBUG)                                                  36000
      MAXOB=-1E200                                                          37000
      DO 400 I2=1,NOBIT                                                     38000
        JX=IOBIT(I2)                                                        39000
      IF (JX .EQ. IRECOVER)5,7                                              40000
    5 CONTINUE                                                              40100
      JX1 = IFLY(LASTPAY)                                                   40200
      DISTAD = D(IRECOVER,JX1) + DREC(JX1)                                  40300
      DVALO = VALDIST*DISTAD                                                40400
      ATTRNEW = D(IRECOVER,JX1) * COPATTR                                   40450
      DVALB = (VALRECVR*VALSORTY*SURV(JX1)*EXPF(-ATTRNEW)) - DVALO          40600
      IF (DISTAD .GT. RNGSURP)335,355                                       40700
    7 RHOK=RHOJ(JX)                                                         41000
      DO 10 IX1 =1,LASTPAY $ IX2 =IX1+1                                     42000
      JX2=IFLY(IX2)                                                         43000
          IF(RHOJ(JX2).GT.RHOK) 200,10                                      44000
   10     CONTINUE                                                          45000
  200 JX1=IFLY(IX1)                                                         46000
C     THEN  DETERMINE DISTANCE ADDED IF INSERTED IN NORMAL RHO SEQUE        47000
      DIST1=DIFF(JX1,JX)                                                    48000
      DIST2=DIFF(JX,JX2)                                                    49000
      DISTAD=DIST1+DIST2-DISTLEG(JX2)                                       50000
      ICALL=61                                                              51000
      WRK PRNTF(-7,JX,6HNORMAL)                                             52000
C     THEN COMPARE DISTANCE ADDED IF INSERTED OTHER SIDE (F NEAREST         53000
      IF(RHOJ(JX2)-RHOJ(JX).LT.RHOJ(JX)-RHOJ(JX1)) 275,230                  54000
  230 IF(JX1.NE.IORIG) 235, 330                                             55000
C     TRY PRIOR LEG                                                         56000
  235 IXTEST =IX1                                                           57000
  240 IXTEST =IXTEST-1 $ JXTEST=IFLY(IXTEST)                                58000
      IF(JXTEST.EQ.JX1) 240,241                                             59000
  241 DISTEST=DIFF(JXTEST,JX)                                               60000
      ADDTEST=DISTEST+DIST1-DISTLEG(JX1)                                    61000
      ICALL=62                                                              62000
      WRK PRNTF(-7,JX,8HTSTPRIOR)                                           63000
      IF(ADDTEST.LT.DISTAD) 250, 330                                        64000
C     THEN REVISE INSERTION POINT AND EVALUATE                              65000
  250 IX2=IX1 $ IX1=IXTEST $ JX2=IFLY(IX2)                                  66000
  270 JX1=IFLY(IX1)                                                         67000
      DISTAD=ADDTEST      $ DIST1=DISTEST                                   68000
      DIST2=DIST1                                                           69000
      ICALL=63                                                              70000
      WRK PRNTF(-7,JX,8HMOVPRIOR)                                           71000
C     TRY ONE MORE PRIOR POSITION                                           72000
      GO TO 230                                                             73000
C     TRY SUCCEEDING LEG                                                    74000
  275 IXTEST=IX2                                                            75000
  280 IXTEST =IXTEST+1 $ JXTEST=IFLY(IXTEST)                                76000
      IF (JXTEST.EQ.JX2) 290,290                                            77000
  290 DISTEST=DIFF(JX,JXTEST)                                               78000
```

```
      ADDTEST=DISTEST+DIST2 -DISTLEG(JXTEST)                          79000
      ICALL=64                                                        80000
      *** PRNTF(-7,JX,7HTSTSUCC)                                      81000
      IF(ADDTEST.LT.DISTAD ) 300, 310                                 82000
C***    REVISE INSERTION POINT AND EVALUATE                           83000
  300 DISTAD=ADDTEST  $  DIST1=DIST2                                  84000
      JX1=JX2    $  IX1=IX2                                           85000
      JX2=JXTEST $ IX2 =IXTEST                                        86000
      ICALL=65                                                        87000
      *** PRNTF(-7,JX,7H40VSUCC)                                      88000
C***    GO TO EVALUATE                                                89000
      GO TO  330                                                      90000
  310 IF(RHOJ(JXTEST).LT.RHOX) 320,330                                91000
C       THEN TEST ONE LEG FURTHER OUT                                 92000
  320 DIST1=DIST2   $   DIST2=DISTEST                                 93000
      JX1=JX2  $ IX1=IX2                                              94000
      JX2=JXTEST $ IX2=IXTEST                                         95000
      GO TO 280                                                       96000
C     NOW EVALUATE WITH RESPECT TO CHOSEN LEG                         97000
  330 IF(DISTAD.GT.RNGSURP) 335,336                                   98000
  335 DVALR(JX)=-1E200                                                99000
      GO TO 355                                                      100000
  336 IF(A*HDS.EQ.NASMS) 337,338                                     101000
  337 ATTRNE=CORATTR*DISTAD                                          102000
      ATNELG=CORATTR*DIST1  $  GO TO 339                             103000
  338 ATTRNE=ATLOCMI(JX)*CORATTR*DISTAD                              104000
      ATNELG=ATLOCMI(JX)*CORATTR*DIST1                               105000
  339 DISTLEG(JX)=DIST1                                              106000
      IF(DIST(JX2).EQ.DISTLEG(JX2)) 340,350                          107000
  340 ATTRNE=ATTRNE+ATTRMILO          $ ATNELG=ATNELG+ATTRMILO       108000
  350 DVALO=VALDIST*DISTAD                                           109000
     1    *VALON(JX2)*SURV(JX2)*(1.0-EXPF(-ATTRNE*1))               110000
      IF(A*HDS.EQ.NASMS) 352,353                                     111000
  352 DVALM(JX)=(VALM(JX)*VALA(JX))*SURV(JX1)*EXPF(-ATNELG)-DVALO    112000
      GO TO 355                                                      113000
  353 DVALM(JX)=VALM(JX)*SURV(JX1)*EXPF(-ATNELG)-DVALO               114000
  355 CONTINUE                                                       115000
      ICALL=66                                                       116000
      *** PRNTF(-8,JX,8HEVALUATE)                                    117000
      IF(DVALM(JX).GT.-MAXOB)  360, 400                              118000
  360 CONTINUE                                                       119000
      IF (JX .EQ. IRECOVER) 3601,3605                                119100
 3601 CONTINUE                                                       119200
      IF (IFLY(LASTPAY) .EQ. IRECOVER) 400,3611                      119300
 3605 CONTINUE                                                       119400
      IK=INDEXNO(MYPOTGT(JX))                                        120000
      DO 361 II=2*LASTTGT                                            121000
        JZ=XABSF(IMIT(II))                                           122000
        IN=INDEXNO(MYPOTGT(JZ))                                      123000
        IF(IK.EQ.IN)400,361                                          124000
  361   CONTINUE                                                     125000
 3611 CONTINUE                                                       125500
      MAXOB=DVALM(JX)                                                126000
      JA009=JX                                                       127000
      JAF = JX1                                                      128000
  362 IF1=LKHITMT(JAF)  $  IF2=IF1.)                                 129000
```

```
      IF(IFLY(IF1).EQ.IFLY(IF2)) 363,400                                130000
  363 JAF=XABSF(IHIT(IF2))  * GO TO 362                                 131000
  400 CONTINUE                                                          132000
      ICALL=67                                                          133000
      CALL PRINTIT(IFVAL)                                               134000
      IOTA=IOTA-1                                                       135000
      RETURN                                                            136000
      END                                                               137000
```

IDENT EVALOB

PROGRAM LENGTH		00641
ENTRY POINTS	EVALOB	00012
BLOCK NAMES		
	PRNTF	00034
	PRINTOPT	00025
	3	40167
	SORTYTET	01751
	CURSORTY	00214
	EVAL	00021
	CORRIDOR	00024
	VAL	00003
	INDEX	00007
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	OBJECT.	
	PRINTIT	
	DIFF	
	PRNTF	
	EXPF	

C00015	ADDLO=											
C00025	ADDTEST	00176	00177	00207	00210	00223	00257	00257	00270	00271	00273	00273
C00020	ATANEA											
C00001	ATLEG											
C00000	ATLEGMI											
C00021	ATLOCAL											
C01357	ATLOCMI	00355	00355	00361	00361							
C00027	ATNEWLG	00350	00362	00362	00376	00377	00400	00420	00420	00435	00435	
C00013	ATTRHILO	00374	00374	00376	00377							
C17027	ATTRLOC											
C00026	ATTRNEW	00056	00057	00057	00346	00356	00356	00373	00373	00375	00375	00401
		00401										
C00005	AVAILOW											
P00607	BEGIN.	00611										
C00000	CLAT											
C00007	CLENGTH											
C00301	CLONG											
C33737	CNTRYLOC											
C00011	CORATTR	00055	00056	00344	00344	00346	00347	00352	00352	00357	00357	
C00012	CORSATTR											
C00014	CRITATT											
C00013	CURVAL											
C00002	CZONE											
C00032	D	00046	00046	00054	00055							
C23257	DELAT											
C25373	DELONG											
C27507	DESIG											
P00031	DICT.	00014	00025	00062	00121	00125	00140	00171	00204	00233	00251	00265
		00311	00404	00431	00440	00454	00553					
X00003	DIFF	00120	00124	00170	00250							
C00035	DIST1	00123	00127	00174	00174	00225	00225	00275	00322	00347	00350	00360
		00360	00363	00363								
C00033	DIST2	00127	00130	00226	00254	00254	00274	00321	00321	00323	00324	
C00024	DISTAD	00051	00051	00053	00053	00070	00070	00132	00132	00210	00223	00271
		00274	00334	00334	00345	00345	00353	00353	00412	00413		
C00003	DISTANCE											
C00016	DISTDEF											
P00622	DISTEST	00173	00224	00253	00323							
C01410	DISTLEG	00131	00131	00175	00176	00256	00256	00365	00365	00371	00371	
C01441	DISTLOW	00367	00367									
C12577	DISTOUT											
C14713	DISTREC											
C00017	DISTSV											
C01720	DREC	00050	00050									
C00213	DSTB											
C00000	DUMM											
C01667	DVALA											
C01636	DVALR	00067	00067	00340	00341	00433	00434	00445	00446	00460	00460	00522
		00522										
C00030	DVALO	00054	00066	00066	00414	00415	00432	00433	00444	00445		
C00005	ELAT											
C00006	ELONG											
P00612	ENDI..G.	00015	00560	00610	00611							
P00012	EVALOB	00012										

P00000	EXIT.	00613									
X00005	EXPF	00061	00403	00430	00437						
C36053	FLAG										
P00003	FORMAT.	00020	00135	00201	00230	00262	00306	00451			
C00007	FSTATTR										
P00623	I2	00033	00034	00545							
C00073	IAVAIL										
C00001	ICALL	00023	00023	00133	00134	00200	00200	00227	00227	00260	00261	00305
		00305	00447	00450	00550	00551					
C00001	ICAMFROM	00022									
C00006	ICHGPLAN										
C00014	ICORCAR										
C00017	ICORICOR										
C00005	ICORR										
C00016	ICORRSHR										
C00002	ICURRAIO										
C00001	ICUWSPTY										
C00021	IDEBUG	00026									
C00003	IDITCH										
C10463	IOPEN										
C00004	IOVAL	00554									
P00624	IP1	00532	00534								
P00625	IP2	00533	00536	00540							
C00004	IPLY	00042	00102	00103	00115	00115	00143	00164	00215	00215	00220	00220
		00243	00244	00467	00534	00535	00536	00537				
C00013	IGRPDATA										
C00012	IGRPTYPE										
C00023	IMIT	00503	00503	00541	00541						
P00626	II	00500	00502	00516							
C00010	IINDEX										
C00007	IINITORT										
P00627	IK	00477	00513								
P00630	IN	00513	00514								
P00561	INOOOO4.	00045	00574	00605							
C00003	INOEXND	00476	00476	00511	00512						
C00020	INEXTFLT										
P00610	INITIAL.	00015									
C00041	IOMIT	00035	00035								
C00001	IORIG	00155	00155								
C00000	IOTA	00016	00016	00017	00021	00021	00556	00556	00557		
C00000	IPASS										
C00005	IRAIDSHR										
C00002	IRECOVER	00037	00037	00464	00464	00467	00470	00570	00570		
C00003	IRSTRCPM										
C00020	ISFINPLA										
C00000	ISORTY										
C00000	ISRTYTGT										
C00015	ISTRXSUM										
C00004	IT										
C00011	ITGTASGN										
C06155	ITOLD										
P00631	IX1	00076	00100	00114	00114	00152	00212	00214	00217	00321	00330	
P00632	IX2	00101	00102	00213	00214	00247	00300	00304	00327	00333		
P00633	IXTEST	00160	00161	00162	00163	00213	00240	00241	00242	00243	00303	00332

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P00111  .10          00107   00107
P00114  .200         00110
P00154  .230         00152   00153   00230
P00157  .235
P00161  .240         00167
P00170  .241         00166
P00212  .250
P00217  .270
P00237  .275         00153
P00241  .280         00247   00333
P00250  .290         00248
P00273  .300
P00315  .310         00272   00272
P00321  .320
P00334  .330         00156   00211   00211   00314   00320   00320
P00337  .335         00072
P00342  .336         00335   00336
P00344  .337
P00352  .338         00343
P00363  .339         00351
P00373  .340
P00401  .350         003..
P00420  .352
P00435  .353         00417
P00447  .355         00071   00072   00341   00434
P00463  .360
P00466  .3601
P00472  .3605        00465
P00516  .361         00514
P00521  .3611        00470
P00530  .362         00544
P00540  .363
P00545  .400         00462   00462   00471   00515   00537
P00041  .S
P00073  .T           00040
P00615  .ERASER.     00060   00136   00141   00202   00205   00231   00234   00253   00266   00307   00312
                     00062   00611   00614   00621   00624   00627   00632   00636   00652   00655
P00003  ..100000     00020
P00004  ..100001     00142
P00005  ..100002     00206
P00006  ..100003     00235
P00007  ..100004     00267
P00010  ..100005     00313
P00011  ..100006     00456
P00614  .ESTEEP.     00475   00475   00510   00511
C00003  JAGO
C00011  JADDA
C00007  JADDR        00525   00525
C00013  JAE          00527   00527   00530   00530   00543   00543
C00002  JCOMR
C00005  JDEL
C00001  JDELR
C00001  JGROUP
C00016  JHOSE
```

C00023	JOUTSRT											
C00024	JPAYLOAD											
C00022	JREFUEL											
C00017	JSEQFRP											
C00006	JTGTIN											
P00634	JX	00036	00073	00122	00126	00141	00145	00147	00172	00205	00234	00252
		00266	00312	00340	00354	00364	00422	00441	00455	00457	00463	00472
		00521	00524									
C00031	JX1	00042	00043	00047	00047	00116	00116	00122	00150	00151	00154	00154
		00165	00166	00175	00221	00221	00276	00325	00424	00424	00442	00443
		00526	00524	00600	00600							
C00023	JX2	00103	00104	00104	00126	00130	00216	00216	00245	00246	00275	00302
		00302	00324	00331	00331	00366	00366	00370	00370	00406	00406	
P00635	JXTEST	00165	00172	00245	00252	00255	00301	00315	00330			
P00636	JZ	00505	00506									
C00014	KALC											
C00010	KONPWR											
C00036	LASTPAY	00041	00041	00112	00112	00466	00466					
C00037	LASTTGT	00517	00517									
C00124	LKMITMY	00531	00531									
C00156	LOSTTGT											
C00007	MAXDA											
C00010	MAXDAR											
C00006	MAXOR	00031	00031	00461	00461	00523	00523					
C00008	MAXPT											
C00006	MINR											
C00004	MINDA											
C00001	MUSTREC											
C00001	MYPOTGT	00473	00473	00500	00507							
C00211	NASMS	00343	00416									
C00072	NAVAIL											
C00003	NHIT											
C00207	NLOSTTGT											
C00040	NOMIT	00546	00546									
C00015	NPREDEF											
C00000	NT											
C00002	NUMASM											
C00001	NUMBOMB											
C00030	NUMMIT											
C00210	NWDS	00342	00342	00415	00416							
C00003	PLAT											
C00004	PLONG											
C00011	PRATRATE											
C00021	PREATTR											
X00002	PRINTIT	00024	00552									
X00004	PRNTF	00137	00203	00232	00264	00310	00453					
X00001	QRQDICT.	00000	00013									
P00564	RELCON..	00027	00555	00607								
C01326	RHOJ	00074	00074	00105	00105	00143	00144	00145	00146	00147	00158	00151
		00152	00316	00316								
P00637	RHOK	00075	00106	00317								
C00212	RNGASM											
C00014	RNGDEF											
C00002	RNGSUBR	00071	00335									

C00004	#SVLOW											
C21143	#VAL											
C01472	S											
C01523	SUMV	00065	00065	00410	00425	00425	00443	00444				
C31623	TASK											
C06347	TIMEPREM											
C02117	TLAT											
CC4233	TLONG											
P00546	TS00001.	00033										
P00112	TS00002.	00077										
P00517	TS00003.	00501										
P00567	UP00003.	00562	00571	00572	00573	00575	00575					
P00577	U#00004.	00044	00117	00222	00277	00324	00543	00601	00002	00003	00005	00006
C01275	V											
C00006	VALIT											
C01244	VALA	00423										
C01213	VALB	00422	00423	00441	00442							
C00015	VALDIST	00052	00052	00411	00412							
C01554	VALDOME											
C03016	VALMAX											
C00022	VALO											
C01605	VALON	00407	00407									
C00012	VALONT											
C00000	VALRECVR	00063	00063									
C00012	VALSORTV	00064	00064									
C00010	VALTOTT											
C03002	VUMLOAD											
P00034	#S00001.	00547	00547									
P00100	#S00002.	00113	00113									
P00502	#S00003.	00520	00520									
P00640	##	00143	00207	00236	00270	00314	00457					

00351 SYMBOLS

```
      SUBROUTINE FLTPLAN                                                    1000
CSMAP      FLTPLAN   1.30.70  ***************************************      23000
CUSE       PATDSTHK  (FEB71)  ***************************************      2000
      COMMON/3/NT,JGROUP,JCORR,INDEXNO(1100),TLAT(1100),TLONG(1100),       1000
     1TIMEREM(1100),ICMEN(1100),DISTOUT(1100),DISTREC(1100),               2000
     2ATTPLOC(1100),VAL(1100),DELAT(1100),DELONG(1100),DESIG(1100),        3000
     3TASK(1100),CNTRYLOC(1100),FLAG(1100)                                 4000
CEND       PATDSTHK  ***************************************              2000
CUSE       PRNTF     9/10/69  ***************************************      5000
      COMMON/PRNTF/ATLEGHI,ATLEG,MAGSURF,DISTANCE,HSVLOW,AVATLOW,          1000
     1   VALIT,FSTATTR,VALTOTT,PRATRATE,VALCNT,                            2000
     2   CURVAL,CRITATT,ADDLOW,JHONE,DISTSV,ATAMEA,ATLOCAL,                3000
     3   VALC,JX2,DISTAC,ADDBEST,ATTMEA,ATMELS,DVALC,JX1,                  4000
     4   DIST1,DIST2                                                       5000
CEND       PRNTF     ***************************************              5000
CUSE       PRINTOPT  9/10/69  ***************************************      10000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,IMSTKOPH,IEVAL,          1000
     1       IPAIDSW,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,                    2000
     2       IGRPTYPE,IGRPDATA,ICORCAP,ISTRKSUM,ICORRSW,                   3000
     3       ICORRIOSW,IAFXTFLT,IDEBUG,JREFUEL,JOBTSAT,JPAYLOA             4000
CEND       PRINTOPT  ***************************************              10000
CUSE       CURRAID   (FEB71)  ***************************************      14000
      COMMON/CURRAID/MYPHASE(100),MASGN(100),JTGT(10,100),MYASGN(1100),    1000
     1INDEXVEH(100)                                                        2000
CEND       CURRAID   ***************************************              14000
CUSE       SORTYTGT  9/10/69  ***************************************      16000
      COMMON/SORTYTGT/MAXPT,MYPOTGT(25),S(25,25),VALB(25),VALA(25),        1000
     1      V(25),PHOLD(25),ATLOCHI(25),DISTLEG(25),DISTLO=(25),S(25),     2000
     2      SURV(25),VALONE(25),VALON(25),DVALB(25),DVALA(25),DREC(25)     3000
CEND       SORTYTGT  ***************************************              16000
CUSE       CURSORTY  9/10/69  ***************************************      19000
      COMMON/CURSORTY/NUMHIT,NUMHONE,NUMASH,NHIT,IFLY(13),IHIT(13)         1000
     1       ,LASTPAY,LASTTGT,NOHIT,IOHIT(25),NAVAIL,IAVAIL(25)            2000
     2       ,LKHITMT(25),ITOLD,LOSTTGT(25),NLOSTTGT,NUMRSS,NASHS,RNGASH   3000
     3       ,OSTR                                                         4000
CEND       CURSORTY  ***************************************              19000
CUSE       OUTSRT    (FEB71)  ***************************************      23000
      COMMON/OUTSRT/ICUTSRT,MYGROUP,MYCORR,INDVEH,JREF,JOPEN,PAYLOAD,      1000
     1LNCHBASE,ITYP,BASELAT,BASELONG,NMAP,MAPTYPE(10),OBLAT(10),           2000
     2OBLONG(10),OLAT(10),OLONG(10),IORDFCT(10),OSIG(10),TSK(10),          3000
     3CATHLO(10),FLG(10),ATTHOUT(10),SURVOUT(10),OSTLOW1,OSTLOW2,          4000
     4OSTLOW3,SPDLOW,SPDHIGH,RANGFX,RANGEREF,DELAY,IHG,ILAT,IHOMBER,       5000
     5AYLOW,RNGOC                                                          6000
      TYPE INTEGER MAPTYPE                                                 7000
CEND       OUTSRT    ***************************************              23000
CUSE       RUNCHECK  9/10/69  ***************************************      30000
      COMMON/RUNCHECK/RUNCHECK                                             1000
CEND       RUNCHECK  ***************************************              30000
      DATA(RUNCHECK=0)                                                     31000
CUSE       INITOPT   9/24/69  ***************************************      32000
      COMMON/INITOPT/FLYLOW(3),IMPORTS(3),ATPDIST(3),DISTINK,TDEFDIST,     1000
     1   RNGF                                                              2000
CEND       INITOPT   ***************************************              32000
CUSE       CORRIDOR  9/10/69  ***************************************      34000
      COMMON/CORRIDOR/CLAT,CLONG,CZONE,PLAT,PLONG,ELAT,ELONG,CLENGTH,      1000
     1   KORRWR,CORRTYP,CORRATTR,ATTRHILO,RNGDEF,NPHDEF,                   2000
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      2    DISTDEF(3),PREATTR(3)                                          3000
       TYPE INTEGER CZONE                                                4000
       TYPE REAL KORPWR                                                  5000
CEND       CORRIDOR  ********************************************************* 34000
CUSE       RAIDSHR   9/10/69  ********************************************** 37000
       COMMON/RAIDSHR/NVEH,NRVEH(200),DISTB(200),NB,VPRBASE,             1000
      1        NWPV(200),NWPC,TGTSTWND,NASMPV(200)                       2000
       TYPE INTEGER VPRBASE                                              3000
CEND       RAIDSHR   ********************************************************* 37000
CUSE       GRPTYPE   IFEB71  ********************************************** 39000
       COMMON/GRPTYPE/ISIMTYPE,RANGE,CEP,SPEED,ALERTDLY,NALRTDLY,RANGEDEC 1000
      1    ,ICLASS,NOPERSON,SPDHI,SPDLO,SPDASH,RANGREF,NWPSITE,IPEP       2000
      2    ,IRECMODE,IPENMODE,FUNCTION                                    3000
       TYPE INTEGER FUNCTION                                             3500
       TYPE REAL NALRTDLY                                                4000
CEND       GRPTYPE   ********************************************************* 39000
CUSE       INDEX     9/10/69  ********************************************** 43000
       COMMON/INDEX/ISORTY,IORIG,IRECOVER,IDITCH,IT,ICORR,JTGTIR         1000
CEND       INDEX     ********************************************************* 43000
CUSE       EVAL      9/10/69  ********************************************** 44000
       COMMON/EVAL/MINA,JDELA,MAXDA,JADD,MINDA,JDEL,MAXOR,JADDA,MAXDAR   1000
      1      ,JADDA,VALSORTY,JAF,KALC,VALDIST,VALMAX,JSEQERR,TSFINPLN     2000
       TYPE REAL MINA,MAXDA,MINDA,MAXOR,MAXDAR                           3000
CEND       EVAL      ********************************************************* 44000
       DIMENSION IDEF(10)                                                47000
CUSE       DEBUG     9/10/69  ********************************************** 48000
       COMMON/DEBUG/IOTA,ICAMFROM(20)                                    1000
CEND       DEBUG     ********************************************************* 48000
CUSE       PCALL     9/10/69  ********************************************** 49000
       COMMON/PCALL/IPASS,ICALL                                          1000
CEND       PCALL     ********************************************************* 49000
       IOTA=IOTA+1                                                       50000
       ICAMFROM(IOTA)=8H FLTPLAN                                         51000
       ICALL=34                                                          52000
       CALL PRINTIT(IDEBUG)                                              53000
       ICALL=35                                                          54000
       NW=PRNTF(-9,8HBEFORE S,8HET-UP   )                                55000
C***   FLTPLAN ENTRY                                                     56000
C          CALC DISTANCE AND VALON (HI ALT), WORKING BACK FROM RECOVERY T 57000
     1 DIFSUP=CORATTR-CORSATTR                                           58000
       DISTANCE=0.0  %CURVAL=0.                                          59000
       VALMAX=0.0                                                        60000
       IFINFLT=1                                                         61000
       II=NMIT                                                           62000
     5 II=II-1                                                           63000
       JM=IMIT(II)    %JM2=XABSF(IMIT(II+1))                             64000
       JY=IFLY(II)    %JY2=IFLY(II+1)                                    65000
       IF(JM.LT.0) 10,20                                                 66000
    10 JM=-JM    % V(JM)=VALB(JM)+VALA(JM)    % GO TO 25                67000
    20 V(JM)=VALB(JM)                                                    68000
    25 VALMAX=VALMAX+V(JM)                                               69000
C      VALMAX=UPPER LIMIT OF SORTY VALUE                                 70000
       IF(JY2.EQ.JY) 30,40                                               71000
    30 DISTLEG(JM2)=0.0  %  S(JM2)=1.0  %  GO TO 48                      72000
    40 DISTLEG(JM2)=DIFF(JY,JY2)                                         73000
       DISTANCE=DISTANCE+DISTLEG(JM2)                                    74000
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      IF(JM2.EQ.IRECOVER) 41,42                                          75000
C     ADD RECOVERY DISTANCE TO DISTOUT OR DEPEN DIST                     76000
   41 LEGREC=IFLY(I1)                                                    77000
      IF(LEGREC.EQ.1) 410,411                                            78000
  410 LEGREC = XABSF(IMIT(I1))                                           79000
  411 DRECOV = DREC(LEGREC)                                              80000
      DISTLEG(IMITCH)=DRECOV                                             81000
      DISTANCE=DISTANCE+DRECOV                                           82000
   42 IF(JV.NE.IORIG) 43,44                                              83000
   43 ATLEG=ATLOCMI(JV2)+DISTLEG(JM2)*CORRATTR $ GO TO 47                84000
C     CALC ATTR AT HI ALT EXCEPT FOR LEG TO FIRST TGT                    85000
   44 IONE=I1+1   $  JMONE=JM2                                           86000
      ATLEG=ATTRHILO+(ATLOCMI(JV2)+CORRATTR*DISTLEG(JM2)                 87000
     1     *DIFSUP*RNGDEF*(1.0-EXPF(-DISTLEG(JM2)/RNGDEF)))             88000
   47 S(JM2)=EXPF(-ATLEG)                                                89000
   48 VALON(JM)=V(JM)*VALON(JM2)*S(JM2)                                  90000
      DISTLOW(JM2)=0.0                                                   91000
      ICALL=36                                                           92000
      WW= PRNTF(I1,JM2,RNSETUP,M2)                                       93000
      IF(JM.NE.IORIG) 5,55                                               94000
   55 IF (JCOMP .LE. 2)  58, 40                                          95000
   58 DISTLEG(IORIG)=0.   $  GO TO 61                                    96000
   60 DISTLEG(IORIG)=DISTANCE                                            97000
   61 DISTLOW(IORIG)=0.0                                                 98000
      DISTANCE=DISTANCE+DISTLEG(IORIG)                                   99000
      ICALL=37                                                          100000
      WW=PRNTF(-9,PARAMETER SETUP-UP     )                              101000
C     PREPARE FOR NEXT LOOP                                             102000
      SURV(IORIG)=1.0/S(JMONE)      $ S(IORIG)=0.0                      103000
C     CALC SURPLUS RANGE AT HI ALT                                      104000
      RNGSURP=RANGE-DISTANCE                                            105000
      IF(RNGSURP.LE.0)62,63                                             106000
   62 AVAILOW=0  $  RSVLOW=0  $  GO TO 78                               107000
   63 AVAILOW=RNGSURP/(RANGEDEC-1.0)                                    108000
      ICALL=38                                                          109000
      WW= PRNTF(-2.0,PMPRERESV)                                         110000
C     RESERVE LOW ALTITUDE RANGE PRIOR TO TGT1                          111000
      RSVLOW=TPREDIST*DISTLEG(JMONE)                                    112000
      AVAILOW=AVAILOW-RSVLOW                                            113000
      ICALL=39                                                          114000
      WW= PRNTF(-2.0,RMFST6TRSV)                                        115000
      IF(AVAILOW.LT.0.0) 70,80                                          116000
   70 RSVLOW=RSVLOW+AVAILOW                                             117000
      AVAILOW=0.0                                                       118000
      ICALL=40                                                          119000
      WW= PRNTF(-2.0,RMXAVAIL I)                                        120000
C     CALCULATE INITIAL ATTRITION RATES                                 121000
   78 DO 79 L=1,3                                                       122000
   79 FLYLO=(L)=0.0                                                     123000
   80 LL=I $ L=IMPORTD(LL)    $ PWATRATE=ATPDIST(L)  $FSTATTR=CORATTR   124000
      ATLO=ATTRHILO*CORATTR  $ATDIFHI=CORATTR-ATLO                      125000
C     NOW PROCESS FORWARD FOR INTERIM VALUE SURV AND ALLOCATE LOW ALT   126000
      I1=I     $ VALONE(IORIG)=0.0   $JM2=XABSF(IMIT(I1)) $JV2=IFLY(I1) 127000
   90 I1=I1+1      $ JM=JM2   $JM2=XABSF(IMIT(I1)) $ JV=JV2 $JV2=IFLY(I1) 128000
      IF(IONE-I1)120,95 ,100                                            129000
   95 VONIG=VALONE(JM)                                                  130000
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      100 SURV(JM2)=SURV(JM)*S(JM2)                                          131000
          VALDONE(JM2)=VALDONE(JM)+V(JM2)*SURV(JM2)                          132000
      110 IF(JM2.NE.IDITCH) 90,115                                           133000
      115 CONTINUE                                                           134000
          ICALL=131                                                          135000
          WW=PRNTF(-2.0,7HDEFICIT)                                           136000
          IF(RSVLOW.GT.1.0) 201,350                                          137000
      C   CALC REVISED S(JM2) AND DISTLOW(JM2) THEN RETURN TO STATEMENT 100 138000
      120 IF(DISTLEG(JM2).EQ.0.0) 100,130                                    139000
      130 IF(AVAILOW.EQ.0.)140,150                                           140000
      140 CONTINUE                                                           141000
          IF(RSVLOW.EQ.0.0)100,200                                           142000
      150 IF(JM2.EQ.IDITCH)140,155                                           143000
      155 IF(AVAILOW.LT.DISTLEG(JM2)) 160,170                                144000
      160 DISTLOW(JM2)=AVAILOW     $AVAILOW=0.0                              145000
          ATLEG=DISTLEG(JM2)*CORATTR-DISTLOW(JM2)*ATDIFHI+ATLOCHI(JY2)       146000
          ICALL=41                                                           147000
          WW=PRNTF(-2.0,9HXAVAIL 2)                                          148000
          S(JM2)=EXPF(-ATLEG)                                                149000
          GO TO 200                                                          150000
      170 DISTLOW(JM2)=DISTLEG(JM2)                                          151000
          AVAILOW=AVAILOW-DISTLOW(JM2)                                       152000
      175 ATLEG=ATTRAILOW*(CORATTR*DISTLEG(JM2)+ATLOCHI(JY2))                153000
      180 S(JM2)=EXPF(-ATLEG)                                                154000
          ICALL=42                                                           155000
          WW= PRNTF(I1,JM2,7HALOCLEG)                                        156000
          GO TO 100                                                          157000
      C   CALCULATE RELATIVE VALUES                                         158000
      200 RATELEG=CORATTR * ATLOCHI(JY2)/DISTLEG(JM2)                        159000
      201 VALONT=VALON(JM2)*SURV(JM)*S(JM2)                                  160000
          VALTOTT=VALDONE(JM)+VALONT                                         161000
          VAL1T=VALTOTT-VOR16                                                162000
      205 CONTINUE                                                           163000
          ICALL=43                                                           164000
          WW=PRNTF(-2,0,7HDECIDE1)                                           165000
          ICALL=44                                                           166000
          WW=PRNTF(-4.0,7HDECIDE2)                                           167000
          IF(VALTOTT*PRATRATE.GT.VALONT*RATELEG)210,250                      168000
      210 IF(VALTOTT*PRATRATE.GE.VAL1T*STATTR) 220,260                       169000
      C   USE RESERVE IN PRECORRIDOR LEG                                     170000
      220 IF(NPREDEF)222,260                                                 171000
      222 FLYLOW(L)=DISTDEF(L)                                               172000
          RSVLOW=RSVLOW-FLYLOW(L)                                            173000
          IF(RSVLOW.LT.0.0) 230, 240                                         174000
      230 FLYLOW(L)=FLYLOW(L)+RSVLOW                                         175000
          ICALL=77                                                           176000
          CALL PRINTIT(IIINITOPY)                                            177000
          DISTLOW(IORIG)=DISTLOW(IORIG)+FLYLOW(L)                            178000
          RSVLOW=0.0      $ CURVAL=VALTOTT*PRATRATE                          179000
          ICALL=45                                                           180000
          WW= PRNTF(-3,L,8HXRESERVE)                                         181000
          GO TO (100,550)IFINFLT                                             182000
      240 LL=LL+1                                                            183000
          DISTLOW(IORIG)=DISTLOW(IORIG)+FLYLOW(L)                            184000
          ICALL=46                                                           185000
          WW= PRNTF(-3,L,8HSTILLRSV)                                         186000
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C     MOVE TO NEXT PRECORR LEG                                          187000
      IF(LL.GT.NPREDEF) 241,242                                         188000
  241 PRATRATE=0.0       $ GO TO  205                                   189000
  242 L=IMPORTO(LL)  $ PRATRATE=ATPDIST(L)  $ GO TO 205                 190000
  250 IF(VALIT*FSTATTR.GT.VALONT*RATELEG) 260 , 320                     191000
C     USE RESERVE IN CORRIDOR BEFORE FIRST TARGET                       192000
  260 CRITATT=MAX1F(VALTOTT*PRATRATE,VALONT*RATELEG)/VALIT              193000
      IF(CRITATT.LE.CORSATTR*1.01)  270, 290                            194000
  270 ADDLOW=DISTLEG(JHOME)-DISTLOW(JHOME)                              195000
      IF(ADDLOW.L.RSVLOW) 280 ,310                                      196000
  280 RSVLOW=RSVLOW-ADDLOW                                              197000
      DISTLOW(JHOME)=DISTLEG(JHOME)                                     198000
      FSTATTR=0.0                                                       199000
      ICALL=47                                                          200000
      WW= PRNTF(-5,1,8HTGT)DONE)                                        201000
      GO TO 205                                                         202000
  290 ADDLO=RNGDEF*LOGF(DIFSUP/(CRITATT-CORSATTR))                      203000
      ADDLO=MIXIF(ADDLO,DISTLEG(JHOME))-DISTLOW(JHOME)                  204000
      IF(ADDLOW.LE.RSVLOW) 298,310                                      205000
  298 RSVLOW=RSVLOW-ADDLOW                                              206000
      DISTLOW(JHOME)=ADDLOW+DISTLOW(JHOME)                              207000
      ICALL=48                                                          208000
      WW= PRNTF(-5,6,8HINC TGT)                                         209000
      IF(DISTLOW(JHOME).EQ.DISTLEG(JHOME)) 305,300                      210000
  300 FSTATTR=CRITATT*.999  $  GO TO 205                                211000
  305 FSTATTR=0.0  $  GO TO 205                                         212000
  310 DISTLOW(JHOME)=DISTLOW(JHOME)+RSVLOW                              213000
      RSVLOW=0.0       $ FSTATTR=CORSATTR*EXPF(-DISTLOW(JHOME)/RNGDEF)  214000
      CURVAL=FSTATTR*VALIT                                              215000
      ICALL=49                                                          216000
      WW= PRNTF(-5,0,8HXRESERVE)                                        217000
      GO TO (1[3,550)IFINFLT                                            218000
C     USE RESERVE ON LEG                                                219000
  320 ADDLOW=DISTLEG(JH2)-DISTLOW(JH2)                                  220000
  325 IF(ADDLOW.LT.RSVLOW) 330, 340                                     221000
  330 DISTLOW(JH2)=DISTLEG(JH2)                                         222000
      RSVLOW=RSVLOW-ADDLOW                                              223000
      GO TO 175                                                         224000
  340 DISTLOW(JH2)=DISTLOW(JH2)+RSVLOW                                  225000
      RSVLOW=0.0                                                        226000
      CURVAL=VALONT*CORATTR                                             227000
      ATLEG=DISTLEG(JH2)*CORATTR-DISTLOW(JH2)*ATDIFHI+ATLOCHI(JH2)      228000
      GO TO 180                                                         229000
C     CALC ACTUAL S TO TGT 1(SOME)                                      230000
  350 CONTINUE                                                          231000
      ICALL=50                                                          232000
      WW=PRNTF(-0,8HLOW ALT.,8HALOCATED)                                233000
      T1=CORSATTR*DISTLEG(JHOME)                                        234000
      T2=CORSATTR*(ATTRHILO-1.0)*(DISTLOW(JHOME))                       235000
      TEMP=(CORATTR-CORSATTR)*RNGDEF                                    236000
      T3=TEMP*(1.0-EXPF(-DISTLEG(JHOME)/RNGDEF))                        237000
      T4=TEMP*(ATTRHILO-1.0)*(1.0-EXPF(-DISTLOW(JHOME)/RNGDEF))         238000
      IF(DISTLOW(JHOME))351,352                                         239000
  351 TS=ATLOCHI(JHOME)+ATTRHILO                                        240000
      GO TO 353                                                         241000
  352 TS=ATLOCHI(JHOME)                                                 242000
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      353 SONE=EXPF(-T1-T2-T3-T4-T5)                                    239000
          DELDONE=VORIG*(1.0/SONE-SURV(IORIG))                          240000
          I1=0                                                          241000
      C   FOR ALL ORIGIN PTS SET ASSUMMED S=1 SET SURV= 0                242000
      C   FINALLY CALCULATE ATTRITION TO ORIGIN(SORIG)                  243000
          EARLYAT=0.0                                                   244000
          DO 360 L=1,NPWEDEF                                            245000
      360 EARLYAT=EARLYAT + ATPOIST(L)*(DISTDEF(L)-(1.0-ATTRMILG)*FLYLOW(L))  246000
          SORIG=EXPF(-EARLYAT)                                          247000
          S(IORIG)=SORIG                                                248000
          SFACT=SORIG*SONE                                              249000
          S(JHONE)=SONE                                                 250000
          DO  380 II=1,LASTPAY                                          251000
            I1=1+LASTPAY-II  $ JM=XABSF(IMIT(I1)) $ JM2=XABSF(IMIT(I1+1))  252000
          IF(I1.LT.IONE) 370,375                                        253000
      370 SURV(JM)=1.0/SONE                                             254000
      375 VALDONE(JM2)=(VALDONE(JM2)+DELDONE)*SFACT                     255000
          SURV(JM) = SURV(JM)*SFACT                                     256000
          ICALL=51                                                      257000
          WW= PRNTF(I1,JM,6HFINFLT)                                     258000
      380 CONTINUE                                                      259000
      C   1944 AND 1945 BETWEEN 1960 AND 1961                          260000
          GO TO (382,560)IFINFLT                                        261000
      382 IF(RNGSURP.LE.0) 385,390                                      262000
      385 LAST=LASTPAY  $  DEFICIT=-RNGSURP -DISTLEG(IDITCH)            263000
      386 ITARG=XABSF(IMIT(LAST))                                       264000
          DEFICIT=DEFICIT-DISTLEG(ITARG)                                265000
          S(ITARG) = 0  $  SURV(ITARG)=0                                266000
          LAST=LAST-1  $  IF(LAST) 387,389                              267000
      387 IF(DEFICIT.LE.0) 389,386                                      268000
      388 JM3=XABSF(IMIT(LAST))                                         269000
          VALSORTY=VALDONE(JM3)                                         270000
          VALDIST=((VALDONE(JM3)-V(JM3))*SURV(JM3))/(-RNGSURP)          271000
          GO TO 400                                                     272000
      389 VALSORTY=0  $  GO TO 391                                      273000
      390 VALSORTY=VALDONE(XABSF(IMIT(LASTPAY)))                        274000
      391 VALDIST=CURVAL*SFACT*(1.0-ATTRMILG)                           275000
          IF(AVAILOW)400,400,395                                        275200
      395 VALDIST=0.                                                    275400
      400 CONTINUE                                                      276000
          RUNCHECK=RUNCHECK+VALSORTY                                    277000
          ICALL=52                                                      278000
          WW=PRNTF(-9,8HEND OF F,8HLTPLAN  )                            279000
          IOTA=IOTA-1                                                   280000
          RETURN                                                        281000
          ENTRY FINFLT        $ IFINFLT=2                               282000
          IOTA=IOTA+1  $  ICAMFROM(IOTA)=8H  FINFLT                     283000
          ICALL=95  $  CALL PRINTIT(IDEPNG.                             284000
      C**** SET UP INITIAL VALUES OF OSTLOW FOR QUTSRT--GET NDEF AND LASTLOW  285000
          OSTLOW2  =DISTLOW(JHONE)     $ ADD2=0.0                       286000
          OSTLOW3  =0.0                $ ADD3=0.0                       287000
          I=IONE  $  IHIGH=I       $NDEF=1  $  IDEF(1)=0                288000
          IF(RNGSURP.GT.0.0) 506,400                                    289000
      500 OSTLOW1  =DISTLOW(1)         $ ADD1=0.0  $  LASTLOW=0.0       290000
      501 I=I+1  $  IF(I.LE.LASTPAY) 502,509                            291000
      502 JX=IMIT(I)  $  IF(JX.LT.0) 5021,503                           292000
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 5021 JX=-JX  $  IF(JX.EQ.IFLY(I)) 505,501                                  293000
C***  GET NO. DEFENDED TGTS AFTER TGT1                                      294000
  503 IF(ATLOCMI(JX)) 504, 505                                             295000
  504 NDEF=NDEF+1   $ IDEF(NDEF)=I                                         296000
  505 IF(DISTLOW(JX)) 506, 501                                             297000
  506 DSTLOW3 =DSTLOW 3 +DISTLOW(JX)                                       298000
C**** DETERMINE LAST TGT PASSED AT LOW ALT                                 299000
        IF(DISTLOW(JX).EQ.DISTLEG(JX)) 507,501                             300000
  507 LASTLOW=I  $  GO TO 501                                              301000
  509 CONTINUE                                                             302000
  510 IF(IDEF(NDEF).GT.LASTLOW) 515, 400                                   303000
C**** RETRIEVE RESERVE FROM TGT1 RESET SURV FOR ALL LOW ALT TO TGT1        304000
  515 RSVLOW=DISTLOW(JHONE)  $ DISTLOW(JHONE)=0.0 $ ADD2=ADD2-RSVLOW       305000
      ATLEG=ATTRHILO*(ATLOCMI(JHONE)+CONSATTR*DISTLEG(JHONE)               306000
     1   +DIFSUP*RNGDEF*(1.0-EXPF(-DISTLEG(JHONE)/RNGDEF)))                307000
      SAEW=EXPF(-ATLEG) $ IX=IONE  $ASSIGN 520 TO LVRECALC  $GO TO 600     308000
C**** RETRIEVE RESERVE FROM PRECORR LEGS                                   309000
  520 RSVLOW=RSVLOW+DISTLOW(IORIG)  $  ADD1=ADD1-DISTLOW(IORIG)            310000
      DISTLOW(IORIG)=0.0                                                   311000
      DO 521 L=1,3                                                         312000
  521 FLYLO=(L)=0.0                                                        313000
      SAEW=1.0/SAEW  $IX=1  $ASSIGN 530 TO LVRECALC  $GO TO 600            314000
C**** EXTEND LOW ALT TO NEXT DEFENDED TARGET                               315000
  530 JDEF=1     $ OLDRSV=RSVLOW                                           316000
  532 JDEF=JDEF+1  $  IF(IDEF(JDEF).LE.LASTLOW) 532,533                    317000
  533 I1=XMAXOF(IONE,LASTLOW)                                              318000
  534 I1=I1+1  $  JM2=XABSF(IHIT(I1))                                      319000
      IF(JM2.NE.IFLY(I1)) 534,535                                          320000
  535 RSVLOW=RSVLOW-DISTLEG(JM2)+DISTLOW(JM2)                              321000
      DISTLOW(JM2)=DISTLEG(JM2)                                            322000
      ATLEG=ATTRHILO*(ATLOCMI(JM2)+CORATTR*DISTLEG(JM2))                   323000
      SAEW=EXPF(-ATLEG)                                                    324000
      IX=I1  $ ASSIGN 536 TO LVRECALC  $GO TO 600                          325000
  536 IF(I1.LT.IDEF(JDEF)) 534,540                                         326000
  537 I1=I1+1   $JM2=IHIT(I1)  $  IF(JM2.LT.0) 537, 535                    327000
  540 ADD3=ADD3+OLDRSV-RSVLOW  $  LASTLOW=I1                               328000
C**** UTILIZE RESERVE IF POS.RECLAIM FROM LEGS IF NEG                      329000
      IF(RSVLOW) 541,555,548                                               330000
C**** REMOVE REQUIRED LOW ALT FROM LATER LEGS                              331000
  541 RECLO=0.0   $ IHI=IONE                                               332000
  542 IF(RECLO+RSVLOW.LT.0.0) 543,545                                      333000
  543 IHI=IHI+1  $  JHI=XABSF(IHIT(IHI))  $ IF(JHI.NE.IFLY(I+1)) 543,544   334000
  544 RECLO=RECLO+DISTLOW(JHI)  $ DISTLOW(JHI)=0.0                         335000
      IF(RECLO+RSVLOW.LE.0.0) 545,546                                      336000
  545 ATLEG=CORATTR*DISTLEG(JHI)+ATLOCMI(JHI)  $  SAEW=EXPF(-ATLEG)        337000
      IX=IHI  $  ASSIGN 543 TO LVRECALC  $  GO TO 600                      338000
  546 DISTLOW(JHI)=RECLO+RSVLOW                                            339000
      ATLEG=CORATTR*DISTLEG(JHI)-DISTLOW(JHI)*ATDIFHI                      340000
      SAEW=EXPF(-ATLEG)  $  ASSIGN 547 TO LVRECALC  $  GO TO 600           341000
  547 RECLO=-RSVLOW  $  RSVLOW=0.0  $  ADD2=ADD2-RECLOW                    342000
      GO TO 555                                                            343000
C**** ALLOCATE REMAINING RESERVE (RETURN TO 550)                           344000
  548 LL=1  $  L=IMPORTD(LL)  $  PRATRAIE=ATPDIST(L)  $  FSTATTR=CORATTR   345000
      RATELEG=0.0 $ VALTOTT=VALONE(LASTPAY)                                346000
      VALIT=VALTOTT-VORIG  $ GO TO 205                                     347000
  550 ADD2=ADD2+DISTLOW(JHONE)                                             348000
```

```
      ADD1=ADD1+OLDRSV-DISTLOW(JHONE)                                   349000
  555 GO TO 350                                                         350000
C**** UPDATE SURVIVAL TO TARGET ONE, RETURN TO 560                      351000
  560 VALNEW=VALDONE(XABSF(IMIT(LASTPAY)))                              352000
      IF(VALNEW.GT.VALSORTY) 561,565                                    353000
  561 VALSORTY=VALNEW                                                   354000
      DSTLO=1 =DSTLO=1 + ADD1  $ ADD1=0.0                               355000
      DSTLO=2 =DSTLO=2 +ADD2   $ ADD2=0.0                               356000
      DSTLO=3 =DSTLO=3 +ADD3   $ ADD3=0.0                               357000
  565 GO TO 510                                                         358000
C*****LOCAL SUBROUTINE RECALC (SNEW,IX)                                 359000
  500 VALBASE=0.0  $  JX=IMIT(IX)  $  IB=IX-1                           360000
      ICALL=94                                                          361000
      WW=PRNTF(-9,8HEND OF F,8HLTPLAN )                                 362000
      IF(IB) 601,602                                                    363000
  601 JB=XABSF(IMIT(IB))                                                364000
      VALBASE=VALDONE(JB)                                               365000
  602 SRATIO=SNEW/S(JX)  $  S(JX)=SNEW                                  366000
      DO 610 IXX=IX,LASTPAY                                             367000
        JX=IMIT(IXX)  $  IF(JX.LT.0 )  603,604                          368000
  603   JX=-JX                                                          369000
  604   SURV(JX)=SURV(JX)*SRATIO                                        370000
        VALDONE(JX)=VALBASE+(VALDONE(JX)-VALBASE)*SRATIO                371000
  610 CONTINUE                                                          372000
      GO TO LVRECALC                                                    373000
      END                                                               374000
```

IDENT FLTPLAN

PROGRAM LENGTH		02331
ENTRY POINTS	FINFLT	01507
	FLTPLAN	00050
BLOCK NAMES		
	3	40167
	PRNTF	00034
	PRINTOPT	00025
	CURRAID	04540
	SORTYTGT	01751
	CURSORTY	00214
	OUTSRT	00221
	RUNCHECK	00001
	INITOPT	00014
	COMMIDOR	00024
	RAIDSHR	01445
	GRPTYPE	00022
	INDEX	00007
	EVAL	00021
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	Q1Q10100	
	QRQDICT.	
	PRINTIT	
	PRNTF	
	DIFF	
	XMAXOF	
	MINIF	
	MAXIF	
	LOGF	
	EXPF	

P02240	ADD1	01547	01656	01660	02101	02103	02122	02125				
P02241	ADD2	01532	01622	01624	02055	02054	02075	02100	02127	02131		
P02242	ADD3	01535	01755	01760	02133	02136						
C00015	ADDLOW	01022	01023	01026	01053	01053	01060	01062	01062	01063	01066	01067
		01145	01146	01147	01147	01155						
C00025	ADDTEST											
C00004	ALERTOLY											
C00020	ATAREA											
P02243	ATDIFHI	00432	00544	01173	02037							
C00001	ATLEG	00213	00213	00240	00241	00242	00242	00546	00547	00557	00560	00602
		00602	00603	00603	01176	01176	01442	01642	01643	01732	01733	01733
		02017	02020	02020	02040	02041	02041					
C00000	ATLEGHI											
P02244	ATLO	00427	00431									
C00021	ATLOCAL											
C01357	ATLOCHI	00212	00212	00235	00236	00545	00546	00600	00600	00621	00621	01175
		01175	01253	01253	01260	01260	01471	01571	01637	01731	02017	
C00027	ATRENLG											
C00006	ATPOIST	00421	00422	00771	00772	01310	01311	02061	02062			
C00013	ATTAHILO	00237	00240	00425	00424	00601	00601	01214	01215	01240	01240	01254
		01254	01305	01305	01461	01461	01441	01641	01731	01732		
C17027	ATTWLOC											
C00026	ATTRNEW											
C00160	ATTROUT											
C00005	AVAILOW	00331	00332	00340	00341	00355	00356	00367	00370	00374	00375	00516
		00516	00527	00527	00533	00533	00536	00537	00570	00571	00572	00573
		01465	01465									
C00217	AVLOW											
C00011	BASELAT											
C00012	BASELONG											
P02225	BEGIN.	02225										
C00002	CEP											
C00000	CLAT											
C00007	CLENGTH											
C00001	CLONG											
C00134	CNTRLC											
C33737	CNTRYLOC											
C00011	CORATTR	00075	00075	00210	00210	00423	00424	00426	00430	00438	00540	00541
		00574	00574	00624	00624	01165	01165	01170	01170	01223	01223	01727
		01727	02014	02014	02033	02033	02063	02064				
C00012	CORSATTR	00076	00232	00233	01013	01014	01044	01044	01125	01125	01210	01211
		01216	01217	01224	01635	01636						
P02245	COUNT.	01302	01303	01333	01333	02177	02200					
C00014	CRITATT	01013	01015	01016	01043	01043	01104	01104				
C00013	CURVAL	00101	00726	01127	01166	01166	01462	01462				
C00002	CZONE											
C00032	D											
P02246	DEFICIT	01407	01414	01416	01425							
C23257	DELAT											
C00213	DELAY											
P02247	DELDONE	01274	01355									
C25373	DELONG											
C27507	DESIG											
P00001	DICT.	00052	00063	00071	00151	00226	00245	00261	00314	00346	00364	00403

		00503	00554	00563	00606	00613	00645	00655	00716	00734	00756	01010
		01037	01051	01057	01076	01124	01135	01205	01232	01245	01267	01317
		01366	01501	01511	01524	01631	01646	01706	01736	02023	02044	02152
X00005	DIFF	00150										
P02250	DIFSUB	00077	00230	01046	01633							
C00032	DIST1											
C00033	DIST2											
C00024	DISTAB											
C00003	DISTANCE	00100	00100	00155	00155	00157	00157	00200	00200	00202	00202	00304
		00305	00306	00307	00324	00325						
C00311	DISTR											
C00016	DISTREF	00700	00700	01307	01310							
C00011	DISTINK	00276	00276									
C01410	DISTLEG	00144	00145	00154	00154	00156	00156	00177	00177	00207	00207	00221
		00222	00231	00234	00274	00275	00301	00301	00305	00306	00353	00354
		00513	00513	00531	00531	00537	00540	00567	00567	00576	00576	00623
		00623	01021	01021	01027	01030	01054	01060	01102	01144	01144	01153
		01153	01167	01167	01212	01213	01226	01226	01406	01406	01415	01415
		01607	01624	01625	01636	01637	01723	01723	01725	01726	01730	01730
		02014	02014	02034	02034							
C01441	DISTLGM	00255	00303	00304	00535	00535	00542	00563	00570	00571	00572	00721
		00721	00723	00723	00745	00745	00750	00750	01022	01030	01061	01061
		01070	01070	01071	01101	01102	01113	01113	01115	01115	01117	01120
		01145	01154	01160	01160	01162	01162	01172	01172	01220	01221	01235
		01235	01250	01250	01527	01527	01544	01544	01600	01600	01604	01604
		01605	01605	01616	01616	01620	01621	01654	01654	01657	01657	01661
		01662	01724	01726	02004	02005	02007	02007	02032	02032	02036	02036
		02077	02077	02102	02102							
C12577	DISTOUT											
C14713	DISTREC											
C00017	DISTSV											
C00052	DLAT											
C00004	DLONG											
C01720	DREC	00174	00174									
P02251	DRECOV	00175	00201									
C00110	DSIG											
C00213	DSTH	00277	00277									
C00204	DSTLOW1	01545	01545	02121	02121	02123	02123					
C00205	DSTLOW2	01530	01530	02125	02126	02127	02130					
C00206	DSTLOW3	01533	01533	01602	01602	01605	01605	02132	02132	02134	02134	
C01567	DVALA											
C01636	DVALB											
C00030	DVALO											
P02252	EARLYAT	01274	01312	01312	01314							
C00005	ELAT											
C00006	ELONG											
P02226	ENDING.	00053	01506	01512	02223	02224	02224					
P00000	EXIT.	02230										
X00012	EXPF	00225	00244	00562	00605	01123	01231	01244	01266	01316	01635	01645
		01[illegible]5	02022	02043								
P01507	FINFLT	01[illegible]7										
C34053	FLAG											
C00146	FLG											
P00050	FLTPLAN	00050										

C00000 FLYLOW 00412 00413 00701 00781 00703 00703 00710 00710 00712 00712 00722
00722 00747 00747 01306 01306 01405 01406
P00015 FORMAT. 00055 00066 00260 00311 00343 00341 00400 00500 00551 00612 00642
00652 00731 00753 01034 01073 01132 01202 01327 01476 01517 02147
C00007 FSTATTR 00426 00425 00672 00775 01031 01032 01106 01106 01110 01111 01126
01126 02064 02065
C00021 FUNCTION
C03014 HAPTYPE
P02253 I 01536 01552 01553 01554 01557 01565 01575 01610
P02254 II 00104 00107 00110 00111 00163 00167 00215 00262 00433 00436 00444
00445 00447 00456 00614 01275 01334 01337 01346 01367 01710 01711
01712 01713 01737 01742 01746 01747 01750 01760
C00073 IAVAIL
P02255 IB 02145 02155 02157
C00001 ICALL 00061 00061 00065 00256 00257 00310 00310 00342 00342 00357 00360
00376 00377 00476 00477 00550 00550 00611 00611 00640 00640 00651
00657 00713 00714 00727 00730 00751 00752 01033 01033 01072 01072
01130 01131 01200 01201 01364 01364 01474 01475 01522 01522 02146
02146
C00001 ICAMERON 00060 01521
C00006 ICHGPLAN
C00007 ICLASS
C00014 ICORCAR
C00017 ICOMICOR
C00005 ICORR
C00016 ICORRSHR
C00002 ICURMAID
C00001 ICURSRTY
C03216 IDNUMBER
C00021 IDEBUG 00054 01525
P00003 IDEF 01540 01574 01613 01702 01743
C00003 IDITCH 00176 00176 00474 00474 00525 00525 01405 01405
C10463 IOPEN
C00004 IEVAL
P02256 IFIREFLT 00104 00737 01140 01374 01514
C00004 IFLY 00117 00117 00121 00121 00164 00164 00442 00442 00454 00454 01566
01566 01717 01717 02001 02001
P02257 IGOTO. 00740 01141 01375
C00013 IGRPDATA
C03012 IGRPTYPE
P02260 IHI 01766 01773 01774 01775 02024
P02261 IHIGH 01536
C00021 IHIT 00111 00112 00113 00114 00170 00170 00437 00437 00447 00450 01337
01340 01343 01343 01411 01411 01431 01431 01451 01560 01560 01713
01714 01750 01751 01775 01776 02106 02142 02142 02140 02140 02201
02201
P02262 II 01330 01336 01372
C00010 IINDEX
C00007 IINITOPT 00717
C03215 ILRT
C00003 IMPORTO 00417 00417 00767 00767 02057 02057
C00003 INDEXNO
C04374 INDEXVEH
C00003 INDVEH

```
C00020  INSATFLT
P02223  INITIAL.  00053  01512
C00076  INOBJECT
C00041  INPIT
P02253  INPF      00216  00456  01340  01535  01647  01707  01765
C00001  INPIG     00204  00206  00260  00265  00273  00274  00300  00300  00302  00303  00434
                  00434  00720  00720  00744  00744  01271  01272  01320  01321  01655  01653
C00000  INTA      00054  00054  00055  00057  00057  01504  01505  01508  01514  01515  01516
                  01520  01520
C00000  INTSET
C00030  IPASS
C00020  IPFAMODE
C00005  IPAIDSHR
C00017  IPECMODE
C00002  IPECOMER  00181  00181
C00016  IPER
C00214  IPS
C00003  IPSTRCPM
C00026  IPTIMPLR
C00006  IPTYPE
C00000  ISONTY
C00000  ISPIZZET
C00015  ISTMRSUM
C00004  IT
P02254  ITAPG     01413  01414
C00011  ITGTASSR
C00155  ITOLD
C00010  ITYP
P02255  IX        01650  01672  01744  02025  02141  02164  02173  02174
P02246  IXA       02174  02177
P00075  .1
P00125  .10
P00434  .100      00460  00515  00523  00617  00741  01142
P00473  .110
P00476  .115      00475
P00512  .120      00457
P00518  .130      00515
P00521  .140      00526
P00524  .150      00520
P00527  .155      00526
P00533  .160
P00586  .170      00532  00532
P00574  .175      01154
P00603  .180      01177
P00132  .20       00124  00124
P00620  .200      00523  00565
P00625  .201      00511
P00643  .205      00765  00773  01042  01107  01111  02074
P00667  .210
P00675  .220      00674
P00677  .222      00674
P00707  .230
P00742  .240      00706  00706
P00764  .241
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P00766	.242	00763	00763					
P00135	.25	00131						
P00774	.255	00665	00666					
P01002	.260	00674	00674					
P01020	.270	01014						
P01025	.280							
P01043	.290	01017						
P01065	.295	01064						
P00143	.30							
P01104	.300	01103						
P01110	.305	01103						
P01112	.310	01024	01024	01064				
P01143	.320	01001	01001					
P01147	.325							
P01152	.330							
P01157	.340	01150	01151					
P01200	.350	00510	00511	02104				
P01252	.351	01251						
P01257	.352	01251						
P01262	.353	01254						
P01304	.360							
P01350	.370							
P01353	.375	01347	01347					
P01372	.380							
P01377	.382	01376						
P01402	.385	01401						
P01410	.386	01427						
P01425	.387	01423						
P01430	.388	01426						
P01446	.389	01446						
P01450	.390	01401						
P01460	.391	01447						
P01467	.395							
P00150	.40	00142						
P01471	.400	01445	01466	01466	01543	01543	01614	01614
P00163	.41							
P00167	.410							
P00173	.411	00166						
P00203	.42	00162						
P00206	.43							
P00215	.44	00205						
P00242	.47	00214						
P00250	.48	00147						
P00107	.5	00267						
P00265	.50							
P01544	.500							
P01552	.501	01567	01601	01667	01611			
P01557	.502	01555						
P01564	.5021							
P01570	.503	01562	01563					
P01573	.504	01572						
P01577	.505	01567	01572					
P01602	.506	01601						
P01610	.507							

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P01612  .539        01556
P01612  .510        02137
P01615  .515
P01652  .520        01650
P01665  .521
P01674  .530        01672
P01780  .532        01703   01704
P01785  .533        01704
P01711  .534        01720   01745
P01721  .535        01720   01753   01753
P01742  .536        01740
P01746  .537        01754
P01755  .540        01744   01744
P01764  .541        01763
P01767  .542
P01773  .543        02002   02025
P02003  .544        02002
P02014  .545        01772   02013
P02027  .546        02013
P02047  .547        02045
P02055  .548        01763
P00270  .55         00247
P02075  .550        00741   01142
P02104  .555        01762   02054
P02105  .560        01376
P02117  .561
P02137  .565        02116   02116
P00273  .58         00271
P00276  .60         00272
P02140  .600        01651   01673   01741   02026   02046
P02157  .601        02156
P02166  .602        02156
P02205  .603
P02207  .604        02203   02204
P00302  .61         00275
P02217  .610
P00331  .62         00327
P00334  .63         00330
P00373  .70
P00407  .78         00333
P00412  .79
P00415  .80         00371   00372
P00444  .90         00475
P00461  .95         00457
P02232  .ERASER.    00007   00072   00229   00232   00237   00243   00312   00315   00336   00340   00344
                    00347   00362   00385   00401   00404   00501   00504   00542   00544   00552   00555
                    00561   00604   00643   00646   00653   00656   00662   00665   00671   00673   00732
                    00735   00754   00757   00776   01000   01004   01006   01011   01611   01035   01040
                    01045   01046   01047   01074   01077   01122   01133   01136   01171   01174   01203
                    01206   01220   01222   01230   01237   01242   01243   01247   01265   01315   01441
                    01443   01443   01444   01453   01477   01502   01627   01635   01640   01644   01734
                    02021   02035   02040   02042   02110   02150   02153
P00015  ..100000    00056
P00016  ..100001    00072
```

```
P00017  ..100002   00073
P00020  ..100003   00263
P00021  ..100004   00315
P00022  ..100005   00316
P00023  ..100006   00350
P00024  ..100007   00366
P00025  ..100008   00405
P00026  ..100009   00505
P00027  ..100010   00556
P00030  ..100011   00615
P00031  ..100012   00647
P00032  ..100013   00657
P00033  ..100014   00736
P00034  ..100015   00760
P00035  ..100016   01041
P00036  ..100017   01100
P00037  ..100018   01137
P00040  ..100019   01206
P00041  ..100020   01207
P00042  ..100021   01370
P00043  ..100022   01502
P00044  ..100023   01503
P00045  ..100024   01517
P00046  ..100025   02153
P00047  ..100026   02154
P02231  .NSTIFF.   01454   01455   02111   02112
P01060  .Z00001.   01856
C00003  JADD
C00011  JADDA
C00007  JADDR
C00013  JAF
P02267  JB         02162   02163
C00002  JCOMB      00270   00270
P02270  JDFF       01675   01700   01701   01702   01743
C00005  JDEL
C00001  JDELB
C00005  JDPEN
C00001  JERROR
P02271  JH         00113   00123   00125   00126   00126   00132   00136   00253   00265   00445   00481
                   00464   00630   00342   01351   01360   01367
P02272  JH2        00116   00144   00153   00160   00206   00217   00221   00246   00250   00262   00441
                   00446   00452   00446   00473   00512   00524   00530   00534   00566   00575   00607
                   00614   00622   00626   01143   01152   01157   01345   01353   01716   01722   01752
P02273  JH3        01433   01434
P02274  JHI        02000   02004   02015   02031
C00018  JHONE      00217   00220   00320   00320   00352   00353   01020   01020   01027   01054   01067
                   01112   01112   01211   01212   01252   01252   01257   01257   01325   01325   01526
                   01526   01615   01615   02076   02076
C00023  JOUTSRT
C00024  JPAYLOAD
C00004  JREF
C00022  JREFUEL
C00017  JSEQERR
C00310  JTGT
```

C00006	JTSTIN											
P02275	JX	01561	01564	01565	01575	01577	01603	02143	02147	02202	02233	02286
		02297										
C00031	JX1											
C00023	JX2											
P02276	JY	00120	00142	00152	00203	00453						
P02277	JY2	00122	00141	00152	00211	00235	00443	00453	00455	00545	00577	00620
		01174										
C00014	KALC											
C00010	KOPWG											
C00006	KPAYLOAD											
P02300	L	00410	00410	00420	00421	00577	00707	00735	00745	00757	00771	00771
		01277	01363	01663	01664	02000	02061					
P02301	LAST	01403	01410	01422	01423	01430						
P02302	LASTLOW	01551	01612	01613	01703	01707	01741					
C00036	LASTPAY	01330	01331	01334	01335	01402	01402	01456	01456	01554	01555	02067
		02067	02105	02105	02174	02175						
C00037	LASTTGT											
P02303	LEGREC	00165	00172	00173								
C00124	LMHITGT											
P02304	LL	00414	00414	00742	00743	00741	00746	02050	02056			
C00007	LNCHPASS											
X00011	LOSE	01050										
C00156	LOSTTGT											
P02305	LVPRCALC	01651	01673	01741	02026	02046	02220					
X00010	MAXIF	01007										
C00002	MAXOB											
C00013	MAXOBM											
C00006	MAXOC											
C00003	MAXPT											
X00007	MINIF	01054										
C00000	MINP											
C00004	MINSA											
C02260	MYASGN											
C00000	MYBASE											
C00002	MYCOBS											
C00001	MYCOLR											
C00001	MYPGTGT											
C00005	MYLRTPL*											
C00144	NASSA											
C01135	NASWRK											
C00211	NASXS											
C00372	NAVAIL											
C00621	NB											
P02306	NBEF	01537	01573	01574	01575	01612						
C00013	NBES											
C00003	NHIT	00105	00105									
C00207	NLOSTTGT											
C00015	NMBSITE											
C00040	NOMIT											
C00010	NOPWSGN											
C00015	NPHECBF	01675	00675	00706	00742	01305	01403					
C00001	NPSEW											
C00001	NT											

```
C00002  .*BASE
C00001  .*BUFH
C00000  .*BUFIT
C00000  .*EF
C00210  .*ERLS
C01133  .*FC
C00423  .*FV
C00026  .*LAT
C00040  .*LOCS
P02307  .LOCSV    01477  01754  02141
C00003  .LAT
C00004  .LOAD
C00011  .PATCHTE  00422  00423  00661  00673  00726  00744  00765  00772  00773  01003  02062
                  02063
C00021  .RELATIO
X00003  .RETLTIT  00052  00715  01523
X00004  .SCITE    00070  00260  00313  00345  00363  00402  00502  00553  01617  01644  00654
                  00733  00755  01030  01075  01134  01204  01305  01501  02151
X00001  .SIGLIST  01550
X00002  .SJOBTCT  00060  00091  01519
C00001  .SPEED
C00006  .SPSPEC   00334  00334
C00212  .SPSPEF
C00211  .SPSPEI
C00014  .SPSPIF
P02310  .STFLEG   00625  00654  01000  01006  02066
P02311  .SYSLOG   01765  01767  02003  02005  02010  02027  02050  02053
C01326  .TAD
C00212  .TASK
C00227  .TSTC
C00014  .TSTLEF   00222  00223  00230  00231  01052  01152  01120  01121  01224  01227  01227
                  01234  01236  01625  01626  01533  01534
C00013  .TSX      00323  00324
C00002  .TSXSUB   00325  00326  00330  00337  01377  01477  01406  01444  01441  01442  01541
                  01541
C00004  .TXLOA    00333  00354  00355  00356  00373  00373  00374  00505  00507  00521  00521
                  00702  00702  00704  00734  00711  00711  00724  00725  01023  01025  01025
                  01024  01063  01065  01065  01006  01114  01114  01115  01117  01151  01154
                  01155  01156  01161  01161  01163  01144  01617  01617  01622  01623  01652
                  01652  01655  01655  01675  01676  01721  01721  01724  01725  01754  01757
                  01761  01763  01770  01772  02011  02011  02030  02031  02047  02047  02051
                  02052
C00006  .UNSPEC   00015  01471  01471  01473  01473
C21143  .VAL
C01472  .X        00144  00147  00246  00247  00252  00321  00321  00323  00467  01467  00584
                  00584  00587  00610  00632  01321  01322  01326  01324  01417  01423  02147
                  02170  02172  02172
P02312  SFACT     01324  01356  01362  01463
P02313  SFLG      01647  01670  01671  01737  02024  02045  02166  02171
P02314  SFWA      01270  01271  01323  01324  01351
P02315  SFWIO     01320  01323
C00013  SPDASK
C00011  SPFWT
C00210  SPPWIGH
```

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C00012  SPDLO
C00007  SPDLO+
C00003  SPEED
P02316  SRATIO    02171   02211   02214
C01523  SUPV      00322   00465   00465   00470   00471   00631   00631   01272   01273   01352   01352
                  01360   01361   01362   01363   01421   01448   02213   02210   02212   02212
C00172  SUPVSWIT
P02317  T1        01214   01262
P02320  T2        01222   01263
P02321  T3        01234   01263
P02322  T4        01247   01264
P02323  T5        01255   01261   01264
C31623  TASK
C00012  TDEFDIST  00351   00352
P02324  TEMP      01225   01234   01262
C01134  TGTSWAMP
C06347  TIMEPREW
C02117  TLAT
C04233  TLONG
P01314  TS00002.  01301
P01374  TS00003.  01332
P02220  TS00005.  02176
C00122  TSK
C01275  V         00130   00134   00137   00137   00253   00254   00678   01437
C00006  VALIT     00637   00637   00671   00672   00774   00774   01012   01012   01127   02073   02073
C01244  VALA      00130
C01213  VALA      00127   00127   00133   00133
P02325  VALBASE   02141   02165   02214   02215
C00615  VALDIST   01444   01445   01464   01464   01467   01470
C01554  VALOCNE   00435   00435   00462   00462   00471   00472   00633   00634   01354   01354   01356
                  01357   01434   01435   01455   01456   02078   02078   02112   02113   02103   02104
                  02213   02215   02210
C00016  VALMAX    00102   00103   00135   00135   00148   00148
P02326  VALNEW    02114   02114   02117
C00322  VALO
C01605  VALON     00251   00251   00254   00627   00627   01436   01437
C00012  VALONT    00632   00633   00634   00635   00663   00663   00776   00777   01004   01005   01164
C00017  VALSORTV  01435   01436   01446   01447   01456   01457   01472   01472   02115   02115   02120
                  02120
C00010  VALTOTT   00635   00660   00661   00667   00667   00725   01032   01002   02071   02071
P02327  VORIG     00463   00634   01274   02072
C00622  VPRBASE
P00412  WS00001.  00414
P01304  WS00002.  01313
P01334  WS00003.  01373
P01665  WS00004.  01667
P02201  WS00005.  02217
P02330  WW        00074   00204   00317   00351   00367   00406   00506   00557   00616   00658   00660
                  00737   00761   01042   01101   01148   01210   01371   01504   02155
X00006  XMAXOF    01705
   00714 SYMBOLS
```

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                                                                      47000
      SUBROUTINE FLTROUTE                                             1000
CSUBR      FLTROUTE  22OCT71  ********************************************  14000
CUSE       MASTER    1FEB71  ********************************************  2000
      COMMON/MASTER/IHDATE,IDENTNO,ISIDE,NRTPT,NCOMM,NOPER,NRECOVER     1000
     1,NREF,NMNCRT,NPER,NTYPE,NGROUP,NTOTBASE,NPAYLOAD,NASMTYPE,NWHOTYPE
     2,NTARMAS,NCOMPLEX,NCLASS,NALERT,MTGTS,NCOMTYPE,NCNTRY             3000
CEND       MASTER    ********************************************  5000
CUSE       PRINTOPT  9/10/69  ********************************************  5000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTT,ICURRAID,IRSTRCPR,IEVAL,       1000
     1       IRAIDSHR,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,                2000
     2       IGRPTYPE,IGRPDATA,ICURCAR,ISTRKSUM,ICOMNSHR,               3000
     3       ICORIDOR,INEXTFLT,IDEBUG,JREFUEL,JOINTSRT,JPAYLOA          4000
CEND       PRINTOPT  ********************************************  5000
CUSE       RAIDSHR   9/10/69  ********************************************  9000
      COMMON/RAIDSHR/NAVEH,NAVEH(200),DISTH(200),NH,VERBASE,            1000
     1       NPV(200),NPC,TGTSTMD,NASPV(200)                            2000
      TYPE INTEGER VERBASE                                              3000
CEND       RAIDSHR   ********************************************  9000
CUSE       NEXTFLT   9/10/69  ********************************************  12000
      COMMON/NEXTFLT/NTAILS,JK,SPLIT,K6,LB                              1000
CEND       NEXTFLT   ********************************************  12000
CUSE       CURRAID   1FEB71  ********************************************  13000
      COMMON/CURRAID/MYBASE(100),NASGN(100),JTGT(10,100),MYASGN(1102),  1000
     1INDEXVEH(100)                                                     2000
CEND       CURRAID   ********************************************  13000
      COMMON/2/PHI(1100),RHO(1100)                                      15000
CUSE       TGTASGN   9/10/69  ********************************************  16000
      COMMON/TGTASGN/TGTSASGN,TOTLIM,NTGT,IFSTGT,ILASTGT,IFSTVEH,LSTVEH,1000
     1       ISIDE                                                      2000
CEND       TGTASGN   ********************************************  16000
CUSE       RAIDSTRK  1FEB71  ********************************************  18000
      COMMON/3/NT,JCOUP,JCORR,INDEXNO(1100),TLAT(1100),TLONG(1100),     1000
     1TIMEPREM(1100),IOPEN(1100),DISTOUT(1100),DISTHEC(1100),           2000
     2ATTRLOC(1100),NVAL(1100),DELAT(1100),DELONG(1100),DESIG(1100),    3000
     3TASK(1100),CNTRYLOC(1100),FLAG(1100)                              4000
CEND       RAIDSTRK  ********************************************  18000
C     CHANGED COMMON/RAIDSTRK/ TO COMMON/3/                             21000
CUSE       GRPDATA   9/10/69  ********************************************  22000
      COMMON/GRPDATA/IGROUP,NUMS,NVEHGR2,IREG,ITYPE,IALERT,IREFUEL,     1000
     1       YIELD,ISTART,NBASE,IBASE(150),BLAT(150),BLONG(150),        2000
     2       IPAYLOAD(150),VCOMBASE(150)                                3000
      TYPE INTEGER VCOMBASE                                             4000
CEND       GRPDATA   ********************************************  22000
CUSE       KEYS      9/10/69  ********************************************  26000
      COMMON/KEYS/KEYSTART,KEYVBASE                                     1000
CEND       KEYS      ********************************************  26000
CUSE       ARAYSIZE  9/10/69  ********************************************  27000
      COMMON/ARAYSIZE/MBASEPG,MC,MT,ML,MSTRK,MSORTY,MSRT,MFLY,MAXPA     1000
CEND       ARAYSIZE  ********************************************  27000
CUSE       DEBUG     9/10/69  ********************************************  28000
      COMMON/DEBUG/IDTA,ICAMEFROM(20)                                   1000
CEND       DEBUG     ********************************************  28000
CUSE       FLTPASS   9/10/69  ********************************************  29000
      COMMON/FLTPASS/IFPASS,JVEHLO,JVEHHI,NVEHPASS,NPASS                1000
CEND       FLTPASS   ********************************************  29000
```

```
CUSE      IMESRCH   9/10/69  ********************************************  30000
      COMMON/IMESRCH/IMESRCH                                                1000
CE:C      IMESRCH   ********************************************************  30000
CUSE      PCALL     9/10/69  ********************************************  31000
      COMMON/PCALL/IPASS,ICALL                                              1000
CE:C      PCALL     ********************************************************  31000
      IGTA=IGTA+1                                                           32000
       ICAMFRQ=(IGTA)=PHFLTR0UTE                                            33000
      ICALL=17                                                              34000
      CALL PRINTIT(IDEBUG)                                                  35000
      MTGT=NT                                                               36000
      TRWDS=NWPC   $   NVEH=0                                               37000
      NPASS=1   $   IFPASS=0                                                38000
      DO 6 I=1,NT                                                           39000
    6 MTASG=(I)=-1                                                          40000
      KP=NP   $   LP=1                                                      41000
      IMESRCH=0                                                             42000
      TGTSASG=0.0   $   IFSTGT=1   $   ILASTGT=NT   $   J=1   $   TGTLI=-.5  43000
      ICALL=128                                                             44000
      WW=PRNTF(-12,0.,8HARRAYSIZE)                                          45000
      DO 8 IR=1,NPASE                                                       46000
      NVEH=NVEH+NRVEH(IR)   $   TWL=NWPC-TRWDS                              47000
      TRWDS=TRWDS=W-PV(IR)*NVEH(IR)                                         48000
      IF(TRWDS) 10,12,8                                                     49000
    8 CONTINUE                                                              50000
   10 NVEH=NVEH+TRWDS/NWPV(IR) +.999                                        51000
      NVLR=NRVEH(IR)+TRWDS/NWPV(IR)+.999                                    52000
      NWPC=TWL + NWPV(IR)*NVLR                                              53000
   12 TGTSPW=0=NT/(0.+NWPC)                                                 54000
      IF(IW.LE.4) 20,25                                                     55000
   20 SPLIT=1.   $   GO TO 26                                               56000
   25 SPLIT=0                                                               57000
   26 IF(NVEH.GT.100) 21,22                                                 58000
   21 NPASS=(NVEH+99)/100                                                   59000
      ENTRY FLTPASS                                                         60000
   22 IFPASS=IFPASS+1                                                       61000
      NVEHPASS=IMIN0F(NVEH-100*(IFPASS-1),100)                              62000
      DO 28  ISAT=1,180                                                     63000
   28   NASGN(ISAT) = 0                                                     64000
      IRTSAT=1                                                              65000
      ILFTSAT=NVEHPASS                                                      66000
   29 CONTINUE                                                              67000
   30 VPHASE=IGET(KEYPHASE,JS,VOPHASE)                                      68000
   35 CONTINUE                                                              69000
   50 NTGTS=TGTSPW=0*NWPV(JR)                                               70000
      MEDRT=IFSTGT+(TGTS+1)/2-1                                             71000
      MEDLFT=ILASTGT-(NTGTS+1)/2+1                                          72000
      PHIRT=ABSF(PHI(MEDRT))                                                73000
      PHILFT=ABSF(PHI(MEDLFT))                                              74000
      IF(PHIRT.GT.PHILFT) 53,57                                             75000
C         ASSIGN FLIGHT TO SIDE WITH HIGHEST MEDIAN ABSOLUTE PHI            76000
   53 ISIDE=1   $   GO TO 60                                                77000
   57 ISIDE=2                                                               78000
   60 NFREESRT=ILFTSAT+1-IRTSAT                                             79000
      ICALL=151                                                             80000
      CALL PRINTIT(ITGTASGN)                                                81000
```

```
      IF(NFREESRT.LE.0) 100,62                                          82000
   62 CALL NEXTFLT(JCORE,ISIDE)                                         83000
      ISTART=IGET(KEYSTART,JA,VOMBASE)                                  84000
      ICALL=152                                                         85000
      CALL PRINTIT(INEXTFLT)                                            86000
      IF(NTAILS) 100,100,64                                             87000
   64 IF(NTAILS.GE.NFREESRT) 75,65                                      88000
   65 GO TO(68,70) ISIDE                                                89000
   68 IFSTVEH=IRTSRT                                                    90000
      IRTSRT=IRTSRT+NTAILS                                              91000
      LSTVEH=IRTSRT-1                                                   92000
      GO TO 80                                                          93000
   70 LSTVEH=ILFTSRT                                                    94000
      ILFTSRT=ILFTSRT-NTAILS                                            95000
      IFSTVEH=ILFTSRT+1                                                 96000
      GO TO 80                                                          97000
   75 IFSTVEH=IRTSRT                                                    98000
      LSTVEH=ILFTSRT                                                    99000
      NTAILS=LSTVEH-IFSTVEH+1                                          100000
      IRTSRT = IRTSRT + NTAILS                                         101000
C     RECORD ASSIGNMENT IN COMMON/SORTY                                102000
   80 DO 90 ISRT=IFSTVEH,LSTVEH                                        103000
      MYBASE(ISRT)=JA                                                  104000
   82 INEXVEH(ISRT)=VBORASE+AVEH(JA)+ISTART                            105000
   90 NAVEH(JA)=NAVEH(JA)-1                                            106000
      ICALL=83                                                         107000
      CALL PRINTIT(IRATOSM)                                            108000
      CALL TGTASG                                                      109000
      ICALL=153                                                        110000
      CALL PRINTIT(ITETASGM)                                           111000
      CALL PRINTIT(ICURRAID)                                           112000
      GO TO 29                                                         113000
  100 CALL TIMEME(1)                                                   114000
      ICALL=1                                                          115000
      CALL PRINTIT(INEXTFLT)                                           116000
      ICALL=19                                                         117000
      CALL PRINTIT(ICURRAID)                                           118000
      ICALL=20                                                         119000
      CALL PRINTIT(ITESTACPM)                                          120000
      IF(NPASS.GT.1) 101,119                                           121000
  101 IF(IFPASS.EQ.NPASS)110,102                                       122000
  102 IF(NTAILS) 105,103,103                                           123000
  103 NTAILS=1000 * GO TO 110                                          124000
  105 NTAILS=1050*NTAILS                                               125000
  110  ISTA=ISTA-1                                                     126000
      RETURN                                                           127000
      END                                                              128000
```

IDENT FLTROUTE

PROGRAM LENGTH		00526
ENTRY POINTS	FLTPASS	00202
	FLTROUT.	00005
BLOCK NAMES		
	MASTER	00027
	PRINTOPT	00025
	RADSAV	01465
	NEXTFLT	00005
	CURRAID	04540
	2	34230
	TGTASGN	00016
	3	40167
	GNPDATA	01370
	KEYS	00002
	ARRAYSIZE	00011
	DEPTH	00024
	FLTPASS	00005
	IRESCM	00001
	PCALL	00002
EXTERNAL SYMBOLS		
	Q1QQ6100	
	Q1QQ5100	
	Q1QQ2100	
	Q1Q11100	
	Q8QDTCT.	
	PRINTIT	
	PRNTF	
	IGET	
	NEXTFLT	
	TGTASGN	
	TIME4E	
	AMIRAF	

```
C17027  ATTRLOC
P00466  HBSIN.    00467
C00240  HLAT
C00466  HLONG
C33737  CNTRYLOC
P00588  COUNT.    00040  00041  00373  00374
C23257  DELAT
C25373  DELONG
C27507  DESIG
P00041  DICT.     00007  00020  00066  00204  00216  00233  00304  00312  00315  00324  00413
                  00416  00421  00424  00430  00435  00441  00445
C00311  DISTR
C12577  DISTOUT
C14713  DISTSEC
P00470  ENDING.   00010  00205  00465  00466  00467
P00000  EXIT.     00471
C34053  FLAG
P00202  FLTPASS   00202
P00405  FLTROUTE  00005
P00003  FORMAT.   00013  00043
P00505  I         00035  00041
C00005  IALERT
P00506  IB        00072  00074  00113  00117  00162
C00012  IBASE
C00001  ICALL     00016  00016  00062  00062  00302  00352  00321  00322  00410  00411  00417
                  00432  00433  00437  00443
C00001  ICAMFROM  00015
C00004  ICHGPLAN
C00014  ICORCAR
C00017  ICORIDOR
C00016  ICORRSHP
C00002  ICURRAID  00425  00442
C00001  ICURSRTY
C00021  IDEBUG    00021
C00001  IDFATNO
C10463  IOPEN
C00004  IEVAL
C00000  IFPASS    00034  00206  00208  00207  00452  00452
C00003  IFSTAT    00053  00250  00258
C00005  IFSTVEH   00341  00341  00354  00355  00357  00357  00362  00367  00367  00372
X00018  IGET      00232  00314
P00507  IGOTO.    00335
C00000  IGROUP
C00013  IGRPDATA
C00012  IGRPTYPE
C00008  IHDATE
C00018  IINDEX
C00007  IINITORT
C00004  ILASTAT   00055  00055  00257  00257
P00510  ILFTSRT   00231  00277  00347  00351  00353  00363
C00003  INDEXNO
C04374  INDEXVEH  00403  00404
C00028  INEXTFLT  00325  00436
P00466  INITIAL.  00010  00205
```

C00000	IGTA	00011	00011	00012	00014	00014	00463	00463	00464		
C00000	IPASS										
C00714	IPAYLOAD										
C00005	IRAIDSMP	00414									
C00006	IREFUEL										
C00003	IREG										
C00000	IRESRCH	00050	00051								
C00003	IRSTRCPP	00446									
P00521	IRTSRT	00227	00300	00346	00342	00344	00356	00364	00364		
C00007	ISIDE	00273	00274	00275	00276	00313	00334	00334			
C00002	ISIDEP										
P00512	ISRT	00222	00222	00370	00374						
C00005	ISRTYTGT										
C00010	ISTART	00320	00320	00402	00403						
C00015	ISTRKSUM										
C00011	ITGTASGA	00305	00422								
C00004	ITYPE										
P00116	.10	00112									
P00427	.100	00307	00310	00327	00327						
P00452	.101										
P00455	.102	00453									
P00457	.103	00456									
P00461	.105	00456									
P00463	.110	00450	00451	00454	00460						
C00150	.12	00112									
P00164	.20	00163									
P00174	.21										
P00206	.22	00172	00173								
P00167	.25	00163									
P00171	.26	00166									
P00224	.27										
P00232	.29	00426									
P00232	.30										
P00237	.35										
P00237	.50										
P00273	.53										
P00275	.57	00272	00272								
P00042	.6										
P00277	.60	00274									
P00311	.62	00310									
P00330	.64										
P00334	.65	00332									
P00340	.66	00336									
P00347	.70	00337									
P00356	.75	00332	00333								
P00113	.8										
P00367	.80	00346	00355								
P00401	.82										
P00405	.90										
P00472	.ERASER.	00064	00067	00153	00160	00176	00211	00212	00214	00217	00246	00254
		00255									
P00003	..100000	00013									
P00004	..100001	00070									
C00001	JM	00056	00057	00234	00241	00240	00316	00374	00375	00377	00377	

C00002	JCO-2	00313									
C00001	JGROUP										
C00023	JOUTSRT										
C00024	JPAYLOAD										
C00022	JWEFUEL										
C00310	JTGT										
C00002	JWEPHI										
C00001	JWEPLO										
C00003	KP	00046	00046								
C03000	KEYSTART	00316									
C00001	KEYPHASE	00235									
C00004	LP	00047									
C00006	LSTVEH	00345	00345	00350	00350	00361	00361	00371	00371		
C00013	MAXPA										
C00000	MBASEPG										
C00001	MC										
P00513	MEGLET	00261	00265								
P00514	MEORT	00255	00261								
C00007	MELT										
C00003	ML										
C00005	MSQUTY										
C00006	MSRT										
C00004	MSTRK										
C00002	MT										
C02260	MYASGN	00042	00043								
C00600	MYBASE	00000	00000								
C00023	NALERT										
C00144	NASGN	00224	00225								
C01135	NASMPW										
C00216	NASNTYPE										
C00621	NB	00045	00045								
C00011	NBASE	00114	00114								
C00010	NBNOPY										
C00022	NCLASS										
C00026	NCNTRY										
C00021	NCOMPLEX										
C00004	NCORBW										
C00025	NCORTYPE										
C00005	NOPEN										
X00011	NEXTFLT	00311									
P00515	NFREESRT	00301	00306	00331							
C03013	NGROUP										
C00004	NPASS	00032	00033	00200	00200	00447	00447	00453			
C00015	NPAYLOAD										
C00006	NRECOVER										
C00007	NREF										
C00011	NREG										
C00003	NRTPT										
C00001	NRVEH	00075	00075	00110	00110	00133	00133	00402	00405	00405	00406
C00000	NT	00022	00022	00036	00036	00054	00054	00154	00154		
C00000	NTAILS	00326	00326	00330	00330	00343	00343	00352	00352	00363	00363	00365
		00365	00455	00455	00457	00460	00461	00462	00462		
C00020	NTANKRAS										
C00002	NTGT	00023	00023								

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C00024  NTSTS      00244   00244   00252   00253
C00014  NTOTHASE
C00012  NTYPE
C00000  NVEH       00031   00031   00072   00073   00076   00123   00123   00126   00126   00171   00171
                   00174   00174   00212   00213
C00002  NVEHSAP
C00003  NVEHPASS   00220   00220   00230   00230
P00516  NVLH       00136   00144
C00017  NWHGTYPE
C01133  NWPC       00024   00024   00076   00147   00147   00152   00152
C00001  NWPVS
C00623  NWPV       00103   00103   00121   00121   00131   00131   00137   00137   00242   00242
C00000  PHI        00262   00262   00265   00266
P00517  PHILET     00270   00271
P00520  PHIHT      00266   00271
X00006  PHINTIT    00017   00303   00323   00412   00420   00423   00434   00440   00444
X00007  PHNTP      00055
X00003  Q1002100   00122   00132   00151
X00001  Q1004100   00137   00143   00241
X00002  Q1005100   00126   00130
X00004  Q1010100   00125   00135   00146   00243
X00005  QHOOTFT.   00000   00006   00203
C02114  RHO
C21143  RHL
C00002  SPLIT      00165   00165   00167   00170
C31023  TASK
X00012  TGTASGN    00015
C00001  TGTLIM     00040   00041
C00000  TGTSASGN   00052   00052
C01134  TGTSPWHO   00140   00141   00237   00237
X00013  TIMERF     00427
C00347  TIMERWRD
C02117  TLAT
C04233  TLONG
P00521  TRANS      00030   00102   00111   00111   00116   00127
P00045  TS00001.   00037
P00114  TS00002.   00072
P00410  TS00004.   00372
P00522  TWI        00102   00145
C01142  VCHPASE    00235   00317
C00422  VPHASE     00238   00238   00401   00401
P00042  WS00001.   00044
P00073  WS00002.   00115   00115
P00224  WS00003.   00224
P00377  WS00004.   00407
P00523  WW         00371
X00016  XMITADF    00215
C00007  YIELD
   00315 SYMBOLS
```

```
      SUBROUTINE GETMAIN                                                1000
CSUBR      GETMAIN   72/X3/71   ***********************************      6000
CUSE       PRINTOPT  72/10/69   ***********************************      7000
      COMMON/PRINTOPT/ ISPTYPE,ICOMSWTY,ICOMMAIN,IASTERM,IF77L,         1000
     1        IMAINSUM,ICHGPLAT,ITSITOPT,IIMPEX,ITGTARGA,               2000
     2        ISRPTYPE,IGRPDATA,ICOMPCAP,ISTMTSUM,ICOMTSUM,             3000
     3        ICORIDMS,IMEXTFLT,IDEBUG,JMEMFILE,JCUTSPIL,JPAY(04        4000
CE-D       PRINTOPT  ***********************************************    5000
C          ***FATEMYSTERIOUSLY SUPPLIED PARAMS***                       6000
CUSE       GRPDATA   72/10/69   ***********************************      7000
      COMMON/GRPDAT1/IGRPOUP, NPASS,MEMGRP,TYPEG,ITYPE,ILEMT,TYPEMEL,   1000
     1     YFILE,ISTART,NPASS,IPASS(150),PLAT(150),PLOAD(150),          2000
     2       IPAYL(150),VOLPASS(150)                                    3000
      TYPE INTEGER MEMPASS                                              4000
CE-D       GRPDATA   ***********************************************    5000
CUSE       OVERMEM   72/10/71   ***********************************     11000
      COMMON/OVERMEM/ IPLIN(50),OVPLAT(50),OVLOAD(50),MEMPLAT(20),      1000
     1                MEMLOAD(20)                                        2000
CE-D       OVERMEM   ***********************************************    11500
CUSE       PATDSTRM  IEE-71     ***********************************     13000
      COMMON/PATDSTRM/ JOBNUM,JCOMP,IDENSD(1100),FLAT(1100),TLOAD(1100),1000
     1IT,SPACE(1100),TYPE(1100),STSOUT(1100),DISTMEC(1100),             2000
     2ATTRIB(1100),VAL(1100),PFLAT(1100),PFLOAD(1100),DEST(1100),       3000
     3TASK(1100),CPTYPE(1100),FLAG(1100)                                4000
CE-D       PATDSTRM  ***********************************************    13000
C      CHANGED COMMON /PATDSTRM/ TO COMMON/3/                           14000
       DIMENSION PATDSTRM(1100,15)                                      17000
       EQUIVALENCE(PATDSTRM(1),IDENSD(1))                               18000
       DATA (LOADSTRM=16503), (NPATDIMM=15)                             19000
CUSE       FIXALL    IEE-71     ***********************************     19500
      COMMON/FIXALL/JOBIX(1100),IJKIXM(1100),IMFIX(25)                  1000
      TYPE LOGICAL IMFIX,IIMFIXM,IMFIX                                  2000
CE-D       FIXALL    ***********************************************    19500
      COMMON/ZZ/PMI(1100),PMG(1100)                                     20000
CUSE       PATESTM   72/10/69   ***********************************     21000
      COMMON/PATESTM/NJOBM(200),PIST(200),IMEMPHASE,                    1000
     1          SMPX(2,8),PPC,TGTSPEED,PASSPY(20))                     2000
      TYPE INTEGER MEMPHASE                                             3000
CE-D       PATESTM   ***********************************************    21000
CUSE       TEXTFLT   72/10/69   ***********************************     24000
      COMMON/TEXTFLT/NTELS,IMS,SPLIT,NMELM                              1000
CE-D       TEXTFLT   ***********************************************    24000
CUSE       COMPCMAP  IEE-71     ***********************************     25000
      COMMON/COMPCMAP/PCLAT(30),PCLOAD(30),PCZONE(30),PPLAT(30),        1000
     1PPLOAD(30),PFLAT(30),PFLOAD(30),CPLEXIT(30),KOMPSTYLE(30),        2000
     2ATTRCOMP(30),CPTSUPP(30),MIGRATE(30),IPEAKMM(30),JBMPOFF(30),     3000
     3OFFLIST(30,3),CPTYPE(3,3),CPATE                                   4000
      TYPE INTEGER PCZONE                                               5000
      TYPE REAL KOMPSTYLE                                               7000
CE-D       COMPCMAP  ***********************************************    25000
      DIMENSION PPC(30,20)                                              30000
      EQUIVALENCE(PPC,PPCLAT)                                           31000
CUSE       INDEX     72/10/69   ***********************************     33000
      COMMON/INDEX/ISCRTY,IOPIG,IMFCOVEM,INITCHKPT,ICOMM,JTAPIN         1000
CE-D       INDEX     ***********************************************    33000
C      ARRAY DIMEN SUFFICIENT FOR COMMON CURRENT FOR DATA TAPE SPEED     34000
```

```
CUSE      COMMTROP  9/10/69  ********************************************  35000
      COMMON/COMMTROP/CLAT,CLONG,CZONE,PLAT,PLONG,ELAT,ELONG,CLENSTM,      1000
     1    XCOMP,COMSTTR,CORSATTR,ATTRMILS,RADDEF,RMPERDEF,                 2000
     2    DISTDEF(3),PREATTR(3)                                            3000
      TYPE INTEGER CZONE                                                   4000
      TYPE REAL XCOMP                                                      5000
CEND      COMMTROP  ********************************************************  36000
CUSE      FIXRANGE  9/10/69  ********************************************  38000
      COMMON/FIXRANGE/CENTLAT,CENTLONG,DISTC                               1000
CEND      FIXRANGE  ********************************************************  38000
CUSE      BEGIN     9/10/69  ********************************************  39000
      COMMON/EEEIP/BEGIN                                                   1000
      EQUIVALENCE(IA-FAC,BEGIN)                                            2000
CEND      BEGIN     ********************************************************  39000
CUSE      A         IFE371   ********************************************  40000
      COMMON/A/ISEG(1100)                                                  1000
CEND      A         ********************************************************  40000
      DIMENSION DUMY(20)                                                   41000
      EQUIVALENCE (IDUMY,CLAT)                                             42000
C         FOR DATA TRANSFER                                                43000
CUSE      ITP       9/10/69  ********************************************  44000
      COMMON/ITP/ITP                                                       1000
CEND      ITP       ********************************************************  44000
CUSE      IFTPRNT   9/10/69  ********************************************  45000
      COMMON/IFTPRNT/IFTPRNT(10)                                           1000
CEND      IFTPRNT   ********************************************************  45000
CUSE      FILES     IFE371   ********************************************  46000
C                                                                          3000
      COMMON/FILES/IGTFILE(2),DASFILE(2),MSLTIME(2),ALOCTAR(2),            2000
     1TMPALOC(2),ALOCGRP(2),STRMFIL(2),EVENTAPE,PLANTAPE                   3000
C                                                                          4000
      TYPE INTEGER IGTFILE,RASFILE,MSLTIME,ALOCTAR,TMPALOC,ALOCGRP,        5000
     1STRKFIL,EVENTAPE,PLANTAPE                                            6000
C                                                                          7000
      COMMON/INPUTFL/INPTFL,MYIOTAFL                                       8000
C                                                                          9000
CEND      FILES     ********************************************************  46000
CUSE      ARAYSIZE  9/10/69  ********************************************  52000
      COMMON/ARAYSIZE/MRASEPS,MC,MY,ML,MSTRK,MSCRTY,MSAT,MFLY,MXPA         1000
CEND      ARAYSIZE  ********************************************************  52000
CUSE      DEBUG     9/10/69  ********************************************  53000
      COMMON/DEBUG/IOTA,ICAMFROM(20)                                       1000
CEND      DEBUG     ********************************************************  53000
CUSE      PCALL     9/10/69  ********************************************  54000
      COMMON/PCALL/IPASS,ICALL                                             1000
CEND      PCALL     ********************************************************  54000
CUSE      ISKIPTO   9/10/69  ********************************************  55000
      COMMON/ISKIPTO/ISKIPTO                                               1000
CEND      ISKIPTO   ********************************************************  55000
      IOTA=IOTA+1                                                          56000
      ICAMFROM(IOTA)=8H GENRAID                                            57000
      ICALL=10                                                             58000
      CALL PRINTIT(IDEBUG)                                                 59000
C  READ ALOCGRP FILE TO GET COMMON/RAIDSTRK/                               60000
    & CONTINUE                                                             61000
      ITP=IMPTFL                                                           61500
```

```
      CALL RDARRAY(NT,3)                                                62000
      DO 5 I=1,11                                                       63000
    5 CALL RDARRAY(RAIDSTRK(1,I),NT)                                    64000
      NLOG=(NT-1)/22 + 1                                                64200
      CALL RDARRAY(IJFIX,NLOG)                                          64400
      DO 500 I=12,15                                                    64500
  500 CALL RDARRAY (RAIDSTRK(1,I),NT)                                   64600
      IF(ISKIPTO-IGROUP)101,101,100                                     65000
  100 IOTA=IOTA-1                                                       66000
      RETURN                                                            67000
  101 DO 51 I=1,NT                                                      69000
   51 ATTRLOC(I)=ATTRLOC(I)*TARFAC                                      69000
      ICALL=127                                                         70000
      WW=PRNTF(-12,0.,8HARAYSIZE)                                       71000
C  SET DATA FOR PROPER CORRIDOR IN COMMON CORRIDOR                      72000
    6 KORR=ICORR=JCORR                                                  73000
      CALL SETFLAG                                                      74000
      DO 7 IDATA=1,70                                                   75000
    7   DUMM(IDATA) = DXM(KORR,IDATA)                                   76000
      CALL CENTROID(NT,TLAT,TLONG,CLAT,CLONG)                           76500
      ICALL=11                                                          77000
      CALL PRINTIT(ICORRIDOR)                                           78000
      ITEMPREF=IREFUEL                                                  79000
      IF (JCORR .LE. 2)  10, 15                                         80000
   10 IREFUEL=0                                                         81000
   15 CONTINUE                                                          82000
C     ORDER BASES BY DISTANCE                                          83000
      IF (KORR .LE. 2)  55, 58                                          84000
   55 CALL NOCORR                                                       85000
      CALL CORRPARM(0,BLAT,BLONG,I,NB)                                  86000
      CALL ORDER(PHI,ISEQ,NB)                                           87000
      CALL REORDER(ISEQ,NB,7,BLAT,BLONG,IBASE,DISTB,VONBASE,NVEH,NPV)   88000
      CALL REORDER(ISEQ,NB,2,NASMPV,IPAYLOAD,0,0,0,0,0)                 89000
      ICALL=150                                                         90000
      CALL PRINTIT(IRSTRCPM)                                            91000
      CALL PRINTIT(IGRPDATA)                                            92000
      GO TO 800                                                         93000
   58 CALL CENTROID(NB,BLAT,BLONG,CENTLAT,CENTLONG)                     94000
      DO 80 IB=1,NB                                                     95000
      IF(IREFUEL) 60,60,70                                              96000
   60 DISTB(IB)=DISTF(BLAT(IB),BLONG(IB),ELAT,ELONG)                    97000
      GO TO 80                                                          98000
   70 DISTB(IB)=DISTF(BLAT(IB),BLONG(IP),REFLAT(IREFUEL),REFLONG        99000
     1     (IREFUEL))                                                   100000
   80 CONTINUE                                                          101000
      ICALL=87                                                          102000
      CALL PRINTIT(IHAIDSHR)                                            103000
      CALL ORDER(DISTB,ISEQ,NB)                                         104000
      CALL REORDER(ISEQ,NB,7,BLAT,BLONG,IBASE,DISTB,VONBASE,NVEH,NPV)   105000
      CALL REORDER(ISEQ,NB,2,NASMPV,IPAYLOAD,0,0,0,0,0)                 106000
  800 ICALL=9                                                           107000
      CALL PRINTIT(IHAIDSHR)                                            108000
      ICALL=88                                                          109000
      CALL PRINTIT(IGRPDATA)                                            110000
C  PUT RAIDSTRK DATA IN ORDER BY ASCENDING VALUES OF PHI                111000
      DO 81 I=1,500                                                     112000
```

```
      81 ISEQ(I)=0                                                    113000
         CALL COMPARE(JCOMP,TLAT,TLONG,I,NT)                          114000
         CALL ORDER(PHI,ISEQ,NT)                                      115000
         CALL REORDER(ISEQ,NT,7,INDEX=0,TLAT,TLONG,TIMEPREM,INPUT,   116000
        1             DISTOUT,DISTREC)                               117000
         CALL REORDER(ISEQ,NT,6,ATTRLOC,RVAL,PHI,RMC,DELAT,DELONG=0)  118000
         CALL REORDER(ISEQ,NT,4,DESIG,TASK,CNTRYLOC,FLAG=0,0,0)       119000
         ICALL=13                                                     119000
         CALL PRINTIT(IPSTKCPM)                                       120000
         DO 810 J=1,NT                                                120200
      810 IJFIXW(IJ)=I*1000+ISEQ(IJ)                                  120400
         CALL FLTROUTE                                                121000
C          ** TO ASSIGN BASES TO EACH SORTIE                         122000
      30 IF(NTAILS) 35,49,40                                          123000
      35 PRINT 37, JGROUP,NTAILS                                      124000
      37 FORMAT (44H0 ERROR IN COUNT OF VEH ON BASES GROUP    ,I5/10H NTAILS  125000
        1= ,I2)                                                       126000
      40 CALL OPTMAIC                                                 127000
C          ** TO OPTIMIZE SORTIES                                    128000
         IF(RAMSF(NTAILS),GE.1000) 49,50                              129000
      49 CALL FLTPASS                                                 130000
         GO TO 30                                                     131000
      50 IREFUEL=ITEMPREF                                             132000
         IOTA=IOTA-1                                                  133000
         RETURN                                                       134000
         END                                                          135000
```

IDENT GENRAID

PROGRAM LENGTH		0056T
ENTRY POINTS	GENRAID	00025
BLOCK NAMES		
	PRINTOFT	00025
	GMPDATA	01470
	DPERREF	00276
	3	00167
	FIXALL	00107
	2	04230
	MAINSUB	01445
	NEATFLT	00085
	COMMCHAR	01131
	INDEX	00037
	COMMIDCD	00024
	FIXMARGE	00003
	HEAT	00001
	*	02114
	ITP	00001
	IFTHEAT	00012
	FILES	00026
	INPUTFL	00002
	ARRAYSIZE	00011
	MEMIN	00025
	PCALL	00002
	ISKIPTO	00001
EXTERNAL SYMBOLS		
	U3SUB00A	
	U3UTD00A	
	THEN.	
	OBJECT.	
	PRINTIT	
	NUMARAY	
	PRNTS	
	SETFLAG	
	CENTOID	
	NOCOMM	
	COMCHAR	
	DOSET	
	NEUREK	
	DIST	
	FLTPOINT	
	OPTFAIL	
	FLTPASS	
	STR.	
	ERSI EL.	

C00012	ALOC-PP											
C00004	ALOCTAB											
C00014	ATT=CPWG											
C00013	ATT=MTLS											
C17027	ATTWLOC	00121	00121	00123	00123	00377						
C00774	ATTWPWG											
C00056	ATTWS=PP											
C00002	BASFILE											
C00000	BASIC											
P0	BEGIN.	00037										
C00240	BLAT	00214	00214	00264	00261	00264	00272	00301	00321			
C00246	BLOCK	00215	00217	00265	00262	00265	00274	00301	00322			
C00000	CBATLAT	00265										
C00001	CBATLONG	00266										
X00011	CBATWCIR	00154	00262									
C00000	CLAT	00157										
C00007	CLASSTM											
C00001	CLONG	00157										
C33737	CNTWLOC	00467										
P00476	COMMTL.	00467	00651									
C00011	COMATTR											
X00013	COMPRWA	00202	00354									
C00012	COMSATTW											
P00556	CPWT.	00117	00120	00253	00255	00423	00424					
P00005	CWEAT.	00454										
C00322	CWLENGTH											
C00002	CZONE											
C00644	DEFLIST											
C00550	DEFWARGE											
C23257	DELAT	00601										
C25373	DELONG	00602										
C27507	DESIG	00604										
P00001	DICT.	00027	00064	00065	00056	00070	00077	00132	00143	00155	00164	00201
		00203	00210	00214	00223	00234	00237	00243	00245	00300	00313	00313
		00317	00320	00334	00343	00355	00362	00366	00375	00404	00415	00436
		00464	00453	00455	00464							
C00311	DIST=	00220	00270	00270	00303	00303	00314	00323				
C00002	DISTC											
C00016	DISTWF											
X00016	DISTF	00204	00277									
C12577	DISTORT	00373										
C14713	DISTSEC	00373										
C00002	DPLOT											
C00000	DPLINK											
C00144	DPLOTS											
C00300	DUP	00151	00150									
C00600	DUP2	00151	00151									
C00005	ELAT	00207										
C00006	ELONG	00267										
P00500	ENDING.	00030	00131	00476	00536	00537						
C00226	ENTLAT											
C00204	ENTLONG											
C00016	ENT-TABL											
P00002	ENTT.	00541										

C00053	FLSE	00417										
X00021	FLTPASS	00483										
X00017	FLTPOUTP	00435										
P00005	FORMAT.	00033	00127									
P00025	HFORMAT	00025										
P00454	HPRODUC.	00482										
C00512	HTERMIN											
P00557	I	00050	00057	00072	00101	00113	00120	00346	00350	00505		
C00005	IALPHT											
P00560	IA	00254	00253									
C00012	IBASE	00217	00322									
C00001	ICALL	00334	00340	00125	00126	00141	00142	00231	00232	00305	00306	00334
		00335	00341	00412	00413							
C00001	ICAPFWOR	00436										
C00006	ICHNFLT											
C00014	ICHNOSW											
C00017	ICHTTOW	00145										
C00005	ICOMM	00137	00137									
C00016	ICOMESW											
C00002	ICOMFIL											
C00001	ICOMSLTY											
P00561	IDATA	00144	00145	00521								
C00021	IDFMW	00041										
C00003	IDITCH											
C13463	IDMEF	00372										
C00004	IEVAL											
C00006	IFTPSLT											
C00000	IGROUP	00105	00105									
C00013	IHPRDATA	00240	00344									
C00012	IHWRTYPE											
C00010	IIPSFX											
C00007	IINITOPT											
P00562	IJ	00420	00423									
C00000	IJFIX	00371	00431									
C00143	IJFIX2	00433										
C00106	IKFIX											
P00475	IK00002.	00052	00074	00077	00511							
P00476	IK00005.	00106	00513	00525	00534							
C00093	IMDEXNO	00370										
C00020	INEATFLT											
P00534	INITIAL.	00030										
C00006	INPTFL	00042	00042									
C00001	IO=IS											
C00000	IOTA	00031	00031	00032	00534	00534	00107	00107	00110	00470	00470	00471
C00000	IPASS											
C00714	IPAYLOAD	00226	00331									
C00005	IPAIOSW	00311	00345									
C00002	IPFCOVE=											
C00004	IPFUFL	00164	00164	00173	00174	00254	00254	00256	00254	00467	00467	
C00003	IPG											
C00003	IPSIXCPW	00235	00416									
C00000	ISEG	00211	00215	00224	00314	00320	00327	00351	00352	00363	00367	00374
		00405	00425	00425								
C00000	IS=IPTO	00104	00104									

```
C00006  ISCNTY
C00006  ISHTYIGT
C00010  ISTART
C00015  ISTMRSUM
C00004  IT
P00563  ITEMPREF    00167   00466
C00011  ITGTASGN
C00090  ITP         00163   00043
C00004  ITYPE
P00107  .100
P00173  .10         00171
P00112  .101        00106   00106
P00175  .15         00172
P00437  .30         00465
P00442  .35         00440
P00042  .4
P00454  .40         00440   00441
P00463  .49         00461
P00052  .5
P00076  .500
P00466  .53         00462
P00121  .51
P00208  .55         00176
P00242  .58         00177
P00136  .6
P00261  .60         00257   00257
P00150  .7
P00272  .70         00260
P00304  .80         00271
P00334  .800        00241
P00351  .81
P00425  .820
P00543  .ERASEM.    00064   00130   00133   00460
P00005  ..100000    00033
P00030  ..100001    00134
P00007  ..37        00445
P00542  .ASTIFF.    00427   00427
P00056  .Z00001.    00053
P00200  .Z00002.    00075
P00266  .Z00003.    00262   00263
P00301  .Z00004.    00273   00274   00275   00276
C00001  JA
C00002  JCOMP       00136   00136   00178   00170   00356
C00001  JGROUP      00446   00446
C00023  JOUTSAT
C00024  JPAYLOAD
C00022  JREFUEL
C00004  JTGTID
C00003  KB
C00010  KCRPWR
P00564  KORW        00140   00175   00531
C00360  KORSTYLE
C00004  LA
P00383  LRAINSTK
```

```
C0:010  =3RPA
C0:680  =RASFRG
C00051  =C
C0J057  =FLY
C00033  =L
C00004  =SLTIPF
C00005  =S:=TY
C00006  =S=T
C00004  =ST=*
C00002  =T
C0C001  =YTL1>=L
C01135  =A>=PW      00225  00330
C00421  =           00204  00212  00215  00224  00244  00250  00251  00315  00320  00327
C00011  =>=ASF
C01130  =QATR
P00565  =LOG        00066  00071
X00012  =UCORR      00200
C00606  =P>CWDEF
C00015  =PRFNFF
P00504  =>AIDRNC
C00001  =>>>>       00221  00324
C00000  =T          00044  00056  00062  00062  00108  00115  00115  00150  00340  00364  00367
                    00376  00405  00420  00421
C00000  =TAILS      00437  00437  00450  00450  00456  00456
C00000  =V>>
C00002  =YFNGWP
C01133  =>PC
C00001  =>P<S
C00423  =>PW        00221  00324
X00020  OPTPAIO     00454
X00014  SWIER       00207  00317  00361
P00477  P00000.U    00592
P00513  P00001.U    00516
C00000  PCLAT
C00036  PCLONG
C00074  PCZ0>F
C01090  PHI         00241  00343  00400
C00017  PLAATAPF
C00003  PLAT
C01044  PLONG
C00021  PWRATTN
X01045  PWRTTT      00037  00143  00234  00234  00337  00336  00342  00414
X00007  PWRTF       00131
X00001  P3M00040    00433
X00002  P3M00045    00432
X00004  PPOFICT.    00005  00024
X00023  PRSI=FL.    00473
C00003  =RIOSTH<    00053  00054  00075  00100
X00006  RDAPWAY     00044  00054  00067  00078
C00224  RFFLAT      00274  00302
C00252  RFFLOAG     00275  00302
X00015  RFOW>ER     00213  00222  00310  00325  00345  00374  00403
C00114  RM3         00401
C00014  RN=DFF
```

```
C00132  RPLAT
C00178  RPLONG
C21143  RVAL        00430
X00010  SETFLAG     00142
C00002  SPLIT
X00022  STH.        00443
C00014  STRKFIL
C00006  TAPEAC      00122   00122
C31623  TASK        00407
C00000  TGTFILE
C01134  TGTSP(**)
X00003  THEND.      00452
C06347  TIME-PEV    00372
C02117  TLAT        00156   00356   00371
C04233  TLONG       00157   00367   00371
C00010  TMPALOC
P03125  TS00003.    00116
P00305  TS00005.    00252
P00435  TS00007.    00422
P00564  UP00000.    00051   00060   00073   00102   00114   00347   00503   00505   00506   00507   00511
                    00512
P00520  UP00001.    00145   00514   00521   00522   00523   00525   00526
P00530  UP00006.    00141   00531   00532   00533   00535   00435
C03142  VORBASE     00220   00323
C00622  VPBBASE
P00352  W500001.    00041
P00074  W500002.    00103
P00121  W500003.    00124
P00150  W500004.    00153
P00256  W500005.    00304
P00351  W500006.    00353
P00425  W500007.    00434
P00566  WW          00135
C00007  YIELD
   00363 SYMBOLS
```

```
      SUBROUTINE GETGROUP                                                1000
CSUB1     GETGROUP  2(F*.1)  ***************************************     3000
CUSE      BEGIN     2/16/69  ***************************************     2000
      COMMON/BEGIN/BEGIN                                                 1000
      EQUIVALENCE(ITAC,BEGIN)                                            2000
CEND      BEGIN     ***************************************************  2000
CUSE      IFINO     20APR71  ***************************************     3000
      COMMON /IFINO/ IFINO                                               1000
CSUB      IFINO     ***************************************************  3000
CUSE      PLANTYPE  9/10/69  ***************************************     4000
      COMMON/PLANTYPE/IPITSTP,COMMSL,COMMDMR                             1000
CEND      PLANTYPE  ***************************************************  4000
CUSE      PREMREF   26AUG71  ***************************************     5000
      COMMON /PREMREF/ IPLINK(50),IPLAT(50),IPLONG(50),REFLAT(20),       1000
     1                 REFLONG(20)                                       2000
CEND      PREMREF   ***************************************************  5000
CUSE      PAYLOAD   4/26/69  ***************************************     7000
      COMMON/PAYLOAD/IACHDWR(40),IWHO(40),                               1000
     1   ICARMK2(40),IWHO2(40),IBASE(40),IASM(40),                       2000
     2   ICSM(40),IMFECMS(40),ISDFECOYS(40),ITMIRV(40)                   3000
CEND      PAYLOAD   ***************************************************  7000
CUSE      ASMTABLE  IFFR71    ***************************************     9000
      COMMON//ASMTABLE/IWHOASM(20),RANGEASM(20),MELASM(20),CEPASM(20),    1000
     1SPEEDASM(20)                                                       2000
CEND      ASMTABLE  ***************************************************  9000
CUSE      COMMCHAN  IFFR71    ***************************************     11000
      COMMON/COMMCHAN/PCLAT(30),PCLONG(30),PCZONE(30),PPLAT(30),         1000
     1MPLONG(30),ENTLAT(30),ENTLONG(30),CMLENGTH(30),MDMSTYLE(30),       2000
     2ATTHCORN(30),ATTHSUPP(30),MILOATTH(30),DEFHANGM(30),MDMCHDEF(30),  3000
     3DEFDIST(30,3),ATTHPRE(30,3),NOATA                                  4000
      TYPE INTEGER PCZONE                                                6000
      TYPE REAL MDMSTYLE                                                 7000
CEND      COMMCHAN  ***************************************************  11000
CUSE      FILES     IFFR71    ***************************************     16000
C                                                                        1000
      COMMON/FILES/IMFILE(2),IASFILE(2),MSLTIME(2),ALOCTAM(2),           2000
     1TMPALOC(2),ALOCSMP(2),STMMFIL(2),EVENTAPE,PLANTAPE                 3000
C                                                                        4000
      TYPE INTEGER IMFILE,MASFILE,MSLTIME,ALOCTAM,TMPALOC,ALOCSMP,       5000
     1STMMFIL,EVENTAPE,PLANTAPE                                          6000
C                                                                        7000
      COMMON/INPUTFL/INPTFL,MYTAPE                                       8000
C                                                                        9000
CEND      FILES     ***************************************************  16000
CUSE      MASTER    IFFR71    ***************************************     22000
      COMMON/MASTER/IMDATE,IMEANAD,ISIDE,NRTPT,MCOMM,NDPEN,MECOVER       1000
     1,MFF,MDMMY,MHEC,MTYPE,MGROUP,MTOTBASE,MPAYLOAD,MASMTYPE,MMMCTYPE   2000
     2,MTARGRAS,NCOMPLE,MCLASS,MALERT,MIGIS,MCOMTYPE,MCMTMY              3000
CEND      MASTER    ***************************************************  22000
CUSE      PRINTOPT  9/10/69  ***************************************     24000
      COMMON/PRINTOPT/ ISHTYT(1,ICOMPSHTY,ICUPMAIN,ISTRCPM,IFAIL,        1000
     1       IPRINSM,ICHSPLAN,IIMITOPT,IINDEX,ITGTASGN,                  2000
     2       IGRDTYP,IGRPDATE,ICURCAM,ISTRKSUM,ICOMMSNE,                 3000
     3       ICORTCOM,IXFXTFLT,IPRAUG,JMFFIFL,JOUTSWT,JPAYLOA            4000
CEND      PRINTOPT  ***************************************************  26000
CUSE      STRKSUM   IFFR71    ***************************************     30000
```

```
      COMMON/STRKSUM/KGROUP,NISTRK,NCORM,NSTRK(30)                          1000
CEND      STRKSUM   ••••••••••••••••••••••••••••••••••••••••••••••••••••••  30000
      COMMON/I/ICLAS(80),ITYP(200),TREFL(200),DUMMY(1728)                   38500
CUSE      GRPTYPE   IFEA71   ••••••••••••••••••••••••••••••••••••••••••••••  31000
      COMMON/GRPTYPE/ISTYPE,MANEF,CEP,SPEED,ALERTDLY,AALRTDLY,RANGEDEC      1000
     1   ,ICLASS,NOFFMSN,SPDMI,SPDLO,SPDASM,MAIGREF,MMPSITE,IMEP           2000
     2   ,IREGMODE,IFCTMODE,FUNCTION                                        3000
      TYPE INTEGER FUNCTION                                                 3500
      TYPE REAL MALRTDLY                                                    4000
CEND      GRPTYPE   ••••••••••••••••••••••••••••••••••••••••••••••••••••••  31000
      DATA (ICTYPE=1)                                                       34000
CUSE      GRPDATA   9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  36000
      COMMON/GRPDATA/IGROUP,NPMS,NVEHGRP,IREG,ITYPE,IALERT,I-EFUEL,         1000
     1    YIELD,ISTART,MBASE,IBASE(150),MLAT(150),MLONG(150),              2000
     2      IPAYLOAD(150),VONBASE(150)                                     3000
      TYPE INTEGER VONBASE                                                  4000
CEND      GRPDATA   ••••••••••••••••••••••••••••••••••••••••••••••••••••••  36000
CUSE      ARAYSIZE  9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  48000
      COMMON/ARAYSIZE/MBASEPS,MC,MT,ML,MSTRK,NSCRTY,MSRT,MFLY,MAIPA         1000
CEND      ARAYSIZE  ••••••••••••••••••••••••••••••••••••••••••••••••••••••  48000
CUSE      MYIDENT   9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  41000
      COMMON/MYIDENT/MYIDENT                                                1000
CEND      MYIDENT   ••••••••••••••••••••••••••••••••••••••••••••••••••••••  41000
CUSE      VAL       9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  42000
      COMMON/VAL/VALREC,MUSTREC,VONLOAD                                     1000
CEND      VAL       ••••••••••••••••••••••••••••••••••••••••••••••••••••••  42000
      DIMENSION G(4),V(4),VALREC(200)                                       43000
      TYPE INTEGER G                                                        43500
CUSE      CONTROL   9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  44000
      COMMON/CONTROL/EPSILON,MMAXSRT                                        1000
CEND      CONTROL   ••••••••••••••••••••••••••••••••••••••••••••••••••••••  44000
CUSE      PCALL     9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  45000
      COMMON/PCALL/IPASS,ICALL                                              1000
CEND      PCALL     ••••••••••••••••••••••••••••••••••••••••••••••••••••••  45000
CUSE      ITP       9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  46000
      COMMON/ITP/ITP                                                        1000
CEND      ITP       ••••••••••••••••••••••••••••••••••••••••••••••••••••••  46000
CUSE      IFTPRNT   9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  47000
      COMMON/IFTPRNT/IFTPRNT(18)                                            1000
CEND      IFTPRNT   ••••••••••••••••••••••••••••••••••••••••••••••••••••••  47000
CUSE      NOPRINT   9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  48000
      COMMON/NOPRINT/NOPRINT                                                1000
CEND      NOPRINT   ••••••••••••••••••••••••••••••••••••••••••••••••••••••  48000
      DATA (IAMMER=2) ,(IMISSILE=1)                                         49000
CUSE      ISKIPTO   9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  50000
      COMMON/ISKIPTO/ISKIPTO                                                1000
CEND      ISKIPTO   ••••••••••••••••••••••••••••••••••••••••••••••••••••••  50000
CUSE      DEBUG     9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  51000
      COMMON/DEBUG/IDTA,ICAMFROM(20)                                        1000
CEND      DEBUG     ••••••••••••••••••••••••••••••••••••••••••••••••••••••  51000
CUSE      IDUMP     9/10/69   ••••••••••••••••••••••••••••••••••••••••••••  52000
      COMMON/IDUMP/IDMPG,IDMPC,IDMPS,IDMPP,IPLAN                            1000
CEND      IDUMP     ••••••••••••••••••••••••••••••••••••••••••••••••••••••  52000
CUSE      IWORD     1.14.70   ••••••••••••••••••••••••••••••••••••••••••••  52100
      COMMON /IWORD/ ITWORD                                                 1000
      EQUIVALENCE (IWORD, ITWORD)                                           2000
```

```
      CEND      TAPERD     ********************************************************  52100
      CUSE      FILABEL    IFEF3I     ***************************************CUSE*****  52200
           COMMON/FILABEL/INIDENT,INRUNNO,INDATE,INFORM,INSECR,INTIME,                1000
          1INLNGTH,INCOMM(5)                                                          2000
      CEND      FILABEL    ********************************************************  52200
      CUSE      MYLABEL    IFEF3I     ***************************************CUSE*****  52300
           COMMON/MYLABEL/MYFORMT,MYSECR,MYLNGTH,MYCOMM(5)                            1000
      CEND      MYLABEL    ********************************************************  52300
           IPASS=0                                                                    53000
           IOTA=IOTA+1                                                                54000
           ICAMFROM(IOTA)=AMPOSTALOC                                                  56000
           ICALL=2                                                                    57000
           CALL PRINTIT(IDEBUG)                                                       58000
         3 CONTINUE                                                                   59000
           BASFILE(1)=-8                                                              59500
           NOPRINT=1                                                                  60000
           IFINO = 0                                                                  60500
           MYIDENT=AMPOSTALOC                                                         61000
           CALL INITAPE                                                               62000
           MYIDENT=7HBASFILE                                                          63000
           ITP=BASFILE(1)                                                             64000
           CALL SETREAD                                                               64050
           ITSTBSFL=AHMOV 70                                                          64100
           IF (ITSTBSFL .NE. INFORM)1,2                                               64300
         1 CONTINUE                                                                   64350
           PRINT 9,ITSTBSFL, INFORM                                                   64400
         9 FORMAT (///1X,15(1H*),5X,33H WRONG BASFILE FORMAT, REQUESTED ,A8,        64500
          15H GOT ,A8)                                                              64600
           CALL ABORT                                                                 64700
         2 CONTINUE                                                                   65000
           CALL RDARRAY(IMDATE,23)                                                    65200
           CALL SKIP(545)                                                             65400
           CALL RDARRAY(TGTFILE,16)                                                   65600
           CALL RDARRAY(PCLAT,601)                                                    65800
           CALL RDARRAY(IMBAS,100)                                                    66000
           CALL RDARRAY(NOBO,51,402)                                                  66200
           CALL RDARRAY(DPLINK,150)                                                   66400
           CALL RDARRAY(INISTRK,3)                                                    66600
C                                                                                     66601
C  IF AIRYS ARE USED, READ THE ALLOCATION DATA FROM THE ALOCAP FILE, IF               66602
C  NOT, READ THE DATA FROM THE TMPALOC FILE                                           66603
C                                                                                     66604
           CALL SKIP(650)                                                             66609
           CALL RDARRAY(ICLAS,80)                                                     66610
           CALL SKIP(1480)                                                            66620
           CALL RDARRAY(ITYP,200)                                                     66630
           CALL SKIP(400)                                                             66640
           CALL RDARRAY(IREFL,200)                                                    66650
           INPTFL=TMPALOC(1)                                                          66660
           MYIDINFL=7HTMPALOC                                                         66670
           DO 7000 II=1,NGROUP                                                        66680
           IT=ITYP(II)                                                                66690
           IF (ICLAS(IT) .EQ. 1) 5000,7000                                            66700
      5000 CONTINUE                                                                   66710
           IP=IREFL(II)                                                               66720
           IF (1#IRV(IP))7000,7000,6000                                               66730
```

```
 6000 CONTINUE                                                          740
      MYIDENT = THIRDALOC                                               743
      CALL DEACTIV                                                      745
      MYIDIRFL=THALOCERR                                                750
      IARTFL=ALOCGRP(1)                                                 760
      GO TO 8000                                                        770
 7000 CONTINUE                                                          780
 8000 CONTINUE                                                          790
      ICALL=123                                                         800
      WW=PRNTF(-12,0,#HARAYSIZE);                                       810
      MYIDENT=MYIDIRFL                                                  820
      ITP=IARTFL                                                        830
      CALL SETREAD                                                      840
      MYIDENT=#HSTHRFIL                                                 850
      MYLNGTH=STHRFIL(2)                                                860
      ITP=STHRFIL(1)                                                    870
      CALL SETWRITE                                                     880
    4 ICALL=3                                                           890
      CALL PRINTI(ICOMCAR)                                              900
      READ 5,TAPREAD,MUSTREC,VUNLOAD                                    910
      PRINT 41,TAPREAD                                                  920
   41 FORMAT(9H TAPREAD =,F10.4)                                        930
      PRINT 42,MUSTREC,VUNLOAD                                          940
   42 FORMAT(10H MUSTREC =,I10,3X,9H VUNLOAD=,F10.4/4(20H    GROUP     VA  950
     1REC  ))                                                           960
    5 FORMAT F10.4,I10,F10.4)                                           970
      DO 45 I=1,200                                                     980
   45 VALREC(I)=9999.                                                   990
  450 READ 51,((G(I),V(I)),I=1,4)                                       1000
   51 FORMAT(4(I10,F10.4))                                              1010
      PRINT 51,((G(I),V(I)),I=1,4)                                      1020
      DO 499 I=1,4                                                      1030
      IF (G(I) .EQ. 20)46,48                                            1040
   46 CONTINUE                                                          1050
      DO 47 II=1,200                                                    1060
      IF(VALREC(II).EQ.9999.)460,47                                     1070
  460 VALREC(II)=V(I)                                                   1080
   47 CONTINUE                                                          1090
      GO TO 499                                                         1100
   48 IF(G(I).EQ.0)49,480                                               1110
  480 IF(G(I).LE.200.AND.G(I).GE.1)481,489                              1120
  481 IG=G(I)   ;  VALREC(IG)=V(I)                                      1130
      GO TO 499                                                         1140
  489 PRINT 490,I,G(I)                                                  1150
  490 FORMAT(15H *****ERROR--G(,I2,2H)=,F8.3)                           1160
  499 CONTINUE                                                          1170
      GO TO 450                                                         1180
   49 IF(VUNLOAD)50,55                                                  1190
   50 EPSILON=VUNLOAD                                                   1200
   55 READ 6, IS,IPTO,IPAPE,IOMPC,IOMPS,IOMPP                           1210
    8 FORMAT (5I10)                                                     1220
      IPLAN=1                                                           1230
    6 CONTINUE                                                          1240
      ITP=BASFILE(.)                                                    1250
      CALL SKIP(715%)                                                   1260
      CALL RDWORD                                                       1270
```

```
      IF (ITWORD .NE. BWRRRRRRRR)601,603                                110400
  601 CONTINUE                                                          110500
      PRINT 602,ITWORD                                                  110600
  602 FORMAT (///74H ERROR IN SKIPPING TO POSTDATA PORTION OF BASFILE.  110700
     1END SENTINEL READ WAS ,A8)                                        110800
      CALL ABORT                                                        110900
  603 CONTINUE                                                          110950
      CALL RDARRAY(JUNK,1)                                              111000
      IF (JUNK .EQ. BWZZZZZZZZ)62,603                                   111500
C     READ GRPTAPE NG                                                   116000
   62 DO 1000 II=1,NGROUP                                               117000
      VALRECVR=VALREC(II)                                               118000
      IF(IPHASE)504,505                                                 119000
  505 CONTINUE                                                          120000
      ITP=INPTFL                                                        120500
      CALL RDARRAY(KGROUP,33)                                           121000
      IF(KGROUP.EQ.3HEOT)506,504                                        122000
  504 CONTINUE                                                          123000
      ITP=BASFILE(1)                                                    124000
      CALL RDARRAY(IGROUP,10)                                           125000
      CALL RDARRAY(IBASE,MBASEPG)                                       126000
      CALL RDARRAY(BLAT,MBASEPG)                                        127000
      CALL RDARRAY(BLONG,MBASEPG)                                       128000
      CALL RDARRAY(IPAYLOAD,MBASEPG)                                    129000
      CALL RDARRAY(NONBASE,MBASEPG)                                     130000
      CALL SETFLAG                                                      132000
      ICALL=124                                                         133000
      NW=PRNTF(-12,0,BMARAYSIZE)                                        134000
      CALL RDARRAY(ISIMTYPE,LGTYPE)                                     135000
      IF(IRECMODE.LT.0 .AND. VALRECVR.EQ.9999.) VALRECVR = 0.           135500
      IF(KGROUP.EQ.IGROUP)500,501                                       136000
  501 IF(KGROUP.LT.IGROUP)502,503                                       137000
  503 IPHASE=1                                                          138000
      GO TO 1000                                                        139000
  502 CONTINUE                                                          140000
      PRINT 31, MYIDINF                                                 140500
   31 FORMAT (///1X,67,21H-BASFILE OUT OF PHASE)                        141000
      CALL ABORT                                                        142000
  500 CONTINUE                                                          143000
      IPHASE=0                                                          144000
      ICALL=125                                                         145000
      NW=PRNTF(-12,0,BMARAYSIZE)                                        146000
    7 ICALL=5                                                           147000
      CALL PRINTIT(IGRPDATA)                                            148000
      ICALL=6                                                           149000
      CALL PRINTIT(IGRPTYPE)                                            150000
      ICALL=113  $  CALL PRINTIT(JPAYLOAD)                              151000
        IF(ICLASS.EQ.IHOMBER)  100,10                                   152000
   10   IF(ICLASS.EQ.IMISSILE)  200,20                                  153000
   20   PRINT 21, ICLASS                                                154000
   21 FORMAT(24H UNRECOGNIZED BOMB CLASS ,  I5)                         155000
      CALL ABORT                                                        156000
  100 CALL PREBAID                                                      157000
        GO TO 1000                                                      158000
  200   CALL MISASGN                                                    159000
 1000 CONTINUE                                                          160000
```

```
  505 CONTINUE                                                  161000
      IGROUP=201                                                162000
      CALL OUTSRT                                               162500
 1002 CONTINUE                                                  163000
      ITP=BASFILE(1)                                            163200
      CALL TERMTAPE                                             163400
      ITP=IAPTFL                                                163600
      CALL TERMTAPE                                             163800
 1001 CONTINUE                                                  164000
      ITP=STRKFIL(1)                                            164200
      CALL TERMTAPE                                             164400
      IOTA=IOTA-1                                               166000
      RETURN                                                    167000
      END                                                       168000
```

IDENT GETGROUP

PROGRAM LENGTH		01438
ENTRY POINTS	GETGROUP	00585
BLOCK NAMES		
	BEGIN	00001
	IFTHN	00001
	PLANTYPE	00003
	OPENREF	00276
	PAYLOAD	00620
	ASMTABLE	00144
	COMMCHAR	01131
	FILES	00020
	INPUTFL	00002
	MASTER	00027
	PRINTOPT	00025
	STRKSUM	00041
	I	04230
	GRPTYPE	00022
	GRPDATA	01370
	ARRAYSIZE	00011
	MYIDENT	00001
	VAL	00003
	CONTROL	00002
	PCALL	00002
	ITP	00001
	IFTPHAT	00012
	NOPRINT	00001
	ISKIPTO	00001
	DEBUG	00025
	TOUMP	00005
	THORD	00001
	FILAMEL	00014
	MYLAMEL	00010
EXTERNAL SYMBOLS		
	THEND.	
	QBODICT.	
	PRINTIT	
	INITAPE	
	SETHEAD	
	ABORT	
	RDARRAY	
	SKIP	
	DEACTIV	
	PRNTF	
	SETWRITE	
	RDWORD	
	SETFLAG	
	FREWIND	
	MISAGGR	
	OUTSRT	
	TERMTAPE	
	ISM.	
	STM.	
	QNSINGL.	

X00006	ABORT	00560	01141	01261	01330						
C00004	ALERTDLY										
C00012	ALOCGRP	00664	00664								
C00006	ALOCTAB										
C00416	ATTHCORR										
C00776	ATTHPRE										
C00454	ATTHSUPP										
C00002	BASFILE	00524	00525	00537	00537	01117	01117	01166	01166	01346	01346
C00000	BEGIN										
P01367	BEGIN.	01370									
C00240	BLAT	01200									
C00466	BLONG	01203									
C00002	CEP										
C00074	CEPASM										
P01366	CRYPTI.	00553	00555	00732	00734	00736	00747	00757	00760	00777	01001	01015
		01016	01063	01065	01103	01105	01107	01110	01111	01136	01256	01325
C00002	CORHOPR										
C00001	CORMSL										
P00326	CREPT.	00560	00752	00763	00763	01006	01070	01115	01141	01261	01330	
C00322	CRLENGTH										
X00011	DEACTIV	00660									
C00644	DEFDIST										
C00550	DEFRANGE										
P00001	DICT.	00507	00522	00534	00542	00550	00557	00561	00563	00566	00571	00574
		00577	00602	00605	00610	00613	00616	00621	00624	00627	00632	00661
		00677	00710	00720	00724	00730	00741	00744	00751	00754	00762	00773
		01005	01010	01022	01060	01067	01101	01114	01122	01125	01133	01140
		01142	01144	01161	01171	01174	01177	01202	01205	01210	01213	01221
		01226	01253	01260	01262	01271	01300	01304	01310	01322	01327	01331
		01333	01336	01345	01351	01355	01361					
C00062	DPLAT										
C00000	DPLINK	00606									
C00144	DPLONG										
C00748	DUMMY										
P01371	ENDING.	00510	01364	01367	01370						
C00226	ENTLAT										
C00264	ENTLONG										
C00000	EPSILON	01076	01076								
C00016	EVENTAPE										
P00000	EXIT.	01372									
P00326	FORMAT.	00515	00531	00535	00543	00636	00640	00662	00671	00711	01126	01146
		01163	01216	01266								
C00021	FUNCTION										
P00003	G	01001	01015	01026	01042	01045	01050	01053	01064			
P00505	GETGROUP	00505										
P00568	G600000.	00546										
P00742	G600001.	00726										
P00752	G600002.	00742										
P00763	G600003.	00752										
P01006	G600004.	00771										
P01023	G600005.	01006										
P01070	G600006.	01056										
P01115	G600007.	01077										
P01141	G600010.	01131										

```
P01261  GG00011.    01251
P01330  GG00012.    01320
C00512  HILOATTR
P01416  I           00764  00764  00778  01000  01902  01613  01814  01817  01824  01825  01832
                    01041  01044  01047  01052  01862  01864  01870
P01417  II          01151  01152  01337
C00005  IALERT
C00310  IASM
C00012  IBASE       01175
P00324  IBGMBER     01313
C00001  ICALL       00520  00520  00672  00673  00721  00722  01214  01215  01265  01265  01275
                    01276  01302  01305
C00001  ICAMEMOM    00517
C00006  ICHGPLAN
C00000  ICLAS       00617  00625  00646
C00007  ICLASS      01312  01312  01315  01315  01324  01324
C00014  ICORCAR     00725
C00017  ICORIDOM
C00016  ICORRSHP
C00002  ICUPRAID
C00001  ICURSRTY
C00021  IDEBUG      00523
C00001  IDENTNO
C00001  IDMPC       01110
C00003  IDMPG       01106  01106
C00003  IDMPR       01112
C00002  IDMPS       01111
C00004  IFVAL
P01047  IF000001.   01046
P01233  IF000002.
C00000  IFTNO       00527  00530
C00009  IFTPRNT
P01420  IG          01053  01054
C00000  IGROUP      01172  01241  01241  01244  01244  01342  01343
C00013  IGRPDATA    01301
C00012  IGRPTYPE    01305
C00000  IHDATE      00564
P01421  II          00641  00642  00650  00667  01031  01031
C00010  IINDEX
C00007  IINITOPT
C00550  IMIRV       00653  00654
P00325  IMISSILE    01316
C00007  INCOMM
C00002  INDATE
C00020  INEXIFLT
C00003  INFORM      00544  00545  00554  00554
C00000  INIDENT
X00004  INITAPE     00533
P01367  INITIAL.    00510
C00008  INITSTRX    00611
C00006  INLNGTH
C00009  INPTFL      00635  00635  00665  00665  00784  00785  01156  01156  01352  01352
C00001  INRUNNO
C00004  INSECR
```

C00005	INTIME											
C00000	IOTA	00512	00513	00514	00516	00516	01362	01362	01363			
P01422	IP	00652	00653									
C00003	IPASS											
C00714	IPAYLOAD	01206										
C00020	IPENMODE											
P01423	IPHASE	00512	01155	01250	01264							
C00004	IPLAN	01115	01116									
C00005	IRATOSHR											
C50017	IRECMODE	01230	01230									
C00430	IREFL	00633	00651	00651								
C00006	IREFUEL											
C00003	IREG											
C00016	IREP											
C00003	IRSTKCPN											
C00002	ISIDEM											
C00000	ISIMTYPE	01227										
C00000	ISKIPTO	01104	01104									
C00C06	ISMTYTGT											
C00010	ISTART											
C00015	ISTRKSUM											
P01424	IT	00644	00645									
C00011	ITGTA$BA											
C00000	ITP	00540	00545	00785	00786	00716	00716	01120	01120	01157	01157	01167
		01167	01347	01347	01353	01353	01357	01357				
P01425	ITSTRSFL	00544	00552									
C00000	ITWORD	01126	01126	01135	01135							
C00120	ITYP	00625	00643	00643								
C00004	ITYPE											
C00050	IWMD1											
C00170	IWMD2											
C00000	IWMDASM	00600										
P00546	.1											
P01315	.10	01314										
P01332	.100	01314										
P01337	.1000	01250	01322									
P01236	.100001											
P01240	.100002	01231	01232	01235								
P01356	.1001											
P01346	.1002											
P00562	.2	00545										
P01320	.20	01317										
P01335	.200	01317										
P00524	.3											
P00721	.4											
P00766	.45											
P00771	.450	01072										
P01030	.46											
P01035	.460											
P01037	.47	01034										
P01041	.48	01027										
P01044	.480	01043										
P01052	.481	01051										
P01056	.489	01044	01051									

```
P01073  .49         01043
P01070  .499        01040   01055
P00650  .5000
P01075  .50         01074
P01263  .500        01242
P01243  .501        01242
P01251  .502        01246
P01247  .503        01245   01245
P01166  .504        01155   01165
P01156  .505
P01342  .506        01165
P01077  .55         01074
P00656  .6000
P01117  .6
P01131  .601
P01143  .603        01130   01147
P01150  .62
P00667  .7000       00647   00654   00655
P01275  .7
P00672  .8000       00664
P01373  .ERASER.    00675   00700   01217   01222   01267   01272
P00326  ..100000    00515
P00327  ..100001    00531
P00330  ..100002    00535
P00331  ..100003    00543
P00355  ..100004    00636
P00356  ..100005    00654
P00357  ..100006    00662
P00360  ..100007    00701
P00361  ..100008    00711
P00441  ..100009    01127
P00461  ..100010    01147
P00462  ..100011    01164
P00463  ..100012    01223
P00475  ..100013    01273
P00476  ..21        01323
P00464  ..31        01254
P00362  ..41        00745
P00370  ..42        00755
P00425  ..499       01061
P00412  ..5         00731
P00417  ..51        00774   01011
P00442  ..602       01134
P00436  ..7         01102
P00332  ..9         00551
C00023  JCUTSET
C00024  JPAYLOAD    01311
C00022  JREFUEL
P01426  JUNK        01145   01146
C00000  XGROUP      01162   01163   01163   01240   01248   01243   01243
C00360  XORSTYLE
C00001  XWALSRT
P00323  LGTYPE      01227
C00010  XAXIS
```

```
C00000  #BASEPG    01175  01200  01203  01206  01211
C00001  #C
C00007  #FLY
X03617  #ISASEN    01335
C00003  #L
C00004  #SLTIME
C00005  #SORTY
C00006  #SRT
C00004  #STRK
C03002  #T
C00001  #USTREC    00735  00735  00750  00756
C00003  #YCOMM
C00030  #YFORMT
C00000  #YIDENT    00532  00532  00536  00536  00657  00657  00703  00704  00712  00712
C00001  #YIDIWFL   00637  00637  00663  00663  00702  00703  01255  01255
C00002  #YLNGTH    00714  00714
C00001  #YSECR
C00500  %ADECOYS
C00023  %ALERT
C00005  %ALRTDLY
C00240  %ASP
C00016  %ASPTYPE
C00011  %BASE
C00010  %BNDRY
C00022  %CLASS
C00360  %CM
C00024  %CNTRY
C00021  %COMPLEX
C00002  %CORR
C00004  %CORRP
C00025  %CORTYPE
C01130  %DATA
C00430  %DECOYS
C00005  %OPEN
C00013  %GROUP     00670  00670  01340  01340
C00015  %HPSITE
C00000  %OBOMR1    00603
C00120  %OMR2
C00010  %OPERSON
C00000  %OPRINT    00526  00526
C00015  %PAYLOAD
C00006  %PRCDEF
C00006  %RECOVER
C00007  %REF
C00011  %REG
C00003  %RTPT
C00003  %STRK
C00020  %TAAKRAS
C00024  %TGTS
C00014  %TOTBASE
C00001  %TSTRK
C00012  %TYPE
C00002  %VEHGRP
C00017  %WHOTYPE
```

```
C00001  NWPAS
X00020  OUTSRT    01344
C00000  PCLAT     00575
C00036  PCLONG
C00074  PCZONE
C00017  PLANTAPE
X00016  PRERAID   01332
X00003  PRINTIT   00521   00723   01277   01303   01307
X00012  PRNTF     00676   01220   01270
X00002  QBQCICT.  00000   00506
X00024  QRSINGL.  01365
C00001  RANGE
C00024  RANGEASM
C00006  RANGEDEC
C00014  RANGREF
X00007  RDARRAY   00562   00570   00573   00576   00601   00604   00607   00615   00623   00631   01143
                  01160   01170   01173   01176   01201   01204   01207   01225
X00014  RDWORD    01124
C03226  REFLAT
C00252  REFLONG
C00050  RELASM
C00132  RPLAT
C00170  RPLONG
X00015  SETFLAG   01212
X00005  SETREAD   00541   00707
X00013  SETWRITE  00717
X00010  SKIP      00565   00612   00620   00626   01121
C00013  SPDASM
C00011  SPDHI
C00012  SPDLO
C00003  SPEED
C00120  SPEEDASM
X00025  STM.      00547   00743   00753   01007   01057   01132   01252   01321
C00014  STRKFIL   00713   00713   00715   00715   01356   01356
C00000  TARFAC    00733   00733   00744   00746
X00021  TERMTAPE  01353   01354   01360
C00000  TGTFILE   00572
X00001  THEND.    00556   00740   00750   00761   01004   01021   01046   01113   01137   01257   01326
C00010  TMPALOC   00634   00634
P00670  TS00031.  00641
P01340  TS00027.  01151
X00022  TSM.      00727   00772   01100
C00000  TWORD
P00007  V         01002   01016   01035   01054
P00013  VALREC    00767   01033   01036   01055   01153
C00008  VALRECVR  01153   01134   01233   01233   01234   01237
C01142  VOMBASE   01211
C00002  VUMLOAD   00737   00763   01073   01073   01075   01075
P00642  WS00001.  00671   00671
P00766  WS00002.  00770
P00777  WS00003.  01003
P01014  WS00004.  01020
P01025  WS00005.  01071
P01033  WS00006.  01037
```

```
P01152  =S0A087.   01341   01341
P01427  ==         00782   01224   G127*
C00097  YIELD
   00473 SYMBOLS
```

```
      SUBROUTINE GETSORT                                                1000
CSUBR      GETSORT   28APR71  ***********************************************  1900C
CUSE       OPENREF   26AUG71  ***********************************************  2000
      COMMON /OPENREF/ OPLINK(50),OPLAT(50),OPLONG(50),REFLAT(20),      1000
     I                 REFLONG(20)                                      2000
CEND       OPENREF   ***********************************************  2800
CUSE       CORRIDOR  9/19/69  ***********************************************  4000
      COMMON/CORRIDOR/CLAT,CLONG,CZONE,    ,PLONG,ELAT,ELONG,CLENGTH,   1000
     1    KORRWR,CORATTR,CORSATTP,ATTRHILO,RNGDEF,MPREDEF,              2000
     2    DISTOFF(3),PREATTR(3)                                         3000
      TYPE INTEGER CZONE                                                4000
      TYPE REAL KURRWR                                                  5000
CEND       CORRIDOR  ***********************************************  4000
CUSE       PRINTOPT  9/10/69  ***********************************************  7000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,IMSTKCPW,IEVAL,       1000
     1        IRAIDSHR,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,               2000
     2        IGRPTYPE,IGRPDATA,ICURCAR,ISTRKSUM,ICOMASHR,              3000
     3        ICORIDOR,INEXTFLT,IDEBUG,JPREFFL,JOUTSRT,JPAYLOAD         4000
CEND       PRINTOPT  ***********************************************  7000
CUSE       CHGPLAN   9/10/69  ***********************************************  11000
      COMMON/CHGPLAN/JOB,IAI,ISCAN,JAFT,ATO,OTA,RTC,OTP                 1000
      TYPE INTEGER ATO,OTA,RTC,OTH                                      2000
CEND       CHGPLAN   ***********************************************  11000
CUSE       ASMTABLE  IFER71  ***********************************************  13000
      COMMON/ASMTABLE/INMOASM(20),RANGEASM(20),RELASM(20),CEPASM(20),    1000
     1SPEEDASM(20)                                                      2000
CEND       ASMTABLE  ***********************************************  13000
CUSE       CURRAID   IFER71  ***********************************************  15000
      COMMON/CURRAID/MYBASE(100),MASGN(100),JTGT(10,100),MYASGN(1100),  1000
     1IMDEXVE(100)                                                      2000
CEND       CURRAID   ***********************************************  15000
CUSE       CURSORTY  9/10/69  ***********************************************  17000
      COMMON/CURSORTY/NUMHIT,NUMNOW,NUMASM,NHIT,IFLY(13),IHIT(13)       1000
     1        ,LASTPAY,LASTTGT,NOWIT,IOWIT(25),NAVAIL,IAVAIL(25)        2000
     2        ,LMHITMT(25),ITOLD,LOSTTGT(25),NLOSTTGT,NWHOS,NASMS,RNGASM 3000
     3        ,DSTR                                                     4000
CEND       CURSORTY  ***********************************************  17000
CUSE       SORTYTGT  9/10/69  ***********************************************  21000
      COMMON/SORTYTGT/MAXPT,MYPOTGT(25),D(25-25),VALH(25),VALT(25),     1000
     1      V(25),RNGD(25),ITLOCM(25),DISTLEG(25),DISTLOW(25),S(25),    2000
     2      SUMV(25),VALDONE(25),VALOW(25),DVALR(25),DVALA(25),PREC(25) 3000
CEND       SORTYTGT  ***********************************************  21000
CUSE       GRPTYPE   IFER71  ***********************************************  21000
      COMMON/GRPTYPE/ISTMTYPE,RANGE,CEP,SPEED,ALERTDLY,MALRTDLY,RANGEDEC
     1   ,ICLASS,NOPERSON,SPDMI,SPDLO,SPDASM,RANGPEF,NMPSITE,IHEP
     2   ,IPECMODE,IPEAMODE,FUNCTION
      TYPE INTEGER FUNCTION
      TYPE REAL MALRTDLY
CEND       GRPTYPE   ***********************************************  24000
CUSE       GRPDATA   9/10/69  ***********************************************  27000
      COMMON/GRPDATA/IGRPNR,NUMAS,NVEHGRP,IPEG,ITYPE,IALERT,I-EFUFL,    1000
     1      YIELD,ISTART,MBASE,IPASE(150),MLAT(150),MLONG(150),          2000
     2        IPAYLOA(150),YOLBASE(150)                                 3000
      TYPE INTEGER YOLBASE                                              4000
CEND       GRPDATA   ***********************************************  27000
CUSE       FAIDSHR   9/10/69  ***********************************************  31000
```

```
      COMMON/RAIDSHK/AVEH,NAVEH(231),DIST2(200),N8,VERBASE,          1000
     1        NAPV(200),*ERC,TGTSPWND,NAS=PV(200)                    2000
      TYPE INTEGER VERBASE                                          3000
CEND      RAIDSHK   ********************************************** 31000
CUSE      RAIDSTHK  (FE=71  ********************************************** 33000
      COMMON/3/AT,JSHOOP,JCORR,INDEXNO(1100),TLAT(1100),TLONG(1100),  1000
     1TIMERREM(1100),IOPEN(1100),DISTOUT(1100),DISTREC(1100),         2000
     2ATTPLOC(1100),NVAL(1100),DELAT(1100),DELONG(1100),DESTG(1100),  3000
     3TASK(1100),CNTRYLOC(1100),FLAG(1100)                            4000
CEND      RAIDSTHK  ********************************************** 33000
C     CHANGES COMMON /RAIDSTRK/ TO COMMON /3/                         34000
CUSE      PAYLOAD   9/24/69   ********************************************** 37000
      COMMON/PAYLOAD/NCOMM(40),I1H01(40),                             1000
     1    NCHOMM2(40),I1HO2(40),NASM(40),IASM(40),                   2000
     2    NCM(40),NCOMS(40),NADECMS(40),IMIRV(40)                    3000
CEND      PAYLOAD   ********************************************** 37000
CUSE      INDEX     9/10/69   ********************************************** 39000
      COMMON/INDEX/ISORTV,IOPIG,IRECOVER,IDITCH,IT,ICORR,JIGTIA       1000
CEND      INDEX     ********************************************** 39000
C         GETS NEXT SORTIE FROM CURRAID AND INSERTS IN CURSORTY       40000
      DATA (ITOLD=0)                                                  41000
CUSE      FIXRANGE  9/10/69   ********************************************** 42000
      COMMON/FIXRANGE/CENTLAT,CENTLONG,RANGE                          1000
CEND      FIXRANGE  ********************************************** 42000
CUSE      INITORT   9/24/69   ********************************************** 43000
      COMMON/INITORT/FLYLOW(3),IMPORTR(3),ATPOINT(3),DISTINK,TOEFDIST,1000
     1   RANGE                                                        2000
CEND      INITORT   ********************************************** 43000
CUSE      DEBUG     9/10/69   ********************************************** 45000
      COMMON/DEBUG/ICOUNTA,ICANFROM(20)                               1000
CEND      DEBUG     ********************************************** 45000
CUSE      VAL       9/10/69   ********************************************** 46000
      COMMON/VAL/VALMECVR,MUSTMEC,VALMECR                             1000
CEND      VAL       ********************************************** 46000
CUSE      FLTPASS   9/10/69   ********************************************** 47000
      COMMON/FLTPASS/IFPASS,JVEHNO,JVEHMI,*/FMPASS,*PASS              1000
CEND      FLTPASS   ********************************************** 47000
CUSE      PCALL     9/10/69   ********************************************** 48000
      COMMON/PCALL/IPASS,ICALL                                        1000
CEND      PCALL     ********************************************** 48000
      TYPE REAL MIRVAL                                                49000
      ICOUNTA=ICOUNTA+1                                               50000
      ICANFROM(ICOUNTA)=FROM GETSORT                                  51000
      ICALL=1*2                                                       52000
      CALL PRINTIT(ICURRAID)                                          53000
      ICALL=77                                                        54000
      CALL PRINTIT(IDEBUG)                                            55000
      ICALL=7*                                                        56000
      CALL PRINTIT(INDEX)                                             57000
      ICALL=120  $  ***PRINTF(-11,0,0)                                58000
C**** ENTRY GETSORT                                                   59000
C     INITIALIZE SORTIE RECORDS                                       60000
      IF=MYBASE(ISORTV)                                               61000
      DIST=DISTH(I+)                                                  62000
      IF (ITHERE(I)).GT.0) 1001,1001,1002                             63000
1001  CONTINUE                                                        63500
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```
      IF (IREFUEL .EQ. -3)1001,1030                                     63600
 1000 IF(IREFUEL.EQ.-5)1008,1009                                        64000
 1008 RANGE=2.*RANGREF-RANGE+(DSTR-DISTC) % GO TO 1002                  65000
 1009 CONTINUE                                                          66000
      RANGE=RANGREF - (DSTR-DISTC)                                      66500
      GO TO 1002                                                        67000
 1001 CONTINUE                                                          67300
      RANGE=RANGE - (DSTR-DISTC)                                        67600
 1002 IF (JCORR .LE. 2)  1003, 1007                                     68000
 1003 IF(IREFUEL) 1004,1004,1005                                        69000
 1004 PLAT=PLAT(IB)  %  PLONG=PLONG(IB)  %  GO TO 1007                  70000
 1005 PLAT=REFLAT(IREFUEL)  %  PLONG=REFLONG(IREFUEL)                   71000
 1007 NWPOS=NWPV(IW)                                                    72000
      NASMS=NASMPV(I                                                    73000
      RNGASM=RANGEASM(IASM(IPAYLOAD(IB)))                               74000
      ICALL=154                                                         75000
      CALL PRINTIT(ICORRIDOR)                                           76000
      CALL PRINTIT(IINITORT)                                            77000
    1 NEXTIT=0                                                          78000
      NUMPOPR=0                                                         79000
      NUMAS=0                                                           80000
      LASTTGT=1                                                         81000
      LASTPAY=2                                                         82000
      NHIT=3                                                            83000
      IHIT(1)=IFLY(1)=IORIG                                             84000
      IHIT(2)=IRECOVER                                                  85000
      IFLY(2)=IRECOVER                                                  86000
      IHIT(3)=IDITCH                                                    87000
      IFLY(3)=IDITCH                                                    88000
      LKHITMT(IORIG)=1                                                  89000
      LKHITMT(IDITCH)=3                                                 90000
      LKHITMT(IRECOVER)=2                                               91000
C     FIND TARGETS PREVIOUSLY NOT ASSIGNED                              92000
C *** SELECT RANGE IN IT TO SEARCH                                      93000
      ISRT=ISORTY                                                       94000
C  DELETED 1366 THROUGH 1379                                            95000
    9 IF(NASGN.ISRT))900,82                                             96000
  900 ITNE=XASGF(JTGT(1,ISRT))                                          97000
      IF(ITNE.GT.ITOLD, 10, 20                                          98000
   10 JSTART=ITOLD+1                                                    99000
      ISTOP=ITNE                                                       100000
      GO TO 30                                                         101000
   20 JSTART=ITNE                                                      102000
      ISTOP=ITOLD-1                                                    103000
   30 ITOLD=ITNE                                                       104000
C**** SEARCH RANGE SELECTED                                            105000
   35 DO 50 ITX=JSTART,ISTOP                                           106000
        IF(MYASGN(ITX)) 50,40                                          107000
   40   NLOSTTGT=NLOSTTGT+1                                            108000
      IF(NLOSTTGT.GT.25) 41,49                                         109000
   41 PRINT 42, NLOSTTGT,LOSTTGT                                       110000
   42 FORMAT(38H *****NLOSTTGT IS GREATER THAN 25*****/11H NLOSTTGT =,  111000
     1 I4,3X/11H LOSTTGTS =, 25I4)                                     112000
      GO TO 52                                                         113000
   49   LOSTTGT(NLOSTTGT)=ITX                                          114000
        MYASGN(ITX)=1.0                                                115000
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   50   CONTINUE                                                          116000
C**** SCAN OMIT LIST  FOR LEAST VALUABLE TARGETS, DROP  LOWER HALF TO QU  117000
   52 NDROP=(NOMIT-1)/2                                                   118000
   55 DO  80 IDUM=1,NDROP                                                 119000
        MINVAL=+1E200                                                    120000
        DO  70  I3=1,NOMIT                                               121000
          J=IOMIT(I3)                                                    122000
          RELVAL=MAX1F(DVAL2(J),.5*DVALA(J))                             123000
          IF(RELVAL.LT.MINVAL) 60,70                                     124000
   60     MINVAL=RELVAL                                                  125000
          IDROP=J                                                        126000
   70     CONTINUE                                                       127000
C       DROP SELECTED TARGET                                             128000
        JDO=IDROP                                                        129000
        CALL OUTPOTGT                                                    130000
      ICALL=81                                                           131000
      CALL PRINTIT(ICURSRTY)                                             132000
   80 CONTINUE                                                           133000
C  DROP MORE IF NAVAIL TOO SMALL FOR NEXT SORTIE                         134000
   82 N=XABSF(NASGN(ISRT1))                                              135000
      IF(NAVAIL.LT.N) 85, 100                                            136000
   85 IF(NOMIT.EQ.0) 95,90                                               137000
   90 NDROP=1                                                            138000
      GO TO 55                                                           139000
   95 N=NAVAIL                                                           140000
C*** BRING IN TARGETS FOR SPECIFIED SORTIE                               141000
  100 SUMVAL=0.0                                                         142000
      JAFT=IORIG  $  JOLDFLY=IORIG                                       143000
      DO 135 ISTRK=1,N                                                   144000
        ITX=JTGT(ISTRK,ISRT)                                             145000
        IT=XABSF(ITX)                                                    146000
        CALL INPOTGT                                                     147000
      JDO=JTGTIN                                                         148000
C         TO ADD IT INTO OMIT LIST                                       149000
                                      JDO=IOMIT(NOMIT)                   150000
        IF(IT.EQ.ITX) 110, 120                                           151000
  110   CALL CHGPLAN(C1R)                                                152000
      JOLDFLY=JDO                                                        153000
C         TO MOVE TO BOMB LIST                                           154000
        GO TO 130                                                        155000
  120 IAIM=JOLDFLY                                                       156000
      IF(DIFF(JDO,JOLDFLY).GT.RNGASM) 121,122                            157000
  121 IAIM=JDO  $  JOLDFLY=JDO  $  GO TO 124                             158000
  122 IL=XABSF(NASGN(ISRT))                                              159000
      IF(IL.EQ.1) 121,124                                                160000
  124 CALL CHGPLAN(C1A)                                                  161000
C         TO MOVE TO ASM LIST                                            162000
  130   SUMVAL=SUMVAL+ VAL8(JDO)                                         163000
  135   JAFT=JDO                                                         164000
      V(IRECOVER)=SUMVAL*VALRECVR                                        165000
      VAL8(IRECOVER)=SUMVAL*VALRECVR                                     166000
        VALCM(IDITCM)=0.0                                                167000
C*** NOW ADD IN SELECTED TARGET FROM LOSTTARGET LIST AS SPACE PERMITS     168000
      NADD=1MINOF(NLOSTTGT,NAVAIL)                                       169000
      DO  140 IDUM=1,NADD                                                170000
C       BRING IN FROM END OF LIST                                        171000
```

```
            IT=LOSTTGT(NLOSTTGT)                                    172000
            NLOSTTGT=NLOSTTGT-1                                     173000
            CALL INPOTGT                                            174000
      140   CONTINUE                                                175000
C***  DROP RECOVERY IF FLAGED BY NEG VALUE OF NASGN                 176000
            IF(NASGN(ISPT).LT.0) 150,145                            177000
      145 IF(IRECMODE.EQ.-1)150,160                                 178000
      150   JDO=IRECOVER                                            179000
            CALL CHGPLAN(RTO)                                       180000
      160 CONTINUE                                                  181000
          ICALL=80                                                  182000
          CALL PRINTIT(ICURSRTY)                                    183000
          IOTA=IOTA-1                                               184000
          RETURN                                                    185000
          END                                                       186000
```

IDENT GETSORT

PROGRAM LENGTH		0064C
ENTRY POINTS	GETSORT	00027
BLOCK NAMES		
	OPENREF	00274
	CORRIDOR	00024
	PRINTOPT	00025
	MAIN	00010
	SELF	00144
	PAIR	04540
	CURSORTV	00214
	SORTYTGT	01751
	GRPTYPE	00022
	GRPDATE	01370
	PAIRSHR	01445
	3	40167
	PAYLOAD	00620
	INDEX	00007
	FIXHANGE	00003
	INITOPT	00014
	DEBUG	00025
	VAL	00003
	FLTPASS	00005
	PCALL	00002
EXTERNAL SYMBOLS		
	THEN.	
	DIGIT00	
	DADVICT.	
	PRINTIT	
	PRNTF	
	OUTPUTGT	
	INPUTGT	
	[illegible]PLAN	
	DIFF	
	XMINUF	
	MAXIF	
	STM.	
	SLO.	
	UNSIGL.	

```
C00004  ALERTPLY
C01357  ATLOCAT
C00004  ATO
C00096  ATPDIST
C00010  ATTRHILO
C17827  ATTRLOC
P00576  BEGIN.      00577
C00240  BLAT        00130   00130
C00466  BLONG       00132   00132
C00006  BTO         00535
C00000  CENTLAT
C00001  CENTLONG
C00002  CFF
C00074  CFPASM
X00010  CHGPLAN     00425   00455   00533
C00000  CLAT
C00007  CLENGTH
C00001  CLONG
C33737  CNTRYLOC
P00550  CNVRTI.     00265
C00011  CORATTR
C00012  CORSATTR
P00614  COUNT.      00322   00323
P00003  CREAT.      00274
C00002  CZONE
C00032  D
C23257  DELAT
C25373  DELONG
C27507  DESIG
P00001  DICT.       00031   00042   00046   00052   00360   00142   00165   00262   00270   00273   00333
                    00346   00352   00415   00426   00436   00456   00504   00517   00534   00541
X00011  DIFF        00435
C00311  DISTA       00067   00067
C00002  DISTC       00104   00105   00110   00110   00115   00115
C00016  DISTDEF
C00011  DISTINK
C01410  DISTLEG
C01441  DISTLOW
C12577  DISTOUT
C14713  DISTREC
C00062  DPLAT
C00000  DPLINK
C00144  DPLONG
C01720  DREC
C00213  DSTB        00070   00070   00103   00104   00107   00107   00114   00114
C01667  DVALA       00330   00330
C01636  DVALR       00326   00334
C00005  ELAT
C00006  ELONG
P00600  ENDING.     00032   00545   00570   00577
P00000  EXIT.       00601
C36053  FLAG
C00300  FLYLOW
P00003  FORMAT.     00035
```

```
C00021  FUNCTION
P00027  GETSORT    00027
P00274  G600000.   00260
P00615  I3         00317   00322
C00001  IAIM       00434   00434   00444
C00005  IALERT
C00310  IASM       00152   00152
C00073  IAVAIL
P00616  IB         00066   00066   00127   00142
C00012  IBASE
C00001  ICALL      00040   00040   00044   00050   00054   00157   00166   00347   00356   00536   00537
C00001  ICAMFROM   00037
C00006  ICHGPLAN
C00007  ICLASS
C00014  ICORCAR
C00017  ICORIDOR   00163
C00065  ICORR
C00016  ICORRSHR
C00002  ICURRAID   00043
C00001  ICURSRTY   00353   00542
C00021  IDEBUG     00047
C00003  IDITCH     00204   00204   00206   00206   00213   00213   00501   00501
C10463  IOPEN
P00617  IDROP      00341   00343
P00620  IDUM       00314   00354   00507   00520
C00004  IEVAL
C00004  IFLY       00176   00177   00203   00203   00207   00207
C00008  IFPASS
C00008  IGROUP
C00013  IGRPDATA
C00012  IGRPTYPE
C00021  IHIT       00177   00201   00201   00205   00205
C00010  IINDEX     00053
C00007  IINITOPT   00166
P00621  IL         00452
C00550  IMIRY
C00003  IMPORTD
P00551  IN00011.   00226   00573
P00552  IN00016.   00406   00553   00563   00574
C00003  INDEXNO
C04374  INDEXYEH
C00020  INEXTFLT
P00576  INITIAL.   00032
X00007  INPOTBT    00414   00516
C00041  IOHIT      00324   00324   00420
C00001  IORIG      00175   00176   00210   00211   00376   00377   00400   00401
C00008  IOTA       00033   00033   00034   00036   00036   00543   00543   00544
C00000  IPASS
C00714  IPAYLOAD   00147   00147
C00020  IPEHMODE
C00005  IRAIDSHR
C00017  IRECMODE   00527   00527
C00002  IRECOVER   00200   00200   00202   00202   00215   00216   00473   00474   00531   00531
C00006  IREFUEL    00071   00071   00074   00074   00077   00077   00124   00124   00135   00135
```

```
C00003  IREG
C00016  IREP
C00003  IRSTRCPM
C00002  ISCAN
C00000  ISIMTYPE
C00000  ISORTY      00063   00064   00217   00220
P00622  ISRT        00221   00223   00357   00447   00523   00587
C00000  ISRTYTGT
C00010  ISTART
P00623  ISTOP       00240   00244   00384
P00624  ISTRK       00403   00466   00560
C00015  ISTRKSUM
C00004  IT          00413   00413   00422   00422   00512   00513
C00011  ITGTASGN
P00625  ITNEW       00231   00232   00237   00241   00245
C00155  ITOLD       00003   00232   00233   00235   00235   00242   00243   00246   00246
P00626  ITX         00250   00251   00275   00300   00303   00410   00411   00423
C00004  ITYPE
C00050  IWHO1
C00170  IWHO2
C00080  IWHOASM
P00077  .1000       00075
P00167  .1
P00235  .10
P00375  .100        00365   00365
P00074  .10001      00872
P00114  .1001       00872   00876
P00121  .1002       00073   00166   00113
P00124  .1003       00122
P00127  .1004       00125   00125
P00135  .1005       00126
P00142  .1007       00123   00134
P00101  .1008
P00107  .1009       00100
P00425  .110
P00433  .120        00424
P00443  .121        00454
P00447  .122        00441   00442
P00455  .124        00446   00453
P00460  .130        00432
P00464  .135
P00520  .140
P00527  .145        00525   00525
P00531  .150        00526
P00536  .160        00530
P00241  .20         00233   00234
P00245  .30         00240
P00247  .35
P00254  .40
P00260  .41
P00275  .49         00257   00257
P00303  .50         00253
P00306  .52         00274
P00313  .55         00372
```

```
P00337  .60
P00342  .70         00336   00336
P00354  .80
P00357  .82         00225
P00366  .85
P00223  .9
P00226  .900        00225
P00371  .90         00367
P00373  .95         00370
P00604  .ERASER.    00056   00061   00310   00331   00334
P00003  ..100000    00035
P00004  ..42        00263
P00602  .NSTIFF.    00151   00151   00154   00154
P00334  .Z00001.    00327
P00627  J           00325   00326   00340
C00003  JAFT        00377   00409   00465
C00002  JCORR       00121   00121
C00000  JDG         00344   00344   00416   00417   00421   00421   00430   00430   00437   00443   00443
                    00444   00461   00461   00464   00464   00532   00532
C00001  JGROUP
P00630  JOLDFLY     00402   00431   00433   00437   00445
C00023  JOUTSRT
C00024  JPAYLOAD
C00022  JREFUEL
P00631  JSTART      00237   00242   00247
C00310  JTGT        00227   00227   00407   00407
C00006  JTGTIN      00416
C00002  JVEHHI
C00001  JVEHLO
C00010  KORPWR
C00036  LASTPAY     00174
C00037  LASTTGT     00173
C00124  LKHITMT     00211   00212   00214   00214   00216   00217
C00156  LOSTTGT     00271   00277   00512
X00013  MAXIF       00332
C00000  MAXPT
P00546  MINVAL      00316   00335   00340
C00001  MUSTREC
C02260  MYASGN      00252   00252   00302   00302
C00000  MYBASE      00064   00065
C00001  MYPOTGT
P00632  N           00362   00364   00374   00470
P00633  NADD        00500   00521
C00500  NADECOYS
C00005  NALRTDLY
C00144  NASGN       00224   00224   00360   00360   00458   00458   00523   00524
C00240  NASM
C01135  NASMPV      00145   00145
C00211  NASMS       00146   00146
C00072  NAVAIL      00363   00363   00373   00373   00505
C00621  NB
C00011  NBASE
C00360  NCM
C00430  NDECOYS
```

P00634	NOROP	00312	00355	00372							
C00003	NHIT	00175									
C00207	NLOSTTGT	00254	00254	00255	00256	00264	00264	00276	00276	00505	00511	00511
		00513	00514	00515								
C00015	NMPSITE											
C00300	NOBOMB1											
C00120	NOBOMB2											
C0004C	NOMIT	00306	00306	00317	00320	00366	00366	00417	00420			
C00010	NOPERSON											
C00004	NPASS											
C00015	NPREDEF											
C00001	NRVEH											
C00000	NT											
C00002	NUMASM	00172										
C00001	NUMBOMB	00171										
C00000	NUMMIT	00167	00170									
C00000	NVEH											
C00002	NVEHGRP											
C00002	NVEHPASS											
C00210	NWHOS	00144	00144									
C01133	NWPC											
C00001	NWPNS											
C00623	NWPV	00143	00143									
C00005	OTA	00457										
C00007	OTR	00427										
X00006	OUTPOTGT	00345										
P00553	P00003.U	00555										
C00303	PLAT	00131	00131	00137	00137							
C00004	PLONG	00133	00133	00141	00141							
C00021	PREATTR											
X00004	PRINTIT	00041	00045	00051	00161	00164	00351	00540				
X00005	PRNTF	00057										
X00002	QIQ10100	00301										
X00003	QBQDICT.	00000	00030									
X00016	QNSINGL.	00567										
C00061	RANGE	00103	00115	00117								
C00024	RANGEASM	00155	00155									
C00006	RANGEDEC											
C00014	RANGREF	00102	00102	00111	00112							
C00226	REFLAT	00136	00136									
C00252	REFLONG	00140	00140									
C00050	RELASM											
P00535	RELVAL	00335	00337									
C01226	RHOJ											
C00212	RNGASM	00158	00158	00440	00441							
C00014	RNGDEF											
C00013	RNGE	00105	00106	00112	00113	00117	00120					
C21143	RVAL											
C01472	S											
X00015	SLO.	00267										
C00013	SPDASM											
C00011	SPDHI											
C00012	SPDLO											
C00003	SPEED											

```
C00120  SPEEDASM
X00014  STM.        00261
P00636  SUMVAL      00374   00460   00463   00472   00476
C01523  SUPV
C31623  TASK
C00012  TDEFDIST
C01134  TGTSPHHD
X00001  THEND.      00272
C05347  TIMEPREM
C02117  TLAT
C04233  TLONG
P00304  TS00001.    00250
P00355  TS00002.    00314
P00343  TS00003.    00321
P00470  TS00004.    00485
P00521  TS00005.    00510
P00557  UP00003.    00404   01467   00553   00560   00561   00563   00564   00564
P00566  UP00007.    00222   00567   00570   00571   00575   00577
C01275  V           00474   00475
C01244  VALA
C01213  VALB        01462   01462   00477   00500
C01554  VALDOME
C01605  VALON       00502   00502
C00000  VALRECVR    00472   00473   00476   00477
C01142  VOMBASE
C00622  VPRBASE
C00002  VUMLOAD
P00251  WS00001.    00305   00305
P00315  WS00002.    00356   00356
P00324  WS00003.    00342
P00436  WS00004.    00471   00471
P00511  WS00005.    00522   00522
P00637  WW          00063
X00312  XMINOF      00503
C00007  YIELD
   00456 SYMBOLS
```

```
      SUBROUTINE INITOPT                                                    1000
CSUBR      INITOPT   20AUG71   ********************************************** 10000
CUSE       RAIDSTRK  1FEB71    ********************************************** 2000
      COMMON/RAID/NT,JGROUP,JCOPY,INDEXNO(1100),TLAT(1100),TLONG(1100),     1000
     1TIMEPREV(1100),IOPEN(1100),DISTOBJ(1100),DISTREC(1100),               2000
     2ATTRLOC(1100),NVAL(1100),DELAT(1100),DELONG(1100),DESIG(1100),        3000
     3TASK(1100),CNTRYLOC(1100),FLAG(1100)                                  4000
CEND       RAIDSTRK  ********************************************************* 2000
CUSE       PRINTOPT  9/10/69   ********************************************** 5000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,INSTKCPY,IEVAL,           1000
     1       IRAIDSHP,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,                    2000
     2       IGRPTYPE,IGRPDATA,ICORCAR,ISTRKSUM,ICORRSHR,                   3000
     3       ICORRIDOR,INEXTFLT,IDEBUG,JREFUEL,JCUTSRT,JPAYLOAD             4000
CEND       PRINTOPT  ********************************************************* 5000
CUSE       CURSORTY  9/10/69   ********************************************** 9000
      COMMON/CURSORTY/NUMHIT,NUMNOMB,NUMASN,NHIT,IFLY(13),IHIT(13)          1000
     1       ,LASTPAY,LASTTGT,NOHIT,IOHIT(25),NAVAIL,IAVAIL(25)             2000
     2       ,LKHITHT(25),ITOLD,LOSTTGT(25),NLOSTTGT,NWHDS,NASMS,RNGASM     3000
     3       ,DSTR                                                          4000
CEND       CURSORTY  ********************************************************* 9000
CUSE       SORTYTGT  9/10/69   ********************************************** 13000
      COMMON/SORTYTGT/MAXPT,MYPOINT(25),D(25,25),VALA(25),VALB(25),         1000
     1     V(25),RMOJ(25),ATLCCHI(25),DISTLEG(25),DISTLOW(25),S(25),        2000
     2     SURV(25),VALDONE(25),VALON(25),DVALB(25),DVALA(25),DREC(25)      3000
CEND       SORTYTGT  ********************************************************* 1300
CUSE       INITOPT   9/26/69   ********************************************** 16000
      COMMON/I  TOPT/FLYLOW(3),IMPORTD(3),AIRPOINT(3),DISTINK,TREFDIST,     1000
     1   RNGF                                                               2000
CEND       INITOPT   ********************************************************* 16000
CUSE       CORRIDOR  9/19/69   ********************************************** 18000
      COMMON/CORRIDOR/CLAT,CLONG,CZONE,PLAT,PLONG,ELAT,ELONG,CLENGTH,       1000
     1    KORENR,CORATTR,CORSATTR,ATTRNILU,RNGDEF,NPNEDEF,                   2000
     2    DISTDEF(3),PREATTR(3)                                              3000
      TYPE INTEGER CZONE                                                    4000
      TYPE REAL NONPAR                                                      5000
CEND       CORRIDOR  ********************************************************* 18000
CUSE       GRPTYPE   1FEB71    ********************************************** 21000
      COMMON/GRPTYPE/ISIMTYPE,NAMOF,CEP,SPEED,ALERTDLY,NALRTDLY,RANGEDEC    1000
     1   ,ICLASS,IOPERSON,SPEED,SPOLD,SPDASH,RANGDEF,NWPSITE,TREP           2000
     2   ,INECMODE,IPENMODE,FUNCTION                                        3000
      TYPE INTEGER FUNCTION                                                 3500
      TYPE REAL NALRTDLY                                                    4000
CEND       GRPTYPE   ********************************************************* 21000
CUSE       GRPDATA   9/10/69   ********************************************** 25000
      COMMON/GRPDATA/IGROUP,NPLNS,NVEHGRP,TREG,ITYPE,IALERT,IREFUEL,       1000
     1      YIELD,ISTART,NBASE,IBASE(150),MLAT(150),MLONG(150),             2000
     2        IPAYLOAD(150),VORBASE(150)                                    3000
      TYPE INTEGER VORBASE                                                  4000
CEND       GRPDATA   ********************************************************* 25000
CUSE       RAIDSHP   9/20/69   ********************************************** 29000
      COMMON/RAIDSHP/NVEH,NRVEH(200),DISTH(200),NR,VPRBASE,                 1000
     1         NWPV(200),NBPC,TGTSPWU,NASMPV(200)                           2000
      TYPE INTEGER VPRBASE                                                  3000
CEND       RAIDSHP   ********************************************************* 29000
CUSE       OPENREF   26AUG71   ********************************************** 31000
      COMMON /OPENREF/ OPLINK(50),OPLAT(50),OPLONG(50),REFLAT(20),          1000
```

```
     1              REFLONG(20)                                          2000
CEND      DRENREF   ***************************************************  31000
CUSE      INDEX     9/10/69   *****************************************  33000
      COMMON/INDEX/ISORTY,IORIG,IRECOVER,IDITCH,JT,ICORR,JTGTIX          1000
CEND      INDEX     ***************************************************  33000
      DATA(IORIG=1),(IRECOVER=2),(IDITCH=3)                              34000
      DATA(NSPARE = 4)                                                   35000
CUSE      DEBUG     9/10/69   *****************************************  36000
      COMMON/DEBUG/IOTA,ICAMFROM(20)                                     1000
CEND      DEBUG     ***************************************************  36000
CUSE      ARAYSIZE  9/10/69   *****************************************  37000
      COMMON/ARAYSIZE/MBASEPG,MC,MT,ML,MSTRX,MSORTY,MSRT,MFLY,MAXPA      1000
CEND      ARAYSIZE  ***************************************************  37000
CUSE      FIXRANGE  9/10/69   *****************************************  38000
      COMMON/FIXRANGE/CENTLAT,CENTLONG,DISTC                             1000
CEND      FIXRANGE  ***************************************************  38000
      DIMENSION IFIX(20)                                                 39000
CUSE      PCALL     9/10/69   *****************************************  40000
      COMMON/PCALL/IPASS,ICALL                                           1000
CEND      PCALL     ***************************************************  40000
      IOTA=IOTA+1                                                        41000
      ICAMFROM(IOTA)=8H INITOPT                                          42000
      IF (IOTA.LE.5                                                      43000
      CALL PRINTIT(IDEBUG)                                               44000
C***  ENTRY INITOPT                                                      45000
      NWMDS=0                                                            46000
      DO 5 IB=1,MBASE                                                    47000
      IF(NWMDS.LE.NWPV(IB)) 4,5                                          48000
    4 NWMDS=NWPV(IB)                                                     49000
    5 CONTINUE                                                           50000
      MAXPT=XMINOF(MAXPA,NWMDS+NSPARE+3)                                 51000
C         SET DATA FOR SORTIE ORIGIN, RECOVER, DITCH, AND OTHERS         52000
      DO 10 I=1,MAXPT                                                    53000
      J=I                                                                54000
      V(J)=0.0  $  S(J)=0.0                                              55000
      DISTLEG(J)=DISTLOW(J)=DREC(J)=0.0                                  56000
      MYPOTGT(J)=0 $ DVALA(J)=-1E200  $ DVALB(J)=-1E200                  57000
      VALA(J)=0.0   $ VALB(J)=0.0   $ATLOCHI(J)=0.0                      58000
   10 RHOJ(J)=0.0                                                        59000
      NHIT=3 $ NOMIT=0 $NAVAIL=MAXPT-3                                   60000
      VALON(IDITCH)=0. $ VALDONE(IORIG)=0.0                              61000
C***      INITIALIZE DISTANCE ARRAY TO -1 BUT WITH D(IDITCH,JX)=0.0      62000
      DO  30 J1=1,MAXPT                                                  63000
        DO  20 J2=1,MAXPT                                                64000
   20 D(J1,J2)=-10.0                                                     65000
        D(J1,IDITCH)=0.0                                                 66000
   30   D(IDITCH,J1)=.0                                                  67000
      D(IORIG,IRECOVER)=20000                                            68000
      RHOJ(IORIG)=0.0  $ RHOJ(IRECOVER)=1E200 $ RHOJ(IDITCH)=2E200       69000
C***      SET ARRAY AVAIL                                                70000
      DO  40 I3=1,NAVAIL                                                 71000
        J=3+1+NAVAIL-I3                                                  72000
      LKMITMT(J)=0                                                       73000
   40   IAVAIL(I3)=J                                                     74000
      NLOSTTGT=0        $ IDEFDIST=0.0  $ ITOLD = 1                      75000
C     GET IMPORTANCE OF PRECORRIDOR ATTRITION IN DECREASING ATTRITION PE  76000
```

```
      DO 41 L=1,3                                                    77000
      IMPORTD(L)=0                                                   78000
   41   ATPDIST(L)=-PREATTN(L)/DISTDEF(L)                           79000
      IF(NPREDEF-1) 44,42,43                                         80000
   44 DO 45 L=1,3                                                    81000
   45 ATPDIST(L)=0                                                   82000
      GO TO 47                                                       83000
   42 IMPORTD(1)=1                                                   84000
      ATPDIST(1)=-ATPDIST(1)                                         85000
      TREFDIST=DISTDEF(1)                                            86000
      GO TO 47                                                       87000
   43 CALL ORDER(ATPDIST,IMPORTD, NPREDEF)                           88000
      DO  46 L=1,NPREDEF                                             89000
      TREFDIST=TREFDIST+DISTDEF(L)                                   90000
   46   ATPDIST(L)=-ATPDIST(L)                                      91000
C     SET RANGE DATA                                                 92000
   47 DISTANK= CLENGTH                                               93000
      IF (JCORR .LE. 2)  470, 480                                    94000
  470 CONTINUE                                                       95000
      IF (IREFUEL)4701,50,50                                         95200
 4701 CONTINUE                                                       95400
      IF (IREFUEL .EQ. -3)50,51                                      95600
  480 DISTC=DISTF(CENTLAT,CENTLONG,ELAT,ELONG)                       96000
      IF (IREFUEL)4801,50,48                                         97000
 4801 CONTINUE                                                       97300
      IF (IREFUEL .EQ. -3)50,51                                      97600
   48 DISTANK=DISTF(REFLAT(IREFUEL),REFLONG(IREFUEL),ELAT,ELONG)*CLENGTH 98000
C     AND SET DISTB(IB)=0 SINCE IRRELEVANT                           99000
      DO 49 IB=1,NB                                                  100000
   49 DISTB(IB)=0.                                                   101000
   50 RANGE=RANGE                                                    102000
      GO TO 52                                                       103000
   51 IF(IREFUEL.EQ.-5)510,511                                       104000
  510 RANGE=2.*RANGREF-RANGE                                         105000
      GO TO 52                                                       106000
  511 RANGE=RANGREF                                                  107000
   52 CONTINUE                                                       108000
      ICALL = 161                                                    109000
      CALL PRINTIT(IGRPDATA)                                         110000
      ICALL = 162                                                    111000
      CALL PRINTIT(IRAIDSHR)                                         112000
      ICALL=26                                                       113000
      CALL PRINTIT(II+IIOPT)                                         114000
      IOTA=IOTA-1                                                    115000
      RETURN                                                         116000
      END                                                            117000
```

IDENT INITOPT

PROGRAM LENGTH		00530
ENTRY POINTS	INITOPT	00031
BLOCK NAMES		
	3	40167
	PRINTOPT	00025
	CURSORTY	00214
	SORTYTGT	01751
	INITOPT	00014
	CORRIDOR	00024
	GRPTYPE	00022
	GRPDATA	01370
	RAIDSHR	01445
	OPENREF	00276
	INDEX	00007
	DEBUG	00025
	ARAYSIZE	00011
	FIXRANGE	00003
	PCALL	00002
EXTERNAL SYMBOLS		
	QBODICT.	
	PRINTIT	
	ORDER	
	DISTF	
	XMINOF	

C00004	ALERTFLY										
C01357	ATLOCHI	00116									
C03014	ATPDIST	00232	00233	00243	00244	00247	00250	00255	00271	00271	00272
C0F013	ATTHRILE										
17027	ATTPLOC										
P00502	BEGIN.	00503									
C0F240	BLAT										
C00466	BLONG										
C00000	CENTLAT	00311									
C00001	CENTLONG	00311									
C0F002	CEF										
C00000	CLAT										
C00007	CLENGTH	00274	00276	00332	00332						
C00001	CLONG										
C37737	CNTRYLOC										
C00011	COPATTR										
C00012	COPSETTP										
P00520	COUNT.	00054	00055	00077	00077	00146	00147	00204	00205	00264	00265	00340
		00341									
C00002	CZONE										
C00032	D	00151	00151	00154	00155	00157	00160	00166	00167		
C23257	DELAT										
C25373	DELONG										
C27507	DESIG										
P00001	DIST.	00033	00244	00270	00304	00310	00327	00363	00370	00375	
C00311	DISTR	00242	00243								
C00002	DISTS	00313	00313								
C00016	DISTSEF	00232	00250	00251	00267	00267					
F00004	DISTF	00307	00324								
C00011	DISTSAK	00275	00275	00333	00333						
C01416	DISTSFS	00104									
C01441	DISTSOK	00105									
C12577	DISTOUT										
C14713	DISTSFC										
C00062	DPLAT										
C00000	DPLTAK										
C01144	DPLONG										
C01720	DREC	00105									
C05213	DST=										
C01567	DVALA	00110	00111								
C01436	DVALB	00112	00113								
C00005	ELAT	00312	00331								
C00006	ELONG	00312	00331								
P00504	ENDING.	00034	00502	00503	00504	00504					
P00000	EXIT.	00510									
C34055	FLAG										
C05000	FLYLOW										
P00030	FORMAT	00037									
C00021	FUNCTION										
P00521	I	00174	00180	00182							
P00522	I3	00241	00214	00215	00217						
C00005	IALERT										
C00073	IAVAIL	00215	00215								
P00523	I4	00051	00055	00335	00342						

```
C00012  IBASE
C00001  ICALL       00042   00142   00360   00361   00364   00373
C00001  ICAMERON    00041
C00006  ICHPLAN
 00007  ICLASS
C00014  ICOMCAR
C00017  ICORIDOR
C00005  ICTHR
C00016  ICOR SWP
C00002  ICUR  IC
C00001  ICURSRTY
C00021  IDFNIG      00045
C00003  IDITCH     C00003   00130   00131   00176   00176   00462   00462
C00453  IOPEN
C00004  IEVAL
P00003  IFIX
C00004  IFLY
C00000  IGROUP
C00013  IGRPDATA    00364
C00012  IGRPTYPE
C00021  IHIT
C00010  IINDEX
C00007  IINITOPT    00376
C00003  IMPORTD     00227   00230   00246   00247   00255
P00403  IN00006.    00147   00414   00427   00433   00445
P00404  IN00007.    00156   00414   00426   00472
P00405  IN00010.    00157   00415   00431   00466
P00406  IN00011.    00166   00456   00500
C00003  INDEXAD
C00220  INEXTFLT
P00503  INITIAL.    00034
P00031  INITOPT     00031
C00041  IOMIT
C00001  IORIG       00027   00133   00133   00170   00170   00474   00474
C00000  ICTA        00035   00035   00036   00040   00040   00400   00400   00401
C00000  IPASS
C00714  IPAYLOAD
C00020  IPENMODE
C00005  IRAIDSHP    00371
C00017  IRECMODE
C00002  IRECOVER    C00002   00173   00173   00451   00451
C00006  IREFUEL     00301   00301   00304   00314   00314   00317   00317   00322   00322   00350
                    00350
C00003  IREG
C00016  IREP
C00003  IRSTKCPY
C00000  ISIMTYPE
C00000  ISORTY
C00003  ISRTYTGT
C00010  ISTART
C00015  ISTRKSUM
C00004  IT
C00011  ITGTASGN
C00155  ITOLD       00223   00224
```

```
C00004  ITYPE
P00117  .10
P00150  .20
P00156  .30
P00061  .4          00057
P00214  .40
P00231  .41
P00246  .42         00236
P00253  .43         00237
P00260  .44         00236
P00263  .45
P00271  .46
P00274  .47         00245   00252
P00301  .470        00277
P00304  .4701       00302
P00307  .480        00300
P00322  .48         00315
P00317  .4801       00315
P00342  .49
P00063  .5          00060
P00345  .50         00302   00303   00306   00315   00321
P00350  .51         00305   00320
P00352  .510
P00356  .511        00351
P00360  .52         00347   00355
P00511  .ERASER.    00066   00071
P00030  ..100000    00037
P00330  .Z000001.   00324   00325
P00524  J           00101   00102   00120   00211   00212   00214
P00525  J1          00136   00161   00423
P00526  J2          00142   00441
C00092  JCC=R       00276   00276
C00001  JGHOUR
C00023  JOUTSET
C00024  JPAYLOAD
C00022  JREFUEL
C00006  JTGTI
C00016  KCMPMM
P00527  L          00225   00226   00241   00241   00261   00264
C00036  LASTPAY
C00037  LASTTGT
C00124  LKHITMT     00212   00213
C00156  LOSTTGT
C00010  MARPA       00071
C00000  MAPT        00072   00072   00074   00075   00125   00126   00144   00144   00163   00163
C00000  MBASEPG
C00001  MC
C00007  MELV
C00003  ML
C00005  MSORTY
C00006  MSPT
C00004  MSTMK
C00002  MT
C00001  MY-OTGT     00107
```

C00005	NALRTDLY								
C01135	NASSPV								
C00211	NASMS								
C00072	NAVAIL	00127	00127	00201	00202	00207	00207		
C00621	NB	00335	00336						
C00011	NBASE	00052	00052						
C00003	NBIT	00123	00124						
C00207	NLOSTTBT	00220	00221						
C00015	NMPSITE								
C00043	NOMIT	00125							
C00010	NOPERSON								
C00015	NPREDEF	00234	00235	00256	00261	00262			
C00001	NRVEH								
P00027	NSPARE	00065							
C00000	NT								
C00002	NUMASM								
C00001	NUMBOMB								
C00000	NUMBIT								
C00000	NVEH								
C00002	NVEHGRP								
C00210	NWHDS	00047	00050	00056	00056	00062	00062	00064	00064
C01133	NWPC								
C00001	NWPNS								
C00623	NWPV	00057	00057	00061	00061				
X00003	ORDER	00253							
P00414	P00002.U	00420							
P00433	P00003.U	00436							
C00003	PLAT								
C00004	PLONG								
C00021	PREATTR	00231	00231						
X00002	PRINTIT	00043	00362	00367	00374				
X00001	QBOOICT.	00000	00032						
C00001	RANGE	00345	00345	00354					
C00006	RANGEDEC								
C00014	RANGREF	00353	00353	00356	00356				
C00226	REFLAT	00323	00330						
C00252	REFLONG	00324	00330						
P00412	RELCON..	00046	00257	00365	00372	00377	00502		
C01326	RHOJ	00120	00121	00171	00171	00174	00174	00177	00177
C00212	RNGASM								
C00014	RNGDEF								
C00013	RNGE	00346	00346	00354	00355	00357	00357		
C21143	RVAL								
C01472	S	00104							
C00013	SPDASM								
C00011	SPDMI								
C00012	SPDLO								
C00003	SPEED								
C01523	SURV								
C31623	TASK								
C00012	TDEFDIST	00222	00222	00251	00252	00266	00266	00270	00270
C01134	TGTSPWMD								
C00347	TIMEPREM								
C02117	TLAT								

```
C04233  TLONG
P00064  TS00001.   00053
P00123  TS00002.   00076
P00163  TS00003.   00141
P00153  TS00004.   00145
P00220  TS00005.   00203
P00274  TS00010.   00263
P00345  TS00011.   00337
P00422  UP00002.   00137   00162   00418   00423   00424   00425   00431   00432
P00440  UP00003.   00143   00434   00441   00442   00443   00445   00446
P00450  UP00010.   00410   00452   00453   00454   00456   00457
P00461  UP00011.   00407   00463   00464   00465   00470   00471
P00473  UP00012.   00411   00475   00476   00477   00501   00501
C01275  V          00102   00103
C01244  VALA       00114
C01213  VALB       00115
C01154  VALDDAE    00134   00134
C01605  VALON      00131   00132
C01142  VCNH&SE
C00622  VPH&SE
P00056  =S00001.   00063
P00100  =S00002.   00122
P00141  =S00003.   00164   00164
P00150  =S00004.   00152
P00206  =S00005.   00217
P00227  =S00006.   00234
P00243  =S00007.   00245
P00266  =S00010.   00273
P00342  =S00011.   00344
X00005  XMISDE     00067
C04007  YIELD
   00365 SYMBOLS
```

```
      SUBROUTINE INPUTGT                                                1000
CSUBR      INPUTGT   26FEB71  ********************************************* 2000
CUSE       PRINTOPT  9/10/69  ********************************************* 2000
      COMMON/PRINTOPT/ ISHTYTGT,ICURSHTY,ICURRAID,IMSTKCPM,IEVAL,       1000
     1        IRAIDSW,ICMGPLAN,IIPITOPT,IIADEA,ITGTASGN,                2000
     2        IGRPTYPE,IGRPDATA,ICURCAP,ISTRKSUM,ICOMMSWR,              3000
     3        ICORIGIN,INEXTFLT,IDEBUG,JMEPDEL,JCUTSHT,JPAYLOAD         4000
CEND       PRINTOPT  ********************************************* 2000
CUSE       INDEX     9/10/69  ********************************************* 6000
      COMMON/INDEX/ISORTY,IORIG,IRECOVER,IOTTCH,IT,ICORR,JTGTIN         1000
CEND       INDEX     ********************************************* 6000
CUSE       SORTYTGT  9/10/69  ********************************************* 7000
      COMMON/SORTYTGT/MAXPT,MYPOTGT(25),P(25,25),VALU(25),VALV(25),     1000
     1     V(25),RHO(25),ATLOCHI(25),DISTLEG(25),DISTLOG(25),S(25),     2000
     2     SUBV(25),ALPONE(25),VALON(25),DVALB(25),DVALA(25),DREC(25)   3000
CEND       SORTYTGT  ********************************************* 7000
CUSE       COMSORTY  9/10/69  ********************************************* 10000
      COMMON/COMSORTY/NUMHIT,NUMBOMB,NUMASM,NMIT,IPLY(13),IHIT(13)      1000
     1       ,LASTPAY,LASTTGT,NOMIT,IOMIT(25),NAVAIL,IAVAIL(25)         2000
     2       ,LKHIT(25),ITGID,LOSTTGT(25),NLOSTTGT,NOBDS,NASMS,NUGASM   3000
     3       ,DSTH                                                      4000
CEND       COMSORTY  ********************************************* 10000
CUSE       COMRAID   JFEB71  ********************************************* 14000
      COMMON/COMRAID/MYBASE(100),NBSG(10),JTGT(10,100),MYBSG(1100),     1000
     1MYBSE(100)                                                        2000
CEND       COMRAID   ********************************************* 14000
CUSE       RAIDSTRK  JFEB71  ********************************************* 18000
      COMMON/BANK/JGRCOM,JCOMM,IPOEXNO(1100),TLAT(1100),TLONG(1100),    1000
     1TIMEREM(1100),IOPEN(1100),DISTOUT(1100),DISTREC(1100),            2000
     2ATTLOC(1100),MVAL(1100),DELAT(1100),DELONG(1100),DESIG(1100),     3000
     3TASK(1100),CNTMYLOC(1100),FLAG(1100)                              4000
CEND       RAIDSTRK  ********************************************* 18000
C     CHANGED COMMON/RAIDSTRK/ TO COMMON/J/                             19000
CUSE       FIXALL    2FEB71  ********************************************* 19500
      COMMON/FIXALL/IUFIX(1100),IJFIXR(1100),IKFIX(25)                  1000
      TYPE LOGICAL IUFIX,IJFIXR,IKFIX                                   2000
CEND       FIXALL    ********************************************* 19500
      COMMON/Z/RHI(1100),RHO(1100)                                      20000
CUSE       CORRICM   9/10/69  ********************************************* 21000
      COMMON/COMMUNM/CLAT,CLONG,CZONE,PLAT,PLONG,FLAT,FLONG,CLENGTH,    1000
     1     XCORR,COMATTP,CORSETTP,ATTHMIL,ENGREF,NWREREF,                2000
     2     DISTREF(3),PREATTP(3)                                         3000
      TYPE INTEGER CZONE                                                4000
      TYPE REAL KOMP,R                                                  5000
CEND       COMMUNM   ********************************************* 21000
      DIMENSION XUMM(25)                                                24000
      EQUIVALENCE (XUMM,CLAT)                                           25000
CUSE       DEBUG     9/10/69  ********************************************* 26000
      COMMON/DEBUG/ICTA,ICAMERON(20)                                    1000
CEND       DEBUG     ********************************************* 26000
CUSE       PCALL     9/10/69  ********************************************* 27000
      COMMON/PCALL/TPASS,ICALL                                          1000
CEND       PCALL     ********************************************* 27000
      ICTA=ICTA+1                                                       28000
      IC=MRNO=(ICTA1=RHI=PUTGT                                          29000
C     SUBROUTINE INPUTGT                                                30000
```

```
C          ADDS TARGET (ITX) TO IAVAIL(NAVAIL),RECORDS IN OMIT LIST          31000
      ITX=IT    $  JX=IAVAIL(NAVAIL)      $   NAVAIL=NAVAIL - 1              32000
      JTGTIN=JX                                                              33000
      IF(MYASGN(MYPOTGT(JX)).EQ.2)3,4                                        34000
    3 MYASG=(MYPOTGT(JX))=1                                                  35000
    4 MYPOTGT(JX)=ITX                                                        36000
      MYASGN(ITX)=2                                                          37000
      DO  10 IDUM=4,MAXPT                                                    38000
      D(JX,IDUM)=-10.0                                                       39000
   10 D(IDUM,JX)=-10.0                                                       40000
      IF(RVAL(ITX))11,11,13                                                  41000
   11 RVAL(ITX)=.1                                                           42000
      INDEXNOX=INDEXNO(ITX)                                                  43000
      PRINT 12,JGROUP,JCORR,INDEXNOX                                         44000
   12 FORMAT(21H ***RVAL = 0*** GROUP,I3,2X,8HCORRIDOR,I3,2X,10HTARGET N    45000
     10,,I5,4H ***)                                                        46000
   13 VALR(JX)=RVAL(ITX)                                                     47000
      VALA(JX)=RVAL(ITX)*TIMEPREM(ITX)                                       48000
      ATLOCHT(JX)=ATTRLOC(ITX)                                               49000
      RHOJ(JX)=RHO(ITX)                                                      50000
      INDIA(JX)=IJFIXM(ITX)                                                  50500
C  CALCULATE PENDIST                                                        51000
      D(IORIG,JX)=DISTF(PLAT,PLONG,TLAT(ITX),TLONG(ITX))                     52000
      D(IRECOVER,JX) = DISTOUT(ITX)                                          53000
      DREC(JX)=DISTREC(ITX)-DISTOUT(ITX)                                     54000
      NOMIT=NOMIT+1                                                          55000
      IOMIT(NOMIT)=JX    $    LIMITMT(JX)=-NOMIT                            56000
      IC'LL=85                                                               57000
      CALL PRINTIT(ISATYTGT)                                                 58000
      IC'LL=ICTA-1                                                           59000
      RETURN                                                                 60000
      END                                                                    61000
```

IDENT INPOTGT

PROGRAM LENGTH		00307
ENTRY POINTS	INPOTGT	00026
BLOCK NAMES		
	PRINTOPT	00025
	INDEX	00007
	SORTYTGT	01751
	CURSORTY	0021A
	CURPAID	04540
	3	40167
	FIXALL	00107
	2	04230
	CORRIDOR	00024
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	THEND.	
	Q3000040	
	Q3010040	
	QRWDICT.	
	DISTF	
	PRINTIT	
	STM.	
	QNSI.VGL.	

C01357	ATLOCM1	00141	00142						
C00013	ATTHMILO								
C[illegible]	ATTHLOC	00140	00141						
P[illegible]67	BEGIN.	00272							
C00000	CLAT								
C00007	CLENGTH								
C00001	CLOG								
C33737	CNTHYLOC								
P00206	CNVRTI.	00124	00125	00127					
C00011	COMATTR								
C00012	CORSATTR								
P00302	COUNT.	00076	00108						
P00003	CREPT.	00132							
C00042	CZONE								
C00032	D	00102	00102	00104	00104	00160	00161	00163	00164
C23257	DELAT								
C25373	DELONG								
C27507	DESIG								
P00001	DICT.	00030	00121	00131	00155	00177			
C00016	DISTDEF								
X00005	DISTF	00154							
C01410	DISTLEG								
C01441	DISTLOM								
C12577	DISTOUT	00161	00162	00165					
C14713	DISTSEC	00164	00165						
C01720	DREC	00164	00166						
C00213	DSTR								
C00000	DUMM								
C01667	DVALA								
C01636	DVALR								
C00005	ELAT								
C00006	ELONG								
P00273	ENDING.	00031	00204	00270	00271	00271	00272		
P00300	EXIT.	00275							
C34053	FLAG								
P00003	FORMAT.	00034							
P00132	G600000.	00117							
C00073	IAVAIL	00041							
C00001	ICALL	00175	00175						
C00001	ICAMFRO.	00036							
C00006	ICHGPLAN								
C00014	ICORCAR								
C00017	ICORICOR								
C00005	ICORR								
C00016	ICORRSHR								
C00002	ICURRAID								
C00001	ICURSRTY								
C00021	IDEBUG								
C00003	IDITCH								
C10463	IOPEN								
P00303	IOUM	00072	00225						
C00004	IEVAL								
C00004	IFLY								
C00213	IGRPDATA								

```
C00012  IGPRTYPE
C00021  I=IT
C00010  IINDEX
C00057  IINITOPT
C00000  IJFIX
C00043  IJFIX=
C00106  IMFIX       00150
P00207  IN00005.    00077   00220   00232   00241
P00210  IN00006.    00077   00217   00230   00243
P00211  IN00007.    00160   00245   00255
P00212  IN00010.    00163   00244   00265
C00003  INDEX=0     00115
P00304  INDEX=0X    00114   00124
C00374  INDEXVF=
C00020  INEXTFLT
P00270  INITIAL.    00031
P00026  INPUTGT     00026
C00041  IO=IT       00173
C00001  IORIG       00251   00251
C00000  IOTA        00032   00032   00033   00035   00035   00202   00202   00203
C00000  IPASS
C00005  IPAIRSW
C00002  IPECOVER    00241   00241
C00003  IPSTACP=
C00000  IS?=TY
C00000  ISHIXTGT    00200
C00015  ISTW=SUM
C00004  IT          00034   00037
C00011  ITGIASGN
C00155  ITOLD
P00305  ITX         00040   00064   00067   00107   00114   00132
P00103  .10
P00133  .13         00111   00111
P00132  .13         00112
P00056  .2
P00044  .4          00055
P00003  ..100000    00034
P00004  ..12        00122
P00274  .=STIFF.    00053   00057   00061   00062
P00156  .Z00001.    00152   00153
C00002  JOCAL       00125
C00001  JOHOLD      00123   00123
C01023  JOUTSET
C01024  JPAYLOAD
C00022  JUFFUEL
C00310  JTGT
C00006  JTGTIN      00047   00047
P00306  JX          00042   00046   00050   00056   00065   00134   00171   00234
C00010  K0PP=P
C00036  LASTPAY
C00037  LASTTGT
C00124  LKMIT=T     00174
C00156  LOSTSGT
C00000  MARK        00174   00174
```

```
C02240  .YASG.    00054  00054  00062  00063  00070  00070
C00000  .YPASE
C00001  .YPRTGT   00051  00051  00057  00057  00065  00066
C00144  .ASG.
C00211  .ES.S
C00272  .AVATI    00040  00041  00044  00044  00045
C00263  .WIT
C00237  .LOSTTGT
C00147  .EMIT     00167  00167  00170  00172  00172  00173
C00015  .PREFEF
C00060  .T
C00002  .UPASY
C00001  .UMMOMY
C00000  .UMMTT
C00210  .A.TS
P00217  P00000.L  00222
C00000  PWI
C00003  PLAT      00155
C00004  PLOAG     00158
C00021  PREJTTJ
X00004  PRINTIF   00174
X00002  0300000   00165
X00003  03310040  00167
X00004  PROFIGT.  00000  00027
X00010  PASIMPL.  00206
P00215  PELOAD..  00201  00247
C02114  PWU       00142  00143
C01324  PRIU      00143  00144
C00212  PLGASY
C00014  PLGOFF
C21143  PVAL      00110  00110  00114  00115  00133  00133  00136  00136
C01472  S
X00007  STP.      00120
C01523  SLOW
C01423  TISK
X00001  TMPSO.    00130
C04367  TIMEPREC  00137
C02117  TLAT      00151  00157
C04233  TLOAG     00152  00157
P00107  TSTOOLI.  00075
P00224  UP00000.  00073  00220  00225  00226  01227  00232  00233
P00235  UP00002.  00043  00234  00237  00240  00246  00246
P00250  UP00005.  00214  00252  00253  00254  00256  00256
P00260  UP00006.  00213  00262  00263  00264  00266  00266
C01275  V
C01244  VALA      00137  00143
C00213  VELA      00135  00135
C01554  VALOAF
C01605  VALOA
P00101  VSOOOOL.  00104
   00236 SYMBOLS
```

```
      SUBROUTINE MISASG                                                 1000
CSUBR      MISASGN   (IMAY71)  ***************************************** 4000
C     ASSIGN MISSLES TO TARGETS AND WRITE MISSLE EVENTS FOR A MAXIUM OF   2000
C     SECONDS                                                           3000
CUSE       3          SAPR71  ***************************************** 4000
      COMMON/A/T,JS=CUR,JCOMP,INDEXNO(1100),TLAT(1100),TLONG(1100),     1000
     1IMTGT(1100),MVEL(1100),PLAT(1100),PLONG(1100),DESIG(1100),        2000
     2TASK(1100),CNTRYLOC(1100),FLAG(1100),FTIME(10,50),EVTDATA(270),   3000
     3 DUM(3230)                                                        4000
      TYPE INTEGER DESIG,TASK,CNTRYLOC,FLAG                             5000
CEND       3          ***************************************** 6000
C     CHANGED COMMON /MAINSTRK/ TO COMMON/3/                            7000
CUSE       GRPDATA   4/10/69  ***************************************** 8000
      COMMON/GRPDATA/IGROUP,NUMS,NUMGRP,TYPE,ITYPE,IALERT,T=FUEL,       1000
     1      YIELD,ISTART,NBASE,IBASE(150),MLAT(150),MLONG(150),         2000
     2        IPAYLOAD(150),NONBASE(150)                                3000
      TYPE INTEGER NONBASE                                              4000
CEND       GRPDATA   ***************************************** 8000
CUSE       GRPTYPE   (FEB71)  ***************************************** 12000
      COMMON/GRPTYPE/ISIMTYPE,RANGE,CEP,SPEED,ALERTCLY,ALNTCLY,RANGEDEL 1000
     1   ,ICLASS,NOPERSON,SPDHI,SPDLO,SPDASH,MANSHEF,NUMSITE,IHEP       2000
     2   ,IPECMODE,IPEAMODE,FUNCTION                                    3000
      TYPE INTEGER FUNCTION                                             3500
      TYPE REAL ALNTCLY                                                 4000
CEND       GRPTYPE   ***************************************** 12000
CUSE       PLANTYPE  9/10/69  ***************************************** 15000
      COMMON/PLANTYPE/INITSTRK,CORMSL,CORNOMB                           1000
CEND       PLANTYPE  ***************************************** 15000
CUSE       PAYLOAD   M/26/69  ***************************************** 16000
      COMMON/PAYLOAD/NOBOMB1(40),I=MD1(40),                             1000
     1    NOBOMB2(40),I=MD2(40),MASM(40),IASM(40),                      2000
     2    NCM(40),NUECOYS(40),NAMECOYS(40),TMIRV(40)                    3000
CEND       PAYLOAD   ***************************************** 16000
CUSE       FILES     (FEB71)  ***************************************** 18000
C                                                                       1600
      COMMON/FILES/TGTFILE(2),BASFILE(2),MSLTIME(2),ALOCTAB(2),         2000
     1TMPALOC(2),ALOCGRP(2),STRKFIL(2),EVENTAPE,PLANTAPE                3000
C                                                                       4000
      TYPE INTEGER TGTFILE,BASFILE,MSLTIME,ALOCTAB,TMPALOC,ALOCGRP,     5000
     1STRKFIL,EVENTAPE,PLANTAPE                                         6000
C                                                                       7000
      COMMON/INPUTFL/INPTFL,MYIDINFL                                    8000
C                                                                       9000
CEND       FILES     ***************************************** 14000
CUSE       MASTER    (FEB71)  ***************************************** 24000
      COMMON/MASTER/IMDATE,IDENTNO,ISIDEM,NRTPT,NCOMM,NOPEN,NRECOVER    1000
     1,NMEP,NMNORY,NREG,NTYPE,NGROUP,NTOTBASE,NPAYLOAD,NASMTYPE,NMMOTYPE 2000
     2,NTANKS,NCOMPLEX,NCLASS,NALERT,NTGTS,NCORTYPE,NCNTRY              3000
CEND       MASTER    ***************************************** 24000
      EQUIVALENCE (ISIDE,ISIDEM)                                        25000
CUSE       IFTPRNT   9/10/69  ***************************************** 27000
      COMMON/IFTPRNT/IFTPRNT(10)                                        1000
CEND       IFTPRNT   ***************************************** 27000
      DIMENSION KMISL(18),KSITE(18),KTGTIND(18),XDLAT(18),XDLONG(18),   28000
     1FLTIME(18),BLAT(18),BLONG(18),XTLAT(1M),XTLONG(1M),KDESIG(18),    29000
     2KTASK(1M),KCNTRYLC(18),KFLAG(18)                                  29500
```

```
      EQUIVALENCE(IVTDATA(19),KMISL(1)),(IVTDATA(37),KSITE(1)),      30000
     1 (IVTDATA(55),KTGTIND(1)),(EVTDATA(73),KCLAT(1)),(EVTDATA(91),  31000
     2KDLONG(1)),(EVTDATA(109),FLTIME(1)),(EVTDATA(127),KLAT(1)),     32000
     3(EVTDATA(145),KLONG(1)),(EVTDATA(163),STLAT(1)),(EVTDATA(181),  33000
     4XTLONG(1)),(IVTDATA(199),KDESIG(1)),(IVTDATA(217),KTASK(1)),    34000
     5(IVTDATA(235),KCNTRYLC(1)),(IVTDATA(253),KFLAG(1))              34500
      DIMENSION MISARR(18,14)                                         35000
      EQUIVALENCE(MISARR(1),IVTDATA(19))                              36000
      COMMON/PCALL/IPASS,ICALL                                        37000
      TYPE INTEGER *4NLIST, SIDE,   TARLIST                           38000
      DATA (LRC=270)                                                  39000
      DIMENSION OUTS*(50), IVTDATA(270)                               40000
      EQUIVALENCE,EVTDATA,IVTDATA)                                    41000
      COMMON/ITP/ITP                                                  42000
      COMMON/ISKIPTO/ISKIPTO                                          43000
      COMMON/MISPRNT/LK,LL,NEVTS                                      44000
C                                                                     44100
      DIMENSION LFIXMISS (1000)                                       44200
      TYPE LOGICAL LFIXMISS                                           44300
C                                                                     44400
C     LFIXMISS  FIXED ASSIGNMENT INDICATOR                            44500
C                                                                     44600
      DATA (IASHFT = 10000000B),(MASKNUM=7777B)                       44620
C     IASHFT IS USED TO EXTRACT ISTART FROM VONBASE                   44640
C     MASKNUM IS USED TO EXTRACT NUMB FROM VONBASE                    44660
C                                                                     44680
      IF (IGROUP .GT. 200)10,20                                       45000
   10 IVTDATA(6)=NLAST                                                46000
      ITP=STRKFIL(1)                                                  47000
      CALL WRARRAY(EVTDATA,LRC)                                       48000
      RETURN                                                          49000
   20 CONTINUE                                                        50000
      ITP=INPTFL                                                      50500
      CALL RDARRAY(NT,3)                                              51000
      IF (NT .GT. 1000)30,40                                          52000
   30 PRINT 35,NT                                                     53000
   35 FORMAT(30H  TOO MANY TARGETS IN MISASGN ,I5)                    54000
      CALL ABORT                                                      56000
   40 CONTINUE                                                        57000
      DO 50 MM=1,3200,1100                                            57500
      CALL RDARRAY(INDEXNO(MM),NT)                                    58000
   50 CONTINUE                                                        59000
      CALL RDARRAY(RVAL,NT)                                           60000
      CALL RDARRAY(DLAT,NT)                                           61000
      CALL RDARRAY(DLONG,NT)                                          62000
      LLOGICAL=((NT-1)/32)+1                                          62020
      CALL RDARRAY (LFIXMISS,LLOGICAL)                                62030
      CALL RDARRAY(DESIG,NT)                                          62050
      CALL RDARRAY(TASK,NT)                                           62100
      CALL RDARRAY(CNTRYLOC,NT)                                       62150
      CALL RDARRAY(FLAG,NT)                                           62170
      MASTOR=1R                                                       63000
      IF(ISKIPTO-IGROUP)70,70,60                                      64000
   60 RETURN                                                          65000
   70 IF(IGROUP.EQ.ISKIPTO)90,80                                      66000
   80 CONTINUE                                                        67000
```

```
      PRINT 85, MYID(IAF)
   85 FORMAT (//1X,67(1H=)BASFILE OUT OF PHASE===MISASGN)
      CALL ABORT
   90 ASSITES = (NOPERSQN - 1) / NMPSITE + 1
  120 DO 130 K=1,LNC
  130 IVTDATA(K)=0
      IF(IMIRV(IDAYE.AD))139,135
  135 DO 137 JK=1,NT
  137 INDEXNO(JK)=-INDEXNO(JK)
  139 IVTDATA(1)=2
      IF(ISIDE.EQ.4H-LUF)140,150
  140 IVTDATA(1)=1
  150 CONTINUE
      IVTDATA(3)=IGROUP
      IVTDATA(5)=IPAYLOAD(1)
      IVTDATA(9)=ISI+TYPE
      IVTDATA(10)=1
      IVTDATA(11)=IMFG
      IVTDATA(12)=IFLEPT
      NORIN = NT
C
C     COUNT NUMBER OF MISSILE ASSIGNMENTS ACTUALLY REQUIRED
C
      NMPNT = 0
      DO 170 I=1,NT
      IF(INDEXNO(I))160,170,170
  160 NMPNT = NMPNT +1
  170 CONTINUE
C
C     COUNT ACTUAL NUMBER OF VEHICLES IN GROUP
C
      NMIS = 0
      DO 180 I=1,NBASE
      ITEST = VONBASE(I).AND.MASKNUM
      NMIS = NMIS+ITEST
  180 CONTINUE
C
C     CHECK CORRESPONDENCE BETWEEN NUMBER OF ASSIGNMENTS
C       AND  NUMBER OF VEHICLES
C
      IF(NMPNT - NMIS)600,190,700
C
C     NOT ENOUGH TARGETS ASSIGNED, DECREASE
C          NUMBER OF VEHICLES ON EACH BASE
C
  600 NTOMIT = NMIS - NMPNT
      IOMIT = 0
      K = -1
  610 K = K + 1
      J = XMODF(K,NBASE) +1
      ITEST = VONBASE(J).AND. MASKNUM
      IF(ITEST)610,610,620
  620 IOMIT = IOMIT +1
      VONBASE(J) = VONBASE(J)-1
      IF (IOMIT - NTOMIT)  610, 190, 190
C
```

```
C     TOO MANY TARGETS, REMOVE EXCESS                                   90380
C                                                                       90390
  700 IF(I-IRV(IPAYLOAD))720,720,710                                    90400
C     ERROR IN PROGRAM FOOTPRNT                                         90410
  710 PRINT 711,IGROUP,NWPNT,NMIS                                       90420
  711 FORMAT(1H0,10(,16H***** MIRV GROUP,I4,4H HAS,I4,*ROOSTER ASSIGNMEN 90430
     1TS, BUT ONLY*,I4,* ROOSTERS*)                                     90440
      GO TO 190                                                         90450
  720 NTOMIT = NWPNT-NMIS                                               90460
      NT = NT-NTOMIT                                                    90470
C     CHECK FOR FIXED ASSIGNMENTS BEFORE REMOVING TARGETS               90480
      ICANUSE = NT                                                      90490
      DO 770 I=1,NTOMIT                                                 90500
      J = NTGTIN+1-I                                                    90510
      IF(LFIX-ISS(J))730,770                                            90520
C     FIXED, FIND PLACE TO PUT IT                                       90530
  730 IF(LFIX-ISS(ICANUSE))740,760                                      90540
C     THIS TARGET IS ALSO FIXED - LOOK AGAIN                            90550
  740 ICANUSE = ICANUSE - 1                                             90560
      IF(ICANUSE) 750,750,730                                           90570
C     TOO MANY FIXED TARGETS                                            90580
  750 PRINT 751, IGROUP                                                 90590
  751 FORMAT(1H0,10X,* TOO MANY FIXED TARGETS IN GROUP*,I4,* SOME WILL B 90600
     1E OMITTED*)                                                       90610
      GO TO 190                                                         90620
C     REPLACE THIS TARGET WITH FIXED TARGET INFORMATION                 90630
  760 INDEXNO(ICANUSE) = INDEXNO(J)                                     90640
      TLAT(ICANUSE) = TLAT(J)                                           90650
      TLONG(ICANUSE) = TLONG(J)                                         90660
      INTOT(ICANUSE) = INTOT(J)                                         90670
      RVAL(ICANUSE) = RVAL(J)                                           90680
      DLAT(ICANUSE) = DLAT(J)                                           90690
      DLONG(ICANUSE) = DLONG(J)                                         90700
      DESIG(ICANUSE) = DESIG(J)                                         90702
      TASK(ICANUSE) = TASK(J)                                           90704
      ENTRYLOC(ICANUSE) = ENTRYLOC(J)                                   90706
      FLAG(ICANUSE) = FLAG(J)                                           90708
      LFIX-ISS(ICANUSE) = LFIX-ISS(J)                                   90710
  770 CONTINUE                                                          90720
C                                                                       90730
C     CORRECT NUMBER OF VEHICLES AND ASSIGNMENTS - MIGHT BE             90740
C                                                                       90750
  190 CONTINUE                                                          90760
      NFITS=0                                                           91000
      NTGTT=0                                                           92000
      NWPNT=0                                                           93000
      DO 300 INBAS=1,NBASE                                              94000
      ITGT=1                                                            95000
      IFVT=0                                                            96000
C     COMPUTE STARTING SITE FOR EACH BASE                               96200
      MYSTART = (VONBASE(INBAS)/ITSHFT) +1                              96600
      ISIT = AMOUF(MYSTART,NOSITES)                                     96800
      ISITE=IVINDAT(J)=IBASE(INBAS)+ISIT                                97000
C     COMPUTE NUMBER OF VEHICLES ON THIS BASE                           97200
      NXPR = VONBASE(INBAS) .AND. MASKONE                               97400
      NMISF=0                                                           98000
```

```
      N=0A = 0                                                          99000
      ISKIP=INBAS-1                                                     100000
      ISTOR=0    $ I=PN=ISTART                                          101000
  210 CALL POSIT(ITGT,ISKIP,JTGT,NRVS)                                  102000
      IF(ISTOR+NRVS.LE.1A)200,240                                       103000
  200 LTGT=JTGT+NRVS-1   <  IF(LTGT.GT.NT)202,205                       104000
  202 PRINT 203,LTGT,NT                                                 105000
  203 FORMAT(24H UNDER-ALLOCATED--LTGT=,I5,2X,4HNT=,I5)                 106000
  205 DO 220 IT=1,NRVS                                                  107000
      ISTOR=ISTOR+1                                                     108000
      KSITE(ISTOR)=ISITE                                                109000
      KPISL(ISTOR)=ISPN                                                 110000
      RLAT(ISTOR)=RLAT(INBAS)                                           111000
      RLONG(ISTOR)=RLONG(INBAS)                                         112000
      KTGT=JTGT+IT-1                                                    113000
      KTGTIND(ISTOR)=XABSF(INDEX0(KTGT))                                114000
      XRLAT(ISTOR)=RLAT(KTGT)                                           115000
      XRLONG(ISTOR)=RLONG(KTGT)                                         116000
      XTLAT(ISTOR)=TLAT(KTGT)                                           117000
      XTLONG(ISTOR)=TLONG(KTGT)                                         118000
      FLTIME(ISTOR)=DISTF(RLAT(INBAS),RLONG(INBAS),TLAT(KTGT),          119000
     1     TLONG(KTGT))/SPEED                                           120000
      KPRESIG(ISTOR)=PRSIG(KTGT)                                        120100
      KTASK(ISTOR)=TASK(KTGT)                                           120200
      KCNTRYLC(ISTOR)=CNTRYLOC(KTGT)                                    120300
      KFLAG(ISTOR)=FLAG(KTGT)                                           120400
  220 CONTINUE                                                          121000
      NMISE=NMISE + 1     <  I=PN=ITPN+1                                122000
      ITGT=KTGT+1                                                       122200
      IF(ITGT.GT.NT)255,256                                             122400
  255 ITGT=1                                                            122600
  256 ISKIP=NMASE-1                                                     122800
      N=0H=N=0H+1                                                       123000
      IF(N=0H.GE.=0H-)260,240                                           124000
C     RESET SITE INDEX                                                  125000
  240 ISIT = ISIT + 1                                                   126000
      ISIT = MODF(ISIT, NOSITES)                                        127000
      ISITE = IMASE(INBAS) + ISIT                                       128000
      GO TO 210                                                         133000
  260 RTGTF=ISTOR    = LTGTT=(TGTT+ITGTF                                134000
      ISTOR=0                                                           135000
      IFVT=IFVT+1                                                       136000
      NFVTS=NFVTS+1                                                     137000
      NUMVT=NUMVT+NMISE                                                 138000
      IVTDATA(17)=NMISE                                                 139000
      IVTDATA(18)=NTGTF                                                 140000
      NMISE=0                                                           141000
      NFLTS=IVTDATA(18)   <  FLGTMIN=99999.                             142000
      DO 450 IF=1,NFLTS                                                 143000
      IF(FLTIME(IF).LT.FLGTMIN)440,450                                  144000
  440 FLGTMIN=FLTIME(IF)                                                145000
  450 CONTINUE                                                          146000
      IF(INITSTEP.EQ.2)460,470                                          147000
  460 DESLNGH=0.                                                        148000
      GO TO 480                                                         149000
  470 DESLNGH=FLGTMIN*CORMSL                                            150000
```

```
  480 CONTINUE                                                          151000
      DELAY=ALERTDLY                                                    152000
      IF(IALERT.EQ.1)500,490                                            153000
  490 DELAY=NALRTDLY                                                    154000
  500 CONTINUE                                                          155000
      EVTDATA(4)=DELAY+OFSLNCH                                          156000
      LL=IEVT                                                           157000
      LK=INBAS                                                          158000
      ICALL=121                                                         159000
      CALL PRINTIT(22)                                                  160000
      ITP = STRKFIL                                                     161000
      CALL #HARRAY(EVTDATA,LOC)                                         162000
      DO 280 I=1,11                                                     163000
      DO 270 J=1,NTGTE                                                  164000
  270 MISAPR(J,I)=0                                                     165000
  280 CONTINUE                                                          166000
      IF(N=OR.GE.N=PF)290,200                                           167000
  290 N=04=0                                                            168000
  300 CONTINUE                                                          169000
      PRINT 310,N=PNT,NMIS,NTGTT,NTGTIN,IGROUP,N=PNS                    171000
  310 FORMAT(1X,I5,4H OF ,I5,1H= MISSILES USED ON ,I5,4H OF ,I5,        172000
     1 17H TARGETS IN GROUP,I4,11H.  N=PNS = ,I5)                       173000
      RETURN                                                            174000
      END                                                               175000
```

IDENT MISASGN

PROGRAM LENGTH		01341
ENTRY POINTS	MISASGN	00263
BLOCK NAMES		
	3	40167
	GRPDATA	01370
	GRPTYPE	00022
	PLNTYPE	00003
	PAYLOAD	00620
	FILES	00020
	INPUTFL	00002
	MASTER	00027
	IFTPRNT	00012
	PCALL	00002
	ITP	00001
	ISKIPTO	00001
	MISPRNT	00003
EXTERNAL SYMBOLS		
	THEN.	
	Q3Q00040	
	Q3QI0040	
	QBQUICT.	
	WRARRAY	
	RDARRAY	
	ABORT	
	POSIT	
	DISTF	
	PRINTIT	
	ERROR	
	STM.	
	ONSYSEL.	

```
X00007  ABORT      00322  00414
C00004  ALERTDLY   01127  01127
C00012  ALOCGRP
C00006  ALOCTAB
C00002  BASFILE
P01254  BEGIN.     01256
C00240  BLAT       00775  00775  01014  01021
C00466  BLONG      00777  00777  01014  01021
C00002  CEP
C23257  CNTRYLOC   00370  00664  00664  01027
P01224  CNVNTI.    00317  00411  00577  00601  00602  00644  00755  00757  01211  01212  01213
                   01214  01214  01217
C00002  CORFOWR
C00001  CORVSL     01125  01125
P01271  COUNT.     00427  00430  00445  00446  00503  00504  00521  00522  00765  00766  01110
                   01111  01165  01166
P00130  CWFWT.     00322  00414  00605  00647  00762  01222
P01272  DELAY      01130  01135  01136
C17027  DESIG      00362  00662  00662  01025
P01273  DESLNCH    01123  01126  01137
P00001  DICT.      00265  00277  00305  00314  00321  00323  00331  00337  00342  00345  00356
                   00361  00364  00367  00372  00406  00413  00415  00544  00574  00604  00641
                   00646  00715  00735  00752  00761  01020  01057  01147  01154  01206  01221
X00011  DISTF      01017
C12577  DLAT       00343  00660  00660  01006
C14713  DLONG      00346  00661  00661  01007
C31731  DUP
P01257  ENDING.    00266  00301  00400  01222  01254  01255  01255
C00016  EVENTAPE
C31313  EVTDATA    00300  01137  01140  01155
P00000  EXIT.      01261
C25373  FLAG       00373  00665  00665  01030
P01274  FLGTMIN    01105  01113  01110  01124
C31467  FLTIME     01024  01024  01112  01112  01115  01115
P00130  FORMAT.    00272  00454
C27507  FTIME
C00021  FUNCTION
P00322  GG00000.   00312
P00414  GG00001.   00404
P00605  GG00002.   00572
P00647  GG00003.   00637
P00762  GG00004.   00750
P01222  GG00005.   01204
P01275  I          00477  00504  00515  00522  00614  00620  00672  01157  01172  01234
C00005  IALERT     00472  00472  01131  01131
C00310  IASM
C00012  IBASE      00716  00717  01061  01061
C00001  ICALL      01145  01145
P01276  ICAUSE     00613  00627  00633  00634  00652
C00007  ICLASS
C00001  IDENTNO
P01277  IEVT       00706  01070  01071  01141
P01300  IF         01104  01110
C00000  IFTPRT
```

C00000	IGROUP	00267	00267	00370	00376	00402	00402	00461	00461	00576	00576	00643
		00643	01215	01215								
C00000	IHDATE											
C00550	IHIRV	00437	00437	00570	00570							
P01225	IA00013.	01166	01225	01240	01242	01252						
P01301	INBAS	00702	00706	00727	00765	01060	01143	01201				
C00003	INDEXNO	00327	00332	00447	00447	00450	00505	00505	00651	00651	00653	00653
		01004	01004									
P01254	INITIAL.	00264	-									
C00000	INITSTRK	01120	01120									
C00000	INPTFL	00302	00302									
C00367	INTOT	00656	00656									
P01302	IOMIT	00536	00555	00556	00562							
C00000	IPASS											
C00714	IPAYLOAD	00434	00434	00463	00463	00565	00565					
C00020	IPENMODE											
C00017	IRECMODE											
C00006	IREFUEL											
C00003	IREG	00470	00470									
C00016	IREP											
P03126	IRSHFT	00711										
C00002	ISIDE	00454	00454									
C00002	ISIDEM											
C00000	ISITYPE	00465	00465									
P01303	ISTT	00716	00720	01053	01054	01060	01062					
P01304	ISITF	00722	00771	01063								
P01305	ISKIP	00730	00734	01047								
C00000	ISKIPTO	00375	00375									
C00010	ISTART	00732	00732									
P01306	ISTOR	00731	00740	00767	00770	00771	01064	01067				
P01307	IT	00743	01002	01031								
P01310	ITEST	00525	00526	00553								
P01311	ITGT	00705	00734	01037	01040	01044						
C00000	ITP	00275	00275	00303	00303	01152	01152					
C00004	ITYPE											
C31313	IVTDATA	00273	00273	00431	00432	00452	00453	00457	00457	00462	00462	00464
		00464	00466	00466	00467	00471	00471	00473	00473	00720	00721	01076
		01076	01100	01100	01102	01103						
C00050	IXMD1											
C00170	IXMD2											
P01312	IXPN	00733	00773	01035	01036							
P00272	.10	00271										
P00424	.120											
P00431	.130											
P00441	.135											
P00447	.137											
P00452	.139	00440										
P00457	.140											
P00461	.150	00456										
P00510	.160	00504										
P00512	.170	00504	00507									
P00530	.180											
P00676	.190	00532	00563	00564	00665	00647						
P00302	.20	00270	00271									

```
P00743  .200        00742   01176
P00750  .202
P00760  .205        00747   00747
P00734  .210        01063
P01031  .220
P01053  .240        01052
P01043  .254
P01045  .256        01041   01042
P01094  .260        00742   01051   01056
P01167  .270
P01172  .240
P01177  .290        01176
P00312  .30
P01201  .300
P00324  .40         00314   00311
P01115  .460
P01117  .450        01114   01114
P01122  .460
P01124  .470        01121
P01127  .480        01123
P01134  .490        01132
P00333  .50
P01136  .500        01133
P00480  .60
P00536  .600        00533
P00540  .610        00553   00554   00563
P00555  .620
P00401  .70         00377   00377
P00545  .700        00533
P00572  .710
P00606  .720        00571   00571
P00627  .730        00624   00634
P00633  .740        00632
P00637  .750        00635   00635
P00650  .760        00632
P00672  .770        00626
P00404  .80         00403
P00416  .90         00403
P01263  .EPSEL.     00351   00353   00420   00545   0.712
P00130  ..100000    00272
P00153  ..100001    00455
P00220  ..203       00753
P00233  ..310       01217
P00131  ..35        00315
P00154  ..711       00575
P00201  ..751       00642
P00141  ..85        00407
P01262  .STIFF.     00436   00436   00547   00567
P00332  .Z00001.    00327
P01021  .Z00002.    01013   01014   01015   01016
P01313  J           00544   00550   00557   00621   00623   00650   01162   01247
C00002  JCOMM
C00001  JGROUP      00401   00401
P01314  JK          00442   00445
```

P01315	JTGT	00737	00743	01001					
P01316	K	00425	00427	00537	00540	00541			
C31665	KCNT=VLC	01027							
C31621	KDESIG	01025							
C31707	KFLAG	01030							
C31335	KMISL	00774	00774						
C31357	KSITE	00772	00772						
C31643	KTASK	01026							
P01317	KTGT	01003	01003	01036					
C31401	KTGTIND	01006							
P00065	LFIX=ISS	00357	00625	00631	00647	00671			
C00000	LK	01143	01144						
C00001	LL	01141	01142						
P01320	LLOGICAL	00354	00357						
P00125	LPC	00300	00425	01155					
P01321	LTGT	00745	00745	00754					
P00127	MASKNUM	00524	00552	00724					
P01322	MASTOR	00374							
C31335	MISAMR	01167	01170						
P00263	MISASGN	00263							
P01323	M	00325	00326	00334					
C00004	MSLTIME								
C00001	MYIDINFL	00416	00416						
P01324	MYSTART	00713							
C00500	NADECOYS								
C00023	NALERT								
C00005	NALMTDLY	01134	01134						
C00240	NASV								
C00016	NASMTYPE								
C00011	NBASE	00517	00517	00540	00542	01045	01045	01202	01202
C00010	NBOARY								
C00022	NCLASS								
C00360	NCM								
C00026	NCNTRY								
C00021	NCOMPLEX								
C00004	NCORRM								
C00025	NCORTYPE								
C00430	NDECOYS								
C00005	NOPER								
C00002	NEVTS	00676	00677	01071	01072	01073			
P01325	NFLTS	01104	01106						
C00013	NGROUP								
P01326	NMIS	00514	00524	00527	00532	00534	00602	00607	01212
P01327	NMISE	00726	01033	01034	01074	01075	01102		
C00015	NMPSITE	00421	00422						
C00000	NONOMB1								
C00120	NONOMB2								
C00310	NOPERSQN	00416	00416						
P01330	NOSITES	00623	00713	01055					
C00015	NPAYLOAD								
C00006	NPECOVER								
C00007	NREF								
C00011	NREG								
C00003	NRTPT								

P01331	%RVS	00737	00741	00744	00763						
C00000	NT	00304	00307	00307	00316	00316	00332	00340	00343	00346	00347	00347
		00362	00365	00370	00373	00442	00443	00474	00501	00501	00610	00610
		00612	00612	00746	00746	00756	00756	01040	01041			
C00020	%TARKPAS											
P01332	%TGTF	01065	01066	01077	01164							
P01333	%TGTIN	00475	00617	01214								
C00024	%TGTS											
P01334	%TGTT	00700	01065	01066	01213							
P01335	%TOMIT	00535	00582	00607	00611	00674						
C00014	%TOTBASE											
C00012	%TYPE											
C00002	%VEHGRP											
C00017	%%HDTYPE											
P01336	%%OM	00727	01047	01050	01175	01200						
P01337	%%PM	00725	01051	01175								
C00001	%%PNS	01217										
P01340	%%PST	00476	00510	00511	00531	00535	00560	00606	00701	01074	01075	01210
P00003	OUTSW											
P01226	P00002.U	01231										
P01242	P00004.U	01244										
C00017	PLANTAPE											
X00010	POSIT	00734										
X00012	PRINTIT	01146										
X00002	Q3000040	00624	00630	00666								
X00003	Q3010040	00670										
X00004	QBODICT.	00000	00264									
X00015	QBSIMEL.	01223										
C00001	RANGE											
C00006	RANGEDEC											
C00014	RANGREF											
X00006	RDARRAY	00304	00330	00335	00341	00344	00355	00360	00363	00366	00371	
C10463	RVAL	00340	00657	00657								
C00013	SPDASW											
C00011	SPDMI											
C00012	SPDLO											
C00003	SPEED	01023	01023									
X00014	STH.	00313	00405	00573	00640	00751	01205					
C00014	STRKFIL	00274	00274	01151	01151							
C21143	TASK	00365	00663	00663	01026							
C00000	TGTFILE											
X00001	THEND.	00320	00412	00603	00645	00748	01220					
C02117	TLAT	00654	00654	01010	01015	01022						
C04233	TLONG	00655	00655	01011	01016	01022						
C00010	TMPALOC											
P00434	TS00002.	00426										
P00452	TS00003.	00444										
P00513	TS00004.	00502										
P00531	TS00005.	00520										
P00674	TS00006.	00616										
P01202	TS00007.	00703										
P01033	TS00010.	00764										
P01120	TS00011.	01107										
P01172	TS00013.	01165										

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```
P01233  $P00002.  00500  00514  00615  00673  01160  01173  01227  01234  01235  01236  01240
                  01241
P01246  $P00006.  00547  00622  01163  01242  01247  01250  01251  01253  01253
C01142  VCHBASE   00523  00523  00550  00551  00557  00560  00561  00707  00707  00722  00723
C31511  #LAT      00774  00774
C31533  #LONG     01000  01000
X00005  #PARMAT   00276  01153
P00324  #S00001.  00335
P00431  #S00002.  00433
P00447  #S00003.  00451
P00505  #S00004.  00512
P00523  #S00005.  00530
P00617  #S00006.  00675  00675
P00704  #S00007.  01203  01203
P00767  #S00010.  01032
P01112  #S00011.  01117
P01151  #S00012.  01174
P01167  #S00013.  01171
C31423  XDLAT     01007
C31445  XDLONG    01016
X00013  XHDIF     00543  00714  01050
C31555  XTLAT     01011
C31577  XTLONG    01017
C00007  YIELD
   00433 SYMBOLS
```

```
      SUBROUTINE NEXTFLT(JCOPR,ISIDE)                                    1000
CSUBR      NEXTFLT   SAPR71    ***************************************** 15000
C   DELIVERS JR FOR NEXT FLIGHT AND NTAILS IN FLT --  IF SPLIT EQ. 1. -   2000
CUSE       GRPDATA   9/10/69   ***************************************** 2500
      COMMON/GRPDATA/IGROUP,NUMNS,NVEHGRP,IREG,ITYPE,IALERT,IREFUEL,     1000
     1     YIELD,ISTART,NBASE,IBASE(150),BLAT(150),BLONG(150),           2000
     2       IPAYLOAD(150),VONBASE(150)                                  3000
      TYPE INTEGER VONBASE                                               4000
CEND       GRPDATA   ***************************************************** 2500
CUSE       PRINTOPT  9/10/69   ***************************************** 3000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURMAID,IMSTKCPU,IEVAL,        1000
     1       IRAIDSHR,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,                 2000
     2       IGRPTYPE,IGRPDATA,ICURCAR,ISTUKSUM,ICURRSHR,                3000
     3       ICORIDOR,INEXTFLT,IDEBUG,JREFUEL,JOUTSRT,JPAYLOAD           4000
CEND       PRINTOPT  ***************************************************** 3000
CUSE       NEXTFLT   9/10/69   ***************************************** 4000
      COMMON/NEXTFLT/NTAILS,JR,SPLIT,KR,LR                               1000
CEND       NEXTFLT   ***************************************************** 4000
CUSE       KEYS      9/10/69   ***************************************** 9000
      COMMON/KEYS/KEYSTART,KEYVBASE                                      1000
CEND       KEYS      ***************************************************** 9000
CUSE       RAIDSHR   9/10/69   ***************************************** 10000
      COMMON/RAIDSHR/NVEH,NRVEH(200),DIST(200),JR,VBRBASE,               1000
     1       NBPV(200),NBPC,TGTSPEED,NASHDV(200)                         2000
      TYPE INTEGER VBRBASE                                               3000
CEND       RAIDSHR   ***************************************************** 10000
CUSE       DEBUG     9/10/69   ***************************************** 13000
      COMMON/DEBUG/IOTA,ICAMEO(20)                                       1000
CEND       DEBUG     ***************************************************** 13000
CUSE       PCALL     9/10/69   ***************************************** 14000
      COMMON/PCALL/IPASS,ICALL                                           1000
CEND       PCALL     ***************************************************** 14000
      IOTA=IOTA+1                                                        15000
      ICAME(IOTA)=8H NEXTFLT                                             16000
      ICALL=21                                                           17000
      CALL PRINTIT(IDEBUG)                                               18000
      IF (JCOPR .LE. 2)  1, 10                                           19000
    1 GO TO (10,3) ISIDE                                                 20000
C     JR IS EXTERNAL CURRENT BASE INDEX                                  21000
C     KR IS MARKER FOR SIDE 2                                            22000
C     LR IS MARKER FOR SIDE 1                                            23000
C     IR IS INTERNAL NEXTFLT INDEX                                       24000
    3 IR=KR                                                              25000
    4 IF(NRVEH(IR).LE.0)5,6                                              26000
    5 IR=IR+1                                                            27000
      IF(IR.LE.0) 6,4                                                    28000
    6 KR=IR  <  JR=KR  <  GO TO 30                                       29000
   10 IR=LR                                                              30000
   11 IF(NRVEH(IR).LE.0)20,25                                            31000
   20 IR=IR+1                                                            32000
      IF(IR.GT.KR)60,11                                                  33000
   25 LR=IR  <  JR=LR                                                    34000
   30 CONTINUE                                                           35000
      VBRBASE = IGET(KEYVBASE,JR,VONBASE)                                35500
      CRIT=1.7-SPLIT                                                     36000
      IF(NRVEH(IR).LT.CRIT*VBRBASE) 40,50                                37000
```

```
      40 NTAILS=NPVEH(I-1)                                          38000
         GO TO 70                                                   39000
      50 NTAILS = (NPVEH(I+1) + 1)/2                                40000
         GO TO 70                                                   41000
      60 NTAILS=1                                                   42000
C*ERROR SIGNAL                                                      43000
      70 IC*LL=82                                                   44000
         CALL ERINIT(INEXTFLT)                                      45000
         IOTA=IOTA-1                                                46000
         RET                                                        47000
         END                                                        48000
```

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IDENT NEXTFLT

PROGRAM LENGTH		00173
ENTRY POINTS	NEXTFLT	00004
BLOCK NAMES		
	GMPDATA	01370
	PRINTOPT	00025
	NEXTFLT	00005
	KEYS	00002
	RAIDSHP	01405
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	Q1004100	
	Q1002100	
	GMGDICT.	
	PRINTIT	
	IGET	

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```
P00127 BEGIN.     00147  00155  00161
C00240 BLAT
C00466 BLOBG
P00170 CALLN      00072  00073
P00001 DICT.      00006  00017  00064  00122  00132  00133
C00311 DISTR
P00150 ENDING.    00007  00126  00127  00130  00130  00131  00131
P00000 EXIT.      00153
P00003 FORMAT.    00012
P00021 FP00001.   00141  00142
P00024 FP00002.   00145  00106
P00164 GETPL.     00134  00143
P00154 GETPU.     00137  00165
C00005 IALERT
P00171 IF         00030  00031  00035  00036  00037  00042  00046  00047  00053  00054  00055
                  00060  00076  00102  00106
C00012 IBASE
C00001 ICALL      00015  00015  00117  00120
C00001 ICAMERON   00014
C00006 ICMGPLAN
C00014 ICOMCAR
C00017 ICORIDOR
C00016 ICOMRSHP
C00002 ICUPMAID
C00001 ICUMSRTY
C00021 IDEBUG     00026
C00004 IEVAL
X00305 IGET       00063
P00172 IGOTO.     00025
C00000 IGROUP
C00013 IGRPDATA
C00012 IGRPTYPE
C00010 IINDEX
C00007 IINITOPT
C00020 INEXTFLT   00123
P00127 INITIAL.   00007
C00000 IOTA       00010  00010  00011  00013  00013  00124  00124  00125
C00000 IPASS
C00714 IPAYLOAD
C00005 IPAIRSHP
C00006 IREFUEL
C00003 IRFG
C00003 IRSTRCPM
P00003 ISIDE      00024
C00000 ISRTYTGT
C00010 ISTART
C00015 ISTRKSUM
C00011 ITGTASGN
C00004 ITYPE
P00024 .1         00022
P00045 .10        00023  00026
P00047 .11        00056  00057
P00053 .20        00051
P00060 .25        00052
```

```
P00027  .3
P00063  .39         00044
P00031  .4          00040
P00102  .40
P00035  .5          00033
P00106  .59         00101   00101
P00042  .6          00034
P00115  .60         00040   00041   00057
P00117  .70         00105   00114
P00165  .ERASER.    00111
P00003  ..100000    00012
C00001  JH          00044   00042   00065
P00003  JCDR=       00021
C00023  JOUTSFT
C00024  JPAYLOAD
C00022  JREFUEL
C00003  KB          00027   00027   00043   00043
C00000  KEYSTART
C00001  KEY=BASE    00065
C00004  LH          00045   00045   00061   00061
C01135  MAS=PV
C00621  MB          00055   00058
C00011  MBASE
P00004  NEXTFLT     00004
C00001  NAVE=       00032   00032   00050   00050   00100   00103   00103   00103   00107   00107
C00000  NTAILS      00104   00104   00113   00113   00115   00116
C00000  NVE=
C00002  NVFNGRP
C01133  N=PC
C00001  N=PNS
C00623  N=PV
P00143  PF00002.    00140
P00147  PF00003.    00144
X00004  PRINTIT     00014   00121
X00002  S1002100    00077
X00001  S1004100    00074
X00003  SHORICT.    00000   00005
C00002  SPLIT       00071   00071
C01134  TGTSP=HD
C01142  VO=BASE     00064
C00622  VPR=ASE     00067   00067   00075   00075
C00007  YIELD
   00137 SYMBOLS
```

```
      SUBROUTINE ADCORR                                                 1000
CSUBR      ADCORR     (NULL)    ***************************************** 7000
CUSE       RAIDS-R    9/10/69   ***************************************** 2000
      COMMON/RAIDSRR/NVER,NPVER(200),DIST(200),NO,VERBASE,              1000
     1        NPV(210),NPC,TGTSPWD,NASPV(200)                           2000
      TYPE INTEGER VERBASE                                              3000
CEND       RAIDS-R    ***************************************************** 2000
CUSE       CORRIDOR   9/19/69   ***************************************** 5000
      COMMON/CORRIDO/CLAT,CLONG,CZONE,PLAT,PLONG,ELAT,ELONG,CLENGT,     1000
     1     NUMPTS,CORATTR,CORSATTR,ATTRILG,PROGDEF,NPROGDEF,            2000
     2     DISTDEF(3),PRSATTR(3)                                        3000
      TYPE INTEGER CZONE                                                4000
      TYPE REAL NUMPTS                                                  5000
CEND       CORRIDOR  ***************************************************** 5000
      COMMON/POLITE/CLAT,CLONG,PCLAT,PCLONG,FACT,CLAT,CLONG            6000
CUSE       GRPDATA    9/10/69   ***************************************** 6000
      COMMON/GRPDAT/IGROUP,NUMPTS,NUMGRP,IREG,ITYPE,IALERT,TOTFUEL,    1000
     1      YIELD,ISTART,NBASE,IPBASE(150),PLAT(150),PLONG(150),        2000
     2        IPAYLOAD(150),VORBASE(150)                                3000
      TYPE INTEGER VORBASE                                              4000
CEND       GRPDATA   ***************************************************** 6000
CUSE       RAIDSTRK   1/24/71   ***************************************** 12000
      COMMON/RAIDTRK/JGROUP,JCORR,INUFNG(1100),TLAT(1100),TLONG(1100),  1000
     1TIMEPRED(1100),IRPE(1100),DISTOUT(1100),DIST=FC(1100),            2000
     2ATTRLOC(1100),NVAR(1100),DELAT(1100),DELONG(1100),TESTC(1100),    3000
     3TASK(1100),CNT=VLOC(1100),FLAG(1100)                              4000
CEND       RAIDSTRK  ***************************************************** 12000
CUSE       FIXRANGE   9/19/69   ***************************************** 15000
      COMMON/FIXRANGE/CFLAT,CFLONG,DISTF                                1000
CEND       FIXRANGE  ***************************************************** 15000
      EQUIVALENCE (TARGPR,KORPRM)                                       15100
      CALL CRATHGID (NUM,FLAT,FLONG,CLAT,CLONG)                         16000
      CALL CRATHGTD (NT,TLAT,TLONG,TCLAT,TCLONG)                        17000
      FACT=1                                                            18000
      CALL INTERP                                                       19000
      PLAT=CLAT  *  PLONG=CLONG      *  CLAT=TCLAT  *  CLONG=TCLONG     20000
      IPBASE = 1                                                        21000
      NPREDEF=0                                                         22000
      DO 10 I=1,NP                                                      23000
      PLAT=PLAT(I)  *  PLONG=PLONG(I)                                   24000
   10 DIST= I)=DISTF(PLATI,PLONGI,TCLAT,TCLONG)                         25000
      DISTC=DISTF(NCLAT,NCLONG,TCLAT,TCLONG)                            26000
      RETURN                                                            27000
      END                                                               28000
```

IDENT ^OCORR

PROGRAM LENGTH		00075
ENTRY POINTS	^OCORR	00000
BLOCK NAMES		
	REL(SP)	01445
	COMMOCOR	00026
	PUBLIC	00007
	SMP STA	01370
	3	40147
	FIX-PAGE	00003
EXTERNAL SYMBOLS		
	DEFECT.	
	CEAT-GIA	
	INT=R	
	UIS1=	

```
C00013  ATTWRTLC
C17027  ATTWLOC
C00000  WCLAT      00012   00060
C00001  WCLONG     00013   00067
P00064  WEGIN.     00065
C00240  WLAT       00011   00044   00044
P00071  WLATI      00045   00052
C00006  WLONG      00012   00046   00060
P00072  WLONGI     00047   00062
C00000  CENTLAT
C00001  CENTLONG
X00002  CENTROID   00007   00014
C00000  CLAT       00031   00032
C00007  CLENGTH
C00001  CLONG      00033   00034
C37737  CNTRVLOC
C00011  COMATTR
C00012  COMSATTR
P00073  COUNT.     00042   00043
C00002  CZONE
C23257  DELAT
C25373  DELONG
C27507  DESIG
P00001  DICT.      00005   00010   00015   00024   00051   00057
C00311  DIST=      00054   00054
C00002  DISTC      00062   00062
C00016  DISTDFF
X00004  DISTF      00050   00056
C12577  DISTOUT
C14713  DISTSEC
C00005  ELAT
C00006  ELONG
P00056  ENDING.    00004   00063   00064
P00000  EXIT.      00067
C00004  FACT       00022   00022
C34053  FLAG
P00074  I          00037   00043
C00005  IALERT
C00012  IPASE
C10463  IPDEV
C00000  ISWDUP
C00010  ISWPAR     00035
C00003  INDEXNO
P00064  INITIAL.   00004
X00003  INTERP     00023
C00714  IPAYLOAD
C00006  IPLFUEL
C00003  IPEG
C00010  ISTART
C00004  ITYPE
P00050  .10
C00002  JCORR
C00001  JSWDUP
C00010  KORRUP
```

```
C01135  =AS=PV
C00621  =V          00011   00040   00040
C00011  =HASE
P00003  =OCORR      00003
C00015  NPREDEF     0003A
C00001  =RVEH
C00000  =T          00014
C00000  =VEH
C00002  =VEHGRP
C01133  ==PC
C00001  ==PNS
C00623  =aPV
C00005  OLAT        00025
C00006  OLONG       00026   00027
C00003  PLAT        00025   00026
C00004  PLONG       00027   00030
C00021  PREATTR
X00001  S=OBJCT.    00000   00004
C00014  =NGDEF
C21143  =VAL
C31623  TASK
C00002  TCLAT       00017   00030   00031   00053   00061
C00003  TCLONG      00020   00032   00033   00053   00061
C31134  TGTSPWHC
C06347  TI=EPHEM
C02117  TLAT        00014
C04233  TLONG       00017
P00056  TS00001.    00041
C01142  VONMASE
C00622  VPPHASE
P01044  =500001.    00055
C00007  YIELD
   0012A SYMBOLS
```

```
      SUBROUTINE OPTRAID                                                1000
CSUBR      OPTRAID   9/10/69   ********************************************  17000
CUSE       PRINTOPT  9/10/69   ********************************************  2000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,IMSTKCPM,TEVAL,       1000
     1        IRAIDSHR,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,               2000
     2        IGRPTYPE,IGRPDATA,ICORCAR,ISTRKSUM,ICONRSHR,              3000
     3        ICONIDON,INEXTFLT,IDEBUG,JREFUEL,JOUTSRT,JPAYLOAD         4000
CEND       PRINTOPT  ********************************************  2000
CUSE       INDEX     9/10/69   ********************************************  6000
      COMMON/INDEX/ISORTY,IORIG,IRECOVER,IDITCH,IT,ICORR,JTGTIN         1000
CEND       INDEX     ********************************************  6000
CUSE       RAIDSHR   9/10/69   ********************************************  7000
      COMMON/RAIDSHR/NVEH,NRVEH(200),DIST(200),NB,VPHASE,               1000
     1        NWPV(200),NWPC,TGTSPWHD,NASMPV(200)                       2000
      TYPE INTEGER VPHASE                                               3000
CEND       RAIDSHR   ********************************************  7000
CUSE       FLTPASS   9/10/69   ********************************************  9000
      COMMON/FLTPASS/IFPASS,JVEHLO,JVEHHI,NVEHPASS,NPASS                1000
CEND       FLTPASS   ********************************************  9000
CUSE       DEBUG     9/10/69   ********************************************  10000
      COMMON/DEBUG/IOTA,ICAMFROM(20)                                    1000
CEND       DEBUG     ********************************************  10000
CUSE       PCALL     9/10/69   ********************************************  11000
      COMMON/PCALL/IPASS,ICALL                                          1000
CEND       PCALL     ********************************************  11000
      IOTA=IOTA+1                                                       12000
      ICAMFROM(IOTA)=8H OPTRAID                                         13000
      ICALL=22                                                          14000
      CALL PRINTIT(IDEBUG)                                              15000
C***      FIRST PROCESS SORTIES FORWARD                                  16000
      CALL INITOPT                                                      17000
      IPASS=1                                                           18000
      DO 10 ISRT=1,NVEHPASS                                             19000
        ISORTY=ISRT                                                     20000
      CALL SETFLAG                                                      21000
        CALL GETSORT                                                    22000
        CALL SORTOPT                                                    23000
   10   CALL DUMPSRT                                                    24000
      ICALL=23                                                          25000
      CALL PRINTIT(IMSTKCPM)                                            26000
C***      THEN REVERSE ORDER                                            27000
      IPASS=2                                                           28000
      CALL TIMENE(3)                                                    29000
      DO 20 IDUM=1,NVEHPASS                                             30000
      ISORTY=1+NVEHPASS-IDUM                                            31000
      CALL SETFLAG                                                      32000
        CALL GETSORT                                                    33000
      ICALL=135                                                         34000
      CALL PRINTIT(IMSTKCPM)                                            35000
        CALL SORTOPT                                                    36000
      ICALL=136                                                         37000
      CALL PRINTIT(IMSTKCPM)                                            38000
        CALL OUTSRT                                                     39000
      ICALL=137                                                         40000
      CALL PRINTIT(IMSTKCPM)                                            41000
      CALL REFARDRT                                                     42000
```

```
      ICALL=138                                                    43000
      CALL PRINTIT(I+STKCPM)                                       44000
        CALL DUMPSRT                                               45000
      ICALL=139                                                    46000
      CALL PRINTIT(I+STKCPM)                                       47000
   20 CONTINUE                                                     48000
      CALL TIMEME(4)                                               49000
      ICALL=24                                                     50000
      CALL PRINTIT(I+STKCPM)                                       51000
      ICALL=75                                                     52000
      ##=PRNTF(-10,0,0)                                           53000
      IOTA=IOTA+1                                                  54000
      RETURN                                                       55000
      END                                                          56000
```

IDENT OPTRAID

PROGRAM LENGTH		00181
ENTRY POINTS	OPTRAID	00004
BLOCK NAMES		
	PRINTOPT	00025
	INDEX	00007
	RAIDSWR	01445
	FLTPASS	00006
	DEBUG	00025
	PCALL	00002

EXTERNAL SYMBOLS

GEODICT.
PRINTIT
INITOPT
SETFLAG
GETSORT
SORTOPT
DUMPSRT
TIMER
OUTSORT
REFRSORT
PRNTF

```
P00150 HEGIN.      00152
P00001 DICT.       00004  00017  00026  00031  00033  00035  00037  00046  00052  00063  00065
                   00071  00074  00077  00102  00105  00110  00113  00114  00121  00127  00134
                   00142
C00311 DISTH
X00007 DUMPSWT     00036  00115
P00151 ENDIAG.     00067  00147
P00005 EXIT.       00151
P00003 FORMAT.     00012
X00005 GETSOWT     00032  00064
C00001 ICALL       00015  00016  00042  00044  00066  00067  00075  00143  00111  00117  00131
                   00132  00134
C00001 ICALFOOK    00014
C00004 ICMPLAN
C00014 ICOMCAN
C00017 ICOMIDOM
C00005 ICONN
C00016 ICONRSKN
C00002 ICUPPAIC
C00001 ICUNSPTY
C00021 IDENTG      00020
C00003 IDITCH
P00156 IDUM        00055  00060  00123
C00004 IEXAL
C00000 IFPASS
C00013 IGNPDATA
C00012 IGNPTYPE
C00010 IINDEX
C00007 IINITOPT
C00020 INEXTFLT
P00150 INITIAL.    00007
X00003 INITOPT     00021
C00001 IONIS
C00006 IOTA        00016  00019  00011  00013  00013  00145  00146  00147
C00008 IPASS       00023  00060
C00005 IRAINSWG
C00002 IRECOVER
C00003 IRSTXCPY    00007  00072  00102  00104  00114  00122  00135
C00000 ISOPTY      00027  00027  00060  00061
P00157 ISWT        00025  00024  00045
C00000 ISXTYTGT
C00015 ISTXSUM
C00004 IT
C00011 ITGTASGN
P00036 .10
P00123 .20
P00152 .ERASER.    00140  00143
P00003 ..IOROOT    00012
C00023 JOUTSWT
C00024 JPAYLOAD
C00022 JUFFUEL
C00006 JTGTIX
C00002 JWEWWI
C00001 JWFWLG
```

```
C01135 %AS=PV
C00621 -=
C00004 -PASS
C00001 =MOVE=
C00000 =VE=
C00003 =VEHPASS  00041  00041  00058  00057  00124  00124
C01133 -WPC
C00623 %=PV
P00004 OPTRAIN   00004
X00011 OUTSRT    00101
X00002 PRINTIT   00014  00045  00070  00074  00104  00112  00120  00133
X00013 PRNTF     00141
X00001 SEQUTCT.  00000  00005
X00012 REFARRRT  00107
X00004 SETFLAG   00030  00062
X00006 SORTOPT   00034  00073
C01134 TGTSP=#0
X00010 TIME=E    00051  00124
P00041 TS00001.  00025
P00124 TS00002.  00055
C00622 SPREASE
P00026 =S00001.  00042  00042
P00056 =S00002.  00125  00125
P00160 =W        00145
   00113 SYMBOLS
```

```
      SUBROUTINE OUTPOTGT                                                1000
CSUBR      OUTPOTGT  9/10/69  ********************************************* 21000
CUSE       PRINTOPT  9/10/69  ********************************************* 2000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,INSTKCPR,IEVAL,        1000
     1        IRAIDS(2),ICHGPLAN,JINITOPT,IINDEX,ITGTASGN,                2000
     2        IGRPTYPE,IGRPDATE,ICURCAR,ISTRKSUM,ICORRSHR,                3000
     3        ICCMIDS(2),INEXTFLT,IDEBUG,JHEPDEL,JOUTSRT,JPAYLOAD        4000
CEND       PRINTOPT  ********************************************************* 2000
CUSE       CHGPLAN   9/10/69  ********************************************* 4000
      COMMON/CHGPLAN/JDO,IAIM,ISCAN,JAFT,ATO,OTA,BTO,OTB                 1000
      TYPE INTEGER ATO,OTA,BTO,OTB                                       2000
CEND       CHGPLAN   ********************************************************* 4000
CUSE       CURSORTY  9/10/69  ********************************************* 8000
      COMMON/CURSORTY/NUMHIT,NUMOMB,NUMASM,NHIT,IFLY(13),IHIT(13)        1000
     1        ,LASTPAY,LASTTGT,NOMIT,IOMIT(25),AVAIL,IAVAIL(25)          2000
     2        ,LKHITMT(25),ITCLO,LOSTTGT(25),LOSTTGT,NUMOS,NASMS,RNGASM  3000
     3        ,OSTM                                                      4000
CEND       CURSORTY  ********************************************************* 8000
CUSE       CURRAID   (FEB71)  ********************************************* 12000
      COMMON/CURRAID/MYPHASE(100),NASGN(100),JTGT(10,100),MYASGN(1100),  1000
     1IMYAVEH(100)                                                       2000
CEND       CURRAID   ********************************************************* 12000
CUSE       SORTYTGT  9/10/69  ********************************************* 14000
      COMMON/SORTYTGT/MAXPT,MYPOTGT(25),D(25,25),VALN(25),VALE(25),      1000
     1     V(25),RHOJ(25),ATLOCHI(25),DISTLFG(25),DISTLO(25),S(25),      2000
     2     SURV(25),VALDONE(25),VALON(25),DVALR(25),DVALA(25),PREC(25)   3000
CEND       SORTYTGT  ********************************************************* 14000
CUSE       DEBUG     9/10/69  ********************************************* 17000
      COMMON/DEBUG/IOTA,ICAMEFOR(20)                                     1000
CEND       DEBUG     ********************************************************* 17000
      IOTA=IOTA+1                                                        18000
      ICAMEFOR(IOTA)=8HOUTPOTGT                                          19000
C***  SUBROUTINE OUTPOTGT ENTRY                                          20000
C          REMOVES POTENTIAL TARGET J IN ANY POSITION OF OMIT LIST        21000
      JX=JDO                                                             22000
      IOM=-LKHITMT(JX)                                                   23000
      IF(IOM.LE.0) 10,30                                                 24000
   10 PRINT  20 ,JX, IOM                                                 25000
   20 FORMAT (28HERROR, ATTEMPT DELETE OPN J=,I5,15H IN HIT LIST NO.=I5) 26000
      IOM=NOMIT                                                          27000
      JX=IOMIT(JX)                                                       28000
C****     REQUEST OK                                                     29000
   30 NOMIT=NOMIT-1                                                      30000
      DO 40 I2=IOM,NOMIT                                                 31000
      IOMIT(I2)=IOMIT(I2+1)                                              32000
   40 LKHITMT(IOMIT(I2))=-I2                                             33000
      NAVAIL=NAVAIL+1                                                    34000
      IAVAIL(NAVAIL)=JX                                                  35000
      LKHITMT(JX)=0                                                      36000
      IT=MYPOTGT(JX)  $  MYASGN(IT)=0                                    37000
C         TO FLAG AS AVAILABLE                                           38000
      IOTA=IOTA-1                                                        39000
      RETURN                                                             40000
      END                                                                41000
```

IDENT OUTPOTGT

PROGRAM LENGTH		00130
ENTRY POINTS	OUTPOTGT	00020
BLOCK NAMES		
	PRINTOPT	00025
	CHGPLAN	00010
	CURSORTY	00214
	CURRAID	04540
	SORTYTGT	01751
	DEBUG	00025
EXTERNAL SYMBOLS		
	THEAD.	
	OBJOICT.	
	STH.	
	UNSIGL.	

```
C01357 ATLLCHI
C00006 ATO
P00114 XEGIN.      00117
C00006 XTO
P00115 CHVATI.     00044  00065
P00123 COUNT.      00063  00004
P00003 CREAT.      00050
C00032 D
P00001 DICT.       00022  00041  00047
C01610 FISTLFG
C01441 FISTLOC
C01720 GREC
C00213 GSTR
C01667 GVALA
C01436 GVALR
P00126 GXGINC.     00023  00113  00110  00117
P00006 EXIT.       00121
P00003 FORMAT.     00024
P00050 GGGGGGG.    00037
P00124 I2          00060  00063  00071  00074
C00001 IAIR
C00073 IAVAIL      00102
C00001 ICHREAD     00031
C00004 ICHSPLAS
C00014 ICOMCAN
C00017 ICOMIOCS
C00016 ICOMOSMO
C00002 ICUSMAIN
C00001 ICUSUTY
C00021 IDFLUS
C00004 IFVAL
C00004 IFLY
C00013 IGWPDATA
C00012 IGWRTYPE
C00021 IHIT
C00010 IIHOEX
C00007 IIHITCPT
C00020 IHREVEM
C00020 IHFRTELT
P00116 INITIAL.    00023
P00125 IO          00034  00035  00065  00051  00057  00062
C00041 IOATT       00052  00053  00065  00065  00066  00067  00067
C00040 IOTB        00024  00024  00025  00027  00027  00111  00111  00112
C00005 IOSIOSMO
C00003 IOSTACOM
C00002 ISCAN
C00000 ISGIVIGT
C00016 ISIOSSUB
P00126 IT          00126  00107
C00011 ITGYASGN
C00155 ITOLD
P00037 .10         00036
P00055 .30         00056
P00047 .40
```

```
P00003  ..INPUT.    00024
P00004  ..P         0042
P00122  .'SIIFF.    0071   00072
C00003  LEFT
C00005  JUMP        0030   00031
C00023  JUMPS-T
C00026  UNDYLOP
C00029  LOOP.FEL
C00030  START
P00127  JR          0032   00032   00042   00056   00054   00100   00104
C00036  LASTWORY
C00037  LASTTST
C00124  LOWITST     0033   00033   00072   00073   0 100   00104
C00156  LOSTTST
C00000  TEMPT
C02260  WYASCII     00110  00110
C00000  WYWISE
C00001  WPOINT      00105  00105
C00144  WORK
C00241  WORDS
C00072  WAVAIL      0076   00076   00077   00101   00101
C00003  WORK
C00257  WLOSTTST
C00040  WORK        00050  00050   00055   00055   00054   00100   00001
C00002  WORDS
C00001  WHICHWA
C00000  WORKIT
C00210  WORDS
C00005  STA
C00007  STS
P00020  OUTPUTST    00020
X00002  OVFLICT.    00000   00021
X00004  OVSTSL.     00114
C01324  WORD
C00212  PAGES
C01472  S
X00003  STM.        00040
C01523  SUB
X00001  TAPE.       00044
P00074  TSOOOOOL.   00042
C01275  W
C01244  WALA
C01213  WALK
C01554  WALTONE
C01525  WALTS
P00065  WSOOOOOL.   00076
   00144 SYMBOLS
```

```
      SUBROUTINE OUTSRT                                                 1000
CSHAR OUTSRT   29AUG71  ********************************************** 30000
CUSE  PRINTOPT 9/10/69  ********************************************** 2000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURRAID,ISTRCPT,TEVAL,        1000
     1      IPAICSHR,ICHGPLAN,IINTTOPT,IINDEX,ITGTASGN,                2000
     2      IGRPTYPE,IGRPDATA,ICORCAR,ISTRKSUM,ICOMMSHR,               3000
     3      ICORRIDOR,INEXTFLT,IDEBUG,JREFUEL,JOUTSRT,JPAYLOAD         4000
CEND  PRINTOPT  ********************************************************** 2000
CUSE  PRNTF    9/10/69  ********************************************** 6000
      COMMON/PRNTF/ATLEGMI,ATLEG,ANGSURF,DISTANCE,RSVLOW,AVAILOW,      1000
     1   VALIT,FSTATTR,VALTOTT,PPAYRATE,VALONI,                        2000
     2   CURVAL,CRITATT,ADDLOW,JHOME,DISTSV,ATAREA,ATLOCAL,            3000
     3   VAL2,JX2,DISTAR,AUDTEST,ATTRNEW,ATHFLG,DVALD,JX1,             4000
     4   DIST1,DIST2                                                   5000
CEND  PRNTF    ********************************************************** 6000
CUSE  GRPDATA  9/10/69  ********************************************** 10000
      COMMON/GRPDATA/IGROUP,NAPNS,NVEHGRP,INEG,ITYPE,IALERT,IREFUEL,   1000
     1    VIELD,IST&RT,NBASE,IBASE(150),ILAT(150),ILONG(150),           2000
     2      IPAYLOAD(150),NONBASE(150)                                  3000
      TYPE INTEGER NONBASE                                             4000
CEND  GRPDATA  ********************************************************** 10000
CUSE  GRPTYPE  1FEB71  ********************************************** 14000
      COMMON/GRPTYPE/ISIMTYPE,RANGE,CEP,SPEED,ALERTDLY,RALRTDLY,RENGEDEC 1000
     1   ,ICLASS,NOPERSON,SPDHT,SPDLO,SPDASH,RANGREF,NMPSITE,IREP      2000
     2   ,IREFMODE,IPENMODE,FUNCTION                                   3000
      TYPE INTEGER FUNCTION                                            3500
      TYPE REAL RALRTDLY                                               4000
CEND  GRPTYPE  ********************************************************** 14000
CUSE  PLANTYPE 9/10/69  ********************************************** 17500
      COMMON/PLANTYPE/INITSTRK,COMMSL,COMBOMB                          1000
CEND  PLANTYPE  ********************************************************** 17500
CUSE  CORRIDOR 9/10/69  ********************************************** 18000
      COMMON/CORRIDOR/CLAT,CLONG,CZONE,PLAT,PLONG,ELAT,ELONG,CLENGTH,  1000
     1   CORPWR,COMATTR,CORSATTR,ATTRMILC,ANGDEF,NPREDEF,              2000
     2   DISTDEF(3),PREATTR(3)                                         3000
      TYPE INTEGER CZONE                                               4000
      TYPE REAL CORPWR                                                 5000
CEND  CORRIDOR  ********************************************************** 18000
CUSE  RAIDSTRK 1FEB71  ********************************************** 21000
      COMMON/3/AT,JGROUP,JCORR,INDEXNO(1100),TLAT(1100),TLONG(1100),   1000
     1TIMEPREM(1100),IOPEN(1100),DISTOUT(1100),DISTREC(1100),          2000
     2ATTRLOC(1100),PVAL(1100),DELAT(1100),DELONG(1100),DESIG(1100),   3000
     3TASK(1100),CNTRLOC(1100),FLAG(1100)                              4000
CEND  RAIDSTRK  ********************************************************** 21000
C     CHANGED COMMON/RAIDSTRK/ TO COMMON/3/                            24000
CUSE  SORTYTGT 9/10/69  ********************************************** 25000
      COMMON/SORTYTGT/MAXPT,WTPOTGT(25),D(25,25),VALR(25),VALA(25),    1000
     1    V(25),RHOJ(25),ATLOCM(25),DISTLEG(25),DISTLOM(25),S(25),     2000
     2    SURV(25),ALPONE(25),VALON(25),DVALR(25),DVALA(25),SREC(25)   3000
CEND  SORTYTGT  ********************************************************** 28000
CUSE  CURSORTY 9/10/69  ********************************************** 28000
      COMMON/CURSORTY/NUMHIT,NUMBOMB,NUMASM,NHIT,IFLY(13),IHIT(13)     1000
     1      ,LASTPAY,LASTTGT,ADMIT,IOMIT(25),NAVAIL,IAVAIL(25)        2000
     2      ,LKHITMT(25),ITOLD,LOSTTGT(25),PLOSTTGT,ANMDS,NASMS,RNGASM 3000
     3      ,DSTB                                                     4000
CEND  CURSORTY  ********************************************************** 28000
```

```
CUSE      MATRSHR   9/10/69  ********************************************  32000
      COMMON/MATRSHR/NVEH,NRVEH(200),DIST(200),NO,VPRBASE,                1000
     1        RF V(200),NREC,TGTSPNO,NASPV(200)                           2000
      TYPE INTEGER VPRBASE                                                3000
CEND      MATRSHR   ********************************************  32000
CUSE      FLTPASS   9/10/69  ********************************************  34000
      COMMON/FLTPASS/IFPASS,JVEHLO,JVEHHI,NVEHPASS,KPASS                  1000
CEND      FLTPASS   ********************************************  34000
CUSE      CURRAID   1FEB71  ********************************************  35000
      COMMON/CURRAID/MYBASE(100),NASGN(100),JTGT(10,100),MYASGN(1100),    1000
     1NADEXVEH(100)                                                       2000
CEND      CURRAID   ********************************************  35000
CUSE      INDEX     9/10/69  ********************************************  37000
      COMMON/INDEX/ISORTY,IOPIG,IRECOVEN,INITCH,IT,ICORP,JTGTIN           1000
CEND      INDEX     ********************************************  37000
CUSE      INITOPT   9/24/69  ********************************************  38000
      COMMON/INITOPT/FLYLO(3),IMPORTO(3),ATPDIST(3),DISTI,TOEFDIST,       1000
     1   RPSE                                                             2000
CEND      INITOPT   ********************************************  38000
CUSE      OUTSRT    1FEB71  ********************************************  40000
      COMMON/OUTSRT/IOUTSRT,MYGROUP,MYCORM,IMOVEM,JMEF,JOPENO,PAYLOAD,    1000
     1LOCBASE,ITYP,BASELAT,BASELONG,NMAP,MAPTYPE(10),DELAT(10),          2000
     2DELONG(10),DLAT(10),DLONG(10),IOBJECT(10),DSIG(10),TSK(10),        3000
     3CRTHLC(10),FLG(10),ATTROUT(10),SUMYOUT(10),DSTLOW1,DSTL=2,         4000
     4DSTLO=3,SPOLOC,SPDHIGH,RANGEX,RANGEREF,DELAY,IPG,ILAT,IPNUMBER,    5000
     5AVLO=,RMSDC                                                        6000
      TYPE INTEGER MAPTYPE                                               7000
CEND      OUTSRT    ********************************************  40000
      DATA(IDROWREF=9HROWNUMB)                                           8000
      DATA (LOUTSRT=145)                                                 9000
CUSE      FILES     1FEB71  ********************************************  49000
C                                                                        1000
      COMMON/FILES/TGTFILE(2),MASFILE(2),MSLTIME(2),ALOCTAB(2),          2000
     1TMPALOC(2),ALOCGRP(2),STRKFIL(2),EVENTAPE,PLANTAPE                 3000
C                                                                        4000
      TYPE INTEGER TGTFILE,MASFILE,MSLTIME,ALOCTAB,TMPALOC,ALOCGRP,      5000
     1STRKFIL,EVENTAPE,PLANTAPE                                          6000
C                                                                        7000
      COMMON/INPUTFL/INPTFL,MYINFL                                       8000
C                                                                        9000
CEND      FILES     ********************************************  49000
CUSE      ITP       9/10/69  ********************************************  55000
      COMMON/ITP/ITP                                                     1000
CEND      ITP       ********************************************  55000
CUSE      IFTPRNT   9/10/69  ********************************************  57000
      COMMON/IFTPRNT/IFTPRNT(10)                                         1000
CEND      IFTPRNT   ********************************************  57000
CUSE      IFTNO     20APR71  ********************************************  57500
      COMMON /IFTNO/ IFTNO                                               1000
CEND      IFTNO     ********************************************  57500
CUSE      DEBUG     9/10/69  ********************************************  58000
      COMMON/DEBUG/IOTA,ICAMERON(20)                                     1000
CEND      DEBUG     ********************************************  58000
CUSE      PCALL     9/10/69  ********************************************  59000
      COMMON/PCALL/IPASS,ICALL                                           1000
CEND      PCALL     ********************************************  59000
```

```
      CUSE      IDUMP     4/10/69  ********************************************  60000
                COMMON/IDUMP/IDUMPG,IDUMPC,IDUMPS,IDUMPP,IPLAN                    1000
      CEND      IDUMP     ********************************************************  63000
      C     HAPTYPE(IM)   =OLLERITH IDENTIFIER OF TYPE OF HAPPENING               61000
      C     IOBJECT(IM)   INDEX NUMBER FOR OBJECT OF HAPPENING                    62000
      C     OBLAT(IM)     LATITUDE FOR OBJECT                                     63000
            IOTA=IOTA+1                                                           64000
            ICNFNO=(IOTA)=6HOUTSRT                                                65000
            ICALL=74                                                              66000
            CALL PRINTIT(IDEBUG)                                                  67000
            ISRT = ISORTY                                                         68000
            IF(IPASS.EQ.NPASS) 900,910                                            69000
          900 IOUTSRT=NVEH-ISRT+1                                                 70000
            GO TO 920                                                             71000
          910 IOUTSRT=IPASS*100-ISRT+1                                            72000
          920 CONTINUE                                                            73000
            MYGROUP=ISROUP                                                        74000
            IF (MYGROUP .GT. 200)141,1                                            75000
            1 MYCORN=JCORN  <  IN=MYHASE(ISRT)                                    76000
            LAC=HASE=IHASE(IM)                                                    77000
            HASELAT=BLAT(I-)                                                      78000
            HASELONG=LONG(IM)                                                     79000
            IROVER=IOPEN(MYPOTGT(ISRT) < JREF=IREFUEL                             80000
            JOPEN=IOPEN(MYPOTGT(IFLY(LASTTGT))) < KPAYLOAD=IPAYLOAD(IM)           81000
            IF(IFLY(LASTTGT).EQ.1)1001,1002                                       82000
         1001 JOPEN = IOPEN(MYPOTGT((6HSF(IHIT(LASTTGT))))                        83000
         1002 ITYP= ISI=TYPE $ SPOLO=SPOLO $ SPOHIGH=SPOHI < RANGE=RANGE          84000
            RANGEREF=RANGREF                                                      85000
      C     ACCUMULATE DISTANCES AT LOW ALTITUDE                                  86000
            IPG=IPEG                                                              87000
            IL=T = IALERT                                                         88000
            AVLO=AVAILO                                                           88200
            RANGEC=RANGEDEC                                                       88300
            IF(IHITSTRK.NE.214,3                                                  88500
            3 DELAY=0                                                             89000
            IF(IALERT.NE.1)2,5                                                    90000
            2 DELAY=ALERTDLY-ALERTDLY                                             91000
            GO TO 5                                                               91200
            4 DELAY=ALERTDLY                                                      91400
            IF(IALERT.NE.1) 40,5                                                  91600
           40 DELAY=ALERTDLY                                                      91800
            5 CALL FIXFLT                                                         92000
      C     OUTPUT HAPPENINGS                                                     93000
            DO 6? I=1,NHIT                                                        94000
           6? ATTHOUT(I)=0                                                        95000
           70 HAPTYPE(I)=HHOGLEG   < OBLAT(I)=PLAT  < OBLONG(I)=PLONG            96000
                IOBJECT(I)=JCORN   < OBLAT(I)=0  < OBLONG(I)=0                    97000
            DSIG(I)=0                                                             97200
            TS<(I)=0                                                              97400
            CNTRLC(I)=0                                                           97600
            FLG(I)=0                                                              97800
            ATTHOUT(I)=COMATT  <  SUMY(OUT(I)=SUBY(I)                             98000
            IF(SUMY(OUT(I)) .GT. 0.0000001)72,71                                  98100
           71 CONTINUE                                                            98200
            DST(I+1) = -1.                                                        98300
            GO TO 141                                                             98400
```

```
```

```
      IC(I&&)=IC(I&&-1
      RETURN
      END
```

```
139000
139001
140000
```

IDENT OUTSHT

PROGRAM LENGTH 00407
ENTRY POINTS OUTSHT 00013
BLOCK NAMES

PRINTOPT	00024
PRNTF	00034
GRPDATA	01370
GRPTYPE	00022
PLATYPE	00003
CORE1000	00024
3	40167
SORTYTRT	01751
CUMSUMTY	00214
PAIDSHR	01445
FLTPASS	00005
CUMMAID	04540
INDEX	00007
INITOPT	00014
OUTSHT	00221
FILES	00020
INPUTFL	00002
ITP	00001
IFTPART	00512
IFTN	00001
DEBUG	00025
PCALL	00002
IDUMP	00005

EXTERNAL SYMBOLS

GRODICT.
PRINTIT
FINFLT
DRAWAY
SHORT

X00005	AMOAT	00434							
C00015	AOPLO=								
C00025	AOPTEST								
C00004	ALEFTDLY	00152	00154	00158					
C00012	ALOCASP								
C00006	ALOCTAM								
C00020	ATRAFA								
C00001	ATLEG								
C00000	ATLEGMI								
C00021	ATLOCAL								
C01357	ATLOCMI	00264	00265						
C00027	ATMELG								
C00004	ATPPTST								
C00013	ATTMAILO								
C17027	ATTPLOC								
C00026	ATTMAGM								
C00160	ATTMORT	00172	00173	00214	00214	00245	00246		
C00005	AVATLGM	00136	00136						
C00217	AVLO=	00137	00137						
C00011	BASFLAT	00041	00042						
C00012	BASELONG	00043	00044						
C00007	BASFILE								
P00441	BEGIN.	00443							
C00240	BLAT	00060	00061						
C00464	BLONG	00062	00063						
C00002	CEP								
C00000	CLAT								
C00007	CLENGTH								
C00001	CLONG								
C00134	CNTRLC	00211	00317	00320	00341	00371			
C33737	CNTRVLOC	00314	00317						
C00011	COMATTR	00213	00213						
C00002	COMPOWR								
C00001	COMPSL								
C00612	COMSATT=								
P00457	CONST.	00170	00171						
C00014	CRITATT								
C00013	CRVAL								
C00002	CZONE								
C00032	D								
C23257	DELAT	00304	00307						
C00213	DELAY	00145	00144	00154	00153	00155	00155	00161	00161
C25373	DELONG	00310	00311						
C27507	DESIG	00312	00313						
P00001	DICT.	00015	00024	00163	00412	00417	00435		
C00032	DIST1								
C00033	DIST2								
C00024	DISTAN								
C00003	DISTANCE								
C00311	DISTB								
C00016	DISTDEF								
C00011	DISTINC								
C01410	DISTLEG								
C01441	DISTLO=								

C12577	DISTOUT											
C14713	DISTREC											
C00017	DISTSW											
C00052	DLAT	00205	00307	00310	00335	00365						
C00064	DLONG	00206	00311	00312	00336	00366						
C01720	DREC											
C00110	DSIG	00207	00313	00314	00337	00367						
C00213	DSTR											
C00204	DSTLO#1	00223	00223	00401	00401							
C00205	DSTLO#2											
C00206	DSTLO#3											
C01667	DVALA											
C01636	DVALR											
C00030	DVALO											
C00005	ELAT											
C00006	ELONG											
P00444	ENDING.	00016	00440	00441	00442	00442						
C00016	EVENTAPE											
P00000	EXIT.	00444										
X00003	FIXFLT	00162										
C36953	FLAG	00320	00321									
C00146	FLG	00212	00321	00322	00342	00372						
C00000	FLYLOW											
P00004	FORMAT.	00321	00175	00250	00260	00327	00344	00351				
C00307	FSTATTH											
C00021	FUNCTION											
C00014	HAPTYPE	00176	00176	00251	00252	00260	00261	00330	00331	00347	00350	00352
		00353										
P00443	I	00165	00170									
C00005	IALERT	00134	00134	00140	00147	00156	00156					
C00073	IAVAIL											
P00461	IB	00056	00056									
C00012	IBASE	00056	00057									
C00001	ICALL	00024	00024	00414	00415							
C00061	ICAMERON	00023										
C00006	ICHGPLAN											
C00007	ICLASS											
C00014	ICONCAR											
C00017	ICONTROR											
C00005	ICORR											
C00014	ICORRSAV											
C07002	ICURRAIO											
C00001	ICURSRTY											
C07216	IDATAREA	00063										
C00021	IDENTS	00027										
C00003	IDITCH											
C00001	IDMPC	00425	00425									
C00000	IDMPR	00422	00422									
C00003	IDMPS	00433										
C00002	IDMPS	00430	00430									
C10463	IDPEN	00077	00077	00113	00113							
C00004	IEVAL											
C00004	IFLY	00071	00163	00163	00275	00276						
C00000	IFPASS	00032	00032	00040	00040							

C00000	IFTSO	00405	00406								
C00000	IFTMRAT	00407	00410								
C00000	IGMSUP	00044	00046	00421	00427						
C00013	IGMFDATA										
C00012	IGMPTYPE										
P00442	IN	00226	00227	00230	00231	00241	00244	00251	00255	00274	00323	00330
		00347	00352	00354	00361	00373						
C00021	INIT	00106	00231	00232	00245	00265	00252	00253	00255	00256	00261	00262
		00324	00324									
C00010	IINSFX											
C00007	IINITSET											
C00215	ILST	00135	00135									
C00003	IMPORTD											
C00003	INSEXEC	00272	00273									
C00374	INSEXVEH	00064	00065									
C00003	INSVEH	00065	00066									
C00020	INEXTFLT											
P00001	INITIAL	00014										
C00000	INITSTRT	00142	00142									
C00000	INPTFL											
C00076	IOBJECT	00264	00264	00274	00275	00332	00361	00362				
C00041	IOINIT											
C00001	IOPIA											
C00000	IOTA	00017	00017	00020	00022	00022	00030	00030	00037			
C00000	IOUTSET	00036	00037	00043	00043	00413	00027	00027				
C00000	IPASS											
C00714	IPAYLOAD	00101	00101									
C00020	IPESMODE											
C00004	IPLSR	00032	00032									
C00005	IPAIRSWP											
C00017	IRECMODE	00343	00343									
C00002	IRECOVER											
C00006	IREFUEL	00066	00067									
C00003	IRES	00132	00132									
C00016	IREV											
C00214	IRG	00133	00133									
C00003	IRSTRCP											
C00000	ISIVTYPE	00120	00120									
C00000	ISOWTY	00030	00030									
P00443	ISET	00031	00035	00042	00054							
C00000	ISETVTGT											
C00010	ISTART											
C00015	ISTRSW											
C00004	IT	00271	00271	00272								
P00464	ITEMP	00302										
C00011	ITGTSGN											
C00155	ITOLD											
C00004	ITP	00403	00403	00404								
C00010	ITYP	00121	00121									
C00004	ITYPE											
P00041	.I	00047	00047									
P00255	.IDX	00247	00324									
P00354	.IDSOL											
P00340	.IDSOL2	00366										

```
P00105  .1001
P00120  .1002       00104
P00267  .110        00264
P00323  .120        00262
P00327  .130        00325
P00343  .140        00263
P00373  .1401       00342
P00346  .1402       00345
P00351  .1403       00344
P00360  .1404       00350
P00375  .1405
P00400  .1406
P00402  .141        00050   00224   00377   00377
P00414  .142
P00424  .1421
P00427  .1422
P00432  .1423
P00434  .1424
P00436  .1430       00423   00424   00431   00433
P00151  .2
P00145  .3          00143
P00154  .4          00144
P00160  .40
P00162  .5          00156   00153   00157
P00172  .62
P00175  .70
P00222  .71         00220   00221
P00225  .72         00221
P00227  .80         00322
P00034  .900
P00244  .90         00243
P00040  .910        00033
P00250  .91         00246   00244   00326
P00044  .920        00037
P00451  .ERASER.    00110   00236
P00004  ..100000    00021
P00005  ..100001    00175
P00006  ..100002    00250
P00007  ..100003    00260
P00010  ..100004    00327
P00011  ..100005    00346
P00012  ..100006    00351
P00447  .ESTIFF.    00073   00073   00076   00074   00111   00132   00114   00115   00235   00236   00263
                    00264   00277   00300
P00465  J           00254   00257   00267
C00002  JCOSU       00051   00051   00203   00203   00424   00424
C00005  JCOPEN      00100   00100   00116   00117   00331
C00001  JGUIDO
C00016  JHOME
C00023  JOUTSAT     00420
C00026  JPAYLOAD
C00004  JREF        00067   00070
C00027  JREFUEL
C00310  JTGT
```

```
C0n046  JTGTIN
C0n007  JVEMHI
C0n001  JVEMLO
C0n031  JX1
C0n023  JX2
C0n015  KOPPER
C0n00E  KPAYLOAD   00102   00102
C0n036  LASTPAY    00241   00242
C0n037  LASTTGT    00070   00071   00105   00105
C0n124  LKHITPT
C0n007  LNCHBASE   00057   00060
C0n15A  LOSTTGT
P0n003  LOUTSPT    00413
C0n000  MAXPT
P00456  MITP       00405   00407
C0n00A  MSLTIME
C02260  MYASGN
C0n000  MYBASE     00054   00054
C04002  MYCOMM     00052   00052
C0n001  MYGROUP    00045   00045   00046
C0n001  MYIRINFL
C0n001  MYPOTST    00074   00074   00112   00113   00270   00270   00300   00301
C0n005  MALMTDLY   00151   00151   00160   00160
C0n144  NASGN
C01135  NASPV
C00211  NASTS
C0n077  NAVAIL
C00421  NB
C0n011  NBASE
C00013  NBAP       00374   00374
C00053  NBIT       00165   00165
C01207  NLOSTTGT
C0E015  NMPSITE
C03040  NOMIT
C06010  NOPERSON
C00004  NPASS      00035
C00015  NPREDEF
C00001  NRVEH
C00100  NT
C00002  NUMASP
C00001  NUMNOMN
C00000  NUMMIT
C00000  NVEH       00034   00034
C00002  NVEHSAP
C00003  NVEHPASS
C00210  NWHOS
C01133  NXPC
C00001  NYPAS
C00023  NYPV
C00026  OSLAT      00200   00200   00303   00304   00333   00343
C00040  OSLONG     00202   00202   00305   00306   00334   00364
P00013  OUTSRT     00013
C0n017  PLANTAPE
C00003  PLAT       00177   00177
```

```
C0A04A  PLOAD      00201   00201
C00011  PRATHAT
C00021  PRETTY
X0C002  PRINTIT    00025   00015
X0C001  PROJECT.   00000   00014
C00091  RANGE      00126   00126
C00054  RANGEREC   00140   00140
C00212  RANGEREF   00131   00131
C00211  RANGER     00127   00127
C00014  RANGREF    00130   00130
C01326  RECJ
C00212  RESASS
C00220  RESOC      00141   00141
C00414  RESREF
C00013  RGE
C00002  RNGSWP     00357   00357   00375   00375   00400   00400
C00004  RSVLOW
C21103  RVAL
C01472  S
C00013  SPDASH
C00011  SPHI       00124   00124
C00210  SPHIGH     00125   00125
C00012  SPOLG      00122   00122
C00207  SPOLOW     00123   00123
C00003  SPEED
C00014  STHRFIL    00402   00402
C01523  SUBV       00215   00215   00236   00237
C00172  SUMVOUT    00216   00216   00217   00237   00240
C31623  TASK       00314   00315
C00012  TDFFDIST
C00000  TGTFILE
C01134  TGTSPHD
C04347  TIMEPREM
C02117  TLAT       00302   00303
C00233  TLONG      00304   00305
C00010  TMPALOC
P00175  TSOOOOI.   00167
C00122  TSK        00313   00315   00370   00342   00370
C01275  V
C00006  VALIT
C01244  VALA
C31213  VALB
C01554  VALBASE
C00022  VALO
C01635  VALOV
C00012  VALONT
C00013  VALTOTT
C01142  VBIASE
C00622  VBPRASE
X00004  VRANWAY    00411
P00172  VSOOOOI.   00176
C00007  YIELD
   00674 SYMBOLS
```

```
      SUBROUTINE POSIT(ITGT,ISKIP,JTGT,XHVS)                            1000
CSORR      POSIT     10=A271   **********************************      8000
CUSE       3         5A=A71    **********************************      2000
      COMMON/3/AT,JGROUP,JCORR,INDEXNO(1100),TLAT(1100),TLONG(1100),    1000
     1TTGT(1100),XHVAL(1100),DLAT(1100),DLONG(1100),XESIG(1100),        2000
     2TISK(1100),CNTRVLOC(1100),FLAG(1100),FTIME(10,50),FVTDATA(270),   3000
     3 DUM(3230)                                                        4000
      TYPE INTEGER XESIG,TASK,CNTRVLOC,FLAG                             5000
CE=D       3         **************************************************  2000
      ISKIP=0                                                           5000
    5 DO 100 I=ITGT,JT                                                  6000
      IF(I.NE.INDEX(I))10*20*100                                        7000
   10 ISKIP=ISKIP+1                                                     8000
      IF(ISKIP-ISKIP+1)100,30,110                                       9000
   30 JTGT=I                                                            10000
      GO TO 140                                                         11000
   20 PRINT 25,I                                                        12000
   25 FORMAT(32H THIS VALUE = 0 IN POSIT FOR TARGET ,I5)                13000
  100 CONTINUE                                                          14000
      IF(I-1) 5, 5, 5                                                   15000
  110 ISTOP=1                                                           16000
      XHVS=ISTOP-JTGT                                                   17000
      IF (XHVS) 120, 130, 140                                           18000
  120 XHVS=ISTOP+JT-JTGT                                                19000
  140 RETURN                                                            22000
      END                                                               23000
```

IDENT POSTT

PROGRAM LENGTH 00152
ENTRY POINTS POSTT 000.3
BLOCK NAMES
3 0014T
EXTERNAL SYMBOLS
TMP.
OBJECT.
STR.
SYSTEM.

```
P00072 [illegible]    00132  00141  00144
C20257 CNT=VLOC
P00071 CRLFTI.        00045
P00003 CRFRT.         00050
C17027 DESIG
P00001 DICT.          00015  00042  00047  00075  00076
C17577 DLAT
C14713 DLONG
C31731 DUP
P03133 ERRINC.        00015  00067  00072  00073  00073  00074  00074
C31313 ERTYPTA
P00000 EXIT.          00134
C25373 FLAG
P00003 FPNEXT.
P00021 FP00001.       00104  00105
P00032 FP00002.       00112  00113
P00036 FP00003.       00116  00117
P00053 FP00004.       00106  00107
P00057 FP00005.       00120  00121
P00060 FP00006.       00126  00127
P00065 FP00007.       00122  00123
P00066 FP00010.       00130  00131
C27507 FTI=F
P00147 GETHL.         00077  00110  00129
P00137 GETHR.         00102  00114  00143
P00050 HOOOOOO.       00040
P00150 I              00022  00024  00035  00044  00050  00065
C00003 INDEXED        00025  00025
P00072 INITIAL.       00014
C06347 INTOT
P00003 ISKIP          00032
P00151 ISTOP          00056  00063
P00003 ITST           00021  00054
P00050 .100           00027  00034  00037
P00030 .10            00026
P00055 .110           00036
P00063 .120           00061  00061
P00067 .140           00062
P00040 .20            00024
P00035 .30            00033
P00021 .5             00054
P00003 ..25           00033
C00002 JCOMP
C00001 JGROUP
P00003 JTST           00036  00057  00065
P00152 KSKIP          00020  00030  00031
P00003 LOWS           00060  00064
C00000 MT             00051  00051  00064  00064
P00110 PF00002.       00103
P00114 PF00003.       00111
P00124 PF00004.       00115
P00132 PF00005.       00125
P00013 POSIT          00013
X00002 QUODICT.       00000  00014
```

```
X00006  BASIGL.   00070
C13463  CAL
X00003  ST=.      0001
C21343  TAS<
X00001  THETA.    01846
C02117  TLAT
C04233  TLONG
P00051  TS00001.  01823
P00024  *S00001.  00052   01852
   00077 SYMBOLS
```

```
      SUBROUTINE PREPAID                                                    1000
CSUBR      PREPAID   25JUN71  ************************************************ 5000
CUSE       PRINTOPT  12/10/69 ************************************************ 2000
      COMMON/PRINTOPT/ ISRTYTGT,ICUNSFTY,ICUPRAID,INSTRCPM,IFVAL,           1000
     1        TMAINSM,ICMGPLEN,IINITOPT,IINDEX,ITSTASGN,                    2000
     2        IGRPTYPE,IGRPDATA,ICUPCAR,ISTRKSUM,TCOMMSHR,                  3000
     3        ICOMIDM,IFXTFLT,IDEBUG,JREFUEL,JOUTSWT,JPAYLOA                4000
CEND       PRINTOPT  ************************************************ 2000
C             *** EXTERNALLY SUPPLIED COMMON BLOCKS ***                     6000
CUSE       COMMCHAR  1FEB71  ************************************************ 7000
      COMMON/COMMCHAR/PCLAST(30),PCLONG(30),PCZONE(30),PPLAT(30),           1000
     1PPLONG(30),ENTLAT(30),ENTLONG(30),CMFENST(30),MOPSTYLE(30),           2000
     2ATTRCOPM(30),ATTASUPP(30),MILDATT(30),DEFMANOF(30),NPRCHDEF(30),      3000
     3DEFDIST(30,3),ATTPRE(30,3),NDATA                                      4000
      TYPE INTEGER PCZONE                                                   6000
      TYPE REAL MOMSTYLE                                                    7000
CEND       COMMCHAR  ************************************************ 7000
CUSE       MASTER    1FEB71  ************************************************ 12000
      COMMON/MASTER/IMDATE,IDFLTID,ISIDEW,IPTPT,ICOMM,IOPEN,IRECOVER        1000
     1,IREF,NMDCNT,IMEG,ITYPE,IGROUP,NIOTBASE,NPAYLOAD,NASMTYPE,NWMOTYPE    2000
     2,ITANKBAS,NCOMPLEX,NCLASS,IALERT,ITGTS,NCORTYPE,NCNTRY                3000
CEND       MASTER    ************************************************ 12000
CUSE       GRPDATA   4/10/69 ************************************************ 15000
      COMMON/GRPDAT/IGROUP,NRPRS,MVEHGRP,TMES,ITYPE,IALERT,IREFUEL          1000
     1      YIELD,IST,RT,MBASE,IBASE(150),MLAT(150),MLONG(150),             2000
     2        IPAYLOA(150),MOVMBSE(150)                                     3000
      TYPE INTEGER MOVMBSE                                                  4000
CEND       GRPDATA   ************************************************ 15000
CUSE       KEYS      4/10/69 ************************************************ 19000
      COMMON/KEYS/KEYSTART,KEYMASK                                          1000
CEND       KEYS      ************************************************ 19000
CUSE       GRPTYPE   1FEB71  ************************************************ 20000
      COMMON/GRPTYPE/ISTRTYPE,NAMGE,CEP,SPEED,ALERTJLY,MALRTDLY,RANGEDEC    1000
     1   ,ICLASS,NOPENSQN,SPDMI,SPDLG,SPDASM,RANSREF,NMPSITE,IHEP           2000
     2   ,IMECMODE,IHEPMODE,FUNCTION                                        3000
      TYPE INTEGER FUNCTION                                                 3500
      TYPE REAL MALRTDLY                                                    4000
CEND       GRPTYPE   ************************************************ 20000
CUSE       STRKSUM   1FEB71  ************************************************ 26000
      COMMON/STRKSUM/RGROUP,NTSTRK,NCORM,NSTRK(31)                          1000
CEND       STRKSUM   ************************************************ 26000
      DATA (LSTRKSUM=33)                                                    25000
CUSE       PAYLOAD   4/24/69 ************************************************ 26000
      COMMON/PAYLOAD/NOMSI(40),INMOI(40),                                   1000
     1     NOMCMM2(40),IMMO2(40),NASM(40),IASM(40),                         2000
     2     NCM(40),NFCOYS(40),NRECOYS(40),IMIRV(40)                         3000
CEND       PAYLOAD   ************************************************ 26000
CUSE       IFTPRNT   4/10/69 ************************************************ 28000
      COMMON/IFTPRNT/IFTPRNT(10)                                            1000
CEND       IFTPRNT   ************************************************ 28000
CUSE       ITP       4/10/69 ************************************************ 29000
      COMMON/ITP/ITP                                                        1000
CEND       ITP       ************************************************ 29000
CUSE       FILES     1FEB71  ************************************************ 30000
C                                                                           1000
      COMMON/FILES/TAPFILE(2),MASFILE(2),MSLTIME(2),MLOCTAP(2),             2000
```

```
      1T=ALLOC(2),ALOCSMP(2),STxxFIL(2),EVENTAPE,PLANTAPE                    3000
C                                                                            4000
      TYPE INTEGER I-TFILE,BASFILE,xSLTIxE,xLOCTSx,T-PELOC,AL CHRP,          5000
     .SY-xFIL,EVENTAPE,PLANTAPE                                              6000
C                                                                            7000
      COxxxON/INPUTFL/ITxxTFL,xxINFL                                         8000
C                                                                            9000
CE xD      FILES     ***************************************************** 10000
C          *** INTERNALLY xExxRATED ARRAYS ***                             11000
CUSE       xSIDSxx   V17/40  ***************************************************** 12000
      COxxxON/xBIDSxx/NVEx,xBVEx(200),xDIST(200),xx,vPxxESE,                 13000
     1         xxPE(200),xxPC,TGTSPxx0,NxxSxDV(200)                          14000
      TYPE INTEGER VARxESE                                                   15000
CE xD      xxIDSxx   ***************************************************** 16000
CUSE       xxEExEE   26AUG71 ***************************************************** 17000
      COxxxON /xPExxPS/ xPLIxx(50),xPLAT(50),xPLOxx(50),xFFLAT(20),          18000
     1                  REFLONG(20)                                          19000
CE xD      CxE-xEE   ***************************************************** 20000
CUSE       xxxVSIZE  V17/40  ***************************************************** 21000
      COxxxON/ZxxAVSIZE/-xxSEPS,-C,xT,xL,xSTIxx,xSORTV,-SHT,xFIV,-xVPx       22000
CE xD      S-xVSIZE  ***************************************************** 23000
CUSE       xExxUx    V17/40  ***************************************************** 24000
      COxxxON/xExxUG/ITIA,ICAxExx(20)                                        25000
CE xD      CExxUG    ***************************************************** 26000
CUSE       PCALL     V17/69  ***************************************************** 27000
      COxxxON/PCALL/IPASS,ICALL                                              28000
CE xD      PCALL     ***************************************************** 29000
      ITIx=ITIx+1                                                            30000
      ICxxF=xx (ITIx)=xx xxExAT                                              31000
C**   ExIxY xxExxIx                                                          32000
      ICALL=7                                                                33000
      CALL xxTxTIT(IxExxx)                                                   34000
      xxYSI_xTx=xxIxxE(3,2x,24)                                              35000
      xFYx_xSE=xxEY---E(2,6,24)                                              36000
C                                                                            37000
C -END CxxxxxON/STxxSIx/ xxxx xIIxxx THE I xALOC FILE xx THE PL CxOx FILE    38000
C                                                                            39000
   22 CC TIxx                                                                40000
      ITx=I xxTFL                                                            41000
      ICxLL=126                                                              42000
      xx=xxxTE(-12, xHxxxxYSI/x)                                             43000
   23 ICALL=x                                                                44000
      CALL xxTxTIT(IST=x5Ox)                                                 45000
   40 CC TI=xE                                                               46000
      xxPx=0                                                                 47000
      CC xx) Ix=1,=x SE                                                      48000
   42 vBx=-ISx = IxxI (xFYYxxSx,Tx,xxI(xFIx)                                 49000
   43 xxVxx(I-)=xxPx=-3F                                                     50000
      xxSxxV(I-)=xxxV(IPxVL>-(I-))                                           51000
      xxPV(I-)=GxD=-((IPxYL>-(I-))xx)=0 )2(IPxVLx-(I-))xx4-xxPV(I-)          52000
   51 xxPx=xxGxxxPV(I-)xVPx-xSx                                              53000
      IF( xPx-Fx>-xxSIx>x)                                                   54000
   61 xxIxT Sx,'xx-- xPxS                                                    55000
   62 FCxxAT(xx=xx-x TH CxIC OF xx, xxxS T=IS xxxxxxx-xPx xx13,              56000
     1 x-xxxxxxS x,I3)                                                       57000
C***     SET xx ST=IxE xATA FCx xEXT CONxTIxx xSSIGxxx ***                   58000
```

```
      53 [illegible]                                                    7300
         T=ST-K=T5[illegible]                                           7400
         [illegible]=[illegible]  -PC=                                  7500
         [illegible] [illegible] G=                                     7600
         [illegible]=[illegible]                                        7700
         [illegible]                                                    7800
         T=ST-K=[illegible]= ST=([illegible]                            7900
         CALL [illegible]                                               8000
 1[03]   [illegible]                                                    8100
 1[04] [illegible]=1                                                    8200
 1[05] RETURN                                                           8300
       E[illegible]                                                     8400
```

IDENT PRERAID

PROGRAM LENGTH 00247
E Y POINTS PRERAID 00024
BLOCK NAMES

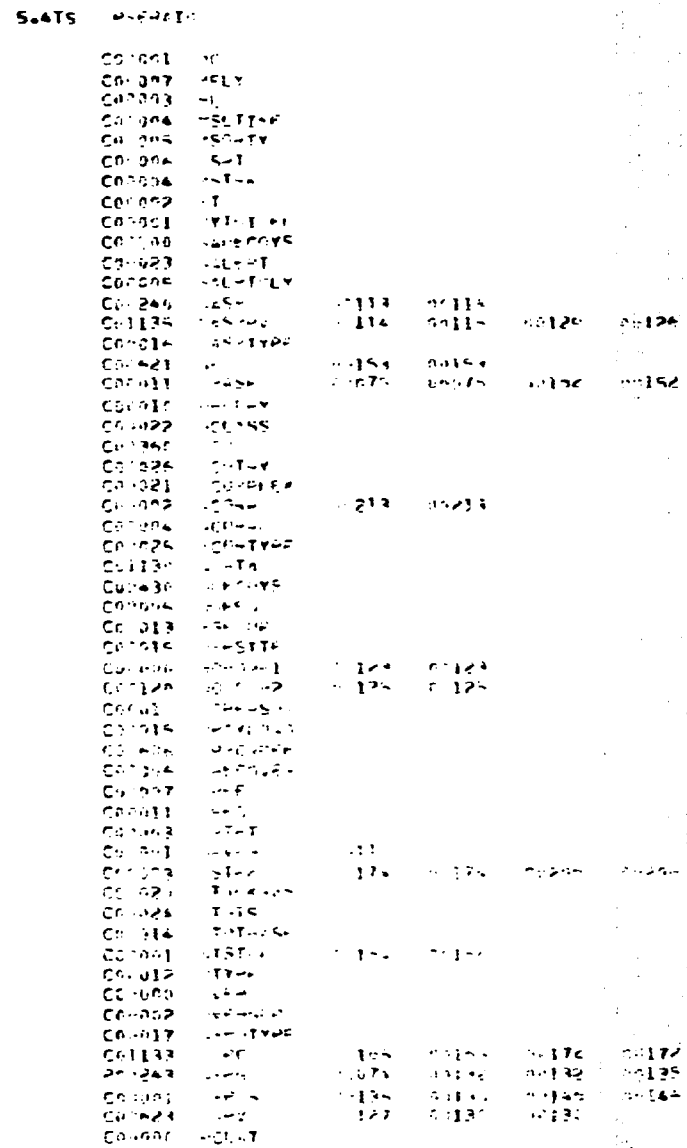
PRINTOPT	00025
CORECHAR	01131
MASTER	00027
GRPDATA	01370
KEYS	00002
GRPTYPE	00022
STRFSUM	00041
PAYLOAD	00620
IFTPNAT	00012
ITP	00001
FILES	00020
INPUTFL	00002
RAIUSHR	01445
OPENREF	00274
ARAYSIZE	00011
DEBUG	00025
PCALL	00002

EXTERNAL SYMBOLS

THEND.
Q1003100
Q1010100
GRDICT.
PRINTIT
KEYMAKE
PRNTF
IGET
GENRAID
STH.
ONSIGL.

```
C00004  ALERTMLY
C00012  ALOCSRP
C00006  ALOCTAR
C00416  ATTNCORW
C00776  ATTNPWE
C00454  ATTNSUPP
C00002  BCSFILE
P00222  BFRIM.      00223
C00240  CLAT
C00466  CLONG
C00002  CRP
P00221  CNVRTI.     00145   00167
P00240  COUNT.      00100   00101
P00004  CREAT.      00152
C00322  CRLENGTH
C00644  DEFDIST
C01550  DEFRANGE
P00001  DICT.       00026   00037   00046   00047   00062   00071   00103   00142   00151   00211
C00311  DIST
C00062  DPLAT
C00000  DPLINE
C00144  DPLONG
P00224  ENDING.     00027   00217   00222   00223
C00225  ENTLAT
C00264  ENTLONG
C00016  EVENTAPE
P00000  EXIT.       00225
P00004  FORMAT.     00032   00057
C00021  FUNCTION
X00011  GETMAIN     00210
P00152  GG00000.    00160
C01512  HILOATTR
C00005  IALERT
C00310  IAS
P00241  I           00075   00100   00104   00133
C00012  IBASE
P00242  IC          00167   00173   00212
C00001  ICALL       00035   00035   00055   00056   00066   00067
C00001  ICAMFROM    00034
C00005  ICMSPLAN
C00007  ICLASS
C00014  ICORCAR
C00017  ICORIGIN
C00016  ICORPSW
C00002  ICUMAIN
C00001  ICUSRTY
C00021  IDERUG      00040
C00001  IDENTAG
C00004  IEVAL
C00000  IFTPRNT
X00010  IGET        00192
C00000  IGROUP
C00013  ISHRDATA
C00012  IGMTYPE
```

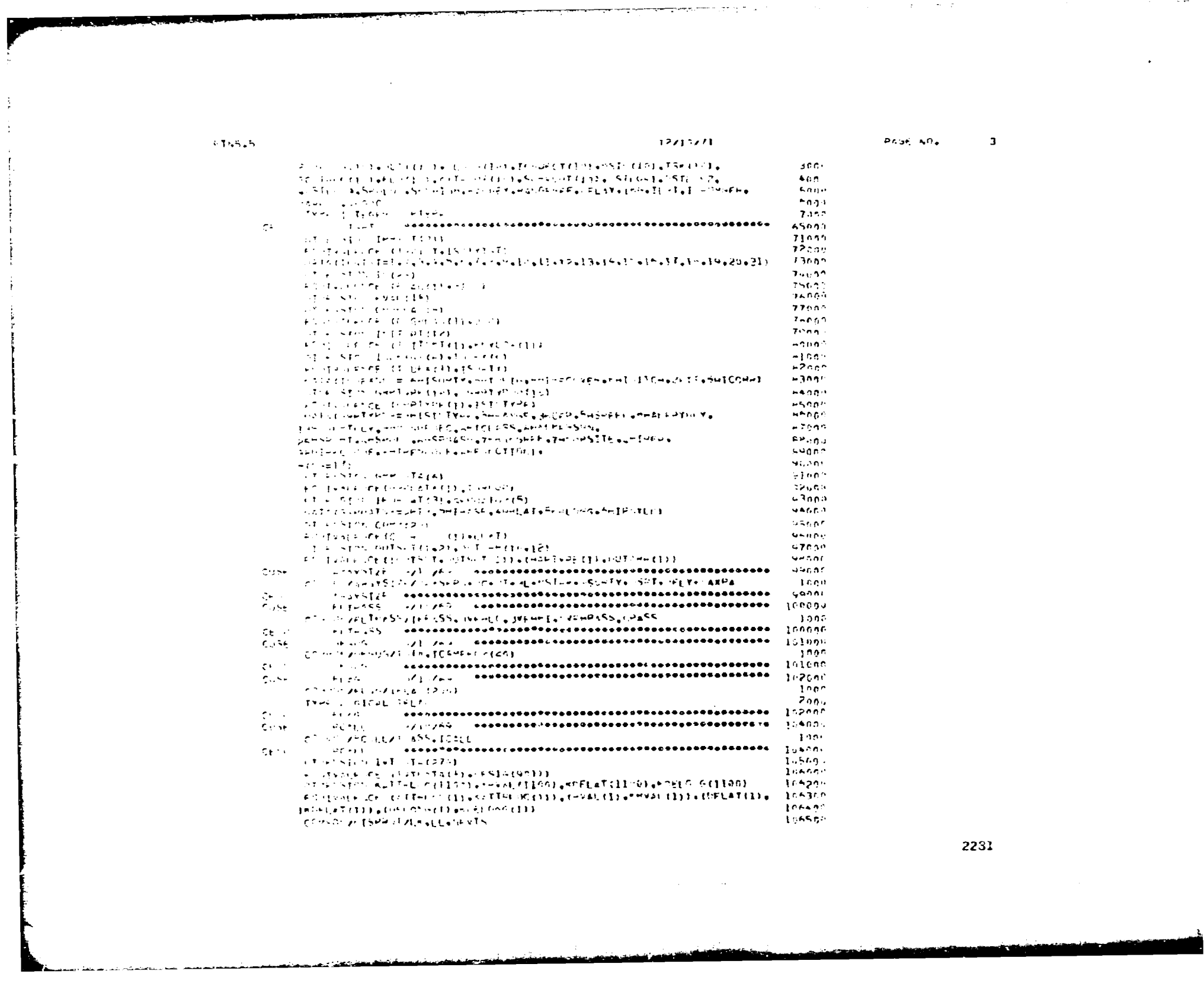
```
C00000  IMDATE
C00016  IINDEX
C00007  IINITOPT
C00550  IMIRV
C00020  INEXTFLT
P00222  INITIAL.    00027
C00000  IAPTFL      00053   00053
C00030  IOTA        00030   00030   00031   00033   00033   00215   00215   00216
C00000  IPASS
C00014  IPAYLOAD    00110   00111   00115   00116   00120   00120
C00020  IPEAMODE
C00005  IRAIDSMR
C00017  IRECMODE
C00006  IREFUEL
C00003  IREG
C00016  IREP
C00003  IRSTACPM
C00002  ISIDEM
C00000  ISI=TYPE
CC0000  ISATVTGT
C00010  ISTART
C00015  ISTRXSUM    00072
C00011  ITGTASGA
C00000  ITP         00054   00054
C00004  ITYPE
C00050  IXMGI
C00170  IXMG2
P00212  .1000
P00215  .1100
P00217  .1200
P00053  .22
P00066  .23
P00073  .40
P00102  .42
P00107  .43
P00130  .50
P00140  .51         00137
P00152  .53         00137
P00230  .ERASEH.    00065   00063
P00004  ..100000    00032
P00005  ..100001    0006A
P00006  ..52        00143
P00226  .ASTIFF.    00112   00113   00117   00122   00122   00124
C00023  JCUTSPT
C00024  JPAYLOAD
C00022  JREFUEL
X00006  KEYMAKE     00041   00046
C00000  KEYSTART    00045   00045
C00001  KEYVBASE    00052   00104
C00000  KGROUP
C00360  KOMSTYLE
P00003  LSTRXSUM
C00010  MAXPA
C00000  MBASEFG
```



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C00036  PCLONG
C00074  PCZONE
C00017  PLANTAPE
P00024  PRERAID     00024
X00005  PRINTIT -   00036   00079
X00007  PRNTF       00061
X00002  Q1003100    00171   00205
X00003  Q1010100    00202
X00004  Q800ICT.    00040   00025
X00013  QNSINGL.    00220
C00001  RANGE
C00006  RANGENEC
C00014  RANGREF
C00226  REFLAT
C00252  REFLONG
C00132  RPLAT
C00170  RPLONG
C00013  SPDASH
C00011  SPOHI
C00012  SPOLO
C00003  SPEED
X00012  STM.        00141
C00014  STPREFIL
C00000  TGTFILE
C01134  TGTSPEED
X00001  THEND.      00150
C00010  TMPALOC
P00244  TRSTHR      00160   00200   00234   00207
P00245  TRSMNS      00164   00170   00173   00200
P00135  TS00001.    00077
P00213  TS00002.    00167
C01142  VOMEASE     00105
C00622  VPREASE     00106   00105   00107   00107   00131
P00102  #S00001.    00134
P00170  #S00002.    00214
P00246  **          00065
C00007  YIELD
   00307 SYMBOLS
```

```
      SUBROUTINE PRINT PLOT (IC)                                        1000
CS:UM      PRINT PLOT   72/00/71  ************************************** 3300
CUSE       (STAT)       (FTN 4.7)  ************************************** 2000
      COMMON /COMSTAT/ICMAXE,ICEXIT,ICSTAT,ICUR,NOPEN,NCOVER           1000
     1,NEXT,NPRNT,NTYPE,NUSER,NUSTAT,NSET,NAVLOG,NSNTYPE,NWRITE         4000
     2,TASK,CLASS,CURFLE,CLASS,NFLNT,CITS,CURTYP,CNTRY                  3000
CE:UM      (STAT)     ************************************************** 2000
      INTEGER*2 I                                                       5000
      EQUIVALENCE(ICHAR,I)                                              6000
CUSE       PRINT PLOT   72/00/43  ************************************** 7000
      COMMON /PLOTCM/ IS,ITYPE,ICURFE,ICHAR,ISTACK,ICOUNT,             1000
     1       IXPOS,ICHOPT,IYPOS,IFONT,IFLAG,IPEN,                       2000
     2       IBUFF,IXPREV,IYPREV,ICURCAP,ISTSUM,ICURSAV,                3000
     3       ICOMIN,IMAXTSLI,IBUFFS,JBUFFL,JBUFSW,IBAYLOG               4000
CE:UM      PRINT PLOT ************************************************** 7000
CUSE       (PTYPE)    (FTN 4.7)  ************************************** 11000
      COMMON /PTYPE/ISTYPE,NARGS,CENSHFT,LENTOT,NSLOTS,NRANGE,CC        1000
     1    ,YCLASS,NUSER,SPACE,SPACE,SHFTS,NAME,NPOS,ITS,IFB            2000
     2    ,ICODE,IFNODE,ICCII)                                         3000
      TYPE INTEGER A,ACTION                                             3500
      TYPE REAL XAL,IOLY                                                4000
CE:UM      (PTYPE)    ************************************************** 11000
CUSE       PRINTA     72/00/43  ************************************** 15000
      COMMON/PRINTA/ICOUNT,NPRNTS,NAVE,NSET,ITYPE,ISLENT,IFNEL,         1000
     1    NTYPE,ISTART,NBASE,NSPACE(150),NLST(150),NUMS(150),           2000
     2       TRAYLOG(150),NUMSEL(150)                                   3000
      TYPE INTEGER*2 NBASE                                              4500
CE:UM      PRINTA     ************************************************** 15000
CUSE       PRINT DATA 72/00/43  ************************************** 19000
      COMMON/PRINTD/ NAME(40),LNAME(40),                                1000
     1    NAME2(40),NAS(40),IAS(40),                                    2000
     2    (CONAME(40),CONAS(40),ICONAV(40)                              4000
CE:UM      PRINTDATA  ************************************************** 19000
CUSE       STACKUP    (FTN 4.7)  ************************************** 21000
      COMMON/STACKU/ NGROUP, TST(30),CONN(30),STN(30)                   1000
CE:UM      STACKUP    ************************************************** 21000
CUSE       (STACK)    (FTN 4.7)  ************************************** 22000
      COMMON/STACK/ICOM,JCOM,IVERSO(1100),FLAT(1100),TLONS(1100),       1000
     1TLATS(1100),IMPA(1100),NTSTOT(1100),ISTNSC(1100),                 2000
     2STTPLOC(1100),NAL(1100),PFLAT(1100),PFLONG(1100),DESIG(1100),     3000
     3TASK(1100),CNT,YLOC(1100),FLAG(1100)                              4000
CE:UM      MAINSTACK  ************************************************** 22000
C     COMMON CONTAINING MAINSTACK TO COMMON/3/                          25000
CUSE       COMMON     (FTN 4.7)  ************************************** 26000
      COMMON/COMMC/PFLAT(30),PCLONG(30),PCZONE(30),RPLAT(30),           1000
     1RPLONG(30),FLAT(30),FLONG(30),CHLENGT(30),CORSTYLE(30),           2000
     2ATTACH(30),ITSUSP(30),ILOAD(30),DEPARNE(30),NOPEN(30),            3000
     3DEPDIST(30,3),ITSPHE(30,3),DATA                                   4000
      TYPE INTEGER PZONE                                                6000
      TYPE REAL NOMSTYLE                                                7000
CE:UM      COMMON     ************************************************** 26000
      DIMENSION DUM(20,10)                                              31000
      EQUIVALENCE(DUM,PFLAT)                                            32000
CUSE       COMMON     72/10/43  ************************************** 33000
      COMMON/COMMI/ICLAT,CLONG,CZONE,FLAT,PLONG,ELAT,ELONG,CLENGTH,     1000
     1    ICORR,CUSTTY,CONSATTY,ATTRMILD,NSDEF,NWREDEF,                 2000
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     2     DIST2FF(4),PREATTR(4)                                        3000
      TYPE INTEGER   NE                                                 5000
      TYPE REAL KOPP M                                                  9000
CEND        COMMON  **************************************************  35000
      DIMENSION COMM(15)                                                36000
      EQUIVALENCE (COMM,CLAT)                                           37000
CUSE        HEXTELT   4/10/69  ***************************************  39000
      COMMON/HEXTELT/STATES,J,SPLIT,RAL                                 1000
CEND        HEXTELT  ************************************************   34000
      COMMON/P2/PHI(1100),RHO(1100)                                     34000
CUSE        SORTYTGT  4/10/69  ***************************************  40000
      COMMON/SORTYTGT/NPT,TYPETGT(25),H(25,25),VAL (25),VAL (25),       1000
     1      V(25),RR(25),ATTACH(25),DISTLEN(25),[illegible](25),S(25),  2000
     2      SHRE(25),VALONE(25),VALON(25),RVALR(25),VALR(25),MFC(25)    3000
CEND        SORTYTGT  ***********************************************   40001
CUSE        CURSORTY   4/10/69  **************************************  43000
      COMMON/CURSORTY/[illegible]IT,[illegible],HIT,IFLY(13),THIT(13)  1000
     1      ,LASTRA,LASTTGT,[illegible]IT,IOMIT(25),MAVAIL,IAVAIL(2)   2000
     2      ,LEFTI(25),IT,[illegible],LOSTTGT(25),LOSTTOT,[illegible],S,R,BASE  3000
     3      ,DSX                                                        4000
CEND        CURSORTY  ***********************************************   43000
CUSE        RAIDSHR    4/10/69  **************************************  47000
      COMMON/RAIDSHR/[illegible](200),DIST(200),[illegible]PHASE,       1000
     1      [illegible](200)                                            2000
      TYPE INTEGER PHASE                                                3000
CEND        RAIDSHR  ************************************************   47000
CUSE        COMPTIN    [illegible]  **********************************  50000
      COMMON/COMPTIN/[illegible]ASE(100),MASGN(100),JTGT(10,100),MYAS(1100),  1000
     1   [illegible](100)                                               2000
CEND        COMPTIN  ************************************************   50000
CUSE        EVAL       4/10/69  **************************************  52000
      COMMON/EVAL/[illegible],WELA,[illegible]A,JADD,[illegible],[illegible],JADD,MAXDAM  1000
     1      ,JADD,[illegible]SORTY,JAP,[illegible],VALLIST,[illegible],JSEVER,TS,INDL  2000
      TYPE REAL [illegible]                                             3000
CEND        EVAL  ***************************************************   52000
      COMMON/[illegible]/[illegible],ISCAN,JAFT,LTO,DTA,[illegible],UT  55000
      TYPE INTEGER  LTO, DTA , [illegible] , UT                         56000
CUSE        INITOPT    4/24/69  **************************************  57000
      COMMON/INITOPT/[illegible](3),[illegible](3),[illegible]IST(2),DISTINV,[illegible]IST,  1000
     1   [illegible]                                                    2000
CEND        INITOPT  ************************************************   57000
CUSE        INDEX      4/10/69  **************************************  59000
      COMMON/INDEX/INDEX,[illegible],IRECOVER,[illegible]ITCH,IT,ICC,[illegible]JTGT  1000
CEND        INDEX  **************************************************   59000
CUSE        TOTASG     4/11/69  **************************************  60000
      COMMON/TOTASG/TOTSASG,[illegible],NTGT,IESTGT,ILASTGT,IFST-[illegible],LSTV[illegible],  1000
     1      ISIDE                                                       2000
CEND        TOTASGN  ************************************************   60000
C     USE   Y GENERAL INT TASGN                                         62000
CUSE        [illegible]      2/20/71  ************************************  63000
      COMMON /[illegible]/ [illegible](50),NPLAT(5),[illegible](20),FFLAT(20),  1000
     1      [illegible](20)                                             2000
CEND        [illegible]  ***********************************************   63000
CUSE        OUTSHT     1/20/71  **************************************  65000
      COMMON/OUTSHT/OUTSHT, [illegible],[illegible],[illegible],JHFF,JMPEN,PAYLOAD,  1000
     1INCOMBASE,ITYP,[illegible]AT,[illegible],[illegible],[illegible]TYPE(10),[illegible]AT(1),  2000
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      DATA (NWDPRNT = 0)                                                  107000
      CALL TIMSME(-2)                                                     108000
      IF(IFLAG(ICALL)) 3,200                                              110000
    3 PRINT 4,ICALL,ICAMFROM(ICALL)                                       111000
    4 FORMAT(10HGPRINT NO.,I3,6H FROM ,A8)                                112000
    5 GO TO (10,20,30,40,50,60,70,80,90,100,110,120,130,140,150,160,170,  113000
     1  180,190,195,210,220,9998),ICOMMON                                 114000
C SORTYTGT = OPTION 1                                                     115000
   10 PRINT 11,IGROUP,ICORR,ISORTY,NMAXPT                                 116000
   11 FORMAT ( 9HOSORTYTGT/10X,9HIGROUP = ,I4,10X,8HICORR = ,I4,10X,9HIS  117000
     1ORTY = ,I4,10X,8HMAXPT = ,I4)                                       118000
      PRINT 12,(J,MYPOTGT(J),LKMITMT(J),Z(J),VALR(J),VALA(J),             119000
     1 RNOJ(J),ATLOC=I(J),J=1,NMAXPT)                                     120000
      PRINT 121,(J,DISTLEG(J),DISTLON(J),B(J),SUMV(J),VALDONE(J),         121000
     1  VALON(J),DVALB(J),DVALA(J),DREC(J),J=1,NMAXPT)                    122000
   12 FORMAT(8X,7HMYPOTGT,4X,7HLKMITMT,9X,1HV,11X,6HVALR,10X,6HVALA,10X,  123000
     1 4HNOJ,9X,7HATLOC=I/(2X,I2,4X,I3,9X,I2,7X,5(E10.3,4X)               124000
     2))                                                                  125000
  121 FORMAT(6X,7HDISTLEG,4X,7HDISTLON,7X,1HB,7X,4HSUMV,7X,7HVALDONE,8X,  126000
     1 5HVALON,9X,5HDVALB,9X,5HDVALA,9X,4HDREC/(2X,I2,3X,F4.0,7X,F4.0,6X,  127000
     2 F6.3,4X,F6.3,4X,5(E10.3,4X) ))                                     128000
      PRINT 13,(I,I=1,NMAXPT)                                             129000
   13 FORMAT(5X,1HU,5X,25(I4))                                            130000
      DO 15 I=1,NMAXPT                                                    131000
      DO 14 J=1,NMAXPT                                                    132000
   14 ID(J) = D(I,J)/10.                                                  133000
   15 PRINT 16,(I,(ID(J),J=1,NMAXPT))                                     134000
   16 FORMAT(5X,I4,1X,25(1X,I3))                                          135000
      GO TO 200                                                           136000
C  CURSORTY = OPTION 2                                                    137000
   20 PRINT 21, NUMHIT,NUMBOMB,NUMASM,NMIT,LASTPAY,LASTTGT,NOMIT,NAVAIL,  138000
     1 ITOLD,ALOSTTGT    ,NWHDS,NASMS,RNGASM                              139000
   21 FORMAT(9HOCURSORTY/                                                 140000
     1 13X,6HNUMHIT,3X,7HNUMBOMB,3X,6HNUMASM,3X,4HNMIT,3X,7HLASTPAY,3X,   141000
     2         7HLASTTGT,3X,5HNOMIT,3X,6HNAVAIL,3X,5HITOLD,3X,8HALOSTTG   142000
     3T,3X,5HNWHDS,3X,5HNASMS,3X,6HRNGASM/5X,I2,7X,I2,8X,I2,2(8X,I2),8X,  143000
     4I2,2(7X,I2),6X,I2,8X,I2,7X,I2,6X,I2,5X,F6.1)                        144000
      PRINT 22,(I,I=1,NFLY)                                               145000
   22 FORMAT( 9X,13(6X,I2))                                               146000
      PRINT 23,(IMIT(I),I=1,NMIT)                                         147000
      PRINT 24, IFLY(I),I=1,NMIT)                                         148000
   23 FORMAT(3X,6HIMIT =,13(4X,I4))                                       149000
   24 FORMAT(3X,6HIFLY =,13(4X,I4))                                       150000
      PRINT 25,(I,I=1,NMAXPT)                                             151000
   25 FORMAT(12X,25(I3,1X))                                               152000
      PRINT 26,(IOMIT(I),I=1,NOMIT)                                       153000
      PRINT 27,(IAVAIL(I),I=1,NAVAIL)                                     154000
   26 FORMAT(2X,10HIOMIT =   ,25(I3,1X))                                  155000
   27 FORMAT(1X,11HIAVAIL =   ,25(I3,1X))                                 156000
      PRINT 28,(LOSTTGT(I),I=1,LOSTTGT)                                   157000
   28 FORMAT(1X,11HLOSTTGT =   ,25(I3,1X))                                158000
      PRINT 29,(LKMITMT(I),I=1,NMAXPT)                                    159000
   29 FORMAT(1X,11HLKMITMT =  13(I3,1X))                                  160000
      GO TO 200                                                           161000
C  CURRAID = OPTION 3                                                     162000
   30 PRINT 31,(I,I=1,10)                                                 163000
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      31 FORMAT (4H0CO=,8I0/5X,4HIS=T,3X,6HSTRESE,3X,8HTHIFFER
     1,3X,5HASGN=,3X,6HJTST [,I3(5X,I2,3X),1H])                        144000
        DO 32 I=1,NSE=ASS  * NP=ASGN(I) * NDA=ASSF(NP)                 145000
      32 PRINT 33,(I,NP=ASF(I),I=1,NDA)                                146000
      33 FORMAT (4X,I2,=X,I4,4X,I4,4X,I4,4X,I4,1H])                    147000
         GO TO 200                                                     148000
C     ASIGSTMT NO COMMON                                               149000
      40 PRINT 41, NT,JSROU ,JCOM                                      150000
      41 FORMAT(21=0PAI=IST= NO CO=MON/SY=T =,I4,6X,=MJCROUT= =,I3,6X,7HJ 151000
     1COM =,I3/5X,5HINXO,2X,4HTEST,3X,5=TLO=G,2X,=TI=ERME=,2X,5HIOPEN 152000
     2,3X,7H=ISTOUT,4X,7=DIST=RC,4X,7HATT=LOC,5X,4HMVAL,2X,3H=HI,4X,  153000
     33H=HO,3X,4H=VISG,2X,5HCHSIG,1X,3=T=C,1X,2HCL,1A,1HF)            154000
        PRINT 42,(I,T=OPEN(I),TEST(I),TLO=G(I),TI=ERME(I),TOPEN(I),    155000
     1DIST=OUT(I),CHSIG(I),ATT=LOC(I),MVAL(I),MHI(I),MHO(I),=VASGN(I), 156000
     2DFSI(=(I),VASG(I),C=T=VLOC(I),FLAG(I)),I=1,=T)                  157000
      42 FORMAT(1X,I3,1X,I4,2X,F6,1,1X,F6,1,1X,F10,3,1X,I4,2X,F1=,3,   158000
     1S(1X,F10,3),I4,2X,I5,1X,I2,2X,I2,1X,I1)                         159000
         GO TO 200                                                     160000
C  EVAL                                                              161000
      50 PRINT 52,(EVAL(I),I=1,1A)                                     162000
      52 FORMAT (5HOEVAL/5X,4HT=P=,4X,5HJROLL=,3X,5=HAX=,6X,3X,4=JA=D=,4X, 163000
     1 5=VISNA,3X,6=JUEL,4X,5H=AXC=,3X,5HJADDR,2X,6H=AXDAR,3X,5HJBODA,3X 164000
     2 ,3=VALSOHTY,5X,3HJAF,3X,6HVALC,3X,7=VALDIST/1X,F10,3,2X,I4,     165000
     3S(1X,F10,3,1X,I4),3X,F1=,3,3X,I4,3X,I4,2X,E10,3/4X,6HVAF=AX,6X,  166000
     4 7HJSF)FM=0,3X             /2X,F10,3,4A,12,9X    )              167000
         GO TO 200                                                     168000
C  MAIDSHN                                                           169000
      60 PRINT 62,=VE=, A,VPRHASE,=PC,TGTSP=N                          170000
      62 FORMAT(RHONMAIN SHD/2X,6HN=VE= =,I4,=X,4HN4 =,I3,=A,9HVPRR=SE =,I4  , 171000
     16X,6HN=PC =,I3,8X,10HTGTSP=HI =,F=,1)                           172000
        =LIES=N/21                                                     173000
        NN=N=LIES,21  * NL=21  * NS=1                                  174000
      63 DO 67= K=1,NLIES                                              175000
         PRINT 65,(I,I=1,S,=L)                                         176000
      65 FOR=AT(5X,6HI= =,2X,21(I2,3X))                                177000
         PRINT 66,(VI=T=(I),I=NS,=L)                                   178000
      66 FORMAT(2X,7H=ISC= =,21(I4,=))                                 179000
         PRINT 67,(VI=T=(I),I=NS,=L)                                   180000
      67 FORMAT(3X,7H IST= =,21(F5,0))                                 181000
         PRINT 47,(VA=(I),I=NS,=L)                                     182000
     =71 FOR=AT(3X,6H=)SV =,21(F2,3X))                                 183000
         PRINT 472,(=AS PV(I),I=NS,=L)                                 184000
     472 FORMAT(1X,6H=AS PV=,21(I2,3X))                                185000
     473 CO=TINUE  * TS(=)=0,=42                                       186000
      48 IF(=L)=ES)N=0,=N                                              187000
     =49 NS=N,1                                                        188000
      =1 NL= +  * NL)=S=1  * N=2=  * GO TO 63                          189000
     =42 GO TO 200                                                     190000
C  CHGPLAN                                                           191000
      70 PRINT 72,  CHGPLAN(I),I=1,=A)                                 192000
      72 FOR=AT (8=RCHGPLAN=/1X,6H=C =,I=,5X,7HIAI4 = ,                193000
     1 I4,4X,6HISCA= = ,I=,4X,7=JSF = ,I4)                            194000
         GO TO 200                                                     195000
C  INITOPT                                                           196000
      80 PRINT 82,(INITOPT(I),I=1,12)                                  197000
      82 FOR=AT (8HOINITOPT/,3X,11=FLYLO= = ,=2(F5,1,3= ,),F6,1,2H= ),3X,  198000
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      1)2H)*HPDATA = ( ,2(I2,2H ,),I2,3H ),3X,11HATPDIST = (,2(F9.3,2X),
     2F9.3,1H)/10X,10HPISTING = ,F6.1,3X,11HTDEFDIST = ,F6.1,4X,
     37HPDEF = ,F7.1)                                                  220000
      GO TO 200                                                        223000
C  INDEX                                                              224000
   90 PRINT 92,(INDEX(I),I=1,10)                                       225000
   92 FORMAT(1H0,10I12/10X,5(A6,6X))                                   226000
      GO TO 200                                                        227000
C  TGTASSN                                                            228000
  100 PRINT 102,TGTS,SM,TGTL,M,TGT,IFSTST,ILASTGT,IFSTVEH,LSTVEH,ISIDE 229000
  102 FORMAT(1H0,TGTASSN/4X,I4,1H=TGTS+SM,I4,1H=TGTL+M,I4,1H=TGT,I4,1H= 230000
     1FST =,F6.1,2X,8HILASTGT =,I3,2X,8HIFSTVEH =,                     231000
     2I3,1X,8HLSTVEH =,I3,1X,7HISIDE =,I2)                             232000
      GO TO 200                                                        233000
C  GRPTYPE                                                            234000
  110 PRINT 112,(GRPTYP,M(I),M=PTYPE(I),I=1,10)                       235000
  112 FORMAT(9H0GRPTYPE/5A,4B,3H = ,I4,3X,4B,3H = ,F6.0,3X,4B,3H = ,  236000
     1F4.1,3X,4A,3H = ,F6.0,3X,4B,3H = ,F4.1,3X,4H,3H = ,F4.1/4X,4B,  237000
     23H = ,F6.1,3X,4B,3H = ,I2,3X,4B,3H = ,I3,3X,4A,3H = ,F5.0,3X,4B, 238000
     33H = ,F5.0,3X,4B,3H = ,F4.0/4X,4B,3H = ,F6.0,6(3X,4A,3H = ,I4),  239000
     43X,4B,3H = ,A4)                                                  239500
      GO TO 200                                                        240000
C  GRPDATA                                                           241000
  120 PRINT 122,(GRPDATA(K),K=1,10)                                   242000
  122 FORMAT(1H0,GRPDATA/8X,8HGRPNUM = ,I3,2X,8HNSG = ,I4,2X,         243000
     19HVEHGRP =,I4,2X,6HIPOS =,I3,2X,7HITYPE =,I3,2X,8HNTALE=T =,I2,2X, 244000
     29HNREFUEL =,I3/8X,7HTIELD =,F10.2,2X,8HISTART =,I3,2X,7HSABASE =, 245000
     3I3)                                                              244000
      NLIN=NBASE/10 + 2*NBASE-10*NLIN + JJ=0                           247000
      I=0                                                              248000
  123 IF(I-NLIN) 124,124,125                                           249000
  124 I=I+1                                                            250000
      J=10*I-13 + JJ=10*I                                              251000
  125 IF(GRPDATA(1)=8H(2X,A6,                                          252000
      IF(GRPDATA(2)=8H=(2X,I4,                                         253000
      IF(GRPDATA(3)=8H2X))                                             254000
      PRINT IFORMAT,(GRPDATA(K),K=J,JJ))                               255000
      PRINT IFORMAT,(GRPDATA(K),K=J,JJ))                               256000
      PRINT IFORMAT,(GRPDATA(K),K=J,JJ))                               257000
      IFORMAT(2)=8H4(2X,F4.                                            258000
      IFORMAT(3)=8H1))                                                 259000
      PRINT IFORMAT,(GRPDATA(K),K=J,JJ))                               260000
      PRINT IFORMAT,(GRPDATA(K),K=J,JJ))                               261000
      GO TO 123                                                        262000
  126 J=JJ+1 + JJ=JJ+10 + I=I+1 + GO TO 125                            263000
 1261 CONTINUE                                                         264000
      GO TO 200                                                        265000
C  CORRCHAR                                                           266000
  130 PRINT 132,NDATA                                                  267000
  132 FORMAT (9HCORRCHAR/8X,8HNDATA = ,I2/                             268000
     18X,6HPCLAT,6X,6HPCLONG,6X,6HPCZONE,7X,6HRPLAT,6X,6HRPLONG,6X,    269000
     2 8HCRLENGTH,6X,8HCORSTYLE,6X,8HATTRCORR,4X,8HATTRSUPP)           270000
  134 PRINT 135,(PCLAT(I),PCLONG(I),PCZONE(I),RPLAT(I),RPLONG(I),      271000
     1  CRLENGTH(I),CORSTYLE(I),ATTRCONN(I),ATTRSUPP(I),I=1,NCORRCH)   272000
  135 FORMAT (7X,6(F9.1,6X),3X,I2,2X,2(6X,E10.3))                      273000
      PRINT 136                                                        274000
```

```
      138 FORMAT(4X,6HENTLAT,2X,7HENTLONG,3A,6HMILDIFF,3X,6HDEFR =,6F,2X,
     1 6HRHCORR=,10(F,1,1X))                                                  275000
         PRINT 137,(ENTLAT(I),ENTLONG(I),MILDIFF(I),DEFRANGE(I),
     1                 (RHCORR(I),(DEFDIST(I,J),J=1,3),(ATTPARM(I,J),
     2                 J=1,3),I=1,NCORR)                                      276000
      137 FORMAT(4X,F6,1,2X,F6,1,3X,F10,3,3A,F6,1,6X,I2,7X,3(F6,1,2X),I4,
     1 3(2X,F10,3))                                                           277000
          GO TO 200                                                           278000
C  STRRSUM                                                                   279000
      150 PRINT 151,NGROUP,NTSTRK,NCORR,(I,I=1,NCORR)                         280000
          PRINT 153,(NSTRK(I),I=1,NCORR)                                      281000
      151 FORMAT (8HOSTRKSUM/10X,9HNGROUP = ,I3,8X,9HNTSTRK = ,I4,8X,8HNCORR
     1 = ,I2/4X,4HCORR,4X,20(I2,3X))                                          282000
      153 FORMAT (6X,5HNSTRK,3X,20(I3,2X))                                    283000
          GO TO 200                                                           284000
C  CORRSUM                                                                   285000
      160 PRINT 162,NVEH,NB,VPRBASE,(I,I=1,9),(I,I=1,9)                       286000
      162 FORMAT (8HOCORRSHR/8X,7HNVEH = ,I4,8X,5HNB = ,I3,8X,10HVPRBASE =
     1 I3/8X,5HNVEH,8X,9(I1,3X),1HN,3X,9(I1,3X),1HN)                          287000
          PRINT 163,(NVEH(I),I=1,NB)                                          288000
      163 FORMAT (20X,20(I3,1X)/)                                             289000
          GO TO 200                                                           290000
C  CORRTOW                                                                   291000
      170 PRINT 172,((CORR(I),I=1,5),(CORR(I),I=6,20),(CORR(I),I=-,7))        292000
      172 FORMAT (8HOCORRTOW/
     1       4X,7HCLAT = ,F6,1,3X,8HCLONG = ,F6,1,3X,8HCZONE = ,F4,1,3X,
     1 7HPLAT = ,F6,1,3X,8HPLONG = ,F6,1,3X,10HCLENGTH = ,F9,1,3X,9HCORP=
     2R = ,I2/4X,10HCORATTN = ,E10,3,4A,11HCORSATTN = ,E10,3,4A,11HATTNF=
     3ILO = ,E10,3,4A,9HRNGOFF = ,F6,1,4X,                    10HPREVE
     4F = ,I4/4X,11HDISTDEF = (,2(F6,1,2H ),1,F6,1,1H),3X,11H=FATTN = (,
     52(E10,3,2H ),1,E10,3,1H),3X,6HFLAT =,F4,1,3X,7HFLONG =,F-,1)        305000
          GO TO 200                                                           306000
C  NEXTFLT                                                                   307000
      180 PRINT 182,NTAILS,JR,SPLIT                                           308000
      182 FORMAT(8HONEXTFLT/12X,9HNTAILS = ,I4,8X,5HJR = ,I4    ,8A,8HSPLIT =
     1 ,E10,3)                                                                310000
          GO TO 200                                                           311000
      190 PRINT 192,(ICARFROM(I),I=1,IOTA)                                    312000
      192 FORMAT(21H PRINT REQUESTED FROM/(10(3X,A8)))                        313000
          GO TO 200                                                           314000
      195 PRINT 196,MREFUEL,NREFUEL,(I,I=1,MREFUEL),(NEFLAT(I),I=1,NREFUEL)   315000
      196 FORMAT(7HONREFUEL/16X,10HMREFUEL = ,I2,10X,10HNREFUEL = ,I2/10X,
     1    3HI =,2X,10(4X,I2,4X)/5X,9HREFLAT =,2X,10(2X,F6,1,2X))             317000
          PRINT 197,(NEFLONG(I),I=1,NREFUEL)                                  318000
      197 FORMAT(4X,9HNEFLONG =,2X,10(2X,F6,1,2X))                            319000
          GO TO 200                                                           320000
      210 CONTINUE                                                            321000
          PRINT 211,((OUTSRT(I),I=1,12),(OUTSRT(I),I=133,142))                321500
      211 FORMAT(7HOOUTSRT/(5E,9HIOUTSRT =,I3,3X,9HNYGROUP =,I3,3X,7HNYCORR =
     1I3,3X,8HIAOVEH =,I3,3X,6HJREF =,I2,3X,7HJOPEN =,I2,3X,10HPAYLOAD
     2=,I3,3X,10HLNCHBASE =,I5/8X,6HITYP =,I2,3X,9HBASELAT =,F4,1,3X,
     3/4H,BASELONG =,F6,1,3X,6HNHAP =,I3,3X,8HOSTLOW =,3(F7,1,1X)/4X,
     47HSPDLG =,F4,1,3X,7HSHOWI =,F6,1,3X,7HRANGE =,F7,1,3X,9HANGREF =,
     5F7,1,3X,7HDELAY =,F6,2,3X,6HIREG =,I4,3X,8HIALENT =,I3)
          PRINT 212                                                           328000
      212 FORMAT(10X,7HNTYPE,5X,5HOBLAT,5X,6HORLONG,5X,6HDLAT,5X,5HDLONG,    329000
```

```
     15X,7HIDENT,4X,1HI,5X,6HESIG,1X,3HTSK,1X,2HCL,3X,1HF,4X,7HATT-OUT,4X,      330000
    27HSUM-OUT )                                                               330500
      PRINT 213, ((J,(OUTARR(J,K),K=1,12)),J=1,NMAP)                           331000
  213 FORMAT (4X,I2,3X,4F8.4,F6.1,5X,F6.1,4X,F6.3,3X,F6.3,4X,I5,               332000
     2    4X,F5.1,X,F2.2,2X,F2.3,X,I1,4X,F7.4,5X,F6.4)                        332500
      GO TO 200                                                                333000
  220 PRINT 221,(I,I=1,NPAYLOAD)                                               333500
  221 FORMAT(1H0PAYLOAD//12H IMPAYLOAD = ,20I5)                                334000
      PRINT 222,(XDUMMY1(I),I=1,NPAYLOAD)                                      335000
  222 FORMAT(12H  XDUMMY1 = ,20I5)                                             336000
      PRINT 223,(XDUMMY2(I),I=1,NPAYLOAD)                                      337000
  223 FORMAT(12H  XDUMMY2 = ,20I5)                                             338000
      PRINT 224,(XAS(I),I=1,NPAYLOAD)                                          339000
  224 FORMAT(12H  XDUMMYS = ,20I5)                                             340000
      PRINT 225,(IAS(I),I=1,NPAYLOAD)                                          341000
  225 FORMAT(12H  IASW    = ,20I5)                                             342000
      GO TO 200                                                                343000
 8888 CONTINUE                                                                 344000
      NMPRNT=IVTDATA(14)                                                       345000
      IF(I.GT.NOOP.EQ.NMOPRNT)9002,8888                                        346000
 8889 NMOPRNT = I+NOOP                                                         347000
      PRINT 9000,(XTS,INDEXNO(NTS),TLAT(NTS),TLONG(NTS),IDPTR(NTS),           348000
     1KATTHLOC(NTS),XRVEL(NTS),XDELAT(NTS),XDELONG(NTS),NTS=1,NT)             349000
 9000 FORMAT( 5HNI   TARGET NO   INDEX NO   TGT LAT   TGT LONG   TGT VEL      350000
     1GE   ,1X,5HDESI,1X,3HTSK,1X,2HCL,1X,1HF///(4X,I5,6X,I5,5X,F7.3,        350500
     2F11.3,6I2,2X,2F8.3,1X,A2,2X,A2,1X,I1))                                  351000
      PRINT 9007,NEVTS                                                         352000
 9007 FORMAT(// 38H   NUMBER OF EVENTS TO BE GENERATED =  ,I3)                 353000
 9002 CONTINUE                                                                 354000
      PRINT 9001, I+NOOP, NMPRNS, NBASE, NOPENSQN, NMPSITE, ISTART            355000
 9001 FORMAT(// 12H +NOOP NO = I3, 12H   NO WPNS = I4, 12H   NO SONS =        356000
     1I4, 14H   NOPENSQN = I3, 13H   NMPSITE = I2, 12H   ISTART = I2 )        357000
      PRINT 9003,LL,LK,IVTDATA(17),IVTDATA(18)                                 358000
 9003 FORMAT(// 10H EVENT NO. I4,12H FOR SQN NO. I4,/ 15H NO. OF WEAPONS      359000
     1 I3, / 15H NO. OF TARGETS I3 /)                                         360000
      PRINT 9004                                                               361000
 9004 FORMAT(10X, 9HMISSILE NO. SITE INDEX  BASE LAT  BASE LONG  TARGET       362000
     1 INDEX  TARGET LAT  TARGET LONG  FLIGHT TIME  ,14HDESTG TSK CL F)        363000
      PRINT 9005, (IVTDATA(NPS+18),IVTDATA(NPS+36),IVTDATA(NPS+126),           364000
     1IVTDATA(NPS+144),IVTDATA(NPS+54),IVTDATA(NPS+142),IVTDATA(NPS+180)       365000
     2,IVTDATA(NPS+108),IVTDATA(NPS+198),IVTDATA(NPS+216),                     365500
     3IVTDATA(NPS+234),IVTDATA(NPS+252),NPS=1,NMPRNT)                          366000
 9005 FORMAT(1X,10X,I7,I11,F13.2,F10.2,I12,6X,F10.7,F11.2,4X,F9.3,3X,          367000
     1A5,1X,A2,2X,A2,1X,I1/)                                                  367500
  200 CONTINUE                                                                 368000
      CALL TIMEVE(-3)                                                          369000
      RETURN                                                                   370000
      END                                                                      371000
```

IDENT PRINTIT

PROGRAM LENGTH 05662
ENTRY POINTS PRINTIT 03072
BLOCK NAMES

MASTER	00027
PRINTOPT	00025
GRPTYPE	00022
GRPDATA	01370
PAYLOAD	00420
STMTSUM	00061
3	40147
CORRCHAR	01131
CORRIDOR	00024
MERTELT	00006
2	06230
SORTYIGT	01751
CUMSORTY	00214
RAINSMR	01445
CUMPAID	04540
EVAL	00021
CHGPLACE	00010
INITOPT	00014
INDEX	00037
TGTASGN	00013
OPE REF	00274
OUTPUT	00221
ARRAYSIZE	00011
FLTPASS	00005
DEBUG	00025
FLAG	00007
PCALL	00002
MISMAT	00003

EXTERNAL SYMBOLS

OBJECTCODE	
IMBED.	
OBJECTOT.	
TIMEFE	
STR.	
GPST-GL.	

```
C01006  ALENTRY
C01357  ATLOCHI   03256
C00004  ATO
C00006  ATPOIST
C00416  ATTHCOPY  04533
C00013  ATTHMILO
C17027  ATTHLOC   03710
C00140  ATTWORT
C00776  ATTOPPE   04404  04404
C01454  ATTHSUPP  04534
C01217  AVLOW
C00011  BASELAT
C00012  BASELOAD
P05506  CERIAL   05576  05602  05610
C01240  CLAT      04036  04036
C01406  CLOAD     04400  04400
C00006  CTO
C01002  CFP
C00000  CHPPLAN   04154  04154
C00040  CLAT
C00007  CLOSETH
C00001  CLOSE
C01134  CNTHLP
C33737  CNTHYLOC  03722
P05477  CNVRTL.   03110  03115  03151  03153  03154  03156  03172  03174  03176  03200  03201
                  03202  03203  03204  03220  03226  03227  03230  03231  03232  03233  03234
                  03235  03236  03250  03314  03321  03342  03343  03344  03345  03346  03347
                  03350  03351  03352  03353  03354  03355  03356  03372  03413  03434  03454
                  03475  03514  03537  03550  03560  03625  03627  03630  03632  03640  03661
                  03662  03663  03677  03701  03702  03703  03704  03705  03706  03707  03710
                  03711  03713  03715  03716  03720  03721  03722  03723  03744  03760  03761
                  03762  03763  03764  04013  04036  04055  04076  04117  04155  04175  04214
                  04215  04232  04233  04234  04235  04236  04237  04240  04241  04255  04257
                  04277  04342  04347  04363  04371  04405  04413  04431  04437  04453  04461
                  04507  04524  04525  04526  04527  04530  04531  04532  04533  04534  04543
                  04564  04565  04566  04567  04575  04625  04626  04627  04635  04656  04657
                  04673  04674  04675  04702  04711  04731  04752  04762  04772  05005  05007
                  05010  05024  05033  05045  05053  05065  05106  05127  05137  05164  05171
                  05215  05236  05257  05300  05321  05347  05351  05352  05353  05354  05355
                  05356  05367  05380  05373  05403  05404  05405  05407  05410  05412  05422
                  05423  05425  05426  05447  05450  05451  05452  05453  05454  05455  05456
                  05457  05460  05461  05462
C00011  CORETTH
C00000  CORE      04751  04751  04761  04761  04771  04771
C00012  CORESETTH
P05421  COUNT.    03276  03300
P05477  CREMT.    03121  03141  03245  03265  03266  03334  03361  03401  03443  03443  03443
                  03525  03526  03566  03567  03600  03653  03660  03732  03752  03767  04022
                  04063  04064  04105  04126  04163  04203  04224  04244  04265  04305  04512
                  04543  04551  04617  04665  04745  04717  04740  05000  05013  05035  05074
                  05115  05165  05153  05203  05224  05245  05266  05307  05330  05364  05376
                  05415  05431  05437  05470
C00322  CRLENGTH  04531
C00002  CZONE
```

C00032	0	03301	03301								
C00044	DEFDIST	04574	04574								
C00550	DEFRANGE	00554									
C23257	DELAT										
C00213	DELAY										
C25373	DELONG										
C27507	DESIG	03717	03717								
P00001	DICT.	03074	04101	03111	03120	03146	03150	03163	03212	03215	03244	03247
		03294	03311	03327	03337	03366	03443	03500	03603	03421	03424	03442
		03465	03442	03465	03503	03526	03524	03527	03545	03550	03566	03572
		03605	03622	03646	03650	03735	03770	03731	03735	03751	03755	03760
		04004	04021	04026	04042	04065	04063	04066	04104	04107	04125	04146
		04162	04164	04202	04205	04273	04227	04243	04247	04264	04270	04304
		04340	04345	04350	04377	04402	04421	04427	04445	04450	04467	04504
		04511	04514	04542	04545	04556	04553	04610	04622	04643	04646	04664
		04670	04710	04723	04737	04743	04777	05033	05012	05016	05034	05040
		05073	05074	05114	05126	05144	05147	05152	05155	05202	05206	05223
		05226	05244	05247	05265	05270	05306	05311	05327	05342	05365	05370
		05375	05401	05414	05417	05430	05433	05436	05441	05467	05473	05563
		05564										
C00311	DIST	00054	00054									
C00016	DISTDEF											
C00011	DISTINC											
C01410	DISTLFG	03225	03224									
C01441	DISTLOG	03227										
C12577	DISTOUT	03706										
C14713	DISTSEC	03707										
C00052	DLAT											
C00064	DLONG											
C00062	DPLAT											
C00060	DPLINC											
C00144	DPLONG											
C01720	DSEC	03236										
C00110	DSIG											
C00213	DSTA											
C00204	DSTLOW1											
C00206	DSTLOW2											
C00204	DSTLOW3											
C00000	DUM											
C00000	DUM											
C01667	DVALA	03235										
C01436	DVALA	03234										
C00006	ELAT											
C00004	ELONG											
P00575	ENDING.	03075	05475	05564	05561	05561	05562	05562				
C07226	ENTLAT	00562	00562									
C00266	ENTLONG	00564										
C00000	EVAL	03743	03743									
P00000	EXIT.	05600										
C36053	FLAG	03723										
C00146	FLG											
C00030	FLYLOW											
P00077	FORMAT.	04332	04336	04332	04022	04424						
P03121	FP00001.	05572	05573									

```
C00021  FUNCTION
P05611  SETPL.      05555
P05691  SETPU.      05570   05605
P03121  GG03000.    03107
P03161  GG00001.    03144
P03213  GG00002.    03161
P03245  GG00003.    03213
P03265  GG00004.    03245
P03330  GG00005.    03307
P03341  GG00006.    03334
P03401  GG00007.    03361
P03422  GG00010.    03401
P03443  GG00011.    03422
P03463  GG00012.    03443
P03504  GG00013.    03463
P03525  GG00014.    03504
P03546  GG00015.    03525
P03567  GG00016.    03546
P03606  GG00017.    03570
P03647  GG00020.    03620
P03666  GG00021.    03654
P03732  GG00022.    03666
P03752  GG00023.    03733
P03767  GG00024.    03753
P04022  GG00025.    04002
P04043  GG00026.    04022
P04064  GG00027.    04043
P04105  GG00030.    04064
P04126  GG00031.    04105
P04163  GG00032.    04144
P04205  GG00033.    04164
P04224  GG00034.    04204
P04244  GG00035.    04225
P04265  GG00036.    04245
P04305  GG00037.    04266
P04356  GG00040.    04336
P04400  GG00041.    04356
P04422  GG00042.    04400
P04446  GG00043.    04425
P04470  GG00044.    04446
P04512  GG00045.    04502
P04543  GG00046.    04512
P04551  GG00047.    04543
P04617  GG00050.    04551
P04644  GG00051.    04620
P04665  GG00052.    04644
P04717  GG00053.    04664
P04740  GG00054.    04717
P05000  GG00055.    04741
P05013  GG00056.    05001
P05035  GG00057.    05014
P05074  GG00060.    05036
P05115  GG00061.    05074
P05145  GG00062.    05114
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P05153  GG00063.  05145
P05203  GG00064.  05153
P05224  GG00065.  05204
P05245  GG00066.  05224
P05264  GG00067.  05245
P05307  GG00070.  05264
P05330  GG00071.  05307
P05346  GG00072.  05340
P05376  GG00073.  05366
P05415  GG00074.  05376
P05431  GG00075.  05415
P05437  GG00076.  05431
P05470  GG00077.  05437
C00000  GRPDATA   04274  04276
P00067  GRPDATN*  00076  04342  04394  04404  04431  04452
C00000  GRPTYPE   04256  04256
P00042  GRPTYPN*  00075  04255
C00014  *GPTYPE
C00512  HILOATTN  04565
P05522  I         03252  03255  03257  03266  03313  03330  03306  03371  03373  03406  03411
                  03414  03427  03432  03435  03450  03453  03455  03470  03473  03476  03511
                  03514  03517  03532  03535  03540  03553  03556  03561  03575  03577  03601
                  03607  03612  03624  03626  03647  03673  03676  03700  03724  03740  03742
                  03745  04007  04012  04014  04027  04032  04035  04050  04053  04056  04071
                  04074  04077  04112  04115  04123  04151  04153  04156  04171  04173  04176
                  04211  04213  04217  04252  04254  04260  04315  04317  04322  04323  04325
                  04330  04475  04476  04517  04522  04535  04550  04561  04611  04631  04634
                  04634  04651  04654  04657  04677  04701  04703  04706  04710  04712  04724
                  04727  04732  04740  04750  04753  04758  04760  04763  04766  04770  04773
                  05021  05024  05027  05047  05052  05054  05060  05063  05066  05101  05104
                  05107  05123  05125  05130  05133  05135  05140  05211  05214  05216  05231
                  05234  05237  05252  05255  05260  05273  05276  05301  05314  05317  05322
                  05334
C00051  IAI*
C00005  IALERT
C00310  IAS*      05320  05320
C00073  IAVAIL    03515  03515
C00012  IBASE     04370  04370
C00001  ICALL     03103  03103  03114  03113
C00001  ICAMFDD*  03116  05025  05025
C00006  ICMGPLA*
C00007  ICLASS
P00077  ICO*MON   03121
C00014  ICOMCAP
C00017  ICO*IDOS
C00005  ICORE     03152  03152
C00014  ICO*PSHR
C00002  ICUPRATO
C00001  ICUWS*TY
P00003  ID        04304  03321
C00216  IDMOM*ER
C00021  IDEBUG
C00001  IDENTRO
C00003  IDITCH
```

```
C13463  IOPEN     03705  05354
C00004  IEVAL
C00300  IFLAG     03105
C00004  IFLY      04433  04433
P00044  IFORMAT   04333  04334  04335  04341  04351  04403  04423  04424  04430  04451
C00000  IFPASS
C00003  IFSTGT    04235
C00005  IFSTVFM   04237
P05623  IGOTO.    03122
C00000  IGROUP    03150  03150  05333  05333  05336  05336  05402  05402
C00013  IGRPDATA
C00012  IGRPTYPE
C00000  IHDATE
C00021  IHIT      03412  03412
C00010  IINDEX
C00007  IINITOPT
C00004  ILASTGT   04236
C00215  ILRT
C00556  IMINV
C00053  IMPJMPTO
P05500  INCOMP.   03277  05505  05522  05525  05537
P05501  INCOMP.   03434  05504  05511  05524  05542
P05502  INCOMP.   04573  04003  05506  05523  05525  05540
P05503  INCOMP.   05107  05534  05520  05564  05556
C00000  INDEX     04215  04215
P00034  INDEXAM   00075  04214
C00003  INDEXED   03700  03701  05350  05361
C04374  INDEXPE   03630
C00003  INDXPE
C00026  INEXTFLT
P05567  INITIAL.  03075
C00000  INITOPT   04174  04174
C00074  INJECT
C00041  INPUT     04474  03474
C00001  INREG
C00000  INTA      03115  03115  05031  05031
C00000  INTSGT
C01000  IPASS
C00714  IPAYLOAD  04412  04412
C00020  IPENCODE
C03000  IPUTGT    00075
C00006  IRAINSAR
C00017  IRECORDF
C00002  IRECOVER
C00004  IREFUEL
C00003  IREV
C00014  IRG
C00214  IRS
C00003  IRSTRCPY
C00002  ISCAN
C00020  ISFINPLS
C00007  ISINF     04241
C00002  ISINPV
C00006  IST-TYPE
```

```
C00000  ISORTY      03154
C00000  ISRTYTST
C00010  ISTART      05411   05411
C00015  ISTRESU
C00014  IT
C00011  ITSTASS
C00155  ITOLD       03152
C00010  ITYP
C00014  ITYPE
C31313  IVIDATA     05331   05331   05424   05424   05426   05446   05446   05450   05451   05452   05453
                    05454   05455   05456   05457   05440   05441   05462
C00050  I=01
C00170  I=02
P05344  .10         03123
P04225  .100        03132
P04245  .110        03133
P04246  .120        03133
P04317  .123        04470
P04322  .124        04321
P04332  .125        04500
P04471  .126        04320
P04501  .12=1       04321
P04502  .130        03134
P04512  .134
P03301  .14
P03337  .15
P04420  .151        03135
P04446  .160        03134
P04701  .170        03134
P04011  .180        03137
P05014  .190        04140
P04036  .195        04141
P03335  .20         03124
P04470  .200        03134   03334   03547   03653   03732   03753   04143   04153   04223   04224   04244
                    04285   04501   04617   04665   04740   05000   05013   05035   05115   05203   05330
P05116  .210        03141
P05206  .22         03142
P03107  .3          03164
P03570  .30         03125
P03620  .33
P04454  .40         03125
P03121  .5
P04733  .50         03126
P03755  .60         03127
P04500  .63         04162
P04126  .670
P04133  .68         04131
P04135  .680        04134
P04137  .681        04134
P04143  .682        04132
P04144  .70         03130
P04164  .80         03130
P05331  .8040       03143
P05334  .8040       05335
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P0=2?4  .93          =3131
P0=37=  .4003        =3335
P05612  .5P=95F=.    14077  03132  05671  05674
P01574  ..1=03?00    =3332
P01577  ..1=0=01     =3336
P01=00  ..1=0=02     =3336
P01601  ..1=0003     =3422
P01602  ..1=0=04     =3424
P01321  ..112        =3230
P1=115  ..11         =3147
P01371  ..112        =3250
P01=40  ..12         =3164
P0=2=4  ..121        =3214
P01614  ..123        =3271
P0=264  ..13         =3250
P01603  ..132        =3505
P01651  ..135        =3515
P01647  ..136        =3500
P01721  ..137        =3554
P01747  ..141        =3423
P02003  ..143        =3447
P01275  ..14         =3312
P02016  ..142        =3471
P02061  ..143        =3722
P02071  ..172        =3744
P02270  ..142        =5006
P02252  ..143        =5017
P02267  ..146        =5041
P02332  ..147        =5077
P01306  ..21         =3340
P02346  ..211        =5121
P02437  ..212        =5150
P02556  ..213        =5176
P02416  ..22         =3334
P02611  ..221        =5207
P02622  ..222        =5227
P02630  ..223        =5250
P02636  ..224        =5271
P02664  ..225        =5312
P02625  ..23         =3404
P02636  ..24         =3466
P02647  ..25         =3466
P02656  ..26         =3466
P02670  ..27         =3507
P03502  ..28         =3530
P04514  ..29         =4551
P02524  ..31         =4573
P02641  ..36         =3623
P03077  ..3          =3112
P02600  ..41         =4457
P02733  ..43         =3671
P02745  ..52         =3736
P01040  ..62         =4756
P01113  ..65         =4006
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P01125	..65	04025									
P01135	..67	04046									
P01146	..671	04047									
P01157	..672	04113									
P01170	..72	04147									
P01215	..82	04167									
P02652	..9000	05343									
P02734	..9001	05401									
P02771	..9003	05420									
P03017	..9004	05434									
P03042	..9005	05442									
P02724	..9007	05371									
P01204	..92	04207									
P05624	J	03166	03171	03173	03205	03220	03223	03225	03237	03272	03277	03315
		03320	03422	03633	03641	04326	04343	04364	04405	04432	04454	04472
		04571	04576	04601	04604	05150	05143	05175	05510			
C00003	JADR											
C00011	JADR8											
C00007	JADDR											
C00013	JAF											
C00003	JAFT											
C00001	JB	05007										
C00002	JCORR	03563										
C00005	JDEL											
C00001	JDELR											
C00000	JDO											
C00005	JDPER											
C00001	JGROUP	03662										
P05625	JJ	04314	04331	04352	04374	04416	04442	04464	04471	04474	04475	
C00023	JOUTSRT											
C00024	JPAYLOAD											
C00004	JREF											
C00022	JREFUEL											
C00017	JSEGENM											
C00010	JTGT	03637	03637									
C00006	JTGTIN											
C00002	JVEHMI											
C00001	JVEHLO											
P05626	K	04273	04275	04300	04303	04346	04350	04356	04367	04372	04406	04411
		04414	04432	04435	04440	04456	04457	04462	05165	05172	05552	
C00014	KALC											
C17027	KATTGLOC	05355										
C00003	KB											
C23257	KDELAT	05357										
C23373	KDELONG	05360										
C00000	KGROUP	04424	04525									
C00010	KOMMAR											
C00360	KORSTYLE	04532										
C00006	KPAYLOAD											
C21163	KRVAL	05356										
C00036	LASTPAY	03364										
C00037	LASTYGT	03367										
C00004	LB											
C00000	LK	05423										

C00124	LIMIT=T	03175	03175	03557	03557						
C00001	LL	05421	05421								
C00007	LNCH=ASE										
C00156	LOSTTST	03536	03536								
C00006	LSTVEH	04240									
C00002	MAX=A										
C00010	MAXDA=										
C00006	MAXG=										
C00010	MAXP=										
C00000	MAXPT	03155	03155	03207	03207	03241	03241	03261	03261	03274	03274	03324
		03324	03332	03332	03457	03457	03563	03563				
C00000	MH=SEPG										
C00001	MC										
C00007	MFLY	03375	03375								
P00076	MHIPART	05334	05337								
C00006	MIGH										
C00004	MINA										
C00003	ML										
P00076	MPEFUEL	05042	05056								
C00005	MSOFTY										
C00006	MSRT										
C00004	MSTR=										
C00002	MT										
C02266	MY=SG=	03715	03715								
C00006	MYBASE	03624	03627								
C00002	MYCOM=										
C00001	MYCM=OP										
C00001	MYPOTAT	03173	03174								
P05627	N	04001	04126								
C00500	NADECAYS										
C00023	NALERT										
C00005	NALRTFLY										
C01144	NASA=	03413	03417								
C00240	NASP	05277	05277								
C01135	NASPBY	04116	04116								
C00211	NASAS	03355									
C00016	NAS=TYPE										
C00072	NAVAIL	03451	03521	03521							
C00621	NB	03761	03767	03767	03773	03774	04074	04734			
C00011	NBASE	04305	04305	04311	04312	05405					
C00010	NBSPBY										
C00022	NCLASS										
C01345	NC=										
C00024	NCNTRY										
C00021	NCOMPLEX										
C00004	NCOMB	04527	04543	04640	04661	04661					
C00014	NCOMB=	04537	04537	04613	04613						
C00025	NCURTYPE										
C01130	NDATA	04506	04508								
C04430	NDECAYS										
C00005	NDPEN										
C00002	NEWTS	05372	05372								
P00075	NG										
C00013	NGROUP										

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C00013  %MAP        05177   05177
C00003  %MIT        03345   03414   03430   03437   03437
P05630  %L          03776   04034   04037   04060   04101   04122   04135   04140
P05631  %LIN        04310   04311   04320
P05632  %LINES      03772   03772   04127   04133   04141
C00207  %LOSTTGT    03353   03562   03562
P05633  %PRNT       05332   05464
C00015  %PSITE      05410
C00000  %SNOBOL     05235   05235
C00120  %SPCHAR     05256   05256
C00040  %TMIT       03350   03500   03500
C00010  %TPERSON    05406   05406
P05634  %U          03614   03615   03631   03643
P05635  %UE         04617
C00006  %PASS
C00015  %PAYLOAD    05220   05220   05241   05241   05262   05262   05303   05303   05324   05324
C00004  %PHCHREF    04567
C00015  %PREREF
P05636  %PS         05444   05445   05463
P05637  %R          03774   04131   04137   04142   04313   04374
C00004  %RECOVER
C00007  %REF
C00007  %REFUEL     05044   05044   05070   05070   05111   05111
C00011  %RES
C00003  %RTP1
C00001  %RVEH       04033   04033   04730   04730
P05640  %S          03777   04026   04028   04047   04070   04111   04130
C00003  %STAR       04456   04456
C00000  %T          03460   03460   03720   03720   05342   05342
C00005  %TAILS      05005   05005
C00020  %TARGETAS
C00002  %TGT        04754
C00024  %TGTS
C00014  %TIMEBASE
P05641  %TS         05344   05344   05350   05341
C00001  %TSIDE      04624
C00012  %TYPE
C00002  %UMASK      04304
C00001  %UPDATING   04343
C00000  %UTMIT      03341   03341
C00010  %VEH        03757   03757   04570   04672
C00002  %VEHCOD
C00003  %VEHPASS    03651   03651
C00210  %WHIS       05356
C00017  %WHLTYPE
C01133  %WPC        04763
C00001  %WPLS       05406
C00423  %WV         04076   04076
C00024  %XLAT
C00001  %XLOCS
C00005  %YA
C00007  %YU
C00014  %YTARG      05170   05170
C00008  %YTGT       05124   05124   05130   05134
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P05504	P00000..	04511										
P05525	P00001..	04531										
P05546	P00003..	04547										
C00000	PCLAT	04523	04523									
C00004	PCLOAD	04525										
C00076	PCZERO	04524										
P05574	PFB0002.	04571										
C00006	PMT	03712	03712									
C00003	PLAT											
C00004	PLOAD											
C00021	PREATTN											
P05372	PRINTIT	03072										
X02003	QIDIR100	03303										
X00001	Q3000040	03104										
X00004	QMODICT.	03000	03073									
X00007	QRSTORE.	05476										
C00001	RADDR											
C00006	RADDRFEC											
C00212	RADDRFREF											
C00211	RADDRR											
C00016	RADDREF											
C00224	REFLAT	05064	05064									
C00252	REFLOAD	05105	05105									
C02114	RMD	03714										
C01326	RMDC	03203										
C00212	RRADDR	03356										
C00220	RSUBR											
C00016	RTNREF											
C00013	RTNR											
C00132	RPLAT	04527										
C00170	RPLOAD	04530										
C21143	RVAL	03711										
C01472	S	03230										
C00013	SBDSR											
C00011	SBUMI											
C00210	SBUMIDR											
C00012	SBYLD											
C00207	SBYLDR											
C00013	SBYRD											
C00002	SBLIT	05017										
X00005	ST..	03111	03145	03162	03214	03244	03310	03336	03362	03402	03423	03444
		03464	03506	03525	03547	03571	03621	03655	03667	03734	03756	04003
		04023	04044	04065	04106	04145	04165	04205	04226	04246	04267	04337
		04357	04401	04420	04447	04503	04513	04544	04552	04621	04645	04667
		04721	04762	05006	05015	05037	05075	05117	05140	05156	05205	05225
		05244	05267	05310	05341	05367	05377	05416	05432	05460		
C01523	SUBR	03231										
C00172	SUBRXOUT											
C31423	TASK	03721										
C00012	TBFFDIST											
C00004	TBTLIM	04233										
C00200	TBTSAGS	04231	04231									
C01134	TBTSBRUP	03744										
X00002	TBRUP.	03117	03157	03214	03243	03263	03325	03357	03377	03420	03441	03461

		03502	03523	03544	03565	03606	03625	03644	03730	03750	03765	04020
		04041	04062	04103	04124	04141	04201	04222	04242	04263	04303	04354
		04374	04420	04444	04465	04513	04541	04547	04615	04642	04663	04715
		04736	04774	05011	05033	05072	05113	05143	05151	05201	05222	05243
		05256	05305	05326	05346	05374	05413	05427	05435	05466		
K00005	TIMEUF	03100	05472									
C04347	TIMEOUT	03704										
C02117	TLAT	03702	05352									
C04233	TLOG	03703	05353									
P03207	TS00001.	03170										
P03241	TS00002.	03222										
P03261	TS00003.	03254										
P03332	TS00004.	03270										
P03307	TS00005.	03275										
P03324	TS00006.	03317										
P03375	TS00007.	03370										
P03416	TS00010.	03410										
P03437	TS00011.	03431										
P03457	TS00012.	03452										
P03500	TS00013.	03472										
P03521	TS00014.	03513										
P03542	TS00015.	03534										
P03563	TS00016.	03556										
P03651	TS00020.	03611										
P03643	TS00021.	03635										
P03726	TS00022.	03675										
P04127	TS00024.	04001										
P04016	TS00025.	04011										
P04037	TS00026.	04031										
P04060	TS00027.	04052										
P04101	TS00030.	04073										
P04122	TS00031.	04114										
P04352	TS00037.	04345										
P04374	TS00040.	04364										
P04416	TS00041.	04410										
P04442	TS00042.	04436										
P04464	TS00043.	04456										
P04537	TS00044.	04521										
P04613	TS00047.	04560										
P04640	TS00050.	04633										
P04661	TS00051.	04653										
P04734	TS00054.	04724										
P05031	TS00060.	05023										
P05056	TS00061.	05051										
P05070	TS00062.	05062										
P05111	TS00063.	05103										
P05177	TS00067.	05162										
P05220	TS00070.	05213										
P05241	TS00071.	05233										
P05262	TS00072.	05254										
P05303	TS00073.	05276										
P05324	TS00074.	05314										
P05362	TS00075.	05345										
P05464	TS00076.	05466										

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C00122  TSK
P05513  UP000000.  03167  03206  03221  03240  03273  03310  03323  03634  03642  04327  04473
                   04572  04577  04602  04607  05061  05176  05507  05514  05515  05516  05524
                   05524
P05533  UP000001.  03253  03260  03267  03331  03367  03374  03407  03415  03430  03436  03451
                   03456  03471  03477  03512  03520  03533  03541  03554  03562  03576  03602
                   03610  03650  03674  03725  03741  03746  04010  04015  04030  04034  04051
                   04057  04072  04100  04113  04121  04152  04157  04172  04177  04212  04220
                   04253  04261  04310  04324  04477  04520  04536  04557  04612  04632  04837
                   04652  04660  04700  04764  04707  04713  04725  04733  04747  04754  04757
                   04764  04767  04774  05022  05030  05050  05055  05061  05067  05102  05110
                   05120  05131  05134  05141  05212  05217  05232  05240  05253  05261  05274
                   05302  05315  05323  05527  05534  05535  05536  05542  05543
P05551  UP000003.  04274  04301  04344  04351  04365  04373  04407  04415  04433  04441  04455
                   04463  05166  05173  05545  05552  05553  05554  05556  05557
C01275  #          03177  03177
C01244  VALA       03202
C01213  VALM       03201
C00015  VALOIST
C01554  VALDONE    03237
C00016  VALMAX
C01605  VALOK      03233
C00012  VALSORTY
C01142  VONBASE
C00622  VPRHASE    03762  04675
P03171  #S00001.   03210  03210
P03223  #S00002.   03242  03242
P03255  #S00003.   03262  03262
P03271  #S00004.   03333  03333
P03301  #S00005.   03304
P03320  #S00006.   03325  03325
P03371  #S00007.   03376  03376
P03411  #S00010.   03417  03417
P03432  #S00011.   03440  03440
P03453  #S00012.   03460  03460
P03473  #S00013.   03501  03501
P03514  #S00014.   03522  03522
P03535  #S00015.   03543  03543
P03556  #S00016.   03564  03564
P03577  #S00017.   04603
P03612  #S00020.   03652  03652
P03636  #S00021.   03644  03644
P03674  #S00022.   03727  03727
P03742  #S00023.   03747
P04002  #S00024.   04130  04130
P04012  #S00025.   04017  04017
P04032  #S00026.   04040  04040
P04053  #S00027.   04061  04061
P04074  #S00030.   04102  04102
P04115  #S00031.   04123  04123
P04153  #S00032.   04140
P04173  #S00033.   04200
P04213  #S00034.   04221
P04254  #S00035.   04262
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P04275 *S00036.   04302
P04346 *S00037.   04353   04353
P04367 *S00040.   04375   04375
P04411 *S00041.   04417   04417
P04435 *S00042.   04443   04443
P04457 *S00043.   04465   04465
P04522 *S00044.   04540   04540
P04573 *S00045.   04600
P04603 *S00046.   04610
P04561 *S00047.   04614   04614
P04634 *S00050.   04641   04641
P04654 *S00051.   04662   04662
P04701 *S00052.   04705
P04710 *S00053.   04714
P04727 *S00054.   04735   04735
P04750 *S00055.   04755
P04760 *S00056.   04765
P04770 *S00057.   04775
P05024 *S00060.   05032   05032
P05052 *S00061.   05057   05057
P05063 *S00062.   05071   05071
P05104 *S00063.   05112   05112
P05125 *S00064.   05132
P05135 *S00065.   05142
P05167 *S00066.   05174
P05163 *S00067.   05200   05200
P05214 *S00070.   05221   05221
P05234 *S00071.   05242   05242
P05255 *S00072.   05263   05263
P05276 *S00073.   05304   05304
P05317 *S00074.   05325   05325
P05345 *S00075.   05363   05363
P05445 *S00076.   05465   05465
C00007 YIELD
   01224 SYMBOLS
```

```
      FUNCTION PRNTF(IP,JP,T,FAST)                                      1000
CSUBR      PRNTF     72/60/71  ************************************      32000
CUSE       COMMON    1/10/69   ************************************      20000
      COMMON/COMMON/U(2),ATM,CLONG,C700,MLAT,PLONG,ELAT,FLONG,LENGTH,   1000
     1    NUMBER,COMMENT,COMMENT,ATTRIL,ROGUEF,NPREFF,                  2000
     2    ISTOFF(3),PREATTO(3)                                          3000
      TYPE INTEGER CHOICE                                               4000
      TYPE REAL NUMBER                                                  5000
CENDS      COMMENT   ************************************************  2000
CUSE       PRNTF     72/60/71  ************************************      5000
      COMMON/PRNTF/I(2),ATLEN,MAXSURF,NTST,NCE,MAXLEN,NVALS,            1000
     1    VALIT,ESTATUS,VALTOT,PREVTHATF,VALMAT,                        2000
     2    CURVAL,CHILIT,APULSE,JUMPF,NIDTSV,ATMFA,FLOCIL,               3000
     3    VALC,JKP,JSTAR,ERRTEST,TTMPF,MTRFLG,VALU,JC1,                 4000
     4    TST1,TST2                                                     5000
CENDS      PRNTF     ************************************************  5000
CUSE       MAINCHECK 72/60/69  ************************************      10000
      COMMON/MAIC/C/MINC/EC                                             1000
CENDS      MAINCHECK ************************************************  10000
CUSE       ATOSTM    72/60/71  ************************************      11000
      COMMON/ATOST/JUMP,JCC,T(1100),TYPE(1100),TLAT(1100),TLONG(1100),  1000
     1T,ERR(1100),IMAG(1100),ISTOU(1100),IST(1100),                     2000
     2ATT(1100),C(1100),VEL(1100),FLAT(1100),FLONG(1100),ESTG(1100),    3000
     3TAS(1100),CT(1100),CHC(1100),FLAG(1100)                           4000
CENDS      ATOSTM    ************************************************  11000
C     CHANGE COMMON/MAIN/STMAX TO COMMON/3/                             12000
CUSE       MAIN      72/60/69  ************************************      15000
      COMMON/MAIN/I,JCALL,MAIN,JADD,TIME,JUEL,MAIN,JADD,TMAIN           1000
     1    JUMP,MAIN,STOTY,JEF,VALC,VALIST,VALTMA,JUSE,EFF,ISTIPLN       2000
      TYPE REAL TIME,MAIN,VI(10),TXOR,ARIA                              3000
CENDS      MAIN      ************************************************  15000
CUSE       INTER     72/60/69  ************************************      16000
      COMMON/INTER/I,CHTY,IOSI,THECHUEF,ISTTCH,TI,ICOMM,JTATI           1000
CENDS      INTER     ************************************************  16000
CUSE       SWITCH    72/60/69  ************************************      17000
      COMMON/SWITCH/I,PRT(25),ORTGT(25),O(25),VAL(25),                  1000
     1    V(25),PRINT(25),ATLOC(25),DISTLF(25),DISTLO(25),S(25),        2000
     2    SW(25),ALLOWF(25),VALD(25),DVALD(25),VALE(25),FREC(25)        3000
CENDS      SWITCH    ************************************************  19000
CUSE       TESTOPT   72/60/69  ************************************      22000
      COMMON/TESTOPT/FLAG(3),ITMOUT(3),ATPOINT(3),OUIST(3),TREFOIST,    1000
     1    TRUE                                                          2000
CENDS      TESTOPT   ************************************************  22000
CUSE       SKIP      72/60/69  ************************************      24000
      COMMON/SKIP/SKIP,ISKIP                                            1000
CENDS      SKIP      ************************************************  24000
      DATA(SKIP=0),(ISKIP=0)                                            25000
CUSE       CLASSIFY  72/60/69  ************************************      26000
      COMMON/CLASSO/TYPE,NUMASS,SCHIT,IMIT,                             1000
     1        LASTPRT,LASTTGT,SCHIT,IO=IT(25),NOVEIL,IAVAIL(25)         2000
     2        LASTIT(25),TTOL,LOSTTGT(25),LOSTTGT,NOSS,LASS,PNGASS      3000
     3        ,NOST                                                     4000
CENDS      CLASSIFY  ************************************************  26000
CUSE       ASPTYPE   72/60/71  ************************************      30000
      COMMON/ASPTYPE/ISTSTYPE,MAINF,CFP,SPEED,ALEPT,LY,VALMTD,Y,PANGERREC 1000
     1    ICLASS,NUMASS,SPEED,SPEED,SPEED,MASSEF,ASPSITE,IFFP           2000

                                                                  2302
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      2    ,TRFTYPE,TYPMODE,FUNCTION                                          4000
           TYPE INTEGER FUNCTION                                              5000
           TYPE REAL VALUE                                                    6000
CDC       COMMON/CMPTYPE   ********************************************     7000
CUSE      COMMON/DATA      9/10/69  ********************************************     8000
          COMMON/CMPDATA/ITYPE,NPINS,NVERS,TYPG,ITYPE,IALERT,IXEFUEL,       9000
         1      YTPLIM,IST,RT,XMASE,IXMASE(150),XLAT(150),XLONG(150),      10000
         2       IPAYLOAD(150),YOXMASL(150)                                11000
           TYPE INTEGER XXXXXX                                              12000
CDC       COMMON/CMPDATA   ********************************************     13000
CUSE      COMMON/DATA      9/10/69  ********************************************     14000
          COMMON/AIRSHW/NVER,XPVER(200),DIST(200),XXXVERXXSE,               15000
         1       XXPV(200),XXPC,IOTSXXXD,XXSXPV(200)                       16000
           TYPE INTEGER VERXXSE                                             17000
CDC       COMMON/AIRSHW    ********************************************     18000
CUSE      COMMON/FLTPASS   9/10/69  ********************************************     19000
          COMMON/FLTPASS/IFLPASS,JVEHLO,JVEHHI,NVEHPASS,IPASS               20000
CDC       COMMON/FLTPASS   ********************************************     21000
CUSE      COMMON/CURRAID   IFE=71   ********************************************     22000
          COMMON/CURRAID/MXYBASE(100),NASGN(100),JIGI(10,100),XYASGN(1100),  23000
         1 NEXVE=(100)                                                      24000
CDC       COMMON/CURRAID   ********************************************     25000
CUSE      COMMON/AREASIZE  9/10/69  ********************************************     26000
          COMMON/AREASIZE/NXBASEPG,XCONT,XLINK,XSIZE,XSCNTY,XSRT,XFLY,XMXPA  27000
CDC       COMMON/AREASIZE  ********************************************     28000
          DIMENSION AREASIZE(9)                                             29000
          EQUIVALENCE(AREASIZE,NXBASEPG)                                    30000
CUSE      COMMON/CALL      9/10/69  ********************************************     31000
          COMMON/PCALL/IPASS,ICALL                                          32000
CDC       COMMON/CALL      ********************************************     33000
CUSE      COMMON/FLAG      9/10/69  ********************************************     34000
          COMMON/FLAG/IFLAG(200)                                            35000
          TYPE LOGICAL IFLAG                                                36000
CDC       COMMON/FLAG      ********************************************     37000
CUSE      COMMON/DEBUG     9/10/69  ********************************************     38000
          COMMON/DEBUG/ITA,ICALLFROM(20)                                    39000
CDC       COMMON/DEBUG     ********************************************     40000
CUSE      COMMON/STATS     9/5/69   ********************************************     41000
          COMMON/STATA/IPASTQ(60),IFSTSORT(5),LSTSORT(40),LPASS(80),        42000
         1      LCORR(60),LSCORR(40)                                       43000
CDC       COMMON/STATS     ********************************************     44000
          IF(IFLAG(ICALL)) 2,510                                            45000
        2 CALL TIMEVE(-2)                                                   46000
          IF(MOD(I,IUF T)3,4                                                47000
        3 ISKIP=1   C  GO TO 5                                              48000
        4 ISKIP=0                                                           49000
          PRINT 600,ICALL,ICALLFROM(ITA)                                    50000
      600 FORMAT(10HCPRINT AT,I3,6H FROM ,A8)                               51000
        5 IF(IP)20,500,30                                                   52000
       20 IPP=XABSF(IP)                                                     53000
          GO TO (40,45,50,55,60,65,70,75,80,85,90,100) IPP                  54000
       30 IF(ISKIP) 33,31                                                   55000
       31 PRINT 32,IUE,T                                                    56000
       32 FORMAT(3H000,8H,2H00,3X,2HI1,2X,2HJM,7X,1HV,6X,7HDISTLE,3X,1HS,   57000
         1 3X,7HDISTLO,2X,7HATLEG=I,2X,5HATLEG,5X,5HVALON,4X,7HV=LOONE,6X,  58000
         2 4HSUBV)                                                          59000
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      33 PRINT 34,(IP,JP,V(JP),DISTLEG(JP),S(JP),DISTLO(JP),
     1 ATLEGHI,ATLEG,VALON(JP),VALDONE(JP),SURV(JP))                    66000
      34 FORMAT(15X,I2,2X,I2,2X,E10.3,2X,F4.0,2X,F5.3,2X,F4.0,4X,F6.4,2X,  68000
     1 F6.4,2X,F10.3,2X,E10.3,2X,E10.3)                                 69000
         GO TO 500                                                      70000
      40 PRINT 42                                                       71000
      42 FORMAT(48H** ERROR ** FIRST PARAMETER IN PHATF IS MINUS ONE)   72000
         GO TO 500                                                      73000
      45 PRINT 47, IDENT,IMPORTY,HUGSURP,DISTANCE,RSVLOW,AVAILOW       74000
      47 FORMAT(3H0**,A4,2H**,3X,9HISORTY = ,I2,3X,10HHUGSURP = ,F6.1,3X,11  75000
     1HDISTANCE = ,F4.1,3X,9HRSVLOW = ,F4.1,3X,10HAVAILOW = ,F6.2)      76000
         GO TO 500                                                      77000
      50 PRINT 52,(IDENT,JP,ATPDIST(JP),DISTDEF(JP),FLYLOW(JP))        78000
      52 FORMAT(3H0**,A4,2H**,3X,4HL = ,I2,3X,13HATPDIST(L) = ,E10.3,3X,  79000
     1 13HDISTDEF(L) = ,F10.3,3X,12HFLYLOW(L) = ,F6.2)                  80000
         GO TO 500                                                      81000
      55 VAL1=VALIT+FSTATTR+VAL2=VALTOTT+PHATRATE$VAL3=VALONT+CORATTR    82000
      56 IF(ISKIP)59,58                                                 83000
      58 PRINT 57,IDENT                                                 84000
      57 FORMAT(3H0**,A4,2H**,2X,13HVALIT+FSTATTR,14X,14HVALTOTT+PHATRATE,  85000
     1 14X,14HVALON+CORATTR)                                            86000
      59 PRINT 571,        VALIT,FSTATTR,VAL1,VALTOTT,PHATRATE,VAL2,     87000
     1 VALONT,CORATTR,VAL3,CURVAL                                       88000
     571 FORMAT(12X,E8.2,14X,E8.2,13X,E8.2,14X,E8.2,13X,E8.2,3X,          89000
     1 E8.2,14X,E8.2,13X,E8.2,3X,9HCURVAL = ,E9.2)                      90000
         GO TO 500                                                      91000
      60 PRINT 62,IDENT,CRITATT,ADDLOW,JHOME,DISTLO(JHOME),FSTATTR      92000
      62 FORMAT(3H0**,A4,2H**,3X,10HCRITATT = ,E10.3,3X,9HADDLOW = ,E10.3,  93000
     1 3X,8HDISTLO=(,I2,4H) = ,F6.1,3X,10HFSTATTR = ,E10.3)             94000
         GO TO 500                                                      95000
      65 IF(ISKIP) 63,64                                                96000
      64 PRINT 67                                                       97000
      67 FORMAT(3H0JH,5X,5HV(JH) ,4X,8HSURV(JH),2X,6HDISTSV,4X,6HATAREA,6X,  98000
     1 7HATLOCAL,6X,4HVALO,6X,9HOVALA(JH),3X,9HOVALA(JH),2X,2HJA,2X,8HSU  99000
     2RV(JA))                                                           100000
      63 PRINT 671,JP,V(JP),SURV(JP),DISTSV,ATAREA,ATLOCAL,VALO,VALH(JP),D  101000
     1VALA(JP),IDENT,SURV(IDENT)                                        102000
     671 FORMAT(1X,I2,2X,E10.3,2X,F8.3,2X,F4.1,5(2X,E10.3),2X,I2,2X,F6.3)  103000
         GO TO 500                                                      104000
      70 PRINT 72, IDENT,JX1,JP,JX2,DISTLEG(JX2),DIST1,DIST2,DISTAD,AGOTEST  105000
      72 FORMAT(3H0**,A4,2H**,2X,5HJX1 =,I2,1X,4HJX =,I2,1X,5HJX2 =,I2,1X,  106000
     114HDISTLEG(JX2) =,F6.1,1X,7HDIST1 =,F8.1,1X,7HDIST2 =,F8.1,1X,  8H  107000
     2DISTAD =,F7.2,1X,9HAGOTEST =,F7.2)                                108000
         GO TO 500                                                      109000
      75 PRINT 77, IDENT,JP,ATTRNE,ATNEWLG,VALDIST,DVALO,DVALR(JP)      110000
      77 FORMAT(3H0**,A4,2H**,1X,4HJX =,I2,1X,9HATTRNE =,E10.3,1X,9HATNEWL  111000
     1G =,E10.3,1X,9HVALDIST =,F10.3,1X,7HDVALO =,E10.3,1X,11HDVALR(JX  112000
     2)=,E10.3)                                                         113000
         GO TO 500                                                      114000
      80 PRINT 81, JP,IDENT                                             115000
      81 FORMAT(1H0,24H/2H01,3X,4HINIT,3X,7HDISTLEG,3X,7HDISTLO,5X,1HS,5X,  116000
     1 4HSURV,7X,5HVALO,7X,7HVALONE,7X,6HVALH,9X,6HVALA,6X,7HATLOCHI,  117000
     22X,5HPTGT,1X,5HINXNO)                                             118000
         DO 82 K=1,NINIT  $  K1=XREF(INIT(K))  $ K2=HYPOTGT(K1)         119000
      82 PRINT 83,K,INIT(K),DISTLEG(K1),DISTLOW(K1),S(K1),SURV(K1),VALON(K1  120000
     1),VALDONE(K1),VALH(K1),VALA(K1),ATLOCHI(K1),HYPOTGT(K1),          121000
```

```
      PRINT(6,92) (SORTIE(K2)                                          122000
   93 FORMAT(1X,I2,3X,I3,4X,F5.1,4X,F6.1,3X,F6.4,2X,F5.4,3X,E10.3,3X,  123000
     1 E10.3,3X,E10.3,3X,E10.3,4X,F6.4,1X,I5,1X,I5)                     124000
      GO TO 500                                                        125000
   85 NASGNT=0  $  NRECOV=0                                            126000
      DO 86, I=1,NVEHPASS                                              127000
      IF(NASGN(I).LT.0) 851,86                                         128000
  851 NRECOV=NRECOV+1                                                  129000
   86 NASGNT=NASGNT+NASSF(NASGN(I))                                    130000
      NUMDST=0                                                         131000
      DO 860, IV=1,NVEHPASS                                            132000
      IR=NVHASE(IV)                                                    133000
  860 NUMDST=NUMDST+NPV(IR)                                            134000
      NUMSOM=NUMDST-NASGNT                                             135000
      PRINT 87,ICORR,JGROUP,NUMDST,NUMDSO*,NVEHPASS,NRECOV,2U CHECK    136000
   87 FORMAT(17H0CORRIDOR SUMMARY/10X,6HCURR =,I2,2X,7HGROUP =,I3,2X,14H  137000
     1TOT.NO.VHCS. =,I4,2X,15HNO.OMIT. =,I3,2X,12HR.C.SORTIES =,I3,      138000
     2 2X,16HNO.RECOV.OMIT. =,I3,/17H TOTAL VALSOMTY =,E15.6)            139000
      GO TO 500                                                        140000
   90 PRINT 92, ISORTY,IPASS,JCORR,JGROUP                              141000
   92 FORMAT(24H BEGIN PROCESSING SORTIE,I3,6H, PASS,I2,10H, CORRIDOR,  142000
     1  I3,7H, GROUP,I3)                                               143000
      GO TO 500                                                        144000
  100 CONTINUE                                                         145000
  500 PRINTF=1                                                         146000
      NOLD=IDENT                                                       147000
      CALL TIMEME(-3)                                                  148000
  510 RETURN                                                           149000
      END                                                              150000
```

IDENT PRNTF

PROGRAM LENGTH 01707
ENTRY POINTS PRNTF 00743
BLOCK NAMES

CURRIDOB	00026
PRNTF	00034
RUNCHECK	00001
3	00167
EVAL	00021
INDEX	00007
SORTXTST	01751
LIMITPT	00014
SKIP	00002
CURRXRTX	00214
SW TYPE	00022
GRPDATA	01370
RATNSPN	01445
FLTPISS	00045
CURRCID	00548
ARRAYSIZE	00011
PCALL	00002
FLAG	00007
DEBUG	00025
DATA	00550

EXTERNAL SYMBOLS

OBJPRGRM	
TMPX.	
GRPRTCT.	
TIMER	
STR.	
GNSINGL.	

C00015	ADDLOW	01217										
C00025	ADDTEST	01314										
C00004	ALERTPLY											
C00000	ARAYSIZE											
C00020	ATAREA	01254										
C00001	ATLEG	01053										
C00000	ATLEGHI	01051	01051									
C00021	ATLOCAL	01255										
C01357	ATLOCHI	01412										
C00027	ATRFLG	01332										
C00006	ATRDIST	01123	01123									
C00013	ATTHHILO											
C17027	ATTHLOC											
C00026	ATTHHLW	01330	01330									
C00005	AVAILOW	01104										
P01546	BEGIN.	01646	01655	01661								
C00240	BLAT											
C00466	BLONG											
C06002	BRP											
C00000	CLAT											
C01007	CLENGTH											
C00001	CLONG											
C33737	CNTRYLOC											
P01545	CNVRTI.	00774	00774	01030	01040	01042	01045	01046	01047	01050	01052	01053
		01055	01056	01057	01077	01101	01103	01106	01105	01106	01117	01121
		01124	01126	01130	01153	01162	01164	01166	01170	01171	01173	01175
		01177	01201	01203	01214	01216	01217	01220	01222	01224	01245	01250
		01251	01253	01254	01255	01256	01260	01261	01263	01266	01277	01301
		01303	01305	01307	01311	01312	01313	01314	01325	01327	01331	01332
		01334	01336	01341	01352	01354	01375	01377	01402	01403	01404	01405
		01404	01417	01416	01411	01412	01413	01416	01475	01477	01501	01502
		01504	01505	01510	01521	01523	01525	01526				
C00011	CONATTH	01142	01142	01176	01176							
C00012	CONSATTH											
P01647	CONST.	01433	01436	01455	01456							
P00003	CONST.	01051	01053	01062	01071	01111	01133	01156	01200	01227	01240	01271
		01317	01344	01357	01424	01513	01537					
C00014	CNITATT	01215	01215									
C00013	CONVAL	01202	01202									
C00002	CZONE											
C00032	D											
C23257	DELAT											
C25373	DELONG											
C27507	DESTG											
P00001	DIST.	00745	00756	00771	01000	01025	01032	01035	01041	01045	01070	01074
		01110	01114	01132	01150	01155	01160	01205	01211	01224	01234	01237
		01242	01270	01274	01316	01322	01343	01347	01356	01372	01420	01472
		01512	01516	01530	01540	01551	01552					
C00032	DIST1	01213	01213									
C00033	DIST2	01312										
C00024	DISTSQ	01313										
C01003	DISTSQF	01164										
C00311	DISTH											
C00016	DISTREF	01125	01125									

```
C00011  DISTIN
C01410  DISTLEG     01044   01374   01301   01401   01401
C01441  DISTLOG     01044   01221   01222   01403
C12577  DISTOUT
C14713  DISTREC
C00017  DISTSV      01252   01252
C01720  DREC
C00213  DST4
C01467  DVALA       01261
C01436  DVALB       01257   01257   01340   01340
C00030  DVALD       01335   01335
C00005  FLAT
C00004  FLONG
P01407  FORINC.     01340   01542   01540   01547   01547   01550   01550
P00000  EXIT.       01453
C35053  FLAG
C00006  FLYLOG      01127   01127
P00003  FORMAT.
P00741  FP00001.    01616   01617
P01001  FP00002.    01561   01561
P01006  FP00003.    01562   01563
P01027  FP00004.    01620   01621
P01037  FP00005.    01564   01565
P01061  FP00006.    01570   01571
P01063  FP00007.    01572   01573
P01076  FP00010.    01622   01623
P01116  FP00011.    01624   01625
P01120  FP00012.    01576   01575
P01122  FP00013.    01674   01677
P01152  FP00014.    01626   01627
P01213  FP00015.    01630   01631
P01244  FP00016.    01600   01601
P01266  FP00017.    01602   01603
P01262  FP00020.    01632   01633
P01264  FP00021.    01634   01635
P01274  FP00022.    01636   01637
P01302  FP00023.    01604   01605
P01324  FP00024.    01640   01641
P01324  FP00025.    01606   01607
P01337  FP00026.    01610   01611
P01351  FP00027.    01612   01613
P01353  FP00030.    01642   01643
P01533  FP00031.    01644   01645
C00007  FSTATT      01136   01136   01223   01223
C00021  FUNCTION
P01644  GETPL.      01556   01556
P01454  GETPU.      01556   01616   01660
P01001  GG00000.    01747
P01053  GG00001.    01023
P01042  GG00002.    01033
P01071  GG00003.    01063
P01111  GG00004.    01072
P01133  GG00005.    01112
P01156  GG00006.    01144
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[illegible]  [illegible]       [illegible]
[illegible]  [illegible]       [illegible]
[illegible]  [illegible]       [illegible]
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[illegible]  [illegible]       [illegible]  [illegible]
[illegible]  [illegible]
[illegible]  [illegible]
[illegible]  [illegible]       [illegible]  [illegible]
[illegible]  I-ASA
[illegible]  ICALL             00747  00747  00772  00773
C00001       ICAMERA           [illegible]
[illegible]  ICLASS
[illegible]  [illegible]       01474  01474
[illegible]  [illegible]       [illegible]  [illegible]  01070  01116  01152  01213  01262  01264  01276  01324  01353
                               [illegible]
[illegible]  IDITCH
[illegible]  IOPEN
[illegible]  IFLAG             [illegible]
[illegible]  IFIX
[illegible]  IFPASS
C00374       IFSTSTAT
P01672       [illegible]       [illegible]
C00003       [illegible]
C00021       I-IT              01362  01362  01376  01377
C00003       [illegible]
C00003       [illegible]       01415  01415
C04374       [illegible]
P01566       INITIAL.          00744
C00004       [illegible]
C00001       ICRIA
C00000       IOTA              00776  00776
P00003       IP                [illegible]  01004  01037
C00000       IPASS             01522  01522
C00714       IPAYLOAD
C00020       IPEN-CDE
P01673       IPP               01006
C00000       IPRINTING
C00017       IRSCMODE
C00002       IRECOVER
C00006       I-EFLAT
C00003       IRES
C00016       IRVE
C00020       ISFINPLN
C 0000       ISIMTYPE
C00001       ISKIP             C00001  00763  00764  00765  00765  01021  01021  01144  01144  01230  01230
C00000       ISONTY            01100  01190  01520  01520
C00010       ISTART
C00004       IT
```

P01165	.47										
P01054	.5555										
P01674	.5	01452	01455								
P01532	.100	01021									
P00753	.2	00752									
P01504	.20	01002									
P00763	.3										
P01021	.30	01009									
P01023	.31										
P01031	.33	01022									
P00765	.4	00762									
P01043	.40	01010									
P01072	.45	01018									
P01001	.5	00764									
P01112	.50	01011									
P01532	.500	01002	01062	01071	01111	01133	01206	01227	01271	01317	01344	01424
		01513	01531								
P01542	.515	00752									
P01134	.55	01012									
P01144	.56										
P01146	.58										
P01156	.59	01145									
P01207	.61	01013									
P01240	.63	01231									
P01232	.64										
P01235	.65	01013									
P01272	.71	01014									
P01321	.75	01015									
P01345	.80	01016									
P01370	.82										
P01405	.85	01016									
P01433	.851										
P01440	.86	01434	01437								
P0146	.860										
P01511	.90	01017									
P01665	.EPASE+.	00754	00757	01444	01445	01536	01541				
P01014	..32	01024									
P01044	..34	01036									
P01114	..42	01064									
P01126	..43	01075									
P01164	..52	01115									
P01220	..57	01151									
P01243	..571	01151									
P01303	..600	00772									
P01302	..62	01212									
P01337	..67	01235									
P01403	..671	01243									
P01425	..72	01275									
P01476	..77	01323									
P01541	..81	01350									
P01615	..83	01373									
P01651	..87	01473									
P01722	..92	01517									
P00073	.ABS										

C00011	JADDA										
C00027	JADDR										
C00013	JAF										
C00002	JCOMP	01524	01524								
C00005	JDEL										
C00001	JDELG										
C00001	JGROUP	01478	01478	01526							
C00014	JHOME	01220	01221								
P00003	JP	01041	01043	01120	01122	01244	01246	01302	01325	01337	01351
C00017	JSECERR										
C00310	JTGT										
C00008	JTGTIN										
C00002	JVERHI										
C00001	JVERLO										
C00031	JX1	01300	01300								
C00023	JX2	01394	01304	01306							
P01675	K	01360	01361	01374	01376	01421					
P01676	K1	01364	01365	01400							
P01677	K2	01367	01414								
C00014	K&LC										
C00000	KCLO	00003	00760	00760	01534	01535					
C00310	KOPPER										
C00036	LASTPAY										
C00037	LASTTGT										
C00340	LCORR										
C00454	LGROUP										
C00124	LKMITMT										
C00156	LOSTTGT										
C00264	LPASS										
C00170	LSTSQMT										
C00002	MAXDA										
C00010	MAXDAR										
C00006	MAXOM										
C00010	MAXPA										
C00000	MAXRT										
C00009	MBASEPG										
C00001	MC										
C00007	MFLY										
C00000	MINM										
C00004	MINDA										
C00003	ML										
C00035	MSORTY										
C00006	MSRT										
C00004	MSTRK										
C00002	MT										
C02240	MYASGN										
C00000	MYBASE	01457	01457								
C00001	MYPGTGT	01365	01366	01413							
C00004	NALMTOLY										
C00144	NASGN	01435	01435	01442	01442						
P01700	NASGNT	01426	01445	01446	01467						
C01135	NASMPV										
C00211	NASMS										
C00072	NAVAIL										

```
C00621  NR
C00011  NWASE
C00003  NWIT        01422   01422
C00207  NLOSTTGT
C00015  NWPSITE
C00040  NOWIT
C00010  NOPENSON
C00004  NPASS
C00015  NPREDEF
P01701  NWECOM      01427   01440   01441   01505
C00001  NPVEM
C00003  NT
C00002  NUMASM
C00001  NUMHOME
C00000  NUMMIT
C00002  NVEM
C00002  NVEMGRP
C00003  NVEMMASS    01430   01431   01452   01453   01503   01503
C00210  NXMTS
P01702  NXM SOM     01447   01502
P01703  NXMTST      01451   01461   01464   01464   01500
C01433  NXPC
C00001  NXPS
C00029  NXPV        01462   01463
P01446  PF00002.    01457
P01414  PF00003.    01457
P01444  PF00004.    01415
C00003  PLAT
C00004  PLONG
C00011  PRATRATE    01137   01171
C00021  PRRATTR
P00743  PRRTF       00743
X00001  .3000043    01750
X00203  PREDICT.    01300   00744
X00006  PRSIGNL.    01344
C01001  PXMGE
C01004  PXMGREDEC
C01014  PXMGREF
C01324  PXOJ
C00212  PXPASM
C00014  PXPREF
C00013  PXPM
C00002  PXPSUBR     01102   01102
C00004  PXVLOM      01105
C00000  PXXCHECK    01507   01507
C21143  PYAL
C01472  S           01047   01434
C00013  SPPASM
C00011  SPTMT
C00012  SPULO
C00003  SPEED
X00165  STM.        00770   01024   01034   01064   01073   01113   01147   01157   01210   01233   01241
                    01274   01321   01340   01371   01471   01515
C00120  STMV        01047   01251   01255   01265   01405
```

```
C31A23  T45F
C0:012  TFEF:1ST
C01136  TJFSD.--
X2:022  T=5C0.    :777   01031   01060   01067   01107   01131   01154   01204   01225   01236   01267
                  :131-   01362   01355   01417   01511   01527
X00364  TI=0.5    00756   01537
C0=347  T=FF.--
C02117  T.ST
C04233  T.C06
P01622  T5C0001.  01349
P01650  T5C0002.  01432
P01646  T5C0003.  01454
C01275  .         01044   01046   01247   01247
P01736  VALI      1136    01145
C000.4  VALIT     01134   01134   01162   01162
P01705  .0L2      01146   01177
P01706  .0L3      1143    01213
C01244  VALD      1411
C01213  VALF      1417
C01215  VALUEST   01333   01343
C01254  VALUCOF   01056   01407
C01014  VALMAX
C01022  .0LT      01256
C01026  VALU.     01054   01056   01405
C01012  .0L.NT    01141   01141   01174   01174
C01013  VALSOWIT
C01014  VALTOTT   1134    01137   01147   01147
P01543  VALUE.    01533   01552
C01142  V=.-1SS
C0 422  V=M=ASS
P01341  VSC 001.  01423   01423
P01435  VSC0002.  1447
P01457  VSC0003.  1455
C0 417  VIELD
        VSCALES
```

```
      SUBROUTINE REF_ACT                                                1000
C     ***********************************************************       2000
C     *  REF_ACT  (REF7)                                        *       2100
C     *  AUTHOR:  S/10/69                                       *       2200
C     ***********************************************************       2300
      COMMON/PARAMTCPT/ ISYSTYP,ICOMSHTY,/COMPARM/I,I,ISYSCOM,TERMAL,   1000
     1        IMAIN,ICOMPL,M,IINITMPT,IIREF,ITGT,NSH,                   2000
     2        ISYSTYP,I,M,MLGT,ICOMCAP,ISTMSOM,ICOMMSHP,                3000
     3        ICOM,I,M,IREF(IPLT,IMPOS,JMPHOEL,JCNTSHT,JMAXLOA          4000
C     ***********************************************************       5000
C     *  REF_PTR  (REF7)                                        *       6000
C     ***********************************************************       7000
      COMMON/COMPTYPE/ISYMTYP,ICOMP,COMPSPEC),ALEMTYLY,VALMTCLY,PARSEDEC 1000
     1   ,ICOMPSE,I,M,ESOM,KBOMT,SPOLM,SPACSM,PARAMEP,M,MSITE,I,MEP      2000
     2   ,IREGMODE,IMEMSOM,FUNCTION                                       3000
      TYPE INTEGER * (ACTION)                                           3500
      TYPE REAL VALUEONLY                                               4000
C     ***********************************************************       5000
C     *  GETTYPE  (REF7)                                        *       6000
C     ***********************************************************       7000
      SUBROUTINE GETTGT  (REF7)                                         8000
      COMMON/SOMTYTGT/MAXPT,MPOINT(25),I(25,25),VALI(25),VALR(25),      1000
     1     V(25),M,I(25),ATLOC(I(25),DISTLEG(25),DISTLOM(25),S(25),     2000
     2     SUBV(25),VALOME(25),VALOM(25),VALLA(25),VALL(25),MREC(65)    3000
C     ***********************************************************       4000
C     *  GETDATA  (REF7)                                        *       5000
C     ***********************************************************       6000
      COMMON/COMPUTE/IOMODE,MAXSHAPE,MREC,ITYPE,IALEMT,IMFUEL,          1000
     1     MTELP,ISTART,MMASS,IMASE(150),MLAT(150),MLON(150),           2000
     2        IPEVEL (150),VOMASE(150)                                  3000
      TYPE INTEGER VALMASE                                              4000
C     ***********************************************************       5000
C     *  GETSTMK  (REF7)                                        *       6000
C     ***********************************************************       7000
      SUBROUTINE GETSTMK(I)                                             8000
C     GET/REP COMMON/PASTSTMK/ TO COMMON/3/                             9000
      COMMON/3/P(1100),PMO(1100)                                        9500
C     ***********************************************************       1000
C     *  CLOSAID  (REF7)                                        *       1100
      COMMON/COMPAID/MVMASE(100),MSG,(100),JTGT(10,100),MVASM(1100),    1000
     1IMREMEM(1100)                                                     2000
C     ***********************************************************       2100
C     *  INDEX  -/10/69                                         *       2200
C     ***********************************************************       2300
      COMMON/INDEX/ISORTY,IOMIG,IMECOVEM,IMTTCH,IT,IOORM,JTGTI          1000
C     ***********************************************************       2200
C     *  INITORT  -/24/69                                       *       2400
C     ***********************************************************       2500
      COMMON/IMITGRT/FLYLOM(3),IMPORTD(3),ATPOIST(3),DISTIM,IMEEDIST,   1000
     1   MASE                                                           2000
C     ***********************************************************       2400
C     *  CURSORTY  -/10/69                                      *       2500
C     ***********************************************************       2600
      COMMON/CURSORTY/MOMIT,MUMASM,MUMASM,MMIT,IFLY(13),I=IT(13)        1000
     1        ,LASTPAY,LASTTGT,MOMIT,IOMIT(25),MAVAIL,IAVAIL(25)        2000
     2        ,LMMIT(25),ITOLD,LOSTTGT(25),MLOSTTGT,ANMMS,MASMS,RNGASM  3000
     3        ,DSTM                                                     4000
C     ***********************************************************       5000
C     *  CURSORTY  -/10/69                                      *       6000
C     ***********************************************************       7000
      DIMENSION CURSORTY(140),STMSORTY(140)                             8000
      EQUIVALENCE(CURSORTY,MOMIT)                                       8500
      DATA(CURSORT=140)                                                 9000
C     ***********************************************************       9500
C     *  VAL  -/10/69                                           *       1000
C     ***********************************************************       1100
      COMMON/VAL/VALFCOM,MUSTMEC,VUALMAX                                1000
```

```
CE:D      ·OL        ********************************************************  33000
CUSE      PCALL      */10/49    ********************************************  34000
      COMMON/PCALL/ITASS,ICALL                                                 1000
CE:D      PCALL      ********************************************************  34000
CUSE      PDEBUG     */10/49    ********************************************  35000
      COMMON/PDEBUG/TRACE,ICALL=0*(20)                                         1000
CE:D      PDEBUG     ********************************************************  35000
CUSE      IOAPP      */10/69    ********************************************  36000
      COMMON/IOAPP/IOAPS,IOAPC,IOAPS,IOAPP,IPLAN                               1000
CE:D      IOAPP      ********************************************************  36000
      DIMENSION JA0(13)                                                       37000
      IOTZ=IOTA+1                                                             38000
      ICALL=0)12  $  CALL PRINTIT(IDEBUG)                                     40000
      PREC=MUSTREC                                                            41000
      MUSTREC=)                                                               42000
  150 CONTINUE                                                                43000
      IF (IREFUEL .EQ. 0 .OR. IREFUEL .EQ. =3)350,151                         43500
C***  STORE PRESENT CURSORTY FOR LATER RETRIEVAL                              44000
  151 DO 152 I=1,LOWSORT                                                      45000
  152   STASORTY(I)=CURSORTY(I)                                               46000
C**** PREPARE PLAN FOR REFUELING ABORT****                                    47000
  161 RANGEZ=RANGE                                                            48000
      RANGE=MAX=(MAX-REF-RANGE)                                               49000
C**** ADD      NEARBY TARGETS INTO OMIT LIST                                  50000
      NTEMP=(NHIT+1)/2   $   *ADD=0                                           51000
      IT=I=MTARGT(IFLY(NTEMP))                                                52000
      ITLO=IT-I    $    IT00LO=0    $    IT00LO=0                            53000
      RMAX=RMO(IT-I)                                                          54000
  170 CONTINUE                                                                55000
      ICALL=1+1                                                               56000
      CALL PRINTIT(I-STORM)                                                   57000
      IT-I=IT-I+1                                                             58000
      IF(IT-I.GT.NT)180,190                                                   59000
  180 IT00=I=1                                                                60000
      IF(IT00LO) 300,200                                                      61000
C***  SKIP IF ADD I: SORTYTGT LIST                                            62000
  190 IF(=YASGN(IT-I).EQ.2)170,195                                            63000
  195 IT=IT-1                                                                 64000
      ASSIGN 200 TO LVTL    $    GO TO 250                                    65000
  200 CONTINUE                                                                66000
      ICALL=162                                                               67000
      CALL PRINTIT(I-STORM)                                                   68000
      ITLO=ITLO-1                                                             69000
      IF(ITLO.LT.1)210,220                                                    70000
  210 IT00LO=1                                                                71000
      IF(IT00-I)300,170                                                       72000
C***  SKIP IF ADD I: SORTYTGT LIST                                            73000
  220 IF(=YASGN(ITLO).EQ.2)200,220                                            74000
  230 IT=ITLO                                                                 75000
      ASSIGN 170 TO LVTL    $    GO TO 250                                    76000
C***  IF SORTYTGT LIST ADEQUATE, MAKE ALT PLAN                                77000
  250 IF(NAVAIL.GT.0)255,300                                                  78000
  255 IF(NAVO.LE.NHIT/2) 260,300                                              79000
  260 IF(=MO(IT).LT.=MOMAX)270,280                                            80000
C***  IF RMO SMALL ADD I:TO OMIT LIST                                         81000
```

```
      220 RVAL(IT)=RVAL(IT)/2.                                          82000
          ITEMP=MYASG(IT)                                               83000
          CALL IPOTGT                                                   84000
          RVAL(IT)=2.0*RVAL(IT)                                         85000
          MYASG(IT)=ITEMP                                               86000
          NAND=NAND + 1                                                 87000
          JA(NAND)=JTOTIN                                               88000
      280 GO TO LATIN                                                   89000
      300 CONTINUE                                                      90000
          DO 302 I=1,NMIT                                               91000
          IMIT(I)=KABSF(IMIT(I))                                        92000
      302 IFLY(I)=IMIT(I)                                               93000
          NUMSYM=NUMSYM-NUMASM                                          94000
          NUMASM=0                                                      95000
          ICALL=110                                                     96000
          CALL PRINTIT(ICURSRTY)                                        97000
          ICALL=140                                                     98000
          CALL PRINTIT(ISRTYTOT)                                        99000
          ICALL=143                                                     100000
          CALL PRINTIT(I-STKCPM)                                        101000
          CALL SORTOPT                                                  102000
C**** TO DEVELOP SORTIE                                                 103000
          ICALL=144                                                     104000
          CALL PRINTIT(I-STKCPM)                                        105000
          IPLAN=2                                                       106000
          CALL OUTSRT                                                   107000
          IPLAN=1                                                       108000
C**** TO OUPUT ALTERNATE PLAN                                           109000
C***  RETRIEVE OLD CURSORTY                                             110000
          DO 320 I=1,LOC-SORT                                           111000
      320     CURSORTY(I)=STMSORTY(I)                                   112000
          ICALL=145                                                     113000
          CALL PRINTIT(I-STKCPM)                                        114000
          ICALL=151                                                     115000
          CALL PRINTIT(ICURRATO)                                        116000
          ICALL=111                                                     117000
          CALL PRINTIT(ICURSRTY)                                        118000
          MAGE=MAGEZ                                                    119000
          MUSTREC=MREC                                                  120000
      350 IMIT=IMIT-1                                                   121000
          RETURN                                                        122000
          END                                                           123000
```

IDENT PEFABORT

PROGRAM LENGTH		00564
ENTRY POINTS	PEFABORT	00236
BLOCK NAMES		
	PRINTOPT	00025
	GRPTYPE	00022
	SORTYTGT	01751
	GRPLITA	01370
	3	40147
	2	04230
	CUR-SID	06564
	INDEX	00007
	INITOPT	00016
	CURSRTV	00214
	VAL	00003
	PCALC	00002
	UERR	00025
	IDCB	00005
EXTERNAL SYMBOLS		
	GRAPTCT.	
	PRINTIT	
	INPUTGT	
	SORTOPT	
	DUMST	

00501 00472

```
C00004  IF...
P00241  IF...
C00004  IFL...      00307   00311   00446
C00005  I...
C00013  I...
C00012  I...
C00321  I=IT        00443   00442   00444   00445   00445
C00018  II...
C00017  II...
C00003  I...
C00033  I...
C00376  I...
C00420  I...
P00537  I...        00241
X00003  I...        00415
C00041  I...
C00001  IP...
C00003  I...        00242   00242   00243   00245   00245   00534   00534   00537
C00000  I...
C00714  I...
C00020  I...
C00004  IP...       00478   00477   00502
C00005  I...
C00017  I...
C00002  I...
C00004  I...        00257   00257   00241   00241
C00003  I...
C00016  I...
C00303  I...        00324   00353   00647   00475   00317
C00000  I...
C00000  I...
C00000  I...        00443
C00010  I...
C00015  I...
C00004  IT...       00344   01344   00370   00371   00403   00403   00407   00417   00417   00420
P00541  IT...       00414   00422
C00011  I...
P00552  IT=I        00316   00317   00327   00330   00331   00337   00343
P00553  ITL...      00314   00354   00355   00363   00367
C00155  I...
P00554  I...        00315   00335   00361
P00555  I...        00314   00335   00361
C00004  I...
P00257  .15...
P00264  .I=I        00262
P00271  .152
P00276  .15...
P00322  .17...      00342   00362   00371
P00336  .14...
P00337  .14...      00332   00333
P00343  .18...      00341
P00347  .27...      00334   00345   00360
P00360  .21...
P00363  .22         00354   00357
```

```
P00367 .23          00365
P00373 .25          00346
P00376 .255
P00403 .26          00431
P00407 .270
P00431 .240         00404  00406
P00434 .300         00336  00362  00374  00375  00402
P00465 .302
P00510 .320
P00534 .350         00260  00263
P00544 .PHASE#.     00309
P00235 ..LOOP       00244
P00543 .*STIFF.     00311  00312
P00217 JADD         00430
C00002 JCOPY
C00001 JGMOVE
C00023 JOBTS-T
C00024 JPAYLOAD
C00022 JREFUEL
C00310 JTGT
C00006 JTGTIN       00426  00426
C00034 LASTPAT
C00037 LASTTGT
P00234 LOOKSOR      00265  00504
C00124 LXMITMT
C00156 LOSTTGT
P00556 LWTIN        00364  00372  00431
C00000 MAPPT
P00557 MREC         00254  00532
C00031 MLSTREC      00253  00255  00256  00533  00533
C00266 MYASIN       00340  00340  00364  00364  00413  00413  00423  00423
C00000 MYMASS
C00001 MYPOINT      00312  00313
P00560 NAME         00364  00401  00424  00425  00427
C00005 NELMTOLY
C00144 NASSA
C00211 NAS-S
C00072 NAVAIL       00373  00373
C00011 NBASE
C00003 NBIT         00301  00302  00376  00376  00435  00436
C00207 NLOSTTGT
C00015 NOPSITE
C00040 NOMIT
C00010 NOPERSON
C00000 NT           00331  00332
P00561 NTEMP        00305  00307
C00002 NUMASM       00451  00452
C00001 NUMCOM       00450  00450  00451
C00000 NUMMIT
C00002 NVEHCLE
C00210 NWHOS
C00001 NWPNS
X01005 OUTSWT       00500
C00000 PHI
```

```
X-:32  -:3 :1T    :-3   00324  00351  00455  00441  00545  00473  00515  00521  00525
X0:001  -:.:GT.    3:   00237
C0:031  -:.:F      :277
C0:00A  -:.:F.EQ
CA:016  -:.:FF     :274   00276
P:.:23A  -FF.:.=:T  :.23A
C0:116  -:=:       :0317  00327  00660  00604
C0:13A  -:=:.
P0:562  -:=:.:3    :321   00475
C0:216  -:.:45:
C0:313  -:=:       :274   00476  00300  00303  00361  00531  00531
P0:543  -:.:.:2    :274   00536
C2:143  -:.:       :413   03:1:  00412  00432  00420  00421  00421
C0:472  S
X0:004  S.:FT:.:   :.47:
C:.:13  S:.:S-
C3:011  S:.:FI
C0:312  S:.:.3
C0::03  S:.:F3
P0:003  ST=S:.:3F  :.372  00511
C0:523  S:.:V
C3:523  T:S:
C0:.12  T:.:F:.:ST
C:.:347  T:.:.:.:.:
C0:113  T:.:T
C0:233  T:.:.
P0:274  TS:.:.:1.  :2:F
P0:45:  TS:.:.:2.  :437
P0:513  TS:.:.:3.  :5:4
C0:275  V
C0:246  V:.:3
C0:213  V:.:F
C0:556  V:.:.:.:
C0:36:  V:.:.:
C0:.9:  V:.:.:F:.:
C0:162  V:.:.:S:
C0:.02  V:.:.:.:
P0:271  VS:.:.:1.  :273
P0:442  VS:.:.:2.  :447
P0:513  VS:.:.:3.  :5:2
C0:.07  V:F:.:
   00311 ST=:.:L:
```

```
      SUBROUTINE SETFLAG                                                1000
CSUBB      SETFLAG   $/5/69    ********************************************* 34000
CUSE       GRPDATA   $/10/69   ********************************************* 2000
      COMMON/GRPDATA/IGROUP,NGRPS,NWEMGRP,IFES,ITYPE,IALERT,IREPEL,     1000
     1      VIELD,ISTART,PHASE,IASF(150),HLAT(150),HLONG(150),          2000
     2       IPAYLOAD(150),VOLPASE(150)                                 3000
      TYPE INTEGER VOLPASE                                              4000
CEND       GRPDATA   ********************************************* 5000
CUSE       INDEX     $/10/69   ********************************************* 6000
      COMMON/INDEX/ISORTX,IORIG,IRECOVER,INITC,I,ICOUNT,NTIN            1000
CEND       INDEX     ********************************************* 8000
CUSE       PCALL     $/10/69   ********************************************* 9000
      COMMON/PCALL/IPASS,ICALL                                          1000
CEND       PCALL     ********************************************* 2000
CUSE       DATA      $/5/69    ********************************************* 3000
      COMMON/DATA/IP(150),IA(6),IFSTSORT(6),ILSTSORT(6),LPASS(40),      1000
     1       LCORR(6),LORIGIR(6)                                        2000
CEND       DATA      ********************************************* 3000
CUSE       FLAG      $/10/69   ********************************************* 10000
      COMMON /FLAG/IFLAG(200)                                           1000
      TYPE LOGICAL IFLAG                                                2000
CEND       FLAG      ********************************************* 10000
      DIMENSION DATA(4),A(                                              12000
      EQUIVALENCE(IA(1),DATA(1))                                        13000
      TYPE INTEGER A,DATA                                               14000
      DATA (DATA(I),I=1,4)/                                             15000
      IF(IT.EQ.2                                                        16000
    2 PRINT 3                                                           17000
    3 FORMAT(                                                           18000
      PRINT 5,(DATA(J),J=1,4)                                           19000
    5 FORMAT(                                                           20000
      IF(                                                               21000
    7 PRINT 5,(DATA(J),J=1,4)                                           22000
    8 FORMAT(                                                           23000
    9 IF(IT                                                             24000
   11 DO 12 I=1,                                                        25000
   12 IFLAG(I)=                                                         26000
      IF(                                                               27000
   15 IF(                                                               28000
   21 IF(                                                               29000
   25 IF(                                                               30000
   31 IF(                                                               31000
   32 IF(                                                               32000
   35 IF(                                                               33000
   41 CONTINUE                                                          34000
      RETURN                                                            35000
      END                                                               36000
```

IDENT SETFLAG

PROGRAM LENGTH 00257
ENTRY POINTS SETFLAG 00036
BLOCK NAMES
[illegible] 01376
[illegible] 00047
[illegible] 00002
[illegible] 00560
[illegible] 00007
EXTERNAL SYMBOLS
[illegible].
[illegible].
[illegible].
TS=.
ST=.
QUSTNGL.

```
P00244  BEGIN.      00244
C00240  BLAT
C00466  BLONG
P00211  COUNT1.     00063   00115
P00254  COUNT.      00130   00131   00141   00142
P00006  CRFMT.      00051   00073   00121
C00000  DATA        00065   00065   00107   00107
P00001  DICT.       00037   00045   00050   00056   00072   00101   00115
P00247  ENDING.     00040   00207   00245   00246
 00000  EXIT.       00250
 00006  FORMAT.
 00051  GG00003.    00043
P00073  GG00001.    00054
P00116  GG00002.    00077
P00255  I           00126   00130   00137   00141
C00005  IALERT
C00012  IBASE
C00001  ICALL
C00005  ICOMM       00151   00151
C00003  IDITCH
P00146  IF00001.
P00153  IF00002.
P00160  IF00003.
P00167  IF00004.
P00175  IF00005.    00174
C00000  IFLAG       00134   00205
C00074  IFSTSORT    00164   00164   00167   00167   00173   00173
C00000  IGROUP      00144   00145
P00212  IN00001.    00064   00106   00210   00225   00230   00242
P00003  INIT        00041   00122
P00245  INITIAL.    00040
C00001  ICPIG
C00000  IPASS       00154   00156
C00714  IPAYLOAD
C00090  IPRINTNG    00074   00074   00200   00200
C00002  IRECOVER
C00006  IREFUEL
C00003  IRFG
C00000  ISORTY      00165   00165   00172   00172   00175   00175
C00010  ISTART
C00004  IT
C00004  ITYPE
P00125  .10         00042
P00132  .12
P00150  .15         00145
P00043  .2
P00155  .20         00152
P00162  .25         00157
P00164  .30
P00172  .32         00163
P00200  .35         00166   00171   00177
P00206  .40         00147   00154   00161   00170   00174   00177
P00077  .7          00076
P00121  .9          00076
```

```
P00006  ..3       00046
P00027  ..5       00057
P00032  ..8       00102
P00251  .ASTIFF.  00202  00203
P00256  J         00061  00066  00104  00111  00236
C00006  JTGTIN
C00360  LCOMP     00150  00150  00153  00153
C00454  LGROUP    00143  00143  00146  00146
C00264  LPASS     00155  00155  00160  00160
C00170  LSTSORT   00162  00162  00176  00176
C00011  NBASE
P00004  NC        00052  00073  00116  00122  00123  00137  00224
C00002  NVENGRP
C00001  NWPNS
P00216  P00000.U  00220
P00230  P00001.U  00233
P00005  PMAX      00006  00126
X00002  Q3Q10040  00133  00204
X00003  QADDICT.  00000  00036
X00006  QASINGL.  00210
P00214  RELCON..  00244
P00035  SETFLAG   00035
X00005  STM.      00044  00100
X00001  THEND.    00047  00071  00114
P00136  TS00004.  00127
P00207  TS00005.  00140
X00004  TSM.      00055
P00222  UP00000.  00053  00117  00124  00213  00216  00223  00224  00225  00227  00227
P00235  UP00001.  00062  00067  00105  00112  00231  00236  00237  00240  00242  00243
C00142  VONBASE
P00054  WS00001.  00120
P00063  WS00002.  00070
P00106  WS00003.  00113
P00132  WS00004.  00135
P00143  WS00005.  00206
C00007  YIELD
  00132 SYMBOLS
```

```
      SUBROUTINE SORTOPT                                                1000
CSUBR      SORTOPT   11AUG71  ********************************************** 22000
CUSE       PRINTOPT  9/10/69  ********************************************** 2000
      COMMON/PRINTOPT/ ISRTYTGT,ICURSRTY,ICURMAIN,INSTKCPR,LEVAL,       1000
     1        IRAIDSHR,ICHGPLAN,IINITOPT,IINDEX,ITGTASGN,               2000
     2        IGRPTYPE,IGRPDATA,ICOPCAP,ISTRPSUM,ICOMMSHR,              3000
     3        ICOPIOPR,INEXITFLT,IDEBUG,JREFUEL,JOUTSRT,JPAYLOAD        4000
CEND       PRINTOPT  ********************************************** 2000
C          OPTIMIZES SPECIFIED SORTIE                                    6000
CUSE       CHGPLAN   9/10/69  ********************************************** 7000
      COMMON/CHGPLAN/JDO,IAIM,ISCAN,JAFT,ATO,OTA,RTO,OTH                1000
      TYPE INTEGER ATO,OTA,RTO,OTH                                      2000
CEND       CHGPLAN   ********************************************** 7000
      DATA (ATO=1),(OTA=2),(RTO=3),(OTH=4)                              9000
CUSE       INDEX     9/10/69  ********************************************** 10000
      COMMON/INDEX/ISORTY,IO=IG,IRECOVER,IDITCH,TT,ICURR,JTGTIX         1000
CEND       INDEX     ********************************************** 10000
CUSE       GRPTYPE   1FEB71  ********************************************** 11000
      COMMON/GRPTYPE/ISTRTYPE,RANGE,CEPSPEED,ALERTDLY,RALWTDLY,RANGEDEC 1000
     1    ,ICLASS,NOPERSQN,SPOHI,SPOLO,SPDAST,MAXRNGEF,NMPSITE,IMER     2000
     2    ,IREFMODE,TYPEMODE,FUNCTION                                   3000
      TYPE INTEGER FUNCTION                                             3500
      TYPE REAL RALWTDLY                                                4000
CEND       GRPTYPE   ********************************************** 11000
CUSE       CONTROL   9/10/69  ********************************************** 15000
      COMMON/CONTROL/EPSILON,MAXLSRT                                    1000
CEND       CONTROL   ********************************************** 15000
      DATA(EPSILON=.001),(MAXLSRT=1)                                    16000
CUSE       CURSORTY  9/10/69  ********************************************** 17000
      COMMON/CURSORTY/NUMMIT,NUMSRVR,NURASM,NMIT,IFLY(13),IMIT(13)      1000
     1        ,LASTPAY,LASTTGT,NOMIT,IOMIT(25),NAVAIL,IAVAIL(25)        2000
     2        ,LKMITMT(25),ITGLO,LOSTTGT(25),NLOSTTGT,NUMOS,NASMS,RNGASM 3000
     3        ,OSTH                                                     4000
CEND       CURSORTY  ********************************************** 17000
CUSE       SORTYTGT  9/10/69  ********************************************** 21000
      COMMON/SORTYTGT/MAXPT,NYPOINT(25),D(25,25),VALM(25),VALP(25),     1000
     1     V(25),PHOV(25),ATLOCMI(25),DISTLEG(25),DISTLO(25),S(25),     2000
     2     SUBV,25),VALDONE(25),VALON(25),DVALR(25),DVALA(25),DREC(25)  3000
CEND       SORTYTGT  ********************************************** 21000
CUSE       FIXALL    2FEB71  ********************************************** 23500
      COMMON/FIXALL/IJFIX(1100),IJFIXR(1100),IKFIX(25)                  1000
      TYPE LOGICAL IJFIX,IJFIXR,IKFIX                                   2000
CEND       FIXALL    ********************************************** 23500
CUSE       EVAL      9/10/69  ********************************************** 24000
      COMMON/EVAL/MING,JDELR,MAXDA,JADD,MINDA,JDEL,MAXDB,MAXDAB         1000
     1    ,JADDA,VALSORTY,JAF,MALC,VALDIST,VALMAX,JSEQERR,ISFINPLN      2000
      TYPE REAL MING,MAXDA,MINDA,MAXDB,MAXDAB                           3000
CEND       EVAL      ********************************************** 24000
CUSE       VAL       9/10/69  ********************************************** 27000
      COMMON/VAL/VALRECVR,MUSTREC,UNLOAD                                1000
CEND       VAL       ********************************************** 27000
CUSE       DEBUG     9/10/69  ********************************************** 28000
      COMMON/DEBUG/IDIA,ICAMFROM(20)                                    1000
CEND       DEBUG     ********************************************** 28000
CUSE       PCALL     9/10/69  ********************************************** 29000
      COMMON/PCALL/IPASS,ICALL                                          1000
```

```
      CEND      PCALL     ********************************************************  29000
            IOTA=IOTA+1                                                             30000
            ICAMFROM(IOTA)=8H SORTOPT                                               31000
            ICALL=30                                                                32000
            CALL PRINTIT(IDEBUG)                                                    33000
      C***  ENTRY SORTOPT                                                           34000
            IEXIT=0                                                                 35000
            VALSORTY=0.0                                                            36000
            KNTSEQ=-3                                                               36500
         10 OLDVAL=VALSORTY                                                         37000
            ICALL=146                                                               38000
            CALL PRINTIT(IPSTKCPM)                                                  39000
         15 CALL FLTPLAN                                                            40000
            EPSVAL=EPSILON*VALSORTY                                                 41000
            IF(NUMASM.LT.NASMS)20,30                                                42000
      C***  CONSIDER USING ASMS IN PLACE OF BOMBS                                   43000
         20 ISCAN=LASTTGT                                                           44000
            CALL EVALR                                                              45000
            IF(JADDA) 25,30                                                         46000
         25 JDO=JADDA    $  JAFT=JAF                                                47000
            ICALL=101                                                               48000
            CALL PRINTIT(ISRTYTGT)                                                  49000
            CALL PRINTIT(ICURSRTY)                                                  50000
            CALL CHGPLAN(RTO)                                                       51000
            CALL CHGPLAN(OTA)                                                       52000
            ICALL=102                                                               53000
            CALL PRINTIT(ISRTYTGT)                                                  54000
            CALL PRINTIT(ICURSRTY)                                                  55000
            GO TO 10                                                                56000
         30 IF(NUMBOMB.GT.NBMBS-NASMS) 40,50                                        57000
         40 ISCAN=LASTTGT                                                           58000
      C**  SET ISCAN TO POSTPONE CHANGE IN RECOVERY.DELETE EXTRA BOMBS             59000
            CALL EVALR                                                              60000
            JDO=JDELR                                                               61000
            CALL CHGPLAN(RTO)                                                       62000
            GO TO 10                                                                63000
         50 ISCAN=LASTPAY                                                           64000
            IF(MUSTREC)52,54                                                        65000
         52 ISCAN=LASTTGT                                                           66000
      C***  CONSIDER OMITTING BOMBS OR RECOVERY                                     000
         54 ICALL=147                                                               68000
            CALL PRINTIT(IPSTKCPM)                                                  69000
         60 CALL EVALR                                                              70000
            IF(MINAR.LT.-EPSVAL) 70,103                                             71000
         70 JDO=JDELR    $  JAFTXX=XAMSF(IMIT(LIMITMT(JDO)-1))                      72000
            CALL CHGPLAN(RTO)                                                       73000
      C**                                                                           74000
      C*****CORRECT ANY TGT OMITTED BY ERROR                                        75000
            OLDVAL=VALSORTY                                                         76000
            CALL FLTPLAN                                                            77000
            EPSVAL=EPSILON*VALSORTY                                                 78000
            IF(VALSORTY.LT.OLDVAL) 72,50                                            79000
      C     AVOID REPLACING TGTS WHOSE OMISSION DID NOT RAISE VALSORTY             80000
      C        IF THEY ARE BEYOND RANGE OF SORTIE TO BEGIN WITH (S=0)              81000
         72 IF(S(JDELR))73,50                                                       82000
         73 JAFT=JAFTXX                                                             83000
```

```
      CALL CHGPLAN(OTB)                                              84000
      CALL FLTPLAN                                                   85000
      EPSVAL=EPSILON*VALSORTY                                        86000
  103 CONTINUE                                                       86050
C**                                                                  86010
C***** ELIMINATE FLIGHT POINTS WITH S=0                              86050
      IF (LASTTGT .GT. 1)730,735                                     86060
  730 CONTINUE                                                       86070
      I=2                                                            86080
      DO 734 K=2,LASTPAY                                             86100
      J=IFLY(I)                                                      86150
      IF (S(J) .GT. 0.000000)734,731                                 86200
  731 CONTINUE                                                       86250
      IF (I=IT(I) .GT. 0)732,733                                     86300
  732 CONTINUE                                                       86350
      JDO=J                                                          86400
      CALL CHGPLAN(ATO)                                              86450
      I=I-1                                                          86460
      GO TO 734                                                      86500
  733 CONTINUE                                                       86550
      JDO=J                                                          86600
      CALL CHGPLAN(ATO)                                              86650
      I=I-1                                                          86670
  734 I=I+1                                                          86700
      ISCAN=LASTTGT                                                  86720
      CALL EVALB                                                     86730
  735 CONTINUE                                                       86800
      IF (NOMIT-1)121,104,105                                        87000
  104 IF(IOMIT(1).EQ.IRECOVER) 121,105                               88000
  105 IF(NUMBOMB.LT.NMBS-NASMS) 106,107                              89000
  106 MISP=0.0                                                       90000
  107 IF(NASMS.GT.0) 109,121                                         91000
C***  CONSIDER ASMS ON OMITTED TGTS                                  92000
  109 KALC=0                                                         93000
  110 CALL EVALDA                                                    94000
      KALC = 1                                                       95000
      IF(MAXDA.GT.MINDA+EPSVAL) 120,120                              96000
  120 IF(NUMASM.NE.MASMS) 1201,1200                                  97000
 1200 IF(JDEL)1203,1202                                              97500
 1203 JDO=JDEL                                                       98000
      CALL CHGPLAN(ATO)                                              99000
 1201 JDO=JADD & JAFT=JBF                                           100000
      CALL CHGPLAN(CTA)                                             101000
      VALSORTY=VALSORTY+MAXDA-MINDA                                 102000
      GO TO 110                                                     103000
 1202 IF(IEXIT) 160,121                                             104000
C***                                                                105000
C*** CHECK TGT ORDER--OMIT TGTS IN WRONG ORDER                       106000
  121 IF (KATSEQ) 2220,125,125                                      106500
 2220 IF (JSEQERR) 2225,125                                         107000
 2225 KATSEQ=KATSEQ+1                                               107300
 1220 IF(IKFIX(JSEQERR))125,122                                     107500
  122 JDO=JSEQERR                                                   108000
      IF(IMIT(LKMITXT(JDO)))123,1230,123                            109000
  123 CALL CHGPLAN(STC)                                             110000
      GO TO 1240                                                    111000
```

```
 1230 PRINT 1231                                                        112000
 1231 FORMAT(37H *** ERROR--JOO = 0 AT 122 IN SORTOUT)                  113000
      CALL ABORT                                                        114000
  124 CALL CHGPLAN(OTO)                                                 115000
 1240 CALL FLTPLAN                                                      116000
      ICALL=89                                                          117000
      CALL PRINTIT(ICUMSRTY)                                            118000
      ISCAN=LASTPAY                                                     119000
      IF(MUSTREC)1242,1244                                              120000
 1242 ISCAN=LASTTGT                                                     121000
 1244 CALL EVALR                                                        122000
      ICALL=91                                                          123000
      CALL PRINTIT(ICUMSRTY)                                            124000
  125 IF(NOMIT-1)150,130,130                                            126000
C***      CONSIDER NUMBS ON OMITTED TARGETS                            127000
  130 IF(NUMBOMB.LT.NUMDS-NUMASM) 132,133                               128000
  132 MINB=0  $  GO TO 135                                              129000
  133 ISCAN=LASTTGT                                                     130000
      ICALL=148                                                         131000
      CALL PRINTIT(I-STKCPM)                                            132000
      CALL EVALR                                                        133000
      ICALL=149                                                         134000
      CALL PRINTIT(I-STKCPM)                                            135000
  135 CALL EVALOB                                                       136000
      IF (NUMBOMB .LT. NUMDS-NUMASM .OR. JADDB .EQ. IRECOVER)136,137    137000
  136 MINB=EPSVAL                                                       138000
  137 IF(MAXOB.GT.MINB)139,150                                          139000
  139 IF(JDELB)140,150                                                  139500
  140 JOO=JADDB    $  JAFT = JAF                                        140000
      CALL CHGPLAN(OTB)                                                 141000
      IF (NUMBOMB .LE. NUMDS-NUMASM .OR. JOO .EQ. IRECOVER)143,142      142000
  142 JOO=JDELB  $  JAFTXX=NESF(IWIT(LKWIT*T(JOO)-1))                   143000
      CALL CHGPLAN(OTO)                                                 144000
      ASSIGN 147 TO ICORRECT  $  GO TO 145                              145000
  143 IF(NUMBOMB.GT.NUMDS-NASMS) 515,144                                146000
  515 IEXIT = 1                                                         146200
      GO TO 16                                                          146300
  144 ASSIGN 149 TO ICORRECT                                            147000
C***                                                                    148000
C***  CORRECT ANY ERROR IN PUTTING BOMBS ON OMITTED TGTS                149000
  145 OLDVAL=VALSORTY                                                   150000
      CALL FLTPLAN                                                      151000
      EPSVAL=EPSILON*VALSORTY                                           152000
      IF(VALSORTY-LE.OLDVAL) 146,130                                    153000
  146 GO TO ICORRECT                                                    154000
  147 JOO=JDELB   $  JAFT=JAFTXX                                        155000
      CALL CHGPLAN(OTB)                                                 156000
  148 JOO=JADDB                                                         157000
      CALL CHGPLAN(OTO)                                                 158000
  150 CALL FLTPLAN                                                      159000
      IF(NUMASM.NE.NASMS) 155,160                                       160000
  155 IEXIT=1  $  GO TO 169                                             161000
  160 CONTINUE                                                          162000
      ICALL=150                                                         163000
      CALL PRINTIT(INSTKCPM)                                            164000
      ICALL=32                                                          165000
```

```
      CALL PRINTIT(ICURSRTY)                                          166000
      ICALL=31                                                        167000
      CALL PRINTIT(ISRTYTGT)                                          168000
      ICALL=33                                                        169000
      CALL PRINTIT(ICURRAIC)                                          170000
      IOTA=IOTA-1                                                     171000
      RETURN                                                          172000
      END                                                             173000
```

IDENT SORTOPT

PROGRAM LENGTH		00641
ENTRY POINTS	SORTOPT	00014
BLOCK NAMES		
	PRINTOPT	00025
	CHGPLAN	00010
	INDEX	00007
	GRPTYPE	00022
	CONTROL	00007
	CURSORTY	00214
	SORTYTGT	01751
	FIXALL	00107
	EVAL	00021
	VAL	00003
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	03000040	
	THEN.	
	UNDICT.	
	PRINTIT	
	FLTPLAN	
	EVAL=	
	CHGPLAN	
	EVAL.A	
	ABORT	
	EVALOB	
	STM.	

```
X00011  ABORT       00400
C00004  ALERTDLY
C01357  ATLOCMI
C00004  ATO         00003  00252  00520  00370
P00622  BEGIN.      00623
C00006  BTO         C00004 00101  00130  00165  00242  00404  00525  00567
C00002  CEP
X00007  CHGPLAN     00077  00102  00126  00163  00205  00240  00250  00324  00333  00366  00402
                    00501  00523  00560  00565
P00003  CRFMT.      00400
C00032  D
P00001  DICT.       00016  00027  00043  00046  00060  00072  00075  00100  00103  00107  00112
                    00123  00127  00143  00146  00164  00171  00206  00211  00241  00251  00265
                    00307  00325  00334  00367  00374  00377  00401  00403  00406  00412  00423
                    00427  00446  00451  00454  00457  00502  00524  00542  00561  00566  00571
                    00601  00605  00611  00615
C01410  D.STLEG
C01441  DISTLOW
C01720  DREC
C00213  DSTR
C01667  DVALA
C01636  DVALR
P00624  ENDING.     00017  00621  00622
C00006  EPSILON     00003  00047  00047  00172  00172  00212  00212  00543  00543
P00630  EPSVAL      00051  00159  00174  00214  00313  00466  00545
X00006  EVALR       00057  00122  00145  00264  00422  00450
X00010  EVALOA      00306
X00012  EVALOR      00456
P00000  EXIT.       00625
X00005  FLTPLAN     00045  00170  00210  00405  00541  00570
P00003  FORMAT.     00022
C00021  FUNCTION
P00400  GG00000.    00372
P00631  I           00221  00223  00232  00243  00244  00253  00254  00255  00256
C00001  IAI
C00073  IAVAIL
C00001  ICALL       00025  00025  00040  00041  00067  00070  00105  00140  00141  00407  00410
                    00424  00425  00443  00444  00452  00576  00577  00603  00607  00613
C00001  ICAMFROM    00024
C00006  ICHGPLAN
C00007  ICLASS
C00014  ICORCAR
C00017  ICORIDOR
C00005  ICORR
P00632  ICORRECT    00524  00534  00551
C00016  ICORRSHR
C00002  ICURRAIC    00614
C00001  ICURSRTY    00076  00113  00413  00434  00606
C00021  IDEBUG      00030
C00003  IDITCH
C00004  IEVAL
P00633  IEXIT       00032  00341  00534  00575
P00443  IF00001.    00462
P00507  IF00002.
```

C00006	IFLY	00224	00224								
C00013	IGRPDATA										
C00012	IGRPTYPE										
C00021	IHIT	00160	00160	00233	00233	00363	00364	00520	00520		
C00010	IINDEX										
C00007	IINITOPT										
C00000	IJFIX										
C00003	IJFIXR										
C00104	IKFIX	00354									
C00020	INEXTFLT										
P00622	INITIAL.	00017									
C00041	IOMIT	00271	00271								
C00001	IORIG										
C00003	IOTA	00020	00020	00021	00023	00023	00617	00617	00620		
C00000	IPASS										
C00020	IPENMODE										
C00005	IRAIDSMB										
C00017	IRECMODE										
C00002	IRECOVER	00272	00272	00464	00464	00510	00510				
C00016	IREP										
C00003	IRSTRCPM	00044	00144	00447	00455	00602					
C00002	ISCAN	00056	00056	00121	00121	00133	00133	00137	00137	00262	00263	00415
		00415	00421	00421	00442	00442					
C00020	ISFINPLA										
C00000	ISIMTYPE										
C00000	ISORTY										
C00000	ISRTYPGT	00073	00110	00612							
C00015	ISTRKSUM										
C00004	IT										
C00011	ITGTASG.										
C00155	ITOLO										
P00036	.10	00114	00131	00534							
P00215	.103	00151	00151								
P00271	.104	00267									
P00274	.105	00270	00273								
P00277	.106										
P00301	.107	00276	00276								
P00304	.109	00575									
P00306	.110	00340									
P00315	.120										
P00320	.1200	00314									
P00327	.1201	00317									
P00341	.1202	00313	00314	00321							
P00322	.1203	00321									
P00343	.121	00270	00273	00342	00303						
P00352	.1220										
P00356	.122										
P00364	.123	00365									
P00372	.1230	00364									
P00402	.124	00365									
P00405	.1240	00371									
P00420	.1242	00417									
P00422	.1244	00417									
P00431	.125	00344	00345	00347	00355						

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P00434  .135        00432   00550
P00437  .132
P00441  .133        00436   00436
P00456  .134        00440
P00466  .136        00462
P00470  .137        00465
P00473  .139
P00475  .140        00474
P00512  .142        00511
P00530  .143        00506   00504   00511
P00535  .144        00532   00532
P00537  .145        00527
P00551  .146        00540
P00554  .147        00526
P00563  .144        00535
P00045  .15
P00570  .150        00433   00471   00472   00474
P00574  .155
P00576  .160        00342   00573
P00055  .20
P00346  .2220       00344
P00350  .2225       00347
P00063  .25         00062
P00115  .30         00053   00054   00062
P00120  .40
P00132  .50         00117   00117   00177   00177   00202
P01533  .515
P00136  .52         00135
P00140  .54         00135
P00145  .60
P00152  .70
P00200  .72
P00203  .73         00202
P00220  .730
P00232  .731        00230   00231
P00236  .732
P00246  .733        00234   00235
P00255  .734        00231   00245
P00266  .735        00216   00217
P00003  ..100000    00022
P00004  ..1231      00375
P00626  .ASTIFF.    00157   00157   00362   00363   00517   00517
P00634  J           00225   00226   00236   00246
C00003  JADD        00327   00327
C00011  JADDA       00061   00061   00063   00063
C00007  JADDR       00463   00463   00475   00475   00563   00563
C00013  JAF         00065   00065   00331   00331   00477   00477
C00003  JAFT        00066   00066   00204   00204   00332   00332   00500   00500   00557   00557
P00635  JAFTXX      00162   00203   00522   00556
C00005  JDFL        00320   00320   00322   00322
C00001  JDELR       00124   00124   00152   00152   00200   00200   00473   00473   00512   00512   00554
                    00554
C00000  JDD         00064   00064   00125   00125   00153   00153   00154   00237   00237   00247   00247
                    00323   00323   00330   00330   00357   00357   00360   00474   00476   00507   00507
```

2334

		00513	00513	00514	00555	00555	00564	00564				
C00023	JOUTSET											
C00024	JPAYLOAD											
C00022	JREFUEL											
C00017	JSEQERR	00346	00346	00352	00352	00356	00356					
C00006	JTGTIA											
C00014	KALC	00304	00305	00310	00311							
P00636	KK	00222	00251									
P00637	KNTSEC	00035	00343	00350	00351							
C00001	KWALSHT	C00001										
C00036	LASTPAY	00132	00132	00215	00215	00260	00260	00414	00414			
C00037	LASTTGT	00055	00055	00120	00120	00136	00136	00282	00420	00420	00441	00441
C00124	LIMITMT	00154	00155	00360	00361	00514	00515					
C00156	LOSTTGT											
C00002	MAXDA	00311	00337									
C00010	MAXDAA											
C00006	MAXDB	00470	00470									
C00000	MAXPT											
C00000	MINA	00147	00147	00277	00303	00437	00463	00467	00467	00471		
C00004	MINDA	00312	00337									
C00001	MUSTREC	00134	00134	00410	00410							
C00001	MYPOTGT											
C00005	NALMTOLY											
C00211	NASMS	00053	0011	00275	00301	00301	00310	00531	00573			
C00072	NAVATL											
C00003	NBIT											
C00207	NLOSTTGT											
C00015	NMPSITE											
C00040	NOMIT	00266	00266	00431	00431							
C00010	NOPENSQA											
C00002	NUMASM	00052	00052	00315	00315	00435	00461	00505	00572	00572		
C00001	NUMDMR	00115	00115	00274	00274	00434	00434	00460	00460	00504	00504	00530
		00530										
C00000	NUMMIT											
C00210	NUMOS	00114	00275	00435	00461	00505	00531					
P00640	OLDVAL	00037	00167	00176	00540	00547						
C00005	OTA	C00005	00104	00335								
C00007	OTH	C00007	00267	00503	00562							
X00014	PRINTIT	00024	00042	00071	00074	00106	00111	00142	00411	00426	00445	00453
		00600	00604	00610	00614							
X00001	Q3000040	00353										
X00003	QRODICT.	00000	00015									
C00001	RANGE											
C00006	RANGEDEC											
C00014	RANGREF											
C01326	RHOJ											
C00212	RNGASM											
C01472	S	00201	00201	00220	00227							
P00014	SORTOPT	00014										
C00013	SPDASM											
C00011	SPDMI											
C00012	SPDLO											
C00013	SPEED											
X00013	STM.	00373										

```
C01523  SURV
X00002  THEND.      00376
P00260  TS000001.   00222
C01275  V
C01244  VALA
C01213  VALB
C00015  VALDIST
C01554  VALDONE
C00016  VALMAX
C01605  VALOK
C00000  VALRECVR
C00012  VALSORTY    00033  00033  00038  00036  00050  00050  00166  00166  00173  00173  00175
                    00175  00213  00213  00336  00336  00340  00537  00537  00544  00544  00546
                    00546
C00002  VUNLOAD
P00223  WS00001.    00261  00261
   00332 SYMBOLS
```

```
      SUBROUTINE TGTASGN                                                    1000
CSUBR      TGTASGN   2FEB71  ********************************************** 16000
CUSE       ARAYSIZE  9/10/69  ********************************************** 2000
      COMMON/ARAYSIZE/MAXSEPG,MC,MT,ML,MSTRK,MSORTY,MSRT,MFLY,MAXPA         1000
CEND       ARAYSIZE  ********************************************************** 2000
CUSE       PRINTOPT  9/10/69  ********************************************** 3000
      COMMON/PRINTOPT/ ISRTYTET,ICURSRTY,ICURRAID,INSTKCPM,IEVAL,           1000
     1        TRAIDSMR,ICMGPLAN,IINITOPT,IINDEX,ITGTASGN,                   2000
     2        IGMPTYPE,IGRPDATA,ICORCAP,ISTRSUM,ICORMSHR,                   3000
     3        ICORIDOR,INEXTFLT,IDEBUG,JMEFUEL,JOUTSRT,JPAYLOA             4000
CEND       PRINTOPT  ********************************************************** 3000
CUSE       TGTASGN   9/10/69  ********************************************** 7000
      COMMON/TGTASGN/TGTSASGN,TGTLIM,NTGT,IFSTGT,ILASTGT,IFSTVEH,LSTVEH,    1000
     1        ISIDE                                                         2000
CEND       TGTASGN   ********************************************************** 7000
CUSE       INDEX     9/10/69  ********************************************** 9000
      COMMON/INDEX/ISORTY,IORIG,INECOVEH,INITCH,IT,ICORR,JTGTIN             1000
CEND       INDEX     ********************************************************** 9000
CUSE       CURRAID   1FEB71  ********************************************** 10000
      COMMON/CURRAID/MYBASE(100),MASGN(100),JTGT(10,100),MYASGN(1100),      1000
     1INDEXVEH(100)                                                         2000
CEND       CURRAID   ********************************************************** 10000
      COMMON/7/PHI(1100),RHO(1100)                                          12000
CUSE       A         1FEB71  ********************************************** 13000
      COMMON/A/ISEQ(1100)                                                   1000
CEND       A         ********************************************************** 13000
CUSE       RAIDSTRK  1FEB71  ********************************************** 14000
      COMMON/3/MT,JGROUP,JCORR,INDEXNO(1100),TLAT(1100),TLONG(1100),        1000
     1TIMEPHEM(1100),IOPEN(1100),DISTOUT(1100),DISTREC(1100),               2000
     2ATTRLOC(1100),MVAL(1100),DELAT(1100),DELONG(1100),DESIG(1100),        3000
     3TASK(1100),CNTMYLOC(1100),FLAG(1100)                                  4000
CEND       RAIDSTRK  ********************************************************** 14000
C     CHANGED COMMON/RAIDSTRK/ TO COMMON/3/                                 17000
CUSE       FIXALL    2FEB71  ********************************************** 17500
      COMMON/FIXALL/IJFIX(1100),IJFIXR(1100),IKFIX(25)                      1000
      TYPE LOGICAL IJFIX,IJFIXR,IKFIX                                       2000
CEND       FIXALL    ********************************************************** 17500
CUSE       RAIDSHR   9/10/69  ********************************************** 18000
      COMMON/RAIDSHR/NVEH,NRVEH(200),DIST2(200),NR,MPHBASE,                 1000
     1        NMPV(200),NMPC,TGTSPMD,NASMPV(200)                            2000
      TYPE INTEGER MPHBASE                                                  3000
CEND       RAIDSHR   ********************************************************** 18000
CUSE       IRESRCH   9/10/69  ********************************************** 21000
      COMMON/IRESRCH/IRESRCH                                                1000
CEND       IRESRCH   ********************************************************** 21000
CUSE       DEBUG     9/10/69  ********************************************** 22000
      COMMON/DEBUG/IOTA,ICALLFRO(20)                                        1000
CEND       DEBUG     ********************************************************** 22000
CUSE       PCALL     9/10/69  ********************************************** 23000
      COMMON/PCALL/IPASS,ICALL                                              1000
CEND       PCALL     ********************************************************** 23000
      IOTA=IOTA+1                                                           24000
      ICALLFRO(IOTA)=8H TGTASGN                                             25000
      ICALL=12                                                              26000
      CALL PRINTIT(IDEBUG)                                                  27000
      ICALL=129                                                             28000
```

```
      WW=PRNTF(-12,F,BMARAYSIZE)                                        29000
      ICALL=163                                                         30000
      CALL PRINTIT(ICUMPAID)                                            31000
      CALL PRINTIT(I-STMCPM)                                            32000
      CALL PRINTIT(ITGTASGN)                                            33000
      IFSTSRT=IFSTVEH  $  ILASTSRT=LSTVEH                               34000
C     CARRY OUT INITIAL ASSIGNMENT                                      35000
      DO 100 ISEQSRT=IFSTVEH,LSTVEH                                     36000
      NFIX=0                                                            36200
      NWVEH=NWPV(MYPASE(ISEQSRT))                                       36400
      TGTLIM=TGTLIM+.5VEH*TGTSPMD                                       37000
C  ALTERNATE SORTIE ASSIGNMENT BETWEEN TOP AND BOTTOM OF LIST, MEET IN M  38000
      GO TO (12,2) ISIDE                                                39000
C  ASSIGN LAST SORTIE LAST WPNS                                         40000
    2   ISRT = ILASTSRT                                                 41000
        N = NASGN(ISRT)                                                 42000
        ILASTSRT = ILASTSRT - 1                                         43000
    3   IF(MYASGN (ILASTGT) . GT . 0)  4, 5                             44000
    4   ILASTGT = ILASTGT - 1                                           45000
      IF(ILASTGT-IFSTGT)149,3,3                                         46000
  149 ILASTGT=IFSTGT                                                    47000
      ICALL=164                                                         48000
      CALL PRINTIT(ICUMPAID)                                            49000
      CALL PRINTIT(I-STMCPM)                                            50000
      CALL PRINTIT(ITGTASGN)                                            51000
  150 IF(I-RESMCM)100,152                                               52000
  152 IFSTGT=1  $  ILASTGT=NT  =  IRESMCM=1                             53000
      GO TO 3                                                           54000
    5   IT = ILASTGT                                                    55000
    6   IF(MYASGN(IT).LE.0) 7, 8                                        56000
    7   ASSIGN 8 TO LVINSERT                                            57000
        GO TO 10                                                        58000
    8   IT = IT - 1                                                     59000
      ICALL=165                                                         60000
      CALL PRINTIT(ICUMPAID)                                            61000
      CALL PRINTIT(I-STMCPM)                                            62000
      CALL PRINTIT(ITGTASGN)                                            63000
        IF(IT.GE.IFSTGT) 6, 100                                         64000
C  ASSIGN FIRST SORTIE FIRST WEAPONS                                    65000
   12   ISRT = IFSTSRT                                                  66000
        N = NASGN(ISRT)                                                 67000
        IFSTSRT = IFSTSRT + 1                                           68000
   13   IF (MYASGN(IFSTGT).GT.0) 14, 15                                 69000
   14   IFSTGT = IFSTGT + 1                                             70000
      IF(IFSTGT-ILASTGT)13,13,139                                       71000
  139 IFSTGT=ILASTGT                                                    72000
  140 IF(IRESMCM)100,102                                                73000
  142 IFSTGT=1  $  ILASTGT=NT  $  IRESMCM=1                             74000
      ICALL=166                                                         75000
      CALL PRINTIT(ICUMPAID)                                            76000
      CALL PRINTIT(I-STMCPM)                                            77000
      CALL PRINTIT(ITGTASGN)                                            78000
      GO TO 13                                                          79000
   15   IT = IFSTGT                                                     80000
   16   IF(MYASGN(IT).LE.0) 17,18                                       81000
   17   ASSIGN 18 TO LVINSERT                                           82000
```

```
          GO TO 19                                                    83000
   18     IT = IT + 1                                                 84000
          ICALL=167                                                   85000
          CALL PRINTIT(ICURRAID)                                      86000
          CALL PRINTIT(INSTKCPM)                                      87000
          CALL PRINTIT(ITGTASGN)                                      88000
            IF(IT.LE.ILASTGT) IA, 100                                 89000
C ** ENTRY INSERT                                                     90000
   19     J = IT                                                      91000
          MYASGN(IT)=0                                                92000
   20     DO  30 ISTRK=1,N                                            93000
          IF(INDEXNO(J).EQ.INDEXNO(JTGT(ISTRK,ISRT)))  90, 30         94000
C           SKIP IF SAME TARGET IN SORTIE                             95000
   30       CONTINUE                                                  96000
          IF(NFIX.GE.NWVEH)90,31                                      96200
   31 CONTINUE                                                        96400
C***        TESTS OK SO ASSIGN STRIKE TO SORTIE                       97000
          MYASGN(J)=1                                                 98000
          IF(IJFIXR(J))310,311                                        98200
  310 NFIX=NFIX+1                                                     98400
  311 CONTINUE                                                        98600
C           INSERT TARGET IN SORTIE IN ORDER OF RHO                   99000
   32     DO 40 ISTRK=1,N                                            100000
            ITEMP=JTGT(ISTRK,ISRT)                                   101000
            IF(RHO(J).LT.RHO(ITEMP))  35,40                          102000
   35       JTGT(ISTRK,ISRT)=J                                       103000
            J=ITEMP                                                  104000
   40       CONTINUE                                                 105000
C         ADD REMAINING STRIKE AT END OF LIST                        106000
          ICALL=130                                                  107000
          WRITE(6,12,ERR=8)ARRAYSIZE)                                108000
          IF(N.EQ.NSTRK) 60,50                                       109000
   50     N=N+1                                                      110000
          JTGT(N,ISRT)=J                                             111000
   60     TGTSASGA=TGTSASGA + 1.0                                    112000
          IF(TGTSASGA.GT.TSTLIM)  100,90                             113000
   90 GO TO LVINSERT                                                 114000
  100 MASGN(ISRT) = 1                                                115000
          CALL TIMER(1)                                              116000
          ICALL=168                                                  117000
          CALL PRINTIT(INSTKCPM)                                     118000
           ICALL=84                                                  119000
           CALL PRINTIT(ICURRAID)                                    120000
          ICALL=14                                                   121000
          CALL PRINTIT(ITGTASGN)                                     122000
          IOTA=IOTA-1                                                123000
          RETURN                                                     124000
          END                                                        125000
```

IDENT TGTASGN

PROGRAM LENGTH		00523
ENTRY POINTS	TGTASGN	00006
BLOCK NAMES		
	ARAYSIZE	00011
	PRINTOPT	00025
	TGTASGN	00010
	INDEX	00007
	CURRAID	04540
	2	04230
	4	02114
	3	00167
	FIXALL	00107
	RAIDSMR	01445
	IRESRCH	30001
	DEBUG	00025
	PCALL	00002
EXTERNAL SYMBOLS		
	Q30000A0	
	Q80GICT.	
	PRINTIT	
	PRNTF	
	TIMEME	

```
C17027  ATTNLOC
P00470  BEGIN.      00471
C33737  CNTRYLOC
P00505  COUNT.      00334   00335
C23257  DELAY
C25373  DELONG
C27507  DESIG
P00001  DICT.       00010   00021   00027   00035   00040   00043   00120   00123   00126   00155   00160
                    00163   00226   00231   00234   00254   00257   00262   00357   00412   00417   00423
                    00427
C00311  DISTR
C12577  DISTOUT
C14713  DISTREC
P00472  ENDING.     00011   00433   00470   00471
P00000  EXIT.       00473
C36053  FLAG
P00003  FORMAT.     00014   00024   00354
C00001  ICALL       00017   00017   00023   00033   00033   00110   00110   00152   00153   00223   00224
                    00251   00252   00352   00353   00414   00415   00421   00425
C00001  ICAMFROM    00016
C00006  ICMGPLAN
C00014  ICORCAR
C00017  ICORIDOR
C00005  ICORR
C00016  ICORRSHR
C00002  ICURRAIO    00036   00121   00150   00227   00255   00424
C00001  ICURSRTY
C00021  IDEBUG      00022
C00003  IDITCH
C10463  IOPEN
C00004  IEVAL
C00003  IFSTGT      00112   00114   00114   00132   00133   00160   00166   00202   00202   00206   00206
                    00207   00213   00216   00217   00237   00237
P00506  IFSTSRT     00046   00171   00200   00201
C00005  IFSTVEH     00045   00045   00051   00051
P00507  IGOTO.      00071
C00013  IGRPDATA
C00012  IGRPTYPE
C00010  IINDEX
C00007  IINITOPT
C00000  IJFIX
C00043  IJFIXR      00324
C00106  IKFIX
C00004  ILASTGT     00104   00104   00110   00110   00111   00115   00134   00135   00140   00140   00210
                    00212   00212   00220   00221   00265   00265
P00510  ILASTSRT    00050   00073   00102   00103
P00434  INDOOR.     00301   00335   00436   00446   00456
P00435  INDOOR2.    00370   00457   00466
C00003  INDEXNO     00305   00305   00307   00307
C04374  INDEXVEH
C00020  INEXTFLT
P00470  INITIAL.    00011
C00001  IORIG
C00000  IOTA        00012   00012   00013   00015   00015   00431   00431   00432
```

```
C00000  IPASS
C00005  IRAIDSHR
C00002  IRECOVER
C00060  IRESWCH   00130  00130  00130  00136  00214  00214  00222  00222
C00003  IRSTKCPY  00041  00124  00161  00232  00260  00320
C00090  ISEG
P00511  ISFCSRT   00052  00055  00406
C00007  ISIDE     00070
C00000  ISOWTY
P00512  ISPT      00074  00076  00172  00174  00404  00452
C00000  ISRTYTGT
P00513  ISTHR     00274  00311  00331  00443
C00015  ISTRKSUM
C00004  IT        00141  00141  00142  00142  00150  00150  00151  00165  00165  00240  00240
                  00241  00241  00247  00247  00250  00264  00264  00270  00270  00272  00273
P00514  ITEMP     00337  00342  00347
C00011  ITGTASGN  00044  00127  00164  00235  00263  00430
P00403  .100      00131  00167  00215  00266  00377
P00171  .12       00072
P00202  .13       00210  00211  00236
P00212  .130
P00206  .14
P00214  .140
P00216  .142
P00114  .148      00113
P00130  .150
P00237  .15       00204  00205
P00132  .152
P00241  .16       00266  00267
P00245  .17       00243
P00247  .18       00244  00245
P00270  .19       00147  00246
P00073  .2
P00275  .20
P00104  .3        00112  00113  00137
P00311  .30       00310
P00320  .31       00316
P00326  .310      00325
P00330  .311      00325
P00330  .32
P00345  .35
P00110  .4
P00351  .40       00343  00344
P00140  .5        00106  00107
P00365  .50       00364
P00142  .A        00167  00170
P00372  .60       00364
P00146  .7        00144
P00150  .8        00145  00146
P00400  .90       00310  00314  00317  00376  00374
P00475  .ERASER.  00025  00030  00355  00360
P00003  ..100000  00014
P00004  ..100001  00031
P00005  ..100002  00361
```

P00474	.NSTIFF.	00060	00066	00304	00306							
P00515	J	00271	00304	00321	00340	00345	00350	00370				
C00002	JCORR											
C00001	JGROUP											
C00023	JOUTSRT											
C00024	JPAYLOAD											
C00022	JREFUEL											
C00310	JTGT	00302	00302	00336	00336	00346	00346	00371	00371			
C00006	JTGTIN											
C00006	LSTVEH	00047	00047	00407	00407							
P00516	LWINSERT	00147	00246	00400								
C00010	MAXPA											
C00000	MBASEPS											
C00001	MC											
C00007	MFLY											
C00003	ML											
C00005	MSORTY											
C00006	MSRT											
C00004	MSTRK	00363	00363									
C00002	MT											
C02260	MYASGN	00105	00105	00143	00143	00203	00203	00242	00242	00273	00274	00321
		00322										
C00000	MYBASE	00056	00056									
P00517	N	00100	00176	00313	00333	00362	00365	00366	00403	00463		
C00144	NASGN	00076	00077	00174	00175	00404	00405					
C01135	NASMPV											
C00621	NB											
P00520	NFIX	00055	00315	00326	00327							
C00001	NRVEH											
C00000	NT	00133	00134	00217	00220							
C00002	NTGT											
C00000	NVEH											
C01133	NWPC											
C00623	NWPV	00061	00061									
P00521	NWVEH	00062	00063	00315								
P00436	P00001.U	00440										
C00000	PHI											
X00003	PRINTIT	00020	00034	00037	00042	00117	00122	00125	00154	00157	00162	00225
		00230	00233	00253	00256	00261	00414	00422	00426			
X00004	PRNTF	00026	00356									
X00001	Q3000040	00323										
X00002	REJECT.	00000	00007									
C02114	RHO	00340	00341	00342	00343							
C21143	RVAL											
C31623	TASK											
P00006	TGTASGN	00006										
C00001	TGTLIM	00067	00067	00070	00375							
C00000	TGTSASGN	00372	00372	00374	00374	00375						
C01134	TGTSPWNR	00036	00066									
X00005	TIMEME	00411										
C06347	TIMEPREM											
C02117	TLAT											
C04233	TLONG											
P00407	TS00001.	00053										

```
P00313  TS00002.  00306
P00352  TS00003.  00334
P00442  UP00001.  00277  00312  00332  00436  00443  00444  00445  00447  00447
P00451  UP00002.  00075  00173  00452  00453  00454  00460  00460
P00462  UP00011.  00101  00177  00367  00463  00464  00465  00467  00467
C00622  VPRHESE
P00854  WS00001.  00410  00410
P00301  WS00002.  00314  00314
P00336  WS00003.  00351
P00522  WS        00332  00362
   00244 SYMBOLS
```