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COMMAND AND CONTROL TECHNICAL CENTER WASHINGTON DC
INSTITUTE FOR DEFENSE ANALYSES TACTICAL WARFARE (TACWAR) MODEL.--ETC(U)
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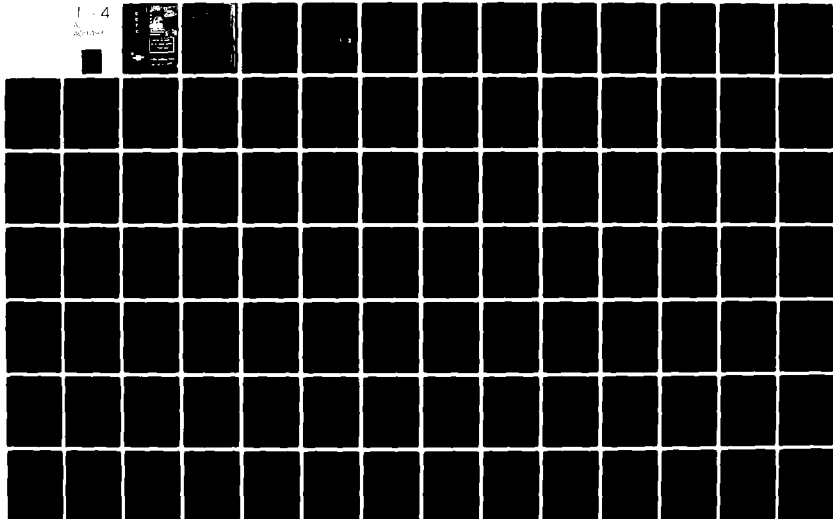
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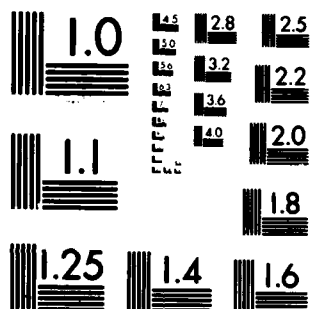
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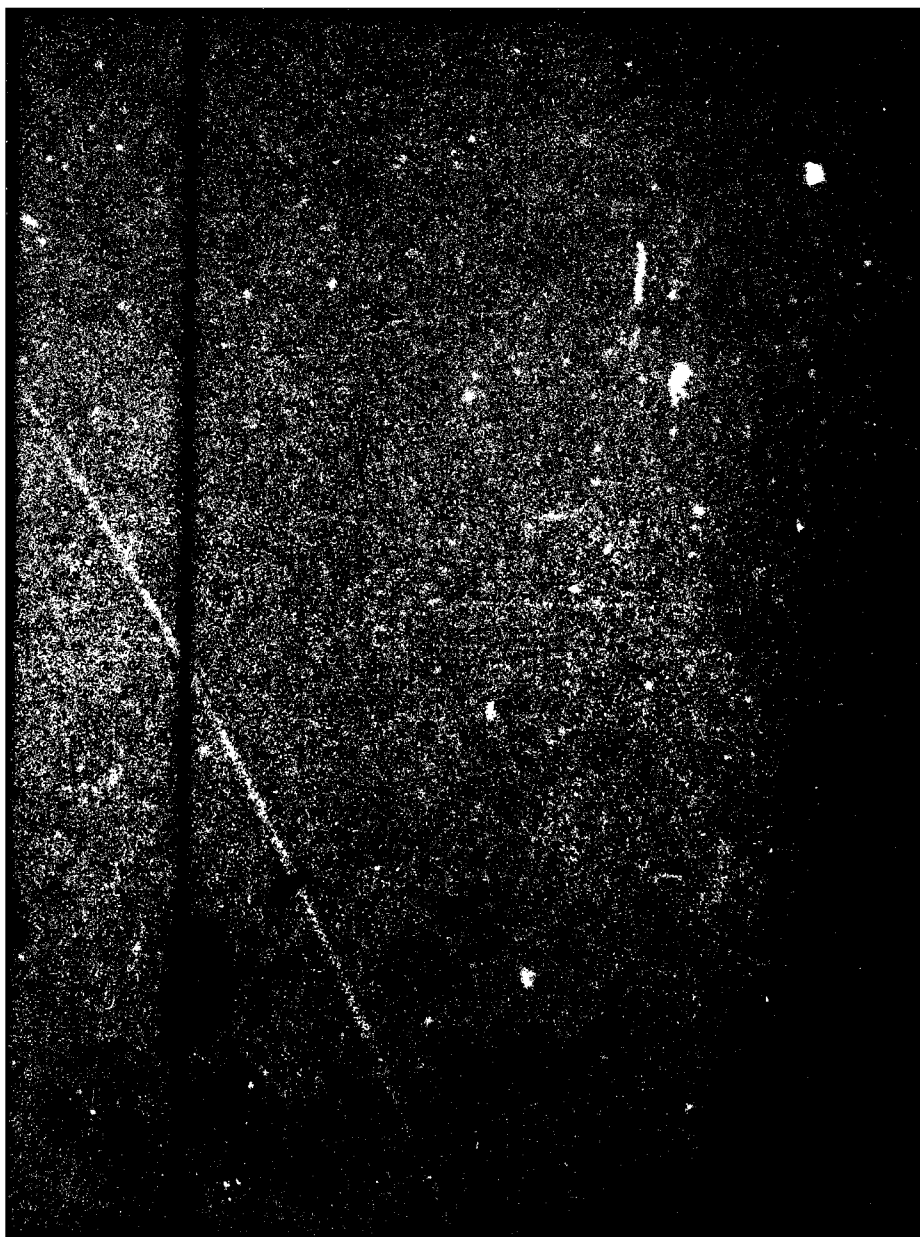


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COMMAND AND CONTROL TECHNICAL CENTER

Computer System Manual CSM-MM-237-77

6 September 1977

INSTITUTE FOR DEFENSE ANALYSES
TACTICAL WARFARE (TACWAR) MODEL.

Program Maintenance Manual.

Part III

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ABSTRACT

The Institute for Defense Analyses (IDA) Tactical Warfare (TACWAR) model is a fully-automated combat simulation that can be used to assess the interaction of combat forces employing conventional, nuclear, and chemical weapons in a theater-wide campaign. This document presents the information necessary for programmer personnel to maintain the TACWAR model.

GLOSSARY

<u>Abbreviation</u>	<u>Meaning</u>
AAA	antiaircraft artillery
ABA	airbase attacker
ABAE	airbase attacker escort
ABAS	airbase attacker diverted to SAM-suppression
CAS	close air support
CASA	close-air-support attacker
CASD	close-air-support defender
CASE	close-air-support escort
CASS	close-air-support diverted to SAM-suppression
CEP	circular error probable
COMMZ	communication zone
FEBA	forward edge of battle area
INT	interdiction of division in reserve
QRA	quick reaction alert
SAM	surface-to-air missile
SSM	surface-to-surface missile
TOE	table of organization and equipment

APPENDIX D
EXECUTION PROCEDURES FOR THE TACWAR MODEL

1. INTRODUCTION

Successful execution of the TACWAR model requires the user to prepare appropriate job control instructions, as well as a set of model input data, if such data do not already exist on a tape or disk file. The job control instructions define the particular user data files to be accessed by the model, the TACWAR executable H* file, and optionally, the remote site to which printed output is to be directed. The model input data are a set of geographical and tactical parameters, force descriptions and allocations, and indexes which define the battle scenario in quantitative terms.

2. EXECUTING TACWAR IN THE BATCH MODE

The user may execute TACWAR by entering model data in punched card form, or he may place the data on a permanent disk file for use in a later execution. Any number of subsequent executions may be performed using the disk file as the source of model input data, and the IDAGAM data file update program, discussed below, allows the user to add, change or delete cards in the file. Sample deck structures illustrating the proper usage and sequencing of job control cards in executing TACWAR are contained in figures 139 through 144.

3. UPDATING INPUT FILES IN THE BATCH MODE

Although the IDAGAM data file update program was created to alter input files for the IDAGAM Model, it may be used for TACWAR files in the same manner. See reference 15 for a description of this program.

3.1 Data File Update Program Input Requirements

Inputs to the data file update program consist of job control instructions and update directives. Update program job control cards include instructions for accessing the update program data file and its executable H* file, and also instructions which set up an auxiliary file containing the modified data files. The update directives cause the program to modify the files by adding, deleting, or replacing specific cards. Figure 144 contains a sample deck structure illustrating the proper usage and sequencing of job control cards when the update program is executed.

```

$      SNUMB  installation - dependent
$      IDENT  installation - dependent
$      USERID installation - dependent
$      CONVER NSPIN
$      LIMITS 10,,,5K
$      DATA  IN,,COPY
.
.
FILE-10 INPUTS
.
.
$      ENDCOPY
$      PRMFL  OT,W,S,catalog - file string for file 10 input
              data
$      CONVER NSPIN
$      LIMITS 10,,,5K
$      DATA  IN,,COPY
.
.
FILE-20 INPUTS
.
.
$      ENDCOPY
$      PRMFL  OT,W,S,catalog - file string for file 20 air-
              base data
$      ENDJOB
***EOF

```

Figure 139. Sample Card Deck To Create TACWAR Data Files


```

$      SNUMB  installation - dependent
$      IDENT  installation - dependent
$      USERID installation - dependent
$      PROGRAM RLHS
$      LIMITS 30,80K,-4K,30K
$      PRMFL  H*,R,R,catalog - file string for TACWAR H* file
$      PRMFL  10,R,S,catalog - file string for file 10 input
                        data
$      PRMFL  20,R,S,catalog - file string for file 20 air-
                        base data
$      FILE   15,X1R,10L
$      SYSOUT 07
$      SYSOUT 08
$      SYSOUT 09
$      SYSOUT 04
$      ENDJOB
***EOF

```

Figure 140. Sample Card Deck To Execute TACWAR Using Data Files

```

$      SNUMB  installation - dependent
$      IDENT  installation - dependent
$      USERID installation - dependent
$      PROGRAM RLHS
$      LIMITS 30,80K,-4K,30K
$      PRMFL  H*,R,R,catalog - file string for TACWAR H* file
$      DATA  10
.
.
FILE-10 INPUTS
.
.
$      DATA  20
.
.
FILE-20 INPUTS
.
.
$      FILE   15,X1R,10L
$      SYSOUT 07
$      SYSOUT 08
$      SYSOUT 09
$      SYSOUT 04
$      ENDJOB
***EOF

```

Figure 141. Sample Card Deck To Execute TACWAR Using Punched Data Decks

```

$      SNUMB  installation - dependent
$      IDENT  installation - dependent
$      USERID installation - dependent
$      PROGRAM RLHS
$      LIMITS 30,80K,-4K,30K
$      PRMFL  H*,R,R,catalog - file string for TACWAR H* file
$      TAPE9  10,X1D,,reel number
$      TAPE9  20,X2D,,reel number
$      FILE   15,X3R,10L
$      SYSOUT 07
$      SYSOUT 08
$      SYSOUT 09
$      SYSOUT 04
$      ENDJOB
***EOF

```

Figure 142. Sample Card Deck To Execute TACWAR Using Tape Files

```

$      SNUMB  installation - dependent
$      IDENT  installation - dependent
$      USERID installation - dependent
$      PROGRAM RLHS
$      LIMITS 30,80K,-4,30K
$      PRMFL  H*,R,R,catalog - file name for TACWAR H* file
$      PRMFL  10,R,S,catalog - file name for data file 10
                        input data
$      PRMFL  20,R,S,catalog - file name for data file 20
                        airbase data
$      FILE   15,X1R,10L
$      SYSOUT 07
$      SYSOUT 08
$      SYSOUT 09
$      REMOTE 04,BS(see note 1)
$      ENDJOB
***EOF

```

Note 1: Identification code will depend on location of remote printer.

Figure 143. Sample Card Deck To Execute TACWAR Using Data Files and To Redirect Output to a Remote Printer

```

$      SNUMB  installation - dependent
$      IDENT  installation - dependent
$      USERID installation - dependent
$      PROGRAM RLHS
$      LIMITS 10,20K,,5K
$      PRMFL  H*,R,R,catalog - file string for IDAGAM update
                        program H* file
$      PRMFL  10,W,S,catalog - file string for file 10 input
                        data
$      SYSOUT 07
$      SYSOUT 08
$      DATA  I*,,COPY
.
.
FILE-10 UPDATES
.
.
$      ENDCOPY
$      PROGRAM RLHS
$      LIMITS 10,20K,,5K
$      PRMFL  H*,R,R,catalog - file string for IDAGAM update
                        program H* file
$      PRMFL  20,W,S,catalog - file string for file 20 air-
                        base data
$      SYSOUT 07
$      SYSOUT 08
$      DATA  I*,,COPY
.
.
FILE-20 UPDATES
.
.
$      ENDCOPY
$      PROGRAM RLHS
$      LIMITS 30,80K,-4K,30K
$      PRMFL  H*,R,R,catalog - file string for TACWAR H* file
$      PRMFL  10,R,S,catalog - file string for file 10 input
                        data
$      PRMFL  20,R,S,catalog - file string for file 20 air-
                        base data
$      SYSOUT 07
$      SYSOUT 08
$      SYSOUT 09
$      SYSOUT 04
$      ENDJOB
***EOF

```

Figure 144. Sample Card Deck To Update Existing Data Files and To Execute TACWAR

3.2 Alter Numbers

Each record on the data base disk file is assigned an alter number based on its position within the file. Thus, the first card image in the file has alter number 1; the fifth image, alter number 5; and the fortieth record, alter number 40. Alter numbers are not a physical part of the file, but are printed sequentially with the corresponding card images when the file contents are listed. Each time the file is updated, a new listing is produced, complete with adjusted alter numbers for every record in the file. If the updated version of the file has been saved, the listing of the updated file must be kept by the user to retain the alter numbers required for future updating. However, the user can obtain at any time a listing of the data file with the alter numbers by executing the update program with %SAVE as the only directive.

3.3 Data File Update Program Composition Rules

Inputs to the data file update program are in two forms, data cards and directive cards. The following paragraphs explain their use.

3.3.1 Data Cards. Data cards which are input to the update program follow precisely the same formats as cards used to construct TACWAR data files. Their preparation is discussed in section 3 of the Maintenance Manual.

3.3.2 Directive Cards. A directive card is distinguished by the presence of the percent character (%) as the first nonblank character on the card. Directive card input is in free-field format, and thus may appear in any column from 1 through 80. The form of any update directive is as follows:

% X m,n

The "%" designates a directive card, X represents the type of update, and m and n refer to specific card alter numbers in the data base. Input formats for the five directives are explained in detail below.

All directives except %SAVE are followed by new data card images, and all updates are entered in numerical order by alter number. The directive %DELETE is the only one which may specify an ending alter number.

The actual update modifications are performed on a temporary workfile that is a copy of the original file. The last update directive issued, %SAVE, implements all preceding updates on the original files, adjusting alter numbers to suit.

3.3.2.1 %ADD Directive. %ADD or %A causes new data cards to be added to the data file, beginning immediately after the card image whose alter number is m.

3.3.2.2 %DELETE Directive. %DELETE or %D causes the card image with alter number m to be deleted from the file. If more than one successive card image is to be deleted, n specifies the alter number of the last card image to be deleted.

3.3.2.3 %REPLACE Directive. %REPLACE or %R causes the card having alter number m to be replaced with the data card or cards following the %R card. When the %R card is not followed by any data cards, the %R directive serves the same purpose as the %D directive.

3.3.2.4 %NEW Directive. %NEW or %N indicates to the update program that the data cards following it constitute an entirely new data file.

3.3.2.5 %SAVE Directive. %SAVE or %S causes the update program to replace the old data file in permanent storage with the new, updated version, and to print out a copy of the new file with alter numbers.

4. EXECUTING TACWAR FROM THE REMOTE TERMINAL

Execution of the TACWAR model can be initiated from a remote terminal through the use of a JCL file in TSS format. An example of such a file is shown in figure 18 in subsection 4.1.3. The use of a parameter card allows for quick alteration of five options on the JCL file, each of which is listed below.

<u>Parameter Number</u>	<u>Option</u>
#1	file name of TACWAR H* file
#2	file name of TACWAR user-selected input data file

#3	file name of TACWAR airbase data file
#4	maximum processing time for execution
#5	maximum number of lines to be printed during execution

4.1 Remote Terminals

The user may execute the TSS JCL file from four types of remote terminals: the VIP 786W, the IBM 2741, the KSR 33 TTY, or the VIP 7705. Each unit requires different operating techniques, but produces the same communication between the HIS 6080 and the JCL file. The differences in operating techniques are described below.

4.1.1 VIP 786W. The VIP 786W is a keyboard/display terminal. There are two power switches on the unit. One is located on the base of the screen, and the other is located on the front of the control unit under the desk top. Both of these switches must be in the "ON" position prior to use. Every response entered by the user must be followed by pressing the ETX, LR and TX keys. These three keys transmit a line.

The appearance of the characters "^*" on the screen indicates that the information already displayed on the screen represents only a portion of the computer's transmission. The user must immediately press the FF and TX keys in order to read the remainder of the message.

4.1.2 IBM 2741. This terminal is a keyboard teletype-compatible terminal which is activated by a single power switch located on the lower right section of the keyboard. In addition, the transmission switch located on the left side of the unit must be in the "LINE" position. Prior to use of this unit, notification must be given to the CCTC scheduler that the terminal is to be switched for HIS 6080 mode of operation. This terminal contains both upper and lower case letters. Since some user responses must be entered in upper case letters, the user is advised to press the shift key for all responses. The RET key transmits input and must follow each terminal user response.

4.1.3 KSR 33 TTY. The KSR 33 is a teletype terminal which is activated by a power switch located under the right-hand side of the unit. The transmission switch which is located on the right side of the keyboard must be in the "LINE" position for operation. All user responses must be terminated by pressing the RET key.

4.1.4 VIP 7705. The VIP 7705 is a keyboard/display terminal which is activated by a power button located in the lower right corner of the display unit. The red light in this switch must be on prior to use. All user responses must be terminated by pressing the TRANSMIT-MSG/PAGE key. The appearance of the characters "^*" on the screen indicates that the information already displayed on the screen represents only a portion of the computer's transmission. The user must immediately press the CLEAR key, the space bar, and the TRANSMIT-MSG/PAGE key in order to receive the remainder of the computer message.

4.2 Log-On Procedures

To access the TACWAR TSS JCL file, the user must first log on or be accepted as a user of the HIS Time-Sharing System. Descriptions of the log-on procedures presented below are specific to the HIS 6080 Time-Sharing System operational at CCTC in the Pentagon. Variations may exist at other installations and should be verified before attempting use at such sites.

If the system responds with a "LINE DISCONNECTED" message while attempting to log on, the user should call scheduling and report the ID number of the terminal, request that the terminal be unlocked, and wait a few minutes before repeating the log-on procedure. The procedure for logging on via the above-mentioned terminals is described in the following steps. User responses are underlined.

a. Step 1.

- (1) VIP 786W. Press the FF key and enter:
\$*SLOG22L,TSS.
- (2) IBM 2741. Press the RET key. The computer will respond with "PROGRAM NAME____". The user should enter TSS.

- (3) KSR 33 TTY. Press the CTRL and A keys simultaneously. The computer will respond with "PROGRAM NAME."
The user should enter TSS.
- (4) VIP 7705. Press the CLEAR key and enter:
\$*\$LOG24,TSS.
- b. Step 2. The computer will respond with channel identification and print, "USERID\$PASSWORD". Enter your USERID and PASSWORD separated by a \$.
- c. Step 3. The computer will respond, "IDENT?". Enter badge number, 5-character program name, branch number, 10-character user's name, project code and integer 10. Example: 4981,XXXXX,315, SAYLOR....,671,10.
- d. Step 4. The computer will then respond, "CLASSIFICATION OF YOUR OUTPUT?". As appropriate, enter one of the following security classification codes: UZZ, CZZ, SZZ, TZZ.
- e. Step 5. The computer will reply, "CLASSIFICATION OF FILES YOU WILL CREATE?". As appropriate, enter one of the following security classification codes: UZZ, CZZ, SZZ, TZZ.

4.3 Altering and Executing the JCL File

Procedures for changing the TSS JCL file are described in subsection 4.1.3 of the maintenance manual.

To run the TSS JCL file, the user must log on to a terminal and follow the steps presented below:

- a. Step 1. The computer will ask, "SYSTEM?". The user should enter CARDIN, which will activate the system program that enters a terminal-initiated job into the computer for execution.
- b. Step 2. The computer will then ask, "OLD OR NEW". The user should enter OLD and the catalog file for the TSS JCL file (e.g., OLD 674IDP00/SAYLOR/TACWAR/TWTSS). This signifies that the JCL file is to be executed.

- c. Step 3. The computer will respond with "READY" and an "*". The user should enter RUN which initiates batch execution of TACWAR. A job number of the form SNUMB XXXXT will be printed. This number should be retained by the user to permit retrieval of TACWAR output printed at the central site from the control disk.
- d. Step 4. The computer will then ask, "CARD FORMAT, DISPOSITION?" The user should enter NORM to move line numbers to columns 73-80 and to obtain normal positioning of characters.
- e. Step 5. The computer will then print an "*". The user should enter BYE which will disconnect the user from the Time-Sharing System.

Figure 145 illustrates the interaction between a user and a VIP 7705 terminal in order to change the TSS JCL file and to execute the TACWAR model via the terminal. User responses are underlined.

5. UPDATING INPUT FILES FROM THE REMOTE TERMINAL

5.1 File IAD

To alter the airbase data file IAD, the user must log on to a terminal and follow the steps presented below:

- a. Step 1. The computer will ask, "SYSTEM?". The user should enter BCDASC and the catalog file string for the airbase data file (e.g., BCDASC 674IDP00/SAYLOR/TACWAR/ABD). A copy of the BCD file ABD will be converted to ASCII format for access from the terminal.
- b. Step 2. The computer will then ask, "LINE NUMBERS?" The user should enter AUTO to obtain line numbers on the ASCII copy of his file.
- c. Step 3. The computer will then respond, "TAB CHARACTERS AND SETTINGS?" The user should enter ASIS to retain the file with no tab characters.

\$*\$LOG24,TSS
USERID\$PASSWORD
674CDP02\$PASSWORD
IDENT?
4981,XXXXX,315,SAYLOR....,671,10
CLASSIFICATION OF YOUR OUTPUT?
UZZ
CLASSIFICATION OF FILES YOU WILL CREATE?
UZZ
SYSTEM?
CARDIN
OLD OR NEW
OLD 6741DP00/SAYLOR/TACWAR/TWTSS
READY
*
30\$:PARAM:TWHSTAR,TWDB,ABA,90,120K
RESAVE TWTSS
TWTSS SAVED
*
RUN
XXXXT
CARD FORMAT, DISPOSITION?
NORM
*
BYE

Figure 145. Sample Terminal Session to Alter and Execute the TSS JCL File

- d. Step 4. The computer will again ask, "SYSTEM?", to which the user should respond CARDIN. This response tells the Honeywell Time-Sharing System that the CARDIN editing features are to be used.
- e. Step 5. The computer will ask "OLD OR NEW-". The user should enter SAME to signify that the file to be updated is the ASCII file just created.
- f. Step 6. The user should update the file using the procedures described for updating the TSS JCL file.
- g. Step 7. When the user has completed his changes and resaved his file, he should enter ASCBCD *; and the catalog-file string for the original (or new) airbase data file (e.g., ASCBCD *;674IDP00/SAYLOR/TACWAR/ABD). This command instructs the computer to convert the current ASCII file to BCD and store it in the specified permfile.
- h. Step 8. The computer will respond "LABELS?" The user must respond STRIP so that the line numbers which were added for updating will be stripped from the file.
- i. Step 9. The computer will respond "TAB CHARACTERS AND SETTINGS?" The user should enter ASIS to retain the file with no tab characters.
- j. Step 10. The computer will then print an "*". This signifies that this activity has been completed. The computer then awaits further instructions from the user to start a new activity or to disconnect from the terminal through a response of BYE. If the user plans next to execute the TSS JCL file with this data file, he should enter REMOVE CLEARFILES at this point to remove the data file from his TSS Available File Table (AFT).

5.2 File MIT

The user-specified input data file MIT contains 80 columns of data, and therefore, cannot be updated using the procedures described above from a terminal which displays only 80 characters per line, e.g., VIP 7705. This updating procedure requires additional space for the line numbers.

However, the TSS TEXT EDITOR system can be used to alter, insert, or delete lines from the MIT file, once it has been converted to ASCII format with no line numbers. See reference 16 for a detailed description of the TEXT EDITOR system.

APPENDIX E
ALPHABETIC LISTING OF TACWAR VARIABLES

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APPENDIX E

Appendix E contains an alphabetic listing of TACWAR variables and includes their program definitions. Each variable is classified as "input" (I) or "working" (W) according to program usage. For each array variable, the array subscripts and dimensions are also appended.

The CDC 6400 FORTRAN compiler accepts a maximum of three dimensions for any array. Therefore, when a variable depends on four parameters, two of the parameters must be represented by a single index. A special notation is used in this appendix to indicate such variables. For example, FAAEFF, which depends on the indexes IAC, IR, KR, and L, is dimensioned by (IAC, IR, KR + NR * (L-1)) where NR is the maximum value of KR. The third index is written in such a manner as to give the unique formula for determining how the last two parameters are combined. In this case, the regions (KR) for side L = 1 are followed by the regions (KR) for side L = 2.

The code for some portions of the TACWAR model was obtained from other programs which used indexes for some variables that need not be dimensioned in TACWAR. Therefore, these variables are dimensioned by 1 in TACWAR and listed as arrays in this appendix (e.g., ALRSRA(1)). The user is warned that although these variables are dimensioned in TACWAR, the fact that they are dimensioned by 1 is used in the code.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
AAACT(IAAC,J,L) (2,2,2)	Alphanumeric identifier for type IAAC army-air carrier.* IAAC= 1,...,NAAC(L) and J = 1,2.	I
AACDS(IAAC,IS,L) (3,8,2)	Number of army-air carriers of type IAAC in active battle area of sector IS for side L.	W
AACS(IAAC,IS,L) (3,8,2)	Number of army-air carriers of type IAAC in sector IS for side L.	I
AACT(IAC,J,L) (7,2,2)	Alphanumeric identifier for type IAC aircraft on side L (J = 1,2).*	I
AAFCT(IAFAC,J,L) (2,2,2)	Alphanumeric identifier for type IAFAC air force reconnaissance aircraft.* IAFAC = 1,2.	I
AAFS(IAFS,J,L) (4,2,2)	Alphanumeric identifier for type IAFS air force air sensor.* IAFS = 1,...,NAFS(L).	I
AAMT(IAM,J,L) (6,2,2)	Alphanumeric identifier for type IAM air munition.* IAM = 1,...,NAM(L).	I
AAST(IAS,J,L) (4,2,2)	Alphanumeric identifier for type IAS air sensor.*	I
ABAFA(IAC) (7)	Number of ABAFA aircraft of type IAC that are alive and continuing on mission.	W

*J is used to make the alphanumeric identifier machine compatible. Names are 8 characters in length and are input in 2 (J) four character strings.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ABAAFD(IAC) (7)	Number of ABAFA aircraft of type IAC that are damaged but not killed.	W
ABAAFH(IAC) (7)	Number of ABAFA aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABAAFK(IAC) (7)	Number of ABAFA aircraft of type IAC that are killed.	W
ABAARA(IAC) (7)	Number of ABARA aircraft of type IAC that are alive and continuing on mission.	W
ABAARD(IAC) (7)	Number of ABARA aircraft of type IAC that are damaged but not killed.	W
ABAARH(IAC) (7)	Number of ABARA aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABAARK(IAC) (7)	Number of ABARA aircraft of type IAC that are killed.	W
ABAAZA(IAC) (7)	Number of ABAZA aircraft of type IAC that are alive and continuing on mission.	W
ABAAZD(IAC) (7)	Number of ABAZA aircraft of type IAC that are damaged but not killed.	W
ABAAZH(IAC) (7)	Number of ABAZA aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABAAZK(IAC) (7)	Number of ABAZA aircraft of type IAC that are killed.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ABADFA(IAC) (7)	Number of ABAFD aircraft of type IAC that are alive and continuing on mission.	W
ABADFD(IAC) (7)	Number of ABAFD aircraft of type IAC that are damaged but not killed.	W
ABADFH(IAC) (7)	Number of ABAFD aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABADFK(IAC) (7)	Number of ABAFD aircraft of type IAC that are killed.	W
ABADRA(IAC) (7)	Number of ABARD aircraft of type IAC that are alive and continuing on mission.	W
ABADRD(IAC) (7)	Number of ABARD aircraft of type IAC that are damaged but not killed.	W
ABADRH(IAC) (7)	Number of ABARD aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABADRK(IAC) (7)	Number of ABARD aircraft of type IAC that are killed.	W
ABADZA(IAC) (7)	Number of ABAZD aircraft of type IAC that are alive and continuing on mission.	W
ABADZD(IAC) (7)	Number of ABAZD aircraft of type IAC that are damaged but not killed.	W
ABADZH(IAC) (7)	Number of ABAZD aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABADZK(IAC) (7)	Number of ABAZD aircraft of type IAC that are killed.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ABAEFA(IAC) (7)	Number of ABAFE aircraft of type IAC that are alive and continuing on mission.	W
ABAEFD(IAC) (7)	Number of ABAFE aircraft of type IAC that are damaged but not killed.	W
ABAEFH(IAC) (7)	Number of ABAFE aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABAEFK(IAC) (7)	Number of ABAFE aircraft of type IAC that are killed.	W
ABAERA(IAC) (7)	Number of ABARE aircraft of type IAC that are alive and continuing on mission.	W
ABAERD(IAC) (7)	Number of ABARE aircraft of type IAC that are damaged but not killed.	W
ABAERH(IAC) (7)	Number of ABARE aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABAERK(IAC) (7)	Number of ABARE aircraft of type IAC that are killed.	W
ABAEZA(IAC) (7)	Number of ABAZE aircraft of type IAC that are alive and continuing on mission.	W
ABAEZD(IAC) (7)	Number of ABAZE aircraft of type IAC that are damaged but not killed.	W
ABAEZH(IAC) (7)	Number of ABAZE aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABAEZK(IAC) (7)	Number of ABAZE aircraft of type IAC that are killed.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ABAF (IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying ABA missions against forward air bases in region IR.	W
ABAFD (IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying area defense missions in front of forward airbases in region IR.	W
ABAFE (IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying ABA escort missions against forward airbases in enemy region IR.	W
ABAFS (IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying SAM suppression missions against forward airbases in region IR.	W
ABARA (IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying ABA missions against rear airbases in region IR.	W
ABARD (IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying area defense missions in front of rear airbases in region IR.	W
ABARE (IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying ABA escort missions against rear airbases in region IR.	W
ABARS (IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying SAM suppression missions against rear airbases in region IR.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ABASEF(IS,L) (8,2)	Number of actual air bases that compose the notional forward airbase in sector IS for side L.	W
ABASER(IS,L) (8,2)	Number of actual airbases that compose the notional rear air base in sector IS for side L.	W
ABASEZ(L) (2)	Number of actual airbases that compose the notional COMMZ air base for side L.	W
ABASFA(IAC) (7)	Number of ABAFS aircraft of type IAC that are alive and con- tinuing on mission.	W
ABASFD(IAC) (7)	Number of ABAFS aircraft of type IAC that are damaged but not killed.	W
ABASFH(IAC) (7)	Number of ABAFS aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABASFK(IAC) (7)	Number of ABAFS aircraft of type IAC that are killed.	W
ABASRA(IAC) (7)	Number of ABARS aircraft of type IAC that are alive and con- tinuing on mission.	W
ABASRD(IAC) (7)	Number of ABARS aircraft of type IAC that are damaged but not killed.	W
ABASRH(IAC) (7)	Number of ABARS aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABASRK(IAC) (7)	Number of ABARS aircraft of type IAC that are killed.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ABASZA(IAC) (7)	Number of ABAZS aircraft of type IAC that are alive and continuing on mission.	W
ABASZD(IAC) (7)	Number of ABAZS aircraft of type IAC that are damaged but not killed.	W
ABASZH(IAC) (7)	Number of ABAZS aircraft of type IAC that are aborting mission and returning home undamaged.	W
ABASZK(IAC) (7)	Number of ABAZS aircraft of type IAC that are killed.	W
ABATPS(IAC,L) (7,2)	Number of ground targets per sortie that a side L type IAC aircraft can engage on ABA missions.	I
ABAZA(IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying ABA missions against COMMZ airbases in region IR.	W
ABAZD(IAC,L) (7,2)	Number of aircraft (sorties) of type IAC on side L flying area defense missions in front of COMMZ airbases.	W
ABAZE(IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying ABA escort missions against COMMZ airbases in region IR.	W
ABAZS(IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying SAM suppression missions against COMMZ airbases in region IR.	W
ACCZ(IAC,L) (7,2)	Number of side L type IAC aircraft (non-QRA) on COMMZ airbases.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ACCZDC(IAC,L) (7,2)	Number of side L type IAC aircraft based on COMMZ airbases that were damaged in air combat during the cycle.	W
ACCZKC(IAC,L) (7,2)	Number of side L type IAC aircraft based on COMMZ airbases that were killed in air combat during the cycle.	W
ACFS(IAC,IS,L) (7,8,2)	Number of side L type IAC aircraft (non-QRA) on forward airbases in sector IS.	I
ACFSDC(IAC,IR,L) (7,3,2)	Number of side L type IAC aircraft based on forward airbases in region IR that were damaged in air combat during the cycle.	W
ACFSKC(IAC,IR,L) (7,3,2)	Number of side L type IAC aircraft based on forward airbases in region IR that were killed in air combat during the cycle.	W
ACHAT(KA) (9)	Alphanumeric identifier to type KA chemical agent.	I
ACHDM(KDM) (3)	Alphanumeric identifier to type KDM chemical dissemination mode.	I
ACRS(IAC,IS,L) (7,8,2)	Number of side L type IAC aircraft (non-QRA) on rear airbases in sector IS.	I
ACRSDC(IAC,IR,L) (7,3,2)	Number of side L type IAC aircraft based on rear airbases in region IR that were damaged in air combat during the cycle.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ACRSKC(IAC,IR,L) (7,3,2)	Number of side L type IAC aircraft based on rear airbases in region IR that were killed in air combat during the cycle.	W
ACSABA(IAC,IS,L) (7,8,2)	Number of successful CAS sorties by type IAC aircraft in sector IS for side L.	W
ADT(IT,J) (10,2)	Alphanumeric identifier for type IT division.* IT = 1,...,NT(1) + NT(2).	I
AEDGE(IAC,L) (7,2)	Average number of additional engagements (in addition to 1.0) that a side L type IAC defender can potentially make.	I
AEEGE(IAC,L) (7,2)	Average number of additional engagements (in addition to 1.0) that a side L type IAC escort can potentially make.	I
AF(I,IAF) (2,201)	Latitude and longitude of air base IAF.	I
AFABS	Additional fraction of aircraft sent on belt suppression missions.	W
AFACA	Additional fraction of aircraft sent on CASA missions.	W
AFACE	Additional fraction of aircraft sent on CASE missions.	W
AFDIM (I,J) (22,4)** (7,4)+	Description or dimensions (J) for airfield item I in data statements.	W

*J is used to make the alphanumeric identifier machine compatible. Names are 8 characters in length and are input in 2 (J) four character strings.

**These dimensions are used in the nuclear model (in labeled Common AFSTF2).

+These dimensions are used in the chemical model (local to CHEMDAM).

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
AGST(IGS,J,L) (6,2,2)	Alphanumeric identifier for type IGS ground sensor.* IGS = 1,..., NGS(L).	I
AIWC(IWC) (3)	Alphanumeric identifier for type IWC chemical weapon category.	I
AIWS(IWC,IWS,L) (3,5,2)	Alphanumeric identifier for type IWS chemical weapon system with IWC weapon category.	I
AKT(KT,J) (3,2)	Alphanumeric identifier for type KT terrain.* KT = 1,...,3 and J = 1,2.	I
ALRS(1,J,L) (1,2,2)	Alphanumeric identifier for long range SAMs on side : (J = 1,2)	I
ALRSR(1,IR,L) (1,3,2)	Number of side L long range SAMs providing area defenses of region IR rear airbases.	I
ALRSRA(1)	Number of area long range SAMs defending rear airbases that are alive and operating.	W
ALRSRD(1)	Number of area long range SAMs defending rear airbases that are damaged but not killed.	W
ALRSRK(1)	Number of area long range SAMs defending rear airbases that are killed.	W
ALRSRS(1)	Number of area long range SAMs defending rear airbases that are suppressed.	W

*J is used to make the alphanumeric identifier machine com-
patible. Names are 8 characters in length and are input
in 2 (J) four character strings.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ALRSZ(1,L) (1,2)	Number of side L long range SAMs providing area defenses in front of COMMZ airbases.	I
ALRSZA(1)	Number of area long range SAMs defending COMMZ airbases that are alive and operating.	W
ALRSZD(1)	Number of area long range SAMs defending COMMZ airbases that are damaged but not killed.	W
ALRSZK(1)	Number of area long range SAMs defending COMMZ airbases that are killed.	W
ALRSZS(1)	Number of area long range SAMs defending COMMZ airbases that are suppressed.	W
ALTAAS(IAS,IAAC,L) (4,3,2)	Altitude (in meters) of side L type IAS air sensor in type IAAC army-air carrier.	I
ALTAFS(IAFS,L) (4,2)	Altitude (in meters) of side L type IAFS air sensor in reconnaissance aircraft.	I
ALTFAP(KA) (9)	Altitude (in meters) at which agent type KA is sampled for assessment purposes.	I
ALTGS(IGS,L) (5,2)	Altitude (in meters) of side L type IGS ground sensor.	I
ALTSAC(IAC,L) (7,2)	Average length of a typical sortie for type IAC aircraft (in hours).	I
AMFAAB(L) (2)	Maximum number of aircraft allowed on an (actual) forward airbase for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
AMLFD (IAC,IS,L) (7,8,2)	Air munition load factor based on distance flown for type IAC aircraft in sector IS for side L.	W
AMLFR (IAC,L) (7,2)	Air munition load factor to account for the additional distance that a rear based side L type IAC aircraft flies when on CAS mission.	I
AMLFZ (IAC,L) (7,2)	Air munition load factor to account for the additional distance that a COMMZ based side L type IAC aircraft flies when on CAS missions.	I
AMNL (IAC,IAM,L) (7,6,2)	Number of air munitions of type IAM in a notional load of a side L type IAC aircraft based on a forward air base flying CAS missions.	I
AMOAAC (IAAC,L) (3,2)	Minimum operational altitude (in meters) of side L type IAAC army-air carrier.	I
AMORAC (L) (2)	Minimum operational altitude (in meters) of side L reconnaissance aircraft.	I
AMRAAB (L) (2)	Maximum number of aircraft allowed on an (actual) rear air base for side L.	I
AMRS (1,J,L) (1,2,2)	Alphanumeric identifier for medium range SAMs on side L (J = 1,2).*	I

*J is used to make the alphanumeric identifier machine compatible. Names are 8 characters in length and are input in 2 (J) four character strings.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
AMTLRS(1,L) (1,2)	Actual number of missiles in theater for long range SAMs on side L.	I
AMTMRS(1,L) (1,2)	Actual number of missiles in theater for medium range SAMs on side L.	I
AMTSRS(ISS,L) (2,2)	Number of missiles /AAA rounds in theater for type ISS short range air defenses on side L.	I
AMXRPL(L) (2)	Maximum number of side L aircraft that can be repaired in one cycle in the repair pool.	I
ANIWS(IWC,IWS,L)	Alphanumeric identifier for type IWS nuclear weapon system in IWC weapon category.	I
ANSLRS(L) (2)	Average number of possible shots per fire control center for side L long range SAMs. (equivalences ASLSBS(ILS,L), ASLSFB(ILS,L), and ASLSBC(ILS,L))	I
ANSMRS(L) (2)	Average number of possible shots per fire control center for side L medium range SAMs.	I
APT(ITP,J) (6,2)	Alphanumeric identifier for type ITP posture. ITP = 1,...,6 and J = 1,2.*	I

*J is used to make the alphanumeric identifier machine compatible. Names are eight characters in length and are input in two (J) 4-character strings.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ARSS(L) (2)	Average shipping rate (in km/day) for side L supplies moving through the supplies network.	I
ASIDE(L) (2)	Alphanumeric identifier for side L. Side 1 is BLUE. Side 2 is RED.	W
ASRS(ISS,J,L) (2,2,2)	Alphanumeric identifier for type ISS short range surface-to-air weapons of side L.*	I
ASUBM(IWC,IWS,L) (3,4,2)	Area (m ²) covered by a single chemical submunition in a side L IWS weapon system of weapon category IWC	I
ASUT(ISU,J,L) (7,2,2)	Alphanumeric identifier for type ISU subunit.* ISU = 1,..., NSU(L) and J = 1,2.	I
ATR(ITR,J) (2,2)	Alphanumeric identifier for tactical role ITR.* ITR = 1,2 and J = 2. ITR = 1 is ATTACKER. ITR = 2 is DEFENDER.	W
AWT(IW,J,L) (10,2,2)	Alphanumeric identifier for type IW weapon.* IW = 1,...,NW(L) and J = 1,2.	I
BMRS(1,IR,L) (1,3,2)	Number of side L medium range SAMs in the belt in region IR.	I
BMRSA(1)	Number of medium range belt SAMs that are alive and operating.	W

*J is used to make the alphanumeric identifier machine compatible. Names are eight characters in length and are input in two (J) 4-character strings.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
BMRSD(1)	Number of medium range belt SAMs that are damaged but not killed.	W
BMRSK(1)	Number of medium range belt SAMs that are killed.	W
BMRSS(1)	Number of medium range belt SAMs that are suppressed.	W
BNDIS(INTS,IS) (18,8)	The interval boundary between INTS and INTS + 1 in sector IS.	I
BSSUP(IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying belt SAM suppression missions into enemy region IR.	W
BSSUPA(IAC) (7)	Number of BSSUP aircraft of type IAC that are alive and continuing on mission.	W
BSSUPD(IAC) (7)	Number of BSSUP aircraft of type IAC that are damaged but not killed.	W
BSSUPH(IAC) (7)	Number of BSSUP aircraft of type IAC that are aborting mission and returning home undamaged.	W
BSSUPK(IAC) (7)	Number of BSSUP aircraft of type IAC that are killed.	W
CAAFSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on ABA attack missions (to all forward airbases): sorties attempted (II=1) or aircraft killed (II=2).	W
CAARSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on ABA attack missions (to all rear airbases): sorties attempted (II=1) or aircraft killed (II=2).	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CAAZSK (IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on ABA attack missions (to all COMMZ air bases): sorties attempted (II=1) or aircraft killed (II=2)	W
CACQF (J,L) (5,2)	Cumulative number of side L aircraft on all forward airbases that are converted to type J QRA aircraft.	W
CACQR (J,L) (5,2)	Cumulative number of side L aircraft on all rear airbases that are converted to type J QRA aircraft.	W
CACQZ (J,L) (5,2)	Cumulative number of side L aircraft on all COMMZ airbases that are converted to type J QRA aircraft.	W
CADAM (IAC,L) (7,2)	Cumulative number of side L type IAC aircraft that have been damaged.	W
CADFSK (IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on area defense missions protecting all forward airbases: sorties attempted (II=1) or aircraft killed (II=2).	W
CADRSK (IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on area defense missions protecting all rear airbases: sorties attempted (II=1) or aircraft killed (II=2).	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CADZSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on area defense missions protecting all COMMZ airbases: sorties attempted (II=1) or aircraft killed (II=2).	W
CAEFSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on ABA escort missions to all forward airbases: sorties attempted (II=1) or aircraft killed (II=2).	W
CAERSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on ABA escort missions to all rear airbases: sorties attempted (II=1) or aircraft killed (II=2).	W
CAEZSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on ABA escort missions to all COMMZ airbases: sorties attempted (II=1) or aircraft killed (II=2).	W
CAKGS(IAC,KW,L) (7,10,2)	Cumulative type IAC aircraft kills of type KW weapon on the ground in sector IS.	W
CAKNSF(IAC,L) (7,2)	Cumulative number of side L type IAC undamaged aircraft on all forward airbases that are killed on the ground not in shelters.	W
CAKNSR(IAC,L) (7,2)	Cumulative number of side L type IAC undamaged aircraft on all rear airbases that are killed on the ground not in shelters.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CAKNSZ(IAC,L) (7,2)	Cumulative number of side L type IAC undamaged aircraft on all COMMZ airbases that are killed on the ground not in shelters.	W
CAKSHF(IAC,L) (7,2)	Cumulative number of side L type IAC undamaged aircraft on all forward airbases that are killed on the ground in shelters.	W
CAKSHR(IAC,L) (7,2)	Cumulative number of side L type IAC undamaged aircraft on all rear airbases that are killed on the ground in shelters.	W
CAKSHZ(IAC,L) (7,2)	Cumulative number of side L type IAC undamaged aircraft on all COMMZ airbases that are killed on the ground in shelters.	W
CALSRK(ILS,L) (1,2)	Cumulative number of side L long range SAMs protecting rear airbases that are killed.	W
CALSZK(ILS,L) (1,2)	Cumulative number of side L long range SAMs protecting COMMZ airbases that are killed.	W
CAREPD(IAC,L) (7,2)	Cumulative number of side L type IAC aircraft that have been repaired.	W
CASA(IAC,KR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying CAS attack missions into enemy region KR.	W
CASAA(IAC) (7)	Number of CAS aircraft of type IAC that are alive and continuing on mission.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CASAD(IAC) (7)	Number of CAS aircraft of type IAC that are damaged but not killed.	W
CASAH(IAC) (7)	Number of CAS aircraft of type IAC that are aborting mission and returning home undamaged.	W
CASAK(IAC) (7)	Number of CAS aircraft of type IAC that are killed.	W
CASCIV	Civilian casualties from chemical attacks.	W
CASD(IAC,IR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying battlefield defense missions into region IR.	W
CASDA(IAC) (7)	Number of CASD aircraft of type IAC that are alive and continuing on mission.	W
CASDD(IAC) (7)	Number of battlefield defense (CASD) aircraft of type IAC that are damaged but not killed.	W
CASDH(IAC) (7)	Number of CASD aircraft of type IAC that are aborting mission and returning home undamaged.	W
CASDK(IAC) (7)	Number of CASD aircraft of type IAC that are killed.	W
CASE(IAC,KR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying CAS escort missions into enemy region KR.	W
CASEA(IAC) (7)	Number of CASE aircraft of type IAC that are alive and continuing on mission.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CASED(IAC) (7)	Number of CASE aircraft of type IAC that are damaged but not killed.	W
CASEH(IAC) (7)	Number of CASE aircraft of type IAC that are aborting mission and returning home undamaged.	W
CASEK(IAC) (7)	Number of CASE aircraft of type IAC that are killed.	W
CASFSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on SAM suppression missions to all forward airbases: sorties attempted (II=1) or aircraft killed (II=2).	W
CASRSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on SAM suppression missions to all rear airbases: sorties attempted (II=1) or aircraft killed (II=2).	W
CASS(IAC,KR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying SAM suppression missions against point SAMs into enemy region KR.	W
CASSA(IAC) (7)	Number of CASS aircraft of type IAC that are alive and continuing on mission.	W
CASSD(IAC) (7)	Number of CASS aircraft of type IAC that are damaged but not killed.	W
CASSH(IAC) (7)	Number of CASS aircraft of type IAC that are aborting mission and returning home undamaged.	W
CASSK(IAC) (7)	Number of CASS aircraft of type IAC that are killed.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CASZSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on SAM sup- pression missions to all COMMZ airbases: sorties attempted (II=1) or aircraft killed (II=2).	W
CBMSK(1,L) (1,2)	Cumulative number of side L belt SAMs that are killed.	W
CBSFSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on belt SAM suppression missions: sorties attempted (II=1) or aircraft killed (II=2).	W
CCACSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on CAS attack missions to all combat sectors: sorties attempted (II=1) or air- craft killed (II=2).	W
CCDCSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on battlefield defense missions in all combat sectors: sorties attempted (II=1) or aircraft killed (II=2).	W
CCECSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on CAS escort missions to all combat sectors: sorties attempted (II=1) or air- craft killed (II=2).	W
CCSCSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on point SAM suppression missions to all combat sectors: sorties attempted (II=1) or aircraft killed (II=2).	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CEITWZ (ITM,IWZ) * (40,11)	Weather ceiling (in meters) in weather zone IWZ at time period ITM (in 12-hour cycles).	I
CEPCHD (IWS,L) (7,2)	CEP of type IWS division chemical system, side L.	I
CEPCHS (IWS,L) (4,2)	CEP of type IWS sector chemical system, side L.	I
CEPCHT (IWS,L) (4,2)	CEP of type IWS theater chemical system, side L.	I
CEPD (IWS,L) (4,2)	CEP of type IWS division nuclear system, side L.	I
CEPS (IWS,L) (5,2)	CEP of type IWS sector nuclear system.	I
CEPT (IWS,L) (5,2)	CEP of type IWS theater nuclear system.	I
CFEBA (IS) (8)	Movement of FEBA in sector IS since last cycle.	W
CGKGS (IW,KW,L) (10,10,2)	Cumulative ground kills of type weapon on the ground in sector.	W
CHDMDP (IWS,L) (4,2)	Minimum depth beyond the FEBA that division chemical system IWS will be fired by side L.	I
CHSMDP (IWS,L) (4,2)	Minimum depth beyond the FEBA that sector chemical system IWS will be fired by side L.	I

*Values in DATA statements.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CHTMDP(IWS,L) (4,2)	Minimum depth beyond the FEBA that theater chemical system IWS will be fired by side L.	I
CIAFSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on INTD attack missions to all INTD targets: sorties attempted (II=1) or aircraft killed (II=2).	W
CIEFSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on INTD escort missions to all INTD targets: sorties attempted (II=1) or aircraft killed (II=2).	W
CISFSK(IAC,II,L) (7,2,2)	Cumulative number of side L type IAC aircraft on area defense missions at all INTD targets: sorties attempted (II=1) or aircraft killed (II=2).	W
CIVCCH(IS,L) (8,2)	Civilian casualties from chemical weapons, in sector IS, side L.	W
CIVCNU(IS,L) (8,2)	Civilian casualties from nuclear weapons in sector IS, side L.	W
CIVFCH(IS,L) (8,2)	Civilian fatalities from chemical weapons in sector IS, side L.	W
CIVFNU(IS,L) (8,2)	Civilian fatalities from nuclear weapons in sector IS, side L.	W
CLPABA(L) (2)	Fraction of side L airbase operating capability that is destroyed by each attacking enemy aircraft.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CLRSDM(1,L) (1,2)	Cumulative number of side L type ILS long range SAMs that have been damaged.	W
CLSREP(1,L) (1,2)	Cumulative number of side L long range SAMs that have been repaired.	W
CMRSDM(1,L) (1,2)	Cumulative number of side L medium range SAMs that have been damaged.	W
CMSREP(1,L) (1,2)	Cumulative number of side L medium range SAMs that have been repaired.	W
CONEQ(ID,IW) (140,10)	Current number of type IW weap- ons in division ID that are contaminated.	W
CPLS(IS,L) (8,2)	Cumulative number of side L people lost in sector IS.	W
CPSSCK(ISS,L) (2,2)	Cumulative number of side L type ISS short range SAMs protecting combat sectors that are killed.	W
CPSSFK(ISS,L) (2,2)	Cumulative number of side L type ISS short range SAMs protecting forward air bases that are killed.	W
CPSSIK(ISS,L) (2,2)	Cumulative number of side L type ISS short range SAMs protecting interdiction targets that are killed.	W
CPSSRK(ISS,L) (2,2)	Cumulative number of side L type ISS short range SAMs protecting rear air bases that are killed.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CPSSZK(ISS,L) (2,2)	Cumulative number of side L type ISS short range SAMs protecting COMMZ air bases that are killed.	W
CQKNSF(J,L) (5,2)	Cumulative number of side L type J QRA aircraft on all forward air bases that are killed on the ground not in shelters.	W
CQKNSR(J,L) (5,2)	Cumulative number of side L type J QRA aircraft on all rear air bases that are killed on the ground not in shelters.	W
CQKNSZ(J,L) (5,2)	Cumulative number of side L type J QRA aircraft on all COMMZ air bases that are killed on the ground not in shelters.	W
CQKSHF(J,L) (5,2)	Cumulative number of side L type J QRA aircraft on all forward air bases that are killed on the ground in shelters.	W
CQKSHR(J,L) (5,2)	Cumulative number of side L type J QRA aircraft on all rear air bases that are killed on the ground in shelters.	W
CQKSHZ(J,L) (5,2)	Cumulative number of side L type J QRA aircraft on all COMMZ air bases that are killed on the ground in shelters.	W
CRAC(IAC,L) (7,2)	Cross (lateral) range (from far left to far right) of a type IAC aircraft on side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CRLRS(1,L) (1,2)	Cross (lateral) range (from far left to far right) of a long range SAM on side L.	I
CRMRS(1,L) (1,2)	Cross (lateral) range (from far left to far right) of medium range SAM on side L.	I
CRSAC(IAC,L) (7,2)	Consumption rate of supplies (in tons per day) of type IAC aircraft for side L.	I
CSABAF(IAC,L) (7,2)	Cumulative number of successful side L type IAC ABA sorties to enemy forward airbases.	W
CSABAR(IAC,L) (7,2)	Cumulative number of successful side L type IAC ABA sorties to enemy rear airbases.	W
CSABAZ(IAC,L) (7,2)	Cumulative number of successful side L type IAC ABA sorties to enemy COMMZ airbases.	W
CSCASA(IAC,L) (7,2)	Cumulative number of successful side L type IAC CAS sorties.	W
CSDAW(L) (2)	Cumulative side L supplies destroyed by air weapons.	W
CSDFS(L) (2)	Cumulative supplies destroyed in forward sector by friendly side L due to FEBA advance of enemy side K.	W
CSDGW(L) (2)	Cumulative supplies destroyed by ground weapons.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
CSDP(IT,IP) (10,4)	Consumption rate of supplies (in tons/day) by type IT divi- sion in posture IP.	I
	$IP = \begin{cases} 1, & \text{means delay} \\ 2, & \text{means prepared position} \\ 3, & \text{means hasty position} \\ 4, & \text{means holding.} \end{cases}$	
CSDR(IT) (10)	Consumption rate of supplies (in tons/day) by type IT division in reserve posture.	I
CSINDA(IAC,L) (7,2)	Cumulative number of successful side L type IAC INTD sorties.	W
CSRSDM(ISS,L) (2,2)	Cumulative number of side L type ISS short range SAMs that have been damaged.	W
CSSREP(ISS,L) (2,2)	Cumulative number of side L type ISS short range SAMs that have been repaired.	W
CTSCD(L) (2)	Cumulative tons of supplies consumed by divisions of side L.	W
CWLS(IW) (10)	Cumulative number of weapons of type IW lost in sector.	W
DACFT(IAAC,L) (3,2)	Distance (in km) from side L type IAAC army-air carrier to target division front.	I
DAMPL(IAC,L) (7,2)	Number of side L type IAC air- craft that are damaged and are in the maintenance pool.	I
DCONEQ(IW,L) (10,2)	Effort required (in man-hours) for side L to decontaminate a type IW weapon.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
DCONTD (IT) (10)	Decontamination capability (in man-hours) of a type IT division at TOE strength level.	I
DDWD CD (L) (2)	Distance (in km) that a side L defender withdraws when changing combat deployment.	I
DEGEFF (ISU,L) (7,2)	Degradation in combat efficiency of personnel in type ISU sub-units who are in full chemical protective gear for one chemical cycle, side L.	I
DEGSRC (L) (2)	Degraded sortie rate capability of COMMZ airbase for side L.	W
DEGSRF (IS,L) (8,2)	Degraded sortie rate capability of forward airbase in sector IS for side L.	W
DEGSRR (IS,L) (8,2)	Degraded sortie rate capability of rear airbase in sector IS for side L.	W
DEPAWC (KA) (9)	Deposition of type KA chemical agent (mg/m ²) on weapon to assure weapon contamination.	I
DEPDR (L) (2)	Depth (km) of side L division in reserve.	I
DFASN (L) (2)	Distance (in km) a supply node is from the FEBA before that supply node is abandoned by side L.	I
DGSFT (IP, ITR,L) (4,2,2)	Distance (in km) from side L ground sensors to target-unit front when the sensing unit is in type IP posture and in type ITR tactical role (i.e., combat deployment).	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
DICT50 (KA, IPP) (9,4)	Median incapacitating dosage (ICT50) for the inhalation component (mg-min/m ³) of type KA agent and IPP protective posture.	I
DID50 (KA, IPP) (9,4)	Median incapacitating dosage (ID50) for the percutaneous component (mg) of type KA agent and type IPP protective posture where IPP = { 1, environmental uniform only 2, environmental uniform, mask available 3, protective clothing on, MHG available 4, protective clothing on, MHG on.	I
DIFCLA (KA) (9)	Diffusivity (cm ² /sec) of liquid component of agent type KA.	I
DINTEG	Average detection potential used in target acquisition equation for a particular type of mission.	W
DISACW (J, L) (2,2)	Round to round dispersion accuracy (meters) of a side L chemical weapon system J when employed in a line source J = { 1, artillery (linear sheaf) 2, air ("stick of bombs").	I
DLCT50 (KA, IPP) (9,4)	Median lethal dosage (LDt50) for the inhalation component (mg-min/m ³) of type KA agent, and type IPP protective posture.	I
DLD50 (KA, IPP) (9,5)	Median lethal dosage (LD50) for percutaneous component (mg) of type KA agent and type IPP protective posture.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
DLSMPL(1,L) (1,2)	Number of side L long range SAMs that are damaged and are in the maintenance pool.	I
DMSMPL(1,L) (1,2)	Number of side L medium range SAMs that are damaged and are in the maintenance pool.	I
DP2(JE,L) (4,2)	If IND2(4,L) = 1, this is the threshold value of enemy advance since the last cycle which will initiate an escalation to state JE for side L (must be negative for Red).	I
DP7(L) (2)	The theater attacker's "stalled movement rate" which in conjunc- tion with a lack of total advance by the sectors of main attack (DPTH7) will initiate a nuclear escalation by side L.	I
DPC2(LE,L) (4,2)	Threshold depth for side L (associated with IEVNT4 of INDC2) since the last cycle which will initiate a transi- tion to chemical employment level LE.	I
DPC7(L) (2)	The theater attacker's "stalled movement rate" which in conjunc- tion with a lack of advance by the sectors of main attack (DPTHC7) will initiate a use of chemical weapons by side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
DPCHD (IWS,IPOS,L) (4,2,2)	Average distance from the FEBA for deployment of division chemical weapon system IWS in position IPOS for side L. (IPOS=1,...,NPCHD)	I
DPCHS (IWS,IPOS,L) (4,2,2)	Average distance from the FEBA for deployment of sector chemical weapon system IWS in position IPOS for side L. (IPOS=1,...,NPCHS)	I
DPCHT (IWS,IPOS,L) (4,2,2)	Average distance from the FEBA for deployment of theater chemical weapon system IWS in position IPOS for side L. (IPOS=1,...,NPCHT)	I
DPTH2 (L) (2)	Threshold depth for side L associated with nuclear IEVNT = 2.	I
DPTH3 (L) (2)	Threshold depth for side L associated with nuclear IEVNT = 3.	I
DPTH7 (L) (2)	For IND2(7,L) = 1, this is the theater attacker's advance objective (for sectors of main attack) which, if not met, and in conjunction with a number of combat days and a low rate of advance (DP7), will initiate a nuclear escalation (to state JE) for side L.	I
DPTH2 (L) (2)	Threshold depth for side L (associated with IEVNT = 2 of INDC2) for movement beyond FEBA which would initiate the use of chemicals.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
DPTHC3(L) (2)	Threshold depth for side L (associated with IEVNT = 3 of INDC2) for cumulative move- ment beyond FEBA which would initiate the use of chemicals.	I
DPTHC7(L) (2)	For INDC2(7,L) = 1, this is the theater attacker's advance objective for sectors of main attack which, if not met, and in conjunction with a number of combat days and a low rate of advance (DPC7), will initiate a use of chemical weapons by side L.	I
DQRAF(IS,L) (8,2)	Desired number of QRA aircraft (of any type) on forward air bases in sector IS for side L.	I
DQRAR(IS,L) (8,2)	Desired number of QRA aircraft (of any type) on rear air bases in sector IS for side L.	I
DQRAZ(L) (2)	Desired number of QRA aircraft (of any type) on COMMZ air bases for side L.	I
DRAFT(L) (2)	Distance from side L recon- naissance aircraft to target division front.	I
DSA(L) (2)	Number of days of supply on- hand for side L airbases at the supply node supplying the air base.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
DSCZBA(L) (2)	Number of days of supply on-hand that a designated side L COMMZ supply node (in sector) has for its users in the active battle area, (where "designated COMMZ supply node" is the first node in COMMZ, by sector).	I
DSCZFS(L) (2)	Number of days of supply on-hand that a designated side L COMMZ supply node has for its users in sector forward.	I
DSCZRS(L) (2)	Number of days of supply on-hand that a designated side L COMMZ supply node has for its users in sector rear.	I
DSD(I,L) (2,2)	Number of days of supply on-hand for side L divisions. (I = 2 indicates divisions located in an active or most-forward inactive) battle area of a sector that is a sector of main attack. I = 1 indicates all other divisions.)	I
DSFNBA(L) (2)	Number of days of supply on-hand that a designated side L sector-forward supply node has for its users in the active battle area, (where "designated sector-forward supply node" is the first node in sector forward).	I
DSRNBA(L) (2)	Number of days of supply on-hand that a designated side L sector-rear supply node has for its users in the active battle area, (where "designated sector-rear supply node" is the first node in sector rear).	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
DSRNFS(L) (2)	Number of days of supply on-hand that a designated side L sector-rear supply node has for its users in sector forward.	I
DSSMPL(ISS,L) (2,2)	Number of side L type ISS short range SAMs that are damaged and are in the maintenance pool.	I
DSSNCZ(L) (2)	Number of days of supply on-hand for side L supply nodes in the COMMZ.	I
DSSNFS(L) (2)	Number of days of supply on-hand for side L supply nodes in sector forward.	I
DSSNRS(L) (2)	Number of days of supply on-hand for side L supply nodes in sector rear.	I
DVDPTH(IDS) (30)	Depth of division IDS.	W
DVMNDP(IWS,JE,L) (4,4,2)	Minimum depth (in km) beyond the FEBA that division nuclear weapon system IWS may be fired when side L is in escalation state JE.	I
DVWDTH(IDS) (30)	Width of division IDS.	W
ECALFA(KAS,KWS) (3,3)	The expansion coefficient for the horizontal dispersion parameter for chemical agents under atmospheric condition KAS and type KWS wind speed (km/hr).	I
$KAS = \begin{cases} 1, & \text{inversion} \\ 2, & \text{neutral} \\ 3, & \text{lapse} \end{cases}$		

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ECALFA (KAS, KWS) (3, 3)	$KWS = \begin{cases} 1, & 2 \text{ mph} \\ 2, & 8 \text{ mph} \\ 3, & 16 \text{ mph.} \end{cases}$	I
ECBETA (KAS, KWS) (3, 3)	The expansion coefficient for the vertical dispersion parameter for chemical agents under atmospheric condition KAS, and wind speed KWS.	I
EFAGT (IAC, L) (7, 2)	Estimated fraction of initial (cycle) inventory of undamaged type IAC aircraft on side L that will be on the ground as targets for enemy ABA missions.	I
EFCE	Epsilon value used in computing eigenvalue (when the anti-potential potential method of weapon value is used).	I
EFFDA (ID) (140)	Effectiveness of division ID on attack.	W
EFFDD (ID) (140)	Effectiveness of division ID on defense.	W
EFFSHL (L) (2)	Estimated fraction of shelters on side L that will be full when the ABA attack occurs, if there are more aircraft than shelters.	I
EFWTD (LIWS, K, IA) (8, 3, 4)	Effective fill weight (lbs) of type IWS division system munition with type IA agent for dissemination mode K for side L. (LIWS = NIWS*(L-1) + IWS)	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
EFWTS (LIWS,K,IA) (8,3,4)	Effective fill weight (lbs) of type IWS sector weapon system munition with type IA agent for dissemination mode K for side L. (LIWS=NIWS*(L-1) + IWS).	I
EFWTT (LIWS,K,IA) (8,3,4)	Effective fill weight (lbs) of type IWS theater weapon system munition with type IA agent for dissemination mode K for side L. (LIWS=NIWS*(L-1)+ IWS).	I
ERDWLE (L) (2)	Effectiveness at which a reinforcing division will replace a withdrawn division of lower effectiveness. (This is the minimum combat effectiveness of a side L division before it replaces a division withdrawn from combat because that division's effectiveness was below EWDRHE(L). This division must be PICVDR(L) percent greater in combat value than the unit it is replacing.)	I
ESDASI (IAC,L) (7,2)	Effectiveness (in tons per sortie) by which supplies are destroyed by a side L, type IAC aircraft on supply interdiction.	I
EWDRHE (L) (2)	Effectiveness at which divisions are withdrawn when replacement divisions exist with higher effectiveness. (This is the maximum combat effectiveness of a side L division before it is withdrawn from combat if there is a unit of effectiveness ERDWLE(L) to replace it in the first inactive battle area.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FAAABA	Fraction of additional aircraft sent on ABA missions from forward airbases to compensate for those sent on CAS from rear.	W
FAAABE	Fraction of additional aircraft sent on ABAE missions from forward airbases to compensate for those sent on CAS from rear.	W
FAAAFF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward air bases in region IR to do ABA missions against forward airbases in region KR.	W
FAAAFR(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward air bases in region IR to do ABA missions against rear airbases in region KR.	W
FAAAFZ(IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from forward air bases in region IR to do ABA missions against COMMZ airbases.	W
FAAARF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear air bases in region IR to do ABA missions against forward airbases in region KR.	W
FAAARR(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear air bases in region IR to do ABA missions against rear airbases in region KR.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FAAARZ(IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do ABA missions against COMMZ airbases.	W
FAAAZF(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do ABA missions against forward airbases in region KR.	W
FAAAZR(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do ABA missions against rear airbases in region KR.	W
FAAAZZ(IAC,L) (7,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do ABA missions against COMMZ airbases.	W
FAABAA(IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly airbase attack (ABA) missions.	I
FAABAD(IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly area defense missions.	I
FAABAE(IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly escort missions with ABA aircraft.	I
FAABAS(IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly SAM suppression missions with ABA aircraft.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FAACTD(IT) (10)	Factor of a notional division's TOE number of army-air carriers in a type IT division.	I
FAADFF(IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to fly area defense missions in front of forward airbases.	W
FAADRF(IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to fly area defense missions in front of forward airbases.	W
FAADRR(IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to fly area defense missions in front of rear airbases.	W
FAAEFF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to do ABAE missions against forward airbases in region KR.	W
FAAEFR(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to do ABAE missions against rear airbases in region KR.	W
FAAEFZ(IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to do ABAE missions against COMMZ airbases.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FAAERF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do ABAE missions against forward airbases in region KR.	W
FAAERR(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do ABAE missions against rear airbases in region KR.	W
FAAERZ(IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do ABAE missions against COMMZ airbases.	W
FAAEZF(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do ABAE missions against forward airbases in region KR.	W
FAAEZR(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do ABAE missions against rear airbases in region KR.	W
FAAEZZ(IAC,L) (7,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do ABAE missions against COMMZ airbases.	W
FAASFF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to fly SAM suppression missions against forward airbases in region KR.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FAASFR(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to fly SAM suppression missions against rear airbases in region KR.	W
FAASFZ(IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to fly SAM suppression missions against COMMZ airbases.	W
FAASRF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to fly SAM suppression missions against forward airbases in region KR.	W
FAASRR(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to fly SAM suppression missions against rear airbases in region KR.	W
FAASRZ(IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to fly SAM suppression missions against COMMZ airbases.	W
FAASZF(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to fly SAM suppression missions against forward airbases in region KR.	W
FAASZR(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to fly SAM suppression missions against rear airbases in region KR.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FAASZZ (IAC,L) (7,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to fly SAM suppression missions against COMMZ airbases.	W
FABAFS (IS,L) (8,2)	Fraction of side L aircraft on ABA missions into each enemy forward region that are sent to sector IS within that region, i.e., $\sum_{IS \in IR} \text{FABAFS}(IS,L) = 1.0$ for every region IR.	I
FABARS (IS,L) (8,2)	Fraction of side L aircraft on ABA missions into each enemy rear region that are sent to sector IS within that region, i.e., $\sum \text{FABAFS}(IS,L) = 1.0$ for $IS \in IR$ every region IR.	I
FABASS (IR,KR,L) (3,3,2)	Fraction of side L aircraft on ABA, ABAE and SAM suppression (both area and belt) that fly from region IR to enemy region KR.	I
FABDRF (IAC,L) (7,2)	Fraction of side L type IAC aircraft on area defense missions that are based on rear airbases but fly to defend in front of forward airbases.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FABDZF(IAC,L) (7,2)	Fraction of side L type IAC aircraft on area defense missions that are based in the COMMZ but fly to defend in front of forward airbases.	I
FABDZR(IAC,L) (7,2)	Fraction of side L type IAC aircraft on area defense missions that are based in the COMMZ but fly to defend in front of rear airbases.	I
FABSFF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to do BSSUP missions into region KR.	W
FABSRF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do BSSUP missions into region KR.	W
FABSUP(IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly belt SAM suppression missions.	I
FABSZF(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do BSSUP missions into region KR.	W
FACAFC(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to do CAS missions into region KR.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FACARC (IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do CAS missions into region KR.	W
FACASA (IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly CAS attack missions.	I
FACASD (IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly battlefield defense missions.	I
FACASE (IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly CAS escort missions (CASE).	I
FACASS (IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly SAM suppression missions with CAS aircraft (CASS).	I
FACAZC (IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do CAS missions into enemy region KR.	W
FACDZC (IAC,IR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do battlefield defense in region IR.	W
FACEFC (IAC,IR, KR+NR*(L-L)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to do CASE missions into region KR.	W
FACERC (IAC,IR, KR+NR*(L-L)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do CASE missions into region KR.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FACEZC(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do CASE missions into region KR.	W
FACIDE(L) (2)	Factor to increase the degradation in combat efficiency (DEGEFF), if chemical garment is worn for a complete conventional cycle (12 hours).	I
FACPDS(I,L) (3,2)	A factor for scaling the probability of detection for a sensor position near the target location for side L sensors in category I, where $I = \begin{cases} 1, & \text{ground based sensors} \\ 2, & \text{army air sensors} \\ 3, & \text{air force sensors.} \end{cases}$	I
FACSFC(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to do CASS missions into region KR.	W
FACSRC(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do CASS missions into region KR.	W
FACSZC(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do CASS missions into region KR.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FADTMC (L) (2)	Fraction of aircraft capable of delivering chemical weapons dedicated to chemical missions for side L.	I
FADTMN (L) (2)	Fraction of attack aircraft dedicated to nuclear missions, side L (limited by nuclear capable aircraft available).	I
FAGSCN (IAC, L) (7, 2)	Fraction of side L type IAC aircraft that are on the ground and are assigned to shelters but are caught not sheltered.	I
FAGTOT (L) (2)	Minimum fraction of the desired level of chemical agent that side L is willing to fire at enemy subunit.	I
FAIAFF (IAC, IR, KR+NR* (L-1)) (7, 3, 6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to do interdiction (INTDA) missions into region KR.	W
FAIARF (IAC, IR, KR+NR* (L-1)) (7, 3, 6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do INTDA missions into region KR.	W
FAIAZF (IAC, KR, L) (7, 3, 2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do INTDA missions into region KR.	W
FAIEFF (IAC, IR, KR+NR* (L-1)) (7, 3, 6)	Fraction of side L type IAC aircraft assigned from forward airbases in region IR to do INTDE missions into region KR.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FAIERF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do INTDE missions into region KR.	W
FAIEZF(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do INTDE missions into region KR.	W
FAINDA(IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly interdiction attack missions.	I
FAINDE(IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly escort missions with interdiction aircraft (INTDE).	I
FAINDS(IAC,L) (7,2)	Fraction of aircraft of type IAC on side L assigned to fly SAM suppression missions with interdiction aircraft (INTDS).	I
FAISFF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do INTDS missions into region KR.	W
FAISRF(IAC,IR, KR+NR*(L-1)) (7,3,6)	Fraction of side L type IAC aircraft assigned from rear airbases in region IR to do INTDS missions into region KR.	W
FAISZF(IAC,KR,L) (7,3,2)	Fraction of side L type IAC aircraft assigned from COMMZ airbases to do INTDS missions into region KR.	W
FAKRH(L) (2)	Factor for computing the number of aircraft on side L killed on their way home.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FAPKAD(L) (2)	Factor for modifying the side L defender versus escort PK to get a PK for attacker versus defender.	I
FAPKDA(L) (2)	Factor for modifying the side L defender versus escort PK to get a PK for defender versus attacker.	I
FAPKED(L) (2)	Factor for modifying the side L defender versus escort PK to get a PK for escort versus defender.	I
FASFRC	Fraction (α) of attacker's CAS sorties that are considered when computing the force ratio for casualties to the attacker.	I
FATCIV	Civilian fatalities from chemical attacks.	W
FAUSHL(L) (2)	Fraction of side L aircraft that can use another aircraft's shelter while that other aircraft is out flying its mission.	I
FCABFD	Factor for computing casualties to the attacker in a breakthrough posture as a function of the delay posture casualty rate.	I
FCAIA(IAC,L) (7,2)	Fraction of a cycle that a side L type IAC aircraft is in the air.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FCASRS (IS,L) (8,2)	Fraction of side L aircraft on CAS missions into each enemy region that are sent to sector IS within that region, i.e., $\sum_{IS \in IR} FCASRS(IS,L) = 1.0$ for every region IR.	I
FCASSS (IR,KR,L) (3,3,2)	Fraction of side L aircraft on CAS, CASE, and CAS SAM suppression that fly from region IR to enemy region KR.	I
FCDBFD	Factor for computing casualties to the defender in a breakthrough posture as a function of the delay posture casualty rate.	I
FCHP (L) (2)	Fraction of casualties to side L divisions when side L is in a holding posture.	I
FCPPC (IPCC,IL) (4,2)	Fraction of civilian population in location IL and protection category IPCC, where $IL = \begin{cases} 1, & \text{active battle area} \\ 2, & \text{inactive battle area} \end{cases}$ and where IPCC = 1,2,3, 4 references IPC = 5,6,7,8 $IPC = \begin{cases} 1, & \text{in APCs} \\ 2, & \text{in tanks} \\ 3, & \text{in foxholes} \\ 4, & \text{in shelters (earth covered)} \\ 5, & \text{in the open} \\ 6, & \text{in single story buildings} \\ 7, & \text{in multistory buildings} \\ 8, & \text{in basements.} \end{cases}$	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FCVLS (L) (2)	Factor for scaling percent casualties to side L to get (weapon) value lost for side L.	I
FDAGPS (IWS, IPDS, L) (4, 2, 2)	Fraction of division chemical weapon system IWS assigned to position IPDS, side L.	I
FDCRAD (L)	Fraction of side L division weapon system chemical rounds in the theater that are allocated to the division pool.	I
FDCRAS (L) (2)	Fraction of side L division weapon system chemical rounds in the theater that are allocated to the sector pool.	I
FDDPTH (L) (2)	Factor to determine depth of type division for side L, (factor of width, WTDCTR).	I
FDEAC (IAC)	Fraction of defenders of type IAC that are able to engage attackers in combat areas.	W
FDEAF (IAC) (7)	Fraction of defenders of type IAC that are able to engage attackers in forward areas.	W
FDEAR (IAC) (7)	Fraction of defenders of type IAC that are able to engage attackers in rear areas.	W
FDEAZ (IAC) (7)	Fraction of defenders of type IAC that are able to engage attackers in the COMMZ.	W
FDSFRC	Fraction (8) of defender's CAS sorties that are considered when computing the force ratio for casualties to the defender.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FDSPOS(IWS,IPOSD,L) (4,2,2)	Fraction of division nuclear weapon system IWS assigned to position IPOSD for side L.	I
FDSWTC(IWS,L) (4,2)	Fraction of a particular division weapon type that represents a type IWS division chemical weapon system (see IDSWTC), side L.	I
FDSWTN(IWS,L) (4,2)	Fraction of a particular division weapon type that represents a type IWS division nuclear weapon system (see IDSWTN).	I
FDWALD(L) (2)	Fraction of division nuclear warheads in theater allocated to division pool for side L.	I
FDWALS(L) (2)	Fraction of division nuclear warheads in theater allocated to sector pool for side L.	I
FDWLAC(IAAC,L) (3,2)	Flight path location for side L IAAC army-air carriers as a fraction of division width.	I
FDWLRA(L) (2)	Flight path location for side L reconnaissance aircraft as a fraction of division width.	I
FEAFBA(L) (2)	Maximum flank exposure (in kms) that a side L attacker will accept while advancing, based on the combat forces in the active battle area only.	I
FEBA(IS) (8)	Forward edge of battle area in sector IS.	W
FEBATZ(IS) (8)	FEBA at time zero in sector IS.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FEDW(L) (2)	Maximum flank exposure (in km) that a side L defender will accept before withdrawing (based on forces in active battle area).	I
FEISF(L) (2)	Flank exposure increment (in km) (in addition to FEAFBA(L) that a side L attacker will accept with a security force ratio of SFRFE(2,L).	I
FGSTD(IT) (10)	Factor of a notional division's number of ground sensors in a type IT division.	I
FINDSS(IR,KR,L) (3,3,2)	Fraction of side L aircraft on INTDA, INTDE, and INTDS missions based in region IR that fly to enemy region KR.	I
FINTRS(IS,L) (8,2)	Fraction of side L aircraft on INT missions into each enemy region that are sent to sector IS within that region, i.e., $\sum_{IS \in IR} FCASRS(IS,L) = 1.0$ for every region IR.	I
FKLAA(1,L) (1,2)	Fraction of kills that are lethal when an enemy aircraft shoots at a friendly aircraft on side L.	I
FKLASM(L) (2)	Fraction of kills which are lethal when an enemy aircraft shoots at a surface-to-air weapon on side L. (FKLASS, FKLAMS, FKLALS)	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FKLSMA(L) (2)	Fraction of kills which are lethal when a surface-to-air weapon on side L shoots at enemy aircraft. (FKLSSA, FKLSMA, FKLLSA)	I
FMBP(L) (2)	Factor for percent increase in movement of the attacker in a breakthrough posture over a delay posture. (FMBP > 1)	I
FMDPT(IT,KP,KT) (10,3,3)	Factor for mobility of type IT division attacking in posture KP and in terrain KT. $KP = \begin{cases} 1, & \text{means delay} \\ 2, & \text{means prepared position} \\ 3, & \text{means hasty position} \end{cases}$	I
FMNC(L) (2)	Factor of minimum contraction of division width for side L.	I
FMNRWS(IMA,JE,L)	Minimum fraction of nuclear reserves for basic weapon type IMA when side L is in escalation state JE. (IMA = 1 missile, IMA = 2 artillery).	I
FMXE(L) (2)	Factor of maximum expansion of division width for side L.	I
FOAEVP(KDM,KA)	Fraction of type KA chemical agent from dissemination mode KDM that evaporates per meter of release height.	I
FOCRPC(L)	Fraction of the air base operating capability (previously destroyed) that is recovered per cycle for side L.	I
FODSUD(ISU,L) (7,2)	Factor for computing offset distance to be used when targeting type ISU subunits on defense based on the values used when on attack.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FPABCP (IPP,L) (4,2)	Fraction of personnel at air bases in type IPP chemical protective posture for side L.	I
FPAFPC (IPCA,L) (4,2)	Fraction of people (both military and civilian) at an air-base that are in protection category IPCA, where IPCA = 1,2,3,4 references IPC = 5,6,7,8 (see FCPPC).	I
FPDCAS (IRT) (5)	Average number of personnel casualties inflicted per CAS sortie (region average) IRT = 1,...,NR(1) + NR(2).	W
FPDRST (I,ISU,L) (3,7,2)	A factor for scaling the negative exponential for how the probability of detection falls off by range for a side L sensor in category I when detecting enemy subunit ISU. $I = \begin{cases} 1, & \text{ground based sensors} \\ 2, & \text{army air sensors} \\ 3, & \text{air force sensors.} \end{cases}$	I
FPKANS (IAC,L) (7,2)	Factor for changing probability of kill of side L type IAC aircraft against sheltered aircraft to get probability of kill against nonsheltered aircraft for side L based on distance flown (i.e., FPKANS multiplied by PKASD(IAC,II,L).	I
FPKC	Fraction of personnel in divisions that are bonus casualties.	W
FPMSCP (IPP,L) (4,2)	Fraction of personnel at SSM sites in type IPP chemical protective posture for side L.	I

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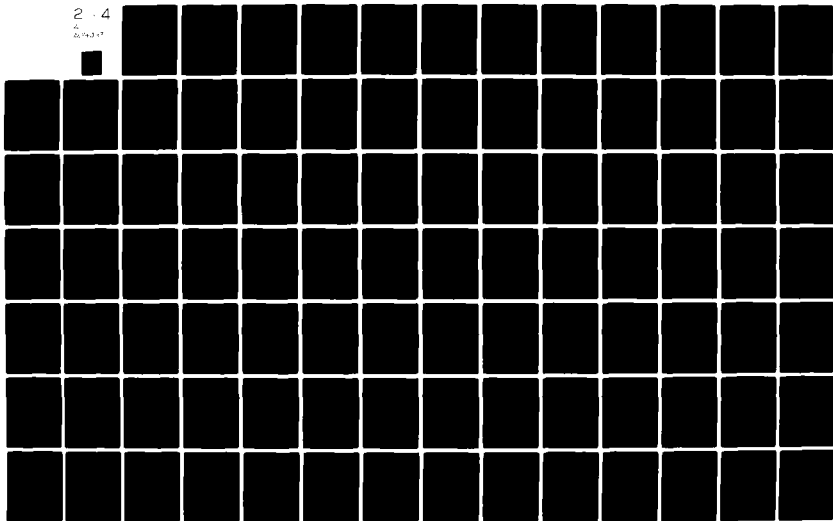
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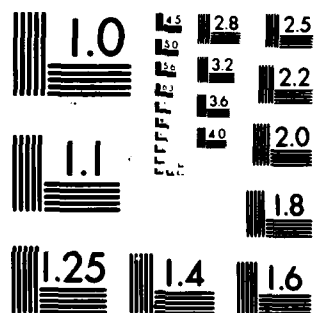
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<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FPRC (ID,IRS) (140,4)	Fraction of people from division ID in radiation category IRS.	W
FPSSPC (IPCS,L) (5,2)	Fraction of people at a SSM site that are in protection category IPCS for side L, where IPCS = 1,2,3,4,5 references IPC = 1,2,3,4,5 of FCPPC.	I
FPSWDU (ISU,L) (7,2)	Fraction of TOE personnel strength at which a side L type ISU subunit is withdrawn from action.	I
FQRACZ (J,L) (5,2)	Fraction of total desired QRA aircraft that should be of type J on COMMZ airbases for side L (J = 1,...,NQRAT).	I
FQRAFS (J,L) (5,2)	Fraction of total desired QRA aircraft that should be of type J on forward airbases for side L (J = 1,...,NQRAT).	I
FQRARS (J,L) (5,2)	Fraction of total desired QRA aircraft that should be of type J on rear airbases for side L (J = 1,...,NQRAT).	I
FRAACI (IAAC,L) (3,2)	Fraction of type IAAC army-air carriers that are inoperable on a given day for side L.	I
FRACIO (L) (2)	Fraction of air force reconnaissance aircraft inoperable for a given day for side L.	I
FRAD (IS) (8)	Force ratio in sector IS, attacker to defender.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FRATA (KP,L) (3,2)	Force ratio to attack in posture KP if side L is theater attacker.	I
FRATD (KP,L) (3,2)	Force ratio to attack in posture KP if side L is theater defender.	I
FRCHGC (ISU,IPP,L) (7,4,2)	Fraction of type ISU subunit in type IPP chemical protective posture for side L. (For definitions of IPP see DID50.)	I
FRCMZC (ISUB,LE,L) (3,4,2)	Maximum fraction of ISUB COMMZ targets side L will target in employment level LE.	I
FRCMZN (ISUB,JE,L) (3,4,2)	Maximum fraction of ISUB COMMZ targets side L will target in escalation state JE.	I
FRDSUZ (IZ,ITR,L) (4,2,2)	Factor to get side L subunit radius by zone location (IZ) and tactical role (ITR); factor of RDSUR (for ITR see WTDCTR).	I
FRLPMA (IM,L) (3,2)	Fraction of side L air force reconnaissance aircraft lost prior to mission accomplishment (for IM see PRAFSM). IM = 1,...,3.	I
FRMAX (ISU,JE,L) (7,4,2)	Maximum fraction of type ISU subunits that side L may target in escalation state JE.	I
FRMAXC (ISU,LE,L) (7,4,2)	Maximum fraction of ISU subunit that side L will target in employment level LE.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FRMSRC (ISU, LE, L) (7, 4, 2)	Maximum fraction of type ISU subunits in rear area divisions that side L will target in employment level LE.	I
FRMSRN (ISU, JE, L) (7, 4, 2)	Maximum fraction of type ISU subunits in rear area divisions that side L will target in escalation state JE.	I
FRSPCR (ISU, IPCM, L) (7, 5, 2)	Fraction of subunit ISU in protection category IPCM while side L division is in reserve, where IPCM = 1, 2, 3, 4, 5 references IPC = 1, 2, 3, 4, 5 in variable FCPPC.	I
FRSUPC (ISU, IPCM, ITR+2 (K-1) (7, 5, 4)	Fraction of subunit ISU in protection category IPCM while side K divisions on the line are in tactical role ITR.	I
FSAGPS (IWS, IPSS, L) (4, 2, 2)	Fraction of sector chemical system IWS assigned to position IPSS for side L.	I
FSCRAS (L) (2)	Fraction of side L sector weapon system chemical rounds in the theater that are allocated to the sector pool.	I
FSKSAK (IAC, L) (7, 2)	Fraction of shelters that are killed when a side L type IAC aircraft is able to attack a shelter in such a way that the aircraft inside it would be killed.	I
FSPAB (IAB) (201)	Fraction of surviving military personnel at actual air base IAB.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FSRAES (L) (2)	Factor for converting side L ABA escort sortie rate to SAM suppression sortie rate.	I
FSRCES (L) (2)	Factor for converting side L CAS escort sortie rate to SAM suppression sortie rate.	I
FSRIES (L) (2)	Factor for converting side L INT escort sortie rate to SAM suppression sortie rate.	I
FSSPOS (IWS,IPOSS,L) (5,2,2)	Fraction of sector nuclear weapon system IWS assigned to position IPOSS for side L.	I
FSSSMS (L) (2)	Fraction of side L SAM sup- pressors that use standoff munitions to avoid being shot at by enemy short range sur- face-to-air weapons.	I
FSSWTC (IWS,L) (4,2)	Fraction of a particular sec- tor weapon type that repre- sents a type IWS sector chemi- cal weapon system for side L.	I
FSSWTN (IWS,L) (5,2)	Fraction of a particular sec- tor weapon type that repre- sents a type IWS sector nuclear weapon system for side L.	I
FSUAZ (ISU,IZ,IT) (7,4,10)	Fraction of type ISU subunits allocated to zone IZ by type IT division.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
FSUPCT (ISN) (95)	Fraction of supplies at node ISN that are contaminated with chemical agent.	W
FSWAS (L) (2)	Fraction of sector warheads in theater allocated to sector pool for side L.	I
FTAGPS (IWS, IPTS, L) (4, 2, 2)	Fraction of theater chemical system IWS assigned to posi- tion IPTS for side L.	I
FTSPOS (IWS, IPOST, L) (5, 2, 2)	Fraction of theater nuclear system IWS assigned to posi- tion IPOST for side L.	I
FTSWTC (IWS, L) (4, 2)	Fraction of a particular weapon type that represents a type IWS theater chemical weapon system for side L.	I
FTSWTN (IWS, L) (5, 2)	Fraction of a particular weapon type that represents a type IWS theater nuclear weapon system for side L.	I
FWDCAS (IW, IRT) (10, 5)	Average number of type IW weapons destroyed per CAS sortie (region average) IRT = 1, ..., NR(1) + NR(2).	W
FWDMAX (L) (2)	Factor to allow user to modify the number of aircraft that will be sent to side L forward airbases from rear airbases.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
GDBA(IBA) (112)	Cumulative ground distance to leading edge of battle area IBA. (May be in a Data state-ment.)	I
GLPAFS(IAFS,L) (4,2)	The number of glimpses per hour for a type IAFS air force sensor for side L.	I
GLPAS(IAS,L) (4,2)	The number of glimpses per hour for a type IAS army air sensor for side L.	I
GLPGS(IGS,L) (5,2)	The number of glimpses per hour for a type IGS ground sensor for side L.	I
HOBD(LIWS,K,IA) (8,3,4)	Height of burst (m) of type IWS division chemical weapon system munition with type IA agent for dissemination mode K for side L. (LIWS=NIWS(L-1) + IWS); K = 1,...,3.	I
HOBS(LIWS,K,IA) (8,3,4)	Height of burst (m) of type IWS sector chemical weapon system munition with type IA agent for dissemination mode K for side L. K = 1,...,3; IWS = 1,...,4.	I
HOBT(LIWS,K,IA) (8,3,4)	Height of burst (m) of type IWS theater chemical weapon system munition with type IA agent for dissemination mode K for side L. K = 1,...,3; IWS = 1,...,4.	I
IAASV(IAS,L) (4,2)	Index to army-air sensors of type IAS that are affected by visibility for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IABAAG(L) (2)	Index for computing ABA air-to-ground attrition (attackers on side L), where, for point attack of sheltered and unsheltered aircraft,	I
	IABAAG = 1, attack shelters only if no open aircraft are detected or no shelters on parking areas 2, attack sheltered or unsheltered aircraft optimally 3, attack a parking area if either a sheltered or an unsheltered aircraft is detected on that area.	
IABAS(IS) (8)	Index to active-battle area in sector IS.	I
IABTA(JE,L) (4,2)	Index to side L airbase targeting assumption for escalation state JE. Airbase targeting priority is established by ranking airbases highest to lowest according to value calculated in WTNAST(L)	I
	IABTA = 1, means one weapon is targeted on the runway of each air base targeted. 2, means one weapon is targeted on the most densely occupied aircraft parking area of each air base targeted. 3, means one weapon is targeted on each aircraft parking area of the airbases targeted.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IACTWS	Index to actual wind speed used in chemical assessment.	I
IAF	Index to airfield.	W
IAFBA(IAF) (201)	Index to battle area location of air base IAF.	I
IAFSV(IAFS,L) (4,2)	Index to air force sensor of type IAFS affected by visibility for side L	I
	IAFSV = $\begin{cases} 1, & \text{affected} \\ 2, & \text{unaffected.} \end{cases}$	
IALBT(ISU,IZ, JE+4(L-1)) (7,4,8)	Index to allowable battlefield targets for nuclear weapons. Equals 1 if type ISU division subunit in zone IZ is an allow- able target for side L in nuclear escalation state JE, 0 otherwise.	I
IALBTC(ISU,IZ, LE+NEML*(L-1)) (7,4,8)	Index to allowable battlefield targets for chemical weapons. Equals 1 if type ISU division subunit in zone IZ is an allow- able target for side L in chemical employment level LE; 0 otherwise.	I
IALCT(ISUB,JE,L) (4,4,2)	Index to allowable COMMZ tar- gets for nuclear weapons. Equals 1 if COMMZ type ISUB target is allowable for side L in nuclear escalation state JE, 0 otherwise.	I
● ISUB = 1 is airbase target - for ISUB = 1, ITYP = 1 is sector-forward airbases - for ISUB = 1, ITYP = 2 is sector-rear airbases.		

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IALCT(ISUB,JE,L)	● ISUB = 2 is supply node target - for ISUB = 2, ITYP = 1 is supply node feeding the active battle area - for ISUB = 2, ITYP = 2 is all other supply nodes in region. ● ISUB = 3 is surface-to-surface missile target - for ISUB = 3, ITYP = 1 is medium range missiles - ITYP = 2 is long range missiles. ● ISUB = 4 is for division targets in the region only - for ISUB = 4, ITYP = 1 is divisions in forward region - ITYP = 2 is divisions in rear region (currently zero).	
IALCTC(ISUB,LE,L) (4,4,2)	Index to allowable COMMZ targets for chemical weapons. Equals 1 if COMMZ type ISUB target is allowable for side L in chemical employment level LE: 0 otherwise. (For ISUB see IALCT.)	I
IALRT(ITYP,ISUB, JE+4(L-1)) (2,4,8)	Index to allowable region targets for nuclear weapons. Equals 1 if type ISUB target in area ITYP is allowable for side L in escalation state JE, 0 otherwise. (For ISUB see IALCT.)	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IALRTC (ITYP,ISUB, LE+NEML(L-1)) (2,4,8)	Index to allowable region targets for chemical weapons. Equals 1 if type ISUB target in area ITYP is allowable for side L in employment level LE: 0 otherwise. (For ISUB see IALCT.)	I
IBA	Index to battle area.	W
IBALD (ID) (140)	Index to battle area location of division ID.	I
ICABTA (LE,L) (4,2)	Index to airbase targeting assumption for chemical employment level LE for side L (see IABTA).	I
ICADTA (L) (2)	Index to COMMZ assignment option* for theater attacker when arriving unit is from side L.	I
ICADTD (L) (2)	Index to COMMZ assignment option* for theater defender when arriving unit is from side L.	I
ICASN (L) (2)	Cycle indicating the arrival of supplies to side L supply nodes.	W
ICDLB (ITC,L) (3,2)	If chemical weapons received by side L in the active battle area will initiate a move to a higher employment level of chemical weapons against target category ITC, then ICDLB = 1, 0 otherwise.	I

*Assignment options are discussed in section 2.2.14.2.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ICDLC (ISUB, ITC, L) (4, 3, 2)	If chemical weapons received by side L against COMMZ targets of type ISUB will initiate a move to a higher employment level of chemical weapons against target category ITC, ICDLC = 1, 0 otherwise. (For ISUB see IALCT.)	I
ICDLR (ISUB, ITC, L) (4, 3, 2)	If chemical weapons received by side L against region targets of type ISUB will initiate a move to a higher employment level of chemical weapons against target category ITC, ICDLR = 1, 0 otherwise. (For ISUB see IALCT.)	I
ICDLT (ITC, L) (3, 2)	Equals 1 if side L wishes to move to a higher employment level of chemical weapons against target category ITC. (A special case of INDC2 (4, L).)	I
ICHFAT	Index to option for reporting number of chemical fatalities within number of persons incapacitated or just number incapacitated by chemical weapons ICHFAT = $\begin{cases} 1, & \text{report fatalities plus incapacitated} \\ 2, & \text{report incapacitated only.} \end{cases}$	I
ICHST (IS, L) (8, 2)	Cycle at which side L initiates a preemptive chemical strike in sector IS.	I
ICHTAR (I, L) (40, 2)	Index of chemical targets of priority I for side L.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ICHTD (IS,L) (8,2)	Cycle at which side L terminates a preemptive chemical strike in sector IS.	I
ICMD	Index to method of chemical weapon attack on target ICMD = $\begin{cases} 1, & \text{rounds aimed upwind of target edge} \\ 2, & \text{rounds aimed at target center.} \end{cases}$	I
ICMES (JE,L) (4,2)	Index to combat mode when side L is in nuclear escalation state JE ICMES = $\begin{cases} 1, & \text{nonnuclear} \\ 2, & \text{nuclear prepared} \\ 3, & \text{nuclear.} \end{cases}$	I
ICMPLX	Index to method of chemical assessment ICMPLX = $\begin{cases} 1, & \text{use longer running, complex code} \\ 2, & \text{use faster running, simplified code.} \end{cases}$	I
ICMS (IS,L) (8,2)	Index to time zero and current combat mode in sector IS for side L. ICMS = $\begin{cases} 1, & \text{nonnuclear} \\ 2, & \text{nuclear prepared} \\ 3, & \text{nuclear} \end{cases}$	I
ICMST (IS,L) (8,2)	Index to combat mode in sector IS (temporary)--a flag variable for use in the ground model. If ICMST = 0, then there is no downgrading of combat mode. If ICMST is 1 or 2, then that is the combat mode to which the side wishes to downgrade on the next cycle.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ICOV	Index to chemical coverage calculations. 0 = uniform coverage, 1 = nonuniform coverage (increases running time).	I
ICPDHD (L) (2)	Index to change a side L prepared defense to a side K (K=3-L) hasty position when side L is attacking into what was originally his own prepared defense.	I
	$\text{ICPDHD} = \begin{cases} 0, & \text{a prepared defense for side L remains a prepared defense for side K} \\ 1, & \text{a prepared defense for side L becomes a hasty position for side K.} \end{cases}$	
ICPRB (ISU, IZ, L) (7, 4, 2)	Index to priority list of preferred chemical targets by side L. The three variables ICPRB, ICPRR, and ICPRCZ are used to form a <u>single</u> priority list of preferred targets when it is assumed that all targets types are allowable. No two target types within the three variables may have the same priority. Priorities are listed highest to lowest as 1, 2, 3, ..., N. The variable	I
	ICPRB (ISU, IZ, L) Gives the priority of side L battlefield targets of type ISU sub-units in zone IZ.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ICPRB (ISU, IZ, L)	ICPRR (ITYP, ISUB, L) (2, 4, 2) Priority of side L region targets of type ISUB in area ITYP. (see vari- able IALCT)	
	ICPRCZ (ISUB, L) (4, 2) Priority of side L COMMZ targets of type ISUB. (see IALCT)	
ICPRCZ	See ICPRB above	I
ICPRR	See ICPRB above	I
ICSM	Index to cycle for supply model.	W
ICSMA (L) (2)	Index to compute sector of main attack for side L	I
	ICSMA = $\begin{cases} 1, \text{ model determined} \\ \quad (\text{sector of maximum} \\ \quad \text{FEBA advance/region}) \\ 2, \text{ user input.} \end{cases}$	
ICYCLE	Index to current combat cycle.	W
IDEL2 (ITC, L) (3, 2)	If IND2(4, L) = 1, then this equals 1 if side L wishes to escalate to nuclear state JE against target category ITC, 0 otherwise.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IDELB3(ITC,L) (3,2)	If nuclear weapons received in the active battle area will initiate an escalation against target category ITC by side L, then IDELB3 = 1, 0 otherwise.	I
IDELC3(ISUB,ITC,L) (4,3,2)	If nuclear weapons received against COMZ targets of sub-type ISUB will initiate an escalation against target category ITC by side L, then IDELC3 = 1, 0 otherwise.	I
IDELR3(ISUB,ITC,L) (4,3,2)	If nuclear weapons received against region targets of sub-type ISUB will initiate an escalation against target category ITC by side L, then IDELR3 = 1, 0 otherwise. (see IALCT)	I
IDELTA(L) (2)	Index to choice of second best nuclear weapon to fire. Equals +1 if side L wishes the second best choice of weapon to be a weapon which is incrementally larger in yield. Equals -1 if side L wishes the second choice of a weapon to be one that is incrementally smaller in yield.	I
IDLABA(IDS,IS) (30,8)	Index to division location in active battle areas in position IDS of sector IS. Side 1 divisions enter sector IS from the right (when facing the FEBA) and as units move in or are withdrawn, those divisions remaining in the sector move to the left. IDLABA(1,IS) is the position to the extreme left and has in it the division that has been in sector IS the longest. (Side 2 divisions enter IS from the left and move to the right.)	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IDLBC3(ITC,L) (3,2)	If nuclear weapons received by side L in the active battle area will initiate a move to a higher employment level of chemical weapons against target category ITC, then IDLBC3 = 1, 0 otherwise.	I
IDLCC3(ISUB,ITC,L) (4,3,2)	If nuclear weapons received by side L against COMMZ targets of type ISUB will initiate a move to a higher employment level of chemical weapons against target category ITC, IDLCC3 = 1, 0 otherwise. (see IALCT)	I
IDLIBA(IDV,IS,L) (15,8,2)	Index to division ID when division is in IDV location in the first inactive battle area of sector IS for side L.	W
IDLRC3(ISUB,ITC,L) (4,3,2)	If nuclear weapons received by side L against region targets of type ISUB will initiate a move to a higher employment level of chemical weapons against target category ITC, IDLRC3 = 1, 0 otherwise. (see IALCT)	I
IDLYLD(J,I,L) (3,5,2)	If warhead of the Ith nuclear weapon system of category J for side L has multiple yield options, then IDLYLD = 1, 0 otherwise where $J = \begin{cases} 1, & \text{division system} \\ 2, & \text{sector system} \\ 3, & \text{theater system.} \end{cases}$	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IDSBDT (JE,ISBT,L) (4,5,2)	Indicator for the ISBTth battle- field surface burst target in escalation state JE for side L (by integer code representation where number entered is the sub- unit type being targeted). ISBT = 1,...,NSBDT.	I
IDSBTS (JE,ISBT,L) (4,5,2)	Indicator for the ISBTth region surface burst target in esca- lation state JE for side L (by integer code representation where the number entered is given by ITYP + 2 (ISUB-1)). ISBT = 1,...,NSBTS.	I
IDSBT (JE,ISBT,L) (4,5,2)	Indicator for the ISBTth COMMZ surface burst target in esca- lation state JE for side L (by integer code representation where number entered is given by ITYP + 2 (ISUB-1)). ISBT = 1,...,NSBT.	I
IDSVE (IDS) (30)	Division identification for the Ith fire mission side L.	W
IDSWTC (IWS,L) (4,2)	Index of type IWS division chemical weapon system to a particular weapon type for side L. Reference weapon is the IW weapon in combat divisions. IWS = 1,...,4.	I
IDSWTN (IWS,L) (4,2)	Index of type IWS division nuclear weapon system to a particular weapon type for side L. Reference weapon is the IW weapon in combat divisions. IWS = 1,...,NDVNW.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IDWTSU(IWSU,ISU,L) (4,7,2)	Index to division weapon type for type IWSU weapon in subunit ISU for side L. (First weapon listed is primary weapon for subunit. If no primary weapon exists, such as with HQ or support units, use zero in first location. Subunits will then be formed with people only.) IWSU = 1,...,NTWSU.	J
IEML(IS,ITC,L) (8,3,2)	Current employment level for chemical weapons for side L in sector IS against target category ITC.	W
IEMLC1(ITC,L) (3,2)	Chemical employment level to be moved to against target category ITC if a preemptive strike is to be initiated.	I
IEMLC2(IEVNT,ITC,L) (7,3,2)	The chemical employment level side L will move to against target category ITC if the corresponding INDC2(IEVNT,L) is 1 and the IEVNT has occurred.	I
IEQGS(IGS,L) (5,2)	Index for target acquisition equations for side L type IGS ground sensor.	I
IESC(IS,ITC,L) (8,3,2)	Index to escalation level in sector IS against target category ITC for side L.	W
IFULL(IS,L) (8,2)	Index which indicates that the first inactive battle area is full.	W
IGO	Index to next day for time t inputs.	W
IGSV(IGS,L) (5,2)	Index to ground sensors of type IGS affected by visibility for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IKASC	Index to kind of atmospheric stability condition. (See ICALFA)	I
IMAGE (I,IAF) (15,201)	Initial image of actual air base IAF, where the Ith word is defined as follows: 1-7 Number of AC of type J, J = 1, 7 8-10 Not used 11 Total number aircraft 12 Total shelters 13 Total military personnel ($\times 10^{-2}$) 14 Total civilians upper half ($\times 10^{-2}$) 15 Total civilians lower half ($\times 10^{-2}$)	I
IMAGE1 (I,IAF) (11,201)	Data of actual airbase IAF where the Ith word is defined as follows: 1-6 Any nonzero value denotes the existence of parking area J, J = 1,6 7 Percent of total military personnel in quadrant 1 8 Percent of total military personnel in quadrant 2 9 Percent of total military personnel in quadrant 3 10 Percent of total military personnel in quadrant 4 11 The total number of parking area existing on the base.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IMTYPE (KA) (9)	Index to model type for assessing effects of chemical agent KA IMTYPE = $\begin{cases} 1, \text{Calder-Sutton} \\ 2, \text{EVAP} \\ 3, \text{Porton.} \end{cases}$	I
IMUTMF (L) (2)	Index to method used for movement of side L forces throughout the theater IMUTMF = $\begin{cases} 1, \text{unit moves NCOBAM(L) battle area every cycle} \\ 2, \text{unit moves 1 battle area every NCOBAM(L) cycles.} \end{cases}$	I
INCYL	Current nuclear or chemical subcycle.	W
IND1 (IS,L) (8,2)	Index for making a preemptive nuclear strike into sector IS by side L; equals 1 if a preemptive strike is to be made in sector IS but 0 otherwise.	I
IND2 (IEVNT,L) (7,2)	Index for tactical event being stimulus for side L firing nuclear weapons	I

Variable Name
and Size

Definition

Type

IND2(IEVNT,L)

IND2 =

- 1, if border incursion is to be used as an escalation criterion, 0 otherwise (IEVNT=1)
- 1, if an advance in sector beyond the advance in adjacent sectors is to be used as an escalation criterion, 0 otherwise. (IEVNT=2)
- 1, if an advance in sector beyond a specified distance is to be used as an escalation criterion, 0 otherwise. (IEVNT=3)
- 1, if an advance in sector beyond a specified distance since the last cycle is to be used as an escalation criterion, 0 otherwise. (IEVNT=4)
- 1, if cumulative loss of QRA aircraft is to be used as an escalation criterion, 0 otherwise. (IEVNT=5)
- 1, if cumulative loss of nuclear delivery systems is to be used as an escalation criterion, 0 otherwise. (IEVNT=6)
- 1, if the total distance advanced or rate of advance of the theater attacker is to be used as an escalation criterion, 0 otherwise. (IEVNT=7)

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IND3(L) (2)	Index for firing nuclear weapons based on other side's actions; is 1 if an initial or increased use of nuclear weapons by the other side is to serve as escalation criterion for side L, 0 otherwise.	I
IND4(L) (2)	Index for side L firing nuclear weapons based on the other sides use of chemical weapons (see INDC4).	I
INDC1(IS,L) (8,2)	Index for making a preemptive chemical strike into sector IS by side L; 1 if a preemptive strike is to be made in sector IS, 0 otherwise.	I
INDC2(IEVNT,L) (7,2)	Index for tactical event being stimulus for side L employing chemical weapons	I

Variable Name
and Size

Definition

Type

INDC2 (IEVNT,L)

INDC2 =

- 1, if border incursion is to be used as an employment criterion, 0 otherwise. (IEVNT=1)
- 1, if the advance in sector beyond the advance in adjacent sectors is to be used as an employment criterion, 0 otherwise. (IEVNT=2)
- 1, if an advance in sector beyond a specified distance is to be used as an employment criterion, 0 otherwise. (IEVNT=3)
- 1, if an advance in sector beyond a specified distance since the last cycle is to be used as an employment criterion, 0 otherwise. (IEVNT=4)
- 1, if cumulative loss of QRA aircraft is to be used as an employment criterion, 0 otherwise. (IEVNT=5)
- 1, if cumulative loss of nuclear delivery systems is to be used as an employment criterion, 0 otherwise. (IEVNT=6)
- 1, if the total distance advanced or the rate of advance of the theater attacker is to be used as an employment criterion, 0 otherwise. (IEVNT=7)

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
INDC3(L) (2)	Index for side L firing chemical weapons based on other side's use of nuclear weapons. If initial or increased use of nuclear weapons by other side is to serve as a criterion for employing chemical weapons, the index is 1, 0 otherwise.	I
INDC4(L) (2)	Index for side L firing chemical weapons based on other side's use of chemical weapons. If initial or increased use of chemical weapons by other side is to serve as a criterion for employing chemical weapons, the index is 1, 0 otherwise.	I
INDLB(ITC,L) (3,2)	Indicator that nuclear weapons fired into the active battle area of side L will initiate a move to a higher employment level of chemical weapon against enemy target category ITC; if so INDLB = 1, 0 otherwise.	I
INDLC(ISUB,ITC,L) (4,3,2)	Indicator that nuclear weapons fired against side L COMMZ targets of type ISUB will initiate a move to a higher employment level of chemical weapons against enemy target category ITC; if so INDLC = 1, otherwise equals zero.	I
INDLR(ISUB,ITC,L) (4,3,2)	Indicator that nuclear weapons fired against side L region targets of type ISUB will initiate a move to a higher employment level of chemical weapons against enemy target category ITC; if so INDLR = 1, otherwise equals zero.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
INDTPG(L) (2)	Index to the amount of time side L will stay in chemical protective gear after an attack. INDTPG = 1, four hours; 2, 12 hours.	I
INDX1(I,L) (100,2)	Index to the Ith weapon on the list to be fired, side L.	W
INTAGT(ISUB,L) (4,2)	Index to type agent side L prefers to fire at type ISUB targets.	I
INTDA(IAC,KR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying interdiction (INTDA) missions into enemy region KR.	W
INTDAA(IAC) (7)	Number of INTDA aircraft of type IAC that are alive and continuing on mission.	W
INTDAD(IAC) (7)	Number of INTDA aircraft of type IAC that are damaged but not killed.	W
INTDAH(IAC) (7)	Number of INTDA aircraft of type IAC that are aborting mission and returning home undamaged.	W
INTDAK(IAC) (7)	Number of INTDA aircraft of type IAC that are killed.	W
INTDE(IAC,KR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying escort missions with interdiction aircraft (INTDE) into enemy region KR.	W
INTDEA(IAC) (7)	Number of INTDE aircraft of type IAC that are alive and continuing on mission.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
INTDED(IAC) (7)	Number of INTDE aircraft of type IAC that are damaged but not killed.	W
INTDEH(IAC) (7)	Number of INTDE aircraft of type IAC that are aborting mission and returning home undamaged.	W
INTDEK(IAC) (7)	Number of INTDE aircraft of type IAC that are killed.	W
INTDM(ISUB,L) (4,2)	Index to dissemination mode side L prefers to use on type ISUB targets.	I
INTDS(IAC,KR,L) (7,3,2)	Number of aircraft (sorties) of type IAC on side L flying SAM suppression missions with interdiction aircraft (INTDS) into enemy region KR.	W
INTDSA(IAC) (7)	Number of INTDS aircraft of type IAC that are alive and continuing on mission.	W
INTDSD(IAC) (7)	Number of INTDS aircraft of type IAC that are damaged but not killed.	W
INTDSH(IAC) (7)	Number of INTDS aircraft of type IAC that are aborting mission and returning home undamaged.	W
INTDSK(IAC) (7)	Number of INTDS aircraft of type IAC that are killed.	W
INTRVL(IS) (8)	Index to interval in sector IS for current FEBA position.	W
INUTAR(I,L) (40,2)	Indicator of side L nuclear targets in priority order I.	W
INWFM	Number of weapons fired under current fire mission.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IOMU	Index to order of weapon assessment model is to	I
	$\text{IOMU} = \begin{cases} 1, \text{ nuclear chemical, and} \\ \quad \text{conventional weapons} \\ 2, \text{ chemical, nuclear, and} \\ \quad \text{conventional weapons} \\ 3, \text{ nuclear and con-} \\ \quad \text{ventional} \\ 4, \text{ chemical and con-} \\ \quad \text{ventional} \\ 5, \text{ conventional only.} \end{cases}$	
IOSN (ISN) (95)	Index to ownership of supply node ISN	I
	$\text{IOSN (ISN)} = \begin{cases} 1, \text{ means Blue} \\ 2, \text{ means Red.} \end{cases}$	
IOSNMS (ISN) (95)	Index to owner of supply node ISN during the last execution of the supply model.	W
IPCMZ	See IPRI	I
IPOPCH	Indicator for use of civilian population centers as constraint to firing chemical weapons	I
	$\text{IPOPCH} = \begin{cases} 1, \text{ civilian population} \\ \quad \text{centers are con-} \\ \quad \text{straints to firing} \\ \quad \text{chemical weapons} \\ 0, \text{ civilian centers} \\ \quad \text{do not impose con-} \\ \quad \text{straints to firing} \\ \quad \text{chemical weapons.} \end{cases}$	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IPOPIN	Index to use civilian centers as constraints to firing nuclear weapons	I
	$\text{IPOPIN} = \begin{cases} 1, & \text{civilian centers} \\ & \text{are constraints to} \\ & \text{firing nuclear} \\ & \text{weapons} \\ 0, & \text{civilian centers} \\ & \text{do not impose con-} \\ & \text{straints to firing} \\ & \text{nuclear weapons.} \end{cases}$	
IPRD	Index to printing detailed results.	W
IPRDO(II) (5)	Indicator of combat cycles when detailed output is printed, $1 \leq II \leq 5$.	I
IPREG	See IPRI	I
IPRI(ISU,IZ,L) (7,4,2)	Index to priority list of pre- ferred nuclear targets by side L. The three variables IPRI, IPREG, and IPCMZ are used to form a <u>single</u> priority list of preferred targets when it is assumed that <u>all</u> target types are allowable. No two target types within the three variables may have the same priority. Priorities are listed highest to lowest as 1,2,...,N. The variable	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IPRI (ISU, IZ, L)	IPRI (ISU, IZ, L) Gives the priority of side L battle-field targets of type ISU in zone IZ.	
	IPREG (ITYP, ISUB, L) Gives the priority of side L region targets of type ISUB in area ITYP. (see IALCT)	
	IPCMZ (ISUB, L) Gives the priority of side L COMMZ targets of type ISUB. (see IALCT)	
IPRS	Indicator for printing summary output.	W
IPRSO (II) (30)	Indicator of combat cycles when summary output is printed, $1 \leq II \leq 30$.	I
IPRT	Indicator for print control in CHEMDAM.	W
IPSHLA (J, L) (7, 2)	Index for priority sheltering of aircraft on side L. IPSHLA (J, L) = IAC, if type IAC aircraft gets Jth priority for sheltering.	I
IPSQRA (I, L) (5, 2)	Index for selecting aircraft to fill QRA shortfalls on side L. IPSQRA (I, L) = J if type J QRA aircraft gets Ith priority for filling QRA shortfalls. (I=1, ..., NQRAT(L))	I
IPTSUR (ISU, L) (7, 2)	Index to priority targeting of type ISU subunits in side L divisions in rear areas.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IQRAP(J,L)	Index for indicating for side L which type aircraft is the Jth QRA aircraft.	I
IRAC(IAC,II,L) (7,3,2)	Index of range for side L type IAC aircraft stationed on air bases whose location is given by II (II = 1 means forward air bases, II = 2 means rear air bases, II = 3 means COMMZ air bases).	I
	IRAC = { 1, if aircraft of type IAC based in II can fly only air defense 2, if aircraft of type IAC based in II can fly at most CAS 3, if aircraft of type IAC based in II can fly at most to enemy forward air bases 4, if aircraft of type IAC based in II can fly at most to enemy rear air bases 5, if aircraft of type IAC based in II can fly everywhere.	
IRADTA(L) (2)	Index to region assignment option* for theater attacker when arriving unit is from side L.	I
IRADTD(L) (2)	Index to region assignment option for theater defender when arriving unit is from side L.	I

*Assignment options are discussed in section 2.2.14.2.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ISA(IS) (8)	Index to sector attacker. Index is 1 if side L is attacker in sector IS; 2 is side 2 is attacker in sector IS; 0 means holding.	W
ISCEF(IS) (8)	Indicator for sector IS being constrained due to exposed flank. ISCEF=1 constrained ISCEF=0 unconstrained.	W
ISCL1(ITC,L) (3,2)	The escalation state to be moved to against target category ITC by side L, if the corresponding IND1(IS,L) is 1.	I
ISCL2(IEVNT,ITC,L) (7,3,2)	The escalation state to be moved to against target category ITC by side L, if a preemptive strike is to be initiated.	I
ISMA(IS) (8)	Index to sector of main attack.	W
ISMAI(IS,L) (8,2)	Input variable for indexing sector of main attack for side L. (Needed if ICSMA(L) = 2)	I
	$\text{ISMAI}(\text{IS},\text{L}) = \begin{cases} 1, & \text{index for sector of main attack} \\ 0, & \text{otherwise.} \end{cases}$	
ISNABA(IS,L) (8,2)	Index to supply node for active battle area in sector IS for side L.	I
ISNBA(IBA) (112)	Index to supply node that supplies battle area IBA.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ISSWTC(IWS,L) (4,2)	Index of a type IWS sector chemical system to a particular weapon type for side L where IWS = 1,...,4 and $\text{ISSWTC} = \begin{cases} 1, \text{ medium range missile} \\ 2, \text{ long range missile} \\ 3, \text{ aircraft type} \\ \quad \text{IAC} = 1 \\ 4, \text{ aircraft type} \\ \quad \text{IAC} = 2 \\ 5, \text{ aircraft type} \\ \quad \text{IAC} = 3 \\ 6, \text{ aircraft type} \\ \quad \text{IAC} = 4 \\ 7, \text{ aircraft type} \\ \quad \text{IAC} = 5 \\ 8, \text{ aircraft type} \\ \quad \text{IAC} = 6 \\ 9, \text{ aircraft type} \\ \quad \text{IAC} = 7. \end{cases}$	I
ISSWTN(IWS,L) (5,2)	Index of a type IWS sector nuclear system to a particular weapon type for side L. (See ISSWTC for weapon index values.)	I
ISTAT(IBA) (112)	Index to status of each battle area IBA as defined in subroutine TAG. (ISTAT is a working array)	W
ISUSVE(I,L) (100,2)	Type subunit targeted by the Ith fire mission, side L.	W
ITA	Index to theater attacker $\text{ITA} = \begin{cases} 1, \text{ Blue} \\ 2, \text{ Red.} \end{cases}$	I
ITAAS(IAS,L) (4,2)	Index to type IAS army air sensor for side L $\text{ITAAS} = \begin{cases} 0, \text{ nonglimpse} \\ 1, \text{ glimpse.} \end{cases}$	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ITAFS(IAFS,L) (4,2)	Index to type of air force sensor IAFS for side L ITAFS = $\begin{cases} 0, & \text{nonglimpse} \\ 1, & \text{glimpse.} \end{cases}$	I
ITD(ID) (140)	Index to type of division ID.	I
ITLZN	Target location (or target type) for current mission.	W
ITMPR(IS,L) (8,2)	The cycle at which the side L preemptive nuclear strike is to be initiated in sector IS.	I
ITSWTC(IWS,L) (4,2)	Index of a type IWS theater chemical system to a particular weapon type for side L. (See ISSWTC for weapon index values.)	I
ITSWTN(IWS,L) (5,2)	Index of a type IWS theater nuclear system to a particular weapon type for side L. (See ISSWTC for weapon index values.)	I
ITTD	Name of working file for time-t data.	I
ITTPR(IS,L) (8,2)	The cycle at which the preemptive nuclear strike is to be terminated in sector IS for side L.	I
IUSFRC	Index to use the security force ratio constraint to movement for units in the active battle area	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
	IUSFRC = $\begin{cases} 0, \text{ means no} \\ 1, \text{ means yes.} \end{cases}$	
IUTAM	Index to use target acquisition model. (If 1 = yes, if 0 = no.)	I
IVNAF(IAFC, IDAM, L) (3, 2, 2)	Vulnerability number for air-field component IAFC at damage level IDAM for side L. For this variable and for IVNSP, IVNSSM, and IVNW the vulnerability number will be written as a 4-digit number (with p = 1 and Q = 2) instead of the normal alphanumeric number.	I
	IAFC = $\begin{cases} 1, \text{ aircraft in the open} \\ 2, \text{ aircraft in shelters} \\ 3, \text{ buildings} \end{cases}$	
	IDAM = $\begin{cases} 1, \text{ severe damage} \\ 2, \text{ moderate damage.} \end{cases}$	
IVNSP(L) (2)	Vulnerability number for nuclear assessments by side L against supply point components.	I
IVNSSM(IDAM, L) (2, 2)	Vulnerability number for assessing blast effects against SSMS for damage type IDAM where IDAM = 1, severe damage; IDAM = 2, moderate damage.	I
IVNW(IDAM, IW, L) (2, 10, 2)	Vulnerability number to be used by side L against weapon type IW for damage type IDAM (where IDAM = 1, severe damage; IDAM = 2, moderate damage.)	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IWL(I,L) (100,2)	Index to weapon to be fired in Ith fire mission, side L.	W
IWLBT(I,L) (100,2)	Number of side L targets per Ith mission, (subunits in divisions, or the parking area targeted at airbases).	W
IWLCOT(I,L) (100,2)	Index to side L target type for Ith mission. (ISU for divisions, or ISUB for regions and COMMZ targets.)	W
IWLCT	Index to specific target type for current fire mission.	W
IWLDM	Dissemination mode of current chemical fire mission.	W
IWLDSM(I,L) (100,2)	Index to dissemination mode being used for Ith fire mis- sion, side L.	W
IWLHOB(I,L) (100,2)	HOB associated with the weapon in the Ith nuclear mission, side L.	W
IWLID	Target identification (either division IDS, airbase IAB or supply node ISN) for current fire mission.	W
IWLIDS(I,L) (100,2)	Identification of target for ith mission, for side L (either) division IDS, airbase IAB supply node ISN, or surface-to- surface missile site).	W
IWLKA	Chemical agent type of current chemical fire mission.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IWLKAT(I,L) (100,2)	Index to agent type being used for Ith fire mission, side L.	W
IWLNCR(I,L) (100,2)	Indicator to number of rounds fired on the Ith mission, side L.	W
IWLTAR	Indicator of subunits or air- base parking area ID of cur- rent fire mission.	W
IWLTLO(I,L) (100,2)	Index to category of weapon for Ith mission, side L.	W
IWLTZN(I,L) (100,2)	Index to side L target location for Ith mission, (zones for sub- units in divisions, or ITYP tar- get for airbases, supply nodes, and SSM sites).	W
IWNSVE(I,L) (100,2)	Number of weapons for the Ith fire mission, side L.	W
IWORD(I,IAF) (15,201)	Data for actual airbase IAF where the Ith word is defined as follows: 1-7 Number of type J aircraft, J=1, 7 8-10 Not used 11 Number shelters 12 Number of military per- sons ($\times 10^{-2}$) 13 Fraction surviving military personnel for current cycle 14 Facility degradation due to use of nuclear weapons 15 Current owner of base (None=0, Blue=1, Red=2)	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
IWUCE	Index of weapon to use in computing eigenvalue for the APP method of computing weapon value.	I
IWZBA(IBA)* (112)	Index for weather zone in battle area IBA.	I
IZNSVE(I,L) (100,2)	Zone location of the Ith fire mission, side L.	W
JCHEM	Name of output file for detailed reports for chemical combat.	I
JCON	Name of output file for detailed reports for conventional combat.	I
JINP	Name of output file for input variables and theater control initialized variables.	I
JJ	Another index (besides J) for type of QRA aircraft.	W
JNUC	Name of output file for detailed reports for nuclear combat	I
JS	Indicator of sector.	W
JSUM	Name of output file for summary reports and diagnostics	I

*Values in data statements.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
KAGINO(KTAG) (6)	Index to order of type KTAG inhalation agents from strongest to weakest.	I
KAGPTO(KTAG) (6)	Index to order of type KTAG percutaneous agents from strongest to weakest.	I
KCHATD(IWS,IA,L) (4,4,2)	Index for the IA agent for IWS division chemical weapon sys- tem for side L.	I
KCHATS(IWS,IA,L) (4,4,2)	Index for the IA agent for IWS sector chemical weapon system for side L.	I
KCHATT(IWS,IA,L) (4,4,2)	Index for the IA agent for IWS theater chemical weapon system for side L.	I
KDMSC(KDM,L) (3,2)	Index to dissemination mode (type KDM) selected as second choice when first choice of KDM for side L is unavailable, where KDM = 1, bulk delivery, 2, submunition delivery, 3, spray delivery.	I
KDSMD(LIWS,K,IA) (8,3,4)	Index for the Kth dissemina- tion mode of the IA agent for the IWS division chemical weapon system of side L. (LIWS = (NIWS(L-1) + IWS))	I
KDSMS(LIWS,K,IA) (8,3,4)	Index for the Kth dissemina- tion mode for the IA agent for the IWS sector chemical weapon system of side L.	I
KDSMT(LIWS,K,IA) (8,3,4)	Index for the Kth dissemina- tion mode for the IA agent for the IWS theater chemical weapon system of side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
KFLAG	Indicator that is set to call chemical and nuclear models.	W
KISS	Indicator to sector.	W
KITC	Index to target type: 1, division target; 2, airbases; 3, supply nodes; 4, missile sites; 5, flag for summary print.	W
KIWF (KA,KDM,L) (9,3,2)	Index to agent (KA) and dissemination mode (KDM) combination in first position of chemical weapons list for side L.	W
KIWL (KA,KDM,L) (9,3,2)	Index to agent KA and dissemination mode (KDM) combination in last position of chemical weapons list for side L.	W
KIWYF (IYLD,L) (42,2)	Index to yield (IYLD) in first position of nuclear weapons list, side L.	W
KIWYL (IYLD,L) (42,2)	Index to yield (IYLD) in last position of nuclear weapons list, side L.	W
KOUNT	Counter in chemical model for indexing MAXIW + RDMAX.	W
KPIS (INTS,IS) (18,8)	Kind of posture in interval INTS, sector IS.	I
KPRAG (ISUB,L) (3,2)	Index to preferred agent for attacking type ISUB region or COMMZ targets. ISUB = 1, airfields; 2, supply nodes; 3, SSM sites side. Side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
KPRDM(ISUB,L) (3,2)	Index to preferred dissemination mode for attacking type ISUB region or COMMZ targets. ISUB = 1, airfields; 2, supply nodes; 3, SSM sites. Side L.	I
KPS(IS) (8)	Kind of posture in sector IS (by interval).	W
KPSY(IS) (8)	Kind of posture in sector IS yesterday.	W
KTARAG(ITC,ISU,L) (2,7,2)	Index to type agent side L would use on type ISU subunit in location ITC, where ITC = 1, battlefield, ITC = 2, rear area.	I
KTARDM(ITC,ISU,L) (2,7,2)	Index to dissemination mode side L would use on type ISU subunit in location ITC.	I
KTER(IS) (8)	Kind of terrain in sector IS (by interval).	W
KTERIS(INTS,IS) (18,8)	Kind of terrain in interval INTS, sector IS.	I
KTERTA(IBA)* (112)	Kind of terrain in battle area IBA for target acquisition model.	I
KTYPWS(IWC,IWS,L) (3,4,2)	Index to type IWS chemical weapon system for the IWC weapon category and for side L.	I
KTYPWS = $\begin{cases} 1, & \text{artillery} \\ 2, & \text{air} \\ 3, & \text{missile} \\ 4, & \text{rocket.} \end{cases}$		

*Values in data statements

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
LFIRER	Indicator of side firing current mission.	W
LXOPT(L) (2)	Index to option for the reassignment of side L aircraft within the theater when forward area airbases are under strength.	I
LXOPT(L)	$\text{LXOPT} = \begin{cases} 1, & \text{COMMZ aircraft are reassigned to forward air bases} \\ 0, & \text{no COMMZ aircraft are reassigned to forward air bases.} \end{cases}$	
MA(ISN,KSN)* (100,100)	Block data (in SUPPLY) containing distances from supply node ISN to supply node KSN.	I
MAD(L) (2)	Maximum number of additional divisions for side L (i.e., the number of follow-on divisions, in addition to ND(L).	I
MAXIW(J) (27)	Index to weapon system J (agent and dissemination mode) that can put the desired level of agent or some portion thereof on target. J=1,...,MAXKIA	W
MAXKIA	Maximum number of dissemination mode-chemical agent combinations being used.	I

*Values in data statements.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
MDDABA*	Maximum dimension for number of divisions in any active battle area. (If the model tries to add an additional division to this maximum dimension, the model will stop and print "STOP 1111.")	I
MFOPT(L) (2)	Index to option for computing FEBA location for side L relative to a given FEBA location. $MFOPT = \begin{cases} 1, & \text{use initial base-} \\ & \text{line location} \\ 2, & \text{use time zero} \\ & \text{FEBA location.} \end{cases}$	I
MNDSFC(IWS,L) (4,2)	Maximum number of firings of division chemical system IWS for side L per chemical sub-cycle.	I
MNFRD(IWS,L) (4,2)	Maximum number of firings of division nuclear system IWS for side L per nuclear sub-cycle.	I
MNFRS(IWS,L) (5,2)	Maximum number of firings of sector nuclear system IWS for side L per nuclear subcycle.	I
MNFRT(IWS,L) (5,2)	Maximum number of firings of theater nuclear system IWS for side L per nuclear subcycle.	I
MNIE	Maximum number of iterations for computing eigenvalue.	I

*Values in data statements.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
MNSSFC(IWS,L) (4,2)	Maximum number of firings of sector chemical system IWS for side L per chemical subcycle.	I
MNSUBR(L) (2)	Maximum number of subunits (in rear area divisions) that would be fired upon by side L given full knowledge of division.	I
MNTSFC(IWS,L) (4,2)	Maximum number of firings of theater chemical system IWS for side L per chemical sub- cycle.	I
NAAC(L) (2)	Number of types of army-air carriers, side L.	I
NAB	Number of airbases.	I
NAC(L) (2)	Number of types of aircraft for side L.	I
NAEQRA	Number of types of aircraft eligible to be connected to QRA aircraft.	W
NAFS(L) (2)	Number of air force sensor types for side L.	I
NAM(L) (2)	Number of types of air muni- tions for side L.	I
NAS(L) (2)	Number of army-air sensor types for side L.	I
NB3(JE,L) (4,2)	The number enemy of nuclear weapons fired into the active battle area which will initiate a transition to nuclear escala- tion state JE for side L.	I
NBA	Number of battle areas.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NBC3 (LE,L) (4,2)	The number of enemy nuclear weapons fired into the active battle area which will initiate a transition to chemical employment level LE for side L.	I
NBNLT	Number of boundary longitude points considered.	I
NCBC4 (LE,L) (4,2)	Number of enemy chemical weapons fired against battlefield targets which will initiate a transition to chemical employment level LE by side L.	I
NCBN4 (JE,L) (4,2)	Number of enemy chemical weapons fired against battlefield targets that will initiate a transition to nuclear escalation level JE for side L.	I
NCHATD (IWS,L) (4,2)	Number of types of chemical agents for use by type IWS division chemical weapon systems, on side L.	I
NCHATS (IWS,L) (4,2)	Number of types of chemical agents for use by type IWS sector chemical weapon systems, on side L.	I
NCHATT (IWS,L) (4,2)	Number of types of chemical agents for use by type IWS theater chemical weapon systems, on side L.	I
NCHBT (L) (2)	Number of the last battlefield chemical targets for side L.	W
NCHCT (L) (2)	Number of the last COMMZ chemical targets for side L.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NCHDW(L) (2)	Number of division weapon systems for delivering chemical munitions, side L.	I
NCHRT(L) (2)	Number of the last region chemical targets for side L.	W
NCHSW(L) (2)	Number of sector weapon systems for delivering chemical munitions, side L.	I
NCHTW(L) (2)	Number of theater weapon systems for delivering chemical munitions, side L.	I
NCOBAM(L) (2)	Number of cycles or battle areas side L uses for movement of forces throughout the theater. (see IMUTMF(L))	I
NCRC4(ISUB,LE,L) (4,4,2)	Number of enemy chemical weapons fired against region targets of subtype ISUB which will initiate a transition to chemical employment level LE by side L.	I
NCRN4(ISUB,JE,L) (4,4,2)	Number of enemy chemical weapons fired against type ISUB region targets that will initiate a transition to nuclear escalation level JE for side L.	I
NCSM	Number of conventional combat cycle between updates of the supply model (i.e., major supply cycle).	I
NCWABA(IS,L) (8,2)	Number of chemical weapons received by side L in sector IS.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NCWCZ (ISUB,IS,L) (4,8,2)	Number of chemical weapons side L receives against COMMZ targets type ISUB in sector IS.	W
NCWREG (ISUB,IS,L) (4,8,2)	Number of chemical weapons side L receives against region targets type ISUB in sector IS.	W
NCYCLE	Number of conventional combat cycles to be played.	I
NCZ3 (ISUB,JE,L) (3,4,2)	The number of enemy nuclear weap- ons fired against COMMZ targets of subtype ISUB which will initi- ate a transition to escalation state JE for side L. (ISUB=1, airfield, ISUB=2, supply nodes, ISUB=3, surface-to-surface missiles).	I
NCZC3 (ISUB,LE,L) (4,4,2)	The number of enemy nuclear weapons fired against COMMZ tar- gets of subtype ISUB which will initiate a transition to chemical employment level LE for side L. (see IALCT)	I
NCZC4 (ISUB,LE,L) (4,4,2)	Number of enemy chemical weap- ons fired against COMMZ tar- gets of subtype ISUB WHICH will initiate a transition to chemical employment level LE for side L. (see IALCT)	I
NCZN4 (ISUB,JE,L) (4,3,2)	Number of enemy chemical weap- ons fired against type ISUB COMMZ targets that will ini- tiate a transition to nuclear escalation level JE for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
ND(L) (2)	Number of divisions for side L at time zero.	I
NDCHW(L) (2)	Number of division chemical weapon systems, side L.	W
NDCRDP(LIWS,KIA, IS) (8,12,8)	Number of chemical rounds for the Kth dissemination mode of the IATH agent for the IWS division chemical weapon system in the division pool in sector IS for side L (LIWS = (NIWS(L-1) + IWS)).	W
NDCRSP(LIWS,KIA, IS) (8,12,8)	Number of chemical rounds for the Kth dissemination mode of the IATH agent for the IWS division chemical weapon system in the sector pool in sector IS for side L.	W
NDCRTP(LIWS,K,IA) (8,3,4)	Number of chemical rounds for the Kth dissemination mode of the IATH agent for the IWS division chemical weapon system in the theater pool for side L.	I
NDCWSI(IWS,IS,L) (4,8,2)	Number of division chemical weapon systems type IWS in sector IS for side L.	W
NDFAB(L) (2)	Depth (measured in number of battle areas) of sector forward for side L.	I
NDIBA(IS,L) (8,2)	Number of side L divisions in the first inactive battle area of sector IS.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NDOB7(L) (2)	The number of days that a side L theater attacker plans for the sectors of main attack to reach a depth of DPTH7. If by this time the required advance is not achieved, nuclear weapons may be used.	I
NDOBC7(L) (2)	The number of days that a side L theater attacker plans for the sectors of main attack to reach a depth of DPTHC7. If by this time the required advance is not achieved, chemical weapons may be used.	I
NDRAB(L) (2)	Depth (measured in number of battle areas) of sector rear for side L.	I
NDS(IS,L) (8,2)	Number of divisions in active battle area of sector IS for side L.	I
NDSAMS(L) (2)	Number of types of divisional SAMs for side L. (NDSAMS(L) are the last weapons in the list of total types of weapons, NW(L).)	I
NDSMD(IWS,IA,L) (4,4,2)	Number of dissemination modes for each IA agent of the IWS division chemical weapon system for side L.	I
NDSMS(IWS,IA,L) (4,4,2)	Number of dissemination modes for each IA agent for the IWS sector chemical weapon system for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NDSMT(IWS,IA,L) (4,4,2)	Number of dissemination modes for each IA agent of the IWS theater chemical weapon system for side L.	I
NDT	Counter.	W
NDVNW(L) (2)	Number of division nuclear weapon system types for side L.	I
NDWHD(I,K,L+2 (IS-1)) (4,4,16)	Number of warheads of Kth yield for Ith division system for side L in the division pool within sector IS.	W
NDWHS(I,K,L+2 (IS-1)) (4,4,16)	Number of warheads of Kth yield for Ith division system for side L in the sector pool of sector IS.	W
NDWHT(I,K,L) (4,3,2)	Number of warheads of Kth yield for Ith division nuclear weapon system in theater pool for side L. I=1,...,NDVNW; K=1,...,NYLD.	I
NDWSI(IWS,IS,L) (4,8,2)	Number of division weapon systems of type IWS in sector IS for side L.	W
NEAEF(L) (2)	The parameters NEAEF, XAEF, and YAEF define the functional relationship that is used to compute the combat effectiveness of side L divisions on attack as a function of percent personnel strength, where	I
NEAEF(L) (2)	The number of end-points of the piecewise linear segments of the attacker's combat effectiveness function.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NEAEF(L)	XAEF(IEAEF,L) The percent of personnel strength which gives the abscissa coordinate of the IEAEFth endpoint of the attacker's effectiveness function. YAEF(IEAEF,L) The value of the attacker's effectiveness function at the point (IEAEF,L).	
NEDEF(L) (2)	The parameters NEDEF, XDEF, and YDEF define the functional relationship that is used to compute the combat effectiveness of side L divisions on defense as a function of percent personnel strength, where	I
NEDEF(L) (2)	The number of endpoints of the piecewise linear segments of the defender's combat effectiveness function.	
	XDEF(IEDEF,L) The percent of personnel strength which gives the abscissa coordinate of the IEAEFth endpoint of the defender's combat effectiveness function.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NEDEF(L)	YDEF(IEDEF,L) The value of the defender's combat effectiveness function at the point (IEDEF,L).	
NEML	Number of chemical employment levels.	I
NEPD(I) (3)	Indicator for printing input data. If 1, variables; 2, initialized data; 3, tables.	I
NESC	Number of nuclear escalation levels.	I
NFMF	The parameters NFMF, XFMF, and YFMF define the functional relationship that is used to compute the FEBA movement when the attacker is in posture KP and terrain KT, with force ratio FRM, and where	I
	NFMF The number of endpoints of the piecewise linear segments of the movement function.	
	XFMF(IFMF) The force ratio value which together with posture type KP and terrain type KT gives the abscissa coordinate of the IFMFth endpoint of the movement function.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NFMF	YFMF(IFMF,KP, KT) The value of the movement function at the point defined by (KP, KT,XFMF).	
NGS(L) (2)	Number of types of ground sensors for side L.	I
NHSNS(IS) (8)	Highest numbered supply node in sector IS excluding node NSN.	I
NHSR(IRT) (5)	Highest numbered sector in region IR for side L where $IRT=IR+(L-1)*NR(1)$ and $IRT=1,...,NR(1) + NR(2)$.	I
NINHAG	Number of inhalation agents.	I
NINTS	Number of intervals played.	I
NIWAS	Number of weapons in the firing list as passed to CHEMDAM.	W
NLS(L) (2)	Number of types of long range SAMs, side L.	W
NLSNS(IS) (8)	Lowest numbered supply node in sector IS excluding node number 1.	W
NLSR(IRT) (5)	Lowest numbered sector in IR for side L where $IRT=IR+(L-1)*NR(1)$ and $IRT=1,...,NR(1) + NR(2)$.	W
NMS(L) (2)	Number of types of medium range SAMs, side L.	W
NNIWAS(L) (2)	Number of fire missions to be fired by side L.	W
NNSC	Number of subcycles (chemical, nuclear) per conventional combat cycle.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NNYDS(L) (2)	Number of different yields of nuclear weapons for side L.	W
NOCDAB(L) (2)	The parameters NOCDAB, XOCD, YOCDPA, YOCDR define the functional relationship that is used to compute the fraction of air-base operating capability that is destroyed when the airbases are attacked with nuclear weapons	I
NOCDAB(L) (2)	The number of endpoints of the piecewise linear segments of the function (IOCDAB =1,...,NOCDAB).	
XOCD(IOCDAB, L) (7,2)	The number of nuclear weapons that are targeted on the air base which gives the abscissa coordinate of the IOCDABth endpoint.	
YOCDPA (IOCDAB,L) (7,2)	The value of the function at the point (IOCDAB,L) when nuclear weapons are targeted on parking areas.	
YOCDR (IOCDAB,L) (7,2)	The value of the function at the point (IOCDAB,L) when nuclear weapons are targeted on the runway.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
N OCDPC (L) (2)	The parameters N OCDPC, X OCDP, Y OCDP define the functional relationship that is used to compute the airbase operating capability of side L as a function of the percent casualties (from chemical or nuclear weapons) to military personnel at the airbase.	I
N OCDPC (L) (2)	The number of endpoints of the piecewise linear segments of the function (I OCDPC = 1, ..., N OCDPC).	
X OCDP (I OCDPC, L) (6, 2)	The percent casualties to military personnel at airbases which gives the abscissa coordinate of the I OCDPCth endpoint.	
Y OCDP (I OCDPC, L) (6, 2)	The value of the function at the point (I OCDPC, L).	
N ODIST (L) (2)	The parameters N ODIST, X ODIST, and Y ODIST define the functional relationship that is used to compute the offset distance (meters) to be used when targeting side L type ISU subunits on the attack as a function of delay times caused by target acquisition processing and weapon response time, where	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NODIST(L)	NODIST(L) (2) The number of end-points of the piecewise linear segments of the offset distance function.	
	XODIST (IODIST,L) (6,2) The time delay value which together with type ISU subunits on the attack gives the abscissa coordinate of the IODISTth endpoint of the offset distance function.	
	YODIST(ISU, IODIST,L) (7,6,2) The value of the offset distance function at the point defined by (ISU,XODIST (IODIST,L)).	
NPCAF(L) (2)	The parameters NPCAF, XPCAF, and YPCAF define the functional relationship that is used to compute percent casualties to the attacker as a function of force ratio and type posture (KP) of the defender.	I
	$KP = \begin{cases} 1, & \text{means delay} \\ 2, & \text{means prepared position} \\ 3, & \text{means hasty position.} \end{cases}$	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NPCAF (L)	NPCAF (L) (2) The number of endpoints of the piecewise linear segments of the attacker's casualty function.	
	XPCAF (IPCAF,L) (8,2) The force ratio value which together with the type KP posture gives the abscissa coordinate of the IPCAF endpoint of the attacker's casualty function of side L.	
	YPCAF (KP, IPCAF,L) (3,8,2) The value of the attacker's casualty function at the point defined by (KP,XPCAF(IPCAF,L)).	
NPCDF (L) (2)	The parameters NPCDF, XPCDF, and YPCDF define the functional relationship that is used to compute percent casualties to the defender L as a function of force ratio and type posture (KP) of the defender where	I
	NPCDF (L) (2) The number of endpoints of the piecewise linear segments of the defender's casualty function.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NPCDF(L)	XPCDF (IPCDF,L) (8,2) The force ratio which together with the type KP posture gives the abscissa coordinate of the IPCDF endpoint of the defender's casualty function for side L. YPCDF(KP, IPCDF,L) (3,8,2) The value of the defender's casualty function at the point defined by (KP,XPCDF(IPCDF,L)).	
NPCHD(IWS,L) (4,2)	Number of positions (i.e., locations) for division chemical weapon system IWS for side L.	I
NPCHS(IWS,L) (4,2)	Number of positions for sector chemical weapon system IWS for side L.	I
NPCHT(IWS,L) (4,2)	Number of positions for theater chemical weapon system IWS for side L.	I
NPERAG	Number of percutaneous agents.	I
NPOSD(IWS,L) (4,2)	The number of positions (locations) for division nuclear weapon system IWS for side L.	I
NPOSS(IWS,L) (5,2)	The number of positions for sector nuclear weapon system IWS for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NPOST(IWS,L) (5,2)	The number of positions for theater nuclear weapon system IWS for side L.	I
NPT(ISU,IZ,IDS) (7,4,30)	Number of potential targets of type ISU in zone IZ in IDSth division in sector.	W
NQRAT(L) (2)	Number of different aircraft types designated as QRA aircraft for side L.	I
NR(L) (2)	Number of regions for side L.	I
NR3(ISUB,JE,L) (4,4,2)	The number of nuclear weapons received against region targets of subtype ISUB which will initiate a transition to escalation state JE side L. (see IALCT)	I
NRBST(L) (2)	Number of range breakpoints used for computing distance that a sensor is from target. Side L.	I
NRC3(ISUB,LE,L) (4,4,2)	The number of nuclear weapons received against region targets of subtype ISUB which will initiate a transition to chemical employment level LE for side L.	I
NS	Number of sectors being played.	I
NSBTD(JE,L) (4,2)	Number of battlefield surface burst target types in escalation state JE side L.	I
NSBTS(JE,L) (4,2)	Number of region surface burst target types in escalation state JE for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NSBTT (JE,L) (4,2)	Number of COMMZ surface burst target types in escalation state JE for side L.	I
NSCHW (L) (2)	Number of sector chemical weapon systems, side L.	W
NSCNW (L) (2)	Number of sector nuclear weapon system types for side L.	I
NSCRSP (LIWS,KIA,IS) (8,12,8)	Number of chemical rounds for the Kth dissemination mode of the IAth agent for the IWS sector chemical weapon system in the sector pool in sector IS for side L. $LIWS = (NIWS * (L-1) + IWS)$	W
NSCRTP (LIWS,K,IA) (8,3,4)	Number of chemical rounds for the Kth dissemination mode of the IAth agent for the IWS sector chemical weapon system in the theater pool for side L.	I
NSCWSI (IWS,IS,L) (4,8,2)	Number of sector weapons systems, type IWS, in sector IS for side L.	W
NSEFF (L) (2)	The parameters NSEFF, XSEFF, and YSEFF define the side L supply effectiveness factor as a function of days of supply on-hand where NSEFF (L) Gives the number of endpoints used in the piecewise linear segments of the supply effectiveness function.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NSEFF (L)	XSEFF (ISEFF,L) The number of days of supply on-hand which gives the abscissa coordinate of the ISEFFth endpoint, of the supply effectiveness function. YSEFF (ISEFF,L) The value of the supply effectiveness function at the point (ISEFF,L).	
NSFRD (IWS,IPOS,L) (4,2,2)	Number of rounds fired by division weapon system IWS in position IPOS for side L.	W
NSFRS (IWS,IPOS,L) (5,2,2)	Number of rounds fired by sector weapon system IWS in position IPOS for side L.	W
NSFRT (IWS,IPOS,L) (5,2,2)	Number of rounds fired by theater weapon system IWS in position IPOS for side L.	W
NSN	Number of supply nodes.	I
NSS (L) (2)	Number of types of short range surface-to-air weapons on side L.	W
NST	Number of sectors, temporarily--used as a working variable in the air model to store NS temporarily.	W
NSU (L) (2)	Number of types of subunits for side L.	I
NSUB	Number of target subtypes (ISUB).	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NSUMPS (IWC,IWS,L) (3,4,2)	Number of submunitions in a side L IWS weapon system of weapon category IWC.	I
NSUTD (ISU,ID) (7,140)	Current number of type ISU subunits in division ID. (Input for each division, if different from TOE value, must be entered as floating point numbers.)	I
NSWHS (I,K,L+2 (IS-1)) (5,3,16)	Number of warheads of Kth yield for the Ith sector system for side L in the sector pool in sector IS.	W
NSWHT (I,K,L) (5,3,2)	Number of warheads of Kth yield for Ith sector nuclear weapon system in theater pool for side L. I=1,...,NSCNW; K=1,...,NYLS.	I
NSWSI (IWS,IS,L) (5,8,2)	Number of sector weapon systems of type IWS in sector IS for side L.	W
NT (L) (2)	Number of types of divisions for side L.	I
NTCHW (L) (2)	Number of theater chemical weapon systems, side L.	W
NTCRTP (LIWS,K,IA) (8,3,4)	Number of chemical rounds for the Kth dissemination mode of the IAth agent for the IWS theater chemical weapon system in the theater pool for side L.	I
NTCWSI (IWS,IS,L) (4,8,2)	Number of theater chemical weapon systems, type IWS, in sector IS for side L.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NTHNW(L) (2)	Number of theater nuclear weapon system types, for side L.	I
NTPP	Number of chemical protective posture types.	I
NTR	Number of tactical roles. NTR = 2.	I
NTSUDT(ISU,IT) (7,10)	TOE number of type ISU subunits in division type IT. (Must be entered as floating point numbers.)	I
NTWHT(I,K,L) (5,3,2)	Number of warheads of Kth yield for Ith theater nuclear weapon system in theater pool for side L. I=1,...,NTHNW; K=1,...,NYLT.	I
NTWSI(IWS,IS,L) (5,8,2)	Number of theater nuclear weapon systems of type IWS in sector IS for side L.	W
NTWSU(L) (2)	Number of types of weapons in subunits for side L.	I
NTYP	Number of target types (ITYP) within ISUB.	I
NUCBT(L) (2)	Number of nuclear battlefield targets, side L.	W
NUCCT(L) (2)	Number of nuclear COMMZ targets, side L.	W
NUCRT(L) (2)	Number of nuclear region targets, side L.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
NW(L) (2)	Number of types of division weapons for side L.	I
NWABA(IS,L) (8,2)	Number of nuclear weapons side L receives against battlefield targets in sector IS (TGTWP2).	W
NWCZ(ISUB,IS,L) (4,8,2)	Number of nuclear weapons side L receives against COMMZ targets type ISUB in sector IS.	W
NWREG(ISUB,IS,L) (4,8,2)	Number of nuclear weapons side L receives against region targets type ISUB in sector IS.	W
NYLD(IWS,L) (4,2)	Number of different yields available for side L IWS division nuclear weapon system.	I
NYLS(IWS,L) (5,2)	Number of different yields available for side L type IWS sector nuclear weapon system.	I
NYLT(IWS,L) (5,2)	Number of different yields available for side L type IWS theater nuclear weapon system.	I
NZ(L) (2)	Number of zones within divisions for side L.	I
OCNUC(IAB) (201)	Current operating capability (fraction) of airbase IAB.	W
OCWRP(IW,L) (10,2)	Maximum number of type IW weapons that the repair pool for side L can repair in one cycle (12 hours).	I
PAACAM(IAAC,IM,L) (3,3,2)	Percent of army-air carriers of type IAAC assigned to mission IM for side L (see PAFRAM)	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PAACSM(IAS,IAAC, IM*L) (4,3,6)	Percent of side L type IAAC army-air carriers with type IAS air sector on mission IM for side L (see PAFRAM).	I
PAFRAM(IM,L) (3,2)	Fraction of air force recon- naissance aircraft assigned to mission IM for side L $IM = \begin{cases} 1, & \text{standoff moving} \\ 2, & \text{forward area} \\ 3, & \text{deep area} \end{cases}$ $0 \leq \sum_{IM} PAFRAM(IM,L) \leq 1.$	I
PAJOR(1,L) (1,2)	Probability that an attacker on side L when engaged by an enemy defender, jettisons its ordnance and returns fire (otherwise it tries to outrun the defen- ders).	I
PARHLS(L) (2)	Probability that aircraft returns home when engaged by an enemy long range SAM on side L.	I
PARHMS(L) (2)	Probability that an aircraft returns home when engaged by an enemy medium range SAM on side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PARKAB(L) (2)	Number of parking areas for aircraft on a typical actual airbase on side L.	I
PCSAB(L) (2)	Planned consumption rate of supplies per aircraft by side L (measured in tons/day per aircraft).	I
PCSD(IT) (10)	Planned consumption rate of supplies by type IT divisions (in tons/day).	I
PDADDA(L) (2)	Probability of detection by a side L area defender of escorts and attackers. (Variables PDDASF, PDDEF, PDDASR, PDDASZ, PDDER, PDDEA equivalenced.)	I
PDANS(IAC,L) (7,2)	Probability that a side L type IAC aircraft detects a non-sheltered aircraft on a typical actual airbase.	I
PDASFB(L) (2)	Probability of detection by a side L long range SAM providing area defense of enemy aircraft attacking airbases. (PDAMSF, PDAMSR, PDAMSZ, PDALSF, PDALSR, PDALSZ equivalenced.)	I
PDASSS(L) (2)	Probability of detection by a side L long range area SAMs of SAM suppressor aircraft.	I
PDBBSS(L) (2)	Probability of detection by a side L medium range belt SAM of SAM suppressor aircraft.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PDBDEA(L) (2)	Probability of detection by a side L battlefield defense aircraft of an enemy escort or attack aircraft. (PDCDAS and PDCDCE equivalenced.)	I
PDBDFB(L) (2)	Probability of detection by a side L battlefield defense aircraft of an enemy aircraft flying by. (PDCDFB(1,L) equivalenced.)	I
PDBSFB(L) (2)	Probability of detection by a side L medium range belt SAM of enemy aircraft flying by to targets in the rear.	I
PDDRA(L) (2)	Probability of detection of any side L division in the rear area.	I
PDENS(IBA) (112)	Population density of civilians for battle area IBA.	I
PDENSS	Civilian population density in battle area.	W
PDESAD(L) (2)	Probability of detection by a side L escort of an enemy area defense aircraft. (PDEABD equivalenced.)	I
PDESBD(L) (2)	Probability of detection by a side L escort of an enemy battlefield defense aircraft. (PDCECD and PDAECD equivalenced)	I
PDIV(ID) (140)	Actual number of people in division ID (value entered for division ID if different from TOE number).	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PDMMX(JE,L) (4,2)	Minimum population of a city which constitutes a collateral damage constraint to side L in escalation state JE.	I
PDPSFB(ISS,L) (2,2)	Probability of detection by a side L type ISS short range SAM of enemy aircraft flying by to targets in the rear.	I
PDPSSS(ISS,L) (2,2)	Probability of detection by a side L type ISS short range SAM of enemy SAM suppressor aircraft.	I
PDSHL(IAC,L) (7,2)	Probability that a side L type IAC aircraft detects a shelter on a typical actual air base.	I
PDSSAS(L) (2)	Probability of detection by side L SAM suppressor aircraft of enemy area SAMs. (PDSAMS, PDSALS equivalenced.)	I
PDSSBS(L) (2)	Probability of detection by side L SAM suppressor aircraft of enemy belt SAMs.	I
PDSSMS(L) (2)	Probability of side L detecting enemy surface-to-surface missile sites.	I
PDSSPS(L) (2)	Probability of detection by side L SAM suppressor aircraft of point SAMs. (PDSPMS, PDSPSS, PDMSMC, PDSSSC equivalenced.)	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PDWD(LIWS,K,IA) (8,3,4)	Initial mass median particle diameter (in microns) of agent IA under dissemination mode K for division weapon system LIWS (i.e., division weapon system IWS for side L.	I
PDWS(LIWS,K,IA) (8,3,4)	Initial mass median particle diameter (in microns) of agent IA under dissemination mode K for sector weapon system LIWS.	I
PDWT(LIWS,K,IA) (8,3,4)	Initial mass median particle diameter (in microns) of agent IA under dissemination mode K for theater weapon system LIWS.	I
PENCOR(KR,L) (3,2)	Number of penetration corridors in enemy region KR for side L penetrators.	I
PFAPOS(IPCM,IMT) (8,3)	Relative protection afforded by a type IPCM protection category over no protection against a type IMT chemical agent. (Values ≥ 1.0) IPCM = the value of IPC in FCPPC, and where $IMT = \begin{cases} 1, & \text{high volatility, C-S type} \\ 2, & \text{medium volatility, EVAP type} \\ 3, & \text{low volatility, Porton type.} \end{cases}$	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PIAIM(IAC,I,L) (7,3,2)	Fraction of type IAC interdiction aircraft assigned to interdiction mission I for side L $I = \begin{cases} 1, & \text{SSM sites} \\ 2, & \text{combat divisions in the rear} \\ 3, & \text{supply depots} \end{cases}$ $\sum_{I=1}^3 \text{PIAIM(IAC,I,L)} = 1.$	I
PICVDR(L) (2)	Fraction increase in combat value that a side L division of effectiveness $\geq$ ERDWLE(L) in the first inactive battle area needs before it replaces a division of effectiveness $\leq$ EWDRHE(L) in the active battle area.	I
PKAD(IAC,KAC,L) (7,7,2)	Probability of kill by a side L type IAC attacker of a type KAC defender if they are engaged.	W
PKANSD(IAC,II,L) (7,9,2)	Probability that a side L type IAC aircraft kills a nonsheltered aircraft given that it shoots at one (where II is as in PKASD).	I
PKASD(IAC,II,L) (7,9,2)	Probability that a side L type IAC aircraft kills an aircraft in a shelter given that it shoots at a shelter containing an aircraft, where II is as below	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PKASD(IAC,II,L)	II = { 1, if the attacker flew from a forward airbase to an enemy forward airbase 2, if the attacker flew from a forward airbase to an enemy rear airbase 3, if the attacker flew from a forward airbase to an enemy COMMZ airbase 4, if the attacker flew from a rear airbase to an enemy forward airbase 5, if the attacker flew from a rear airbase to an enemy rear airbase 6, if the attacker flew from a rear airbase to an enemy COMMZ airbase 7, if the attacker flew from a COMMZ airbase to an enemy forward airbase 8, if the attacker flew from a COMMZ airbase to an enemy rear airbase 9, if the attacker flew from a COMMZ airbase to an enemy COMMZ airbase.	
PKASSM(IAC,I,L) (7,2,2)	Probability of kill by side L type IAC aircraft against an enemy surface-to-surface missile site of type I (see PWSSMS).	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PKDAS(IAC,KAC,L) (7,7,2)	Probability of kill by side L type IAC defender of a type KAC attacker or SAM suppressor if they are engaged.	W
PKDE(IAC,KAC,L) (7,7,2)	Probability of kill by a side L type IAC defender of an enemy type KAC escort if they are engaged.	I
PKED(IAC,KAC,L) (7,7,2)	Probability of kill by a side L type IAC escort of a type KAC defender if they are engaged.	W
PKLSA(L) (2)	Probability of kill by a side L long range SAM of enemy air- craft.	I
PKMSA(L) (2)	Probability of kill by a side L medium range SAM of enemy aircraft.	I
PKSSA(ISS,L) (2,2)	Probability of kill by a side L type ISS short range sur- face-to-air weapon of enemy aircraft.	I
PKSSLS(IAC,L) (7,2)	Probability of kill by a side L type IAC SAM suppressor of enemy long range SAMs.	I
PKSSMS(IAC,L) (7,2)	Probability of kill by a side L type IAC SAM suppressor of enemy medium range SAMs.	I
PKSSSS(IAC,ISS,L) (7,2,2)	Probability of kill by a side L type IAC SAM suppressor of enemy type ISS short range surface-to-air weapons.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PMCHC(LE,L) (4,2)	Population size as a constraint by side L for collateral damage in employment level LE.	I
PPNOTF(IS,L)* (8,2)	Number military personnel at the forward notional airbase in sector IS for side L.	I
PPNOTR(IS,L)* (8,2)	Number military personnel at the rear notional airbase in sector IS for side L.	I
PPNOTZ(L)* (2)	Number military personnel at the COMMZ airbase for side L.	I
PRAFSM(IAFS,IM,L) (4,3,2)	Fraction of reconnaissance aircraft with air force sensor of type IAFS assigned to mission IM for side L $IM = \begin{cases} 1, & \text{standoff moving} \\ 2, & \text{forward area} \\ 3, & \text{deep area.} \end{cases}$	I
PRTGTC(ISUB,LE,L) (3,4,2)	Maximum fraction of ISUB region targets side L will target in employment level LE.	I
PRTGTN(ISUB,JE,L) (3,4,2)	Maximum fraction of ISUB region targets side L will target in escalation state JE.	I
PSJOR(1,L) (1,2)	Probability that a side L SAM suppressor when engaged by an enemy defender, jettisons its ordnance and returns fire (otherwise it tries to outrun the defender).	I

*Values input here will override the values for each notional airbase as calculated from data on actual airbases (IMAGE)

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PSRADS (ISU,L) (4,2)	Probability that a side L type ISU subunit located in the rear area is detected.	W
PSRSC (ISS,IS,L) (2,8,2)	Number of side L type ISS short range SAMs (or AAA) providing point defenses for units in combat in sector IS.	W
PSRSCA (ISS,IS) (2,8)	Number of short range SAMs of type ISS defending units in combat in sector IS that are alive and operating.	W
PSRSCD (ISS) (2)	Number of short range SAMs of type ISS defending units in combat that are damaged but not killed.	W
PSRSCK (ISS) (2)	Number of short range SAMs of type ISS defending units in combat that are killed.	W
PSRSCS (ISS) (2)	Number of short range SAMs of type ISS defending units in combat that are suppressed.	W
PSRSF (ISS,IR,L) (2,3,2)	Number of side L type ISS short range SAMs (or AAA) providing point defenses for forward air-bases in region IR.	I
PSRSFA (ISS) (2)	Number of short range SAMs of type ISS defending forward air-bases that are alive and operating.	W
PSRSFD (ISS) (2)	Number of short range SAMs of type ISS defending forward air-bases that are damaged but not killed.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PSRSFK(ISS) (2)	Number of short range SAMs of type ISS defending forward air-bases that are killed.	W
PSRSFS(ISS) (2)	Number of short range SAMs of type ISS defending forward air-bases that are suppressed.	W
PSRSI(ISS,IS,L) (2,8,2)	Number of side L type ISS short range SAMs (or AAA) providing point defenses for interdiction targets in sector IS.	W
PSRSIA(ISS,IS) (2,8)	Number of short range SAMs of type ISS defending interdiction targets in sector IS that are alive and operating.	W
PSRSID(ISS) (2)	Number of short range SAMs of type ISS defending interdiction targets that are damaged but not killed.	W
PSRSIK(ISS) (2)	Number of short range SAMs of type ISS defending interdiction targets that are killed.	W
PSRSIS(ISS) (2)	Number of short range SAMs of type ISS defending interdiction targets that are suppressed.	W
PSRSR(ISS,IR,L) (2,3,2)	Number of side L type ISS short range SAMs (or AAA) providing point defenses for rear air-bases in region IR.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PSRSRA(ISS) (2)	Number of short range SAMs of type ISS defending rear air-bases that are alive and operating.	W
PSRSRD(ISS) (2)	Number of short range SAMs of type ISS defending rear air-bases that are damaged but not killed.	W
PSRSRK(ISS) (2)	Number of short range SAMs of type ISS defending rear air-bases that are killed.	W
PSRSRS(ISS) (2)	Number of short range SAMs of type ISS defending rear air-bases that are suppressed.	W
PSRSZ(ISS,L) (2,2)	Number of side L type ISS short range SAMs (or AAA) providing point defenses for COMMZ air bases.	I
PSRSZA(ISS) (2)	Number of short range SAMs of type ISS defending COMMZ air-bases that are alive and operating.	W
PSRSZD(ISS) (2)	Number of short range SAMs of type ISS defending COMMZ air-bases that are damaged but not killed.	W
PSRSZK(ISS) (2)	Number of short range SAMs of type ISS defending COMMZ air-bases that are killed.	W
PSRSZS(ISS) (2)	Number of short range SAMs of type ISS defending COMMZ air-bases that are suppressed.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PSSSLS(L) (2)	Probability of suppression by side L SAM suppressor of enemy long range SAMs.	I
PSSSMS(L) (2)	Probability of suppression by a side L SAM suppressor of enemy medium SAMs.	I
PSSSSS(ISS,L) (2,2)	Probability of suppression by a side L SAM suppressor of enemy type ISS short range surface-to-air weapons.	I
PSZD(ISU,IZ,L) * (7,4,2)	Probability that side L type ISU subunit in zone IZ is detected.	I
PSZDDS(ISU,IZ,IDS) (7,4,30)	Fraction of units of type ISU detected in zone IZ in division IDS (TARACQ).	W
PWATS(IW,I,L) (10,4,2)	The fraction of side L type IW weapons that are damaged and abandoned when the unit is in tactical situation I	I
	$I = \begin{cases} 1, & \text{attack} \\ 2, & \text{prepared defense} \\ 3, & \text{delay} \\ 4, & \text{inactive (i.e., holding or in reserve).} \end{cases}$	
PWDRP(IW,L)	Fraction of side L type IW weapons that were damaged but are assumed to be repairable.	I

*Used only if the probability of detection values (normally calculated by the target acquisition model) are a direct user input.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
PWNCTS(IW,I,L) (10,2,2)	Fraction of side L type IW weapons that are noncombat losses when the unit is in tactical situation I $I = \begin{cases} 1, & \text{active} \\ 2, & \text{inactive} \end{cases}$ (all are assumed to be repairable).	I
PWRCRP(IW,L) (10,2)	Fraction of side L type IW weapons that can be repaired in one cycle (12 hours) and sent to the replacement pool.	I
PWSF(IW,L) (10,2)	Percent weapons of type IW in the standard force for side L.	I
PWSSMS(I,L) (2,2)	Number of people associated with a type I SSM site for side L where $I = \begin{cases} 1, & \text{medium range missile/} \\ & \text{rocket site} \\ 2, & \text{long range missile/} \\ & \text{rocket site.} \end{cases}$	I
PZDPTH(IZ,L) (4,2)	Fraction of side L division depth classified as zone IZ $\sum_{NZ} PZDPTH(IZ,L) = 1, \text{ for } L = 1 \text{ and } 2.$ IZ	I
QRACZ(J,L) (5,2)	Number of side L type J QRA aircraft on COMMZ air bases. J=1,...,NQRAT.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
QRAFS(J,IS,L) (5,8,2)	Number of side L type J QRA aircraft on forward airbases in sector IS.	I
QRAK(IS,L) (8,2)	Number of QRA aircraft lost by side L in sector IS.	W
QRARS(J,IS,L) (5,8,2)	Number of side L type J QRA aircraft on rear airbases in sector IS.	I
RAACM(IAAC,I,L) (3,3,2)	Rate of attrition for army-air carriers of type IAAC on mission I for side L (12 hour rate)	I
	$I = \begin{cases} 1, & \text{standoff moving} \\ 2, & \text{forward area} \\ 3, & \text{deep area.} \end{cases}$	
RAAFRM(IM,L) (3,2)	Rate of attrition for air force reconnaissance aircraft assigned to mission IM for side L (air-to-air and ground-to-air attrition) (12 hour rate)	I
	$IM = \begin{cases} 1, & \text{standoff moving} \\ 2, & \text{forward area} \\ 3, & \text{deep area.} \end{cases}$	
RAASDT(IAS,ISU,L) (4,7,2)	Rate at which side L type IAS air sensor detects type ISU subunit.	I
RACAM(IS,IM,L) (8,3,2)	Number of available air force reconnaissance aircraft in sector IS assigned to mission IM for side L.	W
RACCZ(L) (2)	Number of air force reconnaissance aircraft in COMMZ for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
RACFS (IS,L) (8,2)	Number of air force reconnais- sance aircraft in forward sec- tor IS for side L.	I
RACRS (IS,L) (8,2)	Number of air force reconnais- sance aircraft in rear sector IS for side L.	I
RADBPT (IRS) (4)	Radiation level breakpoints in the range between 0, and 2000, for initial nuclear radiation intervals IRST. IRS=1,...,4 and IRST=1,...,5.	I
RAEVP (KA) (9)	Rate at which chemical agent KA evaporates from the ground at temperatures used in the model.	I
RAFSDT (IAFS,ISU,L) (4,7,2)	Rate at which side L type IAFS air force sensor detects type ISU subunit.	I
RANGE	Expected range from sensor to target used in target acqui- sition equation for a particular sensor operation	W
RDBPTA (IPC) (8)	Breakpoint for yield interval when calculating radius of damage from airburst weapon against personnel in protec- tion category IPC (see variable FCPPC).	I
RDBPTS (IPC) (8)	Breakpoint for yield interval when calculating radius of damage from surface burst weapon for weapon effects against personnel in protec- tion category IPC (see FCPPC).	I
RDCFA (IPC,I) (8,2)	Yield coefficient for airburst weapon in the Ith yield interval when calculating radius of dam- age for weapon effects against personnel is IPC protection cate- gory (see variable FCPC).	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
RDCFS(IPC,I) (8,2)	Yield coefficient in the Ith yield interval when calculating radius of damage from surface burst weapon for weapon effects against personnel in protection category IPC (see variable FCPPC).	I
RDEXPA(IPC,I) (8,2)	Yield exponent for airburst weapon in the Ith yield interval when calculating radius of damage for weapon effects against personnel in IPC protection category (see FCPPC).	I
RDEXPS(IPC,I) (8,2)	Yield exponent in the Ith yield interval when calculating radius of damage from surface burst weapon for weapon effects against personnel in protection category IPC (see variable FCPPC).	I
RDMAX(J) (27)	Percent of preferred quantity of agent that weapon system J can put on target.	W
RDPLDV(IWS,IPOSD,L) (4,2,2)	Average distance from the FEBA for deployment of side L type IWS division nuclear weapon system in position IPOSD.	I
RDPLSC(IWS,IPOSS,L) (5,2,2)	Average distance from the FEBA for deployment of side L type IWS sector nuclear weapon system in position IPOSS.	I
RDPLTH(IWS,IPOST,L) (5,2,2)	Average distance from the FEBA for deployment of side L type IWS theater nuclear weapon system in position IPOST.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
RDSIGA(IPC,I) (8,2)	Sigma associated with the Ith yield interval when calcu- lating radius of damage from airburst weapon for weapon effects against personnel in IPC protection category (see variable FCPPC).	I
RDSIGS(IPC,I) (8,2)	Sigma associated with the Ith yield interval when calcu- lating radius of damage from surface burst weapon for weapon effects against person- nel in protection category IPC (see variable FCPPC).	I
RDSSMS(I,L) (2,2)	Radius (in meters) of side L type I SSM site (see SSMSFS).	I
RDSUR(ISU,L) (7,2)	Radius (in meters) of type ISU subunit in reserve posture.	I
REPARA(IAC) (7)	Number of type IAC aircraft that are repaired during the cycle.	W
REPARL(1)	Number of long range SAMs that are repaired during the cycle.	W
REPARM(1)	Number of medium range SAMs that are repaired during the cycle.	W
REPARS(ISS) (2)	Number of type ISS short range SAMs that are repaired during the cycle.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
RFATCM(ITC,LE,L) (3,4,2)	Relative fraction (or importance) of aircraft assigned to chemical missions against target category ITC for employment level LE, side L.	I
RFATNM(ITC,JE,L) (3,4,2)	Relative fraction (or importance) of side L aircraft assigned to nuclear missions against target category ITC for escalation state JE.	I
RGSDT(IGS,ISU,L) (5,7,2)	Rate at which side L type IGS ground sector detects type ISU subunit.	I
RHO(KA) (9)	Density (gm/cm ³) of liquid component of type KA agent.	I
RMXCH(ISU,LE,L) (7,4,2)	Maximum depth that side L will target ISU subunit in employment level LE.	
RMXDP(ISU,JE,L) (7,4,2)	Maximum depth beyond the FEBA that side L may target type ISU subunit in escalation state JE.	I
RNGCHD(IWS,L) (4,2)	Range of type IWS division chemical weapon system for side L.	I
RNGCHS(IWS,L) (4,2)	Range of type IWS sector chemical weapon system for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
RNGCHT(IWS,L) (4,2)	Range of type IWS theater chemical weapon system for side L.	I
RNGDW(IWS,L) (4,2)	Range of side L type IWS division nuclear weapon system.	I
RNGSW(IWS,L) (5,2)	Range of side L type IWS sector nuclear weapon system.	I
RNGTW(IWS,L) (5,2)	Range of side L type IWS theater nuclear weapon system.	I
RPCZ(1,L) (1,2)	Number of people in the COMMZ replacement pool identified by side L and country (currently the country identification is dimensioned to 1).	I
RPSICL(KA) (9)	Reciprocal of the probit slope of the dosage response function for the type KA agent (standard deviation of $\log_{10}$ dosage from $\log_{10}(\text{ICT}_{50})$).	I
RPSIDL(KA) (9)	Reciprocal of the probit slope of the dose response function for type KA agent (standard deviation of $\log_{10}$ dose from the $\log_{10}(\text{ID}_{50})$).	I
RPSLCL(KA) (9)	Reciprocal of the probit slope of the dosage response function for type KA agent (standard deviation of $\log_{10}$ dosage from $\log_{10}(\text{LCT}_{50})$).	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
RPSLDL(KA) (9)	Reciprocal of the probit slope of the dose response function for type KA agent (standard deviation of $\log_{10}$ dose from the $\log_{10}(\text{LD}_{50})$).	I
RRAPL(IAC,L) (7,2)	Fraction of side L type IAC aircraft that are repaired in one cycle.	I
RRLSPL(1,L) (1,2)	Fraction of side L long range range SAMs that are repaired in one cycle.	I
RRMSPL(1,L) (1,2)	Fraction of side L medium range SAMs that are required in one cycle.	I
RRSSPL(ISS,L) (2,2)	Fraction of side L short range SAMs, type ISS, that are repaired in one cycle.	I
RSAMS(L) (2)	Raid size (in number of aircraft) to attack a surface-to-surface missile site for side L.	I
RSMIN(L) (2)	Minimum raid size for attacking airbases--used to determine the number of airbases that will be attacked by side L.	I
RVLOST(KTR) * (6)	"Line-of-sight" range (in meters) in type KTR terrain. KTR=1,...,6 (see Target Acquisition).	I

*Values in data statements.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
SABAF (IAC,IS,L) (7,8,2)	Number of successful ABA sorties by side L type IAC aircraft against forward airbases in sector IS.	W
SABAR (IAC,IS,L) (7,8,2)	Number of successful ABA sorties by side L type IAC aircraft against rear airbases in sec- tor IS.	W
SABAZ (IAC,L) (7,2)	Number of successful ABA sorties by side L type IAC aircraft against COMMZ airbases.	W
SABCZ (L) (2)	Supplies at side L airbase in COMMZ.	I
SABFS (IS,L) (8,2)	Supplies at side L airbase in sector forward of sector IS.	I
SABRS (IS,L) (8,2)	Supplies at side L airbase in sector rear of sector IS.	I
SACCZ (L) (2)	Supplies at COMMZ notional airbase for side L.	W
SACFRB (IS,I,L) * (8,2,2)	Number of shelters for air- craft on forward (I = 1) or rear (I = 2) airbases for side L, in sector IS.	I
SACZB (L) * (2)	Number of shelters for air- craft on notional COMMZ air- bases for side L.	I
SACZBK (L) (2)	Shelters for side L air- craft on COMMZ airbases killed (destroyed) during current cycle.	W

*Values input here for notional airbases will override shelter
values derived from data on actual airbases (IMAGE).

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
SAFRBK(IS,I,L) (8,2,2)	Shelters for aircraft on side L forward (I=1) and rear (I=2) airbases in sector IS killed (destroyed) during current cycle.	W
SAMA(IAM,KW,L) (6,10,2)	Standard allocation of side L type IAM air munition against a side K type KW ground weapon when side L is the attacker (L ≠ K).	I
SAMD(IAM,KW,L) (6,10,2)	Standard allocation of side L type IAM air munition against a side K type KW ground weapon when side L is the defender (L ≠ K).	I
SATCON(KA) (9)	Saturation concentration (mg/m ³) of vapor for type KA agent.	I
SAWA(IW,KW,L) (10,10,2)	Standard allocation of side L type IW ground weapon against a side K type KW ground weapon when side L is the attacker (L ≠ K).	I
SAWD(IW,KW,L) (10,10,2)	Standard allocation of side L type IAM air munition against a side K type KW ground weapon when side L is the defender (L ≠ K).	I
SBNDLT(IBNLT,IS) (7,9)	Boundary latitude at longitude point IBNLT of the northern part of sector IS where 1 ≤ IBNLT ≤ NBNLT and 1 ≤ IS ≤ NS + 1.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
SCMNDP(IWS,JE,L) (5,4,2)	Minimum depth (in km) beyond the FEBA that sector nuclear weapon system IWS may be fired when side L is in escalation state JE.	I
SDIV(ID) (140)	Actual number of supplies (in tons) in division ID. (Value entered for division ID if different from the TOE value.)	I
SEAADA(IAS,L) (4,2)	Sensor error (in meters) for type IAS army-air sensor on deep area search mission. Side L.	I
SEAFDA(IAFS,L) (4,2)	Sensor error (in meters) for type IAFS air force sensor on deep area search mission. Side L.	I
SFRFE(IFR,L) (2,2)	Security force ratio for flank exposure.	I
	SFRFE(1,L) Ratio of attacker to defender security forces above which attacker L will accept an exposed flank of greater than FEAFA(L).	
	SFRFE(2,L) Ratio of attacker to defender security forces that attacker L needs to allow a flank exposure of FEAFA(L) + FEISF(L). IFR = 1,2.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
SHAFAC(ISU,IZ,L) (7,4,2)	Shape factor which gives ratio of width to depth for type ISU subunit in zone IZ for side L (used in chemical assessments).	I
SIGDL(KA) (9)	The change in $\log_{10}$ particle diameter for one sigma change in mass of type KA agent (the reciprocal of the probit slope of the log normal particle size distribution).	I
SIGY1	Horizontal crosswind dispersion parameter (meters) for chemical agents dispersed in a normal line source.	I
SINTDA(IAC,IS,L) (7,8,2)	Number of successful INTD sorties by side L type IAC aircraft against interdiction in sector IS.	W
SLNGTH(J,KDM,L) (2,3,2)	Source length for a line source of chemical agent from type J weapon system under dissemination mode KDM for side L. $J = \begin{cases} 1, & \text{artillery (linear sheaf)} \\ 2, & \text{air ("stick of bombs," bulk filled).} \end{cases}$	I
SLSCAS(IAC,L) (7,2)	Side K (K = 3-L) supplies destroyed in the active battle area for each sortie of a side L type IAC aircraft on CAS attack (tons of supply per sortie).	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
SLWCB(IW,L) (10,2)	Side K (K = 3-L) supplies destroyed in the active battle area for each side L type IW weapon in combat (tons of supply/weapon).	I
SMXRPL(L) (2)	Maximum number of side L SAMs of any type that can be repaired in one cycle in the repair pool.	I
SNASBA(L) (2)	Smallest number of aircraft or shelters per side L airbase before ABA mission is changed to CAS mission.	I
SNLTLN(IL,ISN) (2,95)	Latitude and longitude location of supply node ISN (IL = 1, latitude, IL = 2, longitude).	I
SQMPTS(L) (2)	Area (in square meters) occupied per ton of supplies, for side L.	I
SRACM(IAC,J,L) (7,9,2)	Sortie rate for a side L type IAC aircraft on a type J mission (12 hour rate)	I
	J = { 1, belt SAM suppression 2, battlefield defense 3, area defense 4, airbase attack 5, close air support 6, interdiction 7, escort for airbase attack 8, escort for close air support 9, escort for interdiction.	

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
SRRAC (L) (2)	Sortie rate for air force reconnaissance aircraft for side L. (12 hour rate).	I
SSMSFS (I,IS,L) (2,8,2)	Number of side L surface-to- surface missile sites of type I in forward sector IS $I = \begin{cases} 1, & \text{medium range missiles} \\ 2, & \text{long range missiles.} \end{cases}$	I
SSMSRS (IS,L) (8,2)	Number of long range surface- to-surface missile sites in rear sector IS for side L.	I
SUPASN (ISN) (95)	Negative supplies arriving to supply node ISN during cycle ICASN(L).	W
SUPIN (ISN) (95)	Supply inventory at node ISN (1 ≤ ISN ≤ 95).	I
SWAFDS (IAFS,ISU,L) (4,7,2)	The expected swath-width at which a side L, type IAFS air force sensor will detect an enemy subunit of type ISU.	I
SWASDS (IAS,ISU,L) (4,7,2)	The expected swath-width at which a side L, type IAS army- air sensor will detect an enemy subunit of type ISU.	I
SYD100	The horizontal dispersion parameter of the source cloud at a reference distance of 100 meters from point source.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
SYSD(LIWS,K,IA) (8,3,4)	The horizontal dispersion parameter of the source cloud (from an initial volume source) of type IA agent from IWS division weapon system under dissemination mode K for side L (LIWS = NIWS(L-1) + IWS).	I
SYSS(LIWS,K,IA) (8,3,4)	The horizontal dispersion parameter of the source cloud (from an initial volume source) of agent IA from IWS sector weapon system with dissemination mode K for side L.	I
SYST(LIWS,K,IA) (8,3,4)	The horizontal dispersion parameter of the source cloud (from an initial volume source) of agent IA from IWS theater weapon system with dissemination mode K for side L.	I
SZDSRD	The vertical dispersion parameter of the source cloud at a stated reference distance of either 20 or 100 meters.	I
SZSD(LIWS,K,IA) (8,3,4)	The vertical dispersion parameter of the source cloud (from an initial volume source) of type IA agent from the IWS division weapon system under dissemination mode K for side L.	I
SZSS(LIWS,K,IA) (8,3,4)	The vertical dispersion parameter of the source cloud (from an initial volume source) of agent IA from IWS sector weapon system with dissemination mode K for side L.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
SZST(LIWS,K,IA) (8,3,4)	The vertical dispersion parameter of the source cloud (from an initial volume source) of agent IA from IWS theater weapon system with dissemination mode K for side L.	I
TACND(IAAC,L) (3,2)	TOE number of side L type IAAC army-air carriers in a notional division.	I
TAASSD(IAAC,IAS,L) (3,4,2)	Total time in hours that a type IAS army-air sensor in a type IAAC air carrier searches a division area for subunits ($\leq 12./\text{NNSC}$). Side L.	I
TACAFR(IAFS, IRBST,L) (4,5,2)	Target acquisition CEP (in meters) of side L air force sensor IAFS in range interval IRBST. IRBST=1,...,NRBST.	I
TACASR(IAS, IRBST,L) (4,5,2)	Target acquisition CEP (in meters) of side L army-air sensor IAS in range interval IRBST.	I
TACGSR(IGS, IRBST,L) (5,5,2)	Target acquisition CEP (in meters) of side L ground sensor IGS in range interval IRBST.	I
TACGT	Total (estimated) number of undamaged aircraft of all types on the ground as targets on a notional airbase.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
TACQT	Total number of undamaged QRA aircraft on the ground as targets at notional airbases.	W
TADSRA(ISU,L) (7,2)	Target acquisition delay time for side L subunit of type ISU.	W
TADSZD(ISU,IZ,IDS) (7,4,30)	Target acquisition delay time for subunit ISU in zone IZ in division location IDS.	W
TADTAF(IAFS,L) (4,2)	Target acquisition delay time (in hours) for side L type IAFS air force air sensor.	I
TADTAS(IAS,L) (4,2)	Target acquisition delay time (in hours) for side L type IAS army-air sensor.	I
TADTGS(IGS,L) (5,2)	Target acquisition delay time (in hours) for side L type IGS ground sensor.	I
TADTSZ(IZ,L)* (4,2)	Delay time (minutes) in processing acquisition information on subunits in zone IZ for side L.	W
TAESRA(ISU,L)	Target acquisition sensor error against a side L subunit of type ISU.	W
TAESZD(ISU,IZ,IDS) (7,4,30)	Target acquisition sensor error against subunit ISU in zone IZ in division location IDS.	W
TAFSSD(IAFS,L) (4,2)	Total time in hours a type IAFS air force sensor searches a division area for subunits ($\leq 12./\text{NNSC}$). Side L.	I

*These variables become input variables if the probability of detection values (normally calculated by the target acquisition model) are direct user input.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
TASESZ (IZ,L)* (4,2)	Sensor error (in meters) in acquiring subunits in zone IZ for side L.	W
TCSU (I,L) (100,2)	Total chemical casualties per subunit for the Ith fire mission, side L.	W
TCZN (I,L) (100,2)	Total chemical casualties per zone for the Ith fire mission, side L.	I
TD	Theater defender.	W
TDCWPT (L) (2)	Time delay (minutes) for chemical warning to reach side L personnel in primary target.	I
TDCWST (L) (2)	Time delay (minutes) for chemical warning to reach side L Personnel in secondary target.	I
TGSND (IGS,L) (5,2)	TOE number of side L type IGS ground sensors in a notional division.	I
THFR (J,L) (2,2)	Threshold fraction of surviving type-J TOE nuclear weapons which constitutes escalation for event IEVNT=6 for side L (J = 1, missiles/rockets; J = 2, artillery).	I
THFRC (L) (2)	Threshold fraction of surviving QRA aircraft which constitutes nuclear escalation for event IEVNT=5 for side L.	I
THMNDP (IWS,JE,L) (5,4,2)	Minimum depth (in kms) beyond the FEBA that theater nuclear weapon system IWS may be fired when side L is in escalation state JE.	I

*These variables become input variables if the probability of detection values (normally calculated by the target acquisition model) are a direct user input.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
THQRAC(L) (2)	Threshold fraction of surviving QRA aircraft that will initiate chemical employment for IEVNT=5, side L.	I
THWPC(J,L) (2,2)	Threshold fraction of surviving type-J TOE nuclear weapons (J=1, missiles; j=2, artillery) that will initiate chemical employment for IEVNT=6, side L.	I
TLRSSC(1,L) (1,2)	Total number of side L long range SAMs suppressed during the cycle.	W
TMBOCW(L) (2)	Time (in minutes) required for side L personnel to don masks based on a chemical attack warning.	I
TMRSSC(1,L) (1,2)	Total number of side L medium range SAMs suppressed during the cycle.	W
TNOWP(J,IS,L) (2,8,2)	TOE number of nuclear weapons (J=1, missiles, J=2, artillery) for side L in sector IS.	W
TPD(IT) (10)	TOE number of people in type IT division.	I
TPSUTD(ISU,IT) (7,10)	TOE number of personnel in subunit type ISU in division type IT.	I
TQRA(IS,L) (8,2)	Starting number of QRA aircraft of side L in sector IS.	W
TQRAF	Total number of QRA aircraft of all types on forward airbases in sector IS for the side.	W
TQRAR	Total number of QRA aircraft of all types on rear airbases in sector IS for the side.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
TQRAZ	Total number of QRA aircraft of all types on COMMZ airbases for the side.	W
TRGM(IPC) (8)	Fraction of gamma radiation that is transmitted through protection category IPC (see variable FCPPC).	I
TRNT(IPC) (8)	Fraction of neutron radiation that is transmitted through protection category IPC (see variable FCPPC).	I
TSRSSC(ISS,L) (2,2)	Total number of side L type ISS short range SAMs suppressed during the cycle.	W
TTIRD(IRST) (5)	Time (in days) to reach combat ineffectiveness based on the midpoint level of radiation interval IST as defined by RADBPT where IRST=1,...,5.	I
TWD(IW,IT) (10,2)	TOE number of type IW weapons in type IT division.	I
TWSUTD(IWSU,ISU,IT) (4,7,10)	TOE number of type IWSU weapons in type ISU subunit in type IT division.	I
UBABAF	Upper bound on the number of actual airbases that will be attacked when a notional forward airbase is attacked.	W

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COMMAND AND CONTROL TECHNICAL CENTER WASHINGTON DC F/G 9/2
INSTITUTE FOR DEFENSE ANALYSES TACTICAL WARFARE (TACWAR) MODEL.--ETC(U)
SEP 77 M C FLYTHE, P FINNEGAN, J REIERSON

UNCLASSIFIED

CCTC-CSM-MM-237-77

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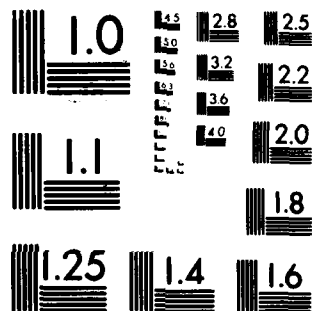
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963 A

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
UBABAR	Upper bound on the number of actual airbases that will be attacked when a notional rear airbase is attacked.	W
UBABAZ	Upper bound on the number of actual airbases that will be attacked when a notional COMMZ airbase is attacked.	W
VAABA(IS,L) (8,2)	Value of side L aircraft on attack in active battle area of sector IS.	W
VADBA(IS,L) (8,2)	Value of side L aircraft on defense in active battle area of sector IS.	W
VAMAW(IAM,KW,L) (6,10,2)	Value of side L type IAM air munition against a side K type KW ground weapon when side L is the attacker ($L \neq K$).	I
VAMDW(IAM,KW,L) (6,10,2)	Value of a side L type IAM air munition against a side K type KW ground weapon when side L is the defender ($L \neq K$).	I
VELAAC(IAAC,L) (3,2)	Velocity (km/hr) of side L type IAAC army air carrier.	I
VELRAC(L) (2)	Velocity (km/hr) of side L air force reconnaissance aircraft.	I
VGABA(IS,L) (8,2)	Value of side L ground forces on attack in active battle area of sector IS.	W
VGDBA(IS,L) (8,2)	Value of side L ground forces on defense in active battle area of sector IS.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
VHRBST(IRBST,L) (5,2)	Value of highest endpoint (in kms) for range interval IRBST for side L when computing sensor error. IRBST = 1,...,NRBST.	I
VIAASF(IAC,L) (7,2)	Value of an individual type IAC aircraft on attack (standard force) for side L.	W
VIADSF(IAC,L) (7,2)	Value of an individual type IAC aircraft on defense (standard force) for side L.	W
VISTWZ(ITM,IWZ)* (40,11)	Visibility (in meters) in weapon zone IWZ at time period ITM, in 12 hour cycles.	I
VIWASF(IW,L) (10,2)	Value of an individual type IW weapon on attack (standard force) for side L.	W
VIWAW(IW,KW,L) (10,10,2)	Value of an individual side L type IW ground weapon against an individual side K type KW ground weapon when side L is the attacker ($L \neq K$).	I
VIWDSF(IW,L) (10,2)	Value of an individual type IW weapon on defense (standard force) for side L.	W
VIWDW(IW,KW,L) (10,10,2)	Value of an individual side L type IW ground weapon against an individual side K type KW ground weapon when side L is the defender ($L \neq K$).	I

*Values in data statements.

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
WCACAS	Width of a normal combat area in which CAS interactions can take place in each sector.	I
WCOR(L) (2)	Width of penetration corridor for side L.	I
WDIV(IW,ID) (10,140)	Actual number of type IW weapons in division ID. (Entered for division ID if different from TOE number.)	I
WDRRP(IW,1,L) (10,1,2)	Number of type IW division weapons that have been damaged and recovered and are assumed repairable; by country (currently set to 1) and side L.	W
WFCNSA(L) (2)	Weighting factor for comparing nonsheltered aircraft with sheltered aircraft on side L.	I
WFCQRA(L) (2)	Weighting factor for comparing QRA aircraft with non-QRA aircraft on side L.	I
WFCRA(L) (2)	Weighting factor for comparing rear based aircraft with forward based aircraft on side L.	I
WFCZA(L) (2)	Weighting factor for comparing COMMZ based aircraft with forward based aircraft on side L.	I
WIDDR(L) (2)	Width (in km) of division in reserve for side L.	I
WIDS(IS) (8)	Width of sector IS.	W
WINDSP(KWS) (3)	Wind speed value (km/hr) of type KWS wind speed (see ECALFA).	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
WLCEP	CEP of the current chemical weapon system.	W
WLHOB	Height of burst for current chemical fire mission.	W
WLPDW	Particle diameter considered in current chemical fire mission.	W
WLPRS	Round-to-round dispersion considered in current chemical fire mission.	W
WLQAT	Chemical agent fill weight of current chemical fire mission.	W
WLSPR	Source length for current chemical fire mission.	W
WLSYS	Initial horizontal dispersion of current chemical weapon system.	W
WLSZS	Initial vertical dispersion of current chemical weapon system.	W
WLYLD(I,L) (100,2)	Yield of Ith weapon used on type target for side L.	W
WPNK(J,IS,L) (2,8,2)	Number of nuclear or chemical weapons (J = 1, missiles, J = 2, artillery) available to side L in sector IS.	W
WRPCZ(IW,1,L) (10,1,2)	Number of type IW weapons in the COMMZ weapon replacement pool for side L and by country (the country index is currently dimensioned to 1).	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
WSRTC(IWC,IWS,L) (3,4,2)	Weapon system response time (minutes) for the type IWC weapon category and the type IWS chemical weapon system for side L.	I
WSRTN(IWC,IWS,L) (3,5,2)	Weapon system response time (minutes) for the type IWC weapon category and the type IWS nuclear weapon system for side L	I
	$IWC = \begin{cases} 1, & \text{division} \\ 2, & \text{sector} \\ 3, & \text{theater.} \end{cases}$	
WTAFS(IS) (8)	Weighted number of aircraft on forward airbases in sector IS.	W
WTAGRC(ISUB,L) (4,2)	Weight of agent side L wants to fire at type ISUB region or COMMZ target.	I
WTAGTD(ITL,ISU,L) (2,7,2)	Weight of agent side L wants to fire at type ISU subunit in target location ITL. ITL = 1, on the line; 2, rear area.	I
WTARS(IS) (8)	Weighted number of aircraft on rear airbases in sector IS.	W
WTAZ	Weighted number of aircraft on COMMZ air bases.	W
WTCAST(L) (2)	Weighting value of aircraft to shelters used by side L for chemical attacks on specific air bases. If WTCAST(L) = X, then weighting value is AX + S(1-X) for aircraft A and shelters S.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
WTDCTR(IT,ICM,ITR) (10,3,2)	Width of type IT division by type ICM combat deployment and type ITR tactical role $\text{ICM} = \begin{cases} 1, & \text{nonnuclear} \\ 2, & \text{nuclear prepared} \\ 3, & \text{nuclear} \end{cases}$ $\text{ITR} = \begin{cases} 1, & \text{attack} \\ 2, & \text{defense.} \end{cases}$	I
WTNAST(L) (2)	Weighting value of number of aircraft to number of shelters used by side L when assigning aircraft to make a nuclear attack on a specific airbase (that is, if $\text{WTNAST}(L) = X$, then weighted sum of aircraft (A) and shelters (S) at a given airbase is $\text{WV} = \text{AX} + \text{S}(1-X)$.	I
WTTA	Weighted total number of tar- get aircraft.	W
WVDATS(IT) (10)	Weapons value for a type IT division on attack in sector.	W
WVDDTS(IT) (10)	Weapons value for a type IT division on defense in sector.	W
XAEF(IEAEF,L) (8,2)	See NEAEF(L)	I
XDEF(IEDEF,L) (8,2)	See NEDEF(L)	I
XFMF(IFMF) (8)	See NFMF	I
XIWY(IYLD,L) (42,2)	Field of the IYLDth nuclear weapon in the weapon list for side L.	W

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
XOCD	See NOCDAB	I
XOCDP	See NOCDPC	I
XODIST	See NODIST	I
XPCAF(IPCAF,L) (8,2)	See NPCAF(L)	I
XPCDF(IPCAF,L) (8,2)	See NPCDF(L)	I
XSEFF(ISEFF,L) (4,2)	See NSEFF(L)	I
YAEF(IEAEF,L) (8,2)	See NEAEF(L)	I
YDEF(IEDEF,L) (8,2)	See NEDEF(L)	I
YFMF(IFMK,KP,KT) (8,3,3)	See NFMF	I
YLDV(K,IWS,L) (3,4,2)	The Kth yield of side L type IWS division nuclear weapon system.	I
YLSW(K,IWS,L) (3,5,2)	The Kth yield of side L type IWS sector nuclear weapon system.	I
YLT(ISU,L) (7,2)	Yield preferred by side L to target and enemy type ISU subunit.	I
YLTDR(L) (2)	Yield preferred by side L to target subunits in rear area divisions.	I

<u>Variable Name and Size</u>	<u>Definition</u>	<u>Type</u>
YLTH(K,IWS,L) (3,5,2)	The Kth yield of side L type IWS theater nuclear weapon system.	I
YLTPA(L) (2)	Yield preferred by side L to target an enemy airbase parking area.	I
YLTRW(L) (2)	Yield preferred by side L to target an enemy airbase run- way.	I
YLTSN(L) (2)	Yield preferred by side L to target an enemy supply node.	I
YLTSSM(L) (2)	Yield preferred by side L to target an enemy surface-to- surface missile site.	I
YOCDP	See NOCDPC	I
YOCDDPA	See NOCDAB	I
YOCDDR	See NOCDAB	I
YODIST	See NODIST	I
YPCAF(KP,IPCAF,L) (3,8,2)	See NPCAF(L)	I
YPCDF(KP,PCDF,L) (3,8,2)	See NPCDF(L)	I
YSEFF(ISEFF,L) (4,2)	See NSEFF(L)	I

APPENDIX F
VARIABLES BY FUNCTION

APPENDIX F

Appendix F contains a list of input and summary output variables by submodel and function. All of these variables are contained in blank Common. An asterisk after a variable name indicates that the variable is a working variable.

Table 12. Input and Summary Output Working Variables
by Submodel and Function

1. Theater Structure Data

AKT	NBA
APT	NBNLT
BNDIS	SBNDLT
FEBA	NDFAB
FEBATZ	NDRAB
GDBA	NHSR
IABAS	NINTS
KPIS	NR
KPS*	NS
KPSY*	PDENS
KTER*	
KTERIS	
MFOPT	

2. Control Parameters

IOMU
IPRDO
IPRSO
IUTAM
IWIV
NCYCLE
NEPD

3. Supplies Model Data

Supply Node Data

DFASN	NSN
IOSN	SNLTLN
ISNABA	SQMPTS
MA	SUPASN*
NHSNS	SUPIN

Supplies Available

DSA	DSRNFS
DSCZBA	DSSNCZ
DSCZFS	DSSNFS
DSCZRS	DSSNRS
DSD	SABCZ
DSFNBA	SAGFS
DSRNBA	SABRS

Consumption

CRSAC
CSDP
CSDR
CTSCD*
PCSAB
PCSD

Miscellaneous

ARSS
ICASN*
NCSM
NSEFF
XSEFF
YSEFF

Supply Losses

CSDAW*
CSDFS*
CSDGW*

4. Ground Model Input Data

Division Characterisitcs

DEPDR	NDSAMS	RDSUR
FDDPTH	NSU	SDIV
FMNC	NSUTD	SHAFAC
FMXE	NTSUDT	TPD
FRDSUZ	NTWSU	TPSUTD
FSUAZ	NZ	TWD
IBALD	PDIV	TWSUTD
IDLABA	PWSF	WDIV
IDWTSU	PWSSMS	WIDDR
ITD	PZDPTH	WTDCTR

Operation Data

DDWDCD	ICMS
ERDWLE	ICPDHD
EWDRHE	ICSMA
FEAFBA	ISMAI
FEDW	ITA
FEISF	IUSFRC
FPSWDU	PICVDR
FRATA	SFRFE
FRATD	

Resources

MAD
MDDABA
ND
NDS
NT
NW
RPCZ
SSMSFS
SSMSRS
WRPCZ

Division Effectiveness

EFFDA*
EFFDD*
NEAEF
NEDEF
XAEF
XDEF
YAEF
YDEF

Weapon Value

EFCE
IWUCE
MNIE
SAWA
SAWD
VGABA*
VGDBA*
VIWAW
VIWDW

Movement

FMBP
FMDPT
NFMF
XFMF
YFMF

Casualties

CPLS*
FASFRC
FCHP
FCVLS
FDSFRC
NPCAF, XPCAF, YPCAF
NPCDF, XPCDF, YPCDF

Weapon Losses

CAKGS*
CGKGS*
CWLS*

Factors

AADFTD
FCABFD
FCDBFD
PWSSMS
RDSSMS
SLWCB

Repair Data

OCWRP
PWATS
PWDRP
PWNCTS
PWRCRP
WDRRP

Unit Arrivals

ICADTA
ICADTD
IMUTMF
IRADTA
IRADTD
NCOBAM

Identifiers

ADT
ASUT
AWT

5. Air Model Input Data

Aircraft Resources Air Base Data Repair Data Identifiers

ACCZ	FQRARS	AF	NOCDB	AMXRPL	AACT
ACFS	IQRAP	AMFAAB	XOCD	DAMPL	AAMT
ACRS	NAC	AMRAAB	YOCDBA	DLSMPL	ALRS
CAKNSF*	NAM	FOCRPC	YOCDR	DMSMPL	AMRS
CAKNSR*	NQRAT	IAFBA	PARKAB	DSSMPL	ASRS
CAKNSZ*	QRACZ	IMAGE*	PPNOTF	RRAPL	
CAKSHF*	QRAFS	IMAGE1*	PPNOTR	RRLSPL	
CAKSHR*	QRAK*	NAB	PPNOTZ	RRMSPL	
CAKSHZ*	QRARS	NOCDB	SACFRB	RRSSPL	
CQKNSF*	TQRA*	XOCDP	SACZB	SMXRPL	
CQKNSR*	VAABA*	YOCDB	SACZBK*		
CQKNSZ*	VADBA*		SAFRBK*		
CQKSHF*					
CQKSHR*					
CQKSHZ*					
DQRAF					
DQRAR					
DQRAZ					
FQRACZ					
FQRAFS					

Weapon Characteristics Munition Data Mission Assignments

ALTSAC	FCAIA	AMLFR	FAABAA	FABSUP
CRAC	IRAC	AMLFZ	FAABAD	FACASS
CRLRS	SLSCAS	AMNL	FAABAE	FACASA
CRMRS	SRACM	SAMA	FAABAS	FACASE
ESDASI	SRRAC	SAMD	FABDRF	FACASD
		VAMAW	FABDZF	FAINDA
		VAMDW	FABDZR	FAINDE
				FAINDS

SAM Resources Operations Mission Data

ALRSR	PSRSF	AEDGE	IPSQRA	ABATPS	FINDSS
ALRSZ	PSRSR	AEEGE	LXOPT	CLPABA	FINTRS
AMTLRS	PSRSZ	ANSLRS	PENCOR	EFFSHL	FSKSAK
AMTMRS	TLRSSC*	ANSMRS	RSAMS	EFAGT	IABAAG
AMTSTS	TMRSSC*	FASFRC	RSMIN	FABAFS	INTDA*
BMRS	TSRSSC*	FDSFRC	SNASBA	FABARS	INTDE*
CLRSDM*		FSSSMS	WCOR	FABASS	INTDS*
CMRSDM*		IPSHLA		FAGSCN	PABWR
				FAUSHL	PAJOR
				FCASRS	PIAIM
				FCASSS	PSJOR
					WCACAS

5. Air Model Input Data (Cont'd)

<u>Parameters and Factors</u>		<u>Probability of Detection</u>	
FAKRH	FSRCES	PDADDA	PDESAD
FAPKAD	FSRIES	PDANS	PDESBD
FAPKDA	FWDMAX	PDASFB	PDPSFB
FAPKED	PARHLS	PDASSS	PDPSSS
FKLAA	PARHMS	PDBBSS	PDSSAS
FKLASM	WFCNSA	PDBDEA	PDSSBS
FKLSMA	WFCQRA	PDBDFB	PDSSMS
FPKANS	WFCRA	PDBSFB	PDSSPS
FSRAES	WFCZA		PDSHL

Probability of Kill and Suppression

PKANS	PKLSA	PKSSMS
PKASD	PKMSA	PKSSSS
PKASSM	PKSSA	PSSSLs
PKDE	PKSSLS	PSSSMS
		PSSSSS

6. Chemical Model Input Data

<u>Weapon Characteristics</u>		<u>Weapon Location</u>
CEPCHD	HOBT	DPCHD
CEPCHS	IDSWTC	DPCHS
CEPCHT	ISSWTC	DPCHT
DISACW	ITSWTC	FDAGPS
EFWTD	MNDSFC	FSAGPS
EGWTS	MNSSFC	FTAGPS
EFWTT	MNTSFC	NPCHD
FDSWTC	RNGCHD	NPCHS
FSSWTC	RNGCHS	NPCHT
FTSWTC	RNGCHT	
HOBD	WSRTC	
HOBS		

<u>Identifiers</u>		<u>Weapon Inventory</u>	
ACHAT	ICMD	FADTMC	NDCWSI*
ACHDM	ICMPLX	FDCRAD	NSCRTP
AIWS	IKASC	FDCRAS	NSCWSI*
IACWTS	IMTYPE	FSCRAS	NTCRTP
ICHFAT	IPOPCH	NDCRPT	NTCWSI*

6. Chemical Model Input Data (Cont'd)

<u>Operations</u>	<u>Chemical Agent Data</u>		<u>Weapon System Data</u>	
FAGTOT	DICT50	PDWS	KCHATD	NCHTW
ICHST	DID50	PDWT	KCHATS	NDSMD
ICHTD	DIFCLA	RHO	KCHATT	NDSMS
INDC1	DLCT50	RPSICL	KDMSC	NDSMT
INDC2	DLD50	RPSIDL	KDSMD	SLNGTH
INDC3	ECALFA	RPSLCL	KDSMS	SYSD
INDC4	ECBETA	RPSLDL	KDSMT	SYSS
NDOBC7	FOAEVP	SATCON	KTYPWS	SYST
TDCWPT	KAGINO	SIGDL	NCHATD	SZSD
TDCWST	KAGPTO	SIGY1	NCHATS	SZSS
THQRAC	NINHAG	SYD100	NCHATT	SZST
THWPC	NPERAG	SZDSRD	NCHDW	
TMBOCW	PDWD		NCHSW	

Employment Data

CHDMDP	ICDLT
CHSMDP	IDLBC3
CHTMDP	IDLCC3
DPC2	IDLRC3
DPC7	IEML*
DPTHC2	IEMLC1
DPTHC3	IEMLC2
DPTHC7	NBC3
FRCMZC	NCRC4
FRMAXC	

Targeting Data

ACSABA*	NPT*
ICPRB	NVSD
ICPRCZ	NVSS
ICPRR	NVST
FRMSRC	SABAF*
IPTSUR	SINTDA*
KPRAG	WTACRC
KPRDM	WTAGTD
KTARAG	
KTARDM	

Employment Data

IALBTC	NCZC4
IALCTC	NRC3
IALRTC	PMCHC
ICDLB	PRTGTC
ICDLC	RFATCM
ICDLR	RMXCH
NCZC3	

Chemical Protection

DEGEFF
FPABCP
FPMSCP
FRCHGC
INDTPG
NTPP
PFAPOS

Parameters

ALTFAP
MAXKIA
NEML
WINDSP

Contamination

DCONEQ
DCONTD
DEPACC
DEPAWC

Civilians

CIVCCH*
CIVFCH*

7. Nuclear Model Input Data

<u>Resources</u>	<u>Weapon Characteristics</u>		<u>Location</u>
ANIWS	CEPD	MNFRS	FDSPOS
FADTMN	CEPS	MNFRT	FSSPOS
NDVNW	CEPT	RNGDW	FTSPOS
NSCNW	FDSWTN	RNGSW	NPOS
NTHNW	FSSWTN	RNGTW	NPOSS
NYLD	FTSWTN	WSRTN	NPOST
NYLS	IDLYLD		RDPLDV
NYLT	IDSWTN		RDPLSC
YLDV	ISSWTN		RDPLTH
YLSW	ITSWTN		
YLTH	MNFRD		

Operational Data

IDELTA	NNSC
IDSBDT	NR3
IDSBT5	THFR
IDSBT7	IPOPIN
IND1	ISLC1
IND2	ISLC2
IND3	THFRC
ITMPR	THQRAC
ITTPR	THWPC
NDOB7	

Nuclear Escalation

DP2	FRMAX
DP7	IALBT
DPTH2	IALCT
DPTH3	IALRT
DPTH7	ICMES
DVMNDP	IDEL2
IDELC3	IDELB3
IDELR3	NSBTT
NB3	PDMMX
NCZ3	PRTGTN
NESL	RFATNM
NSBDT	RMXDP
NSBTS	SCMNDP
FRCMZN	THMNDP

Targeting

ACSABA*	SABAF*
FODSUD	SINTDA*
IABTA	WTNA5T
IESC*	YLT
IPRI	YLTDR
IPREG	YLTPA
IPCMZ	YLTRW
IPTSUR	YLTSN
NSUB	YLTSSM
NTYP	

Assessments

NODIST	RDCFA
XODIST	RDCFS
YODIST	RDEXPA
RADBPT	RDEXPS
RDBPTA	RDSIGA
RDBPTS	RDSIGS

Protection

FCPPC
FPAFPC
FPSSPC
FRSPCR
FRSUPC
TRGM
TRNT

7. Nuclear Model Input Data (Cont'd)

Vulnerability

IVNAF
IVNSP
IVNSSM
IVNW

Civilians

CIVCNU*
CIVFNU*
FPKC*

Weapon Inventory

FDWALD
FDWALS
FSWAS
NDWHD*
NDWHS*
NDWHT
NDWSI*
NSWHS*
NSWHT
NSWSI*
NTWHT
NTWSI*

8. Target Acquisition Model Input Data

Resources

AACS NAS
FAACTD NGS
FGSTD RACCZ
FRAACI RACFS
FRACIO RACRS
NAAC TAACND
NAFS TGSND

Operational Data

ALTAAS
ALTAFS
ALTGS
AMOAAC
AMORAC
DACFT
DGSFT
DRAFT
FACPDS
FDWLAC

Identifiers

AAACT IAFSV
AAFCT IEQCS
AAFS IGSV
AAST ITAAS
AGST ITAFS
IAASV

Attrition

FRLPMA
RAACM
RAAFRM

Error Data

SEAADA
SEAFDA
TACAFR
TACASR
TACGST
VHRBST

Detection

PDDRA
RAASDT
RAFSDT
RGSdT
SWAFDS
SWASDS

Factors

FPDRST
TAASSD
TAFSSD
VELAAC
VELRAC

Data Statements

CEITWZ
IWZBA
KTERTA
RVLOST
VISTWZ

Optional: Nonuse of Model

PSRADS
PSZD
TADTSZ
TASESZ

8. Target Acquisition Model Input Data

Time Delay

TADTAF
TADTAS
TADTGS

APPENDIX G

CROSS-REFERENCE TABLE OF COMMON VARIABLES
AND SUBROUTINES THAT USE OR MODIFY THEM

APPENDIX G

This appendix contains four tables, each of which cross-references all the Common variables to a set of TACWAR subroutines. Figure 13 covers the root programs and the three links for TZERO, WTZERO, and AIRMOD. Figures 14 and 15 cover the nuclear and chemical links, respectively. Figure 16 covers the links for TARACQ, GROUND, AIRGRD, PSAIR, TC, SUPPLY, TIMET, and PSUMMY. The following symbols are used in the tables:

X = Variable is referenced by subroutine

O = Variable is modified by subroutine

[illegible]

Table 13. (Part 2 of 31)

[illegible]

Table 31. (Part 3 of 31)

[illegible]

Table 13. (Part 4 of 31)

[illegible]

Table 13. (Part 5 of 31)

VARIABLE NAME	SUBROUTINES																																
	MAIN	EIGEN	VRAD	CTNYC	CPW	SECUT	GOIST	TAG	APORTN	CLN	IZERO	INP	TCTZ	WTZERO	SCOUT	TCOUT	SPLVOT	WTONE	WTCOUT	WTCOUT	TACOUT	APMOD	BINAC	BINAC	ATRTS	ATRTS	ATRTS	ATRTS	ATRTS	ATRTS	ATRTS	ATRTS	ATRTS
CUKNSR																																	
COKNSZ																																	
COKSHF																																	
COKSHR																																	
COKSHZ																																	
CRAC																																	
CRAC																																	
CRLOS																																	
CRMS																																	
CRSAC																																	
CSARAF																																	
CSARAR																																	
CSARAZ																																	
CSASAS																																	
CSDAW																																	
CSDFB																																	
CSGWH																																	
CSIDP																																	
CSIDR																																	
CSINDA																																	
CSISDM																																	
CTSCD																																	
CWLS																																	
DACFT																																	
DAMFL																																	
DCONEQ																																	
DCONID																																	
DOWDCD																																	
DEGEFF																																	
DEPACC																																	

Table 13. (Part 6 of 31)

[illegible]

Table 13. (Part 7 of 31)

VARIABLE NAME	MAIN	EIGEN	MPROD	CNTRAC	CYFW	SECWH	GOIST	TAG	APORTN	CLR	TEERO	INP	TCTZ	WTZERO	GCUT	TCUT	SPLOT	NUCNE	CHOUT	TACOOT	BIINMOD	BIINPAC	BIINOUT	ATSPSS	ATRTSD	ATRTSA	ATRTSD	ATRTSS	ALLOCT	DEG	AIRATI	ADVI2	ATIR2	ATIR3	ATIR4	ATIR5	ATIR6	HMTRWH	
DSCZBA																																							
DSCZFS																																							
DSCZNS																																							
DSD																																							
DSFNBA																																							
DSRNBA																																							
DSRNFS																																							
DSSMPL																																							
DSSNCZ																																							
DSSNFS																																							
DSSNRS																																							
DVDZTH																																							
DVMNOP																																							
DVMDTH																																							
ECALFA																																							
ECBETA																																							
EFAGT																																							
EFCF																																							
EFCF																																							
EFFDA																																							
EFFDD																																							
EFFSHL																																							
EFMDI																																							
EFWTS																																							
EFMTT																																							
ERDWLE																																							
ESDASI																																							
EWDRHE																																							
FAAAAF																																							
FAAAAF																																							
FAAAAF																																							

Table 13. (Part 8 of 31)

[illegible]

Table 13. (Part 9 of 31)

[illegible]

Table 13. (Part 10 of 31)

[illegible]

Table 13. (Part 11 of 31)

[illegible]

Table 13. (Part 12 of 31)

[illegible]

Table 13. (Part 13 of 31)

VARIABLE NAME	SUBROUTINES																																									
	MAIN	EIGEN	MPMOD	CNTRM	CNTRM	SECTH	GOIST	TAG	APORTN	CLR	IZERO	IMP	TCIZ	WTZERO	GCOUT	TCOUT	SPLOT	WTONE	NUCOUT	CHOUT	TACOUT	AIRMOD	BINEAC	BINAT	ATSSS	ATRED	ATRTSA	ATRTDA	ATRTSS	ALLOCT	DEG	AIRAT	AOV1	AOV2	ATRT2	ATRT3	ATRT4	ATRT5	ATRT6	ATRTM		
ICOLR																																										
ICOLT																																										
ICHEAT																																										
ICST																																										
ICHTD																																										
ICMD																																										
ICNES																																										
ICNPLX																																										
ICNS																																										
ICNST																																										
ICDMD																																										
ICZRB																																										
ICSM	0																																									
ICSHA																																										
ICYCLE																																										
IDEL2																																										
IDELU3																																										
IDELG3																																										
IDELR3																																										
IDELTA																																										
IDELBA																																										
IDELC3																																										
IDELC3																																										
IDELR3																																										
IDELYO																																										
IDBRTD																																										
IDBRTS																																										

Table 13. (Part 14 of 31)

[illegible]

Table 13. (Part 15 of 31)

[illegible]

Table 13. (Part 16 of 31)

[illegible]

Table 13. (Part 17 of 31)

VARIABLE NAME	MAIN	EIGEN	MPROD	CNTNYC	CNTNYC	SECUT	GOIST	TAG	AMORTN	CLN	TZER	INP	TCTZ	WTZER	GCUT	TCUT	SPLYOT	WTONE	NUCUT	CHOUT	TACUT	ALMOD	BINAC	BINAT	ATSSS	ATATED	ATRTDA	ATRTDA	ALLOCT	DEG	ALRATT	AOVL1	AOVL2	ATRT1	ATRT2	ATRT3	ATRT4	ATRT5	ATRT6	ATRTW				
IVNAF																																												
IVNSP																																												
IVNSSM																																												
IVNW																																												
IVORD																																												
IVUCE																																												
IVZBA																																												
IVANK1																																												
IVANK																																												
JCHEM																																												
JLON																																												
JIMP																																												
JNUC																																												
JSUM																																												
KAGINO																																												
KAGPTO																																												
KCHATO																																												
KCHATS																																												
KCHATT																																												
KDMSC																																												
KDSMD																																												
KDSMS																																												
KDSMT																																												
KELAG																																												
KISS																																												
KPS																																												
KPRAG																																												
KPRON																																												
KPS																																												
KPSY																																												

Table 13. (Part 18 of 31)

[illegible]

Table 13. (Part 19 of 31)

VARIABLE NAME	SUBROUTINES																																
	TRAIN	EIGEN	MPROD	CNTRAC	CNTRC	CNTRW	SECW	GOIST	TAG	APORTN	CLR	TZERO	INF	TCTZ	WTZERO	GCOUT	TCOUT	SPYOT	WTONE	NUCOUT	CHOUT	TACOUT	AIRMOD	BINFAC	BINFAC	ATSMO	ATSMO	ATSMO	ATSMO	ATSMO	ATSMO	ATSMO	ATSMO
NCHAD																																	
NCHATS																																	
NCHATT																																	
NCHDW																																	
NCHSW																																	
NCHTW																																	
NCHBAM																																	
NCRCA																																	
NCRNA																																	
NCSW																																	
NCSWABA																																	
NCSW2																																	
NCSWREG																																	
NCYCLE																																	
NCZ3																																	
NCZC3																																	
NCZC4																																	
NCZM4																																	
ND																																	
NDCRDP																																	
NDCRSP																																	
NDCRTP																																	
NDCSW																																	
NDFA8																																	
NDIBA																																	
NDIB7																																	
NDOSC7																																	
NDRAB																																	
NDS																																	
NDSAMS																																	
NDSMD																																	

3

SUBROUTINES

Table 13. (Part 21 of 31)

[illegible]

Table 13. (Part 22 of 31)

[illegible]

Table 13. (Part 23 of 31)

[illegible]

Table 13. (Part 24 of 31)

VARIABLE NAME	MAIN	EIGEN	WPROD	CNTRC	CURW	SECWTH	GOST	TAG	AROTN	CLN	ZERO	INP	TCTZ	WTZERO	GCUT	TCUT	SPLOY	WTONE	CHOUT	JACOT	ARMOD	BINFAC	BINOT	ATSSS	ATATED	ATRTDA	ATRTDA	ALLOT	DEG	AIRATT	AOVL	ATRI	AOVL2	ATRT2	ATRT3	ATRT4	ATRT5	ATRT6	ATRTW		
PKSSL																																									
PKSSMS																																									
PKSSSS																																									
PKCHC																																									
PNOTE																																									
PNOTR																																									
PNOTZ																																									
PRAFSM																																									
PRIGIC																																									
PRIGTN																																									
PSJOR																																									
PSRADS																																									
PSRSF																																									
PSRSR																																									
PSRSZ																																									
PSSSL																																									
PSSSMS																																									
PSSSS																																									
PSZD																																									
PSZDOS																																									
PTWS																																									
PWATS																																									
PWDRP																																									
PWNGTS																																									
PWRCAP																																									
PWRF																																									
PWSSMS																																									
PZDPTH																																									
ORAGZ																																									
ORAFS																																					</				

[illegible]

Table 13. (Part 26 of 31)

[illegible]

Table 13. (Part 27 of 31)

[illegible]

Table 13. (Part 28 of 31)

[illegible]

Table 13. (Part 29 of 31)

[illegible]

Table 13. (Part 30 of 31)

[illegible]

Table 13. (Part 31 of 31)

VARIABLE NAME	SUBROUTINES																																												
	TRAIN	EIGEN	MPROD	CNTRYC	CURM	SECMTH	GOIST	TAG	APORTN	CLN	TZERO	IMP	TCT?	WTZERO	GCOUT	TCOUT	SPL YOT	WTONE	NUCOUT	CHOUT	TACOUT	AIMOD	BINFAC	BINFAC	ATSSS	ATRESO	ATRTSA	ATRTDA	ATRTSS	ALLOCT	DEG	APRATT	AOVL1	AOVL2	ATRT2	ATRT3	ATRT4	ATRT5	ATRT6	ATRTWH					
YAEF																																													
YDEF																																													
YFMF																																													
YLDV																																													
YLSW																																													
YLT																																													
YLTDR																																													
YLIH																																													
YLTFA																																													
YLTRW																																													
YLTSH																																													
YLTSM																																													
YOCDP																																													
YOCDA																																													
YOCDPH																																													
YOCDR																																													
YOCIST																																													
YPCAF																																													
YPCDF																																													
YSEFF																																													

Cross-References Tables for Nuclear
Combat Model Routines (Part 1 of 31)

[illegible]

Table 14. (Part 2 of 31)

VARIABLE NAME	SUBROUTINES																								
	NUC	BLKDA	KDGEN	KDGEN	NUC	ESCLAT	WHINUP	NDSYN	NUC2	NUCTAR	NUCWS	NMWINV	NUC3	NUC4	NUC5	ZNOST	NUCABS	NBFTGS	NRGTS	NG2TGS	PREYLO	DMWINV	NMWINV	NUC6	DAMEVL
ALTGS																									
ANFAAB																									
ANLFD																									
ANLFR																									
ANLFZ																									
ANLNL																									
ANOAAC																									
ANDRAC																									
ANRAAB																									
ANRAB																									
ANTEMP																									
ANTLSE																									
ANTMRS																									
ANTSRB																									
ANXRPL																									
ANWIC																									
ANWIS																									
ANSLRB																									
ANSMRS																									
APT																									
ARSS																									
ASRS																									
ASUT																									
AWT																									
BMRS																									
BNDS																									
CAATSK																									
CAARSK																									
CAAZSK																									
CACOF																									

VARIABLE NAME	SUBROUTINES
LACUR	
LACUZ	
CADAM	
CADFSK	
CADRSK	
CADZSK	
CAEFSK	
CAERSK	
CAEZSK	
CAKGS	
CAKNSF	
CAKNR	
CAKNSZ	
CAKSHE	
CAKSHR	
CAKBIZ	
CALSRK	
CALSZK	
CAREPD	
CARQV	
CARPSK	
CARRSK	
CARSIM	
PARDRK	
CDNRK	
CDREPK	
CDACKS	
CCOCSK	
CELCGR	

Table 14. (Part 4 of 31)

[illegible]

Table 14. (Part 5 of 31)

VARIABLE NAME	SUBROUTINES																								
	UUC	ELKDA	FCDEN	FCDEN	UUC1	ESCLAT	MINUP	WSSVNV	UUC2	WUCTAR	WUCWMS	WUMINV	UUC3	UUC4	UUC5	UUC6	UUC7	WUCABS	WUCFTGS	WUCFTGS	WUCFTGS	WUCFTGS	WUCFTGS	WUCFTGS	WUCFTGS
CUNSHL																									
CORNSZ																									
CORSHL																									
COKSHR																									
COKSHZ																									
CRAC																									
CHAK																									
GRILRS																									
CRMRS																									
CRBAC																									
CSABAF																									
CSABAR																									
CSABAZ																									
CSACASA																									
CSOAW																									
CSUES																									
CSUGW																									
CSOP																									
CSOR																									
CSINDA																									
CSISDM																									
CTED																									
CHLL																									
DACET																									
DAMP																									
DCONEQ																									
DCONTD																									
DOWDCD																									
DEGEFF																									
DEZACC																									

Table 14. (Part 6 of 31)

VARIABLE NAME	SUBROUTINES																																
	VIC	BLKDA	KCOEN	KCOEN	ESCLAT	AMHNUB	NDOSVNV	NUC2	NUCTAR	NUCHPS	NUCHNV	NUC3	NUC4	NUC5	210ST	NUCABS	NBFTS	WROTGS	WCTGS	PREYLD	DMHNV	NUCH	DAMEVL	PAMEA	PREN	2714P	USSLW	WBAO	WBAOVN	WBAOV	WBAOV		
DEPAWC																																	
DEPDR																																	
DEASN																																	
DGSFL																																	
DICT50																																	
DID50																																	
DIECLA																																	
DISACW																																	
DLCT50																																	
DLDBO																																	
DL5MPL																																	
DNSMPL																																	
DP2																																	
DP7																																	
DPC2																																	
DPC7																																	
DPCHD																																	
DPCHS																																	
DPCHT																																	
DPTH2																																	
DPTH3																																	
DPTH7																																	
DPTHC2																																	
DPTHC3																																	
DPTHC7																																	
DDRAE																																	
DDRAE																																	
DDRAZ																																	
DDRAZ																																	
DRAFT																																	
DSA																																	

Table 14. (Part 7 of 31)

[illegible]

Table 14. (Part 8 of 31)

[illegible]

Table 14. (Part 9 of 31)

[illegible]

Table 14. (Part 10 of 31)

[illegible]

Table 14. (Part 11 of 31)

[illegible]

Table 14. (Part 12 of 31)

VARIABLE NAME	SUBROUTINES																																
	NUC	BLKDA	KDCEN	KDCEN	NUC1	ESCLAT	WHINUP	NUC2	NUCTAR	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS	NUCARS
FTSWTC																																	
ETSMIN																																	
FWDCAS																																	
FWDMAX																																	
GDBA																																	
GLPACS																																	
GLPAS																																	
GLPGS																																	
HUBH																																	
HUBS																																	
HUBT																																	
IAASV																																	
IABAG																																	
IABAS																																	
IABIA																																	
IACTWS																																	
IAEBA																																	
IAFV																																	
IALBT																																	
IALBTC																																	
IALCT																																	
IALCTC																																	
IALBT																																	
IALBTC																																	
IALBT																																	
IALBTC																																	
IRALD																																	
ICABTA																																	
ICADTA																																	
ICADTD																																	
ICASH																																	
ICOLR																																	

Table 14. (Part 13 of 31)

VARIABLE NAME	SUBROUTINES																																
	NUC	BLDA	KODEV	KODEN	NUCI	ESCLAT	WHINUP	NDSYN	NUC2	NUCTAR	NUCMBS	NMHN	NUC3	NUCA	NUCS	NUST	NUCAB3	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS	VPATOS
ICDLC																																	
ICDLR																																	
ICDLT																																	
ICH																																	
ICHAT																																	
ICHST																																	
ICHID																																	
ICMD																																	
ICMES																																	
ICMPX																																	
ICMS																																	
ICNST																																	
ICPDHD																																	
ICZBB																																	
ICPRZ																																	
ICPRR																																	
ICSM																																	
ICSWA																																	
ICYCLE	X																																
IDEL2																																	
IDELB3																																	
IDELC3																																	
IDELR3																																	
IDELTA																																	
IDLARA																																	
IDLBC3																																	
IDLCC3																																	
IDLDBA																																	
IDLRC3																																	

Table 14. (Part 14 of 31)

VARIABLE NAME	SUBROUTINES																																	
	NUC	BLKDA	KCODEN	KCOEN	NUC1	ESCLAT	WHINUP	NDSYINP	NUC2	NUCTAR	NUCMPS	NWMINV	NUC3	NUC4	NUC5	NUC6	NUC7	NUC8	NUC9	NUC10	NUC11	NUC12	NUC13	NUC14	NUC15	NUC16	NUC17	NUC18	NUC19	NUC20	NUC21	NUC22	NUC23	NUC24
IDLKLD																																		
IDS8TD																																		
IDS8TS																																		
IDS8TT																																		
IDS8TC																																		
IDS8TN																																		
IDWTSU																																		
TEML																																		
TEMLC1																																		
TEMLC2																																		
TEGGS																																		
TESC																																		
IFULL																																		
IGO																																		
IGSV																																		
IKASC																																		
IMAGE1																																		
IMAGE																																		
INTYPE																																		
IMUTMF																																		
INCYL																																		
IND1																																		
IND2																																		
IND3																																		
IND4																																		
INDC1																																		
INDC2																																		
INDC3																																		
INDC4																																		
INDLB																																		

Table 14. (Part 15 of 31)

VARIABLE NAME	SUBROUTINES																																	
	NUC	BLRDA	KODEN	KODEN	NUC1	ESCLAT	WHINUP	NDSYNU	NUC2	NUCTAR	NUCWP	NMWINV	NUC3	NUC4	NUC5	ZNUST	NUCAR5	NBTGS	NRTGS	PREYD	DWMINV	NMWINV	NUC6	DAREV	FN	PREN	OKINR	DOSLIN	WRAD	WRADV	DEFCON	SIMCN	SIRCOV	CRACO
INDLC																																		
INDLR																																		
INDTPG																																		
INO																																		
INTAGT																																		
INTDA																																		
INTDAA																																		
INTDAD																																		
INTDAH																																		
INTDAK																																		
INTDE																																		
INTDEA																																		
INTDED																																		
INTDEH																																		
INTDEK																																		
INTDM																																		
INTDS																																		
INTDSA																																		
INTDSO																																		
INTOSH																																		
INTDSK																																		
INTRVL																																		
IOU																																		
IOSH																																		
IOSHNS																																		
IPCMBZ																																		
IPCPCH																																		
IPCPIN																																		
IPRD																																		
IPRDO																																		

Table 14. (Part 16 of 31)

VARIABLE NAME	SUBROUTINES																																	
	NUC	BLKOA	KODEN	KODEN	NUCL	ESCLAT	WINUP	NUC2	NUCTAR	NUCWS	NUWINV	NUCA	NUC3	NUC4	NUC5	NUC6	NUC7	NUC8	NUC9	NUC10	NUC11	NUC12	NUC13	NUC14	NUC15	NUC16	NUC17	NUC18	NUC19	NUC20	NUC21	NUC22	NUC23	NUC24
IPREG																																		
IPRI																																		
IPRS																																		
IPRSO																																		
IPSHLA																																		
IPSORA																																		
IP																																		
IPISUR																																		
IPRAP																																		
IRAC																																		
IRADTA																																		
IRADTD																																		
IRSW																																		
ISA																																		
ISCEF																																		
ISCL1																																		
ISCL2																																		
ISMA																																		
ISMAI																																		
ISNABA																																		
ISNBA																																		
ISSWTC																																		
ISSWTN																																		
ISTAT																																		
ITA																																		
ITAAS																																		
ITAFS																																		
ITD																																		
ITM																																		
ITMPR																																		

Table 14. (Part 17 of 31)

VARIABLE NAME	SUBROUTINES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	NUC	BLA	KODEN	NUC1	ESCLAT	WHINUP	NUC2	NUCTAR	NUCHWS	NUCHIN	NUC3	NUC4	NUC5	NUC6	NUC7	NUC8	NUC9	NUC10	NUC11	NUC12	NUC13	NUC14	NUC15	NUC16	NUC17	NUC18	NUC19	NUC20	NUC21	NUC22	NUC23	NUC24	NUC25	NUC26	NUC27	NUC28	NUC29	NUC30	NUC31	NUC32	NUC33	NUC34	NUC35	NUC36	NUC37	NUC38	NUC39	NUC40	NUC41	NUC42	NUC43	NUC44	NUC45	NUC46	NUC47	NUC48	NUC49	NUC50	NUC51	NUC52	NUC53	NUC54	NUC55	NUC56	NUC57	NUC58	NUC59	NUC60	NUC61	NUC62	NUC63	NUC64	NUC65	NUC66	NUC67	NUC68	NUC69	NUC70	NUC71	NUC72	NUC73	NUC74	NUC75	NUC76	NUC77	NUC78	NUC79	NUC80	NUC81	NUC82	NUC83	NUC84	NUC85	NUC86	NUC87	NUC88	NUC89	NUC90	NUC91	NUC92	NUC93	NUC94	NUC95	NUC96	NUC97	NUC98	NUC99	NUC100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Table 14. (Part 18 of 31)

VARIABLE NAME	SUBROUTINES																																				
	NUC	ALKA	KCDEN	KCDEN	NUC1	ESCLAT	WHINUP	NDSPIN	NUC2	NUCTAR	NUCMPS	NUCMIN	NUC3	NUC4	NUC5	ZNDST	NUCABS	NUCFTGS	NUCOTGS	NUC2TGS	NUC1TGS	NUC1D	NUCMIN	NUC8	DAMEVL	FN	PREV	OKINR	DOSLIM	WRAD	WRADVN	OFCCOV	SIMCN	SIRCOV	CIRCOV		
KISS																																					
KPI5																																					
KPRAG																																					
KPRDM																																					
KPS																																					
KPSY																																					
KTARAG																																					
KTARDM																																					
KIER																																					
KIERIS																																					
KIERIS																																					
KTEDTA																																					
KLYDMS																																					
LXOPT																																					
MAD																																					
MAXKIA																																					
MCF																																					
MFOPT																																					
MNDSEFC																																					
MNERD																																					
MNERS																																					
MNERT																																					
MNIE																																					
MNISEFC																																					
MNSUBR																																					
MNTSFC																																					
MOT																																					
NAAC																																					
NAB																																					
NAC																																					
NAFS																																					

Table 14. (Part 19 of 31)

VARIABLE NAME	SUBROUTINES																																
	NLS	BLDCA	KCCEN	KCCEN	ESCLAT	ANINUB	NCNIN	NUC2	NUC2A	NUC2B	NUC2C	NUC2D	NUC2E	NUC2F	NUC2G	NUC2H	NUC2I	NUC2J	NUC2K	NUC2L	NUC2M	NUC2N	NUC2O	NUC2P	NUC2Q	NUC2R	NUC2S	NUC2T	NUC2U	NUC2V	NUC2W	NUC2X	
NAS																																	
NB3																																	
NBA																																	
NBC3																																	
NBNLT																																	
NCBC4																																	
NCBN4																																	
NCIATO																																	
NCHATS																																	
NCHATT																																	
NCHDW																																	
NCHSW																																	
NCHTW																																	
NCOBAM																																	
NCRC4																																	
NCRN4																																	
NCSM																																	
NCWABA																																	
NCWCZ																																	
NCWREG																																	
NCYCLE																																	
NCZ3																																	
NCZC3																																	
NCZC4																																	
NCZN4																																	
NO																																	
NOCRDP																																	
NOCRSP																																	
NOCRTIP																																	
NOCWSI																																	

Table 14. (part 20 of 31)

VARIABLE NAME	NUC	9K0A	9K0EN	9K0DN	ESCL	9K01	9K01P	9K01N	NUC2	NUC2A	NUC2B	NUC3	NUC3A	NUC3B	NUC5	NUC5A	NUC5B	NUC5C	NUC5D	NUC5E	NUC5F	NUC5G	NUC5H	NUC5I	NUC5J	NUC5K	NUC5L	NUC5M	NUC5N	NUC5O	NUC5P	NUC5Q	NUC5R	NUC5S	NUC5T	NUC5U	NUC5V	NUC5W	NUC5X	NUC5Y	NUC5Z	NUC6A	NUC6B	NUC6C	NUC6D	NUC6E	NUC6F	NUC6G	NUC6H	NUC6I	NUC6J	NUC6K	NUC6L	NUC6M	NUC6N	NUC6O	NUC6P	NUC6Q	NUC6R	NUC6S	NUC6T	NUC6U	NUC6V	NUC6W	NUC6X	NUC6Y	NUC6Z	NUC7A	NUC7B	NUC7C	NUC7D	NUC7E	NUC7F	NUC7G	NUC7H	NUC7I	NUC7J	NUC7K	NUC7L	NUC7M	NUC7N	NUC7O	NUC7P	NUC7Q	NUC7R	NUC7S	NUC7T	NUC7U	NUC7V	NUC7W	NUC7X	NUC7Y	NUC7Z	NUC8A	NUC8B	NUC8C	NUC8D	NUC8E	NUC8F	NUC8G	NUC8H	NUC8I	NUC8J	NUC8K	NUC8L	NUC8M	NUC8N	NUC8O	NUC8P	NUC8Q	NUC8R	NUC8S	NUC8T	NUC8U	NUC8V	NUC8W	NUC8X	NUC8Y	NUC8Z	NUC9A	NUC9B	NUC9C	NUC9D	NUC9E	NUC9F	NUC9G	NUC9H	NUC9I	NUC9J	NUC9K	NUC9L	NUC9M	NUC9N	NUC9O	NUC9P	NUC9Q	NUC9R	NUC9S	NUC9T	NUC9U	NUC9V	NUC9W	NUC9X	NUC9Y	NUC9Z	NUC0A	NUC0B	NUC0C	NUC0D	NUC0E	NUC0F	NUC0G	NUC0H	NUC0I	NUC0J	NUC0K	NUC0L	NUC0M	NUC0N	NUC0O	NUC0P	NUC0Q	NUC0R	NUC0S	NUC0T	NUC0U	NUC0V	NUC0W	NUC0X	NUC0Y	NUC0Z	NUC1A	NUC1B	NUC1C	NUC1D	NUC1E	NUC1F	NUC1G	NUC1H	NUC1I	NUC1J	NUC1K	NUC1L	NUC1M	NUC1N	NUC1O	NUC1P	NUC1Q	NUC1R	NUC1S	NUC1T	NUC1U	NUC1V	NUC1W	NUC1X	NUC1Y	NUC1Z	NUC2A	NUC2B	NUC2C	NUC2D	NUC2E	NUC2F	NUC2G	NUC2H	NUC2I	NUC2J	NUC2K	NUC2L	NUC2M	NUC2N	NUC2O	NUC2P	NUC2Q	NUC2R	NUC2S	NUC2T	NUC2U	NUC2V	NUC2W	NUC2X	NUC2Y	NUC2Z	NUC3A	NUC3B	NUC3C	NUC3D	NUC3E	NUC3F	NUC3G	NUC3H	NUC3I	NUC3J	NUC3K	NUC3L	NUC3M	NUC3N	NUC3O	NUC3P	NUC3Q	NUC3R	NUC3S	NUC3T	NUC3U	NUC3V	NUC3W	NUC3X	NUC3Y	NUC3Z	NUC4A	NUC4B	NUC4C	NUC4D	NUC4E	NUC4F	NUC4G	NUC4H	NUC4I	NUC4J	NUC4K	NUC4L	NUC4M	NUC4N	NUC4O	NUC4P	NUC4Q	NUC4R	NUC4S	NUC4T	NUC4U	NUC4V	NUC4W	NUC4X	NUC4Y	NUC4Z	NUC5A	NUC5B	NUC5C	NUC5D	NUC5E	NUC5F	NUC5G	NUC5H	NUC5I	NUC5J	NUC5K	NUC5L	NUC5M	NUC5N	NUC5O	NUC5P	NUC5Q	NUC5R	NUC5S	NUC5T	NUC5U	NUC5V	NUC5W	NUC5X	NUC5Y	NUC5Z	NUC6A	NUC6B	NUC6C	NUC6D	NUC6E	NUC6F	NUC6G	NUC6H	NUC6I	NUC6J	NUC6K	NUC6L	NUC6M	NUC6N	NUC6O	NUC6P	NUC6Q	NUC6R	NUC6S	NUC6T	NUC6U	NUC6V	NUC6W	NUC6X	NUC6Y	NUC6Z	NUC7A	NUC7B	NUC7C	NUC7D	NUC7E	NUC7F	NUC7G	NUC7H	NUC7I	NUC7J	NUC7K	NUC7L	NUC7M	NUC7N	NUC7O	NUC7P	NUC7Q	NUC7R	NUC7S	NUC7T	NUC7U	NUC7V	NUC7W	NUC7X	NUC7Y	NUC7Z	NUC8A	NUC8B	NUC8C	NUC8D	NUC8E	NUC8F	NUC8G	NUC8H	NUC8I	NUC8J	NUC8K	NUC8L	NUC8M	NUC8N	NUC8O	NUC8P	NUC8Q	NUC8R	NUC8S	NUC8T	NUC8U	NUC8V	NUC8W	NUC8X	NUC8Y	NUC8Z	NUC9A	NUC9B	NUC9C	NUC9D	NUC9E	NUC9F	NUC9G	NUC9H	NUC9I	NUC9J	NUC9K	NUC9L	NUC9M	NUC9N	NUC9O	NUC9P	NUC9Q	NUC9R	NUC9S	NUC9T	NUC9U	NUC9V	NUC9W	NUC9X	NUC9Y	NUC9Z	NUC0A	NUC0B	NUC0C	NUC0D	NUC0E	NUC0F	NUC0G	NUC0H	NUC0I	NUC0J	NUC0K	NUC0L	NUC0M	NUC0N	NUC0O	NUC0P	NUC0Q	NUC0R	NUC0S	NUC0T	NUC0U	NUC0V	NUC0W	NUC0X	NUC0Y	NUC0Z	NUC1A	NUC1B	NUC1C	NUC1D	NUC1E	NUC1F	NUC1G	NUC1H	NUC1I	NUC1J	NUC1K	NUC1L	NUC1M	NUC1N	NUC1O	NUC1P	NUC1Q	NUC1R	NUC1S	NUC1T	NUC1U	NUC1V	NUC1W	NUC1X	NUC1Y	NUC1Z	NUC2A	NUC2B	NUC2C	NUC2D	NUC2E	NUC2F	NUC2G	NUC2H	NUC2I	NUC2J	NUC2K	NUC2L	NUC2M	NUC2N	NUC2O	NUC2P	NUC2Q	NUC2R	NUC2S	NUC2T	NUC2U	NUC2V	NUC2W	NUC2X	NUC2Y	NUC2Z	NUC3A	NUC3B	NUC3C	NUC3D	NUC3E	NUC3F	NUC3G	NUC3H	NUC3I	NUC3J	NUC3K	NUC3L	NUC3M	NUC3N	NUC3O	NUC3P	NUC3Q	NUC3R	NUC3S	NUC3T	NUC3U	NUC3V	NUC3W	NUC3X	NUC3Y	NUC3Z	NUC4A	NUC4B	NUC4C	NUC4D	NUC4E	NUC4F	NUC4G	NUC4H	NUC4I	NUC4J	NUC4K	NUC4L	NUC4M	NUC4N	NUC4O	NUC4P	NUC4Q	NUC4R	NUC4S	NUC4T	NUC4U	NUC4V	NUC4W	NUC4X	NUC4Y	NUC4Z	NUC5A	NUC5B	NUC5C	NUC5D	NUC5E	NUC5F	NUC5G	NUC5H	NUC5I	NUC5J	NUC5K	NUC5L	NUC5M	NUC5N	NUC5O	NUC5P	NUC5Q	NUC5R	NUC5S	NUC5T	NUC5U	NUC5V	NUC5W	NUC5X	NUC5Y	NUC5Z	NUC6A	NUC6B	NUC6C	NUC6D	NUC6E	NUC6F	NUC6G	NUC6H	NUC6I	NUC6J	NUC6K	NUC6L	NUC6M	NUC6N	NUC6O	NUC6P	NUC6Q	NUC6R	NUC6S	NUC6T	NUC6U	NUC6V	NUC6W	NUC6X	NUC6Y	NUC6Z	NUC7A	NUC7B	NUC7C	NUC7D	NUC7E	NUC7F	NUC7G	NUC7H	NUC7I	NUC7J	NUC7K	NUC7L	NUC7M	NUC7N	NUC7O	NUC7P	NUC7Q	NUC7R	NUC7S	NUC7T	NUC7U	NUC7V	NUC7W	NUC7X	NUC7Y	NUC7Z	NUC8A	NUC8B	NUC8C	NUC8D	NUC8E	NUC8F	NUC8G	NUC8H	NUC8I	NUC8J	NUC8K	NUC8L	NUC8M	NUC8N	NUC8O	NUC8P	NUC8Q	NUC8R	NUC8S	NUC8T	NUC8U	NUC8V	NUC8W	NUC8X	NUC8Y	NUC8Z	NUC9A	NUC9B	NUC9C	NUC9D	NUC9E	NUC9F	NUC9G	NUC9H	NUC9I	NUC9J	NUC9K	NUC9L	NUC9M	NUC9N	NUC9O	NUC9P	NUC9Q	NUC9R	NUC9S	NUC9T	NUC9U	NUC9V	NUC9W	NUC9X	NUC9Y	NUC9Z	NUC0A	NUC0B	NUC0C	NUC0D	NUC0E	NUC0F	NUC0G	NUC0H	NUC0I	NUC0J	NUC0K	NUC0L	NUC0M	NUC0N	NUC0O	NUC0P	NUC0Q	NUC0R	NUC0S	NUC0T	NUC0U	NUC0V	NUC0W	NUC0X	NUC0Y	NUC0Z	NUC1A	NUC1B	NUC1C	NUC1D	NUC1E	NUC1F	NUC1G	NUC1H	NUC1I	NUC1J	NUC1K	NUC1L	NUC1M	NUC1N	NUC1O	NUC1P	NUC1Q	NUC1R	NUC1S	NUC1T	NUC1U	NUC1V	NUC1W	NUC1X	NUC1Y	NUC1Z	NUC2A	NUC2B	NUC2C	NUC2D	NUC2E	NUC2F	NUC2G	NUC2H	NUC2I	NUC2J	NUC2K	NUC2L	NUC2M	NUC2N	NUC2O	NUC2P	NUC2Q	NUC2R	NUC2S	NUC2T	NUC2U	NUC2V	NUC2W	NUC2X	NUC2Y	NUC2Z	NUC3A	NUC3B	NUC3C	NUC3D	NUC3E	NUC3F	NUC3G	NUC3H	NUC3I	NUC3J	NUC3K	NUC3L	NUC3M	NUC3N	NUC3O	NUC3P	NUC3Q	NUC3R	NUC3S	NUC3T	NUC3U	NUC3V	NUC3W	NUC3X	NUC3Y	NUC3Z	NUC4A	NUC4B	NUC4C	NUC4D	NUC4E	NUC4F	NUC4G	NUC4H	NUC4I	NUC4J	NUC4K	NUC4L	NUC4M	NUC4N	NUC4O	NUC4P	NUC4Q	NUC4R	NUC4S	NUC4T	NUC4U	NUC4V	NUC4W	NUC4X	NUC4Y	NUC4Z	NUC5A	NUC5B	NUC5C	NUC5D	NUC5E	NUC5F	NUC5G	NUC5H	NUC5I	NUC5J	NUC5K	NUC5L	NUC5M	NUC5N	NUC5O	NUC5P	NUC5Q	NUC5R	NUC5S	NUC5T	NUC5U	NUC5V	NUC5W	NUC5X	NUC5Y	NUC5Z	NUC6A	NUC6B	NUC6C	NUC6D	NUC6E	NUC6F	NUC6G	NUC6H	NUC6I	NUC6J	NUC6K	NUC6L	NUC6M	NUC6N	NUC6O	NUC6P	NUC6Q	NUC6R	NUC6S	NUC6T	NUC6U	NUC6V	NUC6W	NUC6X	NUC6Y	NUC6Z	NUC7A	NUC7B	NUC7C	NUC7D	NUC7E	NUC7F	NUC7G	NUC7H	NUC7I	NUC7J	NUC7K	NUC7L	NUC7M	NUC7N	NUC7O	NUC7P	NUC7Q	NUC7R	NUC7S	NUC7T	NUC7U	NUC7V	NUC7W	NUC7X	NUC7Y	NUC7Z	NUC8A	NUC8B	NUC8C	NUC8D	NUC8E	NUC8F	NUC8G	NUC8H	NUC8I	NUC8J	NUC8K	NUC8L	NUC8M	NUC8N	NUC8O	NUC8P	NUC8Q	NUC8R	NUC8S	NUC8T	NUC8U	NUC8V	NUC8W	NUC8X	NUC8Y	NUC8Z	NUC9A	NUC9B	NUC9C	NUC9D	NUC9E	NUC9F	NUC9G	NUC9H	NUC9I	NUC9J	NUC9K	NUC9L	NUC9M	NUC9N	NUC9O	NUC9P	NUC9Q	NUC9R	NUC9S	NUC9T	NUC9U	NUC9V	NUC9W	NUC9X	NUC9Y	NUC9Z	NUC0A	NUC0B	NUC0C	NUC0D	NUC0E	NUC0F	NUC0G	NUC0H	NUC0I	NUC0J	NUC0K	NUC0L	NUC0M	NUC0N	NUC0O	NUC0P	NUC0Q	NUC0R	NUC0S	NUC0T	NUC0U	NUC0V	NUC0W	NUC0X	NUC0Y	NUC0Z	NUC1A	NUC1B	NUC1C	NUC1D	NUC1E	NUC1F	NUC1G	NUC1H	NUC1I	NUC1J	NUC1K	NUC1L	NUC1M	NUC1N	NUC1O	NUC1P	NUC1Q	NUC1R	NUC1S	NUC1T	NUC1U	NUC1V	NUC1W	NUC1X	NUC1Y	NUC1Z	NUC2A	NUC2B	NUC2C	NUC2D	NUC2E	NUC2F	NUC2G	NUC2H	NUC2I	NUC2J	NUC2K	NUC2L	NUC2M	NUC2N	NUC2O	NUC2P	NUC2Q	NUC2R	NUC2S	NUC2T	NUC2U	NUC2V	NUC2W	NUC2X	NUC2Y	NUC2Z	NUC3A	NUC3B	NUC3C	NUC3D	NUC3E	NUC3F	NUC3G	NUC3H	NUC3I	NUC3J	NUC3K	NUC3L	NUC3M	NUC3N	NUC3O	NUC3P	NUC3Q	NUC3R	NUC3S	NUC3T	NUC3U	NUC3V	NUC3W	NUC3X	NUC3Y	NUC3Z	NUC4A	NUC4B	NUC4C	NUC4D	NUC4E	NUC4F	NUC4G	NUC4H	NUC4I	NUC4J	NUC4K	NUC4L	NUC4M	NUC4N	NUC4O	NUC4P	NUC4Q	NUC4R	NUC4S	NUC4T	NUC4U	NUC4V	NUC4W	NUC4X	NUC4Y	NUC4Z	NUC5A	NUC5B	NUC5C	NUC5D	NUC5E	NUC5F	NUC5G	NUC5H	NUC5I	NUC5J	NUC5K	NUC5L	NUC5M	NUC5N	NUC5O	NUC5P	NUC5Q	NUC5R	NUC5S	NUC5T	NUC5U	NUC5V	NUC5W	NUC5X	NUC5Y	NUC5Z	NUC6A	NUC6B	NUC6C	NUC6D	NUC6E	NUC6F	NUC6G	NUC6H	NUC6I	NUC6J	NUC6K	NUC6L	NUC6M	NUC6N	NUC6O	NUC6P	NUC6Q	NUC6R	NUC6S	NUC6T	NUC6U	NUC6V	NUC6W	NUC6X	NUC6Y	NUC6Z	NUC7A	NUC7B	NUC7C	NUC7D	NUC7E	NUC7F	NUC7G	NUC7H	NUC7I	NUC7J	NUC7K	NUC7L	NUC7M	NUC7N	NUC7O	NUC7P	NUC7Q	NUC7R	NUC7S	NUC7T	NUC7U	NUC7V	NUC7W	NUC7X	NUC7Y	NUC7Z	NUC8A	NUC8B	NUC8C	NUC8D	NUC8E	NUC8F	NUC8G	NUC8H	NUC8I	NUC8J	NUC8K	NUC8L	NUC8M	NUC8N	NUC8O	NUC8P	NUC8Q	NUC8R	NUC8S	NUC8T	NUC8U	NUC8V	NUC8W	NUC8X	NUC8Y	NUC8Z	NUC9A	NUC9B	NUC9C	NUC9D	NUC9E	NUC9F	NUC9G	NUC9H	NUC9I	NUC9J	NUC9K	NUC9L	NUC9M	NUC9N	NUC9O	NUC9P	NUC9Q	NUC9R	NUC9S	NUC9T	NUC9U	NUC9V	NUC9W	NUC9X	NUC9Y	NUC9Z	NUC0A	NUC0B	NUC0C	NUC0D	NUC0E	NUC0F	NUC0G	NUC0H	NUC0I	NUC0J	NUC0K	NUC0L	NUC0M	NUC0N	NUC0O	NUC0P	NUC0Q	NUC0R	NUC0S	NUC0T	NUC0U	NUC0V	NUC0W	NUC0X	NUC0Y	NUC0Z	NUC1A	NUC1B	NUC1C	NUC1D	NUC1E	NUC1F	NUC1G	NUC1H	NUC1I	NUC1J	NUC1K	NUC1L	NUC1M	NUC1N	NUC1O	NUC1P	NUC1Q	NUC1R	NUC1S	NUC1T	NUC1U	NUC1V	NUC1W	NUC1X	NUC1Y	NUC1Z	NUC2A	NUC2B	NUC2C	NUC2D	NUC2E	NUC2F	NUC2G	NUC2H	NUC2I	NUC2J	NUC2K	NUC2L	NUC2M	NUC2N	NUC2O	NUC2P	NUC2Q	NUC2R	NUC2S	NUC2T	NUC2U	NUC2V	NUC2W	NUC2X	NUC2Y	NUC2Z	NUC3A	NUC3B	NUC3C	NUC3D	NUC3E	NUC3F	NUC3G	NUC3H	NUC3I	NUC3J	NUC3K	NUC3L	NUC3M	NUC3N	NUC3O	NUC3P	NUC3Q	NUC3R	NUC3S	NUC3T	NUC3U	NUC3V	NUC3W	NUC3X	NUC3Y	NUC3Z	NUC4A	NUC4B	NUC4C	NUC4D	NUC4E	NUC4F	NUC4G	NUC4H	NUC4I	NUC4J	NUC4K	NUC4L	NUC4M	NUC4N	NUC4O	NUC4P	NUC4Q	NUC4R	NUC4S	NUC4T	NUC4U	NUC4V	NUC4W	NUC4X	NUC4Y	NUC4Z	NUC5A	NUC5B	NUC5C	NUC5D	NUC5E	NUC5F	NUC5G	NUC5H	NUC5I	NUC5J	NUC5K	NUC5L	NUC5M	NUC5N	NUC5O	NUC5P	NUC5Q	NUC5R	NUC5S	NUC5T	NUC5U	NUC5V	NUC5W	NUC5X	NUC5Y	NUC5Z	NUC6A	NUC6B	NUC6C	NUC6D	NUC6E	NUC6F	NUC6G	NUC6H	NUC6I	NUC6J	NUC6K	NUC6L	NUC6M	NUC6N	NUC6O	NUC6P	NUC6Q	NUC6R	NUC6S	NUC6T	NUC6U	NUC6V	NUC6W	NUC6X	NUC6Y	NUC6Z	NUC7A	NUC7B	NUC7C	NUC7D	NUC7E	NUC7F	NUC7G	NUC7H	NU

Table 14. (Part 21 of 31)

VARIABLE NAME	SUBROUTINES																																
	NUC	BLKGA	KODEV	KODEN	ESCLAT	MINIPL	WDSYNY	NUC2	NUCTAP	NUCWS	WMINV	NUC3	NUC4	NUC5	NUC6S	NUCABS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS	NUCTOS
NUCUPC																																	
NUDIST																																	
NPCAF																																	
NPCHD																																	
NPCHS																																	
NPCHT																																	
MPERAG																																	
NPOSD																																	
NPOSS																																	
NPORT																																	
NQRAT																																	
NR3																																	
NR																																	
NRST																																	
NRCS																																	
NS																																	
NSBTD																																	
NSBTS																																	
NSB11																																	
NSCWH																																	
NSCRSP																																	
NSCRTP																																	
NSCWSL																																	
NSEFF																																	
NSN																																	
NET																																	
NSU																																	
NSUB																																	
NSUTD																																	
NSWHS																																	

Table 14. (Part 22 of 31)

[illegible]

Table 14. (Part 23 of 31)

[illegible]

Table 14. (Part 24 of 31)

[illegible]

Table 14. (Part 25 of 31)

[illegible]

Table 14. (Part 26 of 31)

[illegible]

Table 14. (Part 27 of 31)

VARIABLE NAME	SUBROUTINES																																					
SABRS																																						
SACFRB																																						
SACZB																																						
SACZBK																																						
SAFRBK																																						
SAMA																																						
SAMU																																						
SATCON																																						
SAWA																																						
SAWD																																						
SDNLT																																						
SCHNDP																																						
SDIV																																						
SEADA																																						
SEAFDA																																						
SEFE																																						
SHAFAC																																						
SIGDL																																						
SIGYI																																						
SINTDA																																						
SLNGTH																																						
SLSCAS																																						
SLWCB																																						
SMXRPL																																						
SNASBA																																						
SNLTUN																																						
SNMRTS																																						
SNACM																																						
SNRAC																																						
SSASFS																																						

Table 14. (Part 28 of 31)

VARIABLE NAME	SUBROUTINES																																				
	NUC	BLKDA	KCOEN	KCOEN	NUC1	ESCLAT	WHINUP	NDVYIN	NUC2	NUCTAR	NUCMPS	NMWINV	NUC3	NUC4	NUC5	ZNDST	NUCABS	NBFTGS	NRTGS	PREYLD	DMWINV	NMWINV	NUC6	DAMEVL	PANEV	FN	PREFN	OKINR	DOSLIM	WRAD	WRADV	OFFCOV	SIMCN	SIRCOV	CIRCOV		
SSMSRS																																					
SUPASN																																					
SUPIN																																					
SWAFDS																																					
SWASDS																																					
SYD100																																					
SYSD																																					
SYSS																																					
SYST																																					
SZDSRD																																					
SZSD																																					
SZSS																																					
SZST																																					
TACND																																					
TACSD																																					
TACAFR																																					
TACASR																																					
TACGR																																					
TADSR																																					
TADSD																																					
TADTAF																																					
TADTAS																																					
TADTGS																																					
TADTSZ																																					
TAEBSA																																					
TAESZD																																					
TAFSSA																																					
TASESZ																																					
TDCWPT																																					
TDCWST																																					

Table 14. (Part 29 of 31)

VARIABLE NAME	SUBROUTINES																																			
	NUC	BLKDA	KDGN	KDGN	NUC1	ESCLAT	WHINUP	NSOYIN	NUCTAR	NUCWS	NUHIN	NUC3	NUC4	NUC5	ZNUST	NUCABS	NAFTGS	NRGTGS	NCZTGS	PREYLD	DMHIN	NUHIN	NUC8	DAMEYL	PAREL	FN	PREFN	OKIN	DOSIM	WRAD	WRADN	OFFCOV	SIMCOV	SIMCOV	CIRCOV	
TGSND																																				
THFR																																				
THFRG																																				
THMNDP																																				
THORAC																																				
THWPC																																				
TLRSSC																																				
TMBOCW																																				
TMRSSC																																				
TINOWP																																				
TPO																																				
TPSUTD																																				
TORA																																				
TRGM																																				
TRNT																																				
TSRSSC																																				
TTIRD																																				
TWD																																				
TWSUTD																																				
VAABA																																				
VADBA																																				
VAMAW																																				
VANDW																																				
VELAAC																																				
VELRAC																																				
VGABA																																				
VGDBA																																				
VHREB																																				
VIAASF																																				
VIADEF																																				

Table 14. (Part 30 of 31)

[illegible]

Table 14. (Part 31 of 31)

VARIABLE NAME	SUBROUTINES																																
	VUC	9LKA	KCOEN	KCOEN	NUCI	ESCLAT	WHINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP	NUCINUP		
XDEF																																	
XTMF																																	
XOCD																																	
XOCDP																																	
XODIST																																	
XPLAF																																	
XPLDF																																	
XSEFF																																	
YAEF																																	
YDEF																																	
YFMF																																	
YLDV																																	
YLSW																																	
YLT																																	
YLTDR																																	
YLTH																																	
YLTPA																																	
YLTRW																																	
YLTSH																																	
YLTSSM																																	
YOCDP																																	
YOCDDA																																	
YOCDDP																																	
YOCDDR																																	
YODIST																																	
YPCAF																																	
YPCDF																																	
YSEFF																																	

Table 15. Cross-reference Tables for Chemical Combat Model Routines
(Part 1 of 31)

VARIABLE NAME	SUBROUTINES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
AACT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

Table 15. (Part 2 of 31)

VARIABLE NAME	SUBROUTINES																																	
ALTAP																																		
ALLOS																																		
AMFAAB																																		
AMLFD																																		
AMLFR																																		
AMLFZ																																		
AMNL																																		
AMOAAC																																		
AMORAC																																		
AMFAAB																																		
AMRS																																		
AMTEMP																																		
AMTLRS																																		
AMTMR																																		
AMTMR																																		
AMXPL																																		
AMWC																																		
AMWS																																		
ANLRS																																		
ANSMTS																																		
AFT																																		
ARSS																																		
ASRS																																		
ASUT																																		
AWT																																		
BHRS																																		
BNDIS																																		
CAAFSK																																		
CAAFSK																																		
CAAZSK																																		

Table 15. (Part 3 of 31)

VARIABLE NAME	SUBROUTINES																								
	CHEP	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE
CACOF																									
CACOR																									
CACQZ																									
CADAM																									
CADFSK																									
CADRSK																									
CADZSK																									
CAEFSK																									
CAERSK																									
CAEZSK																									
CAKGS																									
CAKNSF																									
CAKNSR																									
CAKNSZ																									
CAKSHF																									
CAKSHR																									
CAKSHZ																									
CALSRK																									
CALSZK																									
CAREPD																									
CASQIV																									
CASFJK																									
CASRSK																									
CASSSM																									
CASZSK																									
CBMSK																									
CBFSK																									
CCAGSK																									
CCDCSK																									
CCGQSK																									

Table 15. (part 4 of 31)

VARIABLE NAME	CHEN	KODE	KODE	CHEN6	CHENLEV	EQUIP	CHENSUP	DECN	CHENTAR	CHENWPS	NCGRNV	CHEN3	CHEN4	ZNOST	DUCINV	BTGTS	BTGTS	BTGTS	PEAGDM	KADMC	AIRBASE	CHENS	CHENDAM	DROPS	LINFR	SINFR	OFFCOV	CRADV
CCSGSK																												
CEITWZ																												
CEPCHO																												
CEPCHS																												
CEPGHT																												
CEPD																												
CEPS																												
CEPT																												
CFEBA																												
CGKGS																												
CHMDP																												
CHMDP																												
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Table 15. (Part 5 of 31)

VARIABLE NAME	SUBROUTINES																								
	CHEM	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE
COKNSF																									
COKNSR																									
COKNSZ																									
COKSHF																									
COKSHR																									
COKSHZ																									
CRAC																									
CRAK																									
CRLRS																									
CRMRS																									
CRSAC																									
CSABAF																									
CSABAR																									
CSABAZ																									
CSCASA																									
CSDAW																									
CSDFS																									
CSDGW																									
CSDP																									
CSOR																									
CSINDA																									
CSRSOM																									
CTSCD																									
CWLS																									
DACFT																									
DAMPL																									
DCONEO																									
DCONTD																									
DOWDCD																									
DEGETF																									

Table 15. (Part 6 of 31)

VARIABLE NAME	SUBROUTINES																																
	CHEM	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE	KCODE
DEPACC																																	
DEPAWC																																	
DEPDR																																	
DFASN																																	
DGSFT																																	
DICT60																																	
DID60																																	
DIFCLA																																	
DISACW																																	
DLCT50																																	
DLDS0																																	
OLSMPL																																	
DM3MPL																																	
DP2																																	
DP7																																	
DPC2																																	
DPC7																																	
DPCD																																	
DPCHS																																	
DPCHT																																	
DPHT2																																	
DPHT3																																	
DPHT7																																	
DPHTC2																																	
DPHTC3																																	
DPHTC7																																	
DORAF																																	
DORAR																																	
DORAZ																																	
DRAFT																																	

Table 15. (Part 7 of 31)

VARIABLE NAME	SUBROUTINES																																	
	CHEM	KCODE	KCODE	CHEM6	CHEMLEV	EQUIP	CHEMSUP	DECON	CHEM1	CHEMTAR	CHEMWPS	NCRIW	CHEM2	CHEM3	CHEM4	ZNDST	DUCINV	BFTGTS	RGTGTS	C2TGTS	PREAGDM	KADMC	AIRBASE	CHEM5	CHEMOAM	DROMS	LIMF	SIMCN	OFFCOV	CIRCOV				
DSA																																		
DSCZBA																																		
DSCZFS																																		
DSCZRS																																		
DSD																																		
DSFNBA																																		
DSRNBA																																		
DSRN1S																																		
DSSMPL																																		
DSSNCZ																																		
DSSNFS																																		
DSSNRS																																		
DVDPTH																																		
DVMNDP																																		
DVWDTH																																		
ECALFA																																		
ECBETA																																		
EFAGT																																		
EFCE																																		
EFEDA																																		
EFFDD																																		
EFFSHL																																		
EPWTD																																		
EPWTS																																		
EPWTT																																		
ERDWLE																																		
ESDASH																																		
ERDWRH																																		
FAAAFF																																		
FAAAFR																																		

Table 15. (Part 8 of 31)

[illegible]

Table 15. (Part 9 of 31)

VARIABLE NAME	SUBROUTINES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	CHEM	KCODE	KCODE	CHEM	CHEM	CHEM	EQUIP	CHEM	DECON	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM

Table 15. (Part 10 of 31)

VARIABLE NAME	SUBROUTINES																																
FEBA																																	
FEBAZ																																	
FEDW																																	
FEISF																																	
FGSTO																																	
FINDSS																																	
FINTRS																																	
FKLAA																																	
FKLSM																																	
FKLSMA																																	
FMBP																																	
PMDPT																																	
FMNC																																	
FMXE																																	
FOAEVP																																	
FOGRPC																																	
FODSUD																																	
FPACCP																																	
FPAFC																																	
FPDCAS																																	
FPDRST																																	
FPKC																																	
FPNSCP																																	
FPRC																																	
FFSPC																																	
FFWDU																																	
FORACZ																																	
FORAFB																																	
FORARS																																	
FRAAGI																																	

Table 15. (Part 11 of 31)

[illegible]

Table 15. (Part 12 of 31)

VARIABLE NAME	SUBROUTINES																																
	CHEM	KCODE	KCODE	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM
FTSPUS																																	
FTSWTC																																	
FTSWTN																																	
FWDGAS																																	
FWDMAX																																	
GDRA																																	
GLPAS																																	
GLPAS																																	
GLPGS																																	
HORD																																	
HOBBS																																	
HOBT																																	
IAASV																																	
IABAAG																																	
IABAS																																	
IABTA																																	
IACTWS																																	
IAFBA																																	
IAFSV																																	
IALBT																																	
IALBTC																																	
IALGT																																	
IALCTC																																	
IALRT																																	
IALRTC																																	
IBALD																																	
ICABTA																																	
ICADTA																																	
ICADTD																																	
ICASN																																	

Table 15. (Part 13 of 31)

VARIABLE NAME	SUBROUTINES																																
	CHEM	KCODE	KCODE	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB	GHEB
ICDLB																																	
ICDLC																																	
ICDLR																																	
ICDLT																																	
ICHT																																	
ICHEAT																																	
ICHT																																	
ICHTD																																	
ICMD																																	
ICMES																																	
ICMPLX																																	
ICMS																																	
ICMST																																	
ICPDHD																																	
ICPRB																																	
ICPRCZ																																	
ICPRR																																	
ICSM																																	
ICSMMA																																	
ICYCLE																																	
IDEL2																																	
IDELB3																																	
IDELC3																																	
IDELR3																																	
IDELTA																																	
IDLABA																																	
IDLBC3																																	
IDLCC3																																	
IDLIBA																																	
IDLRC3																																	

Table 15. (Part 14 of 31)

[illegible]

AD-A091 493

COMMAND AND CONTROL TECHNICAL CENTER WASHINGTON DC
INSTITUTE FOR DEFENSE ANALYSES TACTICAL WARFARE (TACWAR) MODEL.--ETC(U)
SEP 77 M C FLYTHE, P FINNEGAN, J REIERSON
CCTC-CSM-MM-237-77

F/G 9/2

UNCLASSIFIED

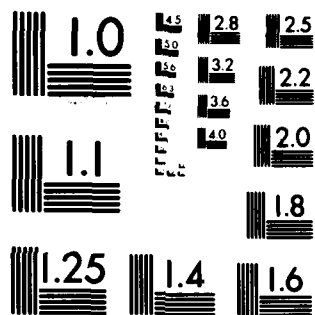
NL

4 - 4

AL

2001-1-1

END
DATE
FILMED
12-80
DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Table 15. (Part 15 of 31)

VARIABLE NAME	SUBROUTINES																																
	CHEM	KCODE	KCODE	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM
INDLC																																	
INDLR																																	
INOTPG																																	
INO																																	
INTAGT																																	
INTDA																																	
INTDAA																																	
INTDAD																																	
INTDAH																																	
INTDAK																																	
INTDE																																	
INTDEA																																	
INTDED																																	
INTDEN																																	
INTDEK																																	
INTDM																																	
INTDS																																	
INTDSA																																	
INTDSO																																	
INTDSH																																	
INTDSK																																	
INTDVL																																	
IGMU																																	
IOSN																																	
KOSMAB																																	
IPCWZ																																	
KOPCH																																	
KOPIN																																	
IPRO																																	
IPROO																																	

Table 15. (Part 16 of 31)

[illegible]

Table 15. (Part 17 of 31)

[illegible]

Table 15. (Part 18 of 31)

VARIABLE NAME	SUBROUTINES																																
KISS																																	
KPIS																																	
KPRAG																																	
KPRDM																																	
KPS																																	
KPSY																																	
KIARAG																																	
KIADOM																																	
KTER																																	
KIENIR																																	
KIERTA																																	
KTYNS																																	
LXDT																																	
MAU																																	
MAXIA																																	
MCF																																	
MFOT																																	
MNDSEC																																	
MNFRD																																	
MNFRS																																	
MNERT																																	
MNIE																																	
MNSEC																																	
MNIBUR																																	
MNISCFC																																	
MOT																																	
MAC																																	
NAB																																	
NAC																																	
NAFS																																	

Table 15. (Part 19 of 31)

[illegible]

Table 15. (Part 20 of 31)

VARIABLE NAME	SUBROUTINES																																			
	CHEM	KCODE	CHEM6	CHEMLEV	EQUIP	CHEMSUP	DECON	CHEM1	CHEMTAR	CHEMW5	MCRIW	CHEM2	CHEM3	CHEM4	ZNUST	DUCINV	BFGTS	RGOTTS	PGTOTS	PRAGDM	KADMC	AIRBASE	CHEM5	CHEMDAM	DOOPS	LINFR	SIMCN	CEFCOV	CINCOV							
NDQV5																																				
NOFAB																																				
NDISA																																				
NDOR7																																				
NDORC7																																				
NDORAB																																				
NDS																																				
ND3AMS																																				
ND3MD																																				
ND3AS																																				
ND3MT																																				
ND3VW																																				
ND3ND																																				
ND3IS																																				
ND3MT																																				
ND3BI																																				
NEAEF																																				
NEDEF																																				
NEML																																				
NEPD																																				
NEEC																																				
NFAF																																				
NGS																																				
NWNS																																				
NH3R																																				
NH3AQ																																				
NH3TS																																				
NH3S																																				
NH3R																																				
NH3C																																				

Table 15. (Part 21 of 31)

[illegible]

Table 15. (Part 22 of 31)

VARIABLE NAME	SUBROUTINES																																	
	CHEM	KODE	KODE	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM
NSUTD	X																																	
NSWHS																																		
NSWHT																																		
NSWSE																																		
NT																																		
NTCRTP																																		
NICHS																																		
NTNHW																																		
NTTP																																		
NTSUDT																																		
NTWHT																																		
NTWSE																																		
NTWSU																																		
NTYP																																		
NW																																		
NWABA																																		
NWCCZ																																		
NWREG																																		
NYLO																																		
NYLS																																		
NYLT																																		
NZ																																		
OCNOC																																		
OLWRP																																		
PACAM																																		
PACSM																																		
PAFRAM																																		
PAJON																																		
PARHLS																																		
PARHMS																																		

Table 15. (Part 23 of 31)

[illegible]

Table 15. (Part 24 of 31)

[illegible]

Table 15. (Part 25 of 31)

VARIABLE NAME	SUBROUTINES																								
	CHEM	KCODE	KCODE	GHEM8	GHEMLEV	EQUIP	CHEMSUP	DECON	CHEM1	CHEMTAR	CHEMWPS	INCRINV	CHEM2	CHEM3	CHEM4	ENDST	DUCINV	BFGTS	AGTGS	CATGS	PREAGOM	KADMC	AIRBASE	CHEMS	CHEMDAM
PRDRP																									
PWNGTS																									
PWRCRP																									
PWSF																									
PWSSMS																									
PZDPH																									
DRAC7																									
ORAFS																									
ORAK																									
ORARS																									
RAACH																									
RAAFRM																									
RAASDT																									
RACAM																									
RACZ																									
RACFS																									
RACRS																									
RADBPT																									
RAEVP																									
RAFSDT																									
ROBPTA																									
ROBPTS																									
RDCFA																									
RDCFS																									
RDEXPA																									
RDEXPS																									
RDPLOY																									
RDPFSC																									
RDPFTH																									
RDPSCA																									

Table 15. (Part 26 of 31)

VARIABLE NAME	CHEM	KCODE	KCODE	CHEM8	CHEMLEV	EQUIP	CHEMSUP	DECON	CHEM1	CHEMTAR	CHEMWIS	NCNIN	CHEM2	CHEM3	CHEM4	ZNOST	DUCIN	BFOTIS	RGOTIS	CZTOTS	PREAGOM	KADOM	AIRBAC	AIRBASE	CHEM5	CHEMDAM	DRCS	LINER	SIMCN	OFFCOV	CIRCOV
RDSICS																															
RDSMS																															
RDSUR																															
RFATCM																															
RFATIM																															
RGSOT																															
RHO																															
RIMCH																															
RIMADP																															
RINGCHD																															
RINGCHS																															
RINGCHT																															
RINGOW																															
RINGSW																															
RINGTW																															
RPCZ																															
RPSICL																															
RPSIDL																															
RPSLCL																															
RPSLDL																															
RRAPL																															
RRLSPL																															
RIMSPL																															
RMSPL																															
RSAMS																															
RSMIN																															
RVLUST																															
SABAF																															
SABAR																															
SABAZ																															

Table 15. (Part 27 of 31)

VARIABLE NAME	SUBROUTINES																																
	CHEM	KCODE	KCODE	CHEM6	CHEMLEV	EQUIP	CHEMSUP	DECON	CHEM1	CHEMTAR	CHEMWS	NCRIW	CHEM2	CHEM3	CHEM4	ZNDST	DUCINV	BFTGTS	RGOTGTS	GZTOTS	PREAGOM	KADMC	AIRBASE	CHEMS	CHEMOMAM	DROPS	LINFR	SIMON	OFFCOV	CINCOV			
SABGZ																																	
SABFS																																	
SABRS																																	
SACFRB																																	
SACZB																																	
SACZBK																																	
SATRBK																																	
SAMA																																	
SAMD																																	
SATCON																																	
SAWA																																	
SAMD																																	
SNDLT																																	
SCHMDP																																	
SDIV																																	
SEAADA																																	
SEAFDA																																	
SFRFE																																	
SHAFAC																																	
SIGDL																																	
SIGY1																																	
SINTDA																																	
SLNGTH																																	
SLSCAS																																	
SLWCB																																	
SMXRPL																																	
SNASBA																																	
SNLTN																																	
SNMPTS																																	
SNACM																																	

Table 15. (Part 28 of 31)

VARIABLE NAME	SUBROUTINES																																
	CHEM	KCODE	CHEM8	CHEM5V	EQUIP	CHEMSUP	DECON	CHEMTAR	CHEMWAS	ACRINV	CHEM2	CHEM3	CHEM4	ZNST	DUCINV	BF7GTS	AG7GTS	PREGOM	KADMC	AIBASE	CHEM5	CHEMDAM	DROPS	LINE	SIMCN	OFFCOV	CIRCOV						
SRTAC																																	
SSMST S																																	
SSMGRS																																	
SUPAGN																																	
SUPIN																																	
SWAFDS																																	
SWASDS																																	
SYD 100																																	
SYSD																																	
SYSS																																	
SYST																																	
SZDSRD																																	
SZSD																																	
SZSS																																	
SZST																																	
TAACND																																	
TAASD																																	
TACAFR																																	
TACASR																																	
TACSR																																	
TADSR																																	
TADSZD																																	
TADTAF																																	
TADTAS																																	
TADTGS																																	
TADTSZ																																	
TAESRA																																	
TAESZD																																	
TAFSSD																																	
TAFSEZ																																	

Table 15. (Part 29 of 31)

VARIABLE NAME	SUBROUTINES																																	
	CHEM	KCODE	KCODE	CHEM	CHEM	EQUIP	CHEM	DECON	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	
TDWPT																																		
TDWST																																		
TGSND																																		
THFR																																		
THFR																																		
THMNDP																																		
THORAC																																		
THWPC																																		
TLRSSC																																		
TMBOW																																		
THRSSC																																		
THOWP																																		
TFD																																		
TFSDTD																																		
TORA																																		
TRGM																																		
TRNT																																		
TSRSSC																																		
TTIRD																																		
TWD																																		
TWSDTD																																		
VAABA																																		
VADBA																																		
VAMAW																																		
VANDW																																		
VELAAC																																		
VELRAC																																		
VGABA																																		
VUDBA																																		
VHIRST																																		
VIAASF																																		

Table 15. (Part 30 of 31)

[illegible]

Table 15. (Part 31 of 31)

VARIABLE NAME	SUBROUTINES																												
	CHEM	KCODE	KCODE	CHEM8	CHEM1EV	EQUIP	CHEMSUP	DECON	CHEM1	CHEMTAR	CHEMWIS	NCHEM3	CHEM3	CHEM4	ZNOST	DUCIN	RTGTS	RTGTS	RTGTS	RTGTS	RTGTS	RTGTS	RTGTS	RTGTS	RTGTS	RTGTS	RTGTS	RTGTS	RTGTS
XTMF																													
XOCD																													
XOCDP																													
XODIST																													
XPCAF																													
XPCDF																													
XSEFF																													
YAEF																													
YDEF																													
YPMF																													
YLOV																													
YLSW																													
YLT																													
YLTDR																													
YLTH																													
YLTPA																													
YLTRW																													
YLTSN																													
YLTSSM																													
YOCDP																													
YOCOPA																													
YOCOPR																													
YOCOR																													
YODIST																													
YPCAF																													
YPCDF																													
YSEFF																													

Table 16. Cross-reference Tables for Target Acquisition Model Routines and the Links for GROUND, AIRGRD, PSAIR, TC, SUPPLY, TIMET, and PSUMMY (Part 1 of 31)

VARIABLE NAME	SUBROUTINES																																
	TARACO	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE	TARACE
AACT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AACDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AACS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AAGT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AAFCT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AAFS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AAMT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AAST	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ABASEF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ABASER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ABASEZ	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ABATFS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACCZ	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACFS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACHAT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACHOM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACRS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ACSARA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ADT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AEDGE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AEEGE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AF	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AGST	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AIWS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AKT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ALDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ALBSR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ALRSZ	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ALTAAS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ALIAFS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ALIFAP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ALTGB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 16. (Part 2 of 31)

VARIABLE NAME	SUBROUTINES																																
	TARCO	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC
ANFAAB																																	
ANLFD																																	
ANLFR																																	
ANLFZ																																	
ANHL																																	
ANDAAC																																	
ANDRAC																																	
AMRAAB																																	
AMRS																																	
AMTEMP																																	
AMTLRS																																	
AMTHRS																																	
AMTSRS																																	
AMXPL																																	
AMWC																																	
AMWS																																	
ANSLRS																																	
ANSMRS																																	
APT																																	
ARSS																																	
ASRS																																	
ASUT																																	
AWT																																	
BNRS																																	
BNDS																																	
CAATSK																																	
CAARSK																																	
CAAZSK																																	
CACOF																																	
CACOR																																	

Table 16. (Part 3 of 31)

VARIABLE NAME	SUBROUTINES																																			
	TARCO	TARCA	TARAGE	TADPAR	BLKDATA	GROUND	GC	FEAMT	AIRGRD	ATRTAB	ORAFIL	ASGTR	PSAIR	TC	IIBA	NXDIV	AIRASG	SUPPLY	TRANPO	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXLI	FIXX	OUTPUT	BLOCK1	TIMET	ASSIGN	IRATIO	IFBA	PSUMMY		
CAC0Z																																				
CADAM																																				
CADFSK																																				
CADRSK																																				
CADZSK																																				
CAEFSK																																				
CAERSK																																				
CAEZSK																																				
CAKGS																																				
CAKNSF																																				
CAKNSR																																				
CAKNSZ																																				
CAKSHF																																				
CAKSHR																																				
CAKSHZ																																				
CALSRIK																																				
CALSZK																																				
CAREPD																																				
CASCIV																																				
CASFJK																																				
CASRSK																																				
CASSIM																																				
CASZSK																																				
CBMSK																																				
CBFSK																																				
CCACSK																																				
CCDCSK																																				
CCECSK																																				
CCSKSK																																				
CEITWZ																																				

[illegible]

Table 16. (Part 5 of 31)

VARIABLE NAME	SUBROUTINES																																	
	APACQ	ARACA	ARAPR	BLKDATA	GROUND	GC	FEBSMT	ALPGRD	ALRTAB	DRAPIL	ASQATR	PSAIR	TC	IIA	NKDIV	ALRSG	SUPPLY	TRAMPQ	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXLI	UPX	OUTPUT	BLOCK1	TMET	ASSIGN	IRATIO	IFEBA	PSUMMY	
LINKSZ																																		
COKSHF																																		
COKSHR																																		
COKSHZ																																		
CRAC																																		
CRAC																																		
CRLRS																																		
CRHRS																																		
CRSAC																																		
CSABAF																																		
CSABAR																																		
CSABAZ																																		
CSCASA																																		
CSDAW																																		
CSDWF																																		
CSDGW																																		
CSDP																																		
CSDR																																		
CSINDA																																		
CSINDM																																		
CTSCD																																		
GWLS																																		
DIACT																																		
DAMPL																																		
DCOMED																																		
DOONTO																																		
DDWDCD																																		
DEGEFF																																		
DEPACC																																		
DEPAWG																																		

Table 16. (Part 6 of 31)

VARIABLE NAME	SUBROUTINES																																		
	TARACO	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC
DEPOR																																			
DFASN																																			
DCSET																																			
DICT50																																			
DID50																																			
DICLA																																			
DISACW																																			
DICT50																																			
DLDS0																																			
DL5MPL																																			
DMSMPL																																			
DP2																																			
DP7																																			
DPC2																																			
DPC7																																			
DPCH0																																			
DPCH5																																			
DPCHT																																			
DPIN2																																			
DPIN3																																			
DPIN7																																			
DPINCH2																																			
DPINCH3																																			
DPINCH7																																			
DORAF																																			
DORAR																																			
DORAZ																																			
DRAFT																																			
DSA																																			
DSCBA																																			

Table 16. (Part 7 of 31)

VARIABLE NAME	TAPCO	TARACE	TARAP	BLDATA	GROUND	GC	FEBAUT	ALRGD	ATRTAB	ORAFIL	ASGATR	PSAIR	TC	WIBA	NXDIV	ALRAG	SUPPLY	TRANSY	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXLI	FIXX	OUTPUT	BLOCK1	TIMEY	ASSIGN	IRATIO	IFEBA	PSUMMY
DSCZFS																																	
DSCZRS																																	
DSD																																	
DSFNBA																																	
OSRNBA																																	
DSRNFS																																	
DSSMPL																																	
DSSNCZ																																	
DSSNFS																																	
DSSNRS																																	
DVDPTH																																	
DVMNDP																																	
DVWDTH																																	
ECALFA																																	
ECBETA																																	
EFAGT																																	
EFCE																																	
EFFDA																																	
EFFDO																																	
EFFMIL																																	
EFMTD																																	
EFMTS																																	
EPWTT																																	
EPWTL																																	
EROWLE																																	
EROWH																																	
ERDRHE																																	
FAAAFF																																	
FAAAFR																																	
FAAAZ																																	
FAAARF																																	

Table 16. (Part 8 of 31)

VARIABLE NAME	SUBROUTINES																																			
	TARACO	TARACA	TARACE	TADPAR	BLKDATA	GROUND	GC	FEAMT	AIRGRD	ATRTAB	GRATIL	ASCATR	PAIR	TC	LIBA	NRDIV	AIRASC	SUPPLY	TRAMP	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXLI	FIXIX	OUTPUT	BLOCK1	TIMET	ASSIGN	IRATIO	IFEBA	PSUMMY		
FAAHR																																				
FAARZ																																				
FAAAZ								X																												
FAAAZR								X																												
FAAAZZ								X																												
FAABAA								X																												
FAABAD																																				
FAABAE																																				
FAABAS																																				
FAACTD														X																						
FABAFE																																				
FABARS																																				
FABABS																																				
FABDRP																																				
FABDZF																																				
FABDZR																																				
FABSUP																																				
FACASA																																				
FACASD																																				
FACASE																																				
FACASS																																				
FACIDE																																				
FACFDS																																				
FADTMC								X																												
FADTMN																																				
FAGSCN																																				
FAGTDT																																				
FAINDA																																				
FAINDE																																				
FAINDS																																				

Table 16. (Part 9 of 31)

VARIABLE NAME	TARCO	TARCA	TARCE	TARAP	BLKDATA	GROUND	GC	FEBAUT	ALRPOD	OPAFIL	ASGATR	TS	ILBA	NKOIV	ALRSG	SUPPLY	TRANPO	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXLI	INPLI	OUTPUT	BLOCK1	TIME1	ASSIGN	IRATIO	FEBA	SUMMY
FAKRN																																
FAKPAD																																
FAKUDA																																
FAKED																																
FASFRIC																																
FATCIV																																
FAUSHL																																
FCABED																																
FCAIA																																
FCASRS																																
FCASSS																																
FCDBFD																																
FCMP																																
FCPTC																																
FCVLS																																
FDAGPS																																
FDCRAD																																
FDCRAS																																
FDPTH																																
FDSERC																																
FDSPOS																																
FDSWTC																																
FDSMTN																																
FDWALD																																
FDWALS																																
FDWLAC																																
FDWLRA																																
FEAFBA																																
FEBA																																
FEBAZ																																

Table 16. (Part 10 of 31)

VARIABLE NAME	SUBROUTINES																																
	TARCO	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC	TARAC
FEDW																																	
FEISF																																	
FGSTD																																	
FINDSS																																	
FINTRS																																	
FKLAA																																	
EKLSM																																	
EKLSMA																																	
FMBP																																	
FMDPT																																	
FMNC																																	
FMXE																																	
FOAEVP																																	
FOCRPG																																	
FODSUD																																	
FPABCP																																	
FPAPFC																																	
FPDCAS																																	
FPDRST																																	
FPKG																																	
FPMSCP																																	
FPRC																																	
FPSSPC																																	
FPWDU																																	
FORACZ																																	
FURAYS																																	
FORARS																																	
FRAACI																																	
FRACIO																																	
FRAD																																	

Table 16. (Part 11 of 31)

[illegible]

Table 16. (Part 12 of 31)

VARIABLE NAME	SUBROUTINES																																	
	TAPAC0	TAPAC1	TAPAC2	TAPAC3	TAPAC4	TAPAC5	TAPAC6	TAPAC7	TAPAC8	TAPAC9	TAPAC10	TAPAC11	TAPAC12	TAPAC13	TAPAC14	TAPAC15	TAPAC16	TAPAC17	TAPAC18	TAPAC19	TAPAC20	TAPAC21	TAPAC22	TAPAC23	TAPAC24	TAPAC25	TAPAC26	TAPAC27	TAPAC28	TAPAC29	TAPAC30	TAPAC31	TAPAC32	
FTSWIN																																		
FWDGAS																																		
FWDMAX																																		
GDPA																																		
GLPAFS																																		
GLPAS																																		
GLPGS																																		
HOBD																																		
HOBS																																		
HOBT																																		
IAASV																																		
IABAAG																																		
IABAS																																		
IABTA																																		
IACTWS																																		
IAFBA																																		
IAFSV																																		
IALBT																																		
IALBTC																																		
IALCT																																		
IALCTC																																		
IALRT																																		
IALRTC																																		
IBALD																																		
ICABTA																																		
ICADTA																																		
ICAOTD																																		
ICASH																																		
ICDUB																																		
ICDLC																																		

Table 15. (Part 13 of 31)

[illegible]

Table 16. (Part 14 of 31)

VARIABLE NAME	TARCO	TARCA	TARAC	TADPA	BLKDATA	GROUND	GC	FEBAIT	AIHQD	ATFAB	QRAFL	ASGAT	ASAIR	TC	IBA	NXDIV	ALRAG	SUPPLY	TAPNO	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXLJ	OUTPUT	BLOCK1	TIME1	ASSIGN	IRATIO	IFEB	PSUMMY
IDSOTS																																	
IDSBTT																																	
IDSWTC																																	
IDSWTN																																	
IDWTSU																																	
IEML														X																			
TEMLC1														X																			
TEMLC2														X																			
IEOGS														X																			
IESC														X																			
IFULL														X																			
IGO														X																			
IGSV														X																			
IKASC														X																			
IMAGE1																																	
IMAGE																																	
IMTYPE																																	
IRUTMF																																	
INCYL																																	
IND1																																	
IND2																																	
IND3																																	
IND4																																	
INDC1																																	
INDC2																																	
INDC3																																	
INDC4																																	
INDLB																																	
INDLC																																	
INDLR																																	

Table 16. (Part 15 of 31)

VARIABLE NAME	SUBROUTINES																																	
	TARCO	TARCA	TARCE	TARPAR	BLKDATA	GROUND	GC	FEBANT	AIRGND	ATATAB	GRAPL	ASGAT	PSAIR	TC	IIBA	NXDIV	AIRASG	SUPPLY	TRAMP	INPUT	INSL	LABEL1	LABEL2	MAIN	CYCLE	FIXL	FIXL2	OUTPUT	BLOCK1	TIME	ASSIGN	IRATIO	IFBA	PSUMMY
INTPG																																		
INO																																		
INTACT																																		
INTDA																																		
INTDAA																																		
INTDAD																																		
INTDAH																																		
INTDAK																																		
INTDE																																		
INTDEA																																		
INTDED																																		
INTDEH																																		
INTDEK																																		
INTDM																																		
INTDS																																		
INTOSA																																		
INTOSD																																		
INTOSH																																		
INTDSK																																		
INTRVL																																		
IONU																																		
IOSN																																		
KOSMAS																																		
PCALZ																																		
IPOTCH																																		
IPOPIN																																		
IPRD																																		
IPRDO																																		
IPREG																																		
IPRI																																		

Table 16. (Part 16 of 31)

VARIABLE NAME	SUBROUTINES																																	
	TARCO	TARCF	TAPAR	BLKDATA	GROUND	GC	FEBAMT	AIRGRD	ATRTAB	GRATL	ASCATR	ASAIR	TC	NIBA	NXDIV	AIRASG	SUPPLY	TRAMP	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXL1	FIXL2	OUTPUT	BLOCK1	TIME1	ASSIGN	IRATIO	IFBA	PSUMMY	
IPRS																																		
IPRSO																																		
IPSHLA																																		
IPSORA																																		
IPT																																		
IPTSUR																																		
IORAP																																		
IRAC																																		
IRADTA																																		
IRADTD																																		
IRSWB																																		
ISA																																		
ISCEF																																		
ISCLI																																		
ISCL2																																		
ISMA																																		
ISMAI																																		
ISNABA																																		
ISNBA																																		
ISSWTC																																		
ISSWTH																																		
ISTAT																																		
ITA																																		
ITAFS																																		
ITD																																		
ITM																																		
ITMPR																																		
ITSWTC																																		
ITSWTH																																		

Table 16. (Part 17 of 31)

[illegible]

Table 16. (Part 18 of 31)

VARIABLE NAME	SUBROUTINES																																
	TARCO	TARAC	TARAP	BLKATA	GROUND	GC	FERANT	ALIGRD	ATRTAB	DRAPL	ASCATN	KAIR	TC	IIBA	NXDIV	AIRAG	SUPPLY	TRANPO	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXLI	IFIX	OUTPUT	BLOCK1	TIMET	ASSIGN	IRATIO	FEBA	PSUMMY
KPRIAG																																	
KPRDM																																	
KPS					X																												
KPSY																																	
KIARAG																																	
KIARDM																																	
KTER																																	
KTERIS																																	
KTERIA																																	
KTYWS																																	
LXOPT																																	
MAD																																	
MAXKIA																																	
MCF																																	
MFOPT																																	
MNDSFC																																	
MNFRD																																	
MNFRS																																	
MNFT																																	
MNIE																																	
MNBSFC																																	
MNSUBR																																	
MNTRFC																																	
MOT																																	
NAAC																																	
NAB																																	
NAC																																	
NAPB																																	
NAM																																	
NAB																																	

Table 16. (Part 19 of 31)

VARIABLE NAME	SUBROUTINES																																	
	TAPCO	TAPCA	TAPCE	TAPAR	BLKATA	GROUND	GC	FEAMT	AIRMOD	ATRTAB	ORATL	ASDATL	PSLID	TC	IIBA	NKCIY	ALPAG	SUPPLY	INPUL	INCOL	LABEL1	LABEL2	MAIN	CYCLE	FILE1	FILE2	OUTPUT	BLOCK1	TIME1	ASSIGN	IRATD	IFBBA	ASUMY	
NB3																																		
NBA																																		
NBC3																																		
NBNLT																																		
NBC4																																		
NBN4																																		
NCHATD																																		
NCHATS																																		
NCHATT																																		
NCHOW																																		
NCHSW																																		
NCHTW																																		
NCOBAM																																		
NCR4																																		
NCHN4																																		
NLSM																																		
NLWABA																																		
NWC2																																		
NWREG																																		
NWGLE																																		
NZ3																																		
NZC3																																		
NZC4																																		
NZD4																																		
ND																																		
NDCRDP																																		
NDCRSP																																		
NDCRTP																																		
NDCRSH																																		

Table 16. (Part 20 of 31)

VARIABLE NAME	SUBROUTINES																																		
	TARCO	TARCA	TARCE	TADPAR	BLKDATA	GROUND	GC	FEBSMT	AIRGAD	ATRTAB	ORATIL	ASGATL	MAIR	TC	IIJA	AKDIV	AKRAG	SUPPLY	TRANO	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	EXLU	UEIX	OUTMT	3LOCK1	TIMECT	ASSIGN	INAT.O	IEBA	PSUMMY	
NDFAB																																			
NDIBA																																			
NDDB7																																			
NDORC7																																			
NDRAB																																			
NDS																																			
NDSAMS																																			
NDSMD																																			
NDSMS																																			
NDSMT																																			
NDYMW																																			
NDWHD																																			
NDWHS																																			
NDWMT																																			
NDWSI																																			
NEAEF																																			
NEDEF																																			
NEML																																			
NEPD																																			
NESC																																			
NEMF																																			
NGS																																			
NHSMS																																			
NHSR																																			
MINHAG																																			
NINTS																																			
NLSMS																																			
NLSR																																			

Table 16. (Part 21 of 31)

VARIABLE NAME	SUBROUTINES																																	
	TAPCO	TARCA	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR	TAPAR
NNSC																																		
NODAB																																		
NODPC																																		
NODIST																																		
NPCAF																																		
NPCDF																																		
NPCHD																																		
NPCMS																																		
NPCMT																																		
NPERAG																																		
NPOSD																																		
NPOSS																																		
NPOST																																		
NORAT																																		
NR3																																		
NR																																		
NREBT																																		
NRC3																																		
NR																																		
NBTD																																		
NBTS																																		
NBTT																																		
NCONW																																		
NCONSP																																		
NCRTP																																		
NCONW																																		
NSEFF																																		
NSN																																		
NST																																		
NSU																																		

Table 16. (Part 22 of 31)

VARIABLE NAME	SUBROUTINES																																
	TARACO	TARACE	TADPAR	BLKDATA	GROUND	GC	FEBAUT	AIRGRD	ATRTAB	ORAFIL	ASGATR	PSAIR	TC	IIBA	NYOIV	AIRASG	SUPPLY	TRANPO	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXLI	FIXIX	OUTPUT	BLOCK1	TIME1	ASSIGN	IRATD	IFEBA	PSUMMY
NSUB	X	X	X																														
NSUTD																																	
NSWHS																																	
NSWHT																																	
NSWSI																																	
NT																																	
NTCRTP																																	
NTCWSI																																	
NTLHNM																																	
NTTP																																	
NTSUOT	X	X	X																														
NTWHT																																	
NTWSI																																	
NTWSU																																	
NTYP																																	
NW																																	
NWABA																																	
NWABZ																																	
NWREG																																	
NYLD																																	
NYLS																																	
NYLT																																	
NZ																																	
OCNUC		X																															
OCWRP																																	
PAACAM	X	X	X																														
PAACSM	X	X	X																														
PAFRAM	X	X	X																														
PAJOR	X	X	X																														
PARHLS																																	

Table 16. (Part 23 of 31)

[illegible]

[illegible]

Table 16. (Part 25 of 31)

VARIABLE NAME	SUBROUTINES																																
	TARACH	TARAC	TARAP	BLKATA	GROUND	GC	FEAMT	AIRGMD	ATRAAB	ORAFIL	ASGATR	PSAIR	TO	IIA	XXDIV	A-RASG	SUPPLY	TRAMPD	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	EXTLU	UNIT	OUTPUT	BLOCK1	TIMET	ASSIGN	IPATO	IFBA	SUMMY
PHATS																																	
PHDRP																																	
PHNGTS																																	
PHICRP																																	
PHSE																																	
PHSSMS																																	
PZDPFH																																	
ORACZ																																	
ORAFS																																	
ORAK																																	
ORARS																																	
ORACH																																	
RAAFTH																																	
RAASDT																																	
RACAM																																	
RACGZ																																	
RACFS																																	
RACRS																																	
RADBPT																																	
RAEVP																																	
RAFSOT																																	
ROBPTA																																	
ROBPTS																																	
RDCEA																																	
RDCFS																																	
RDEXPA																																	
RDEXPS																																	
RDPLOY																																	
RDPASC																																	
RDPATH																																	

Table 16. (Part 26 of 31)

[illegible]

Table 16. (Part 27 of 31)

[illegible]

Table 16. (Part 28 of 31)

VARIABLE NAME	SUBROUTINES																																	
	TARCO	TARAC	TADPAR	BLKDATA	GROUND	GC	FEBANT	ALRGND	ATRTAB	GRATL	ASGATR	PSAIR	TC	IIBA	NRDLV	ALRASG	SUPPLY	TRAND	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FILELJ	FILEX	OUTPUT	BLOCKI	TIMEI	ASSIGN	IRAT.O	IFEB4	PSUMMY	
SOMPTS																																		
SRACM																																		
SRAC	X	X	X																															
SMSFS																																		
SSMSRS																																		
SUPASH																																		
SUPIN																																		
SWAFDS																																		
SWASDS	X	X	X																															
SYD100	X	X	X																															
SYSD																																		
SYSS																																		
SYST																																		
SZDSRD																																		
SZSD																																		
SZSS																																		
SZST																																		
TACIND	X	X	X																															
TAASSD	X	X	X																															
TACAFR	X	X	X																															
TACASR	X	X	X																															
TACGSR	X	X	X																															
TADGSR	X	X	X																															
TADSRA	X	X	X																															
TADSDZ	X	X	X																															
TADTAF	X	X	X																															
TADTAS	X	X	X																															
TADTGS	X	X	X																															
TADTIZ	X	X	X																															
TASRA	X	X	X																															
TASZD	X	X	X																															
TASRDZ	X	X	X																															
TASRDZ	X	X	X																															

Table 16. (Part 29 of 31)

VARIABLE NAME	SUBROUTINES																																
	TARCO	TARCA	TAPAC	BKDATA	GROUND	GC	FEBANT	AIRGND	ATRTAB	ORAFIL	ASCATR	PSAIR	TC	IIEA	NXDIV	AIRASG	SUPPLY	TRAMPD	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXLII	OUTFLX	BLOCK1	TIME1	ASSIGN	RAT O	IFEBA	PUMMY	
TASESZ	X	X	X																														
TDWMT																																	
TDWST																																	
TGSND	X	X	X																														
THFR																																	
THFR C																																	
THINDP																																	
THORAC																																	
THWPC																																	
TLSSCC																																	
IMROGW																																	
IMRSSC																																	
INOWP																																	
TPD								X																				X					
ICSUD																																	
TORA																																	
TRGM																																	
TRNT																																	
TSRSSC																																	
TTIND																																	
TWD																																	
TWSUD																																	
VAARA																																	
VADRA																																	
VABAW																																	
YAHOW																																	
VELAAC																																	
VELRAC	X	X	X																														
VGABA	X	X	X																														
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Table 16. (Part 30 of 31)

VARIABLE NAME	SUBROUTINES																																		
	TARCO	TARCA	TARCE	TARPR	BLKDATA	GROUND	GC	FEBANT	ALRGND	QRTAB	ASAFIL	ASAFR	PAIR	TS	USA	VRDY	VRASG	SUPPLY	TRAMP	INPUT	INSOL	LABEL1	LABEL2	MAIN	CYCLE	FIXL1	FIXL2	OUTPUT	BLOCK1	TIMET	ASSIGN	FEATD	FEBA	PSUMV	
VIADSF	X	X	X	X																															
VISTWZ																																			
VIVASF																																			
VIVAW																																			
VINDSF																																			
VINDW																																			
WCACAS																																			
WCDR																																			
WDIV																																			
WDIRP																																			
WFCNBA																																			
WFCORA																																			
WFCRA																																			
WFCZA																																			
WIDDR																																			
WIDS																																			
WINDSP																																			
WPNK																																			
WPCZ																																			
WPTC																																			
WPTN																																			
WTAGRC																																			
WTAGTD																																			
WICAST																																			
WIDCTR																																			
WTAGRC																																			
WTNAST																																			
WVDATS																																			
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