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AFATL-TR-76-120

DEVELOPMENT OF A COMPUTER PROGRAM FOR STORE AIRLOADS PREDICTION TECHNIQUE

VOUGHT CORPORATION, SYSTEMS DIVISION
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DALLAS, TEXAS 75222

OCTOBER 1976

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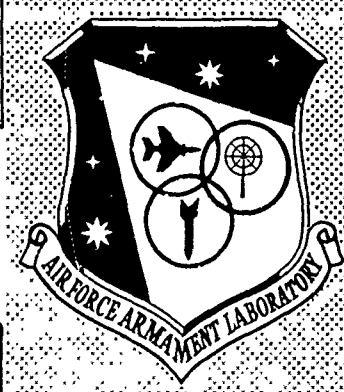
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report describes the development of a computer program for predicting six- component captive store aerodynamic loads for wing-mounted single stores. The program was developed from a portion of AFATL-TR-75-87, "External Store Airloads Prediction Technique," that the contractor developed for the Armament Develop- ment and Test Center (ADTC) under Contract No. F08635-73-C-0070. In addition, modifications to the prediction technique to increase the angle of attack range over which the yawing moment method is applicable are presented. Included in		

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ABSTRACT (CONCLUDED)

appendix form is a detailed user's operational guide to the system. The work reported here was performed under Contract No. F08635 76-C-0037 for the Air Force Armament Laboratory.

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PREFACE

This report documents the results of work accomplished by Systems Division, Vought Corporation, P. O. Box 5907, Dallas, Texas 75222, under Contract No. F08635-76-C-0237 with the Air Force Armament Laboratory, Armament Development and Test Center, Eglin Air Force Base, Florida. Lt. Vayl S. Oxford (DLJC) managed the program for the Armament Laboratory. This effort was conducted during the period from May 1976 to October 1976.

This technical report has been reviewed and is approved for publication.

FOR THE COMMANDER:


WILLIAM F. BROCKMAN, Colonel, USAF

Chief, Munitions Division

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LIST OF SYMBOLS

C_{LOCAL}	Parent aircraft local wing chord, in.
$\frac{C_x}{qS}$	Force coefficient where x can be y, N, A representing side, normal, and axial force, respectively
$\frac{C_x}{qSd}$	Moment coefficient where x can be η , m, ℓ representing yawing, pitching, and rolling moment, respectively
d	Store diameter, ft
HIGH WING	High wing aircraft
$\frac{h_w}{h_f}$	Parameter defining the parent aircraft wing-fuselage relationship
K_{CPM}	Pitching moment correlation factor
K_{INTC}	Factor describing the value of a dependent variable where the independent variable is zero
K_{A1}	Correlation factor to account for the sweep angle of the parent aircraft wing
K_{SLOPE}	Factor describing the rate of change of a dependent variable as a function of an independent variable
$\Delta K_{SLOPE_{INTF}}$	Incremental change in K_{SLOPE} due to aerodynamic interference
L	Store length, in.
L_n	Store nose length, in.
LOW WING	Low wing aircraft
ℓ_{LE}	Distance from the most forward point of the installed store to the wing leading edge as measured in the wing plan view, in.
PM	Pitching moment, ft. lb.
PPA .	Plan projected area, in. ²
q	Free stream dynamic pressure, $\frac{lb.}{ft^2}$
S	Store reference area, $\frac{\pi d^2}{4}$, ft ²

LIST OF SYMBOLS (CONCLUDED)

SF	Side Force, lb.
SPA	Side projected area, in. ²
YM	Yawing moment, ft. lb.
α	Aircraft angle of attack, deg
α_{BREAK}	Angle of attack where yawing moment slope break occurs, deg
$\Delta\alpha_{\text{BREAK}}$	Incremental change in α_{BREAK} , deg
$\alpha_{0\text{SF}}$	Angle of attack where side force is zero, deg
β_S	Store yaw angle, deg
Δ	Increment
$\psi_{A/C}$	Aircraft yaw angle, positive nose right, deg
$()_{\alpha}$	$\frac{\partial ()}{\partial \alpha}$
$()_{\alpha=0}$	Value of () where $\alpha = 0$

SECTION I

INTRODUCTION

This report and user's guide presents a computerized version of the wing-mounted single store airloads prediction methodology found in External Store Airloads Prediction Technique (Reference 1). The prediction technique reported in Reference 1 is somewhat time-consuming and tedious to use in its present form due to the multitude of manual computations required to complete a full six-component airloads solution. The computer routine developed during the current program and reported herein will eliminate most of the engineering effort required to evaluate captive store aerodynamic loads not only for current production aircraft-store configurations but also for new aircraft-weapons designs without resorting to expensive wind tunnel or flight tests. The technique should prove especially valuable for evaluation of new aircraft-weapons design in the preliminary design stages because of the rapid response now available using the computer program for chordwise, spanwise, and vertical variations in store location. Therefore, it permits trade studies to be conducted to minimize installed loads, for example, or to determine a location where the captive loads promote favorable separation. ✕

The yawing moment method of the basic technique has been extended during the current effort to include a broader range of angle of attack than previously presented. The improved yawing moment prediction has been incorporated into the computer program.

The computer routine developed during this program is an accurate representation of the manual technique plus improvements which includes six-component single carriage captive store airloads prediction capabilities for the basic airload as well as the incremental airloads due to aircraft yaw and adjacent store interference as detailed in Reference 1.

SECTION II

COMPUTERIZATION OF STORE AIRLOADS PREDICTION TECHNIQUE

A computer program has been developed that permits rapid prediction of store aerodynamic loads in the captive flow environment for wing-mounted single stores requiring only a knowledge of store isolated aerodynamics, flight conditions, and aircraft-store geometry.

The computer program was designed by considering the general and specific technical requirements outline by the Armament Development and Test Center (ADTC) and molding these requirements into a routine that is simple to input, duplicates the manual technique, and has the minimum possible storage requirements and execution time.

GENERAL REQUIREMENTS

General requirements for the subject effort were to develop a computer program that permits use of the wing-mounted single store portion delineated in AFATL-TR-75-87 (Reference 1) on the CDC 6600 computer at ADTC and, in addition, to extend the yawing moment method to include the full -4 to $+12$ -degree angle-of-attack range included by the other five components. These requirements have been accomplished and are reflected in the computer routine described in this report.

APPROACH TO COMPUTERIZATION

Because the basic technique involves many steps of computation and data handling, this situation presents many options as to the formulation of a computer program. Some of the pertinent factors considered are:

1. Compromise between versatility and ease of input.
2. Readability with manual technique (Reference i).
3. Output options to meet military and industry needs.
4. Effective diagnostics to aid the user.
5. Minimize storage requirements and execution time.

The contractor's experience in aircraft/store design and certification programs aided significantly in evaluating the various options and in formulating an effective and efficient computer program.

The overall objectives were considered best satisfied by a computer program consisting of a main controlling routine that calls various subroutines to predict the airload components and provide supporting methodology. The details of the program, including a simplified flow chart schematic, nomenclature, input requirements, output description, and a sample problem, are presented and discussed in Appendix A; however, some of the salient features of the input deck, multiple run capabilities, and output features are discussed here.

Design of the Input Stream

The input data requirements for the computer program include Mach number, store reference length, dimensions of the store, dimensions of the aircraft, location of the store on the aircraft, and the isolated store aerodynamics. Some other parameters required for routine execution, such as store reference area, are calculated internally.

In order to provide the user with the most general and useful output, the predicted airloads are presented as coefficients in slope and intercept form, as discussed later. This approach

allows deletion of aircraft angle of attack, angle of sideslip, and altitude from the input stream, and allows the user to investigate the airloads at any number of flight conditions after obtaining the computer output.

The input data requirements were divided into six basic groups as shown in Figure 1. Each card in the input stream carries one of the descriptive names of Figure 1 in the first few columns of the card. A brief description of each of the six input groups follows:

- TITLE - TITLE cards contain alphanumeric descriptive information pertaining to the aircraft-store configuration to be run. Up to four TITLE cards may be included.
- STORE - STORE cards contain most of the required store geometry and isolated aerodynamic information. Up to five STORE cards can be required for a configuration, STORE1 through STORE5.
- A/C - A/C cards contain all parent aircraft geometry requirements. Two A/C cards are required for each configuration, A/C1 and A/C2.
- AERO - The AERO card contains the Mach numbers at which airloads predictions are required. Up to seven Mach numbers may be specified between Mach 0.5 and 2.0.
- OPTION - The OPTION card is used to specify the components for which predictions are required. A second field on this card is used to specify the components for which the internally looked-up variables are to be printed.
- SPA, PPA - SPA and PPA cards contain segmented store projected areas used in the initial prediction summation procedure.

TITLE - Header information

STORE - Store parameters

A/C - Aircraft geometry

AERO - Mach numbers

OPTION - Computer routine control

SPA, PPA - Store projected areas

Figure 1. Organization of the Input Data

Output Features

The output features include four main sections: input data listing, store airloads predictions, diagnostic messages, and optional print of all variables looked up in the data base. These four categories of output appear in printed form, as shown in Figure 2.

The input data playback is always included in the output listing for user convenience. With the input data attached to the tabulated data, guesswork is eliminated as to what case the predicted loads data applies. In addition, errors in the input deck are readily traceable through the input deck listing.

The captive store airloads predictions follow the input data playback. The basic airload plus the incremental airloads due to aircraft yaw and adjacent store interference are grouped together for each of the six components, side force, yawing moment, normal force, pitching moment, axial force, and rolling moment. The six components are organized and printed in the identical manner found in the table of contents of Volume II, Book 2 of Reference 1. This organization aids in the readability and rapid association of the predicted values with the various sections of the manual technique. The coefficient data are presented in column form for each Mach number requested. After all component coefficients are presented, distance from store center-of-gravity to forward lug, store reference area, and store reference length data are presented. An asterisk to the immediate right of a coefficient indicates that the prediction was made using a parameter from the data base that was out of range or beyond the span of data used to derive the basic technique. An out-of-range warning is issued in the diagnostics section.

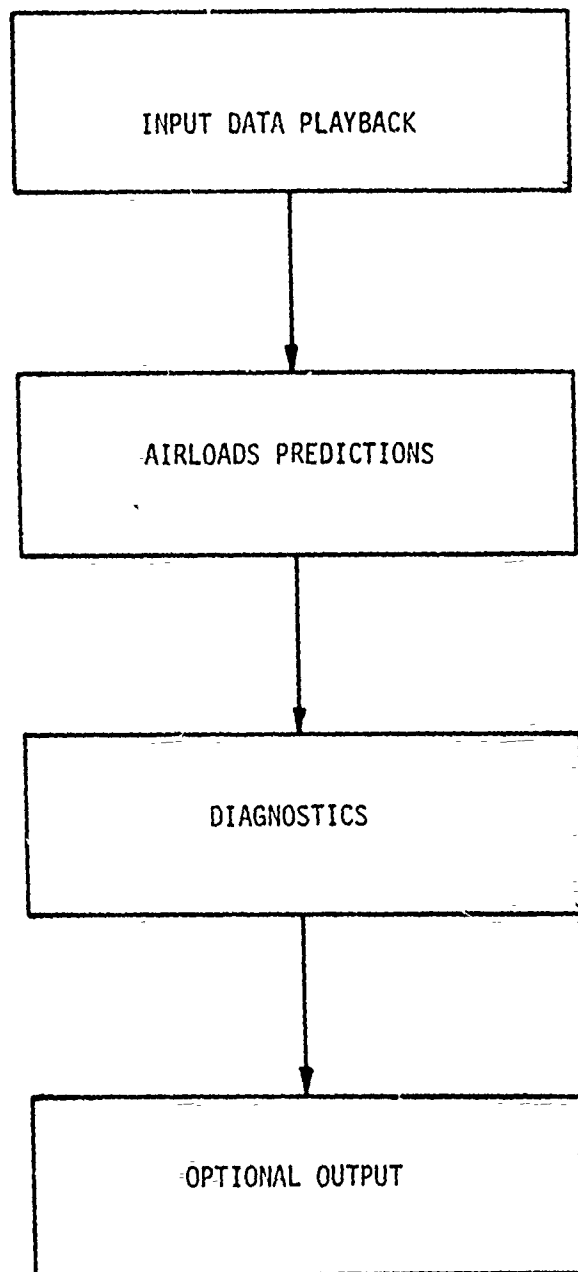


Figure 2. Output Structure

The next section of the output contains diagnostic messages for the benefit of the user. The diagnostics are divided into two types: general and out-of-range warnings. The general diagnostics include messages primarily about input errors. These errors can be either fatal or non-fatal. A non-fatal input error might be that two AERO cards were input and program execution was performed using the last card read. A fatal error might be that the store diameter field was left blank and, therefore, assumed zero. In case of a fatal error, the input data are printed along with the fatal error message(s) and execution is terminated. The out-of-range warnings are designed to inform the user that a prediction has been made with a parameter that is beyond the bounds of the empirical data base used to develop the basic technique. Thus, the prediction has been made with an extrapolated parameter. The warning issued contains the appropriate figure number from Reference 1 and prints the x, y value used in the prediction from that figure. It is then up to the user to consult the figure and apply his engineering judgement to decide if use of the extrapolated data overly compromises the final predictions.

The final portion of the output stream contains the optional output printed only if requested on the OPTION card. The optional output contains all parameters looked up from the data base for each airload component computed. The optional output will print the figure number and x, y value used in the computation from the data base (most figures in Volume II, Book 2, Reference 1).

Multiple Run Capabilities

Up to five separate aircraft-store configurations can be

run in a single input deck by separating the stacked cases with END CASE cards as defined in Appendix A. If the same aircraft-store combination is involved, then only those input cards affected by the change need to be redefined. Thus, the input is constructed in a manner similar to Namelist input in FORTRAN. A maximum of seven Mach numbers can be run for each of the five cases.

SECTION III

APPLICATION OF COMPUTED RESULTS

The tabulated coefficient results of the computer program present the basic airload (i.e., the captive store airload generated by a zero-yaw pitch excursion of the parent aircraft) and the incremental airloads due to aircraft yaw and adjacent store interference. The incremental airloads due to yaw and interference are predicted as increments to be added to the basic airload. Although the method of combining these effects was detailed in Reference 1, it is repeated here for convenience. Therefore, at a particular Mach number the total captive airload experienced by a store can be obtained from the following generalized coefficient expression:

$$C_{x \text{ TOTAL}} = C_{x \text{ BASIC}} + \Delta C_{x \beta_S} \cdot \beta_S + \Delta C_{x \text{ INTF}} \quad (1)$$

where:

- x - Can be y , n , N , M , A , or l representing side force, yawing moment, normal force, pitching moment, axial force, and rolling moment, respectively
- $C_{x \text{ BASIC}}$ - Basic captive airload generated by a zero yaw pitch excursion of the parent aircraft
- $\Delta C_{x \beta_S}$ - Incremental airload due to aircraft yaw per degree store yaw angle, β_S
- β_S - Store yaw angle equal to $\psi_{A/C}$ for a right-wing store installation and $-\psi_{A/C}$ for a left-wing store installation

$\Delta C_{x \text{ INTF}}$ - Incremental airload due to the effect of adjacent store interference.

The generalized coefficient equation presented above, Equation (1), applies to both the slope and intercept predictions made by the computer program.

SECTION IV

MODIFICATION OF THE YAWING MOMENT TECHNIQUE

A typical variation of side force and yawing moment for a wing-mounted single store is shown in Figure 3 as a function of angle of attack. This type of yawing moment variation extends from subsonic flow up through the transonic regime for the experimental data available during the technique development reported in Reference 1. The extreme change in slope of the yawing moment as a function of angle of attack occurs in the 4 to 6-degree angle-of-attack range for most configurations. During the technique development phase of the previous program, the yawing moment prediction technique was developed for the -4 to +6-degree angle-of-attack range. One objective of the current program was to extend the capability of the yawing moment method to apply from -4 to +12 degrees angle-of-attack. This has been accomplished by adding to the previous technique. The previous method has been retained and still applies in the -4 to approximately 6-degree angle-of-attack range.

Extension of the effective angle-of-attack range for the prediction was accomplished by predicting the angle of attack at which the break in yawing moment occurs, and then correlating the yawing moment slope for the 6 to 12-degree range using techniques established in the previous study (Reference 1). The resulting technique for the entire -4 to +12-degree angle-of-attack range consists of a predicted slope and intercept for the lower angle-of-attack range (-4 to 6 degrees) and a predicted slope and intercept for the higher range (6 to 12 degrees). The actual range of applicability for each

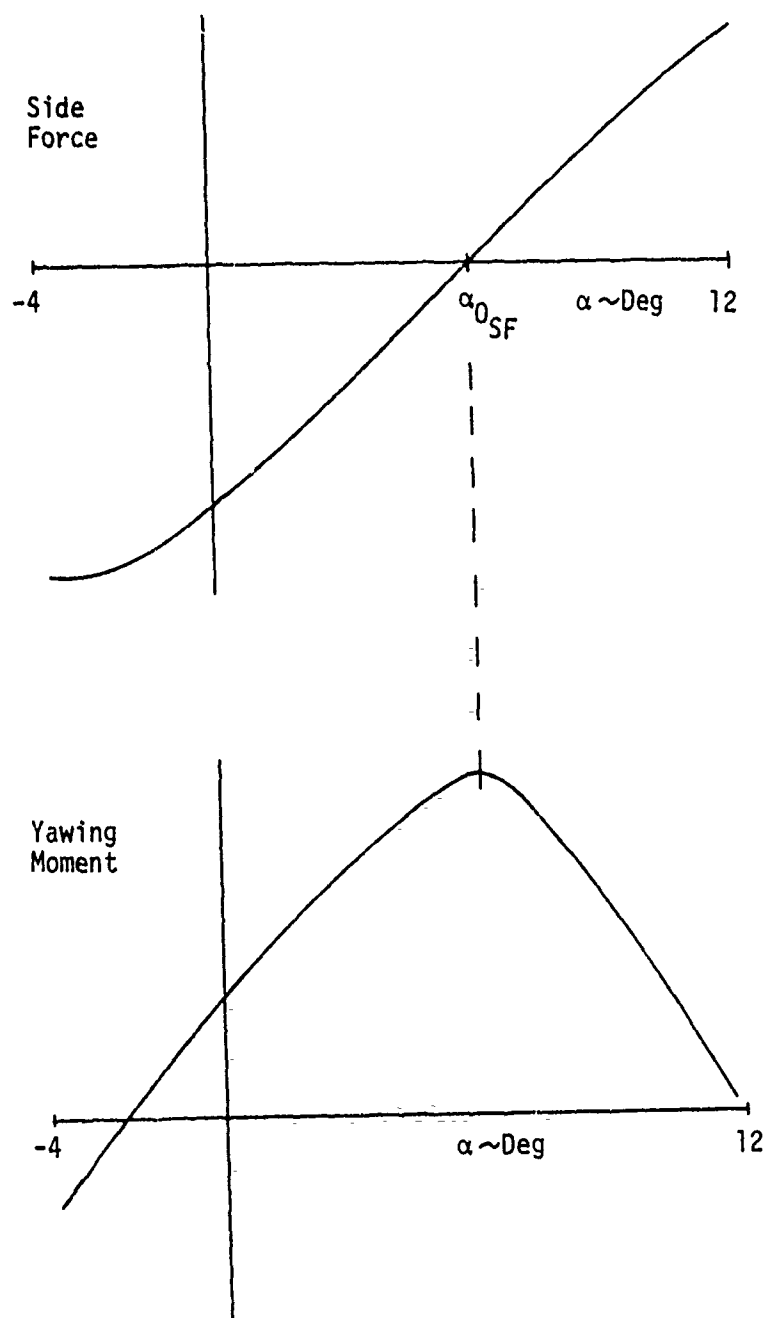


Figure 3. Typical Captive Store Side Force and Yawing Moment

of the equations is determined by the predicted angle of attack at which the yawing moment slope break occurs.

This approach was adopted after studying the available experimental data for high- and low-wing aircraft. It was observed for high-wing aircraft that the yawing moment slope break occurred at the angle of attack where side force was zero, as shown in Figure 3. This loading indicates that the store running load distribution is producing a couple at this angle of attack with maximum yawing moment occurring when side force is zero. This relationship holds true for the available experimental data for high-wing aircraft for Mach numbers from 0.5 to 1.0 at which point the extreme non-linearity disappears from the yawing moment component. For low-wing aircraft, this simple relationship did not hold true; nevertheless, a relationship was discovered between the angle of attack where side force is zero and the angle of attack where the break in yawing moment slope occurs. This relationship varied with Mach number over the range 0.5 to 1.2, above which the extreme non-linearity disappears for the yawing moment component for low-wing aircraft. The relationship between the angles of attack at which the yawing moment slope break occurs and the side force is zero is presented in Figure 4 for both high- and low-wing aircraft.

With this relationship established for high- and low-wing aircraft, a method was needed to apply the relationship to other aircraft. This was accomplished by defining a wing-fuselage height parameter as shown in Figure 5. Armed with this definition, it is possible to determine for all wing-fuselage relationships the Mach number below which the yawing moment slope non-linearity occurs through the following equation:

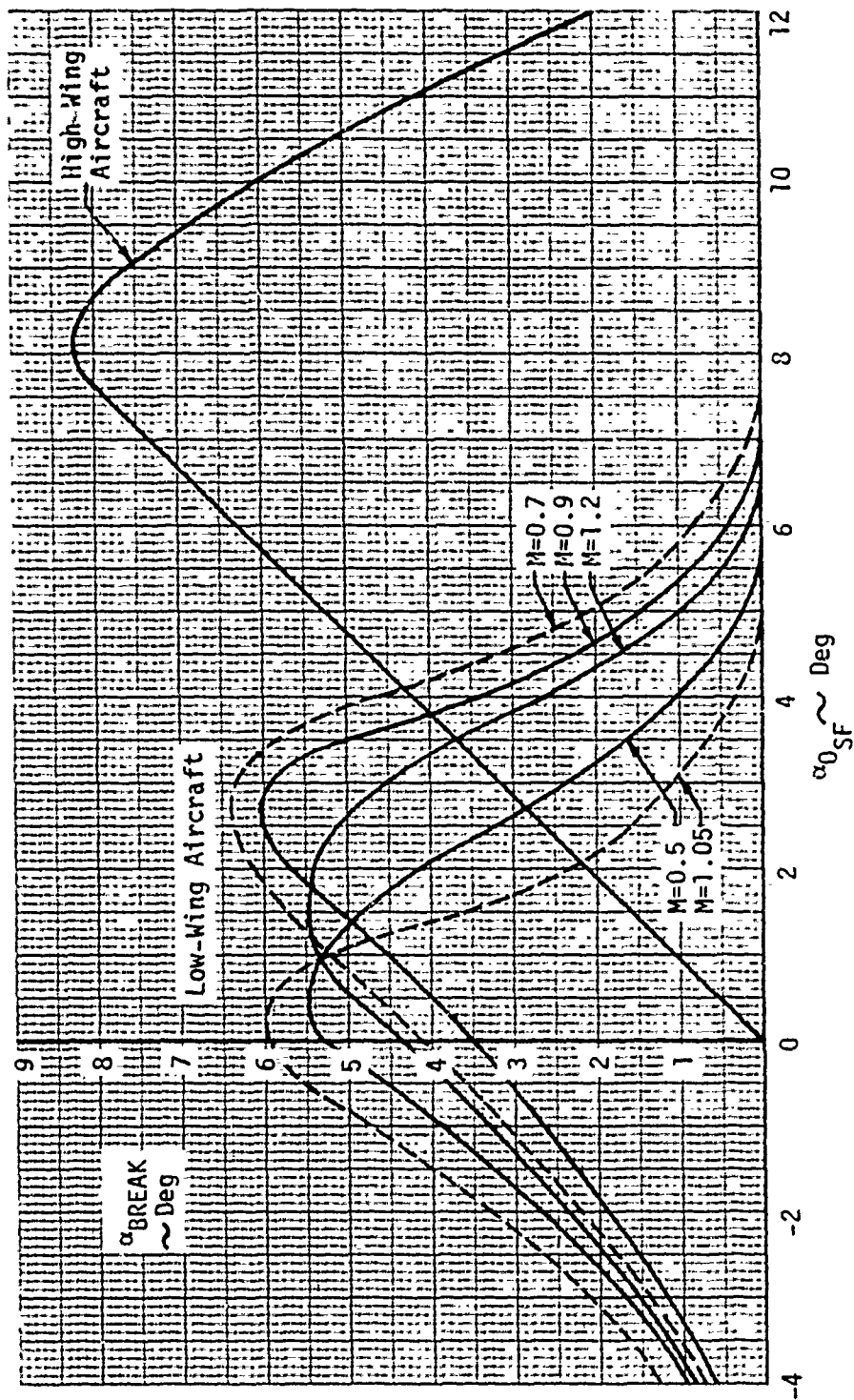
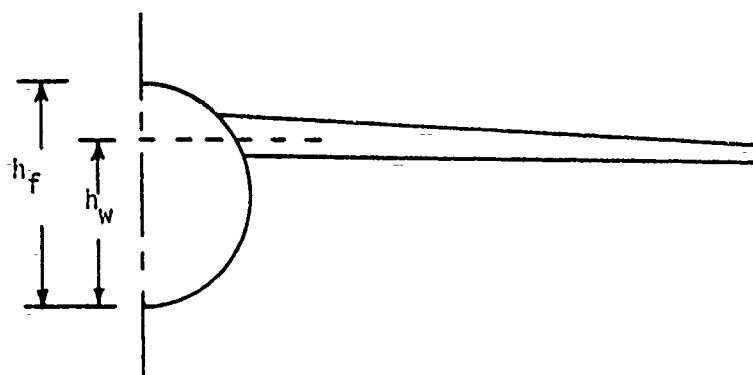


Figure 4. Correlation of α_{BREAK} as a Function of $\alpha_{0_{\text{SF}}}$



$$\frac{h_w}{h_f} = 1.0 \text{ for high-wing aircraft}$$

$$\frac{h_w}{h_f} = 0.0 \text{ for low-wing aircraft}$$

Figure 5. Wing-Fuselage Height Definition

$$M_{\text{BREAK LIMIT}} = 1.2 - 0.2 \frac{h_w}{h_f} \quad (2)$$

If the Mach number for which an airloads computation is desired is less than $M_{\text{BREAK LIMIT}}$, the yawing moment non-linearity exists, and the procedure to determine a new yawing moment slope and intercept that applies in the higher angle-of-attack range is required. This procedure is outlined in the following discussion.

In order to determine the angle of attack where the yawing moment slope break occurs, it is necessary to know the angle of attack where side force is zero, $\alpha_{0_{SF}}$. This parameter is determined from the following equation:

$$\alpha_{0_{SF}} = - \frac{\left(\frac{SF}{q}\right)_{\alpha=0}}{\left(\frac{SF}{q}\right)_{\alpha}} \quad (3)$$

where:

$\left(\frac{SF}{q}\right)_{\alpha=0}$ - Basic side force intercept predicted from Reference 1 for the Mach number of interest, ft^2 .

$\left(\frac{SF}{q}\right)_{\alpha}$ - Basic side force slope predicted from Reference 1 for the Mach number of interest, $\frac{\text{ft}^2}{\text{deg}}$.

Knowing $\alpha_{0_{SF}}$ from Equation (3), determine from Figure 4:

$\alpha_{\text{BREAK HIGH WING}}$, deg

$\alpha_{\text{BREAK LOW WING}}$, deg

Then for the general case,

$$\alpha_{\text{BREAK}} = \alpha_{\text{BREAK LOW WING}} + \frac{h_w}{h_f} (\alpha_{\text{BREAK HIGH WING}} - \alpha_{\text{BREAK LOW WING}}) + \Delta\alpha_{\text{BREAK}} \quad (4)$$

where:

$\frac{h_w}{h_f}$ - Wing-fuselage height parameter. Equal to 1.0 for high-wing aircraft and 0 for low-wing configurations. Other configurations are defined by Figure 5.

$\Delta\alpha_{\text{BREAK}}$ - Final correction to α_{BREAK} to account for $\alpha_{0\text{SF}}$ prediction tolerances (Figure 6), deg.

The preceding equation for α_{BREAK} determines the angle of attack at which the break in yawing moment slope occurs. For angles of attack less than α_{BREAK} , the yawing moment slope and intercept prediction technique presented in Reference 1 is applicable. For angles of attack greater than α_{BREAK} , the following equations predict the applicable slope and intercept:

Yawing moment slope prediction for $\alpha > \alpha_{\text{BREAK}}$: (see Figure 9)

$$\left(\frac{YM}{q}\right)_{\alpha_2} = [K_{\text{SLOPE}} (C_{\text{LOCAL}} K_{\Lambda_1}) + K_{\text{INTC}}] Sd + \frac{h_w}{h_f} \Delta K_{\text{SLOPE INTF}} \quad (5)$$

where:

K_{SLOPE} - Variation in C_{n_x} as a function of $C_{\text{LOCAL}} K_{\Lambda_1}$, Figure 7, $\frac{1}{\text{in. deg}}$.

C_{LOCAL} - Local wing chord of the parent aircraft at the location of the subject store, in.

K_{Λ_1} - Wing sweep correction factor, $\frac{\sin \Lambda}{\sin 45^\circ}$, where Λ is the wing quarter-chord sweep angle, in degrees, of the parent aircraft.

- K_{INTC} - Value of C_{n_α} where $C_{LOCAL K_{\Lambda_1}} = 0$, Figure 7, $\frac{1}{deg}$
 S - Store reference area, $\frac{\pi d^2}{4}$, ft^2
 d - Store diameter, ft
 $\frac{h_w}{h_f}$ - Wing-fuselage height relationship, previously defined (Figure 5)
 $\Delta K_{SLOPE_{INTF}}$ - Incremental change in yawing moment slope due to the interference effect of the fuselage for high wing aircraft (Figure 8), $\frac{ft^3}{deg}$.

Yawing moment intercept for $\alpha > \alpha_{BREAK}$: (see Figure 9)

$$\left(\frac{YM}{q}\right)_{\alpha=0_2} = \left[\left(\frac{YM}{q}\right)_{\alpha_1} - \left(\frac{YM}{q}\right)_{\alpha_2}\right] \alpha_{BREAK} + \left(\frac{YM}{q}\right)_{\alpha=0_1} \quad (6)$$

where:

$\left(\frac{YM}{q}\right)_{\alpha_1}$ - Variation of yawing moment with angle of attack for $\alpha < \alpha_{BREAK}$ as predicted by Reference 1 basic airload, $\frac{ft^3}{deg}$

$\left(\frac{YM}{q}\right)_{\alpha_2}$ - Variation of yawing moment with angle of attack for $\alpha > \alpha_{BREAK}$ as predicted by Equation (5) defined above, $\frac{ft^3}{deg}$

α_{BREAK} - Angle of attack where the yawing moment slope break occurs, Equation (4), deg

$\left(\frac{YM}{q}\right)_{\alpha=0_1}$ - Value of yawing moment at $\alpha=0$ for $\alpha < \alpha_{BREAK}$ as predicted by Reference 1 basic airload, ft^3 .

The derivation of $\left(\frac{YM}{q}\right)_{\alpha=0_2}$, Equation (6), can be easily understood by referring to Figure 9 from which the following expressions can be derived :

Curve 1: Applies if $\frac{FIN SPA}{L} > 5.0$,
where FIN refers to the store WING for
case 1 stores and TAIL for case 2 stores
of Reference 1.

Curve 2: Applies if $\lambda_{LE} > 82.0$ in.

Curve 3: Applies for all other configurations.

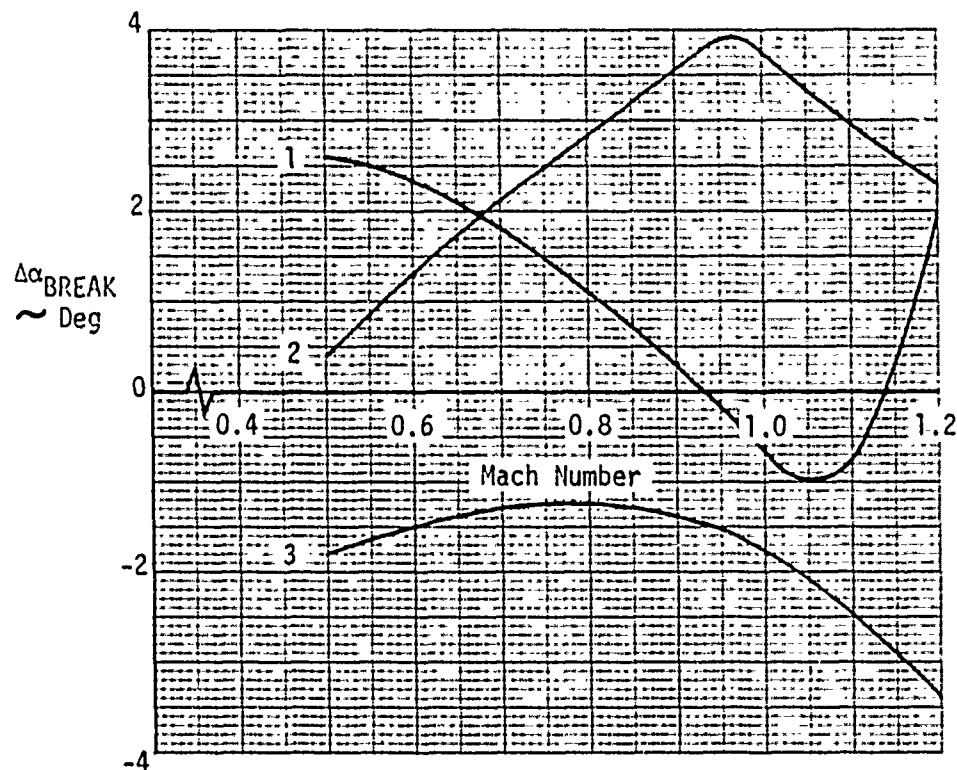


Figure 6. Variation of $\Delta\alpha_{BREAK}$ with Mach Number

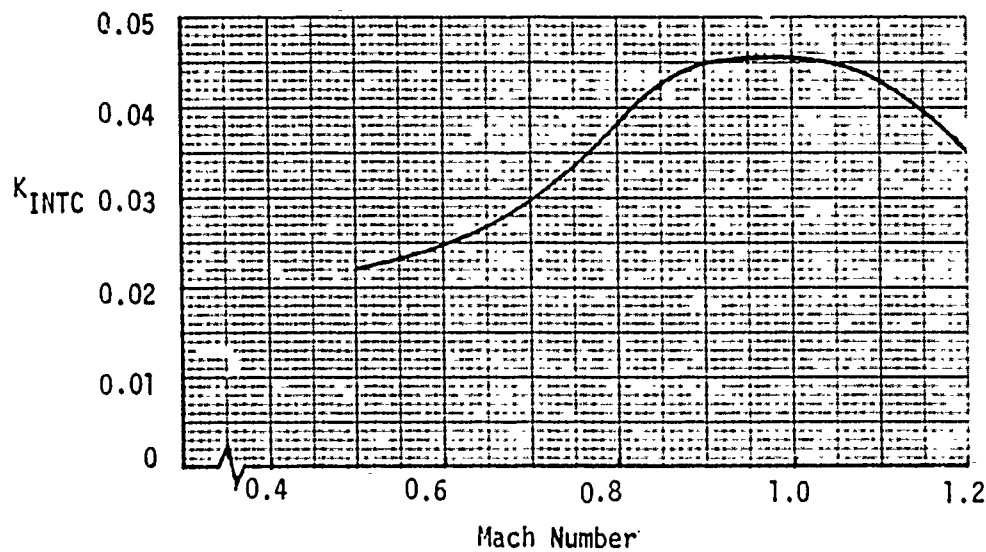
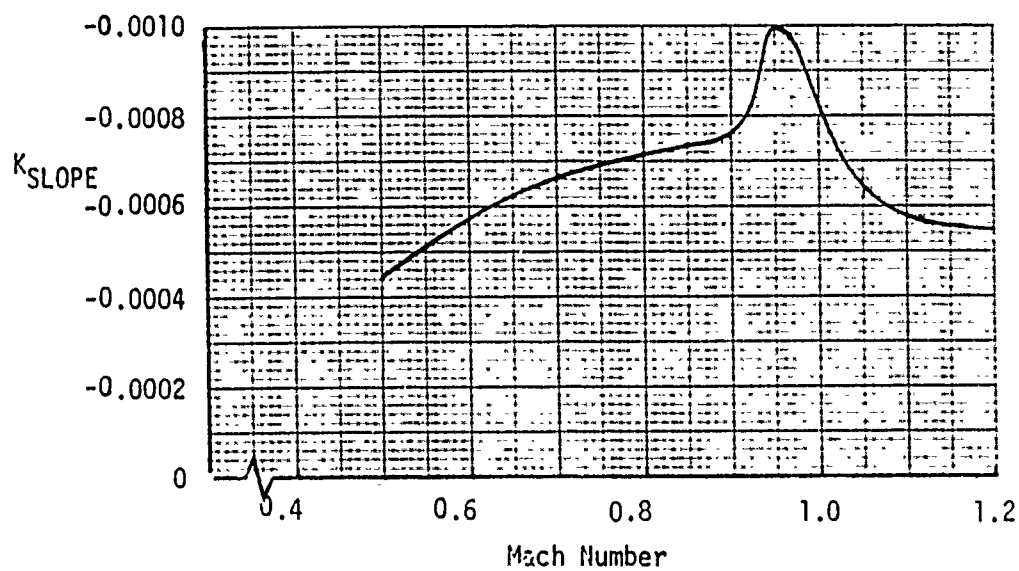
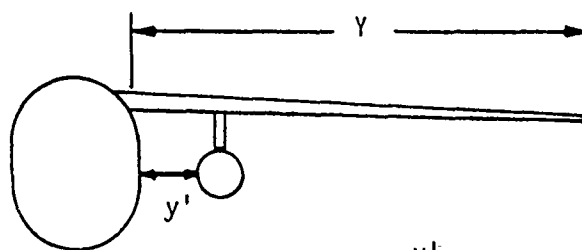


Figure 7. Yawing Moment Modification Parameters - K_{SLOPE} and K_{INTC}



$$\eta' = \frac{y'}{Y}$$

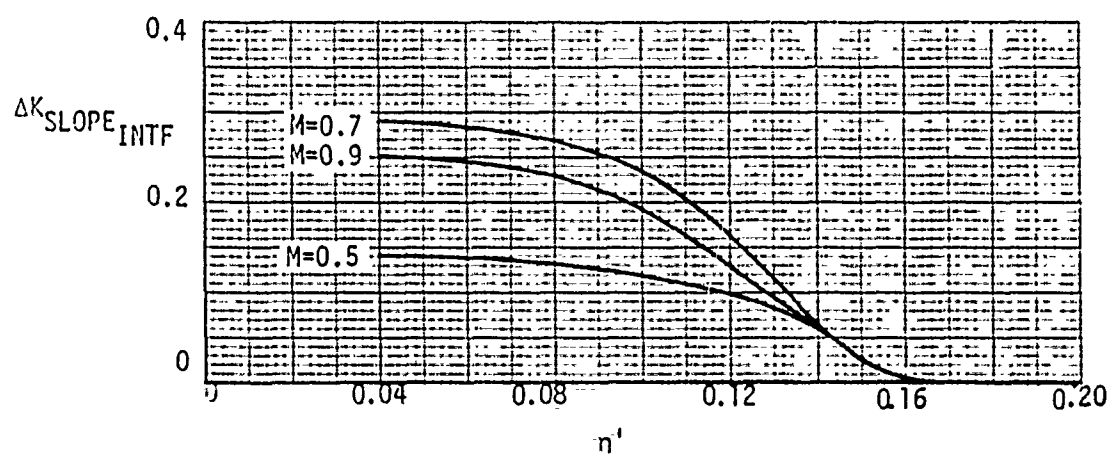


Figure 8. Fuselage Interference Correction - ΔK_{SLOPE_INTF}

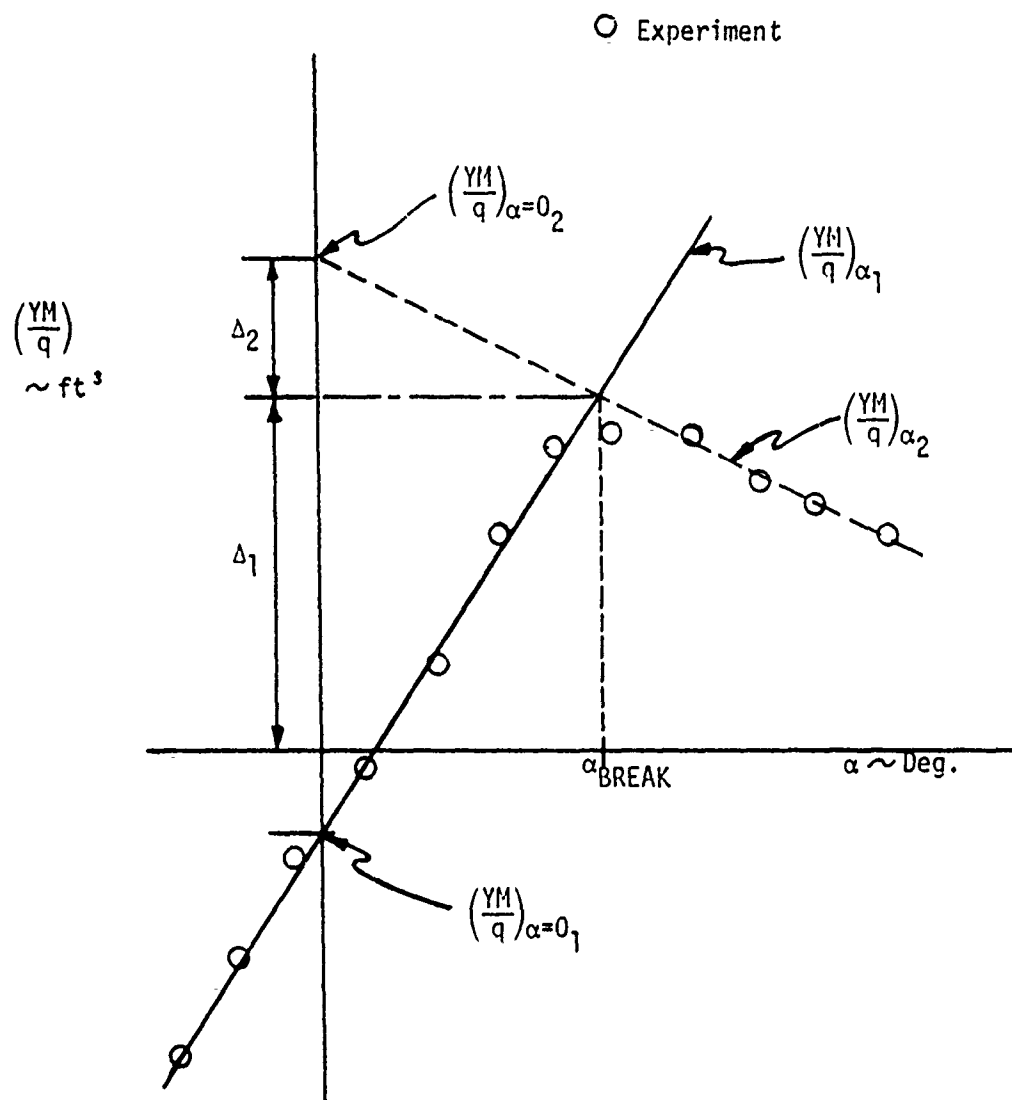


Figure 9. Guide to Derivation of $\left(\frac{YM}{q}\right)_{\alpha=0_2}$

$$\Delta_1 = \left(\frac{YM}{q}\right)_{\alpha_1} \cdot \alpha_{BREAK} + \left(\frac{YM}{q}\right)_{\alpha=0_1} \quad (7)$$

$$\Delta_2 = - \left(\frac{YM}{q}\right)_{\alpha_2} \cdot \alpha_{BREAK} \quad (8)$$

Then,

$$\left(\frac{YM}{q}\right)_{\alpha=0_2} = \Delta_1 + \Delta_2 \quad (9)$$

Hence, the sum represented by Equation (9) yields the results presented in Equation (6) for $\left(\frac{YM}{q}\right)_{\alpha=0_2}$.

The yawing moment prediction method presented in Reference 1 provides a predicted yawing moment slope and intercept for the angle-of-attack range $-4^\circ \leq \alpha \leq \alpha_{BREAK}$. Equations (5) and (6) presented here predict yawing moment slope and intercept, respectively, for the range $\alpha_{BREAK} \leq \alpha \leq 12^\circ$. Therefore, a combination of the two techniques yields a yawing moment prediction method that is valid for the -4° to $+12^\circ$ angle-of-attack range as required. This extension to the technique of Reference 1 has been incorporated in the computer program, and results from the program reflect the combination of these two techniques for the applicable Mach numbers.

The figures required to predict the yawing moment slope and intercept for angles of attack greater than α_{BREAK} have been presented in this report as Figures 4, 6, 7, and 8. The figure numbers in the manual technique (Reference 1) range from 1 to 909. In order to incorporate Figures 4, 6, 7, and 8 presented here into the digital data base for the computer routine, they were renumbered beginning with Figure 910 as follows:

DIGITAL DATA BASE FIGURE NUMBER

Figure 4	910 (Low-Wing)
	911 (High-Wing)
Figure 6	915
Figure 7	912 (K_{SLOPE})
	913 (K_{INTC})
Figure 8	914 ($\Delta K_{SLOPE_{INTF}}$)

SECTION V

ERRORS IN THE MANUAL TECHNIQUE

During the computer program development phase, several errors were discovered in the manual technique reported in Reference 1. These errors were primarily plotting errors affecting four figures in Volume II, Book 2, of Reference 1. These plotting errors involve Figures 26, 49, 53, and 59. The ordinate scale for Figure 53(a) and (b) should be negative instead of the positive scale shown. Figures 26, 49, and 59 are misplotted or poorly faired. The correct values for these three figures are presented in digital form, as used by the computer routine in Table 1.

Besides the plotting errors, one typographical error affecting the equation for $\Delta\left(\frac{PM}{q}\right)_{\alpha=0_2}$ on page 275 of Volume II, Book 2, of Reference 1 was found. The last factor appearing on the right side of this equation should read as follows:

$$\frac{K_{C_{PM}} PPA L_n}{\lambda_{LE} d^2}$$

The definitions of K_{INTC_2} and K_{SLOPE_2} which follow on the same page should also contain this factor.

It is suggested that these corrections be noted in copies of Reference 1 to avoid further misuse.

Table 1. CORRECTIONS TO THE DATA BASE
OF VOLUME II, BOOK 2 OF REFERENCE 1

<u>Figure 26</u>		<u>Figure 49</u>		<u>Figure 59</u>	
X	Y	X	Y	X	Y
0.0	0.0	0.0	0.0	0.0	0.16
0.1	0.0	0.375	0.0	50.0	0.187
0.2	0.0	0.390	0.52	100.0	0.227
0.3	0.0	0.40	0.77	150.0	0.288
0.4	-1.0×10^{-6}	0.41	0.93	200.0	0.380
0.5	-9.0×10^{-6}	0.42	1.02	225.0	0.430
0.6	-1.1×10^{-5}	0.45	1.20	250.0	0.445
0.7	-1.9×10^{-5}	0.475	1.29	275.0	0.448
0.8	-3.3×10^{-5}	0.50	1.31	300.0	0.440
0.9	-8.0×10^{-5}	0.65	1.40	350.0	0.414
1.0	-1.25×10^{-4}			400.0	0.378
1.1	-1.6×10^{-4}			450.0	0.345
1.2	-1.84×10^{-4}			500.0	0.325
1.3	-2.04×10^{-4}				
1.4	-2.2×10^{-4}				
1.5	-2.31×10^{-4}				
1.6	-2.43×10^{-4}				

X is the independent variable

Y is the dependent variable

SECTION VI

CONCLUSIONS AND RECOMMENDATIONS

A computer routine has been developed during this study that provides a rapid method to determine six-component captive store airloads for wing-mounted single carriage stores. The technique represented by the computer routine offers installed store airloads over a broad range of flight conditions which include Mach numbers from 0.5 to 2.0, angles of attack from -4 to +12 degrees, and aircraft yaw angles from -8 to +8 degrees. Airloads coefficients predicted by the routine are an accurate representation of the single carriage method reported in AFATL-TR-75-87 (Reference 1). As such, the computer routine allows inexpensive and rapid computation of installed store aerodynamic loads with accuracy sufficient for preliminary design and evaluation purposes. Thus, the need for some wind tunnel and flight tests may be eliminated.

Modifications of the yawing moment component to extend its usefulness above six degrees angle of attack were completed and incorporated into the computer routine.

It is recommended that predictions from the method contained in the computer routine be correlated with experimental data for aircraft-store configurations not used in the method's derivation. If significant differences are observed for specific configurations, the technique should be updated to be applicable to new configurations. In addition, it is recommended that the remainder of the technique in Reference 1, captive airloads for multiple carriage stores, be developed into a computerized version for Air Force and industry use.

REFERENCES

1. Rudnicki, A. R., et al., External Store Airloads Prediction Technique, Air Force Armament Laboratory Report AFATL-TR-75-87, July 1975.
2. Nielsen, J. N., Pitts, W. C., and Kaattari, G. E., Lift and Center of Pressure of Wing-Body-Tail Combinations at Subsonic, Transonic, and Supersonic Speeds, NACA Report 1307, 1957.
3. Eaton, P. T., A Method for Predicting the Static Aerodynamic Characteristics of Low-Aspect-Ratio Configurations, David Taylor Model Basin, Report 2216, June 1966.

APPENDIX A
USER'S GUIDE

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OPERATIONAL GUIDE

Following is a list of comments which may be helpful to the user until he becomes familiar with the operation of this routine:

1. Multiple cases can be run by separating the cases with "END CASE" cards.
2. A maximum of five cases can be run at one time.
3. A maximum of seven Mach numbers can be run for each case.
4. Data cards that are unchanged from case N to case N+1 need not be included in the case N+1 input deck.
5. Four title cards should be used.
6. Input fields for data that are not required for a particular case should be left blank. (For example, if there are no interfering stores, the input fields describing interfering store parameters should be left blank.)
7. Title cards must be ordered as desired in the output.
8. Cards other than title cards can appear in any order desired.
9. If "x" or "+" is not input in column 10 of STORE3 card, then the planform area of the wing/tail surface as defined for computation of Reference 2 must be input, as well as the sum of all wing and tail planform areas.
10. For type 1 stores, "wing" refers to the lifting surfaces. For type 2 stores, "wing" refers to the forward set of lifting surfaces and "tail" to the aft set.

11. For aircraft with fuselage side inlets, the minimum distance from the store to the inlet as measured in the aircraft yz plane must be input. For aircraft with centerline inlets, a value of "400." should be input in columns 31-40 of the A/C1 card.
12. Each store segment containing SPA or PPA can have more than one area type in it. (For example, 1N, 2N, 2B, 3B, 4B, 4W may appear to describe a particular store where N, B, W represent nose, body, and wing SPA or PPA, respectively.)
13. The captive airloads for any components listed in columns 41-60 of the OPTION card will be calculated automatically.
14. An asterisk appears immediately following any predicted slope or intercept in the output listing which was calculated using extrapolated or out-of-range data from the data base (graphs of Reference 1).
15. The maximum number of SPA or PPA cards that can be input is 40.
16. The maximum number of store segments allowed is 35.
17. If the Side Projected Area is not equal to the Plan Projected Area for each segment type:
 - a. For every SPA card there should be a corresponding PPA card, even if the Plan Projected Area for that segment type is zero.
 - b. For every PPA card there should be a corresponding SPA card, even if the Side Projected Area for that segment type is zero.

18. For unfinned stores, a value of "90" must be input in columns 41-50 of the STORE2 card.
19. Mach numbers may be input in any order on the AERO card.
20. If the optional data base look-up printout for Figures 4 and 5 of Reference 1 are desired, "IP" must be input within columns 41-60 of the OPTION card.

FORTRAN NOMENCLATURE

In an effort to provide the user the most convenient definition of FORTRAN symbols, the definitions of these symbols appear as comments in the listing of the computer routine. (See "Routine Listing" portion of this appendix.) By presenting the definitions in this manner, the location of each variable is identified without the preparation of a special section within this manual, thereby maximizing its simplicity.

INPUT INSTRUCTIONS

This section provides a detailed description of the parameters required as input to the routine.

CARD	PARAMETER (FORTRAN SYMBOL)	COLUMN/FORMAT	DESCRIPTION
TITLE		11-80/7A10	General information describing the aircraft-store configuration to be investigated. There should be four "TITLE" cards.
STORE1	STORE TYPE (ICASE)	10/I1	Identifies the type of store (Case 1, 2, or 3) to be studied. Case 1 ~ store with lifting surfaces at aft end. Case 2 ~ store with both forward and aft lifting surfaces. Case 3 ~ unfinned store.
	K_N (AKN)	11-20/F10.0	Ratio of lift of the store nose to lift of wing alone; required for Case 1 stores. (See line 80, Table 1, page 38 of Reference 2.)
	$K_{B(W)}$ (AKBW)	21-30/F10.0	Ratio of the body lift in the presence of the wing to lift of the wing alone; required for Case 1 stores. (See line 48, Table 1, page 38 of Reference 2.)
	$K_{W(B)}$ (AKWB)	31-40/F10.0	Ratio of lift of the wing in the presence of the body to lift of the wing alone; required for Case 1 stores. (See line 47, Table 1, page 38 of Reference 2.)
	$K_{N/B}$ (AKNB)	41-50/F10.0	Required input for Case 2 stores. (See page 29 of Reference 1 for description.)
	$K_{T/B}$ (AKTB)	51-60/F10.0	Required input for Case 2 stores. (See page 29 of Reference 1 for description.)

CARD	PARAMETER (FORTRAN SYMBOL)	COLUMN/FORMAT	DESCRIPTION
STORE1	$K_{W/B}$ (AKWBT)	61-70/F10.0	Required input for Case 2 stores. (See page 30 of Reference 1 for description.)
	K_{INTF} (AKINTF)	71-80/F10.0	Required input for Case 2 stores. (See page 30 of Reference 1 for description.)
STORE2	Store Length, L (STOREL)	11-20/F10.0	Length of the subject store, in.
	Store Diameter, d (STORED)	21-30/F10.0	Diameter of the subject store, in.
	Nose Length, L_n (ANOSL)	31-40/F10.0	Nose length of the subject store, in., as defined by line 41, Table 1, page 38 of Reference 2.
	Wing/Tail Leading Edge Sweep Angle, Λ_{FIN} (ALEFIN)	41-50/F10.0	Sweep angle of the wing leading edge (Case 1 store) or Tail leading edge (Case 2 store) of the subject store, degrees. (A value of "90." should be input for unfinned stores.)
	Isolated Store Lift Curve Slope, C_{L_α} (CLAISO)	51-60/F10.0	Lift curve slope, C_{L_α} , of the subject store in freestream flow. Obtained from experimental data or by using the method presented in Reference 2.
	Freestream Zero-Lift Drag Coefficient, C_{D_0} (CDOISO)	61-70/F10.0	The C_{D_0} of the subject store in freestream flow. Obtained from experimental data or by using the method presented in Reference 3.
	Store C.G. (XCG)	71-80/F10.0	The distance from the subject store nose to its center of gravity, in.

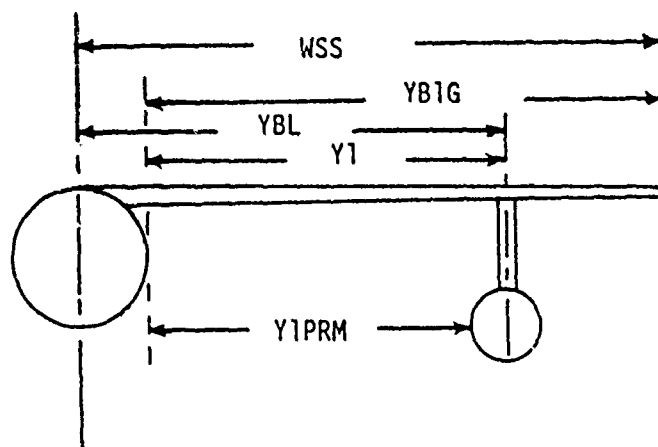
CARD	PARAMETER (FORTRAN SYMBOL)	COLUMN/FORMAT	DESCRIPTION
STORE3	+,x,1 or 2 (ICONFG)	10/A1	Control parameter describing symmetry of store wing/tail. "+" ~ used if wing/tail are in the plus orientation when subject store is in the carriage position. "x" ~ used if wing/tail are in this orientation when the subject store is in the carriage position. "1" ~ used if wing/tail are "symmetric" as defined on page 365 of Reference 1, but not in "+" or "x" orientation. "2" ~ used if wing/tail are "unsymmetric" as defined on page 365 of Reference 1.
	SPA=PPA or Blank (ISYM)	14-20/A7	If the side projected area of each segment is equal to the plan projected area use "SPA=PPA". In this case only SPA cards (as described later) must be input. If the side projected area of each segment is not equal to the plan projected area, these columns should be left blank. Then both SPA and PPA cards must be input. There must be an equal number of SPA and PPA cards.
	Wing Planform Area (WINGPA)	21-30/F10.0	If "1" or "2" is input in column 10 of STORE3 card, the planform area of the wing as used in Reference 2 must be input here, in ² .
	Tail Planform Area (TAILPA)	31-40/F10.0	For Case 2 stores, if "1" or "2" is input in column 10 of the STORE3 card, the planform area of the tail as used in Reference 2 must be input here, in ² .

CARD	PARAMETER (FORTRAN SYMBOL)	COLUMN/FORMAT	DESCRIPTION
STORE3	Sum Planform Area (SUMPA)	41-50/F10.0	If "1" or "2" is input in column 10 of STORE3 card, the sum of all wing and tail planform areas must be input, in ² .
STORE4	Longitudinal Overlap Distance of Outboard Inter- fering Store, X_{INTF} (XINTFO)	11-20/F10.0	Distance from the nose of the subject store to the nose of the interfering store as measured along the longitudinal axis of the subject store, in. (Positive if the subject store nose is forward of the interfering store nose.) Required if an interfering store is outboard of the subject store.
	Lateral Separation Distance to Outboard Inter- fering Store, Y_{INTF} (YINTFO)	21-30/F10.0	Minimum lateral clearance between the subject store and the interfering store as measured in the planview, in. Required if an interfering store is outboard of the subject store.
	Diameter of Out- board Interfer- ing Store, D_{INTF} (DINTFO)	31-40/F10.0	Diameter of the interfering store, in. Required if an interfering store is outboard of the subject store.
	Longitudinal Overlap Distance of Inboard Inter- fering Store, X_{INTF} (XINTFI)	41-50/F10.0	Defined the same as "XINTFO". Required if an interfering store is inboard of the subject store.
	Lateral Separation Distance to Inboard Inter- fering Store, Y_{INTF} (YINTFI)	51-60/F10.0	Defined the same as "YINTFO". Required if an interfering store is inboard of the subject store.
	Diameter of In- board Interfer- ing Store, D_{INTF} (DINTFI)	61-70/F10.0	Defined the same as "DINTFO". Required if an interfering store is inboard of the subject store.

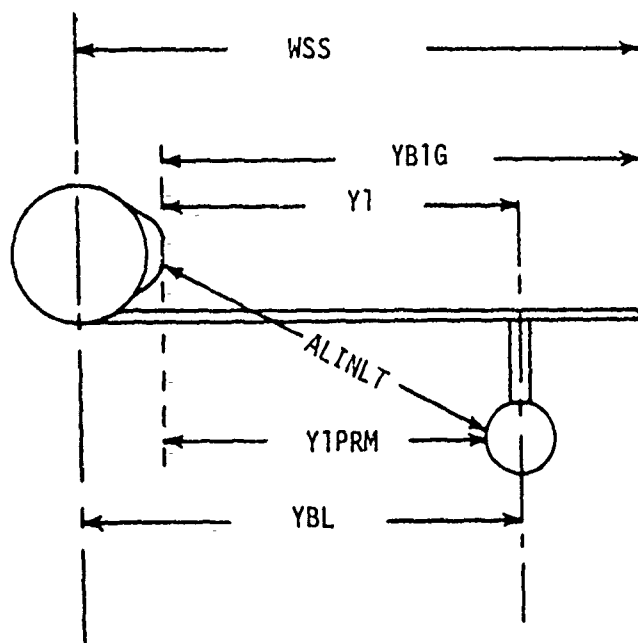
CARD	PARAMETER (FORTRAN SYMBOL)	COLUMN/FORMAT	DESCRIPTION
STORE5 ↓	Length of Outboard Interfering Store, L_{INTF} (ALINFO)	11-20/F10.0	Length of the interfering store, in. Required if an interfering store is outboard of the subject store.
	Length of Inboard Interfering Store, L_{INTF} (ALINF1)	21-30/F10.0	Length of the interfering store, in. Required if an interfering store is inboard of the subject store.
	Lug Spacing (ZPLNSP)	31-40/F10.0	Distance between suspension lugs on subject store, in.
	Store Midlug, X_{ML} (SML)	41-50/F10.0	Distance from the subject store nose to the store mid-lug location as measured along the store longitudinal axis, in.
	Segment Length (SEGL)	51-60/F10.0	Constant length segments of the subject store used to define SPA and PPA, in. (user defined).
	y' (Y1PRM)	61-70/F10.0	The minimum distance from the side of the fuselage to the side of the subject store as measured in the planview, in. (see Figure A-1).
AERO	Mach Numbers, M (REALM(*))	11-80/7F10.0	Mach numbers at which captive store airloads are desired ($0.5 \leq M \leq 2.0$).
A/C1 ↓	Local Chord Length, C_{LOCAL} (CLOCAL)	11-20/F10.0	The aircraft local wing chord at the buttline corresponding to the subject store location, in.
	Pylon Midlug, $\frac{X}{C_{ML}}$ (PXDCML)	21-30/F10.0	Mid-lug location (fraction of aircraft local wing chord) of the pylon on which the subject store is carried.
	Wing Semi-span, $b/2$ (WSS)	31-40/F10.0	Aircraft wing semi-span, in. (see Figure A-1).

CARD	PARAMETER (FORTRAN SYMBOL)	COLUMN/FORMAT	DESCRIPTION
A/C1 ↓	Y (YBIG)	41-50/F10.0	Distance from the side of the fuselage to the wing tip measured in the planview, in. (see Figure A-1).
	y Buttline, y_{BL} (YBL)	51-60/F10.0	Distance from aircraft centerline to pylon centerline (i.e., buttline of the pylon), in. (see Figure A-1).
	y (Y1)	61-70/F10.0	Distance from the side of the fuselage to the pylon centerline, in. (see Figure A-1).
A/C2 ↓	Lambda, Λ (ALAMDA)	11-20/F10.0	Quarter chord sweep angle of the parent aircraft wing, deg.
	Pylon Height, Z (ZPH)	21-30/F10.0	Distance from the lower surface of the wing to the bottom of the pylon at the mid-lug point, in.
	Store to Inlet Distance, L_{INLET} (ALINLT(*))	31-40/F10.0	Minimum distance from the side of the store to the fuselage mounted side inlets of the aircraft in the Y-Z plane, in. (see Figure A-1). (A value of "400." should be input for aircraft with centerline inlet.)
	h_w/h_f (HWDHF)	41-50/F10.0	h_w = distance from the bottom of the fuselage to the wing plane, in., at the chord position of the pylon mid-lug. h_f = height of the fuselage, in., at the chord position of the pylon mid-lug. $h_w/h_f = 1.0$ for a high-wing aircraft and $h_w/h_f = 0.0$ for a low-wing aircraft.
SPA	Segment Number (NSEG)	14-19/I6	Beginning at the store nose, the number associated with the constant length SPA segment.

CARD	PARAMETER FORTRAN SYMBOL)	COLUMN/FORMAT	DESCRIPTION
SPA	Segment Type (NSTYPE)	20/A1	Describes the type of area in each segment. N ~ nose area segment B ~ body area segment W ~ wing area segment T ~ tail area segment
	Area (SPAT)	21-30/F10.0	Side projected area of segment NSEG, in ² .
PPA	Segment Number (NSEG)	14-19/I6	Same as for SPA.
	Segment Type (NSTYPE)	20/A1	Same as for SPA.
	Area (SPAT)	21-30/F10.0	Plan projected area of segment NSEG, in ² .
OPTION	SF,NF,YM,PM,AF,RM (INPTOP(*))	11-27/7(A2,1x)	Components appearing in these columns will be calculated Choose from 1-6 components and list in any order.
	IP,YM,PM,AF,RM, SF,NF (INPGRA(*))	41-60/7(A2,1x)	The components appearing in these columns are those for which table look-up data are printed in the output. Any or all of these components may be listed in any order. IP = Initial Prediction.
END CASE			This card separates up to five cases for a single input deck.



HIGH WING WITH CENTERLINE INLET



LOW WING WITH SIDE INLET

Figure A-1. Input Description

OUTPUT DESCRIPTION

The tabulated output consists of four distinct sections of information. First, a playback of the input data appears followed by the second section containing the predicted captive airloads in coefficient form. Following the predictions, a diagnostics section is included that contains informative statements concerning extrapolated data used in the predictions, as well as descriptions of non-fatal input errors. The final output section contains the values of parameters obtained from the data base used in the computation. This output section is optional. The output is structured in this manner for all cases except when a fatal input error is encountered. In case of a fatal error, the input data are printed along with the fatal error message(s) and execution is terminated.

Figure A-2 presents the typical output arrangement of a successful run, showing the input playback, predicted captive airloads, diagnostic messages, and data base values. Each of the four output sections is discussed in greater detail in the following paragraphs.

A. Input Data Playback

A playback of the input data is furnished to provide the user with a convenient check of the input data and for future reference in associating predictions with the corresponding input request.

B. Captive Airloads Predictions

The final predicted coefficients for the subject configuration are presented in column form for the

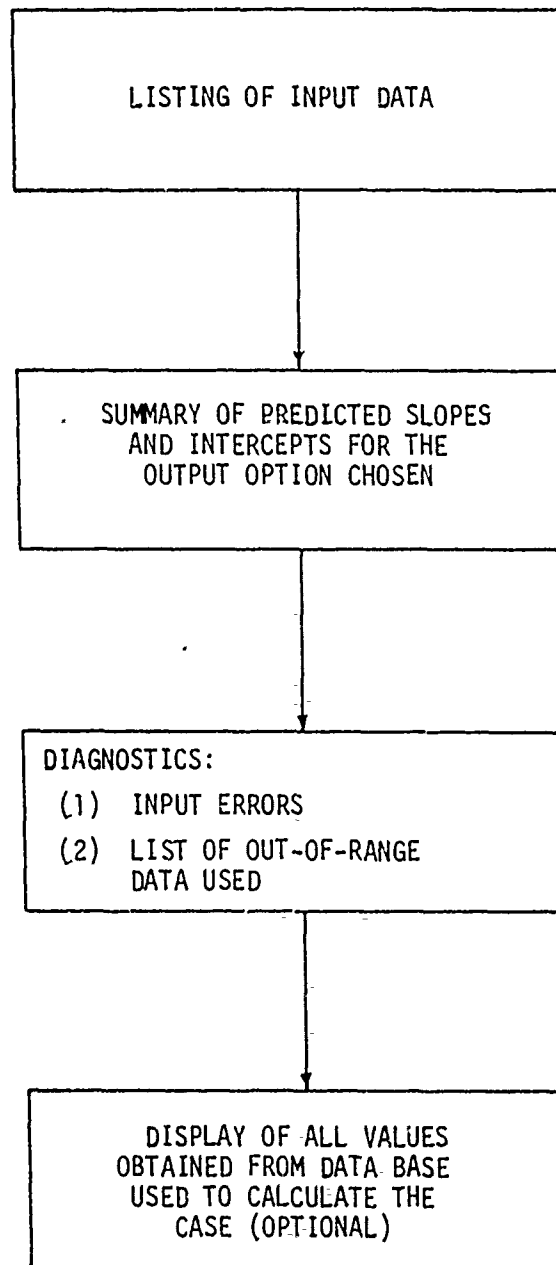


Figure A-2. Schematic of Output

Mach numbers requested. The sign convention for the predicted airloads is identical to the single carriage sign convention presented in Volume II, Book 1 of Reference 1. Moments are referenced to the store center of gravity. The coefficients are presented as a basic slope and intercept for each component plus incremental slopes and intercepts due to the effects of aircraft yaw and adjacent store interference.

Whenever extrapolated data from the data base are used in the calculation of a particular coefficient, an asterisk will appear immediately to the right of that coefficient. An exception to this procedure involves out-of-range data from Figures 4 or 5 of Reference 1. Since these figures are used in the initial predictions portion of the computer routine, the flags are not issued. Predictions are flagged only if the out-of-range parameter involves an empirically derived correction from the experimental data base.

C. Diagnostic Messages

Various error messages have been incorporated into the routine to inform the user of any errors, both fatal and non-fatal, that exist in the input stream. In addition, warning messages are included to call attention to less serious mistakes in the input deck

and to inform the user that a prediction has been made with a parameter that is beyond the bounds of the empirical data base used to develop the basic technique. The out-of-range message applies to those predicted coefficients that are flagged with an asterisk.

D. Optional Output

The presentation of the data base parameters used in calculation of the captive airloads is the last portion of the output. In addition to the "X" and "Y" values from the data base graph, the appropriate figure numbers and line numbers are also presented. This portion of the output is optional and can be suppressed by leaving columns 41-60 blank on the option card in the input deck.

The figure numbers appearing in this portion of the output correspond to the figure numbers in Volume II, Book 2 of Reference 1, which forms the digital data base used by the routine.

The line numbers presented here can refer to a variety of situations, depending on the type of graph from which data are obtained. Obviously, if a given graph in Reference 1 has more than one line, some distinction of data lines must be made. If there is only one line on a given graph, it is always labeled line 1.

If the graph consists of several lines, each designating data for different Mach numbers, the lines are distinguished by assigning line numbers in order of ascending Mach numbers. That is, line 1 will correspond to the lowest Mach number curve present, and the largest line number will correspond to the highest Mach number curve. For example, the data base for Figure 38 in Reference 1 will contain lines 1 through 4.

For graphs that contain incremental data due to aircraft yaw, the curve for negative store sideslip ($-\beta_s$) is line 1, and the curve for positive store sideslip ($+\beta_s$) is line 2 as in Figure 95 of Reference 1.

For graphs containing data describing the incremental load due to adjacent store interference, the curve presenting data for the effect of the outboard interfering store is line 1. Line 2 is comprised of the data concerned with the effect of the inboard interfering store. Figure 55 in Reference 1 illustrates typical curves defining the effect of outboard and inboard interfering stores.

If, as in Figure 48 of Reference 1, there is a graph with both β_s and Mach number data, the line numbers increase with ascending Mach number, but there are two sets, one for ($+\beta_s$) and one for ($-\beta_s$). The set for ($-\beta_s$) will always appear before the set for ($+\beta_s$)

in the optional output. So, even though the output shows, for example, two "Figure 48, line 3" data sets, by the definition presented here the first corresponds to the $(-\beta s)$ calculation and the second to the $(+\beta s)$.

The same type of situation can result when both inboard/outboard interference and Mach number data appear on the same graph, as in Figure 56 of Reference 1. In this case, the first set of data printed for a given figure number is for the calculation using the outboard interfering store curve and the second set is for the inboard. Obviously, both sets will appear only when there is an inboard and outboard interfering store for the case being computed.

ROUTINE DESCRIPTION

This section contains a brief description of the function of each portion of the computer routine.

1. BLKRED

BLOCK DATA routine stores values of parameters that do not change during the execution of the program.

2. BLKFIL

BLOCK DATA routine loads the file, identifying the variables with a file number.

3. STORES

External store airloads prediction technique main routine.

STORES is the controlling program which cycles on up to five cases of data.

SUBROUTINE DESCRIPTION

1. CHECKR

CHECKR assigns an input code to each card in the input stream. It checks for certain variables in which a blank field is valid and also checks for errors in card identification.

2. READIN

This routine reads data according to the format chosen by the input code that is assigned in CHECKR. It also checks fields for valid data and sorts SPA and PPA cards into ascending numerical order.

3. INITIAL

INITIAL sets up most constants used in the program as well as calculates the initial predictions for side force, normal force, pitching moment, and yawing moment.

4. PRINTR

PRINTR copies the files to output.

5. ERROR

This routine prints to the error file the appropriate message for each input error or warning encountered.

6. LININT

LININT is a linear interpolation scheme that retrieves values in the data base necessary to perform the required airloads computations. In addition, it contains the optional graph printout scheme.

7. TWOD

TWOD linearly interpolates between two graph lines in the data base for a specific independent variable.

8. STOPRT

This routine prints all predictions for the specified Mach numbers containing the calculated output.

9. SIDFRC

SIDFRC calculates the predicted side force basic slope and intercept as well as the increments due to aircraft yaw and adjacent store interference for Mach numbers between 0.5 and 2.0.

10. YAWMOM

YAWMOM calculates the predicted yawing moment basic slope and intercept, as well as the increments due to aircraft yaw and adjacent store interference for Mach numbers between 0.5 and 2.0.

11. NORFRC

NORFRC routine calculates the predicted normal force basic slope and intercept, as well as the increments due to aircraft yaw for Mach numbers between 0.5 and 2.0. In addition, it calculates the incremental normal force slope and intercept due to adjacent store interference for a Mach number of 0.5.

12. NORSB1

This routine calculates the incremental normal force slope and intercept due to adjacent store interference for Mach numbers other than 0.5.

13. PITMOM

PITMOM calculates the predicted pitching moment basic slope and intercept as well as the increments due to aircraft yaw and adjacent store interference for Mach numbers between 0.5 and 2.0.

14. AXIFRC

This routine calculates the predicted axial force basic slope and intercept and the increments due to aircraft yaw and adjacent store interference for Mach numbers between 0.5 and 2.0.

15. ROLMOM

ROLMOM calculates the predicted rolling moment basic slope and intercept and the incremental intercept due to aircraft yaw and adjacent store interference for Mach numbers from 0.5 to 2.0.

16. ALNLOC

This routine looks up a dependent value from the data base assuming the independent values are evenly spaced.

17. BREAKP

BREAKP finds the Mach number break points above and below the subject Mach number for use in the applicable Mach number correction calculation.

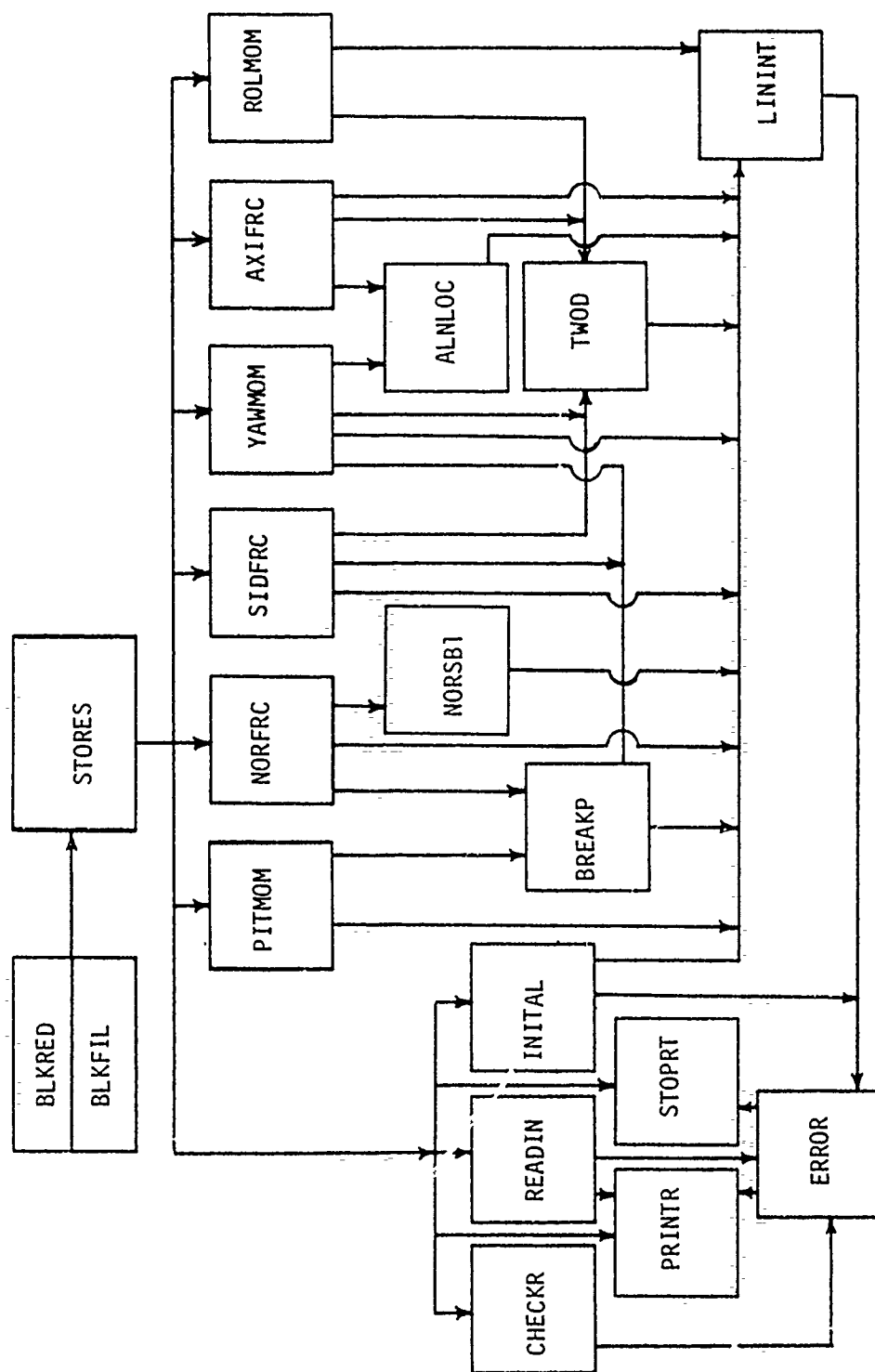


Figure A-3. Computer Routine Structure

SAMPLE CASE

OPTION	SF,NF,AF,YM,PM,RM	19.0
1N	292.	
2N	548.	
3N	648.	
4N	142.	
4B	520.	
5B	662.	
6B	620.	
7B	531.	
8B	393.	
8W	4.5	
9B	203.	
9W	443.	
10B	0.6	

CASE NUMBER = 1

CAPTIVE AIRLOADS PREDICTION TECHNIQUE CALCULATED DATA

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

MACH NUMBER	.50	.70	.90	1.20	1.40	1.60	2.00
SIDE FORCE COEFFICIENTS							
BASIC AIRLOAD							
SLOPE PREDICTION	.08065	.03066	.08120	.03282	.09359	.10436	.06446
INTERCEPT PREDICTION	-.32576	-.32603	-.34097	-.23943	-.09338	.05153	.11433
INCREMENT-AIRCRAFT YAW							
SLOPE PREDICTION (+BS)	.00552	.00552	.00527	.00482	.00502	.00493	.00465
INTERCEPT PREDICTION (+BS)	.09355	.09350	.10374	.11015	.09767	.09378	.09361
SLOPE PREDICTION (-BS)	.00265	.00291	.00324	.00298	.00297	.00297	.00297
INTERCEPT PREDICTION (-BS)	.08803	.08991	.09999	.10672	.09022	.07793	.07073
INCREMENT-ADJACENT STORE INTERFERENCE							
SLOPE PREDICTION	-.03376	-.03376	-.03381	-.03129	-.02341	-.01687	-.01714
INTERCEPT PREDICTION	.13477	.13477	.10857	.22786	.25329	.27870	.27870
YAWING MOMENT COEFFICIENTS							
BASIC AIRLOAD							
ALPHA BREAK (DEGREES)	2.44	3.64	3.01	0.00	0.00	0.00	0.00
SLOPE PREDICTION < ALPHA BREAK	.11079	.12943	.03169	-.04241	-.04271	-.04302	-.03401
SLOPE PREDICTION > ALPHA BREAK	-.01508	-.02562	-.01821	0.00000	0.00000	0.00000	0.00000
INTERCEPT PREDICTION < ALPHA BREAK	-.01715	-.01681	.32454	.63656	.05307	.80359	.61048
INTERCEPT PREDICTION > ALPHA BREAK	.29010	.45922	.47283	0.00000	0.00000	0.00000	0.00000
INCREMENT-AIRCRAFT YAW							
SLOPE PREDICTION (+BS)	-.01454	-.01454	-.00901	-.00615	-.01186	-.01753	-.01753
INTERCEPT PREDICTION (+BS)	.00337	.00337	-.05646	-.15224	-.11984	-.08761	-.08761
SLOPE PREDICTION (-BS)	-.00631	-.00631	-.00555	-.00442	-.00876	-.01317	-.01317
INTERCEPT PREDICTION (-BS)	-.00798	-.00851	-.05224	-.11783	-.08103	-.04382	-.04363
INCREMENT-ADJACENT STORE INTERFERENCE							
SLOPE PREDICTION	.02433	.01945	.01312	.05315	.04879	.02273	.00545
INTERCEPT PREDICTION	.07611	.07611	-.25945	-.17315	-.12063	-.06311	-.06253
NORMAL FORCE COEFFICIENTS							
BASIC AIRLOAD							
SLOPE PREDICTION	-.00356	-.00356	-.00165	.00907	.01007	.00398	.00622
INTERCEPT PREDICTION	.34480	.34480	.34511	.34858	.35049	.35321	.35763
INCREMENT-AIRCRAFT YAW							
SLOPE PREDICTION (+BS)	-.00813	-.00813	-.01078	-.01234	-.01082	-.00931	-.00929
INTERCEPT PREDICTION (+BS)	.01199	.01172	.01412	.00908	.02633	-.04298	-.04315
SLOPE PREDICTION (-BS)	-.00919	-.00919	-.00797	-.01090	-.00426	-.00562	-.00560
INTERCEPT PREDICTION (-BS)	.06886	.06886	.05954	.04196	.02123	.00076	.00056
INCREMENT-ADJACENT STORE INTERFERENCE							
SLOPE PREDICTION	.02838	.02840	.04064	.03826	.04356	.04884	.04884
INTERCEPT PREDICTION	-.04095	-.04095	-.06354	-.23942	-.14125	.02311	.02253

CASE NUMBER = :

CAPTIVE AIRLOADS PREDICTION TECHNIQUE CALCULATED DATA

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

HACH NUMBER	.50	.70	.90	1.20	1.40	1.60	2.00
PITCHING MOMENT COEFFICIENTS							
BASIC AIRLOAD							
SLOPE PREDICTION	.07177	.07075	-.01043	-.13232	-.01765	.10059	.09457
INTERCEPT PREDICTION	-.30414	-.23832	-.21308	-.99607	-1.68305	-2.35942	-1.78536
INCREMENT-AIRCRAFT YAW							
SLOPE PREDICTION (+3S)	.01476	.01476	.00753	.01941	.01879	.01824	.01823
SLOPE PREDICTION (+3S)	-.01564	-.01564	.04674	.02369	.06330	.11222	.11244
SLOPE PREDICTION (-3S)	.01559	.01559	.00832	.01799	.01499	.01195	.01189
SLOPE PREDICTION (-3S)	-.14208	-.14208	-.07060	-.09655	-.06628	-.04735	-.04776
INTERCEPT PREDICTION (+3S)							
INTERCEPT PREDICTION (-3S)							
INCREMENT-ADJACENT STORE INTERFERENCE							
SLOPE PREDICTION	-.02280	-.02260	-.05290	.08745	-.01367	-.11480	-.11400
INTERCEPT PREDICTION	-.00007	-.00007	-.12532	-1.10905	-.60127	-.17305	-.16663
AXIAL FORCE COEFFICIENTS							
BASIC AIRLOAD							
SLOPE PREDICTION	.00086	.00398	.00676	-.01183	-.00513	-.00204	-.00378
INTERCEPT PREDICTION	.14828	.15029	.20404	.41189	.30324	.26719	.22301
INCREMENT-AIRCRAFT YAW							
SLOPE PREDICTION (+3S)	-.00012	-.00012	.00037	.00036	-.00021	-.00015	-.00042
SLOPE PREDICTION (+3S)	.00319	.00288	-.00505	.00333	.00439	.00443	.00417
SLOPE PREDICTION (-3S)	.00032	.00032	.00032	.00102	.00077	.00035	.00012
SLOPE PREDICTION (-3S)	-.00733	-.00746	-.00351	-.00304	-.00631	-.00630	-.00564
INTERCEPT PREDICTION (+3S)							
INTERCEPT PREDICTION (-3S)							
INCREMENT-ADJACENT STORE INTERFERENCE							
SLOPE PREDICTION	-.02422	-.00655	-.00450	-.02564	.02076	.05104	.05299
INTERCEPT PREDICTION							
ROLLING MOMENT COEFFICIENTS							
BASIC AIRLOAD							
SLOPE PREDICTION	-.00781	-.00781	-.00780	-.03645	-.00568	-.00484	-.00402
INTERCEPT PREDICTION	.02399	.02462	.02459	.00206	-.01501	-.03208	-.03333
INCREMENT-AIRCRAFT YAW							
SLOPE PREDICTION (+3S)	-.00996	-.01011	-.01139	-.01136	-.00963	-.00341	-.00686
SLOPE PREDICTION (-3S)	-.01039	-.01180	-.01207	-.01195	-.01081	-.00842	-.00617
INTERCEPT PREDICTION (+3S)							
INTERCEPT PREDICTION (-3S)							
INCREMENT-ADJACENT STORE INTERFERENCE							
SLOPE PREDICTION	.00946	.00866	-.02277	-.01629	-.00960	-.00794	-.00735
INTERCEPT PREDICTION							

REFERENCE DIMENSIONS

STORE CENTER OF GRAVITY TO FORWARD LUG = 13.00 INCHES
STORE REFERENCE AREA = 3.87 FEET**2
STORE REFERENCE LENGTH = 2.21 FEET

CAPTIVE STORE AIRLOADS PREDICTION GENERAL MESSAGES

CASE NUMBER = 1

CAPTIVE AIRLOADS PREDICTION FOR A
33 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER Pylon FOR INTERFERENCE

CASE NUMBER = 1
 MACH NUMBER = .51

DATA

PREDICTION OUT OF RANGE

CAPTIVE STORE AIRLOADS
 CAPTIVE AIRLOADS PREDICTION FOR A
 300 GALLON TANK ON THE A-7 OUTBOARD
 PYLON WITH A 300 GALLON TANK ON THE
 CENTER PYLON FOR INTERFERENCE

MACH NUMBER = .50

WARNING - DATA POINT X = -.6388E+00, Y = .1411E+00 OUT OF RANGE FOR FIGURE	5 LINE	1
WARNING - DATA POINT X = .1527E+01, Y = .2423E+00 OUT OF RANGE FOR FIGURE	5 LINE	1
WARNING - DATA POINT X = -.6388E+00, Y = .1452E+01 OUT OF RANGE FOR FIGURE	4 LINE	1
WARNING - DATA POINT X = .1527E+01, Y = .3973E+00 OUT OF RANGE FOR FIGURE	4 LINE	1

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREDICTIONS

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

CASE NUMBER
MACH NUMBER

1
.50

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
5	1	-.639E+00	.1	5	1	-.398E+00	.191E+00	5	1	-.158E+00	.458E+00
5	1	.830E-01	.	5	1	.830E-01	.876E+00	5	1	.324E+00	.828E+00
5	1	.564E+00	.	5	1	.805E+00	.422E+00	5	1	.105E+01	.303E+00
5	1	.105E+01	.	5	1	.129E+01	.266E+00	5	1	.129E+01	.266E+00
5	1	.153E+01	.242E+00	5	1	-.639E+00	.145E+01	5	1	-.398E+00	.150E+01
4	1	.158E+00	.151E+01	4	1	.830E-01	.110E+01	4	1	.830E-01	.110E+01
4	1	.324E+00	.575E+00	4	1	.564E+00	.382E+00	4	1	.805E+00	.386E+00
4	1	.105E+01	.430E+00	4	1	.129E+01	.430E+00	4	1	.129E+01	.421E+00
4	1	.153E+01	.421E+00	4	1	.153E+01	.397E+00	4	1	.153E+01	.397E+00
14	1	.406E+01	.999E+00	15	1	.218E+01	.142E+01	16	1	.196E+02	.597E+00
31	1	.843E+02	-.886E-03	32	1	.406E+01	0.	33	1	.789E+02	0.
34	1	.843E+02	.409E+00	35	1	.406E+01	0.	36	1	.789E+02	0.
49	1	.349E+00	0.	47	1	.500E+00	.193E-05	48	1	.465E+00	.319E+00
50	1	.500E+00	.113E-05	51	1	.500E+00	.722E-05	52	1	.500E+00	0.
53	1	.465E+00	0.	47	2	.500E+00	.402E-05	48	1	.465E+00	0.
50	2	.500E+00	.409E-05	51	2	.500E+00	.150E-04	52	2	.500E+00	.320E+00
53	1	.465E+00	0.	54	2	.500E+00	-.725E-02	56	1	.331E+01	.224E+00
57	1	.843E+02	.266E+00	58	1	.843E+02	-.130E-01	59	1	.115E+03	.245E+00
60	1	.465E+00	0.	71	1	.843E+02	0.	72	1	.465E+00	0.
73	1	.843E+02	.124E+01	74	1	.465E+00	0.	910	1	.404E+01	.102E+01
911	1	.404E+01	.424E+01	915	3	.500E+00	-.180E+01	912	1	.500E+00	-.440E-03
913	1	.500E+00	.220E-01	914	1	.465E+00	0.	85	1	.243E+02	-.553E-05
86	1	.465E+00	0.	87	1	.843E+02	-.137E-02	88	1	.465E+00	0.
100	1	.843E+02	.218E-03	101	1	.465E+00	0.	102	1	.843E+02	-.202E+00
103	1	.465E+00	0.	85	2	.843E+02	.510E-05	86	2	.465E+00	0.
87	2	.843E+02	-.191E-01	88	2	.465E+00	0.	103	2	.465E+00	0.
101	2	.465E+00	0.	102	2	.843E+02	-.693E-01	103	2	.465E+00	0.
115	2	.500E+00	.17E-02	116	2	.843E+02	.658E-01	117	2	.588E+00	-.277E-01
129	1	.588E+00	.399E-02	130	1	.104E+03	.184E+00	131	1	.218E+01	.141E+01
132	1	.465E+00	.999E+00	133	1	.400E+03	0.	134	1	.450E+02	.800E+00
138	1	.897E+02	.134E+01	139	1	.16E+02	0.	140	1	.160E+00	0.
141	1	.843E+01	.112E+01	146	1	.897E+02	.207E-03	147	1	.465E+00	0.
148	1	.897E+02	-.255E-01	149	1	.465E+00	0.	169	1	.897E+02	-.171E-02
170	1	.588E+00	0.	171	1	.465E+00	0.	172	1	.897E+02	-.204E+00
173	1	.588E+00	0.	174	1	.465E+00	0.	148	2	.897E+02	-.186E-03
147	2	.897E+02	.198E-02	148	2	.897E+02	.651E-02	149	2	.465E+00	0.
169	2	.897E+02	.167E+00	170	2	.588E+00	.787E-03	171	2	.465E+00	0.
172	2	.897E+02	.700E+00	173	2	.588E+00	-.602E-01	174	2	.465E+00	0.
197	1	.897E+02	.402E-02	207	1	.897E+02	.700E+00	194	2	.897E+02	-.401E-04
195	2	.897E+02	.402E-02	204	2	.897E+02	.513E-04	205	2	.897E+02	-.500E-02
214	1	.897E+02	.562E+00	215	1	.406E+01	.100E+01	225	1	.104E+03	.673E-01
226	1	.897E+02	-.619E+01	237	1	.897E+02	.102E-05	238	1	.465E+00	0.
239	1	.897E+02	.155E-01	240	1	.465E+00	0.	259	1	.897E+02	-.431E-03
239	1	.465E+00	0.	261	1	.897E+02	-.917E-01	262	1	.465E+00	0.
240	2	.897E+02	.381E-03	238	2	.465E+00	0.	239	2	.897E+02	-.833E-02
240	2	.465E+00	0.	259	2	.897E+02	.358E-03	260	2	.465E+00	0.
251	2	.897E+02	-.374E-01	262	2	.465E+00	0.	261	2	.897E+02	-.90E-04
282	2	.897E+02	-.243E-02	291	2	.897E+02	.295E-04	292	2	.897E+02	-.180E-02

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREDICTIONS
CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

CASE NUMBER 1
MACH NUMBER .50

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
301	1	.500E+00	-.679E-03	303	1	.500E+00	-.417E-02	303	2	.500E+00	.191E-02
305	4	.500E+00	-.126E+00	305	5	.500E+00	.943E-01	307	2	.500E+00	-.278E-06
307	3	.500E+00	-.124E+00	308	1	.465E+00	0.	309	1	.500E+00	.318E-03
310	1	.500E+00	-.738E-02	309	2	.500E+00	-.117E-03	310	2	.500E+00	.319E-02
311	1	.500E+00	-.113E-02	313	1	.500E+00	.218E-01	315	1	.153E+00	-.629E-03
312	2	.500E+00	-.259E-04	314	2	.500E+00	.117E-01	317	1	.500E+00	-.131E-01
318	1	.465E+00	0.	319	1	.500E+00	.272E-01	323	1	.500E+00	.120E+01
325	1	.465E+00	.101E+01	324	1	.500E+00	-.173E-01	324	2	.500E+00	-.166E-01
326	2	.500E+00	.157E-01	327	1	.265E+02	.346E-03	328	1	.500E+00	.907E-03
329	1	.943E+02	-.404E-02								

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREDICTIONS

CASE NUMBER 1
MACH NUMBER .70

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	1	.843E+02	.699E+00	18	2	.843E+02	.105E+01	19	1	.843E+02	.341E-04
20	1	.843E+02	-.301E-01	38	1	.843E+02	.696E+00	38	2	.843E+02	.105E+01
39	1	.843E+02	-.132E-02	40	1	.843E+02	.117E+01	49	1	.843E+02	0.
47	1	.700E+00	.212E-05	48	1	.465E+00	0.	50	1	.700E+00	.198E-05
51	1	.700E+00	.967E-05	52	1	.700E+00	.320E+00	53	2	.465E+00	0.
47	2	.700E+00	.401E-05	48	1	.465E+00	0.	50	2	.700E+00	.471E-05
51	2	.700E+00	.150E-04	52	2	.700E+00	.320E+00	53	1	.465E+00	0.
55	2	.700E+00	-.725E-02	56	1	.331E+01	.224E+00	57	1	.843E+02	.266E+00
58	1	.843E+02	-.579E+00	62	1	.843E+02	.500E+00	62	2	.843E+02	.700E+00
62	3	.843E+02	.103E+01	63	1	.843E+02	.904E-03	64	1	.843E+02	.381E-01
65	1	.843E+02	.280E-02	66	1	.843E+02	-.456E+00	76	1	.843E+02	.700E+00
76	2	.843E+02	.120E+01	77	1	.843E+02	-.833E+01	78	1	.843E+02	.890E+01
910	2	.404E+01	.450E+01	911	1	.404E+01	.424E+01	915	3	.700E+00	-.120E+01
912	1	.700E+00	-.660E-03	913	1	.700E+00	.300E-01	914	2	.465E+00	0.
91	1	.843E+02	.700E+00	91	2	.843E+02	.120E+01	92	1	.843E+02	-.110E-04
93	1	.465E+00	0.	94	1	.843E+02	.117E-01	95	1	.465E+00	0.
106	1	.843E+02	.698E+00	106	2	.843E+02	.120E+01	107	1	.465E+00	.116E-03
108	1	.465E+00	0.	109	1	.843E+02	-.214E+00	110	1	.465E+00	0.
119	1	.843E+02	.703E+00	109	1	.843E+02	.120E+01	115	2	.700E+00	.104E-02
177	1	.843E+02	.703E+00	105	1	.843E+02	.794E+00	152	1	.897E+02	.703E+00
176	1	.897E+02	.703E+00	134	1	.450E+02	.800E+00	176	1	.897E+02	.694E+00
176	2	.897E+02	.902E+00	151	1	.897E+02	.717E+00	179	2	.465E+00	0.
180	2	.897E+02	.258E-01	178	2	.897E+02	-.860E-03	197	1	.897E+02	.700E+00
197	2	.897E+02	.902E+00	181	2	.465E+00	0.	197	2	.897E+02	-.751E-04
199	2	.897E+02	.902E+00	207	1	.897E+02	.700E+00	199	2	.897E+02	.120E+01
218	1	.897E+02	.525E-02	217	1	.104E+02	.698E+00	217	2	.104E+03	.120E+01
227	1	.897E+02	-.100E-02	219	1	.897E+02	.154E+00	220	1	.210E+01	-.246E+00
229	1	.897E+02	.500E+00	227	2	.897E+02	.854E+00	220	1	.897E+02	.417E-02
242	1	.897E+02	-.936E+00	242	1	.897E+02	.703E+00	264	1	.897E+02	.702E+00
242	1	.897E+02	.703E+00	264	1	.897E+02	.702E+00	284	1	.897E+02	.701E+00
294	1	.897E+02	.701E+00	301	1	.700E+00	-.853E-03	303	1	.700E+00	-.282E-02
303	2	.700E+00	.538E-02	305	4	.700E+00	.134E+00	305	5	.700E+00	.932E-01
307	2	.700E+00	-.235E-02	307	3	.700E+00	-.118E+00	308	1	.465E+00	0.
310	1	.700E+00	.310E-03	316	1	.700E+00	-.746E-02	309	2	.700E+00	-.115E-03
315	2	.700E+00	.288E-02	311	1	.700E+00	-.735E-03	313	1	.700E+00	.202E-01
317	1	.153E+00	-.629E-03	312	2	.538E+00	-.259E-04	314	2	.588E+00	.117E-01
323	1	.700E+00	-.132E-01	318	1	.465E+00	0.	319	2	.843E+02	.279E-01
324	1	.588E+00	.120E+01	325	1	.465E+00	.101E+01	324	1	.700E+00	-.197E-01
328	2	.700E+00	-.169E-01	326	2	.700E+00	.397E-02	327	1	.265E+00	.346E-03
328	1	.588E+00	.907E-03	329	1	.843E+02	-.404E-02				

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRPLANE PREDICTIONS

CASE NUMBER 1
MACH NUMBER .90

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTED PYLON FOR INTERFERENCE

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	1	.843E+02	.699E+00	18	1	.843E+02	.105E+01	19	1	.843E+02	.341E-04
19	1	.843E+02	.301E-01	38	1	.843E+02	.696E+00	39	2	.843E+02	.105E+01
20	1	.843E+02	.132E-02	40	1	.843E+02	.117E+01	41	1	.843E+02	0.
21	1	.843E+02	.235E-05	42	1	.843E+02	0.	43	1	.843E+02	.320E-05
22	1	.843E+02	.179E-04	44	1	.843E+02	.337E+00	45	1	.843E+02	0.
23	1	.843E+02	.383E-05	46	1	.843E+02	0.	47	1	.843E+02	.415E-05
24	1	.843E+02	.159E-04	48	1	.843E+02	.357E+00	49	1	.843E+02	0.
25	1	.843E+02	.726E-02	50	1	.843E+02	.525E+01	51	1	.843E+02	.305E+00
26	1	.843E+02	.368E+00	51	1	.843E+02	.500E+00	52	1	.843E+02	.700E+00
27	1	.843E+02	.105E+01	52	1	.843E+02	.904E+03	53	1	.843E+02	.381E-01
28	1	.843E+02	.280E-02	53	1	.843E+02	-.456E+00	54	1	.843E+02	.700E+00
29	1	.843E+02	.120E+01	54	1	.843E+02	-.833E-01	55	1	.843E+02	.890E+01
30	1	.843E+02	.414E+01	55	1	.843E+02	.441E+01	56	1	.843E+02	-.140E+01
31	1	.843E+02	.750E-03	56	1	.843E+02	.450E-01	57	1	.843E+02	0.
32	1	.843E+02	.700E+00	57	1	.843E+02	.120E+01	58	1	.843E+02	-.110E-04
33	1	.843E+02	0.	58	1	.843E+02	.117E-01	59	1	.843E+02	0.
34	1	.843E+02	.698E+00	59	1	.843E+02	.120E+01	60	1	.843E+02	.116E-03
35	1	.843E+02	.743E+00	60	1	.843E+02	-.214E+00	61	1	.843E+02	0.
36	1	.843E+02	.794E+00	61	1	.843E+02	.110E+01	62	1	.843E+02	-.926E-05
37	1	.843E+02	0.	62	1	.843E+02	.195E-01	63	1	.843E+02	.261E-03
38	1	.843E+02	0.	63	1	.843E+02	.405E+00	64	1	.843E+02	0.
39	1	.843E+02	0.	64	1	.843E+02	.703E+00	65	1	.843E+02	.903E+00
40	1	.843E+02	.736E-03	65	1	.843E+02	-.832E-02	66	1	.843E+02	-.982E-05
41	1	.843E+02	.107E-05	66	1	.843E+02	.800E+00	67	1	.843E+02	.335E+00
42	1	.843E+02	.190E+00	67	1	.843E+02	.140E+00	68	1	.843E+02	.398E+01
43	1	.843E+02	.138E-01	68	1	.843E+02	.101E+01	69	1	.843E+02	.109E+01
44	1	.843E+02	.117E-01	69	1	.843E+02	.302E+00	70	1	.843E+02	.147E-03
45	1	.843E+02	.703E+00	70	1	.843E+02	-.757E-02	71	1	.843E+02	0.
46	1	.843E+02	.703E+00	71	1	.843E+02	.902E+00	72	1	.843E+02	-.463E-03
47	1	.843E+02	.717E+00	72	1	.843E+02	.106E-01	73	1	.843E+02	0.
48	1	.843E+02	0.	73	1	.843E+02	.905E+00	74	1	.843E+02	.946E-04
49	1	.843E+02	0.	74	1	.843E+02	-.847E-02	75	1	.843E+02	-.860E-03
50	1	.843E+02	.698E+00	75	1	.843E+02	.902E+00	76	1	.843E+02	0.
51	1	.843E+02	.700E+00	76	1	.843E+02	.258E-01	77	1	.843E+02	.700E+00
52	1	.843E+02	.901E+00	77	1	.843E+02	.902E+00	78	1	.843E+02	.525E-02
53	1	.843E+02	.666E-03	78	1	.843E+02	-.751E-04	79	1	.843E+02	.598E+00
54	1	.843E+02	.120E+01	79	1	.843E+02	-.417E-01	80	1	.843E+02	.154E+00
55	1	.843E+02	.104E+03	80	1	.843E+02	-.100E-02	81	1	.843E+02	.854E+00
56	1	.843E+02	.218E+01	81	1	.843E+02	.500E+00	82	1	.843E+02	-.936E+00
57	1	.843E+02	.106E+01	82	1	.843E+02	.417E-02	83	1	.843E+02	-.998E+00
58	1	.843E+02	.764E-01	83	1	.843E+02	-.342E+01	84	1	.843E+02	-.380E-03
59	1	.843E+02	.703E+00	84	1	.843E+02	.902E+00	85	1	.843E+02	0.
60	1	.843E+02	0.	85	1	.843E+02	.157E-01	86	1	.843E+02	.307E-02
61	1	.843E+02	.703E+00	86	1	.843E+02	.907E+00	87	1	.843E+02	0.
62	1	.843E+02	0.	87	1	.843E+02	-.112E+00	88	1	.843E+02	-.457E-03
63	1	.843E+02	.703E+00	88	1	.843E+02	.902E+00	89	1	.843E+02	0.
64	1	.843E+02	0.	89	1	.843E+02	-.204E-01	90	1	.843E+02	0.
65	1	.843E+02	0.	90	1	.843E+02	0.				

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREDICTIONS
CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

CASE NUMBER 1
MACH NUMBER .50

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
264	1	.897E+02	.702E+00	264	2	.897E+02	.907E+00	265	2	.897E+02	.336E-02
266	2	.465E+00	0.	267	2	.897E+02	-.139E+00	268	2	.465E+00	-.497E-03
284	1	.897E+02	.701E+00	284	2	.897E+02	.901E+00	285	2	.897E+02	.746E-04
286	2	.897E+02	-.622E-02	294	1	.897E+02	.701E+00	294	2	.897E+02	.903E+00
295	2	.897E+02	-.132E-02	296	2	.897E+02	.731E-01	301	1	.900E+00	-.380E-02
303	1	.903E+00	-.221E-02	303	2	.900E+00	.114E-01	305	4	.900E+00	.178E+00
305	5	.900E+00	.126E+00	307	2	.900E+00	-.448E-01	307	3	.900E+00	.121E-01
308	1	.465E+00	0.	309	1	.900E+00	.320E-03	310	1	.900E+00	-.051E-02
309	2	.903E+00	.366E-03	310	2	.900E+00	-.505E-02	311	1	.900E+00	-.456E-03
313	1	.900E+00	.829E-02	315	1	.153E+00	-.629E-03	312	2	.588E+00	-.259E-04
314	2	.588E+00	.117E-01	317	1	.900E+00	-.131E-01	318	1	.465E+00	0.
320	1	.843E+02	.278E-01	323	1	.588E+00	.120E+01	325	2	.465E+00	.101E+01
324	1	.900E+00	-.201E-01	324	2	.900E+00	-.190E-01	326	2	.900E+00	-.280E-01
327	2	.265E+02	.295E-03	327	3	.265E+02	.351E-03	324	2	.588E+00	.790E-03
328	3	.588E+00	.161E-03	329	2	.843E+02	-.412E-02	329	3	.843E+02	-.379E-02

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRLAYS PREDICTIONS

CASE NUMBER 1
MACH NUMBER 1.20

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	1	.843E+02	.699E+00	18	2	.843E+02	.105E+01	18	3	.843E+02	.120E+01	18	4	.843E+02	.120E+01
18	4	.843E+02	.160E+01	21	1	.588E+00	.101E+01	22	1	.811E+00	.100E+01	22	2	.811E+00	.100E+01
23	1	.588E+00	.993E+00	24	1	.811E+00	.135E+01	25	1	.588E+00	.100E+01	25	2	.811E+00	.100E+01
26	1	.811E+00	.382E-04	27	1	.588E+00	.102E+01	28	1	.811E+00	.100E+01	28	2	.811E+00	.100E+01
38	1	.843E+02	.696E+00	38	2	.843E+02	.105E+01	38	3	.843E+02	.160E+01	38	4	.843E+02	.160E+01
39	1	.843E+02	.132E-02	40	1	.843E+02	.117E+01	41	1	.843E+02	.160E+01	41	2	.843E+02	.160E+01
42	1	.406E+01	0.	43	1	.843E+02	.117E+01	44	1	.406E+01	0.	44	2	.843E+02	.160E+01
49	1	.349E+00	0.	47	1	.120E+01	.217E-05	48	1	.465E+00	0.	48	2	.120E+01	.333E+00
50	1	.120E+01	.188E-05	51	1	.120E+01	.265E-04	52	1	.120E+01	.333E+00	52	2	.120E+01	.333E+00
53	3	.465E+00	0.	51	2	.120E+01	.351E-05	52	2	.120E+01	.333E+00	52	3	.333E+01	.240E+00
50	2	.120E+01	.145E-05	55	2	.120E+01	.229E-04	56	3	.333E+01	.240E+00	56	4	.843E+02	.160E+01
53	3	.465E+00	0.	55	3	.843E+02	.105E+01	62	1	.843E+02	.160E+01	62	2	.843E+02	.160E+01
57	3	.843E+02	.823E+00	58	3	.843E+02	.105E+01	62	3	.843E+02	.160E+01	62	4	.843E+02	.160E+01
62	2	.843E+02	.700E+00	62	4	.843E+02	.105E+01	67	1	.843E+02	.160E+01	67	2	.843E+02	.160E+01
65	1	.843E+02	.240E-02	66	1	.843E+02	.105E+01	76	2	.843E+02	.160E+01	76	3	.843E+02	.160E+01
68	1	.843E+02	.497E+00	76	1	.843E+02	.105E+01	91	1	.843E+02	.160E+01	91	2	.843E+02	.160E+01
77	1	.843E+02	.833E-01	78	1	.843E+02	.105E+01	93	1	.843E+02	.160E+01	93	2	.843E+02	.160E+01
91	2	.843E+02	.120E+01	92	1	.843E+02	.105E+01	106	1	.843E+02	.160E+01	106	2	.843E+02	.160E+01
94	1	.843E+02	.117E-01	95	1	.843E+02	.105E+01	108	1	.843E+02	.160E+01	108	2	.843E+02	.160E+01
106	2	.843E+02	.120E+01	107	1	.843E+02	.105E+01	111	1	.843E+02	.160E+01	111	2	.843E+02	.160E+01
109	1	.843E+02	.214E+00	110	1	.843E+02	.105E+01	114	1	.843E+02	.160E+01	114	2	.843E+02	.160E+01
90	2	.843E+02	.110E+01	94	2	.843E+02	.105E+01	119	1	.843E+02	.160E+01	119	2	.843E+02	.160E+01
93	2	.843E+02	0.	97	2	.843E+02	.105E+01	121	2	.843E+02	.160E+01	121	3	.843E+02	.160E+01
96	2	.843E+02	.413E-05	105	1	.843E+02	.105E+01	124	2	.843E+02	.160E+01	124	3	.843E+02	.160E+01
99	2	.843E+02	0.	107	2	.843E+02	.105E+01	127	2	.843E+02	.160E+01	127	3	.843E+02	.160E+01
105	3	.843E+02	.160E+01	107	3	.843E+02	.105E+01	135	1	.588E+00	.102E+01	135	2	.843E+02	.160E+01
109	2	.843E+02	.160E+01	110	2	.843E+02	.105E+01	144	1	.531E+00	.398E+01	144	2	.843E+02	.160E+01
112	2	.843E+02	0.	113	2	.843E+02	.105E+01	145	1	.588E+00	.102E+01	145	2	.843E+02	.160E+01
115	2	.120E+01	.298E-02	119	1	.843E+02	.105E+01	152	3	.897E+02	.105E+01	152	4	.897E+02	.105E+01
119	3	.843E+02	.160E+01	121	2	.843E+02	.105E+01	158	1	.465E+00	0.	158	2	.897E+02	.105E+01
123	2	.843E+02	.982E-05	124	2	.843E+02	.105E+01	161	1	.897E+02	.105E+01	161	2	.897E+02	.105E+01
126	2	.843E+02	.626E-02	127	2	.843E+02	.105E+01	164	1	.465E+00	0.	164	2	.897E+02	.105E+01
134	1	.450E+02	.800E+00	135	1	.588E+00	.102E+01	177	3	.897E+02	.105E+01	177	4	.897E+02	.105E+01
137	1	.400E+00	.700E+00	144	1	.531E+00	.398E+01	183	1	.465E+00	0.	183	2	.897E+02	.105E+01
143	1	.302E+01	.01E+01	145	1	.588E+00	.102E+01	186	1	.897E+02	.105E+01	186	2	.897E+02	.105E+01
152	2	.897E+02	.902E+00	152	3	.897E+02	.105E+01	189	1	.465E+00	0.	189	2	.897E+02	.105E+01
157	1	.897E+02	.635E-04	158	1	.465E+00	0.	191	1	.897E+02	.105E+01	191	2	.897E+02	.105E+01
160	1	.465E+00	0.	161	1	.897E+02	.105E+01	195	1	.897E+02	.105E+01	195	2	.897E+02	.105E+01
163	1	.897E+02	.361E-02	164	1	.465E+00	0.	198	1	.897E+02	.105E+01	198	2	.897E+02	.105E+01
177	2	.897E+02	.902E+00	177	3	.897E+02	.105E+01	199	1	.897E+02	.105E+01	199	2	.897E+02	.105E+01
182	1	.897E+02	.527E-03	183	1	.465E+00	0.	199	3	.897E+02	.105E+01	199	4	.897E+02	.105E+01
185	1	.465E+00	0.	186	1	.897E+02	.105E+01	199	4	.897E+02	.105E+01	199	5	.897E+02	.105E+01
188	1	.897E+02	.157E-01	189	1	.465E+00	0.	199	5	.897E+02	.105E+01	199	6	.897E+02	.105E+01
191	1	.897E+02	.905E+00	191	2	.897E+02	.105E+01	199	6	.897E+02	.105E+01	199	7	.897E+02	.105E+01
197	2	.897E+02	.133E-03	197	3	.897E+02	.105E+01	199	7	.897E+02	.105E+01	199	8	.897E+02	.105E+01
199	2	.465E+00	0.	199	4	.897E+02	.105E+01	199	8	.897E+02	.105E+01	199	9	.897E+02	.105E+01
163	2	.897E+02	.142E-01	164	2	.465E+00	0.	199	9	.897E+02	.105E+01	199	10	.897E+02	.105E+01
176	2	.897E+02	.902E+00	176	3	.897E+02	.105E+01	199	10	.897E+02	.105E+01	199	11	.897E+02	.105E+01

VALUES USED FOR GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREDICTIONS

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE 1-7 OUTBOARD
PYLON WITH A 500 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

CASE NUMBER 1
MACH NUMBER 1.40

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
13	1	.843E+02	.699E+00	18	2	.343E+02	.105E+01	18	3	.843E+02	.120E+01
14	4	.843E+02	.150E+01	21	1	.538E+00	.101E+01	22	1	.811E+00	-.440E-05
23	1	.588E+00	.993E+00	24	1	.811E+00	.135E-01	25	1	.588E+00	.100E+01
26	1	.811E+00	-.382E-04	27	1	.588E+00	.102E+01	28	1	.811E+00	.575E-01
38	1	.843E+02	.698E+00	38	2	.843E+02	.105E+01	38	3	.843E+02	.160E+01
39	1	.843E+02	-.132E-02	40	1	.843E+02	.117E+01	41	1	.843E+02	.761E-03
42	1	.406E+01	0.	43	1	.843E+02	-.228E+00	44	1	.406E+01	0.
49	1	.349E+00	0.	47	1	.140E+01	.216E-05	48	4	.465E+00	0.
52	1	.140E+01	.272E+00	50	1	.140E+01	.350E-05	51	1	.140E+01	.287E-04
52	1	.140E+01	.365E-05	53	3	.465E+00	0.	53	4	.465E+00	0.
47	2	.140E+01	.266E-05	48	4	.465E+00	0.	48	5	.465E+00	0.
50	2	.140E+01	0.	51	2	.140E+01	0.	52	2	.140E+01	0.
53	3	.465E+00	0.	53	4	.465E+00	0.	53	4	.465E+00	0.
56	3	.331E+01	.240E+00	56	4	.331E+01	.262E+00	56	4	.843E+02	.297E+00
57	4	.843E+02	.626E+00	58	3	.843E+02	-.148E+01	58	4	.843E+02	-.512E-02
62	1	.843E+02	.509E+00	62	2	.843E+02	.700E+00	62	3	.843E+02	.828E+00
62	4	.843E+02	.160E+01	65	1	.843E+02	.280E-02	66	1	.843E+02	.105E+01
67	1	.843E+02	.553E-02	68	1	.843E+02	-.497E+00	76	1	.843E+02	-.456E+00
76	2	.843E+02	.120E+01	76	3	.843E+02	.160E+01	77	1	.843E+02	.700E+00
76	1	.843E+02	.890E+01	79	1	.843E+02	.355E-01	80	1	.406E+01	-.833E-01
81	1	.843E+02	-.395E+00	82	1	.406E+01	0.	81	1	.843E+02	.700E+00
91	2	.843E+02	.120E+01	91	3	.843E+02	.160E+01	92	1	.843E+02	-.110E-04
93	1	.465E+00	0.	94	1	.843E+02	.117E-01	95	1	.465E+00	0.
96	1	.843E+02	.725E-05	97	1	.465E+00	0.	98	1	.843E+02	-.133E-01
99	1	.465E+00	0.	106	1	.843E+02	.698E+00	105	2	.843E+02	.120E+01
106	3	.843E+02	.160E+01	107	1	.843E+02	.116E-01	108	1	.465E+00	0.
109	1	.843E+02	-.214E+00	110	1	.465E+00	0.	111	1	.843E+02	-.106E-03
112	1	.465E+00	0.	113	1	.843E+02	.591E-01	114	1	.465E+00	0.
92	1	.843E+02	.703E+00	90	2	.843E+02	.110E+01	90	3	.843E+02	.160E+01
92	2	.843E+02	-.926E-05	93	2	.465E+00	0.	94	2	.843E+02	.195E-01
95	2	.465E+00	0.	96	2	.843E+02	.413E-05	97	2	.465E+00	0.
98	2	.843E+02	-.668E-02	99	2	.465E+00	0.	105	1	.843E+02	.794E+00
105	2	.843E+02	.105E+01	105	3	.843E+02	.160E+01	107	2	.843E+02	.261E-03
108	2	.465E+00	0.	109	2	.843E+02	-.405E+00	110	2	.465E+00	0.
111	2	.843E+02	.275E-04	112	2	.465E+00	0.	113	2	.843E+02	-.116E+00
114	2	.465E+00	0.	115	2	.140E+01	.274E-02	119	1	.843E+02	-.116E+00
119	2	.843E+02	.903E+00	119	3	.843E+02	.160E+01	121	2	.843E+02	.703E+00
122	2	.843E+02	-.832E-02	123	2	.843E+02	-.932E-05	124	2	.843E+02	.107E-05
125	2	.843E+02	-.176E-04	126	2	.843E+02	.626E-02	127	2	.843E+02	-.190E+00
128	2	.843E+02	.314E+00	134	1	.450E+02	.800E+00	135	1	.588E+00	-.229E-03
136	1	.512E+02	.139E-01	137	1	.600E+01	.992E+00	144	1	.531E+00	.335E+00
142	1	.205E+04	.117E-01	143	1	.302E+01	.101E+01	145	1	.588E+00	.398E+01
152	1	.897E+02	.703E+00	152	2	.897E+02	.902E+00	152	3	.897E+02	.109E+01
162	1	.465E+00	.120E+01	163	1	.897E+02	.160E+01	161	1	.897E+02	.105E+01
165	1	.897E+02	-.117E-03	166	1	.465E+00	.361E-02	164	1	.465E+00	-.878E-04
168	1	.465E+00	0.	177	1	.897E+02	0.	164	1	.465E+00	0.
177	3	.897E+02	.106E+01	177	4	.897E+02	.702E+00	167	1	.897E+02	.107E-01
								177	2	.897E+02	.902E+00
								177	5	.897E+02	.160E+01

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREDICTIONS

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

CASE NUMBER 1
MACH NUMBER 1.40

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
186	1	.897E+02	-.713E-03	187	1	.465E+00	0.	188	1	.897E+02	.157E-01
189	1	.465E+00	0.	190	1	.297E+02	-.395E-04	191	1	.465E+00	0.
192	1	.897E+02	-.699E-01	193	1	.465E+00	0.	194	1	.897E+02	.717E+00
195	2	.897E+02	.905E+00	196	3	.897E+02	.106E+01	197	4	.897E+02	.160E+01
197	2	.897E+02	-.133E-03	198	2	.465E+00	0.	199	2	.897E+02	.280E-02
199	2	.465E+00	0.	200	2	.897E+02	-.254E-03	201	2	.465E+00	0.
201	2	.897E+02	.142E-01	202	2	.465E+00	0.	203	1	.897E+02	.698E+00
203	2	.897E+02	.902E+00	204	3	.897E+02	.110E+01	205	4	.897E+02	.160E+01
205	2	.897E+02	-.323E-03	206	2	.465E+00	0.	207	2	.897E+02	.692E-02
207	2	.465E+00	0.	208	2	.897E+02	.556E-03	209	2	.465E+00	0.
209	2	.897E+02	-.888E-01	210	2	.465E+00	0.	211	1	.897E+02	.700E+00
211	2	.897E+02	.902E+00	212	2	.897E+02	.120E+01	213	4	.897E+02	.160E+01
213	2	.897E+02	.700E+00	214	2	.897E+02	.901E+00	215	3	.897E+02	.120E+01
215	2	.897E+02	.160E-04	216	2	.897E+02	-.210E-04	217	2	.897E+02	.183E-02
217	2	.897E+02	.520E-02	218	2	.897E+02	.530E-02	219	2	.897E+02	-.326E-03
219	2	.897E+02	.520E-02	220	2	.897E+02	.530E-02	221	2	.897E+02	-.282E-01
221	2	.897E+02	.520E-02	222	2	.897E+02	.530E-02	223	3	.104E+03	.160E+01
223	2	.897E+02	.520E-02	224	2	.897E+02	.530E-02	225	3	.218E+01	-.246E+00
225	2	.897E+02	.520E-02	226	2	.897E+02	.530E-02	227	1	.897E+02	.500E+00
227	2	.897E+02	.520E-02	228	2	.897E+02	.530E-02	229	1	.897E+02	.161E+01
229	2	.897E+02	.520E-02	230	2	.897E+02	.530E-02	231	4	.897E+02	.998E+00
231	2	.897E+02	.520E-02	232	2	.897E+02	.530E-02	233	1	.897E+02	.703E+00
233	2	.897E+02	.520E-02	234	2	.897E+02	.530E-02	235	4	.897E+02	.120E+01
235	2	.897E+02	.520E-02	236	2	.897E+02	.530E-02	237	1	.465E+00	0.
237	2	.897E+02	.520E-02	238	2	.897E+02	.530E-02	239	1	.897E+02	.251E-03
239	2	.897E+02	.520E-02	240	2	.897E+02	.530E-02	241	1	.465E+00	.105E+01
241	2	.897E+02	.520E-02	242	2	.897E+02	.530E-02	243	3	.897E+02	.266E-02
243	2	.897E+02	.520E-02	244	2	.897E+02	.530E-02	245	1	.465E+00	0.
245	2	.897E+02	.520E-02	246	2	.897E+02	.530E-02	247	1	.897E+02	.871E-01
247	2	.897E+02	.520E-02	248	2	.897E+02	.530E-02	249	1	.897E+02	.902E+00
249	2	.897E+02	.520E-02	250	2	.897E+02	.530E-02	251	2	.897E+02	.160E+01
251	2	.897E+02	.520E-02	252	2	.897E+02	.530E-02	253	2	.897E+02	.460E-02
253	2	.897E+02	.520E-02	254	2	.897E+02	.530E-02	255	2	.465E+00	0.
255	2	.897E+02	.520E-02	256	2	.897E+02	.530E-02	257	2	.897E+02	.702E+00
257	2	.897E+02	.520E-02	258	2	.897E+02	.530E-02	259	1	.897E+02	.120E+01
259	2	.897E+02	.520E-02	260	2	.897E+02	.530E-02	261	4	.897E+02	.120E+01
261	2	.897E+02	.520E-02	262	2	.897E+02	.530E-02	263	2	.465E+00	0.
263	2	.897E+02	.520E-02	264	2	.897E+02	.530E-02	265	2	.897E+02	.196E-02
265	2	.897E+02	.520E-02	266	2	.897E+02	.530E-02	267	2	.465E+00	0.
267	2	.897E+02	.520E-02	268	2	.897E+02	.530E-02	269	2	.897E+02	.120E+01
269	2	.897E+02	.520E-02	270	2	.897E+02	.530E-02	271	3	.897E+02	.120E+01
271	2	.897E+02	.520E-02	272	2	.897E+02	.530E-02	273	2	.897E+02	.701E+00
273	2	.897E+02	.520E-02	274	2	.897E+02	.530E-02	275	2	.897E+02	.701E+00
275	2	.897E+02	.520E-02	276	2	.897E+02	.530E-02	277	2	.897E+02	.701E+00
277	2	.897E+02	.520E-02	278	2	.897E+02	.530E-02	279	2	.897E+02	.701E+00
279	2	.897E+02	.520E-02	280	2	.897E+02	.530E-02	281	2	.897E+02	.701E+00
281	2	.897E+02	.520E-02	282	2	.897E+02	.530E-02	283	2	.897E+02	.701E+00
283	2	.897E+02	.520E-02	284	2	.897E+02	.530E-02	285	2	.897E+02	.701E+00
285	2	.897E+02	.520E-02	286	2	.897E+02	.530E-02	287	2	.897E+02	.701E+00
287	2	.897E+02	.520E-02	288	2	.897E+02	.530E-02	289	2	.897E+02	.701E+00
289	2	.897E+02	.520E-02	290	2	.897E+02	.530E-02	291	2	.897E+02	.701E+00
291	2	.897E+02	.520E-02	292	2	.897E+02	.530E-02	293	2	.897E+02	.701E+00
293	2	.897E+02	.520E-02	294	2	.897E+02	.530E-02	295	2	.897E+02	.701E+00
295	2	.897E+02	.520E-02	296	2	.897E+02	.530E-02	297	2	.897E+02	.701E+00
297	2	.897E+02	.520E-02	298	2	.897E+02	.530E-02	299	2	.897E+02	.701E+00
299	2	.897E+02	.520E-02	300	2	.897E+02	.530E-02	301	2	.897E+02	.701E+00
301	2	.897E+02	.520E-02	302	2	.897E+02	.530E-02	303	2	.897E+02	.701E+00
303	2	.897E+02	.520E-02	304	2	.897E+02	.530E-02	305	2	.897E+02	.701E+00
305	2	.897E+02	.520E-02	306	2	.897E+02	.530E-02	307	2	.897E+02	.701E+00
307	2	.897E+02	.520E-02	308	2	.897E+02	.530E-02	309	2	.897E+02	.701E+00
309	2	.897E+02	.520E-02	310	2	.897E+02	.530E-02	311	2	.897E+02	.701E+00

CASE NUMBER 1
MACH NUMBER 1.43

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREDICTIONS
CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
310	2	.140E+01	.439E-02	311	1	.140E+01	.379E-03	313	1	.140E+01	-.774E-02
315	1	.153E+00	-.629E-03	312	2	.588E+00	-.259E-04	314	2	.588E+00	.117E-01
317	1	.140E+01	-.919E-02	318	1	.465E+00	0.	318	2	.465E+00	0.
321	1	.843E+02	.233E-02	321	2	.843E+02	-.363E-01	323	1	.588E+00	.120E+01
325	2	.465E+00	.101E+01	325	3	.465E+00	.101E+01	324	1	.140E+01	-.180E-01
324	2	.140E+01	-.160E-01	326	2	.140E+01	-.990E-02	327	3	.265E+02	.351E-03
327	4	.265E+02	.149E-03	328	3	.588E+00	.161E-03	328	4	.588E+00	.346E-03
329	3	.843E+02	-.379E-02	329	4	.843E+02	-.356E-02				

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREUCTIONS

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

CASE NUMBER 1
MACH NUMBER 1.60

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	1	.843E+02	.699E+00	18	3	.843E+02	.105E+01	18	3	.843E+02	.120E+01
18	4	.843E+02	.160E+01	21	1	.843E+02	.101E+01	22	1	.811E+00	.440E-05
23	1	.588E+00	.993E+00	24	1	.811E+00	.135E-01	25	1	.588E+00	.109E+01
26	1	.811E+00	.382E-04	27	1	.588E+00	.102E+01	28	1	.811E+00	.572E-01
38	1	.843E+02	.696E+00	38	2	.843E+02	.105E+01	38	3	.843E+02	.160E+01
38	4	.843E+02	.200E+01	41	1	.843E+02	.761E-03	42	1	.406E+01	0.
43	1	.843E+02	.228E+00	44	1	.406E+01	0.	45	1	.843E+02	.153E-03
46	1	.843E+02	.403E+00	49	1	.349E+00	0.	47	1	.160E+01	.216E-05
48	5	.465E+00	0.	50	1	.465E+00	.433E-05	51	1	.160E+01	.301E-04
52	1	.160E+01	.221E+00	53	4	.465E+00	0.	54	2	.160E+01	.359E-05
48	5	.465E+00	0.	50	2	.160E+01	.338E-05	55	2	.160E+01	.362E-02
52	2	.160E+01	.270E+00	53	4	.465E+00	0.	58	4	.843E+02	.901E+00
56	4	.331E+01	.262E+00	57	4	.843E+02	.626E+00	58	4	.843E+02	.105E+01
62	1	.843E+02	.500E+00	62	2	.843E+02	.700E+00	62	3	.843E+02	.456E+00
62	4	.843E+02	.160E+01	65	1	.843E+02	.280E-02	66	1	.843E+02	.700E+00
67	1	.843E+02	.553E-02	68	1	.843E+02	.497E+00	77	1	.843E+02	.700E+00
76	2	.843E+02	.120E+01	76	3	.843E+02	.160E+01	77	1	.843E+02	.833E-01
78	1	.843E+02	.890E+01	79	1	.843E+02	.356E-01	80	1	.406E+01	0.
81	1	.843E+02	.395E+00	82	1	.406E+01	0.	81	1	.843E+02	.700E+00
91	2	.843E+02	.120E+01	91	3	.843E+02	.160E+01	92	1	.843E+02	.110E-04
93	1	.465E+00	0.	94	1	.843E+02	.117E-01	95	1	.465E+00	0.
96	1	.843E+02	.725E-05	97	1	.465E+00	0.	98	1	.843E+02	.133E-01
99	1	.465E+00	0.	106	1	.843E+02	.698E+00	106	2	.843E+02	.120E+01
106	1	.843E+02	.160E+01	107	1	.843E+02	.116E-03	108	1	.465E+00	0.
109	1	.843E+02	.214E+00	110	1	.465E+00	0.	111	1	.843E+02	.105E-03
112	1	.465E+00	0.	113	1	.843E+02	.591E-01	114	1	.465E+00	0.
90	1	.843E+02	.703E+00	90	2	.843E+02	.110E+01	90	3	.843E+02	.160E+01
96	2	.843E+02	.413E-05	97	2	.465E+00	0.	98	2	.843E+02	.110E+01
99	2	.465E+00	0.	105	1	.843E+02	.794E+00	105	2	.843E+02	.110E+01
105	3	.843E+02	.160E+01	111	2	.843E+02	.275E-04	112	2	.465E+00	0.
113	2	.843E+02	.166E+00	114	2	.465E+00	0.	115	2	.160E+01	.128E-02
119	1	.843E+02	.703E+00	119	2	.843E+02	.903E+00	119	3	.843E+02	.160E+01
121	2	.843E+02	.107E-05	122	2	.843E+02	.832E-02	123	2	.843E+02	.982E-05
124	2	.843E+02	.190E+00	125	2	.843E+02	.176E-04	126	2	.843E+02	.626E-02
127	2	.843E+02	.229E-03	128	2	.843E+02	.314E+00	134	1	.450E+02	.800E+00
135	1	.588E+00	.335E+00	136	1	.512E+02	.138E-01	137	1	.800E+00	.986E+00
144	1	.531E+00	.398E+01	142	1	.205E+04	.117E-01	143	1	.302E+01	.101E+01
145	1	.588E+00	.109E+01	152	1	.897E+02	.703E+00	152	2	.897E+02	.902E+00
152	3	.897E+02	.105E+01	152	4	.897E+02	.120E+01	152	5	.897E+02	.160E+01
161	1	.897E+02	.878E-04	162	1	.465E+00	0.	162	1	.897E+02	.361E-02
164	1	.465E+00	0.	165	1	.897E+02	.117E-03	165	1	.465E+00	0.
167	1	.897E+02	.107E-01	168	1	.465E+00	0.	168	1	.897E+02	.703E+00
177	2	.897E+02	.903E+00	177	3	.897E+02	.196E+01	177	4	.897E+02	.120E+01
177	5	.897E+02	.150E+01	186	1	.897E+02	.713E-03	186	1	.465E+00	0.
138	1	.897E+02	.157E-01	189	1	.465E+00	0.	190	1	.897E+02	.395E-04
191	1	.465E+00	0.	192	1	.897E+02	.659E-01	193	1	.465E+00	0.
151	1	.897E+02	.717E+00	151	2	.897E+02	.905E+00	151	3	.897E+02	.160E+01
151	4	.897E+02	.160E+01	157	2	.897E+02	.133E-03	158	2	.465E+00	0.

VALUES USED FOR: GRAPHS IN CALCULATION OF CAPTIVE AIRPLANE PREDICTIONS

CAPTIVE AIRPLANE PREDICTION FOR A
300 GALLON TANK ON THE 1-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

CASE NUMBER 1
MACH NUMBER 1.40

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
159	2	.897E+02	.200E-02	161	2	.465E+00	0.	257	2	.897E+02	.702E+00
162	2	.465E+00	0.	163	2	.897E+02	.142E-01	258	2	.897E+02	.120E+01
176	1	.897E+02	.698E+00	176	2	.897E+02	.932E+00	259	4	.465E+00	0.
176	4	.897E+02	.160E+01	182	2	.897E+02	0.	264	2	.897E+02	.105E+01
184	2	.897E+02	.692E-02	185	2	.465E+00	0.	264	2	.897E+02	.477E-06
187	2	.465E+00	0.	188	2	.897E+02	0.	275	2	.465E+00	0.
197	1	.897E+02	.700E+00	197	2	.897E+02	0.	275	2	.897E+02	.301E-01
197	4	.897E+02	.160E+01	207	1	.897E+02	.902E+00	275	2	.897E+02	.907E+00
207	3	.897E+02	.120E+01	207	4	.897E+02	.700E+00	275	2	.897E+02	.160E+01
207	2	.897E+02	.530E-02	210	2	.897E+02	.160E+01	275	2	.897E+02	.103E+00
212	2	.897E+02	.525E-03	213	2	.897E+02	0.	275	2	.897E+02	0.
217	2	.104E+03	.120E+01	217	3	.104E+03	0.	275	2	.897E+02	.701E+00
219	1	.897E+02	.154E+00	220	1	.210E+01	0.	275	2	.897E+02	.160E+01
222	1	.897E+02	.206E-01	227	1	.897E+02	.500E+00	275	2	.897E+02	.160E+01
227	3	.897E+02	.106E+01	227	4	.897E+02	.161E+01	275	2	.897E+02	.160E+01
231	1	.897E+02	-.342E+01	232	1	.538E+00	.993E+00	275	2	.897E+02	.160E+01
234	1	.897E+02	.238E+01	242	1	.897E+02	.703E+00	275	2	.897E+02	.160E+01
242	3	.897E+02	.105E+01	242	4	.897E+02	.120E+01	275	2	.897E+02	.160E+01
251	1	.897E+02	.624E-04	252	1	.465E+00	0.	275	2	.897E+02	.160E+01
254	1	.465E+00	0.	255	1	.897E+02	0.	275	2	.897E+02	.160E+01
257	1	.897E+02	.189E-01	259	1	.465E+00	0.	275	2	.897E+02	.160E+01
264	2	.897E+02	.907E+00	264	3	.897E+02	.105E+01	275	2	.897E+02	.160E+01
264	5	.897E+02	.160E+01	273	1	.897E+02	.266E-02	275	2	.897E+02	.160E+01
275	1	.897E+02	-.103E+00	276	1	.465E+00	0.	275	2	.897E+02	.160E+01
278	1	.465E+00	0.	279	1	.897E+02	.871E-01	275	2	.897E+02	.160E+01
282	4	.897E+02	.120E+01	282	2	.897E+02	.902E+00	275	2	.897E+02	.160E+01
282	2	.465E+00	0.	282	5	.897E+02	.160E+01	275	2	.897E+02	.160E+01
285	2	.897E+02	.554E-03	282	2	.897E+02	.460E-02	275	2	.897E+02	.160E+01
288	2	.465E+00	0.	286	2	.465E+00	0.	275	2	.897E+02	.160E+01
288	3	.897E+02	.105E+01	286	4	.897E+02	.702E+00	275	2	.897E+02	.160E+01
273	2	.897E+02	.237E-02	274	2	.465E+00	0.	275	2	.897E+02	.160E+01
276	2	.465E+00	0.	277	2	.897E+02	.196E-02	275	2	.897E+02	.160E+01
279	2	.897E+02	.913E-02	280	2	.465E+00	0.	275	2	.897E+02	.160E+01
284	2	.897E+02	.901E+00	280	3	.897E+02	.120E+01	275	2	.897E+02	.160E+01
289	2	.897E+02	-.676E-04	284	2	.897E+02	-.106E-02	275	2	.897E+02	.160E+01
294	2	.897E+02	.903E+00	290	2	.897E+02	.120E+01	275	2	.897E+02	.160E+01
297	2	.897E+02	-.220E-02	294	3	.897E+02	.120E+01	275	2	.897E+02	.160E+01
300	2	.897E+02	.427E-01	298	2	.897E+02	.761E-01	275	2	.897E+02	.160E+01
303	2	.897E+02	.954E-03	301	1	.160E+01	-.290E-02	275	2	.897E+02	.160E+01
307	2	.160E+01	-.405E-01	305	4	.160E+01	.214E+00	275	2	.897E+02	.160E+01
309	1	.160E+01	.346E-03	307	3	.160E+01	.138E+01	275	2	.897E+02	.160E+01
310	2	.160E+01	.443E-02	310	1	.160E+01	-.630E-02	275	2	.897E+02	.160E+01
315	1	.153E+00	-.629E-03	311	1	.160E+01	.813E-03	275	2	.897E+02	.160E+01
317	1	.160E+01	-.813E-02	312	2	.588E+00	-.259E-04	275	2	.897E+02	.160E+01
323	1	.588E+00	.120E+01	318	2	.465E+00	0.	275	2	.897E+02	.160E+01
324	2	.160E+01	-.140E-01	325	3	.465E+00	.101E+01	275	2	.897E+02	.160E+01
328	4	.588E+00	.346E-03	326	2	.160E+01	-.774E-02	275	2	.897E+02	.160E+01
				329	4	.843E+02	-.356E-02	275	2	.897E+02	.160E+01

VALUES USED FROM GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREDICTIONS

CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON THE A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

CASE NUMBER 1
MACH NUMBER 2.00

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
16	1	.843E+02	.699E+00	18	2	.843E+02	.105E+01	18	3	.843E+02	.120E+01
18	4	.843E+02	.160E+01	18	5	.843E+02	.200E+01	18	1	.588E+00	.100E+01
26	1	.811E+00	-.382E-04	18	1	.588E+00	.102E+01	25	1	.811E+00	.575E-01
29	1	.843E+02	.228E-04	30	1	.843E+02	-.370E-01	28	1	.843E+02	.696E+00
38	2	.843E+02	.105E+01	38	3	.843E+02	.160E+01	38	4	.843E+02	.200E+01
41	1	.843E+02	.761E-03	42	1	.406E+01	0.	43	1	.843E+02	-.220E+00
44	1	.406E+01	0.	45	1	.843E+02	.153E-03	46	1	.843E+02	.403E+00
49	1	.349E+00	0.	47	1	.200E+01	.216E-05	48	1	.465E+00	0.
50	1	.200E+01	.497E-05	51	1	.200E+01	.302E-04	52	1	.200E+01	.194E+00
53	4	.465E+00	0.	47	2	.200E+01	.338E-05	48	5	.465E+00	0.
50	2	.200E+01	.384E-05	51	2	.200E+01	.371E-04	52	2	.200E+01	0.
53	4	.465E+00	0.	55	2	.200E+01	-.368E-02	56	2	.200E+01	.264E+00
57	4	.843E+02	.626E+00	58	4	.843E+02	-.501E+00	62	1	.843E+02	.262E+00
62	2	.843E+02	.700E+00	62	3	.843E+02	.105E+01	62	4	.843E+02	.500E+00
62	5	.843E+02	.200E+01	67	1	.843E+02	.553E-02	68	1	.843E+02	.160E+01
69	1	.843E+02	.473E-02	70	1	.843E+02	-.661E+00	76	1	.843E+02	-.497E+00
76	2	.843E+02	.120E+01	76	3	.843E+02	-.661E+00	76	4	.843E+02	.700E+00
79	1	.843E+02	.356E-01	80	1	.406E+01	0.	84	1	.843E+02	.200E+01
82	1	.406E+01	0.	83	1	.843E+02	.204E-01	84	1	.843E+02	-.395E+00
91	1	.843E+02	.700E+00	91	2	.843E+02	.120E+01	91	3	.843E+02	.977E-01
96	1	.843E+02	.725E-05	91	1	.465E+00	0.	91	1	.843E+02	.160E+01
99	1	.465E+00	0.	106	1	.843E+02	.638E+00	98	1	.843E+02	-.13E-01
105	3	.843E+02	.160E+01	111	1	.843E+02	-.106E-03	98	2	.843E+02	.120E+01
115	1	.843E+02	.591E-01	114	1	.465E+00	0.	112	1	.843E+02	.703E+00
90	2	.843E+02	.110E+01	90	3	.843E+02	0.	96	2	.843E+02	.413E-05
97	2	.465E+00	0.	98	2	.843E+02	-.668E-02	99	2	.465E+00	0.
105	1	.843E+02	.794E+00	105	2	.843E+02	.110E+01	105	3	.843E+02	.160E+01
111	2	.843E+02	.275E-04	112	2	.465E+00	0.	113	2	.843E+02	-.116E+00
119	2	.465E+00	0.	115	2	.200E+01	.306E-03	125	2	.843E+02	.703E+00
126	2	.843E+02	.903E+00	119	3	.843E+02	.160E+01	125	1	.843E+02	-.176E-04
134	2	.843E+02	.626E-02	127	2	.843E+02	-.229E-03	128	2	.843E+02	.314E+00
137	1	.450E+02	.800E+00	135	1	.588E+00	.335E+00	135	1	.512E-02	.138E-01
143	1	.120E+01	.712E+00	144	1	.531E+00	.398E+01	142	1	.205E+04	.117E-01
152	1	.302E+01	.101E+01	145	1	.588E+00	.109E+01	152	1	.897E+02	.703E+00
152	2	.897E+02	.902E+00	152	3	.897E+02	.105E+01	152	4	.897E+02	.120E+01
167	2	.897E+02	.160E+01	155	1	.897E+02	-.117E-03	156	1	.465E+00	0.
177	1	.897E+02	.107E-01	168	1	.465E+00	0.	177	1	.897E+02	.702E+00
177	2	.897E+02	.902E+00	177	3	.897E+02	.106E+01	177	4	.897E+02	.120E+01
192	5	.897E+02	.160E+01	190	1	.897E+02	-.395E-04	191	1	.465E+00	0.
192	1	.897E+02	-.659E-01	193	1	.465E+00	0.	191	1	.897E+02	.717E+00
191	2	.897E+02	.905E+00	151	3	.897E+02	.106E+01	151	4	.897E+02	.160E+01
161	2	.897E+02	-.254E-03	162	2	.465E+00	0.	163	2	.897E+02	.142E-01
164	3	.465E+00	0.	176	1	.897E+02	.638E+00	176	2	.897E+02	.902E+00
176	3	.897E+02	.110E+01	176	1	.897E+02	.150E+01	195	2	.897E+02	.556E-03
187	2	.897E+02	0.	186	1	.897E+02	-.888E-01	199	2	.465E+00	0.
197	1	.897E+02	.700E+00	197	2	.897E+02	-.888E-01	199	3	.897E+02	.123E+01
197	4	.897E+02	.160E+01	207	2	.897E+02	.700E+00	207	3	.897E+02	.902E+00
207	1	.897E+02	.120E+01	207	1	.897E+02	.700E+00	207	2	.897E+02	.902E+00
207	4	.897E+02	.160E+01	207	4	.897E+02	.160E+01	207	2	.897E+02	-.684E-04

CASE NUMBER 1
MACH NUMBER 2.00

VALUES USED FOR 304 GRAPHS IN CALCULATION OF CAPTIVE AIRLOADS PREDICTIONS
CAPTIVE AIRLOADS PREDICTION FOR A
300 GALLON TANK ON T-12 A-7 OUTBOARD
PYLON WITH A 300 GALLON TANK ON THE
CENTER PYLON FOR INTERFERENCE

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE	FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
203	2	.897E+02	.530E-02	212	2	.397E+02	.523E-03	213	2	.897E+02	-.282E-01
217	1	.104E+03	.699E+00	217	2	.104E+03	.120E+01	217	3	.104E+03	.160E+01
217	2	.104E+03	.231E+01	221	1	.588E+00	.660E-03	222	1	.897E+02	.206E-01
223	1	.588E+00	.473E-03	224	1	.897E+02	.210E-01	227	1	.897E+02	.500E+00
227	2	.897E+02	.854E+00	227	3	.897E+02	.108E+01	227	4	.897E+02	.161E+01
227	5	.897E+02	.200E+01	233	1	.897E+02	-.180E-01	234	1	.897E+02	.238E+01
235	1	.897E+02	-.184E-01	236	1	.897E+02	.355E+01	242	1	.897E+02	.703E+00
242	2	.897E+02	.902E+00	242	3	.897E+02	.135E+01	242	4	.897E+02	.120E+01
242	5	.897E+02	.160E+01	255	1	.897E+02	.251E-03	256	1	.465E+00	0.
257	1	.897E+02	-.189E-01	258	1	.465E+00	0.	264	1	.897E+02	.702E+00
264	2	.897E+02	.907E+00	264	3	.897E+02	.105E+01	264	4	.897E+02	.120E+01
264	5	.897E+02	.160E+01	277	1	.897E+02	.111E-03	278	1	.465E+00	0.
279	1	.897E+02	.871E-01	280	1	.465E+00	0.	282	1	.897E+02	.703E+00
282	2	.897E+02	.902E+00	282	3	.897E+02	.105E+01	282	4	.897E+02	.120E+01
282	5	.897E+02	.160E+01	285	1	.465E+00	.554E-13	286	1	.897E+02	.702E+00
285	2	.897E+02	-.301E-01	286	2	.897E+02	0.	286	4	.897E+02	.120E+01
286	5	.897E+02	.907E+00	277	2	.897E+02	.105E+01	278	2	.465E+00	0.
289	2	.897E+02	.160E+01	280	2	.465E+00	.196E-02	284	1	.897E+02	.701E+00
289	5	.897E+02	.901E+00	284	3	.897E+02	.120E+01	284	4	.897E+02	.160E+01
289	2	.897E+02	-.676E-04	290	2	.897E+02	-.108E-02	294	1	.897E+02	.701E+00
294	2	.897E+02	.903E+00	294	3	.897E+02	.120E+01	301	4	.897E+02	.160E+01
299	2	.897E+02	-.858E-03	300	2	.897E+02	.427E-01	301	1	.200E+01	-.172E-02
303	1	.200E+01	.119E-03	303	2	.200E+01	.992E-03	305	4	.200E+01	.181E+00
305	5	.200E+01	.158E+00	307	2	.200E+01	-.405E-01	307	3	.200E+01	-.183E-01
308	1	.465E+00	0.	309	1	.200E+01	.117E-03	310	1	.200E+01	-.564E-02
309	2	.200E+01	-.418E-03	310	2	.200E+01	.417E-02	311	1	.200E+01	.143E-02
313	1	.200E+01	.127E-01	315	1	.153E+00	-.629E-03	318	2	.465E+00	0.
314	2	.588E+00	-.117E-01	317	1	.200E+01	-.675E-02	318	2	.465E+00	0.
322	1	.843E+02	-.377E-01	323	1	.588E+00	.120E+01	325	3	.465E+00	.101E+01
324	1	.200E+01	-.102E-01	324	2	.200E+01	-.114E-01	326	2	.200E+01	-.694E-02
327	4	.265E+02	.149E-03	328	4	.588E+00	.346E-13	329	4	.843E+02	-.356E-02

TEST06E //// END OF LIST ////
TEST06E //// END OF LIST ////

ROUTINE LISTING

39/20/76 17.02.53

FTN 4.5-13

BLOCK DATA BLK000 74/74 CPT=1

```

1      BLOCK DATA BLK000
2      *****
3      THIS BLOCK DATA ROUTINE STORES VALUES INTO THE PROGRAM
4      AREA. WILL NOT CHANGE DURING EXECUTION.
5      *****
6      NOPTS(*) = THE INITIALS OF THE ROUTINES TO BE SELECTED
7      FOR CALCULATION OR OUTPUT
8      *****
9      ITYPE(*) = THE TYPES OF INPUT CARDS
10     *****
11     NTYPES(*) = THE TYPE OF BODY SEGMENT USED ON AREA CARDS
12     *****
13     ICNFGS(*) = THE TYPE OF STORE CONFIGURATION USED IN
14     THE ROLLING MOMENT ROUTINE.
15     *****
16     1 = SYMMETRIC CURVE
17     2 = NON SYMMETRIC CURVE
18     3 = FINS AT 90 DEGREES
19     4 = FINS AT 45 DEGREES
20     5 = NOT USED
21     *****
22     REALM(1) = THE FIRST MACH NUMBER RUN IS ALWAYS 0.5
23     ISTAR(1) = ARRAY CONTAINING THE OUT-OF-RANGE INDICATORS
24     *****
25     SUBSCRIPT 1 = CALCULATION NUMBER
26     SUBSCRIPT 2 = MACH NUMBER
27     *****
28     COMMON/COMSTR/ ISTAR(46,7), IOSTAR
29     COMMON/COMINH/ ITYPE(14), NTYPES( 4), NOPTS(7), ICNFGS(5)
30     COMMON/COMINF/ AKRM, AKINF, AKN, AKNB, AKTB, AKWB, AKWBI,
31     ALAWJA, ALEFIN(5), ALINF1, ALINF2, ALINF3, ALINF4, ALINF5, ALINF6,
32     ALINF7, ALINF8, ALINF9, ALINF10, ALINF11, ALINF12, ALINF13,
33     ALINF14, ALINF15, ALINF16, ALINF17, ALINF18, ALINF19, ALINF20,
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09/20/76 17.02.53

FIN 4.5+410

74/74 OPT=1

BLOCK DATA BLKFIL

```

1      C      BLOCK DATA BLKFIL
      C      .....
      C      * LOADS FILE IDENTIFICATION WITH FILE NUMBER.
      C      .....
5      C      .....
      C      .....
      C      COMMON/FILES/DATAC,DATIL,GRAPHS,ERROR,IERSUM,OUTPT,REMOVE,TAPL IN
      C      INTEGER DATAC,DATIL,GRAPHS,OUTPT,REMOVE,TAPL IN
      C      DATA DATAC,DATIL,GRAPHS,ERROR,IERSUM,OUTPT,REMOVE,TAPL IN /
      C      2, 5, 1, 3, 4, 6, 7, 8 /
10     END

```


09/20/76 17.02.53

FTN 4.5+410

PROGRAM STORES 74/74 OPT=1

100 CONTINUE
STOP
END

60

DIAGNOSIS OF PROBLEMS
CAPJ NR. SEVERITY DETAILS CONTROL VARIABLE IN COMMON OR EQUIVALENCES, OPTIMIZATION MAY BE INHIBITED.

36 1

SUPERJULINE CHECKER 4/7/76 17.02.53

```

1      SUBROUTINE CHECKP
2      .....
3      * THIS ROUTINE ASSIGNS AN INPUT CODE TO EACH CARD IN THE
4      * INPUT STREAM. THE ASSIGNED VALUES ARE BATTERED INTO
5      * GROUPS ACCORDING TO CASE NUMBER AS WELL AS CARD NUMBER.
6      * IF THIS ROUTINE SEVERAL DATA FIELDS ARE CHECKED TO
7      * DETERMINE IF DATA HAS BEEN ENTERED.
8      * CASES(1,*) = ARRAY CONTAINING THE INPUT CODES FOR EACH
9      * CARD INPUT (ITYPE 1-14)
10     * SUBSCRIPT 1 = CASE NUMBER
11     * SUBSCRIPT 2 = INPUT CODE AS DEFINED
12     * IN BLKRD
13     .....
15     COMMON/COMMONA/ ITYPE(14), IYPES( 4), NUFINS(7), ICHFS(5)
16     COMMON/COMMONC/ DUM1, ITHACH, KRTYPE(14), NCASE, NCASES(5,94), NUMCAS,
17     * NUMCRD(5), NYACH
18     COMMON/FILES/DATIN, GRAPHS, IERROR, IERSUM, OUTPT, REMOVE, TAPEIN
19     * INTEGER DATAC, DATIN, GRAPHS, OUTPT, REMOVE, TAPEIN
20     COMMON/COMMONP/ AKBH, AKINTF, AKN, AKNB, AKTB, AKWB, AKWBI,
21     * ALAMDA, ALEFIN(5), ALINFI, ALINFO, ALINT, I(5), ANUSSEL,
22     * CDOISO, CLAISO, CLOCAL, OINTFI, DINTFO, HMOUF,
23     * ICASE, ICONF, IMAGE( 9), ISYM, ITITLE(36),
24     * NSFG(4,2), NSTYPE(4,2), PXCCML, PEALM(8), SEGL,
25     * SML, SPAT(4,2), STORED, STOREL, SUMPA, TAILPA,
26     * XINGPA, XMSG, XGG, XINTFI, XINTFC, YBIG, YBL,
27     * YINTFI, YINTFO, Y1, YIPRM, ZFH, ZFLNSP
28     .....
29     COMMON/COMMONP/ IERO
30     NCARD = 0
31     NCASE = 1
32     100 READ(DATIN,1) IMAGE
33     1 FORMAT(A1,A2,7A10)
34     IF (EOF(DATIN).NE.0) GO TO 1000
35     IF (IMAGE(1).EQ.8) NCASE=1000
36     IF (NCASE.EQ.6) CALL EPOOF(17)
37     NCARD = NCARD + 1
38     NUMCRD(NCASE) = NCARD
39     DO 200 I=1,14
40     IF (IMAGE(1).EQ.ITYPE(I)) GO TO 300
41     200 CONTINUE
42     NUMCAS = 1
43     CALL EPOOF(11)
44     300 CONTINUE
45     C **** TEST IF THE ANGLE OF THE LEADING EDGE OF THE FILM IS UNDEFINED
46     C **** IF (I.EQ.5.AND. IMAGE(5).EQ.10H
47     C **** ) ALEFIN(NCASE)=1234321.
48     C ****
49     C **** TEST IF THE LENGTH OF THE INLET IS DEFINED
50     C **** IF (I.EQ.11.AND. IMAGE(5).EQ.10H
51     C **** ) ALINFI(NCASE)=1234321.
52     C ****
53     15 CONTINUE
54     WRITE(TAPEIN,1) IMAGE
55     IF (IMAGE(1).EQ.3) NCASE=1000
56     GO TO 100

```

09/20/76 17.02.53

FIN 4.5+4.10

SUBROUTINE CHECKP 74/74 OPT=1

```

10 CONTINUE
C *** END OF CASE FOUND
  NCASE = NCASE + 1
  NCARD = 0
  GO TO 100
1000 IF (NCARD.EQ.0) NCASF = NCASE - 1
      IF (NCASE.EQ.0) CALL ERPOF(16)
      KEHIND TAPFIN
      IF (IERR.EQ.0) GO TO 1001
      CALL POINTP(4)
      STOP
1001 RETURN
      END

```

60

65

70

```

1  SUBROUTINE READIN
2
3  * THIS ROUTINE READS INPUT INTO EACH CASE.
4  * STORED = STORE DIAMETER
5  * STOREL = STORE LENGTH
6  * INPUTS REQUIRED FOR ICASE = 1
7  * AKN = KN FROM AFATL TP-75-87
8  * AK3W = K3(W) FROM AFATL TP-75-87
9  * AK3E = K3(E) FROM AFATL TP-75-87
10 * INPUTS REQUIRED FOR ICASE 2
11 * AKN8 = KN/3 FROM AFATL TP-75-87
12 * AK13 = K1/3 FROM AFATL TP-75-87
13 * AKWHI = KW/3 FROM AFATL TP-75-87
14 * AKINTF = KINTF FROM AFATL TP-75-87
15 * INPUTS REQUIRED FOR ICASE 3
16 * *** ONLY ICASE = 3 ***
17 * ICONFG = CONFIGURATION STORE IS IN (+) = WING VERT.
18 * (X) = WING 45 DEG.
19 * (1) = SYMMETRIC PM
20 * (2) = NO SYMMETRY
21 * ( ) = NOT USED
22
23 * ALANDA = AIRCRAFT WING SWEEP ANGLE
24 * ALFIN = STORE FIN SWEEP ANGLE
25 * ALINTL(+) = MINIMUM DISTANCE FROM STORE TO INLET
26 * ANOSEL = LENGTH OF NOSE
27 * ALINFI = LENGTH OF INBOARD INTERFERING STORE
28 * ALINFO = LENGTH OF OUTBOARD INTERFERING STORE
29 * CJOI30 = ISOLATED STAKE DRAG COEFFICIENT
30 * CLAI30 = ISOLATED STORE LIFT CURVE SLOPE
31 * CLUCAL = LOCAL CHORD LENGTH
32 * DINIFI = DIAMETER OF INBOARD INTERFERING STORE
33 * DINIFO = DIAMETER OF OUTBOARD INTERFERING STORE
34 * INPORA(+) = INPUT OPTION DEFINED IN BLKRD WHICH
35 * TURNS ON BOTH CALCULATION AND PRINT GRAM
36 * DUMP FOR THE CHOSEN COMPONENT
37 * INPTOP(+) = INPUT OPTION DEFINED IN BLKRD WHICH WILL
38 * TURN ON THE CALCULATION FOR THE CHOSEN
39 * COMPONENT
40 * ISYM = OPTION TO CHOOSE PLAN PROJECTED AREA EQUAL
41 * TO SIDE PROJECTED AREA (SPA=PPA)
42 *
43 * <ROVTP(+) = ARRAY CONTAINING THE NUMBER OF CARDS FOR
44 * EACH INPUT CODE AS REFERENCED BY ITYPE 1-14
45 * NSEG(+,*) = SEGMENT NUMBER OF SECTION
46 * 1) SUBSCRIPT 1 = SEGMENT NUMBER
47 * 2) SUBSCRIPT 2
48 * A) 1 = SIDE PROJECTED AREA
49 * B) 2 = PLAN PROJECTED AREA
50 * SPAT(+,*) = SECTIONAL AREAS (SQ.IN.)
51 * SUBSRIPT 1 = NUMBER OF SEGMENT
52 * SUBSCRIPT 2 = A) SPA B) PPA
53 * SEGL = SEGMENT CONSTANT LENGTH AS MEASURED ALONG
54 * THE LONGITUDINAL POSITIVE AXIS.
55 * SML = MID LUG POSITION OF STORE
56 * NSTYPE(+,*) = SEGMENT TYPE
57 * 1) SUBSCRIPT 1 = N=NOSE,B=BODY,W=WING,

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39/20/75 17.02.53

FIV 7.5+1.1

SEQUENCE READING 74/74 C=1

```

115 DO 1000 MCARD=1,INJ)
      INPTYP = NCASES(MCARD,ICARD)
      KOSTYP(INPTYP) = KOSTYP(INPTYP) + 1
      I = KOSTYP(INPTYP)
      IF(INPTYP.LE.3.OR.I.LE.100.INPTYP.GE.100)GO TO 5
      IODR = IERP
      IERR = INPTYP
      CALL ERROR(15)
      IERR = IODR
      * CONTINUE
125 GO TO(10,20,30,40,50,60,70,75,80,90,95,100,500,500),INPTYP
10 CONTINUE
      IF(I.GT.4)CALL ERROR(3)
      IF(I.GT.4)GO TO 500
      ISTR = (I-1) * 9 + 1
      ISTOP = I * 9
      READ(TAPEIN,1000)(ITITLE(J),J=ISTR,ISTOP)
130 FORMAT(9X,9A8)
      GO TO 1000
      C ****
135 C ***** DEAD IN STORE AREA (EITHER SIDE PROJECTEL OR PLAN PROJECTEL)
      C *****
20 INAREA = INPTYP - 1
      IF(I.GT.40)CALL ERROR(7)
      READ(TAPEIN,1000)NSEG(I,INAREA),NSTYPE(I,INAREA),SEAT(I,INAREA)
140 FORMAT(4X,15,41,510.4)
      IF(IPAT(I,INAREA).E.0.0) IERR = INPTYP
      IF(IPAT(I,INAREA).E.0.0)CALL ERROR(21)
      GO TO 23 IFUSTN = 1,4
      IF(NSTYPE(I,INAREA).NE.NSTYPES(IPOSTN))GO TO 23
      NSTYPE(I,INAREA) = IPOSTN
      IF(NSEG(I,INAREA).E.0.0)CALL ERROR(5)
      GO TO 1000
23 CONTINUE
      IERR = INPTYP
      CALL ERROR(4)
      GO TO 1000
25 IERR = INPTYP
      CALL ERROR(7)
      GO TO 1000
155 C ***** STOPPED TYPE CARD
      40 READ(TAPEIN,1000) ICASE,AKN,AKSW,AKNB,AKNB,AKTB,AKWBI,
          AKINTF
160 FORMAT(4X,12,7F10.4)
      IF(ICASE.LI.1.00)ICASE,GT.3)CALL ERROR(8)
      C ***** STORE WITH WING AT AFT END OF BODY
      IF(ICASE.NF.1)GO TO 41
      IF(AKNB*AKTB*AKWBI*AKINTF).NE.0.0)CALL ERROR(9)
      IF(AKNB.EQ.0.0.OR.AKTB.EQ.0.0.OR.AKWBI.EQ.0.0.OR.AKINTF.EQ.0.0)
          CALL ERROR(22)
      GO TO 47
165 41 CONTINUE
      C ***** STORE WITH WING ON FORWARD BODY AND TAIL ON AFT END
      IF(ICASE.NE.2)GO TO 42
      IF(AKNB*AKSW*AKWBI).NE.0.0)CALL ERROR(9)
      IF(AKNB.EQ.0.0.OR.AKTB.EQ.0.0.OR.AKWBI.EQ.0.0.OR.AKINTF.EQ.0.0)
          CALL ERROR(23)
      GO TO 47
170 42 CONTINUE

```

```

C **** UNFINISHED STORE
42 CONTINUE
  IF ((AKN+AKSH+AKWB+AKNB+AKTB+AKMBI).NE.0.0)CALL ERPR(9)
47 CONTINUE
  GO TO 1000
C **** STORE2 TYPE CARD
50 READ(TAPEIN,1080)STOREL,STORED,ANOSL,ALFN,CLAISO,CQUISJ,XCG
  IF (ALEFIN(NUMCAS).NE.1234321.)ALEFIN(NUMCAS) = ALFN
  DO 53 ICK=NUMCAS,5
    ALEFIN(ICK) = ALEFIN(NUMCAS)
53 CONTINUE
  IF (STOREL.LE.0.0.OR.STORED.LE.0.0.OR.XCG.LE.0.0)CALL _ ERROR(18)
  ANOSL = ANOSL / 12.0
  STORED = STORED / 12.0
  CLAISO = CLAISO * 0.785398164 * STORED * STORED
  GO TO 1000
C **** STORE3 TYPE CARD
60 READ(TAPEIN,1050)ICONFG,ISYM,WINGPA,TAILE4,SUMPA
  IF ((ISYM.EQ.1H+.OR.ISYM.EQ.1HX).AND.(WINGPA+TAILPA+SUMPA).NE.0)
    * CALL ERPR(23)
1050 FORMAT(9X,A1,X4,A7,5F10.4)
  IF (ISYM.EQ.7HSP+P04.0R.ISYM.EQ.7H
    IERR = ISYM
    CALL ERPR(13)
62 DO 63 J=1,5
  IF (ICONFG.NE.ICONFGS(J))GO TO 67
  ICSY4 = J
  GO TO 64
63 CONTINUE
  IERR = ICONFG
  CALL ERPR(14)
64 CONTINUE
  GO TO 1000
C **** STORE4 TYPE CARD
70 READ(TAPEIN,1080)XINTFO,YINTFO,JINTFO,XINTFI,YINTFI,DINTFI
  DINTFO = DINTFO / 12.0
  DINTFI = DINTFI / 12.0
  GO TO 1000
C **** STORE5 TYPE CARD
75 READ(TAPEIN,1080)ALINFO,ALINFI,ZPLNSP,SMLSEGL,YLPDM
  IF (SML.EQ.0.03.SEGL.EQ.0.0)CALL ERPR(19)
  GO TO 1000
C **** AERO TYPE CARD
80 READ(TAPEIN,1080)(REALM(IMACH),IMACH=2,8)
  IMACH1 = 1
1090 FORMAT(10X,7F10.4)
  NMACH = 1
  DO 85 I=2,8
    IF (REALM(I).LE.7.0)GO TO 85
    IF (REALM(I).LT.1.5)REALM(I)=1.2*0.0GO TO 83
    IF (REALM(I).EQ.0.5)IMACH1 = 3
    IF (REALM(I).EQ.0.5)GO TO 85
    NMACH = NMACH + 1
  REALM(NMACH) = REALM(I)
  GO TO 85
  03 QU=1 = REALM(I)
  CALL ERPR(10)

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EXECUTIVE REPLY 7-176 0-17-1

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85 CONTINUE
90 TO 1000
C *** A/C TYPE CARD
90 READ(TAPEIN,100)CLICAL,PXCMPL,MSS,Y3IG,YBL,Y1
IF(LOCAL.CL=0.0)MSS=2U.7.0.0.Y3IG=7.0.0.0.YBL=6.0.0.0)
CALL EROR(20)
Y1 = Y1 / 12.0
GO TO 1000
C *** A/C2 TYPE CARD
95 READ(TAPEIN,100)ALAMO,ZFH,ALZZ,HWOHF
IF(ALINLT(NUMCAS).NE.1234321.)ALINLT(NUMCAS) = ALZZ
DO 97 ICK=NUMCAS,F
ALINLT(IK) = ALINLT(NUMCAS)
97 CONTINUE
ALAMO = ALAMO * 0.01745329252
GO TO 1000
C *** OPTION TYPE CARD
100 READ(TAPEIN,100)IYETOP,INPGR
110 FORMAT(10X,7(A2,1X),9X,7(A2,1X))
IFND = 0
DO 105 I=1,7
ICLSG(I) = 0
ICALOK(I) = 0
105 CONTINUE
DO 120 J=1,7
DO 110 J=1,7
IF(J.NE.TOP(I).NE.NOPTS(J))GO TO 108
ICALSG(J) = 1
108 IF(INPGR(I).NE.NOPTS(J))GO TO 110
ICALSG(J) = 1
ICALGP(J) = 1
IFND = 1
GO TO 120
110 CONTINUE
120 CONTINUE
GO TO 000
500 READ(TAPEIN,100)
1000 CONTINUE
JOUTPT = 0
DO 505 JFIND=1,7
IF(ICLSG(JFIND).NE.0)JOUTPT = 1
505 CONTINUE
IF(JOUTPT.EQ.0)CALL ERROR(10)
DO 507 J=1,12
IF(J.EQ.1.OR.J.EQ.3.OR.J.EQ.7.OR.KRDTYP(J).NE.0)GO TO 507
IERR = J
CALL ERROR(24)
507 CONTINUE
IF(ICLSG(15).NE.0.AND.CEOISO.EQ.0.0)CALL ERROR(25)
DO 508 J=1,4
IF(ICLSG(J).EQ.0.0)CLAISO.NE.0.0.OR.KRDTYP(12).EQ.0.0R.
* KRDTYP(5).EQ.0)GO TO 508
IERR = J
CALL ERROR(26)
508 CONTINUE
IF(ICONFG.EQ.7H
AND.KRDTYP(3).EQ.0)CALL ERROR(27)
IF(KRDTYP(1).EQ.0.AND.NUMCAS.EQ.1)CALL ERFOR(1)

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09/20/76 17.02.53

FTN 4.54410

SUBROUTINE READIN 74/74 OPT=1

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290      IF(KRDTYP(1).GT.0.0).KDTYP(1).LT.4)CALL ERROR(2)
      IF(JERPEQ.0) GO TO 510
      CALL PRINTR(4)
      STOP
      510 CONTINUE
      C ****
      C **** SORT SPA AND PPA CARDS (IF ANY) INTO ASCENDING ORDER
      C ****
      DO 600 INDXP = 1,2
      INDX1 = KRDTYP(INDXP+1)
      IF(INDX1.EQ.0)GO TO 600
      INDX2 = INDX1 - 1
      DO 500 I=1,INDX2
      IP1 = I + 1
      DO 560 J=IP1,INDX1
      IF(NSEG(I,INDXP) - NSEG(J,INDXP))560,540,550
      540 IF(NSTYP(I,INDXP) - NSTYPE(J,INDXP))560,540,550
      550 ITEMP1 = NSEG(I,INDXP)
      ITEMP2 = NSTYP(I,INDXP)
      TEMP1 = SPAT(I,INDXP)
      NSEG(I,INDXP) = NSEG(J,INDXP)
      NSTYP(I,INDXP) = NSTYPE(J,INDXP)
      SPAT(I,INDXP) = SPAT(J,INDXP)
      NSEG(J,INDXP) = ITEMP1
      NSTYPE(J,INDXP) = ITEMP2
      SPAT(J,INDXP) = TEMP1
      560 CONTINUE
      600 CONTINUE
      RETURN
      END
      515

```

09/28/70 17.02.53

FIN 4.51+13

74/74 037=1

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SUBROUTINE INITIAL
.....
* SUBROUTINE TO DO INITIAL SETUP AS WELL AS CALCULATE
* THE INITIAL PREDICTIONS
*
* DLLE = DISTANCE FROM FORWARD MOST POINT OF
* THE INSTALLED STORE TO THE WING
* LEADING EDGE AS MEASURED IN THE WING
* PLAN VIEW (POSITIVE).
*
* SEGT(*) = SUM OF PLAN PROJECTED AREAS CUMULATIVE
* SEGMENT
*
* SEGNOI(*) = SUM OF ADJUSTED PLAN PROJECTED AREAS
* CUMULATIVE SEGMENTS
*
* SMID(*) = MIDPOINT OF A SECTIONAL SEGMENT
*
* SMIOI(*) = SEGMENT MIDPOINTS RELATIVE TO STORE
* SEGMENTS
*
* AREASP(*,*) = SEGMENT TYPE CUMULATIVE AREAS
*
* 1) SUBSCRIPT 1
*   A) 1 = NOSE B) 2 = BODY
*   C) 3 = WING D) 4 = TAIL
*
* 2) SUBSCRIPT 2
*   A) 1 = SIDE PROJECTED AREAS
*   B) 2 = PLAN PROJECTED AREAS
*
* AKNOSE(*) = 1=KNOSE FOR SPA
*            2=KNOSE FOR PPA
*
* AKWING(*) = 1=KWING FOR SPA
*            2=KWING FOR PPA
*
* AKTAIL(*) = 1=KTAIL FOR SPA
*            2=KTAIL FOR PPA
*
* SAJUSP(*,*) = SUM OF ADJUSTED SPA
* SUBSCRIPT 1 = TYPE OF SEGMENT
* SUBSCRIPT 2 = 1 SIDE FORCE
*              2 NORMAL FORCE
*
* INDX = 1=SIDE FORCE CALCULATION
*        2=NORMAL FORCE CALCULATION
*
* SPADJ(*,*) = ADJUSTED AREAS FOR EACH SEGMENT
* SUBSCRIPT 1 = NUMBER OF SEGMENT
* SUBSCRIPT 2 = 1=SPA
*              2=RPA
*
* SPADJS(*) = 1=ADJUSTED SPA TOTAL FOR SIDE FORCE
*            2=ADJUSTED PPA TOTAL FOR NORMAL FORCE
*
* SPATSP(*) = 1=SPA TOTAL FOR SIDE FORCE
*            2=PPA TOTAL FOR NORMAL FORCE
*
* AKCSF(*) = 1= ADJUSTED SPA / SPA TOTAL
*           2= ADJUSTED PPA / PPA TOTAL
*
* PREDN(*) = 1=SIDE FORCE INITIAL PREDICTION
*           2=NORMAL FORCE INITIAL PREDICTION
*
* KROTP(*) = THE NUMBER OF CARDS OF A PARTICULAR TYPE
* FOR THE CASE BEING CALCULATED
*
* NCASES(*,*) = THE TYPE OF CASE FOR (CASE NO., CARD NO.)
*
* XMOH(*) = DISTANCE FROM STORE MLP TO AREA SEGMENT
* PPAJFW = ADJUSTED PLAN PROJECTED AREA FORWARD OF THE
* WING
*
* PPFH = PLAN PROJECTED AREA FORWARD OF THE WING
* PREP4 = INITIAL PREDICTION PITCHING MOMENT

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09/20/76 17.02.53

FTN 4.5+410

SUEROUTINE INITIAL 74/74 OPT=1

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175      AKINTF = 1.0
      GO TO 300
225      AKNOSE(INDX) = AKNB * AREASP(2,INDX) / AREASP(1,INDX)
      AREAWG = AREASP(3,INDX)
      AREATL = AREASP(4,INDX)
      IF(INDSYM .GE.3) AREAWG = WINGPA
      IF(INDSYM .GE.3) AREATL = TAILPA
      AKTAIL(INDX) = AKTB * (AREASP(2,INDX)+AREASP(1,INDX)) /
      * (AREATL / AC04FG)
      * AKHNG(INDX) = AKHBI * (AREASP(2,INDX)+AREASP(1,INDX)) /
      * (ARFAWG / AC04FG)
      GO TO 300
250      AKNOSE(INDX) = 2.0
      AKHNG(INDX) = 1.0
      AKINTF = 1.0
300      CONTINUE
      DO 450 I=1,INDG
      XOC = SHID(I) / CL02AL
      CALL LININT(6-INDX,1,XOC,DEPT)
      KIP = HSTYPE(I,INDX)
      GO TO (400,410,420,430),KIP
400      ANOSEK = AKNOSE(INDX)
      AHNGK = 1.0
      GO TO 440
410      ANOSEK = 1.0
      AHNGK = 1.0
      GO TO 440
420      ANOSEK = 1.0
      AHNGK = AKHNG(INDX)
      GO TO 440
430      ANOSEK = 1.0
      AHNGK = AKTAIL(INDX) * AKINTF
440      CONTINUE
      SP40J = DEPT * ANOSEK * AHNGK * SPAT(I,INDX)
      SP44GJ(I,INDX) = SP40J
      SP4JSP(KIP,INDX) = SP4JSP(KIP,INDX) + SP40J
      SP4GJS(INDX) = SP4GJS(INDX) + SP40J
      SP4TSP(INDX) = SP4TSP(INDX) + SP40J
450      CONTINUE
      AKCSF(INDX) = SP4GJS(INDX) / SP4TSP(INDX)
      PREJN(INDX) = CL4ISD * AKCSF(INDX)
475      CONTINUE
C *****
C ***** STJP TO CALCULATE ADJUSTED PLAN PROJECTED AREA FORWARD
C ***** OF WING AND ALSO SHADDED AREA
C *****
      MSGPM1 = KRDTYF(3) - 1
      SEG4J(1) = SP44GJ(1,2)
      SEG1(1) = SP4T(1,2)
      SH1J(1) = SHID(1)
      NSGTOT = 1
      DO 575 I=1,MSGPM1
      IF(MSG1(I,2).EQ.MSEG1(I,2)) GO TO 570
      NSGTOT = NSGTOT + 1
      SEG1(NSGTOT) = 0.0
      SEG4J(NSGTOT) = 0.0
      SH1J(NSGTOT) = 0.0
575

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J9/20/76 17.02.53

FTN 4.3*410

SUBROUTINE INITIAL 76/76 OPT=1

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210 570 SEGT(NSGTOT) = SEGT(NSGTOT) + SPAT(I+1,2)
    SEGACT(NSGTOT) = SEGACT(NSGTOT) + SPABDJ(I+1,2)
    SHIO(NSGTOT) = SHIO(I+1)
    575 CONTINUE
    C ****
    C **** CALCULATION OF FTN AND WING ADJUSTED PLAN PROJECTED AREA
    C **** BETWEEN X/C OF 1.0 AND 1.1
    C ****
    PAXC = 0.0
    NPPAS = XPDTIVE(3)
    DO 515 I=1,NPPAS
    IF(NSIYPE(I,2).NE.2)GO TO 515
    IF(1) = SHIO(I) / CLOCAL
    IF(TEMP1.01.1.CAND.TEMP1.1".1.1)PAXC = PAXC + SPABDJ(I,2)
    515 CONTINUE
    PPAJFW = 0.0
    PPFW = 0.0
    XDU12 = SEGL / 2.0
    DO 590 I=1,NSGTOT
    XDU13 = SHIO(I) + XDU12
    IF(XDU13.01.0.0) GO TO 595
    IF(XDU13/SEGL).GT.1.0)GO TO 580
    PPAJFW = PPAJFW + SEGACT(I)
    PPFW = PPFW + SEGT(I)
    GO TO 590
    580 PPAJFW = PPAJFW - XDU13 / SEGL * SEGACT(I)
    PPFW = PPFW - XDU13/SEGL * SEGT(I)
    GO TO 595
    590 CONTINUE
    595 CONTINUE
    SHDARA = (SPATSP(2) - PPFW) / 144.
    C **** FITTING MOMENT SLOPE PREDICTION
    SPXMPH = 0.0
    DO 350 I=1,INOC
    PAMOPM(I) = XMOY(I) * SPABDJ(I,2)
    SPXMPH = SPXMPH + PAMOPM(I)
    350 CONTINUE
    AKCPH = SPXMPH / SPATSP(2)
    PREPH = CLAISO * AKCPH
    C **** YAHING MOMENT INITIAL PREDICTION
    SPXMYH = 0.0
    IFIN = 3
    IF(ICASE.EQ.2)IFIN = 4
    DO 600 I=1,INOC
    PXMYM(I) = XMOY(I) * SPABDJ(I,1)
    IF(NSIYPE(I,1).EQ.IFIN) GO TO 600
    SPXMYH = SPXMYH + PXMYM(I)
    600 CONTINUE
    AKCYH = SPXMYH / SPATSP(2)
    PREYH = AKCYH * CLAISO
    RETURN
    END

```

```

1 SUBROUTINE PRINTR(IFILE)
2 .....
3 SUBROUTINE TO COPY FILES TO OUTPUT
4 1) ALL COPIES OF INTAKE WILL POSITION INTAKE AT
5 THE BEGINNING OF THE NEXT DATA SET.
6 2) IN ALL CASES THE ENTIRE DATA SET IS COPIED TO
7 OUTPUT
8 3) VARIABLES
9 IFILE = 1 COPIES FILE TAPEIN
10 IFILE = 2 COPIES FILE TAPEIN AND CATAL
11 IFILE = 3 COPIES FILE TAPEIN, DATA, IERRO AND
12 IERSUM
13 IFILE = 4 COPIES FILE TAPEIN AND IERRO
14 IFILE = 5 COPIES FILE DATA
15 IFILE = 6 COPIES FILE DATA AND IERRO
16 IFILE = 7 COPIES FILE IERRO
17 IFILE = 8 COPIES FILE REMOVE
18 .....
19 4) THIS ROUTINE ASSURES FILES ARE DEFINED (BLKFIL)
20 .....
21 COMMON/COHINC/ JUM1,IMACH,KROTP(14),NCASE,NCASES(5,94),NUMCAS,
22 NUMCRD(5),NTACH
23 COMMON/FILES/DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
24 INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
25 COMMON/COHERR/ IERR
26 DIMENSION ICOPY(17)
27 IF(IFILE.EQ.8)GO TO 410
28 IF(IFILE.EQ.4)GO TO 200
29 IF(IFILE.EQ.1)GO TO 25
30 WRITE(OUTPT,1000)NUMCAS
31 FORMAT(1H1,40X,35HINPUT DATA PLAYBACK FOR CASE NUMBER ,I5)
32 IF(IERR.EQ.1)WRITE(OUTPT,1150)NCASE
33 FORMAT(1H1,83X,2H- ,I5)
34 P=MIN(TAPEIN
35 IF(IERR.EQ.1)GO TO 75
36 DO 50 I=1,NUMCAS
37 ILINAS = 1
38 NCARDS = NUMCRD(I)
39 DO 25 J=1,NCARDS
40 ILINAS = ILINAS + 1
41 READ(TAPEIN,101)ICOPY
42 IF(I.EQ.NUMCAS)WRITE(OUTPT,102)ICOPY
43 IF(ILINAS.LT.50)GO TO 25
44 WRITE(OUTPT,1000)NUMCAS
45 IF(IERR.EQ.1)WRITE(OUTPT,1150)NCASE
46 ILINAS = 1
47 25 CONTINUE
48 50 CONTINUE
49 GO TO 200
50 75 CONTINUE
51 ILINAS = 1
52 READ(TAPEIN,101)ICOPY
53 ILINAS = ILINAS + 1
54 IF(ILINAS.EQ.50)GO TO 200
55 IF(EOF(TAPEIN))GO TO 200
56 WRITE(OUTPT,102)ICOPY

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FIN --54410

COMPUTER PRINT 7/76 03:51

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102 FORN(C1,16A8,14)
  IF (C1*MS.LT.5) GO TO 104
  WRITE(OUTPT,100)NUNCAS
  WRITE(OUTPT,115)NCAISE
  ILINAS = 1
104 CONTINUE
  GO TO 108
209 IF (IFILE.LT.2.OR.IFILE.EQ.4.OR.IFILE.EQ.7) GO TO 300
  REWIND DATAC
210 READ(DATAC,101)ICOPY
  IF (EOF(DATAC).NE.0) GO TO 220
  WRITE(OUTPT,101)ICOPY
  GO TO 210
220 REWIND DATAC
  ENDFILE DATAC
  REWIND DATAC
300 IF (IFILE.LT.3.OR.IFILE.EQ.5) GO TO 400
  ITEM = 1
  REWIND IERSUM
310 READ(IERSUM,101)ICOPY
  IF (EOF(IERSUM).NE.0) GO TO 320
  ITEM = ITEM + 1
  WRITE(OUTPT,101)ICOPY
  GO TO 310
320 CONTINUE
  IF (ITEM.LE.7.AND.IERR.NE.1) WRITE(OUTPT,1300)
1300 FORNAT(//6X,12H*** HOME *** )
  ENDFILE IERSUM
  REWIND IERSUM
  REWIND IERSUM
  IF (IFILE.NE.3) GO TO 400
  ITEM = 1
  REWIND IERSUM
330 READ(IERSUM,101)ICOPY
  IF (EOF(IERSUM).NE.0) GO TO 360
  ITEM = ITEM + 1
  WRITE(OUTPT,101)ICOPY
  GO TO 330
360 IF (ITEM.LE.5) WRITE(OUTPT,1300)
  REWIND IERSUM
  ENDFILE IERSUM
  REWIND IERSUM
  RETURN
410 CONTINUE
  REWIND REMOVE
420 READ(REMOVE,101)ICOPY
  IF (EOF(REMOVE).NE.0) GO TO 430
  WRITE(OUTPT,101)ICOPY
  GO TO 420
430 REWIND REMOVE
  ENDFILE REMOVE
  RETURN
  END

```

```

1      SUBROUTINE ERROR(INDEX)
2      .....
3      * ROUTINE CALLED WHENEVER A WARNING MESSAGE OR AN ERROR
4      * MESSAGE IS OUTPUT.
5      .....
6      COMMON/COMLIN/ NPRE,NPRE,NPCINT,X(80),Y(80),BAUX,8ADY
7      COMMON/FILES/DATAC,DATIN,GRAPHIS,IERERR,IERSUM,OUTPT,REMOVE,TAPEIN
8      INTEGED,DATAC,DATIN,GRAPHIS,OUTPT,REMOVE,TAPEIN
9      COMMON/COMINP/ AKBN,AKINTF,AKN,AKNB,AKTB,AKWB,AKMBI,
10     ALAMDA,ALEFIN(5),ALINFI,ALINFI,ALINFI,ALINFI(5),ANCSL,
11     GOOISO,CLAISO,CLUAL,CLINTF,CLINTF,CLINTF(5),ANCSL,
12     ICASE,ICONFS,IMAGE( 9),ISYP,ITITLE(36),
13     NSEG(40,2),NSTYPE(40,2),PXCHML,PEALM(3),SEGL,
14     SXL,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
15     WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
16     YINTFI,YINTFO,YI,YIFRH,ZPH,ZPLNSP
17     COMMON/COMINC/ DUM1,IMACH,KROTP(14),NCASE,NCASES(5,34),NUMCAS,
18     NUMCJ(5),NMACH
19     COMMON/COMERR/ IERR
20     COMMON/COMINB/ ITYPE(14),NTYFS( 4),NOFTNS(7),ICNFGS(5)
21     COMMON/REMOV2/ ICALGR(7),IFIND,INPGRA(7),IPRNT
22     ILINA = ILINA + 1
23     IF(NEXT.EQ.NUMCAS.AND.ILINB.LI.56)GO TO 6
24     WRITE(IERROR,1000)NUMCAS,ITITLE
25     FORMAT(1H1,/,40X,50HCAPTIVE STORE AIRLOADS PREDICTION GENERAL MESSA
26     *GFS,10X,14HCASE NUMBER = ,I5,4(/29X,9A3),/)
27     ILINA = 7
28     ILINB = 7
29     6 CONTINUE
30     IF(NEXT.EQ.NUMCAS.AND.ILINB.LI.56)GO TO 8
31     IF(IERRSUM,1005)NUMCAS,ITITLE(1),I=1,9),DUM1,
32     (ITITLE(1),I=10,36)
33     1005 FORMAT(1H1,/,45X,52HCAPTIVE STORE AIRLOADS PREDICTION QUI OF RANGE
34     * DATA ,13X,14HCASE NUMBER = ,I6,/,29X,9A3,9X,14HMACH NUMBER = ,
35     * F5.2,3(/29X,9A3))
36     ILINB = 7
37     IF(NEXT.NE.NUMCAS.OR.ILINB.GE.56) NEXT = NUMCAS
38     8 CONTINUE
39     GO TO(10,20,30,40,50,60,70,80,90,100,110,120,130,140,150,160),
40     *170,180,190,200,210,220,230,240,250,260,270,280,290,300
41     ,INDEX
42     10 WRITE(IERROR,1010)
43     1010 FORMAT(1X,56HWARNING - NO TITLE CARDS ENCOUNTERED PLEASE INCLUDE
44     *
45     RETURN
46     20 WRITE(IERROR,1020)
47     1020 FORMAT(1X,52HWARNING - INCLUDE 4 TITLE CARDS )
48     RETURN
49     30 WRITE(IERROR,1030)
50     1030 FORMAT(1X,42HERROR TOO MANY TITLES ONLY FIRST 4 USED )
51     RETURN
52     40 WRITE(IERROR,1040)ITYPE(IERR)
53     1040 FORMAT(1X,42HERROR - INCORRECT SEGMENT TYPE ON A ,A5.4HCARD)
54     RETURN
55     50 WRITE(IERROR,1050)ITYPE(IERR)
56     1050 FORMAT(1X,44HERROR - INCORRECT SEGMENT NUMBER ON A ,A4,
57     * ,AHCARD)
58     RETURN

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FIN 4.5+410

SUPERROUTINE ERROR 74/74 CPT=1

```

60 WRITE(IEPROR,1000)IABS(IGPPE),NLPPE
1060 FORMAT(1X,24HFATAL ERROR - GRAPH NUMBER,15,12H LINE NUMBER,1,
* 30H MISSING IN DATA BASE ATTACHED)
CALL STOPPT
CALL PRINTP(3)
IF(IIFING.GT.0)CALL PRINTP(3)
64 STOP
70 WRITE(IEPROR,1070)IYPE(IEPR)
1070 FORMAT(1X,30HFATAL ERROR - A MINIMUM OF FORTY .14,38HCARDS ARE ALL
* ONEJ, RESPACE YOUR IDEAS. )
RETURN
80 WRITE(IEPROR,1080)
1080 FORMAT(1X,30HFATAL ERROR - ICASE MUST BE 1 2 OR 3 )
RETURN
90 WRITE(IEPROR,1090)ICASE
1090 FORMAT(1X,72HWARNING - INPUT DATA INCLUDES EXTRANEOUS DATA ON STOR
* E CARD FOR ICASE = ,15)
RETURN
100 WRITE(IEPROR,1100)DUM1
1100 FORMAT(1X,61HERROR - MAIN NUMBER OUT OF RANGE FOR THIS METHOD. MAC
* H NUMBER ,F5.2,30H NOT INCLUDED IN PREDICTIONS. )
RETURN
110 WRITE(IEPROR,1110)IAGE
1110 FORMAT(1X,52HFATAL ERROR - SPECIFICATION FIELD BAD FOR INPUT CARD,
* /5X,24H,5X,38H,
* ILINA = ILINA + 1
IERR = 1
RETURN
120 IF(DUM1.EQ.DUMX.AND.NUMCAS.EQ.NXTCAS)GO TO 115
WRITE(IEPROR,2000)DUM1
ILIN3 = ILIN3 + 3
115 CONTINUE
2000 FORMAT(3X,14HMATCH NUMBER = ,F5.2,/)
WRITE(IEPROR,1120)BADX,EADY,IABS(NGPPE),NLPPE
1120 FORMAT(5X,24HWARNING - DATA POINT X = ,F10.4,5H, Y = ,E10.4,24H CUT
* OF RANGE FOR FIGURE,15,5H LINE,15)
DUMX = DUM1
NXTCAS = NUMCAS
ILIN3 = ILIN3 + 1
ILINA = ILINA - 1
RETURN
130 WRITE(IEPROR,1130)IERR
1130 FORMAT(1X,113HFATAL ERROR - INCORRECT DEFINITION ON STORED CARD FO
* R AREA SPECIFICATION. (ONLY 1 ) OR (SPA=PPA) ALLOWED )
* 7H INPUT = ,A7)
RETURN
140 WRITE(IEPROR,1140)IERR
1140 FORMAT(1X,78HFATAL ERROR - INCORRECT STORE CONFIGURATION TYPE. CO
* NFIGURATION STORE TYPE = ,1A1,9H INVALID )
RETURN
150 WRITE(IEPROR,1150)IYPE(IEPR)
1150 FORMAT(1X,22HERROR - MORE THAN ONE .14,43H CARD READ IN THIS CASE
* LAST CARD READ IS USED )
RETURN
160 WRITE(IEPROR,1160)
1160 FORMAT(1X,21HINPUT DATA NOT FOUND )
IERR = 1

```

```

115      RETURN
1170      WRITE(IERROR,1170)
1170      FORMAT(1X,46HFATAL ERROR - TOO MANY CASES INCLUDED IN DATA. )
      CALL PRINTF(4)
      STOP
1180      WRITE(IERROR,1180)
1180      FORMAT(1X,53HFATAL ERROR - ONE OF THE FOLLOWING PARAMETERS IS ZERO
      * /20X,25HSTORE CENTER OF GRAVITY
      * /20X,15HSTORE LENGTH
      * /20X,15HSTORE DIAMETER )
      ILINA = ILINA + 3
      IERR = 1
      RETURN
1190      WRITE(IERROR,1190)
1190      FORMAT(1X,53HFATAL ERROR - ONE OF THE FOLLOWING PARAMETERS IS ZERO
      * /20X,13HSTORE MID LUG
      * /20X,14HSEGMENT LENGTH )
      ILINA = ILINA + 2
      IERR = 1
      RETURN
1200      WRITE(IERROR,1200)
1200      FORMAT(1X,53HFATAL ERROR - ONE OF THE FOLLOWING PARAMETERS IS ZERO
      * /20X,12H Y BUTLINE
      * /20X,15H WING SEMI-SPAN
      * /20X,59H DISTANCE FROM FUSELAGE TO WING TIP
      * FOR HIGH WING AIRCRAFT )
      ILINA = ILINA + 3
      IERR = 1
      RETURN
1210      WRITE(IERROR,1210) ITYPE(IERR)
1210      FORMAT(1X,55HFATAL ERROR - AREA NOT VALID ON AN ,A3,4HCARD)
      RETURN
1220      WRITE(IERROR,1220)
1220      FORMAT(1X,84HFATAL ERROR - WHEN ICASE = 1 NONE OF THE FOLLOWING MA
      * Y BE ZERO. KN, K3(4) OR KB(3) )
      IERR = 1
      RETURN
1230      WRITE(IERROR,1230)
1230      FORMAT(1X,90HFATAL ERROR - WHEN ICASE = 2 NONE OF THE FOLLOWING MA
      * Y BE ZERO. KM/B, KT/B, KH/B, OR KINTE
      * )
      IERR = 1
      RETURN
1240      WRITE(IERROR,1240) ITYPE(IERR)
1240      FORMAT(1X,14HFATAL ERROR - ,A0,13HCARD MISSING )
      RETURN
1250      WRITE(IERROR,1250)
1250      FORMAT(1X,80HFATAL ERROR - AXIAL FORCE CALCULATION REQUIRES - NON-
      * ZERO C/J150
      * )
      IERR = 1
      RETURN
1260      WRITE(IERROR,1260) IOPTS(IERR)
1260      FORMAT(1X,51HFATAL ERROR - LIFT CURVE SLOFF MUST NOT BE ZERO IF
      * ,A2,25H IS CHOSEN ON THE OPTION CARD )
      RETURN
1270      WRITE(IERROR,1270)
1270      FORMAT(1X,46HFATAL ERROR - REQUIRED PLATFORM AREAS MISSING )
      IERR = 1

```

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PTN +.5+413

SUBROUTINE ERROR /-74 CPT=1

```

      RETURN
280 WRITE(1,ERRFUP,2240)
2280 FORMAT(1X,52HWARNING: * OR * CONFIGURATION CHOSEN WITH AREAS INPUT)
      RETURN
290 WRITE(1,ERRFOP,2230)
2290 FORMAT(1X,48HFATAL ERROR - ICASE=2 AND NO TAIL AREA INCLUDED )
      CALL PRINTR(4)
      STOP
300 WRITE(1,ERRRUP,3000)
3300 FORMAT(1X,54HFATAL ERROR - INCORRECT VALUES ON OPTICH CARD )
      RETURN
      END
  
```

17

190

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FTN 4.5+410

SUBROUTINE LININT 4/74 OPT=1

```

1      SUBROUTINE LININT(NSCUP,NLCUR,XINDEP,YOEP)
2      *
3      * THIS ROUTINE LOOKS UP DEPENDENT VALUES IN THE DATA BASE *
4      * AND LINEARLY INTERPOLATES WHEN NECESSARY TO DEFINE A *
5      * VALUE. ALL INDEPENDENT VALUES USED ARE ACCEPTABLE WITH *
6      * THE RESULT (FOR OUT OF RANGE VARIABLES) BEING *
7      * EXTRAPOLATED LINEARLY BEYOND THE SCOPE OF DATA WHEN *
8      * NECESSARY. ALL OUT OF RANGE VALUES ARE INCLUDED IN AN *
9      * ERROR SUMMARY AT THE END OF EACH SECTIONAL OUTPUT *
10     * X(*) = INDEPENDENT VALUES FETCHED FROM THE *
11     * DATA BASE *
12     * Y(*) = DEPENDENT VALUES FETCHED FROM THE *
13     * DATA BASE *
14     * NSCUR = THE CURRENT GRAPH BEING LOOKED UP *
15     * NLCUR = THE CURRENT LINE BEING LOOKED UP *
16     * XINDEP = THE CURRENT INDEPENDENT VARIABLE *
17     * YOEP = THE CURRENT INTERPOLATED DEPENDENT *
18     * VARIABLE *
19     *
20     *
21     * COMMON/CONLIN/ YPRE,NLPRE,NPOINT,X(60),Y(60),BADX,BADY
22     * COMMON/FILES/DATIN,GRAPHS,IEROR,IEKSUM,OUTPT,REMOVE,TAPEIN
23     * INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
24     * COMMON/CONINC/ JUMI,IMACH,KROTP(14),NCASE,NCASES(5,94),NUMCAS,
25     * NUMCSD(5),NMACH
26     * COMMON/REMOV2/ ICAL3(7),IFIND,INPGR(7),JFONT
27     * COMMON/CONSTR/ ISTAR(46,7),IDSTAR
28     * COMMON/CONINP/ AKB,AKINF,AKN,AKB,AKTB,AKWB,AKWB1,
29     * ALAMDA,ALEFIR(5),ALINF1,ALINFO,ALINLT(5),ANUSEL,
30     * CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDHF,
31     * ICASS,ICONFG,IMAGE( 9),ISYF,ITITLE(36),
32     * NSEG(4,0,2),NSTYPE(4,0,2),PXDCML,REALM(8),SEGL,
33     * SML,SPAT(4,0,2),STORED,STOREL,SUMPA,TAILPA,
34     * XINGFA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
35     * YINFEI,YINTFO,YI,YIPRY,ZPH,ZPLNSP
36     *
37     * NTRIES = 0
38     * BAD = 0
39     * IF(NLCUR.EQ.NGPRE.AND.NLCUP.EQ.NLPRE) GO TO 20
40     * READ(GRAPH,1010)NGPRE,NLPRE,NPOINT,NCARDS
41     * IF(EOF(GRAPH))XIE(0)GO TO 75
42     * IF(NSPRE.EQ.NGUP.AND.NLPRE.EQ.NLCUR) GO TO 15
43     * READ(GRAPH,1021)(X(I),I=1,NCARDS)
44     * GO TO 10
45     *
46     * 15 READ(GRAPH,1000)(X(I),Y(I),I=1,NPOINT)
47     * 1000 FORMAT(3(1X,E11.4))
48     * 1010 FORMAT(4I10)
49     * 20 IF(X(1).LE.XINDEP)GO TO 30
50     * INDEX = 2
51     * GO TO 50
52     * 30 IF(X(NPOINT).GT.XINDEP) GO TO 40
53     * INDEX = NPOINT
54     * GO TO 60
55     * 40 DO 50 INDEX = 2, NPOINT
56     * IF(X(INDEX)-1).LT.XINDEP.AND.X(INDEX).GT.XINDEP) GO TO 70
57     * 50 CONTINUE
58     * 60 BADX = XINDEP

```

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FIN --S-41C

SUBROUTINE LININT 74/74 CPT=1

```

      IBAO = 1
      ISTAR = (IPOSTAR, IMAO) = 14*
      70 X1 = X(INDX-1)
      YY1 = Y(INDX-1)
      X2 = X(INDX)
      Y2 = Y(INDX)
      XSLOPE = (Y2 - YY1) / (X2 - X1)
      XB = Y2 - XSLOPE * X2
      YDEPT = XSLOPE * X(INDX) + XB
      IF (IBAN.EQ.0) GO TO 75
      BADD = YDEPT
      CALL ERROP(12)
      74 CONTINUE
      NGRAPH = IABS(NGCUR)
      IF (ICALCK(IPRNT).EQ.0) GO TO 80
      IF (ILINE.LT.151.AND.NUMCAS.EQ.LAST.AND.JUMX.EQ.JUM1) GO TO 55
      WRITE(REMOVE,1065) (ITITLE(I), I=1,9), NUMCAS, (ITITLE(I), I=10,18),
      *
      *
      1065 FORMAT(1H1, //30X, 70+VALUES USED FROM GRAPHS IN CALCULATION OF CAPT
      *IVE +PLOAUS PREDICTIONS, //20X, 9A8, 18X, 11MCASE NUMBER, I5,
      *
      *
      2((/20X, 9A8), /)
      WRITE(REMOVE,1070)
      1070 FORMAT(16X, 3(28+FIGURE LINE X Y, 11X), /6X,
      *
      *
      3(30+NUMBER NUMBER VALUE VALUE, 9X))
      ILINE = 7
      NPLACE = 0
      65 LAST = NUMCAS
      JUMX = JUM1
      ILINE = ILINE + 1
      NPLACE = NPLACE + 1
      IF (NPLACE-2) 71, 72, 73
      71 WRITE(REMOVE,1071) NGRAPH, NLCUR, XINDEX, YDEPT
      1071 FORMAT(3X, I5, 3X, I5, 2X, E9, 3, 2X, E9, 3)
      GO TO 74
      72 WRITE(REMOVE,1072) NLCUR, NLCUR, XINDEX, YDEPT
      1072 FORMAT(1H, 43X, I5, 3X, I5, 2X, E9, 3, 2X, E9, 3)
      GO TO 74
      73 WRITE(REMOVE,1073) NGRAPH, NLCUR, XINDEX, YDEPT
      1073 FORMAT(1H, 82X, I5, 3X, I5, 2X, E9, 3, 2X, E9, 3)
      NPLACE = 0
      74 CONTINUE
      80 RETURN
      75 REWIND GRAPHS
      NTRIES = NTRIES + 1
      IF (NTRIES.LT.2) GO TO 10
      NGPRE = NGCUR
      NLCUR = NLCUR
      CALL ERROP(6)
      END

```


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FIN 4.5+416

SURROUTINE STOPPT 74.74 OPT=1

```

WRITE (DATAC, 2000) (SFBAIC(I), ISTAR(2, I), I=1, IMACH)
WRITE (DATAC, 1600)
WRITE (DATAC, 1850) (SFYSPF(I), ISTAR(3, I), I=1, IMACH)
WRITE (DATAC, 2050) (SFYIPF(I), ISTAR(5, I), I=1, IMACH)
WRITE (DATAC, 1875) (SFYSPF(I), ISTAR(4, I), I=1, IMACH)
WRITE (DATAC, 2075) (SFYIPF(I), ISTAR(6, I), I=1, IMACH)
WRITE (DATAC, 1700)
WRITE (DATAC, 1800) (SFYASF(I), ISTAR(7, I), I=1, IMACH)
WRITE (DATAC, 2000) (SFYAF(I), ISTAR(8, I), I=1, IMACH)
100 CONTINUE
IF (ICALSG(4).NE.1) GO TO 110
ILINES = ILINES + 15
WRITE (DATAC, 1100)
WRITE (DATAC, 850) (YB3REK(I), I=1, IMACH)
WRITE (DATAC, 1810) (YB4ASC(I), ISTAR(9, I), I=1, IMACH)
WRITE (DATAC, 1820) (YB4MSC(I), ISTAR(45, I), I=1, IMACH)
WRITE (DATAC, 2010) (YB4AIC(I), ISTAR(10, I), I=1, IMACH)
WRITE (DATAC, 2020) (YB4MIL(I), ISTAR(46, I), I=1, IMACH)
WRITE (DATAC, 1600)
WRITE (DATAC, 1850) (YB4SCF(I), ISTAR(12, I), I=1, IMACH)
WRITE (DATAC, 2050) (YB4ICF(I), ISTAR(14, I), I=1, IMACH)
WRITE (DATAC, 1875) (YB4SCH(I), ISTAR(11, I), I=1, IMACH)
WRITE (DATAC, 2075) (YB4ICP(I), ISTAR(13, I), I=1, IMACH)
WRITE (DATAC, 1700)
WRITE (DATAC, 1800) (YB4ASF(I), ISTAR(15, I), I=1, IMACH)
WRITE (DATAC, 2000) (YB4AIC(I), ISTAR(16, I), I=1, IMACH)
110 CONTINUE
IF (ICALSG(2).NE.1) GO TO 120
ILINES = ILINES + 13
WRITE (DATAC, 1200)
WRITE (DATAC, 1800) (YB4ASC(I), ISTAR(17, I), I=1, IMACH)
WRITE (DATAC, 2000) (YB4AIC(I), ISTAR(18, I), I=1, IMACH)
WRITE (DATAC, 1600)
WRITE (DATAC, 1850) (YB4SCF(I), ISTAR(20, I), I=1, IMACH)
WRITE (DATAC, 2050) (YB4ICF(I), ISTAR(22, I), I=1, IMACH)
WRITE (DATAC, 1875) (YB4SCH(I), ISTAR(19, I), I=1, IMACH)
WRITE (DATAC, 2075) (YB4ICP(I), ISTAR(21, I), I=1, IMACH)
WRITE (DATAC, 1700)
WRITE (DATAC, 1800) (YB4ASC(I), ISTAR(23, I), I=1, IMACH)
WRITE (DATAC, 2000) (YB4AIC(I), ISTAR(24, I), I=1, IMACH)
120 CONTINUE
IF (ICALSG(3).NE.1) GO TO 130
ILINES = ILINES + 13
IF (ILINES.LT.50) GO TO 125
ILINES = 7
WRITE (DATAC, 800) NUMTAS, IIIILE,
      (PEALM(I), I=1, IPTS, JMACH)
125 CONTINUE
WRITE (DATAC, 1300)
WRITE (DATAC, 1800) (YB4ASC(I), ISTAR(25, I), I=1, IMACH)
WRITE (DATAC, 2000) (YB4AIC(I), ISTAR(26, I), I=1, IMACH)
WRITE (DATAC, 1600)
WRITE (DATAC, 1850) (YB4SCF(I), ISTAR(28, I), I=1, IMACH)
WRITE (DATAC, 2050) (YB4ICF(I), ISTAR(30, I), I=1, IMACH)
WRITE (DATAC, 1875) (YB4SCH(I), ISTAR(27, I), I=1, IMACH)
WRITE (DATAC, 2075) (YB4ICP(I), ISTAR(29, I), I=1, IMACH)
WRITE (DATAC, 1700)

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FIN 4.5+410

SUBROUTINE STGPRT 74/74 OPT=1

```

115 WRITE(CATAL,1800) (PMIASC(I),ISTARS(31,I),I=1,IMACH)
    WRITE(CATAC,2000) (PMIAIF(I),ISTARS(32,I),I=1,IMACH)
130 CONTINUE
    IF (ICALSG(6).NE.1) GO TO 140
    ILINES = ILINES + 12
    IF (ILINES.LT.50) GO TO 135
    ILINES = 7
    WRITE(CATAC,800) NUMCAS,ITITLE,
    * (REALM(I),I=1,PTS,JMACH)
135 CONTINUE
    WRITE(CATAL,1400)
    WRITE(CATAC,1800) (AXBASE(I),ISTARS(33,I),I=1,IMACH)
    WRITE(CATAC,2000) (AXBAIF(I),ISTARS(34,I),I=1,IMACH)
    WRITE(CATAC,1600)
    WRITE(CATAC,1850) (AXYSPF(I),ISTARS(35,I),I=1,IMACH)
    WRITE(CATAC,2050) (AXYIPF(I),ISTARS(36,I),I=1,IMACH)
    WRITE(CATAC,1875) (AXYSPF(I),ISTARS(37,I),I=1,IMACH)
    WRITE(CATAC,2075) (AXYIPF(I),ISTARS(38,I),I=1,IMACH)
    WRITE(CATAC,1700)
    WRITE(CATAC,2000) (AXYIPF(I),ISTARS(39,I),I=1,IMACH)
140 CONTINUE
    IF (ICALSG(6).NE.1) GO TO 150
    ILINES = ILINES + 13
    IF (ILINES.LT.50) GO TO 145
    ILINES = 7
    WRITE(CATAC,300) NUMCAS,ITITLE,
    * (REALM(I),I=1,PTS,JMACH)
145 CONTINUE
    WRITE(CATAC,1500)
    WRITE(CATAC,1800) (MYBASE(I),ISTARS(40,I),I=1,IMACH)
    WRITE(CATAC,2000) (MYBAIF(I),ISTARS(41,I),I=1,IMACH)
    WRITE(CATAC,1600)
    WRITE(CATAC,2050) (MYYIPF(I),ISTARS(42,I),I=1,IMACH)
    WRITE(CATAC,2075) (MYYIPF(I),ISTARS(43,I),I=1,IMACH)
    WRITE(CATAC,1700)
    WRITE(CATAC,2000) (MYIATF(I),ISTARS(44,I),I=1,IMACH)
150 CONTINUE
    WRITE(CATAC,875) STGCEL,SREF,STORED
    800 FORMAT(1H1,7/39X,53HCAPTIVE AIRLOADS PREDICTION TECHNIQUE CALCULAT
    ED DATA ,13X,14HCASE NUMBER = ,15/,4(729X,9A8),/2X,11HMACH NUMBE
    R ,32X,7(4X,F8.2))
    875 FORMAT(/2X,21HREFERENCE DIMENSIONS
    ,/6X,40HSTORE CENTER OF GRAVITY TO FORWARD LUG = ,F6.2,FH FEET*2 ,
    ,/6X,24HSTORE REFERENCE LENGTH = ,F6.2,FH FEET ,
    ,/6X,24HALPHA BREAK (DEGREES) ,13X,7(6X,F6.2)
    890 FORMAT(6X,21HALPHA BREAK (DEGREES) ,13X,7(6X,F6.2)
    1000 FORMAT(/2X,26HSHYDRAULIC MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD )
    1100 FORMAT(/2X,26HSHYDRAULIC MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD )
    1200 FORMAT(/2X,26HSHYDRAULIC MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD )
    1300 FORMAT(/2X,26HSHYDRAULIC MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD )
    1400 FORMAT(/2X,26HSHYDRAULIC MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD )
    1500 FORMAT(/2X,26HSHYDRAULIC MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD )
    1600 FORMAT(/2X,26HSHYDRAULIC MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD )
    1700 FORMAT(4X,37HINCREMENT-ADJACENT STORE INTERFERENCE )
    1800 FORMAT(6X,16HSLOPE PREDICTION,24X,7(2X,F9.5,A1) )
    1810 FORMAT(6X,16HSLOPE PREDICTION < ALPHA BREAK ,5X,7(2X,F9.5,A1) )
    1820 FORMAT(6X,16HSLOPE PREDICTION > ALPHA BREAK ,5X,7(2X,F9.5,A1) )

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FTN 4.5+410

SUBROUTINE STOPPI 74/74 OPT=1

```
1850 FORMAT(6X,16HSLOPE PREDICTION,17X,7H(+BS) ,7(2X,F9.5,A1))
1875 FORMAT(6X,16HSLOPE PREDICTION,17X,7H(-BS) ,7(2X,F9.5,A1))
2000 FORMAT(6X,20HINTERCEPT PREDICTION,20X,7(2X,F9.5,A1))
2010 FORMAT(6X,35HINTERCEPT PREDICTION < ALPHA BREAK ,5X,7(2X,F9.5,A1))
2020 FORMAT(6X,35HINTERCEPT PREDICTION > ALPHA BREAK ,5X,7(2X,F9.5,A1))
2030 FORMAT(6X,35HINTERCEPT PREDICTION > ALPHA BREAK ,5X,7(2X,F9.5,A1))
2050 FORMAT(6X,20HINTERCEPT PREDICTION,13X,7H(+BS) ,7(2X,F9.5,A1))
2075 FORMAT(6X,20HINTERCEPT PREDICTION,13X,7H(-BS) ,7(2X,F9.5,A1))
      RETURN
      END
```

175

180

09/20/75 17.02.53

FPA 4.5413

SUBROUTINE SDFPAC 74/74 OPT=1

```

1      SUBROUTINE SDFPAC
2      .....
3      * SUBROUTINE TO CALCULATE THE SIDE FORCE CONTRIBUTION
4      * FOR SIMPLE CARBIDE TYPE STOPS.
5      * SFQAL(*) = INCREMENTAL SIDE FORCE SLOPE
6      *      = LOW MACH NUMBER
7      *      ? = HIGH MACH NUMBER
8      *
9      * SIDE FORCE
10     *
11     * BASIC AIRPLANE
12     * SFBASP = SLOPE PREDICTION AT MACH = 0.5
13     * SFBASC(*) = SFBASP * SLOPE CORRECTION AT MACH = X
14     * SFBATP = INTERCEPT PREDICTION AT MACH = 0.5
15     * SFBATC(*) = SFBATP * INTERCEPT CORRECTION AT MACH=X
16     * INCREMENT-AIRCRAFT YAW
17     * SFYSP(*) = SLOPE PREDICTION
18     * SFYSPM(*) = SLOPE PREDICTION
19     * SFYIP(*) = INTERCEPT PREDICTION
20     * SFYIPM(*) = INTERCEPT PREDICTION
21     * INCREMENT-ADJACENT STORE INTERFERENCE
22     * SFIASP(*) = SLOPE PREDICTION
23     * SFIATP(*) = INTERCEPT PREDICTION
24     *
25     * COMMON/CONING/ NUM1,IMACH,KRDTYP(14),NCASE,NCASES(5,94),NUMCAS,
26     *
27     * COMMON/CONING/ AKM,AKHIF,AKN,AKNB,AKTB,AKW9,AKWBI,
28     * ALA1DA,ALFIN(5),ALINFI,ALINFO,ALINLT(5),ANUSL,
29     * COOISD,CLAISO,CLOCAL,DINTFI,UNINFO,HWHF,
30     * ICASE,ICMFG,IMAGE( 9),ISY,ITITLE(36),
31     * YSEJ(40,2),NSTYPE(40,2),PXDCML,REALM(8),SFGL,
32     * S4L,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
33     * KINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YUL,
34     * YINTEL,YINTFO,YLY,IPRM,ZPH,ZPLNSP
35     * YINTEL,YINTEL,PREON(2),PREPH,PREYM,PXNUMPM(40),
36     * PXMOVY(40),X40M(40)
37     *
38     * COMMON/CONINT/ SFBASP,SFBASC(7),SFBATP,SFEATC(7),SFYSP(7),
39     * SFYSPM(7),SFYIP(7),SFYIPM(7),SFIASP(7),SFIATP(7)
40     *
41     * COMMON/FILES/DATAC,DATIN,GRAPHS,IERXOR,IFPSUM,OUTPT,REMOVE,TAPEIN
42     *
43     * COMMON/CONSET/ AUPJSL,AKCPH,AKCYM,AKNGSE(2),AKTAIL(2),
44     * AKWING(2),ALEDSL,ALEL,ANUPP,AREASP(4,2),
45     * CDCL45,CLDC45,CLSL45,CVALUE(2),IBEGN,ICALSG(7),
46     * IDSYA,IFR0,IMACH1,PPAJFH,PPAXC,SAUJSP(4,2),SHDA4,
47     * SLDSTF,SLDS45,SPAUJS(2),SPATSP(2),SPEF,
48     * SPISID,STLUCL,STPDWS,YDSTD
49     *
50     * COMMON/CONMAC/ XLINTD
51     * COMMON/REMOVE/ ICALCP(7),IFIND,INPGRA(7),IPRNT
52     * COMMON/CONSTR/ ISTA(5,46,7),IDSTAR
53     * DIMENSION SFQAL(2),SFMRG(2)
54     * SFBASC(IMACH) = 0.0
55     * SFBATC(IMACH) = 0.0
56     * SFYSPM(IMACH) = 0.0
57     * SFYIPM(IMACH) = 0.0
58     * SFIASP(IMACH) = 0.0
59     * SFIATP(IMACH) = 0.0

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09/20/76 17.02.53

FTN 4.3.410

SUBROUTINE SLRAC

17.74

COT=

```

115      160 SF3ASC(IMACH) = (SF3ASF + XDELTA) / SREF
120      C ****
120      C **** SF3AIP = SIDE FORCE BALU -IF-JAO INTERCEPT PREDICTION AT
120      C ****      VAO = 0.5
120      C ****
120      IDSTAP = 2
120      IF (JOUN1(1),JOUN2(1)) 125
120      CALL LIMINT(31,1,CLSL45,DEP31)
120      CALL LIMINT(32,1,YDST0,DEP32)
120      DEP32 = DEP32 * HWDF
120      CALL LIMINT(33,1,ALSL,DEP33)
120      CALL LIMINT(34,1,CLSL45,DEP34)
120      CALL LIMINT(35,1,YDST0,DEP35)
120      DEP35 = DEP35 * HWDF
120      CALL LIMINT(36,1,ALSL,DEP36)
120      SF3AIP = (DEP31 + DEP32 + DEP33) * AWINGS + DEP34 + DEP35 +
120      *      DEP36 * SLOS45 * SREF
120      C ****
120      165 CONTINUE
120      C ****
120      C **** SF3AIC(1) = SIDE FORCE BASIC AIRLOAD INTERCEPT PREDICTION AT
120      C ****      MACH = 0.5 + INTERCEPT CORRECTION AT MACH = X
120      C ****
120      XDELTA = 0.0
120      IAO = 0
120      IF (JOUN1(1),JOUN2(1)) GO TO 225
120      CALL PEAKF(38,3,IBREAK,CLSL45,DEP38L,DEP38H)
120      IF (DEP38L,IBREAK,0) GO TO 255
120      IF (IBREAK-2) 208,211,220
120      208 IAO2 = IAO + 1
120      SF3NO(IAO2) = 6.0
120      210 IAO = IAO + 1
120      CALL LIMINT(39,1,CLSL45,DEP39)
120      CALL LIMINT(40,1,CLSL45,DEP40)
120      SF3NO(IAO) = (DEP39 + AWINGS + DEP40) * SLOS45 * SREF
120      IF (IAO,EO,2) GO TO 250
120      220 IAO = IAO + 1
120      CALL LIMINT(41,1,CLSL45,DEP41)
120      CALL LIMINT(42,1,YDST0,DEP42)
120      DEP42 = DEP42 * HWDF
120      CALL LIMINT(43,1,CLSL45,DEP43)
120      CALL LIMINT(44,1,YDST0,DEP44)
120      DEP44 = DEP44 * HWDF
120      SF3NO(IAO) = (DEP41 + DEP42) * AWINGS + DEP43 + DEP44 *
120      *      SLOS45 * SREF
120      IF (IAO,EO,2) GO TO 250
120      IAO = IAO + 1
120      CALL LIMINT(45,1,CLSL45,DEP45)
120      CALL LIMINT(46,1,CLSL45,DEP46)
120      SF3NO(IAO) = (DEP45 + AWINGS + DEP46) * SLOS45 * SREF
120      CONTINUE
120      XDELTA = SF3NO(1) + (JOUN1 + DEP38L) /
120      *      SF3AIC(IMACH) = (SF3AIP + XDELTA) / SREF
120      IF (ICALSG(1),EO,0) GO TO 20000
120      C ****
120      C **** INCREMENTAL AIRCRAFT YAW
120      C ****

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09/20/76 17.02.53

FTN 4.54410

SUBROUTINE SLUFR 74/74 OPT=1

```

C **** SEYSPR(*)=INCREMENTAL SIDE FORCE YAW SLOPE PREDICTION
C **** AT MACH = X (-BS)
C **** SFYSPH(*)=INCREMENTAL SIDE FORCE YAW SLOPE PREDICTION
C ****
C **** AT MACH = X (-BS)
C ****
      IDSTAR = 3
      CALL LININT(49,1.4LEJSL,DEP49)
      ISTARS(4,IMACH) = ISTARS(3,IMACH)
      DO 490 I=1,2
      IDSTAR = 2 + I
      CALL LININT(47,I,DU41,DEP47)
      IF(I.EQ.1) NG = -44
      IF(I.EQ.2) NG = 44
      IF(DUM1.GT.0.7) GO TO 270
      CALL LININT(NG,1,ANUPM,CEP43)
      GO TO 370
270 IF(DUM1.GE.0.9) GO TO 280
      CALL THOD(NG,1,2,0.7,0.0,ANUPM,DEP43)
      GO TO 370
280 IF(DUM1.GT.0.9) GO TO 290
      CALL LININT(NG,2,ANUPM,CEP43)
      GO TO 370
      -90 IF(DUM1.GE.1.05 ) GO TO 300
      CALL THOD(NG,2,3,0.3,1.05,ANUPM,DEP43)
      GO TO 370
100 IF(DUM1.NE.1.05) GO TO 310
      CALL LININT(NG,3,ANUPM,CEP43)
      GO TO 370
310 IF(DUM1.GE.1.2 ) GO TO 320
      CALL THOD(NG,3,1.05,1.2,ANUPM,DEP43)
      GO TO 370
320 IF(DUM1.NE.1.2) GO TO 330
      CALL LININT(NG,4,ANUPM,CEP43)
      GO TO 370
330 IF(DUM1.GE.1.6) GO TO 340
      CALL THOD(NG,4,5,1.20,1.6,ANUPM,DEP43)
      GO TO 370
340 CALL LININT(NG,5,ANUPM,CEP43)
370 CONTINUE
      DE*48 = CEP43 * 4WD4F
      CALL LININT(50,I,DU41,DEP50)
      XDELTA = (DEP47 + DEP48 + DEP49 + DEP50) * SPAGJS(1)
      IF(I.EQ.1) SFYSPH(IMACH) = XDELTA / SREF
      IF(I.EQ.2) SFYSPR(IMACH) = XDELTA / SREF
C **** SFYIPR(*) = INCREMENTAL SIDE FORCE YAW INTERCEPT
C **** PREDICTION AT MACH = X (-BS)
C **** SFYIPH(*) = INCREMENTAL SIDE FORCE YAW INTERCEPT
C **** PREDICTION AT MACH = X (-BS)
C ****
      IDSTAR = 4 + I
      CALL LININT(51,I,DU41,DEP51)
      CALL LININT(52,I,DU41,DEP52)
      IF(I.EQ.1) GO TO 425
      NG = 53
      IF(DUM1.GT.0.9) GO TO 390

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39/20/76 17.02.53

FON 4.5+413

SUBROUTINE SLOFRC 7.774 OPT=1

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230 CALL LININT(NG,1,ANJPM,DEP53)
    GO TO 333
303 IF (JUM1.EQ.1.05) GO TO 400
    CALL TMOB(NG,1,2,0.3,1.05,ANJPM,DEP53)
    GO TO 500
400 IF (JUM1.GT.1.05) GO TO 410
    CALL LININT(NG,2,ANJPM,DEP53)
    GO TO 500
410 IF (JUM1.EQ.1.2) GO TO 420
    CALL TMOB(NG,2,3,1.05,1.2,ANJPM,DEP53)
    GO TO 500
420 IF (JUM1.GT.1.2) GO TO 470
    CALL LININT(NG,3,ANJPM,DEP53)
    GO TO 500
425 NG = 723
    IF (JUM1.GT.0.7) GO TO 430
    CALL LININT(NG,2,ANJPM,DEP53)
    GO TO 500
430 IF (JUM1.EQ.0.9) GO TO 440
    CALL TMOB(NG,1,2,0.7,0.9,ANJPM,DEP53)
    GO TO 500
440 IF (JUM1.GT.0.9) GO TO 450
    CALL LININT(NG,2,ANJPM,DEP53)
    GO TO 500
450 IF (JUM1.EQ.1.05) GO TO 460
    CALL TMOB(NG,2,3,0.3,1.05,ANJPM,DEP53)
    GO TO 500
460 IF (JUM1.GT.1.2) GO TO 470
    CALL LININT(NG,3,ANJPM,DEP53)
    GO TO 500
470 IF (JUM1.EQ.1.6) GO TO 480
    CALL TMOB(NG,3,4,1.2,1.6,ANJPM,DEP53)
    GO TO 500
480 CALL LININT(NG,4,ANJPM,DEP53)
500 CONTINUE
DEF53 = DEP53 + JMDIF
XDELTA = DEP53 + ADJSES + JEP52 + DEP53
IF (L.EQ.1) SFYIPM(1:ACH) = XDELTA / SREF
IF (L.EQ.2) SFYIPP(1:ACH) = XDELTA / SREF
490 CONTINUE
IF (DINTFI.EQ.0.0) DINTFO.EQ.0.0) GO TO 20000
XIND56 = STOREL / (SLDS45 + SLDS45 + CLOCAL)
DO 575 I=1,BEGN,IEND
C *****
C ***** SFLASP(*) = SIDE FORCE INCREMENT ADJACENT STORE SLOPE
C ***** PREDICTION
C *****
    IOSTAP = 7
    IF (L.EQ.1) SLP55 = DINTFC + (XINTFO + 200.0) / (STORED + YINTFO)
    IF (L.EQ.2) SLP55 = DINTFI + (XINTFI + 200.0) / (STOREJ + YINTFI)
    CALL LININT(55,1,QU11,P055)
    SFLASF(1:ACH) = SFLASP(1:ACH) + JEP55 + SLP55
C *****
C ***** SFLAIP(*) = ADJACENT STOPE INTERCEPT PREDICTION
C *****
    IOSTAR = 8
    IND = 1

```

SUBROUTINE SIDFRG 74/74 OPT=1

```

      IF(I.EQ.1)IND = - 1
      NG = 56 * IND
      XIND56 = STOREL / (SLOS45 * SLOS45 * CLOCAL)
      IF(QUH1.GT.0.7) GO TO 510
      CALL LININT(NG,1,XIND56,DEP56)
      CALL LININT(NG+IND,1,CLS45,DEP57)
      CALL LININT(NG+IND+IND,1,CLS45,DEP58)
      GO TO 570
510 IF(QUH1.GE.0.9)GO TO 520
      CALL THOD(NG,1,2,0.7,0.9,ANUPH,DEP56)
      CALL THOD(NG+IND,1,2,0.7,0.9,CLS45,DEP57)
      CALL THOD(NG+IND+IND,1,2,0.7,0.9,CLS45,DEP58)
      GO TO 570
520 IF(QUH1.GT.0.9)GO TO 530
      CALL LININT(NG,2,XIND56,DEP56)
      CALL LININT(NG+IND,2,CLS45,DEP57)
      CALL LININT(NG+IND+IND,2,CLS45,DEP58)
      GO TO 570
530 IF(QUH1.GE.1.2)GO TO 540
      CALL THOD(NG,2,3,0.3,1.2,XIND56,DEP56)
      CALL THOD(NG+IND,2,3,0.3,1.2,CLS45,DEP57)
      CALL THOD(NG+IND+IND,2,3,0.3,1.2,CLS45,DEP58)
      GO TO 570
540 IF(QUH1.GT.1.2)GO TO 550
      CALL LININT(NG,3,XIND56,DEP56)
      CALL LININT(NG+IND,3,CLS45,DEP57)
      CALL LININT(NG+IND+IND,3,CLS45,DEP58)
      GO TO 570
550 IF(QUH1.GE.1.6) GO TO 560
      CALL THOD(NG,3,4,1.2,1.6,XIND56,DEP56)
      CALL THOD(NG+IND,3,4,1.2,1.6,CLS45,DEP57)
      CALL THOD(NG+IND+IND,3,4,1.2,1.6,CLS45,DEP58)
      GO TO 570
560 CALL LININT(NG,4,XIND56,DEP56)
      CALL LININT(NG+IND,4,CLS45,DEP57)
      CALL LININT(NG+IND+IND,4,CLS45,DEP58)
570 CONTINUE
      AKING1 = DEP57 * STOREL / CLOCAL + DEP58
      IF(I.EQ.1)QUH1 = QINTFC * XINTFO / YINTFC
      IF(I.EQ.2)QUH1 = YINTFI * XINTFI / YINTFI
      SFAIP(IMACH) = SFAIP(IMACH) + DEP56 * JLP11 / STORED + -KING1
575 CONTINUE
      SFAISP(IMACH) = SFAISP(IMACH) / SREF
      SFAIIP(IMACH) = SFAIIP(IMACH) / SREF
20000 RETURN
      END

```

```

1  SUBROUTINE YAHOM
2  .....
3  YAHING MORENT
4  BASIC ATPLCAT
5  YHASP = SLOPE PREDICTION AT MACH = 3.5
6  YHASC(*) = YHASP + SLOPE CORRECTION AT MACH=X
7  YHAIIP = INTERCEPT PREDICTION AT MACH = 3.5
8  YHAIIC(*) = YHAIIP + INTERCEPT CORRECTION AT MACH=X
9  INCREMENT-ADJACENT YAW
10 YHASP = SLOPE PREDICTION AT MACH = 0.5 (-3S)
11 YHASP = SLOPE PREDICTION AT MACH = 0.5 (-3S)
12 YHASC(*) = YHASP + SLOPE CORRECTION MACH = X (-3S)
13 YHAIIP = YHASP + SLOPE CORRECTION MACH = X (-3S)
14 YHAIIC(*) = YHAIIP + INTERCEPT CORRECTION AT MACH=0.5 (-3S)
15 YHAIIP = YHAIIP + INTERCEPT CORRECTION MACH=X (-3S)
16 YHAIIC(*) = YHAIIP + INTERCEPT CORRECTION MACH=X (-3S)
17 INCREMENT-ADJACENT STORE INTERFERENCE
18 YHAIIP = SLOPE PREDICTION
19 YHAIIC(*) = YHAIIP + INTERCEPT CORRECTION MACH = X
20 YHAIIP = YHAIIP + INTERCEPT CORRECTION MACH = X
21 YHAIIC(*) = YHAIIP + INTERCEPT CORRECTION MACH = X
22 .....
23 COMMON/COMING/ DUM1,IMACH,OUTY(14),INCASE,NUSES(5,34),NUMCAS,
24 NUMCPS(5),NMACH
25 COMMON/COMINP/ AKB,AKINF,AKN,AKN8,AKT9,AKW8,AKW8I,
26 ALA4,ALAFIN(5),ALINF,ALINFO,ALINLI(5),ALJSL,
27 JDOIS,CLAISO,LOCAL,DINTFI,DINTFO,MACHF,
28 ICASE,ICORFG,IMAGE(3),ISY,ITITLE(36),
29 YSG(4,2),NSTYPE(4,2),PXCML,REALM(8),DESL,
30 SML,SPAT(4,2),STORED,STOREL,SUPPA,TAILP,
31 KINGPA,WSS,XCG,XINTFI,XINTFO,Y8IG,Y8L,
32 YINTFI,YINTFO,Y1,Y1PRM,ZOH,ZPLNSP
33 COMMON/COMENT/ KCSE(2),PREDN(2),PREP,PREYH,PYHOFH(40),
34 XH0Y4(40),X40H(40)
35 COMMON/COMSET/ AOPSL,AKCPH,AKCYN,AKNUSE(2),AKTAIN(2),
36 AKWING(2),ALDLS,ALDEL,NUPP,AREASP(4,2),
37 GDC45,CLD45,CLSL45,OVALUL(2),IBEGN,ICALSG(7),
38 ICSY4,IEND,IMACH1,PPAUFH,PEAXC,SADJSP(4,2),SHDAFI,
39 SLOSXF,SLOS45,SPADJS(2),SPATSP(2),SPEF,
40 SRTSID,STLOC,STROWS,YOSTD
41 COMMON/COMYAH/ YHASP,YHASC(7),YHAIIP,YHAIIC(7),YHAIIP,
42 YHAIIP(7),YHAIIC(7),YHAIIP(7),YHAIIC(7),
43 YHAIIP(7),YHAIIC(7),YHAIIP(7),YHAIIC(7)
44 COMMON/COMHAC/ XLIVTJ
45 COMMON/COMOV2/ ICALSR(7),IFIND,IMPURA(7),IFPNT
46 COMMON/COMSTR/ ISTARS(4,2),TOSTAR
47 COMMON/COMSTU/ SFBASP,SFBASC(7),SFBATP,SFBAIC(7),SFYSP(7),
48 SFYSP(7),SFYIP(7),SFYIP(7),SFYIP(7),SFYIP(7),
49 DIMENSION YHAI(2),YHAI(2),YHAI(2),YHAI(2),YHAI(2),
50 YHASC(IPACH) = 0.0
51 YHAI(2) = 0.0
52 YHAI(2) = 0.0
53 YHAI(2) = 0.0
54 YHAI(2) = 0.0
55 YHAI(2) = 0.0

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09/20/76 17-02-53

FTN 4.5+413

SUBROUTINE YAWMOM 74/74 CDE11

```

115 CALL LININT(72,1,AWP,CEP72)
    CEP72 = DEP72 + 1.34E
    CALL LININT(73,1,CLSL45,DEP73)
    CALL LININT(74,1,AWMOM,CEP74)
    DEP74 = DEP72 + 1.34E
    YMAIP = (CEP71 + CEP72) * ALEL + CEP73 + CEP74 + SLCS45
120 145 CONTINUE
    C *** YMAIC(*) = YAWING MOMENT BASIC AIRLOAD INTERCEPT MACH NUMBER
    C *** CORRECTION
    C *** YMAI(*) = INTERCEPT MACH NUMBER INCREMENTAL CHANGE
    IADJ = 1
    XDELTA = 0.0
    IF(JUM1.EQ.0.5) GO TO 180
    CALL BSEAKF(76,3,JUMF,CLSL45,DEP76L,DEP76H)
    IF(DEP76L.LT.0.0) GO TO 180
    IF(JUMF.EQ.1.0) GO TO 175
130 IADJ = IADJ + 1
    YMAI(IADJ) = 0.0
    JUMP = JUMP + 1
135 HG = 73 + 3 * (JUMP - 1) + 1
    IADJ = IADJ + 1
    CALL LININT(80,1,CLSL45,DEP81)
    CALL LININT(81,1,CLSL45,DEP82)
    YMAI(IADJ) = (DEP81 + ALEL + DEP82) * SLCS45
    IF(IADJ.EQ.2) GO TO 177
140 IADJ = IADJ + 1
    CALL LININT(79,1,CLSL45,DEP79)
    CALL LININT(80,1,CLSL45,DEP80)
    DEP80 = DEP80 + 1.34E
    CALL LININT(81,1,CLSL45,DEP81)
    CALL LININT(82,1,CLSL45,DEP82)
    DEP82 = DEP82 + 1.34E
    YMAI(IADJ) = (DEP79 + DEP80) * ALEL + DEP81 + DEP82 + SLCS45
    JUMP = JUMP + 1
    IF(IADJ.EQ.2) GO TO 170
145 XDELTA = YMAI(1) + (CUM1 - DEP76L) / (DEP76H - DEP76L) +
    YMAI(2) - YMAI(1)
150 YMAIC(IMACH) = (YMAIP + XDELTA) / SRTSTC
    C ***
    C *** YAWING MOMENT MODIFICATION FOR INTERMEDIATE WING LOCATIONS
    C ***
    IF(CUM1.GT.1.2-0.2*WMP) GO TO 187
    IOSTAR = 45
    ALPOSF = 1
    ALPOSF = SFBAIC(IMACH) / SFBASQ(IMACH)
    IF(CUM1.GT.0.9) GO TO 181
    DEP910 = ALPOSF(910,0.5,0.9,0.2,ALPOSF)
    GO TO 186
155 IF(CUM1.EQ.1.05) GO TO 182
    CALL IADJ(910,3,4,1,0.5,ALPOSF,ALPOSF,10)
    GO TO 186
160 IF(CUM1.GT.1.05) GO TO 183
    CALL LININT(910,4,ALPOSF,DEP910)
    GO TO 186
165 IF(CUM1.EQ.1.2) GO TO 184
    CALL IADJ(910,4,5,1,0.2,ALPOSF,DEP910)
    GO TO 186
170 CALL LININT(910,5,ALPOSF,DEP910)

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SUBROUTINE YAKHON 74/74 OPT=1

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185 CONTINUE
CALL LININT(911,1,ALPOST,DEP911)
IF(LELELE.82.0)GO TO 188
CALL LININT(915,1,0UM1,DEF915)
GO TO 191
188 IF(AREAH/STOREL*(F.5.0)GO TO 189
CALL LININT(915,2,0UM1,DEF915)
GO TO 191
189 CALL LININT(915,3,0UM1,DEF915)
191 CONTINUE
YMBKEX(IMACH) = DEP910 + DEP915 + H*DH* * (DEP911 - DEP910)
CALL LININT(913,1,0UM1,DEF912)
CALL LININT(913,1,0UM1,DEF913)
DEP914 = ALNLOC(914,0.5,0.9,0.2,ANUPM)
YMBSC(IMACH) = (DEP912 + CLSL45 + DEP913) * SRISTD + HMDH*DEF914
YMBSC(IMACH) = YMBASC(IMACH) / SRISTD
YMBIC(IMACH) = (YMBASC(IMACH) - YMBASC(IMACH)) + YMBKEX(IMACH) +
YMBIC(IMACH)
ISTARS(46,IMACH) = ISTARS(45,IMACH)
187 CONTINUE
C *** INCREMENT AIRCRAFT YAW
DO 245 I=1,2
C *** YHYSPP = YAWING MOMENT INCREMENT-AIRCRAFT YAW SLOPE (+3S)
C *** PREDICTION
C *** YHYSPP = YAWING MOMENT INCREMENT-AIRCRAFT YAW SLOPE (-3S)
C *** PREDICTION
IDSTAR = 10 + I
DUMY3 = ANOSES + ALEL / STOREL
IF(0UM1.GT.0.5)GO TO 185
CALL LININT(915,1,CLSL45,DEP85)
CALL LININT(916,1,ANUPM,DEF85)
DEP86 = DEF86 + HMDH*
CALL LININT(917,1,CLSL45,DEP87)
CALL LININT(918,1,ANUPM,DEP88)
DEP89 = DEP88 + HMDH*
XDELTA = ((DEP85 + DEP86) * DUMY3 + DEP87 + DEP88) * SRISTD
IF(I.EQ.1) YHYSPP = XDELTA
IF(I.EQ.2) YHYSPP = XDELTA
185 CONTINUE
C *** YHYSOP(*) = YAWING MOMENT INCREMENTAL AIRCRAFT YAW SLOPE (+3S)
C *** MACH NUMBER CORRECTION
C *** YHYSOM(*) = YAWING MOMENT INCREMENTAL AIRCRAFT YAW SLOPE (-3S)
C *** MACH NUMBER CORRECTION
NG = 92 - I
IAUO = 0
XDELTA = 0.0
IF(0UM1.EQ.0.5)GO TO 215
CALL BREAKING,2,JUMP,CLSL45,DEPYL,DEPYH,
IF(DEPY.17.0)GO TO 215
IF(JUMP-2)190,193,195
190 IAUO = IAUO + 1
YHOSCP(IAUO) = 9.0
193 IAUO = IAUO + 1
CALL LININT(92,1,CLSL45,DEP32)
CALL LININT(93,1,1JPM,DEP93)
DEP93 = DEP93 + HMDH*
CALL LININT(94,1,CLSL45,DEP94)

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FTN 4.5+410

SUBROUTINE YAMMUN 76/76 OPT=1

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231 CALL LINIT(95,I,ALU4,DEF95)
    DEP95 = DEP95 * HWHF
    YMOSCP(IADD) = ((DEP92 + DEP93) * DUMY3 + DEP94 + DEP95) * SRISTD
    IF(IADD.EQ.2)GO TO 210
195 IADJ = IADD + 1
    CALL LINIT(95,I,CLSL45,DEF95)
    CALL LINIT(97,I,ANUPM,DEF97)
    DEP97 = DEP97 * HWHF
    CALL LINIT(99,I,CLSL45,DEF99)
    CALL LINIT(99,I,ANUPM,DEF99)
    DEP99 = DEP99 * HWHF
    YMOSCP(IADD) = ((DEP96 + DEP97) * DUMY3 + DEP98 + DEP99) * SRISTD
    IF(IADD.EQ.2)GO TO 210
240
C
    YMOSCP(2) = YMOSCP(1)
    XDELTA = YMOSCP(1) + (DUM1 - DEPLY) / (DEPLY + DEPLY)
210 XDELTA = YMOSCP(1) + YMOSCP(1)
    YMOSCP(2) = YMOSCP(1)
    IF(1.EQ.1) YMOSCP(IADJ) = (YMOSCP + XDELTA) / SRISTD
    IF(1.EQ.2) YMOSCP(IADJ) = (YMOSCP + XDELTA) / SRISTD
    YMYIPP = YAMING MOMENT INCREMENTAL-AIRCRAFT YAM INTERCEPT (+BS)
    YMYIP4 = YAMING MOMENT INCREMENTAL-AIRCRAFT YAM INTERCEPT (-BS)
    PREDICTION
    YMYIP4 = YAMING MOMENT INCREMENTAL-AIRCRAFT YAM INTERCEPT
    IDSTAR = 12 + I
    IF(DUM1.GT.0.5) GO TO 217
    CALL LINIT(100,I,CLSL45,DEF100)
    CALL LINIT(101,I,ANUPM,DEF101)
    DEP101 = DEP101 * HWHF
    CALL LINIT(102,I,CLSL45,DEF102)
    CALL LINIT(103,I,ANUPM,DEF103)
    DEP103 = DEP103 * HWHF
    XDELTA = ((DEP100 + DEP101) * DUMY3 + DEP102 + DEP103) * SRISTD
    IF(1.EQ.1) YMYIP4M = XDELTA
    IF(1.EQ.2) YMYIPP = XDELTA
217 CONTINUE
    YMYICP(*) = YAMING MOMENT INCREMENTAL-AIRCRAFT YAM INTERCEPT
    YMYICM(*) = YAMING MOMENT INCREMENTAL-AIRCRAFT YAM INTERCEPT
    YMYIP4M = YAMING MOMENT INCREMENTAL-AIRCRAFT YAM INTERCEPT
    YMYIPP = YAMING MOMENT INCREMENTAL-AIRCRAFT YAM INTERCEPT
    NG = 107 - I
    XDELTA = 0.0
    IF(DUM1.EQ.0.5)GO TO 240
    IADJ = 0
    CALL BREAKPG(2,JH4P,CLSL45,DEPLY,DEPLYH)
    IF(DEPLY.LT.0.0) GO TO 240
    IF(DUM1.EQ.2)GO TO 235
230 IADJ = IADD + 1
    YMOSCP(IADJ) = 0.0
233 IADJ = IADD + 1
    CALL LINIT(107,I,CLSL45,DEF107)
    CALL LINIT(109,I,ANUPM,DEF109)
    DEP109 = DEP109 * HWHF
    CALL LINIT(109,I,CLSL45,DEF109)
    CALL LINIT(110,I,ANUPM,DEF110)
    DEP110 = DEP110 * HWHF
    YMOSCP(IADJ) = ((DEP107 + DEP109) * DUMY3 + DEP109 + DEP110) *
    SRISTD
245
260
270
275
280
285

```

```

235 IF(IADD.EQ.2)GO TO 237
236 IADD = IADD + 1
237 CALL LININT(111,I,CLSL45,DEP111)
238 CALL LININT(112,I,ANUPF,DEP112)
239 DEP112 = DEP112 * HWDHF
240 CALL LININT(113,I,CLSL45,DEP113)
241 CALL LININT(114,I,ANUPF,DEP114)
242 DEP114 = DEP114 * HWDHF
243 YMQSIF(IADD)=(DEP111 + DEP112) * DUNY3 + DEP113 + DEP114 *
      * SOTSTO
244 IF(IADD.EQ.2)GO TO 237
245 YMQSIP(2) = YMQSIP(1)
246 XDELTA = YMQSIP(1)*(DUM1 - DEPYL) / (DEPYH - DEPYL) *
      * (YMQSIP(2) - YMQSIP(1))
247 IF(I.EQ.1) YMYICH(MACH) = (XDELTA + YMYIFH) / SRISTO
248 IF(I.EQ.2) YMYICP(MACH) = (XDELTA + YMYIPP) / SRISTO
249 YMYICF(*) = YMYING MOMENT INCREMENTAL-AIRCRAFT YAW INTERCEPT
      * MACH NUMBER CORRECTION (+BS)
250 YMYICH(*) = YMYING MOMENT INCREMENTAL-AIRCRAFT YAW INTERCEPT
      * MACH NUMBER CORRECTION (-BS)
251 CONTINUE
252 YMYING MOMENT ADJACENT STORE INTERFERENCE
253 IF(DINTFI.EQ.0.0)GO TO 255
254 IF(DUM1.EQ.0.5)YMYAIF = 0.0
255 DO 300 I=IREGN,IEND
256 YMYAIF(*) = YMYING MOMENT INCREMENT-ADJACENT STORE SLOPE
      * PREDICTION
257 IDSTAR = 15
258 IF(I.EQ.1)YUUM3 = DINTFO * (XINTFO + 200.0) / (STORED * YINTFO)
259 IF(I.EQ.2)YUUM3 = DINTFI * (XINTFI + 200.0) / (STORED * YINTFI)
260 CALL LININT(115,I,YUUM1,DEP115)
261 YMYASP(IPACH) = YMYASP(IPACH) + DEP115 * YUUM3
262 CONTINUE
263 YMYAIF = YMYING MOMENT INCREMENT - ADJACENT STORE INTERCEPT
      * PREDICTION
264 IF(I.EQ.1) DUMY4 = DINTFO * (200.0 - ALEL) / (STORED * YINTFO)
265 IF(I.EQ.2) DUMY4 = DINTFI * (200.0 - ALEL) / (STORED * YINTFI)
266 IDSTAR = 15
267 IF(DUM1.GT.0.5)GO TO 246
268 CALL LININT(116,I,CLSL45,DEP116)
269 DEP116 = DEP116 * HWDHF
270 CALL LININT(117,I,STPDMS,DEP117)
271 DEP117 = DEP117 * HWDHF
272 YMYAIF = YMYAIF + (DEP116 + DEP117) * DUMY4 * SLDS45
      * STORED
273 CONTINUE
274 YMYAIC(*) = YMYING MOMENT INCREMENTAL-ADJACENT STORE
      * INTERCEPT EACH NUMBER CORRECTION
275 NG = 171
276 XDELTA = 0.6
277 IF(DUM1.EQ.0.5)GO TO 265
278 IADD = 0
279 CALL BREAKRNG(2,JUUMF,CLSL45,DEPYL,DEPYH)
280 IF(DEPYL.LT.0.0)GO TO 265
281 IF(I.EQ.1) DUMY3 = DINTFO * XINTFO / STORED

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SUBROUTINE YAK'OM 7-7/74 OPT=1

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345      IF (I, EQ, 2) DUMY3 = DINTFI * XINTFI / STORED
          CUMY4 = ADEL * INQ3IS / STOREL
          IF (JUMP, 2) 247, 250, 255
247      IQJ = IQJ + 1
          YMOAIC(IQJ) = 3.0
250      IQJ = IQJ + 1
          CALL LININT(121, I, CLSL45, DEP121)
          CALL LININT(122, I, CLSL45, DEP122)
          CALL LININT(123, I, CLSL45, DEP123)
          CALL LININT(124, I, CLSL45, DEP124)
          YMOAIC(IQJ) = ((DEP121 * DUMY4 + DEP122) * DUMY3 + (DEP123 * DUMY4 +
          * DEP124)) * SLOSXF * STOREC
          IF (IAJ, EQ, 2) 260 TO 260
255      IAJ = IAJ + 1
          CALL LININT(125, I, CLSL45, DEP125)
          CALL LININT(126, I, CLSL45, DEP126)
          CALL LININT(127, I, CLSL45, DEP127)
          CALL LININT(128, I, CLSL45, DEP128)
          YMOAIC(IAJ) = ((DEP125 * DUMY4 + DEP126) * DUMY3 + (DEP127 *
          * DEP128) * SLOSXF * STORED
          IF (IARD, EQ, 2) 260 TO 260
          YMOAIC(2) = YMOAIC(1)
260      XDELTA = YMOAIC(1) + (LUM1 - DEPYL) / (JFPYH - DEPYL) *
          * (YMOAIC(2) + YMOAIC(1))
265      YMTAIC(IMACH) = YMTAIC(IMACH) + XDELTA
300      CONTINUE
20000      CONTINUE
370      END

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09/20/76 17.02.53

FTN 4.54410

74/74 OPT=1

```

1 SUBROUTINE NORFERC
2
3     NORMAL FORCE
4     BASIC AIRLOAD
5     ANBASP = SLOPE PREDICTION MACH = 0.5
6     ANBASC(*) = ANBASF + SLOPE CORRECTION MACH=X
7     ANBAIP = INTERCEPT PREDICTION MACH = 0.5
8     ANBAIC(*) = ANBAIF + INTERCEPT CORRECTION MACH=X
9
10    INCREMENT-AIRCRAFT YAW
11    ANYSPF = SLOPE PREDICTION MACH = 0.5
12    ANYSPH = SLOPE PREDICTION MACH = 0.5
13    ANYSCF(*) = ANYSPF + SLOPE CORRECTION MACH=X
14    ANYSCM(*) = ANYSPH + SLOPE CORRECTION MACH=X
15    ANYIFF = INTERCEPT PREDICTION MACH = 0.5
16    ANYIFH = INTERCEPT PREDICTION MACH = 0.5
17    ANYICF(*) = ANYIFF + INTERCEPT CORRECTION MACH=X
18    ANYICH(*) = ANYIFH + INTERCEPT CORRECTION MACH=X
19    INCREMENT-ADJACENT STORE INTERFERENCE
20    ANIASP(*) = SLOPE PREDICTION
21    ANIASC(*) = SLOPE MACH NUMBER CORRECTION
22    ANIAPF(*) = INTERCEPT PREDICTION
23    ANIAPC(*) = INTERCEPT MACH NUMBER CORRECTION
24    ANOSEL = STORE NOSE LENGTH
25    YBIG = DISTANCE FROM THE FUSELAGE TO THE WING
26    TIP FOR HIGH-WING AIRCRAFT
27    ADPNXC = ADJUSTED IN PPA FROM X/C = 1.1 TO X/C = 1.0
28    ANFABN(*) = UPPER AND LOWER BREAK MACH NUMBER
29    CORRECTION FOR INCREMENT YAW SLOPE MACH
30    NUMBER CORRECTION
31    PPAUFH = THAT PART OF THE ADJUSTED PLAN PROJECTED
32    AREA FORWARD OF THE WING LEADING EDGE
33    ANFABI(*) = UPPER AND LOWER BREAK MACH NUMBER
34    CORRECTION FOR INCREMENT YAW INTERCEPT
35    MACH NUMBERS
36    ANFABS(*) = UPPER AND LOWER BREAK MACH NUMBER
37    CORRECTION FOR INCREMENT-ADJACENT STORE
38    SLOPE MACH NUMBER CORRECTION
39    ANFAIX(*) = UPPER AND LOWER BREAK MACH NUMBER
40    CORRECTION FOR INCREMENT-ADJACENT STORE
41    INTERCEPT MACH NUMBER CORRECTION
42
43    COMMON/CONSET/ ADFJSL,AKCFH,AKCYH,AKNOSE(2),AKTAIL(2),
44    AKWING(2),ALEDSL,ALEL,ANUPP,AREASP(4,2),
45    CDC45,CLDC45,CLSL45,DVALJF(2),IBEGN,ICALSG(7),
46    TOSY4,IERO,IMACHI,PPAJFW,PPAXC,SADJSP(4,2),SHDAF4,
47    SLOSF,SLJSD45,SPADJSP(2),SPATSP(2),SPREF,
48    SRSTD,STLOCL,STPDWS,YDSTO
49
50    COMMON/CONNOP/ANBASP,ANBASC(7),ANBAIP,ANBAIC(7),ANYSPP,
51    ANYSPH,ANYSCF(7),ANYSCM(7),ANYIFF,ANYIFH,
52    ANYICF(7),ANYICH(7),ANIASP,ANIASC(7),ANIAPF,
53    ANIAPC(7)
54
55    COMMON/CONINF/ AKM4AKI,IF,AKN,AKN8,AKTB,AKW8,AKWBI,
56    ALANDJ,ALFIN(5),ALINF1,ALINF3,ALINLT(5),ANUSEL,
57    CDOISO,CLAISO,CLOCAL,DINTFI,DINTF3,HWHCF,
58    ICASE,ICCNFG,IMAGE(9),ISYM,ITILE(36),
59    YSEG(40,2),NSTYPE(40,2),PXCNLM,REALM(9),SEGL,
60    SYL,SPAT(40,2),STORED,STOREL,SUMFA,TAILEA,

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115 IDSTAP = 18
    IF(JUM1.GT.0.5) GO TO 142
    CALL LININT(138,1,CLOC45,DEP138)
    CALL LININT(139,1,ZPH,DEP139)
    CALL LININT(140,1,PXOCHL,DEP140)
    CALL LININT(141,1,SREF,DEP141)
    ANSAIP = SREF * (DEP138 - 0.0109 * CLOC45 * ALEL + DEP139 +
    * DEP140 * DEP141)

120 142 CONTINUE
    ***** ANJAIC(*) = NORMAL FORCE BASIC AIRLOAD INTERCEPT MACH NUMBER
    ***** CORRECTION
    XDELTA = 0.0
    IF(JUM1.LE.DEP134) GO TO 143
    CALL LININT(144,1,Y1YBC,DEP144)
    XI142 = SAOJS(1.2) / (SREF * CLOC45 * CLOC45) -
    * DEP144 * PAXC / SREF
    CALL LININT(142,1,XI142,DEP142)
    CALL LININT(143,1,ALNDSL,DEP143)
    CALL LININT(145,1,STOWMS,DEP145)
    XDELTA = SREF * DEP142 * (JUM1 - DEP145 * DEP134) / DEP143
    ANBAIC(IMACH) = (ANSAIP + XDELTA) / SREF

135 143 *****
    ***** INCREMENTAL - AIRCRAFT YAW
    *****
    C *****
    C ***** ANYSEP = NORMAL FORCE INCREMENTAL- AIRCRAFT YAW SLOPE
    C ***** PREDICTION (+BS)
    C ***** ANYSPH = NORMAL FORCE INCREMENTAL- AIRCRAFT YAW SLOPE
    C ***** PREDICTION (-BS)
    DO 218 J=1,2
    IDSTAR = 18 + J
    IF(JUM1.GT.0.5) GO TO 144
    XDELTA = 0.0
    CALL LININT(146,J,CJCL45,DEP146)
    CALL LININT(147,J,ANUPN,DEP147)
    DEP147 = DEP147 * H4DHF
    CALL LININT(148,J,CJCL45,DEP148)
    CALL LININT(149,J,ANUPN,DEP149)
    DEP149 = DEP149 * H4DHF
    XDELTA = (DEP146 + DEP147) * ALEL + DEP148 * DEP149 * SP.F
    IF(J.EQ.1) ANYSPH = XDELTA
    IF(J.EQ.2) ANYSEP = XDELTA

140 144 CONTINUE
    ***** ANYSCF(*) = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW SLOPE
    C ***** MACH NUMBER CORRECTION (+BS)
    C ***** ANYSCH(*) = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW SLOPE
    C ***** MACH NUMBER CORRECTION (-BS)
    XDELTA = 0.0
    IAJJ = 0
    IF(JUM1.EQ.0.5) GO TO 140

145 NLINES = 5 + J
    NG = 153 - J
    CALL BREAKF(NG,NLINES,JU4P,CJCL45,DEPYLO,DEPYHI)
    IF(DEPYLO.LT.0.0) GO TO 140
    IF(JUMP.NE.1) GO TO 145
    JUMP = JUMP + 1
    JUMP21 = JUMP

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FTN 4.5+413

SUBROUTINE NUFFRC 74/74 Q3T=1

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175 IADD = IADD + 1
    ANFABN(IADD) = J.
    GO TO 150
145 JUMPP1 = JUMP + 1
150 DO 155 I=JUMP, JUMP+1
    IF (I.GT. (NINES+1)) ANFABN(2) = ANFABN(1)
    IF (I.GT. (NINES+1)) GO TO 165
    NG = 153 + 4 * (I-2)
    CALL LIMINT(NG, JCCL45, DEPY1)
    IADD = IADD + 1
    CALL LIMINT(NG+1, J, ANUPH, DEPY2)
    DEPY2 = DEPY2 * HWDF
    CALL LIMINT(NG+2, J, JCCL45, DEPY3)
    CALL LIMINT(NG+3, J, ANUPH, DEPY4)
    DEPY4 = DEPY4 * HWDF
    ANFABN(IADD) = ((DEPY1 + DEPY2) * JPDLSL + DEPY3 + DEPY4) * SREF
155 CONTINUE
165 XDELTA = ANFABN(1) + (GLM1 - DEPYLO) / (JEPYHI - DEPYLO) *
    * (ANFABN(2) - ANFABN(1))
180 IF (J.EQ.1) ANYSCH(IYACH) = (ANYSPH + XDELTA) / SREF
    IF (J.EQ.2) ANYSC(IYACH) = (ANYSPF + XDELTA) / SREF
C **** ANYIPP = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW INTERCEPT
C **** PREDICTION
C **** ANYIP4 = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW INTERCEPT
C **** PREDICTION
    IOSTAP = 20 + J
    IF (JUM1.GT.0.5) GO TO 182
    CALL LIMINT(169, J, JCCL45, DEP169)
    CALL LIMINT(170, J, STFDMS, DEP170)
    CALL LIMINT(171, J, ANUPH, DEP171)
    DEP171 = DEP171 * HWDF
    CALL LIMINT(172, J, JCCL45, DEP172)
    CALL LIMINT(173, J, STFDMS, DEP173)
    CALL LIMINT(174, J, ANUPH, DEP174)
    DEP174 = DEP174 * HWDF
    XDELTA = ((DEP159 + DEP170 + DEP171) * ALCL + DEP172 + DEP173 +
    * DEP174) * SREF
    IF (J.EQ.1) ANYIP4 = XDELTA
    IF (J.EQ.2) ANYIPP = XDELTA
182 CONTINUE
C **** ANYICP(*) = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW INTERCEPT
C **** MACH NUMBER CORRECTION
C **** ANYICM(*) = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW INTERCEPT
C **** MACH NUMBER CORRECTION
    IAJD = 0
    NG = 173 + J
    XDELTA = 0.0
    IF (JUM1.EQ.0.5) GO TO 200
    CALL BREAK(NG, NINES, JUMP, JCCL45, DEPYLO, DEPYHI)
    IF (DEPYLO.LT.0.0) GO TO 220
    IF (JUMP.NE.1) GO TO 183
    JUMP = JUMP + 1
    JUMPP1 = JUMP
    IADD = IADD + 1
    ANFABN(IADD) = 0.0
    GO TO 185
183 JUMPP1 = JUMP + 1

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FIN 4.5+410

QFT=1

74/74

SUBROUTINE NURFR

CALL NURSB1(J,JMP,204,DEPY1A,DEPY2A,XCELTA)

270 ANIASC(IPACH) = ANIASC(IPACH) + XCELTA

300 CONTINUE

ANIASC(IPACH) = (ANIASC(IPACH) + ANIASP) / SREF

ANIASC(IPACH) = (ANIASC(IPACH) + ANIASP) / SREF

20000 RETURN

END

290

FTN 4,5+410

```

1  SUBROUTINE NORSB1(J,JUMF,NGRPH,DEP1,DEP2,XDELTA)
2  *
3  * THIS ROUTINE CALCULATES THE INCREMENTAL ADJACENT T
4  * STORE INTERFERENCE MACH NUMBER CORRECTION FOR 30TH SLOPE
5  * AND INTERCEPT FOR NORMAL FORCE.
6  *
7  *
8  *
9  *
10 * COMMON/COMING/ DUM1,IMACH,KROTP(14),NCASE,NCASES(5,94),NUPCAS,
11 * COMMON/COMSET/ ADPDSL,AKCFM,AKCYM,AKNGSE(2),AKTAIL(2),
12 * AKWING(2),ALEDSL,ALEL,ANUP,AREASP(4,2),
13 * CDCL45,CLCL45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
14 * IDS14,IEFD,IACH1,PPAJFW,PPAXC,SADJSP(4,2),S40A4,
15 * SLOSRF,SLOS45,SFADJS(2),SPATSF(2),SREF,
16 * SPTSTD,STLDCL,STPDMS,YDSTD
17 *
18 * DIMENSION BREAK(2)
19 * IAD0 = 0
20 IF(JUMF.NE.1)GO TO 100
21 JUMF = JUMF + 1
22 JUMPP1 = JUMF
23 IAD0 = IAD0 + 1
24 BREAK(IAD0) = 0.0
25 GO TO 110
26
27 JUMPP1 = JUMF + 1
28 DO 120 I=JUMF,JUMPP1
29 IF(I.GT.4)BREAK(2) = BREAK(1)
30 IF(I.GT.4)GO TO 130
31 NG = NGRPH + 2*(I-2)
32 CALL LIMIT(NG,J,CDCL45,DEPY3)
33 CALL LIMIT(NG+1,J,CDCL45,DEPY4)
34 IAD0 = IAD0 + 1
35 AKSLP1 = DEPY3 + ADPDSL + DEPY4
36 BREAK(IAD0) = AKSLP1 + CVALUE(J) * SREF
37
38 120 CONTINUE
39 130 XDELTA = BREAK(1) + (DUM1 * DEP1) / (DEP2 + DEP1) *
40 * (BREAK(2) + BREAK(1))
41 RETURN
42 END

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09/20/76 17.02.53

FTH 4.5+410

74/74 OUT=1

```

1  SUBROUTINE PITPM
   *
   * PITCHING MOMENT
   *
   * BASIC AIRLOAD
   *
   * P4BASP = SLOPE PREDICTION MACH = 0.5
   * P4BASC(*) = P4BASP + SLOPE CORRECTION AT MACH=X
   * P4BAIP = INTERCEPT PREDICTION MACH = 0.5
   * P4BAIC(*) = P4BAIP + INTERCEPT CORRECTION MACH=X
   *
   * INCREMENT-AIRCRAFT YAW
   *
   * P4YSP = SLOPE PREDICTION MACH = 0.5 (+BS)
   * P4YSPH = SLOPE PREDICTION MACH = 0.5 (-BS)
   * P4YSPF(*) = P4YSP + SLOPE CORRECTION MACH=X (+BS)
   * P4YSPH(*) = P4YSPF + SLOPE CORRECTION MACH=X (-BS)
   * P4YSPM(*) = P4YSPF + SLOPE CORRECTION MACH=X (+BS)
   * P4YSPH(*) = P4YSPM + SLOPE CORRECTION MACH=X (-BS)
   * P4YIP = INTERCEPT PREDICTION MACH = 0.5
   * P4YICP(*) = P4YIP + INTERCEPT CORRECTION MACH=X (+BS)
   * P4YICM(*) = P4YIP + INTERCEPT CORRECTION MACH=X (-BS)
   *
   * INCREMENT-AIRCRAFT STORE INTERFERENCE
   *
   * P4IASF = SLOPE PREDICTION MACH = 0.5
   * P4IASC(*) = P4IASF + SLOPE CORRECTION MACH=X
   * P4IAIP = INTERCEPT PREDICTION MACH = 0.5
   * P4IAIC(*) = P4IAIP + INTERCEPT CORRECTION MACH=X
   * P4IMBC(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR
   * PITCHING MOMENT BASIC AIRLOAD SLOPE MACH
   * NUM123 CORRECTION
   *
   * P4M123(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR
   * PITCHING MOMENT BASIC AIRLOAD INTERCEPT
   * MACH NUMBER CORRECTION
   *
   * P4PHYMC(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR
   * PITCHING MOMENT INCREMENT-AIRCRAFT YAW
   * SLOPE MACH NUMBER CORRECTION
   *
   * P4PHYIC(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR
   * PITCHING MOMENT INCREMENT-AIRCRAFT YAW
   * INTERCEPT MACH NUMBER CORRECTION
   *
   * P4MYAL(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR
   * PITCHING MOMENT INCREMENT-ADJACENT STORE
   * INTERFERENCE SLOPE MACH NUMBER CORRECTION
   *
   * P4MYIAC(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR
   * PITCHING MOMENT INCREMENT-ADJACENT STORE
   * INTERFERENCE INTERCEPT MACH NUMBER
   * CORRECTION
   *
   *
   * COMMON/COMMON/ NUM1,IMACH,KROTP(14),NCASE,NCASES(5,94),NUMCAS,
   * UMCRD(5),NMACH
   * COMMON/COMMON/ AKCSF(2),PREDN(2),PREPH,PREYH,PYOPH(40),
   * PMOYN(40),XMOH(40)
   * COMMON/COMMON/ AKB,AKINTF,AKN,AKNB,AKTB,AKWB,AKWB1,
   * ALAHA,ALFIN(5),ALINF1,ALINFO,ALINT(5),ANUSEL,
   * CDOISD,CLAISO,CLOCAL,DINTFI,DINTFO,HDDHF,
   * LCASE,LCONFG,IMAGE( 9),LSYM,ITITLE(36),
   * NSEG(40,2),NSTYPE(49,2),PXDCML,REALH(8),SEGL,
   * SHL,SPAT(40,2),STORED,STOREL,SUNPA,TAILPA,
   * WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
   * YINTFI,YINTFO,YI,YIPRM,ZPH,ZPLNSP
   * COMMON/COMMON/ XLINEF
   * COMMON/COMMON/ P4BASP,P4BASC(7),P4BAIP,P4BAIC(7),P4YSPF,

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```

115 140 IADD = IADD + 1
      CALL LININT(221,1,STEPMS,DEP221)
      CALL LININT(222,1,CDCL45,DEP222)
      APBMC(IADD) = DEP222 + DEP221 * AKPOML
      IF(IADD.EQ.2) GO TO 160
120 IADD = IADD + 1
      CALL LININT(223,1,STEPMS,DEP223)
      CALL LININT(224,1,CDCL45,DEP224)
      APBMC(IADD) = DEP224 + DEP223 * AKPOML
125 160 CONTINUE
      XDELTA = APBMC(1) * (DUM1 - DEPYLO)/(DEPYHI - DEPYLO) *
      * (APBMC(2) - APBMC(1))
170 PMBASC(IMACH) = (PMASIF + XDELTA) / JRTSIF
C **** PMBASP = PITCHING MOMENT BASIC AIRLOAF INTERCEPT PREDICTION
      IDSTAR = 26
      IF(DUM1.GT.0.5) GO TO 185
      CALL LININT(225,1,LOCAL,DEP225)
      CALL LININT(226,1,CDCL45,DEP226)
      PMBASP = SREF + (DEP226 + DEP225 * ALEL)
185 CONTINUE
C **** PMBASC(*) = PITCHING MOMENT BASIC AIRLOAF INTERCEPT PAUCH
C **** NUMBER CORRECTION
      IADD = 0
      XDELTA = 0.0
      IF(DUM1.EQ.0.5)GO TO 235
      CALL BREAKP(227,4,1,CDCL45,DEPYLO,DEPYHI)
      IF(DEPYLO.LT.0.3)GO TO 235
      IF(I.GT.1) GO TO 213
      I = I + 1
      IP1 = I
      IADD = IADD + 1
      APBMC(IADD) = J.0
      GO TO 211
210 IP1 = I + 1
211 NG = 22A + 2 * (I-2)
      IF(I.EQ.4)NG = NG + 1
      DO 230 J=1,IP1
      IADD = IADD + 1
      CALL LININT(NG,1,CDCL45,DEPY1)
      CALL LININT(NG+1,1,CDCL45,DEPY2)
      IF(NG.NE.230) GO TO 220
      CALL LININT(NG+2,1,STEPMS,DEPY3)
      NG = NG + 1
      DEPY1 = DEPY1 * ALNDSO / (STORED * 12.0)
      DEPY2 = DEPY2 * DEPY3
220 CONTINUE
      APBMC(IADD) = SREF * ( DEPY2 + DEPY1 * AKPOML )
      NG = NG + 2
230 CONTINUE
      XDELTA = APBMC(1) * (DUM1 - DEPYLO) /
      * (DEPYHI - DEPYLO) + (APBMC(2) - APBMC(1))
      * (PMBASP + XDELTA) / SRISTC
235 PMBASC(IMACH) = (PMBASP + XDELTA) / SRISTC
C ****
C **** INCREMENTAL-AIRCRAFT YAW
C **** PHYSPP = PITCHING MOMENT INCREMENT-AIRCRAFT YAW SLOPE
C **** PREDICTION
      * (+BS)

```

```

C **** PHYSPM = PITCHING MOMENT INCREMENT-AIRCRAFT YAW SLOPE
C **** PREDICTION (-BS)
      DU 357 NL = 1,2
      IDSTAR = NL + 26
      IF (DUM1.GT.0.5) GO TO 250
      XDELTA = 0.0
      CALL LIMINT(237,NL,CDCL45,DEP237)
      CALL LIMINT(238,NL,ANUPM,DEP238)
      DEP238 = DEP238 + HWHF
      CALL LIMINT(239,NL,CDCL45,DEP239)
      CALL LIMINT(240,NL,ANUPM,DEP240)
      DEP240 = DEP240 + HWHF
      XDELTA = (DEP237 + DEP238) * PPAOSL + DEP239 + DEP240 * SRSTD
      IF (NL.EQ.1) PHYSPM = XDELTA
      IF (NL.EQ.2) PHYSPP = XDELTA
250 CONTINUE
C **** PHYSCF(*) = PITCHING MOMENT INCREMENT-AIRCRAFT YAW SLOPE
C **** MACH NUMBER CORRECTION (+BS)
C **** PHYSCH(*) = PITCHING MOMENT INCREMENT-AIRCRAFT YAW SLOPE
C **** MACH NUMBER CORRECTION (-BS)
      IA00 = 0
      XDELTA = 0.0
      IF (DUM1.EQ.0.5) GO TO 295
      CALL PEAKP(242,4,1,CDCL45,DEPYLO,DEPYMI)
      IF (DUM1.EQ.0.5) GO TO 295
      IF (I.GT.1) GO TO 270
      IA00 = IA00 + 1
      I = I + 1
      IF1 = I
      APHYMC(IA00) = 0.0
      GO TO 271
270 IF1 = I + 1
271 DO 230 J=I,IF1
      IF (J.GT.5) APHYMC(2) = APHYMC(1)
      IF (J.GT.5) GO TO 290
      NG = 243 + 4 * (J-2)
      IA00 = IA00 + 1
      CALL LIMINT(NG,NL,CDCL45,DEPY1)
      CALL LIMINT(NG+1,NL,ANUPM,DEPY2)
      DEP22 = DEP22 + HWHF
      CALL LIMINT(NG+2,NL,CDCL45,DEPY3)
      CALL LIMINT(NG+3,NL,ANUPM,DEPY4)
      DEP24 = DEP24 + HWHF
      APHYMC(IA00) = ((DEPY1 + DEPY2) * PPAOSL + DEPY3 + DEPY4) * SRSTD
290 CONTINUE
295 XDELTA = APHYMC(1) + (DUM1 - DEPYLO) / (DEPYMI - DEPYLO) *
      (APHYMC(2) - APHYMC(1))
295 IF (NL.EQ.1) PHYSCH(1) = (PHYSPP + XDELTA) / SPISIC
      IF (NL.EQ.2) PHYSCH(2) = (PHYSPP + XDELTA) / SPISIC
C **** PHYSPP = PITCHING MOMENT INCREMENT-AIRCRAFT YAW INTERCEPT
C **** PREDICTION (+BS)
C **** PHYSPPH = PITCHING MOMENT INCREMENT-AIRCRAFT YAW INTERCEPT
C **** PREDICTION (-BS)
      IDSTAR = NL + 24
      IF (DUM1.GT.0.5) GO TO 300
      XDELTA = 0.0
      CALL LIMINT(259,NL,CDCL45,DEP259)

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SUBROUTINE AITHON
74/76 027=1

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230 CALL LININT(260,NL,ANUPF ,DEP260)
    DEP260 = DEP260 * YADMF
    CALL LININT(261,NL,CDCU45,DEP261)
    CALL LININT(262,NL,ANUFM ,DEP262)
    DEP262 = DEP262 * YADMF
    XDELTA = (IDEP259 + DEP260) * PPAOSL - DEP261 + DEP262 * SATSTI)
    IF(NL.EQ.1)PMYIPM = XDELTA
    IF(NL.EQ.2)PMYIPP = XDELTA
235 CONTINUE
    C *****
    C *****
    C *****
    C *****
    PMYICM(*) = PITCHING MOMENT INCREMENT-AIRCRAFT YAW (+BS)
    PMYICM(*) = PITCHING MOMENT INCREMENT-AIRCRAFT YAW (-BS)
    MACH NUMBER CORRECTION
    IADJ = 0
    XDELTA = 0.0
    IF(DUM1.EQ.0.5) GO TO 350
    CALL BREAKF(264,4,I,CDCU45,JEFYLO,DEPHYH)
    IF(DEPYLO-IT.0.0) GO TO 350
    IF(I.GT.1)GO TO 330
    IADJ = IADJ + 1
    I = I + 1
    IP1 = I
    APHYIC(IADJ) = 0.0
    GO TO 335
250 IF1 = I + 1
330 GO 340 J=I,IP1
335 IF(J.GT.5) APMYIC(2) = LPMYTC(1)
    IF(J.GT.5) GO TO 345
    NG = 265 + 4 * (J-2)
    IADD = IADD + 1
    CALL LININT(NG,NL,CDCU45,DEPY1)
    CALL LININT(NG+1,NL,ANUFM,DEPY2)
    DEPY2 = DEPY2 * HWDHF
    CALL LININT(NG+2,NL,CDCU45,DEPY3)
    CALL LININT(NG+3,NL,ANUFM ,DEPY4)
    DEPY4 = DEPY4 * HWDHF
    APMYIC(IADD) = (IDEPY1 + DEPY2) * PPAOSL + DEPY3 + DEPY4 * SRISTO
265 CONTINUE
340 XDELTA = APMYIC(1) + (DUM1 - DEPYLO) / (JEFYHI - DEPYLO) *
    (APMYIC(2) - APMYIC(1))
350 IF(NL.EQ.1) PMYICH(IMACH) = (PMYIPM + XDELTA) / SRISTO
    IF(NL.EQ.2) PMYICR(IMACH) = (PMYIPP + XDELTA) / SPISIC
270 CONTINUE
    IF(OINIF0.EQ.0.0.AND.OINIFI.EQ.0.0)GO TO 20000.
    C *****
    C *****
    C *****
    ADJACENT STORE CALCULATIONS
275 IF(DUM1.EQ.0.5) PHIASP = 0.0
    IF(DUM1.EQ.0.5) PHIAIP = 0.0
    C ***** PHIASP = PITCHING MOMENT INCREMENT-ADJACENT STORE
    C ***** INTERFERENCE SLOPE PREDICTION
    DO 530 NL = IBEGN,IENO
        IDSTAR = 31
        IF(DUM1.GT.0.5) GO TO 375
        CALL LININT(281,NL,CDCU45,DEP281)
        CALL LININT(282,NL,CDCU45,DEP282)
        PHIASP = PHIASP + (DEP281 + PPAOSL + DEP282) *

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      *
      * DVALUE(NL) * SRISTD
      *
      375 CONTINUE
      C *** PMIASC(*) = PITCHING MOMENT INCREMENT-ADJACENT STORE
      C *** INTERFERENCE SLOPE MACH NUMBER CORRECTION
      XDELTA = 0.0
      IADD = 0
      IF (JUM1.EQ.0.5) GO TO 410
      CALL BREAKP(284,3,I,CDCL45,DEPYLO,DEPYHI)
      IF (DEPYLO.LT.0.0) GO TO 410
      IF (I.GT.1) GO TO 390
      IADD = IADD + 1
      I = I + 1
      IP1 = I
      APMIAC(I,*) = 0.0
      GO TO 395
      390 IP1 = I + 1
      395 DO 400 J=I,IP1
      IF (J.GT.4) APMIAC(2) = APMIAC(1)
      IF (J.GT.4) GO TO 405
      NG = 295 + 2 * (J-2)
      CALL LINTNT(NG,NL,CDCL45,DEPY1)
      CALL LINTNT(NG+1,NL,CDCL45,DEPY2)
      IADD = IADD + 1
      APMIAC(IADD) = (DEPY1 * PPAOSL + DEPY2 * DVALUE(NL) * SRISTD
      400 CONTINUE
      405 XDELTA = APMIAC(1) + (DLM1 - DEPYLO) / (DEPYHI - DEPYLO) *
      *
      410 PMIASC(INMACH) = PMIASC(INMACH) + XDELTA
      C *** PMIAIF = PITCHING MOMENT INCREMENT-ADJACENT STORE
      C *** INTERFERENCE INTERCEPT PREDICTION
      IDSTAP = 32
      IF (JUM1.GT.0.5) GO TO 425
      CALL LINTNT(291,NL,CDCL45,DEP291)
      CALL LINTNT(292,NL,CDCL45,DEP292)
      PMIAIF = PMIAIF + (DEP291 * PPAOSL + DEP292) *
      * DVALUE(NL) * SRISTD
      425 CONTINUE
      C *** PMIAC(*) = PITCHING MOMENT INCREMENT-ADJACENT STORE
      C *** INTERFERENCE INTERCEPT MACH NUMBER CORRECTION
      XDELTA = 0.0
      IADD = 0
      IF (JUM1.EQ.0.5) GO TO 470
      CALL BREAKP(284,3,I,CDCL45,DEPYLO,DEPYHI)
      IF (DEPYLO.LT.0.0) GO TO 470
      IF (I.GT.1) GO TO 450
      IADD = IADD + 1
      I = I + 1
      IP1 = I
      APMIAC(IADD) = 0.0
      GO TO 455
      450 IP1 = I + 1
      455 DO 460 J=I,IP1
      IF (J.GT.4) APMIAC(2) = APMIAC(1)
      IF (J.GT.4) GO TO 465
      NG = 295 + 2 * (J-2)
      CALL LINTNT(NG,NL,CDCL45,DEPY1)
      CALL LINTNT(NG+1,NL,CDCL45,DEPY2)

```

```
345      IADJ = IADJ + 1
      APHIAI(IADJ) = (DEPY1 * PPADSL + DEPY2) * CVALUE(ML) * SRTSID
      460 CONTINUE
      455 XDELTA = APHIAI(1) + (DUM1 - DEPYLO) / (DEPYHI - DEPYLO) *
      * (APHIAI(2) - APHIAI(1))
      470 PHIAIC(IMACH) = PHIAIC(IMACH) + XDELTA
      500 CONTINUE
      PHIASC(IMACH) = (PHIASC(IMACH) + PHIASP) / SRTSID
      PHIAIC(IMACH) = (PHIAIC(IMACH) + PHIAIP) / SRTSID
      20000 RETURN
      END
```

```

1  SUBROUTINE AXIFRC
   C *****
   C AXIAL FORCE
   C BASIC AIRLOAD
   C AXBASP(*) = SLOPE PREDICTION
   C AXBAIP(*) = INTERCEPT PREDICTION
   C INCREMENT-AIRCRAFT YAW
   C AXYSF(*) = SLOPE PREDICTION
   C AXYSPP(*) = SLOPE PREDICTION
   C AXYSPP(*) = INTERCEPT PREDICTION
   C AXYSPP(*) = INTERCEPT PREDICTION
   C INCREMENT-ADJACENT STORE INTERFERENCE
   C *NONE* = SLOPE PREDICTION
   C AXIAIP(*) = INTERCEPT PREDICTION
   C SHDARA = SHADED AREA
   C *****
   C COMMON/COMING/ DUM1,IMACH,KROTP(14),NCASE,NCASES(5,94),NUMCA,
   C NUMCRD(5),MYACH
   C COMMON/COMAXI/ AXBASP(7),AXBAIP(7),AXYSP(7),AXYIP(7),AXIAP(7),
   C AXYSF(7),AXYSPP(7)
   C COMMON/COMINP/
   C AKSW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
   C ALANJA,ALEFIN(5),ALINF1,ALINFO,ALINLT(5),ANOSL,
   C CJOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDHF,
   C ICASE,ICCNFG,IMAGE( 9),ISYP,ITITLE(36),
   C NSEG(4,2),NSTYPE(10,2),PXICHL,REALM(8),SEGL,
   C SML,SPAT(4,2),STORED,STOREL,SUPPA,TAILPA,
   C WINGFA,WSS,XCG,XINTFI,XINTFC,YBIG,YBL,
   C YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
   C COMMON/CGMSET/ ADOSL,AKCPH,AKCYM,AKNOSE(2),AKTAIL(2),
   C AKWIS(2),ALEDSL,ALEL,ANUPT,AREASP(4,2),
   C CQCL+5,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
   C IDSX1,IFAD,IYACH1,PPAJFW,PEAXC,SAUJSP(4,2),SHOAPA,
   C SLOS2F,SLOS45,SPAOJS(2),SPATSP(2),SPEF,
   C SRTSD,STLDCI,STPOWS,YDSTD
   C COMMON/COMWAC/ XLINTD
   C COMMON/REMOV2/ ICALGR(7),IFIND,IMPGR(7),IFRNT
   C COMMON/COMSTR/ ISTARS(46,7),IDSTAR
   C AXBASP(IMACH) = 3.0
   C AXBAIP(IMACH) = 0.0
   C AXYSPP(IMACH) = 0.0
   C AXYSPP(IMACH) = 0.0
   C AXIAP(IMACH) = 3.0
   C AXYSF(IMACH) = 0.0
   C AXYSF(IMACH) = 0.0
   C AXYSF(IMACH) = 0.0
   C GO 125 IGSTR=33,39
   C ISTARS(IGSTR,IMACH) = 14
125 CONTINUE
   IFORT = 5
   IF(ICALSG(IPRNT).EQ.0)GO TO 20030
   C *** AXBASP(*) = AXIAL FORCE BASIC AIRLOAD SLOPE PREDICTION
   IDSTAR = 33
   CALL LININT(301,1,DUM1,DEP301)
   XLINTD = STPOWS
   IF(STPOWS.LE.0.4)IDFV1 = ALNLOC(302,0,0,0.4,0.2,DUM1)
   IF(STPOWS.GT.0.4.AND).STPOWS.LE.0.8)
     DEP1 = ALNLOC(303,0.4,0.0,0.2,DUM1)

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09/20/76 17.02.53

FTN 4.54410

SUBROUTINE AXIFR 74/74 OPT=1

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60 IF(STPWS.GT.0.3)CALL T40D(303,2,3,0.6,0.8,DUM1,DEPY1)
   XLINTD = ANUPM
   DEP304 = 0.0
   IF(XLINTD.GE.0.9,AN).XLINTD, E.0.2)
   *   DEP304 = ALNLOC(304,0.0,0.2,0.1,DUM1)
   DEP304 = DEP304 * 440HF
   AXASP(IMACH) = DEP301 + DEPY1 + DEP304
   IOSTAR = 34
C **** AXASP(*) = AXIAL FORCE BASIC AIRCRAFT INTERCEPT PREDICTION
   XLINTD = SHDARA
   DEP305 = ALNLOC(305,5.0,30.0,5.0,DUM1)
   XLINTD = STPWS
   IF(STPWS.LT.0.4)DEPY1 = ALNLOC(306,0.2,3.4,0.1,DUM1)
   IF(STPWS.GE.0.4)DEPY1 = ALNLOC(307,0.4,0.7,0.1,DUM1)
   XLINTD = DUM1
   IF(ANUPM.GT.0.7) GO TO 150
   CALL LININT(308,1,ANUPM,DEP308)
   GO TO 210
150 IF(DUM1.GE.0.9)GO TO 160
   CALL T40D(308,1,2,0.7,0.9,ANUPM,DEP308)
   GO TO 210
160 IF(DUM1.GT.0.9)GO TO 170
   CALL LININT(308,2,ANUPM,DEP308)
   GO TO 210
170 IF(DUM1.GE.1.05) GO TO 180
   CALL T40D(308,2,3,0.9,1.05,ANUPM,DEP308)
   GO TO 210
180 IF(DUM1.GT.1.2) GO TO 190
   CALL LININT(308,3,ANUPM,DEP308)
   GO TO 210
190 IF(DUM1.GT.1.6) GO TO 230
   CALL T40D(308,3,4,1.2,1.6,ANUPM,DEP308)
   GO TO 210
200 CALL LININT(308,4,ANUPM,DEP308)
210 CONTINUE
   DEP308 = DEP308 * 440HF
   AXBAIF(IMACH) = (COOISO + DEP305) * (1.0 + DEPY1 + DEP308)
   DO 205 I=1,2
   IOSTAR = 34 + I
C **** AXSP(*) = AXIAL FORCE INCREMENTAL-AIRCRAFT YAW SLOPE
C **** PREDICTION
C **** AXSPH(*) = AXIAL FORCE INCREMENTAL-AIRCRAFT YAW SLOPE
C **** PREDICTION
C
   CALL LININT(309,1,DUM1,DEP309)
   IF(I.EQ.1)AXSPH(IMACH) = DEP309
   IF(I.EQ.2)AXSP(IMACH) = DEP309
C **** AXYP(*) = AXIAL FORCE INCREMENT-AIRCRAFT YAW
C **** INTERCEPT PREDICTION
C **** AXYPH(*) = AXIAL FORCE INCREMENT-AIRCRAFT YAW
C **** INTERCEPT PREDICTION
   IOSTAR = 36 + I
   CALL LININT(310,1,DUM1,DEP310)
   IF(I.EQ.1)AXYPH(IMACH) = DEP310
   IF(I.EQ.2)AXYP(IMACH) = DEP310
205 CONTINUE
C **** AXIASP(*) = AXIAL FORCE INCREMENT-ADJACENT STORE INTERFERENCE

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09/20/76 17.02.53

FTN 4.5+4.10

SUBROUTINE AXIFRC 74/74 OPT=1

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115      C ***** SLOPE PREDICTION
      IF(OINTFI.EQ.0.0.AND.OINTFO.EQ.0.0)GO TO 20000
      IOSTAR = 39
      CALL LININT(311,1,0UM1,CEP311)
      CALL LININT(313,1,0UM1,CEP313)
      X0UM = (AREASP(3,2) + AREASP(4,2)) / AREASP(2,2)
      CALL LININT(315,1,X0UM,CEP315)
      DO 220 I=1,BEGH,IEND
      IF(I.EQ.1)0UMX = YINTFO + OINTFO * ALINFO
      IF(I.EQ.2)0UMX = YINTFI + OINTFI * ALINFI
      CALL LININT(312,I,STPOMS,DEP312)
      CALL LININT(314,I,STPOMS,DEP314)
      AXIAP(IMACH) = AXIAP(IMACH) + ((DEP311 + DEP312) * SREF *0UMX /
      * (STOREL * STORED) + DEP313 + DEP314 + DEP315 )
      220 CONTINUE
130      20000 RETURN
      END

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1      SUBROUTINE ROLMOM
2      *
3      * ROLLING MOMENT
4      * BASIC AIRLOAD
5      * RMBASP(*) = SLOPE PREDICTION
6      * RMBASP(*) = INTERCEPT PREDICTION
7      * INCREMENT-AIRCRAFT YAN
8      * NONE* = SLOPE PREDICTION
9      * P4YTPP(*) = INTERCEPT PREDICTION
10     * RMYIPM(*) = INTERCEPT PREDICTION
11     * INCREMENT-ADJACENT STORE INTERFERENCE
12     * NONE* = SLOPE PREDICTION
13     * RMYIAP(*) = INTERCEPT PREDICTION
14     *
15     COMMON/CONINC/ DUM1,IMACH,K2OTYF(14),NCASE,NCASES(5,94),NUMCIS,
16     * NUMCSD(5),NMACH
17     COMMON/CONROL/ RMBASP(7),RMBAP(7),RMYIPP(7),RMYIPM(7),
18     * RMYIAP(7)
19     *
20     COMMON/CONINF/ AKN,AKNB,AKTB,AKWB,AKMBI,
21     * ALAMDA,ALFEIN(5),ALINFI,ALINFO,ALINLT(5),ANOSL,
22     * CDOISO,CLAISU,CLOCAL,DINTFI,DINTFO,HWDHF,
23     * ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
24     * NSEG(40,2),NSTYPE(40,2),EXDCML,REALH(8),SEGL,
25     * SWL,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
26     * WINGPA,HSS,XCG,XINTFI,XINTFO,YBIG,YBL,
27     * YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
28     *
29     COMMON/CONSET/ AOPDSL,ARCFM,AKCYH,AKNOSE(2),AKTALU(2),
30     * AKWING(2),ALEDSL,ALEL,ANOPY,AREASP(4,2),
31     * CCG(45,4),CJJC45,CJSL45,VALUE(2),IDEGN,ICALSG(7),
32     * IOSY,LEND,IMACH1,PRAFM,PFAXC,SAOJSP(4,2),SHDARA,
33     * SLOSXF,SLOS45,SPADJ(2),SPATSP(2),SREF,
34     * SRTSTO,STLOCL,STPOWS,YUSTO
35     *
36     COMMON/CONMAC/ XLINTD
37     COMMON/REMOV2/ ICALSP(7),IFIND,INPCRA(7),IPRNT
38     COMMON/CONSTR/ ISTARS(46,7),IDSTAR
39     RMBASP(IMACH) = 0.0
40     RMYIPP(IMACH) = 0.0
41     RMYTPM(IMACH) = 0.0
42     RMYIAP(IMACH) = 0.0
43     DO 110 IDSTR = 40,74
44     ISTARS(IDSTR,IMACH) = 1P
45     110 CONTINUE
46     IFONT = 6
47     IDS4 = 1
48     IF(IDSYH.GT.3)IOSM = 2
49     IF(ICALSG(IPRNT).EQ.0.OR.ICASE.EQ.3)GO TO 20000
50     IDSTAR = 40
51     AREAS = SUMPA / 144.
52     IF(ICONFG.EQ.1HX)AREAS = 2.5284 * (AREASP(3,2)+AREASP(4,2))/144.0
53     IF(ICONFG.EQ.1H+)AREAS=2.0*(AREASP(3,2)+AREASP(4,2))/144.0
54     STOT12 = STORED * 12.0
55     *
56     CALL LININT(317,IOS4,DUM1,DEP317)
57     IF(DUM1.GT.1.2) GO TO 120
58     CALL LININT(318,1,ANUPH,DEP318)

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09/20/76 17.02.53

FTN 4.5+410

SUBROUTINE ROLNUP 74/74 OPT=1

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        GO TO 140
120 IF (DUM1.GE.1.6) GO TO 130
    CALL TMOB(318,1,2,1.2,1.6,ANUPM,DEP318)
    GO TO 140
130 CALL LININT(318,2,ANUPM,DEP318)
140 CONTINUE
    DEP318 = DEP318 + HMDHF
    RMBSF(IMACH) = (DEP317 + DEP318) * AREAS * SLOS45 / SPTSTO
    C **** RMBAIP(*) = ROLLING MOMENT BASIC AIRLOAD INTERCEPT
    C **** PREDICTION
    IDSIAP = 41
    IF (DUM1.GT.0.5) GO TO 150
    CALL LININT(319,1,CLSL45,DEPY1)
    GO TO 270
150 IF (DUM1.GE.0.7) GO TO 160
    CALL TMOB(319,1,2,0.5,0.7,CLSL45,DEPY1)
    GO TO 270
160 IF (DUM1.GT.0.7) GO TO 170
    CALL LININT(319,2,CLSL45,DEPY1)
    GO TO 270
170 IF (DUM1.GE.0.9) GO TO 180
    CALL LININT(319,2,CLSL45,DEPY1)
    CALL LININT(320,1,CLSL45,YDEP2)
    DEPY1 = (YDEP2 - YDEP1) * (DUM1 - 0.7) / 0.2 + YDEP1
    GO TO 270
180 IF (DUM1.GT.0.9) GO TO 190
    CALL LININT(320,1,CLSL45,DEPY1)
    GO TO 270
190 IF (DUM1.GE.1.05) GO TO 200
    CALL TMOB(320,1,2,0.9,1.05,CLSL45,DEPY1)
    GO TO 270
200 IF (DUM1.GT.1.05) GO TO 210
    CALL LININT(320,2,CLSL45,DEPY1)
    GO TO 270
210 IF (DUM1.GE.1.2) GO TO 220
    CALL LININT(320,2,CLSL45,YDEP1)
    CALL LININT(321,1,CLSL45,YDEP2)
    DEPY1 = (YDEP2 + YDEP1) * (DUM1 - 1.05) / .15 + YDEP1
    GO TO 270
220 IF (DUM1.GT.1.2) GO TO 230
    CALL LININT(321,1,CLSL45,DEPY1)
    GO TO 270
230 IF (DUM1.GE.1.6) GO TO 240
    CALL TMOB(321,1,2,1.2,1.6,CLSL45,DEPY1)
    GO TO 270
240 IF (DUM1.GT.1.6) GO TO 250
    CALL LININT(321,2,CLSL45,DEPY1)
    GO TO 270
250 IF (DUM1.EQ.2.0) GO TO 260
    CALL LININT(321,2,CLSL45,YDEP1)
    CALL LININT(322,1,CLSL45,YDEP2)
    DEPY1 = (YDEP2 - YDEP1) * (DUM1 - 1.6) / (.4 + YDEP1)
    GO TO 270
260 CALL LININT(322,1,CLSL45,DEPY1)
270 CONTINUE
    RMBAIP(IMACH) = DEPY1 + DEP323 * AREAS / SPTSTO

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39/20/76 17.02.53

FTN 4.5410

SUBROUTINE ROLMOM 74/74 OPT=1

```

115 C **** RMYIPP(*) = ROLLING MOMENT INCREMENT-AIRCRAFT YAW INTERCEPT
C **** PREDICTION
      IOSTAR = 42
      IF(JUM1.GT.0.7) GO TO 280
      CALL LININT(325,1,ANUPM,DEP325)
      GO TO 315
120
280 IF(JUM1.GE.0.9) GO TO 290
      CALL THOD(325,1,2,3,7,5,9,ANUPM,DEP325)
      GO TO 315
125
290 IF(JUM1.GT.1.2) GO TO 300
      CALL LININT(325,2,ANUPM,DEP325)
      GO TO 315
300 IF(JUM1.GE.1.6) GO TO 310
      CALL THOD(325,2,3,1,2,1,5,ANUPM,DEP325)
      GO TO 315
130
310 CALL LININT(325,3,ANUPM,DEP325)
315 CONTINUE
      ISTAR(43,IMACH) = ISTAR(42,IMACH)
      DEP325 = 1.0 + (1.0 - DEP325) * HMDHF
      GO 325 NL = 1.2
      IOSTAR = 41 + NL
      XDELTA = 0.0
      CALL LININT(324,NL,JUM1,DEP324)
      XDELTA = DEP325 + DEP324 * AREAS + SLOS45 / SPISTO
      IF(NL.EQ.1) RMYIPP(IMACH) = XDELTA
      IF(NL.EQ.2) RMYIPP(IMACH) = XDELTA
325 CONTINUE
C **** FMYIPM(*) = ROLLING MOMENT INCREMENT-AIRCRAFT YAW INTERCEPT
C **** PREDICTION
C **** RMAIP(*) = ROLLING MOMENT INCREMENT-ADJACENT STORE INTERFERENCE
C **** INTERCEPT PREDICTION
      IF(DINTFI.EQ.0.0.AND.DINTFO.EQ.0.0) GO TO 20000
C ****
C **** ADJACENT STORE CALCULATIONS
C ****
      DO 395 NL = IBEGN, IEVD
      IOSTAR = 44
      IF(NL.EQ.1) ITP = -1
      IF(NL.EQ.2) ITP = 1
      NG = 327 * ITP
      CALL LININT(326,NL,JUM1,DEP326)
      IF(JUM1.GT.0.7) GO TO 325
      CALL LININT(NG,1,STOT12,DEP327)
      CALL LININT(NG+ITP,1,STFOWS,DEP328)
      CALL LININT(NG+ITP+ITP,1,CLSL45,DEP329)
      GO TO 390
335 IF(JUM1.GE.0.9) GO TO 345
      CALL THOD(NG,1,2,0,7,0,9,STOT12,DEP327)
      CALL THOD(NG+ITP,1,2,0,7,0,9,STFOWS,DEP328)
      CALL THOD(NG+ITP+ITP,1,2,0,7,0,9,CLSL45,DEP329)
      GO TO 390
345 IF(JUM1.GT.0.1) GO TO 355
      CALL LININT(NG,2,STOT12,DEP327)
      CALL LININT(NG+ITP,2,STFOWS,DEP328)
      CALL LININT(NG+ITP+ITP,2,CLSL45,DEP329)
      GO TO 390
355 IF(JUM1.GE.1.2) GO TO 365

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09/20/76 17.02.53

FTN 4.5*410

SUBROUTINE RULMOM 74/74 OPT=1

```

175      CALL TWOD(NG,2,3,0,9,1,2,STDT12,DEF327)
          CALL TWOD(NG+ITP,2,3,0,9,1,2,STPOMS,DEF328)
          CALL TWOD(NG+ITP+ITP,2,3,0,9,1,2,CLSL45,DEP329)
          GO TO 390
365      IF(DUM1.GT.1.2)GO TO 375
          CALL LININT(NG,3,STDT12,DEF327)
          CALL LININT(NG+ITP,3,STPOMS,DEF328)
          CALL LININT(NG+ITP+ITP,3,CLSL45,DEP329)
          GO TO 390
180      375      IF(DUM1.GE.1.6)GO TO 385
          CALL TWOD(NG,3,4,1,2,1,8,STDT12,DEF327)
          IF(NL.EQ.1)CALL LININT(NG+ITP,3,STPOMS,DEF328)
          IF(NL.EQ.2)CALL TWOD(NG+ITP,3,4,1,2,1,6,STPOMS,DEF328)
          CALL TWOD(NG+ITP+ITP,3,4,1,2,1,6,CLSL45,DEP329)
          GO TO 390
185      385      CALL LININT(NG,4,STDT12,DEF327)
          IF(NL.EQ.1)CALL LININT(NG+ITP,3,STPOMS,DEF328)
          IF(NL.EQ.2)CALL LININT(NG+ITP,4,STPOMS,DEF328)
          CALL LININT(NG+ITP+ITP,4,CLSL45,DEP329)
          390      RMIAIP(LMACH) = RMIAIP(LMACH) + (DEP326 + DEP327 + DEP328 +
          *      DEP329) * AREAS
395      CONTINUE
          RMIAIP(LMACH) = RMIAIP(LMACH) / SRISTO
20.60      RETURN
          END
195

```

09/20/76 17.02.53

FTN 4.5.413

FUNCTION ALNLOC 74/74 OPT=1

```

1  FUNCTION ALNLOC(NGRAPH,XLO,XHI,XINC,XIND)
2  *
3  * THIS ROUTINE LOOKS UP A DEPENDENT VALUE FROM THE DATA
4  * BASE ASSUMING THE INDEPENDENT VALUES ARE EVENLY SPACED
5  *
6  * NGRAPH = THE NUMBER OF THE GRAPH BEING CONSIDERED
7  *
8  * XLOW = STARTING X VALUE
9  * XHI = ENDING Y VALUE
10 * XIND = INDEPENDENT VALUE
11 * XINC = X INCREMENT
12 *
13 * *****
14 * COMMON/UMMAC/ XLIND
15 * XLOW = XLO
16 * XHIGH = XINC + XLOW
17 * LINE = 1
18 * LINEP1 = 2
19 * IF(XLIND.GE.XHI) LINE = (XHI - XLOW) / XINC + 1.
20 * IF(XLIND.LE.XLOW.OR.XLIND.GE.XHI)GO TO 105
21 * IF(XLIND.GT.XLOW)GO TO 110
22 * 105 CALL LININT(NGRAPH,LINE,XIND,YDEP)
23 * GO TO 130
24 * 110 IF(XLIND.GE.XHIGH)GO TO 120
25 * CALL THOD(NGRAPH,LINE,LINEP1,XLOW,XHIGH,XIND,YDEP)
26 * GO TO 130
27 * 120 XLOW = XHIGH
28 * XHIGH = XHIGH + XINC
29 * LINE = LINE + 1
30 * LINEP1 = LINEP1 + 1
31 * GO TO 100
32 * 130 ALNLOC = YDEP
33 * RETURN
34 * END

```

09/20/76 17.02.53

FTN 4.5+410

SUBROUTINE BREAKF 74/74 OFT=1

```

1      SUBROUTINE BREAKF(NGRAPH,IEND,JUMP,XIND,XLO,XHI)
      C
      C      THIS SUBROUTINE FINDS THE HIGH AND LOW MACH NUMBERS
      C      BETWEEN WHICH THE MACH NUMBER BEING OBSERVED LIES.
      C      IF THE STUDIED MACH NUMBER IS ABOVE THE MAXIMUM GRAPH
      C      LINE PRESENT ON THE GRAPH, THE POINT CORRESPONDING TO
      C      THE MAXIMUM LINE WILL BE USED.
      C
      C      COMMON/COMING/ DUM1,IMACH,KROTP(14),NCASE,NCASES(5,94),NUMCAS,
      C      NUMCD(5),NTACH
      C
10     DO 110 I=1,IEND
      IF(I.GT.1)GO TO 120
      CALL LININT(NGRAPH,I,XIND,XHI)
      IF(DUM1.LE.XHI)GO TO 200
15     XLO = XHI
      CALL LININT(NGRAPH,I+1,XIND,XHI)
      JUMP = I
      IF(DUM1.GT.XLO.AND.DUM1.LE.XHI)GO TO 210
110    CONTINUE
      JUMP = JUMP + 1
      RETURN
200    XLO = - DUM1
210    RETURN
      END

```

DIGITAL DATA BASE LISTING

Presented below is a brief description of the format for each graph in the digital data base.

Figure Number	Line Number	Number of points (X, Y pairs) describing this curve in the data base		Number of cards containing the X, Y pairs	
13	1	17	6		
.1973E+00	.6636E+00	.2250E+00	.7194E+00	.2497E+00	.7665E+00
.2777E+00	.8112E+00	.3129E+00	.8487E+00	.3477E+00	.8985E+00
.3710E+00	.9252E+00	.4100E+00	.9559E+00	.4462E+00	.9791E+00
.4890E+00	.9942E+00	.5094E+00	.9958E+00	.5401E+00	.9930E+00
.5709E+00	.9819E+00	.5980E+00	.9755E+00	.6246E+00	.9631E+00
.6545E+00	.9452E+00	.6988E+00	.9204E+00		
		X ₁₇	Y ₁₇		

[illegible]

.1792E+03	.1051E+01	.1993E+00	.1051E+01	.1047E+03	.1195E+01
18	3	31	11		
.3963E+02	.1198E+01	.1015E+03	.1198E+01	.1109E+03	.1165E+01
.1069E+03	.1176E+01	.1066E+03	.1176E+01	.1169E+03	.1105E+01
.1120E+03	.1127E+01	.1150E+03	.1127E+01	.1217E+03	.1043E+01
.1166E+03	.1063E+01	.1202E+03	.1063E+01	.1307E+03	.1007E+01
.1238E+03	.1010E+01	.1277E+03	.1010E+01	.1371E+03	.1012E+01
.1308E+03	.1007E+01	.1339E+03	.1007E+01	.1495E+03	.1063E+01
.1310E+03	.1045E+01	.1448E+03	.1045E+01	.1596E+03	.1133E+01
.1405E+03	.1111E+01	.1572E+03	.1111E+01	.1694E+03	.1182E+01
.1531E+03	.1172E+01	.1658E+03	.1172E+01	.1787E+03	.1197E+01
.1625E+03	.1195E+01	.1757E+03	.1195E+01		
.1724E+03					
.1994E+03					
18	4	2	1		
.3967E+02	.1602E+01	.1996E+03	.1602E+01		
18	5	2	1		
.3983E+02	.2001E+01	.1996E+03	.2001E+01		
19	1	6	2		
.530E+02	.6966E-04	.7987E+02	.3771E-04	.1122E+03	.1046E-04
.1440E+03	.1357E-04	.1712E+03	.3111E-04	.1998E+03	.4791E-04
20	1	53	18		
.3896E+02	.3843E-01	.4514E+02	.3849E-01	.4997E+02	.3845E-01
.5554E+02	.3833E-01	.5923E+02	.3769E-01	.6269E+02	.3723E-01
.6646E+02	.3646E-01	.7077E+02	.3532E-01	.7418E+02	.3413E-01
.8994E+02	.3259E-01	.8182E+02	.3120E-01	.8548E+02	.2957E-01
.9099E+02	.2782E-01	.9242E+02	.2562E-01	.9632E+02	.2371E-01
.9941E+02	.2175E-01	.1023E+03	.2008E-01	.1056E+03	.1756E-01
.1083E+03	.1536E-01	.1108E+03	.1324E-01	.1125E+03	.1193E-01
.1144E+03	.1079E-01	.1155E+03	.9532E-02	.1249E+03	.1507E-02
.1266E+03	.1222E-03	.1295E+03	.2566E-02	.1326E+03	.5540E-02
.1362E+03	.8921E-02	.1391E+03	.1206E-01	.1412E+03	.1401E-01
.1441E+03	.1703E-01	.1468E+03	.1944E-01	.1494E+03	.2269E-01
.1517E+03	.2533E-01	.1540E+03	.2811E-01	.1569E+03	.3141E-01
.1593E+03	.3438E-01	.1623E+03	.3723E-01	.1644E+03	.3939E-01
.1670E+03	.4179E-01	.1693E+03	.4428E-01	.1711E+03	.4554E-01
.1735E+03	.4729E-01	.1766E+03	.5018E-01	.1796E+03	.5195E-01
.1826E+03	.5422E-01	.1853E+03	.5613E-01	.1879E+03	.5756E-01
.1902E+03	.5914E-01	.1919E+03	.6029E-01	.1941E+03	.6110E-01
.1968E+03	.6236E-01	.2000E+03	.6399E-01		
21	1	11	4		
.1997E+03	.4398E+00	.2812E+00	.4565E+00	.3504E+00	.5466E+00
.4093E+00	.6468E+00	.7571E+00	.7571E+00	.5165E+00	.8366E+00
.5598E+00	.9413E+00	.5938E+00	.1024E+01	.6294E+00	.1088E+01
.6569E+00	.1121E+01	.6988E+00	.1172E+01		
22	1	18	6		
.7529E+00	.2302E-05	.5964E+00	.1233E-06	.6763E+00	.4522E-06
.9325E+00	.1122E-04	.8162E+00	.4804E-05	.8672E+00	.7359E-05
.1057E+01	.1083E-04	.9795E+00	.1864E-04	.1012E+01	.1727E-04
.1199E+01	.2360E-04	.1098E+01	.2088E-04	.1152E+01	.2251E-04
.1356E+01	.2647E-04	.1258E+01	.2524E-04	.1302E+01	.2598E-04
23	1	15	5		
.1993E+00	.1450E+00	.1391E+01	.2612E+00	.1504E+01	.2693E-04
.3705E+00	.4588E+00	.2653E+00	.5303E+00	.3189E+00	.3575E+00
.4750E+00	.6991E+00	.3988E+00	.7766E+00	.4369E+00	.6068E+00
.5605E+00	.9156E+00	.5061E+00	.1011E+01	.5352E+00	.8550E+00
.6538E+00	.1186E+01	.5942E+00	.1242E+01	.6253E+00	.1099E+01
24	1	22	8		
.1992E+00	.4444E-01	.6767E+00	.4283E-01	.7000E+00	.1318E+01
.5051E+00	.2929E-01	.3390E+00	.2202E-01	.4390E+00	.3475E-01
.6555E+00	.6667E-02	.5756E+00	.5051E-02	.6365E+00	.1394E-01
.8636E+00	.2181E-01	.7544E+00	.3554E-01	.8062E+00	.1273E-01
.1073E+01	.5515E-01	.9217E+00	.6747E-01	.9851E+00	.4444E-01
.1869E+01	.8069E-01	.1091E+01	.1036E+00	.1138E+01	.7711E-01
.1405E+01	.1913E+00	.1251E+01	.1590E+00	.1316E+01	.1202E+00
.1576E+01		.1465E+01		.1520E+01	.1758E+00

25	1588E+00	1484E+00	2523E+00	2359E+00	3014E+00	3183E+00
	3408E+00	4077E+00	3771E+00	4769E+00	4233E+00	5958E+00
	4606E+00	6965E+00	4998E+00	7982E+00	5396E+00	6948E+00
	5712E+00	9751E+00	6026E+00	1030E+01	6444E+00	1101E+01
26	6807E+00	1145E+01	6994E+00	1157E+01		
0.		1	17	6		
	3000E+00	0.	1000E+00	0.	2000E+00	0.
	6000E+00	0.	4000E+00	-1000E-05	5000E+00	-9020E-05
	9000E+00	-1100E-04	7000E+00	-1900E-04	8000E+00	-3300E-04
	3000E+00	-8000E-04	1000E+01	-1250E-03	1100E+01	-1610E-03
	1200E+01	-1940E-03	1300E+01	-2040E-03	1400E+01	-2200E-03
1500E+01	-2310E-03	1600E+01	1600E+01	-2430E-03		
27	1	22	8			
	1984E+00	7666E-01	2566E+00	9259E-01	3018E+00	1205E+00
	3562E+00	1553E+00	4012E+00	2031E+00	4460E+00	2628E+00
	4829E+00	3534E+00	5056E+00	4111E+00	5305E+00	5177E+00
	5520E+00	6570E+00	5693E+00	8183E+00	5799E+00	9248E+00
	5912E+00	1064E+01	5982E+00	1147E+01	6036E+00	1225E+01
	6104E+00	1299E+01	6199E+00	1354E+01	6319E+00	1433E+01
	6434E+00	1479E+01	6570E+00	1541E+01	6739E+00	1593E+01
7008E+00	1674E+01					
28	1	22	8			
	1986E+00	-5282E-01	3022E+00	-4485E-01	3541E+00	-3817E-01
	4333E+00	-2791E-01	5016E+00	-1694E-01	5639E+00	-4585E-02
	6203E+00	8571E-02	6982E+00	2532E-01	7610E+00	4266E-01
	8265E+00	6199E-01	9029E+00	8252E-01	9628E+00	1007E+00
	1020E+01	1186E+00	1067E+01	1344E+00	1116E+01	1497E+00
	1176E+01	1718E+00	1207E+01	1832E+00	1248E+01	1938E+00
	1291E+01	2033E+00	1326E+01	2119E+00	1367E+01	2175E+00
1401E+01	2193E+00					
29	1	7	3			
	4004E+02	2702E-04	8101E+02	2310E-04	1112E+03	1988E-04
	1358E+03	1770E-04	1571E+03	1528E-04	1757E+03	1347E-04
2000E+03	1145E-04					
30	1	8	3			
	3972E+02	-3406E-01	6927E+02	3582E-01	1039E+03	-3851E-01
	1270E+03	-3980E-01	1445E+03	-4076E-01	1604E+03	-4201E-01
	1790E+03	-4285E-01	2000E+03	-4482E-01		
31	1	9	9			
	4014E+02	-5710E-03	5231E+02	9720E-03	5911E+02	-9580E-03
	6643E+02	-9466E-03	7880E+02	-9110E-03	8305E+02	-8920E-03
	9193E+02	-6510E-03	9833E+02	-9000E-03	1042E+03	-7350E-03
	1111E+03	-6480E-03	1171E+03	-5420E-03	1205E+03	-4880E-03
	1257E+03	-3900E-03	1296E+03	-3050E-03	1364E+03	-1450E-03
	1400E+03	-5300E-04	1437E+03	6900E-04	1475E+03	1530E-03
	1514E+03	-2590E-03	1566E+03	3880E-03	1623E+03	5360E-03
	1695E+03	6540E-03	1757E+03	7570E-03	1819E+03	8350E-03
	1885E+03	9020E-03	1941E+03	9563E-03	1997E+03	10100E-02
32	1	14	5			
	7443E+00	2233E-03	1100E+01	2129E-03	1377E+01	2078E-03
	1640E+01	2042E-03	1991E+01	1974E-03	2120E+01	1926E-03
	2177E+01	1887E-03	2232E+01	1755E-03	2344E+01	1500E-03
	2423E+01	1079E-03	2472E+01	7284E-04	2517E+01	3025E-04
2550E+01	0.	3	0.			
33	1	3	1			
	0.	1	0.		9998E+02	-7131E-03
34	1	21	7			
	6977E+02	4757E+00	8127E+02	4291E+00	9545E+02	3330E+00
	1053E+03	2520E+00	1141E+03	1498E+00	1213E+03	5769E-01
	1267E+03	-1923E-01	1333E+03	-1417E+00	1405E+03	-2551E+00
	1479E+03	-3725E+00	1531E+03	-4615E+00	1542E+03	-4889E+00
	1566E+03	-5435E+00	1603E+03	-6275E+00	1656E+03	-6994E+00
	1704E+03	-7763E+00	1760E+03	-9472E+00	1817E+03	-9221E+00
1888E+03	-1004E+01		1933E+03	-1064E+01	2901E+03	-1132E+01

7676E+00	1047E+01	1289E+01	1383E+00	1047E+01	1289E+01	1383E+00
1538E+01	1819E+01	2090E+01	1383E+00	1819E+01	2090E+01	1383E+00
2179E+01	2241E+01	2326E+01	1383E+00	2241E+01	2326E+01	1383E+00
2383E+01	2439E+01	2483E+01	1383E+01	2439E+01	2483E+01	1383E+01
2511E+01	2540E+01	2554E+01	1383E+01	2540E+01	2554E+01	1383E+01
2550E+01	4000E+02		0.	4000E+02		0.
0.	8007E+02	9986E+02	1	8007E+02	9986E+02	1
5959E+02	2002E+03		1	2002E+03		1
5975E+02	1046E+01	1132E+03	5	1046E+01	1132E+03	5
1156E+03	1194E+03	1229E+03	13	1194E+03	1229E+03	13
1260E+03	1131E+01	1319E+03	2	1131E+01	1319E+03	2
1355E+03	1131E+01	1417E+03	2	1131E+01	1417E+03	2
2003E+03	1196E+01		3	1196E+01		3
5983E+02	1598E+01		3	1598E+01		3
5991E+02	2000E+01		4	2000E+01		4
7639E+02	1607E+02	9302E+02	1	1607E+02	9302E+02	1
1017E+03	7569E+02	1213E+03	1	7569E+02	1213E+03	1
1293E+03	1675E+03	1410E+03	1	1675E+03	1410E+03	1
1471E+03	1502E+03	1627E+03	1	1502E+03	1627E+03	1
1702E+03	3971E+03	1825E+03	1	3971E+03	1825E+03	1
1795E+03	4848E+03	2000E+03	1	4848E+03	2000E+03	1
7140E+02	1585E+01	8541E+02	1	1585E+01	8541E+02	1
9434E+02	866E+00	1145E+03	1	866E+00	1145E+03	1
1235E+03	1605E+00	1346E+03	1	1605E+00	1346E+03	1
1424E+03	2305E+00	1578E+03	1	2305E+00	1578E+03	1
1645E+03	5741E+00	1792E+03	1	5741E+00	1792E+03	1
1873E+03	7829E+00	2001E+03	1	7829E+00	2001E+03	1
2020E+03	2333E+00		10	2333E+00		10
5987E+02	7208E+03	8511E+02	30	7208E+03	8511E+02	30
9123E+02	7736E+03	1019E+03	30	7736E+03	1019E+03	30
1079E+03	7371E+03	115E+03	30	7371E+03	115E+03	30
1181E+03	6183E+03	1254E+03	30	6183E+03	1254E+03	30
1284E+03	3527E+03	1359E+03	30	3527E+03	1359E+03	30
1385E+03	2010E+03	1445E+03	30	2010E+03	1445E+03	30
1481E+03	4975E+04	1532E+03	30	4975E+04	1532E+03	30
1562E+03	5584E+04	1645E+03	30	5584E+04	1645E+03	30
1755E+03	2142E+03	1703E+03	30	2142E+03	1703E+03	30
1890E+03	2741E+03	1838E+03	30	2741E+03	1838E+03	30
7670E+00	2340E+03	2000E+03	30	2340E+03	2000E+03	30
1340E+01	2181E+03	1184E+01	30	2181E+03	1184E+01	30
1945E+01	2359E+03	1733E+01	30	2359E+03	1733E+01	30
2216E+01	1957E+03	2162E+01	30	1957E+03	2162E+01	30
2383E+01	1493E+03	2333E+01	30	1493E+03	2333E+01	30
2484E+01	2220E+04	2451E+01	30	2220E+04	2451E+01	30
2550E+01		2553E+01	30		2553E+01	30
5937E+02	2226E+00	6472E+02	43	2226E+00	6472E+02	43
9003E+02	2276E+00	9955E+02	43	2276E+00	9955E+02	43
1043E+03	1932E+00	141E+03	43	1932E+00	141E+03	43
1194E+03	8538E+01	1302E+03	43	8538E+01	1302E+03	43
1344E+03	2841E+01	1415E+03	43	2841E+01	1415E+03	43
1444E+03	227E+00	1541E+03	43	227E+00	1541E+03	43
1596E+03	333E+00	1735E+03	43	333E+00	1735E+03	43
1796E+03	4116E+00	1999E+03	43	4116E+00	1999E+03	43
9461E+00	6336E+00	1623E+01	44	6336E+00	1623E+01	44
1847E+00	5756E+00	221E+01	44	5756E+00	221E+01	44

600E-01	-208E-06	7302E-01	-91E-06	826E-01	-750E-06
913E-01	-726E-06	9970E-01	-689E-06	1083E+00	-6728E-06
112E+00	-6154E-06	1208E+00	-5374E-06	1273E+00	-4021E-06
1310E+00	-3446E-06	1352E+00	-2462E-06	1391E+00	-1190E-06
1412E+00	-9436E-07	1422E+00	0.	1420E+00	0.
1000E+01	0.				
50					
500E+00	1147E-05	5671E+00	1402E-05	6215E+00	1537E-05
666E+00	176E-05	7077E+00	203E-05	7614E+00	2437E-05
7943E+00	2692E-05	8297E+00	2951E-05	8572E+00	3106E-05
8714E+00	3202E-05	8819E+00	3218E-05	8992E+00	3306E-05
9175E+00	3134E-05	9369E+00	2999E-05	9523E+00	2855E-05
9753E+00	2656E-05	1055E+00	2389E-05	1001E+01	2150E-05
1013E+01	1923E-05	1024E+01	1740E-05	1031E+01	1541E-05
1041E+01	1366E-05	1050E+01	1111E-05	1106E+01	9876E-06
1072E+01	880E-06	1089E+01	824E-06	1102E+01	8323E-06
1122E+01	538E-06	1138E+01	1131E-05	1155E+01	1350E-05
1179E+01	1561E-05	1197E+01	1852E-05	1230E+01	2150E-05
1265E+01	2541E-05	1300E+01	2859E-05	1338E+01	3094E-05
1372E+01	3361E-05	1416E+01	3572E-05	1470E+01	3843E-05
1511E+01	4314E-05	1559E+01	4197E-05	1607E+01	4356E-05
1658E+01	4464E-05	1711E+01	4599E-05	1751E+01	4655E-05
1792E+01	4755E-05	1844E+01	4814E-05	1890E+01	4842E-05
1934E+01	4906E-05	2000E+01	4970E-05		
51					
500E+00	7216E-05	5695E+00	7581E-05	6401E+00	8655E-05
6556E+00	958E-05	7099E+00	1076E-04	7900E+00	1257E-04
8290E+00	1433E-04	8749E+00	1691E-04	9209E+00	1869E-04
9656E+00	2080E-04	1024E+01	2297E-04	1068E+01	2400E-04
1135E+01	258E-04	1192E+01	2641E-04	1247E+01	2702E-04
1297E+01	2765E-04	1333E+01	2805E-04	1367E+01	2842E-04
1406E+01	2870E-04	1464E+01	2917E-04	1529E+01	2966E-04
1595E+01	3014E-04	1655E+01	3015E-04	1742E+01	3016E-04
1918E+01	3018E-04	1883E+01	3020E-04	1949E+01	3030E-04
2000E+01					
52					
500E+00	3187E+00	6018E+00	3187E+00	6707E+00	3189E+00
7265E+00	3203E+00	7736E+00	3235E+00	8231E+00	3274E+00
8800E+00	3341E+00	9302E+00	3420E+00	9775E+00	3479E+00
1017E+01	3499E+00	1041E+01	3511E+00	1069E+01	3509E+00
1106E+01	3491E+00	1146E+01	3460E+00	1190E+01	3408E+00
1227E+01	3343E+00	1262E+01	3266E+00	1291E+01	3162E+00
1324E+01	3057E+00	1357E+01	2897E+00	1362E+01	2775E+00
1422E+01	2645E+00	1469E+01	2505E+00	1512E+01	2385E+00
1561E+01	2282E+00	1605E+01	2205E+00	1663E+01	2093E+00
1702E+01	2071E+00	1739E+01	2039E+00	1787E+01	2002E+00
1837E+01	1938E+00	1833E+01	1961E+00	1927E+01	1951E+00
2000E+01					
53					
5597E-01	-1444E+00	3050E-01	-1404E+00	1002E+00	-1333E+00
1111E+00	-1293E+00	1502E+00	-1248E+00	1261E+00	-1177E+00
1304E+00	-1082E+00	1364E+00	-9260E-01	1414E+00	-7011E-01
1454E+00	-5248E-01	1480E+00	-3850E-01	1508E+00	-2310E-01
1531E+00	-1216E-01	1554E+00	-2432E-02	1550E+00	0.
1000E+01	0.				
54					
5593E-01	-1913E+00	7579E-01	-1901E+00	9071E-01	-1850E+00
1016E+00	-1630E+00	1102E+00	-1799E+00	1173E+00	-171E+00
1234E+00	-1706E+00	1285E+00	-1633E+00	1325E+00	-1566E+00
1365E+00	-1461E+00	1493E+00	-1319E+00	1458E+00	-1104E+00
1498E+00	-9141E-01	1532E+00	-7437E-01	1567E+00	-5350E-01
1596E+00	-3326E-01	1614E+00	-2795E-01	1634E+00	-1803E-01
1650E+00	-5321E-02	1659E+00	-5876E-02	1691E+00	-2634E-02
1690E+00	0.				
55					
2000E-01	-1720E+00	3017E-01	-1714E+00	3017E+00	-160E+00

.1103E+00	16	.1201E+00	15	.1534E+00	.1253E+00	..1455E+00
.1299E+00	16	.1340E+00	15	..1283E+00	.1395E+00	..1102E+00
.1422E+00	16	.1456E+00	15	..1470E+00	..173E+00	..7660E-01
.1496E+00	16	.1520E+00	15	..4944E-01	.1539E+00	..3587E-01
.1564E+00	16	.1587E+00	15	..1236E-01	.1603E+00	..5268E-02
.1619E+00	16	.1620E+00	15	0.	.1000E+01	0.
.6009E-01	47	.8046E-01	43	6	.1019E+00	..1331E+00
.1123E+00	47	.1222E+00	43	6	.1284E+00	..1129E+00
.1333E+00	47	.1372E+00	43	6	.1406E+00	..7639E-01
.1447E+00	47	.1471E+00	43	6	.1500E+00	..2472E-01
.1530E+00	47	.1554E+00	43	6	.1550E+00	0.
.1600E+01	47	.1600E+01	43	6	0.	0.
.5000E+00	47	.6015E+00	43	15	.6637E+00	.4018E-05
.7010E+00	47	.7320E+00	43	15	.7741E+00	.3965E-05
.8066E+00	47	.8471E+00	43	15	.8765E+00	.3852E-05
.9010E+00	47	.9282E+00	43	15	.9533E+00	.3638E-05
.9776E+00	47	.1001E+01	43	15	.1016E+01	.3175E-05
.1026E+01	47	.1036E+01	43	15	.1050E+01	.2959E-05
.1064E+01	47	.1077E+01	43	15	.1095E+01	.3072E-05
.1115E+01	47	.1145E+01	43	15	.1172E+01	.3438E-05
.1209E+01	47	.1247E+01	43	15	.1286E+01	.3605E-05
.1322E+01	47	.1362E+01	43	15	.1441E+01	.3650E-05
.1484E+01	47	.1526E+01	43	15	.1558E+01	.3613E-05
.1596E+01	47	.1636E+01	43	15	.1683E+01	.3533E-05
.1727E+01	47	.1761E+01	43	15	.1811E+01	.3468E-05
.1850E+01	47	.1900E+01	43	15	.1938E+01	.3391E-05
.2000E+01	47	.2000E+01	43	15	0.	0.
.5006E-01	48	.7985E-01	19	7	.9964E-01	..3357E-05
.1074E+00	48	.1150E+00	19	7	.1207E+00	..3174E-05
.1270E+00	48	.1333E+00	19	7	.1391E+00	..2313E-05
.1434E+00	48	.1461E+00	19	7	.1493E+00	..1285E-05
.1520E+00	48	.1543E+00	19	7	.1564E+00	..3712E-06
.1590E+00	48	.1603E+00	19	7	.1600E+00	0.
.1000E+01	48	.1000E+01	19	7	0.	0.
.5994E-01	48	.8195E-01	23	8	.9120E-01	..3084E-05
.1005E+00	48	.1083E+00	23	8	.1161E+00	..2929E-05
.1202E+00	48	.1261E+00	23	8	.1303E+00	..2542E-05
.1349E+00	48	.1378E+00	23	8	.1409E+00	..1807E-05
.1430E+00	48	.1445E+00	23	8	.1467E+00	..1183E-05
.1489E+00	48	.1502E+00	23	8	.1515E+00	..4691E-06
.1527E+00	48	.1538E+00	23	8	.1556E+00	..9791E-07
.1550E+00	48	.1600E+01	23	8	0.	0.
.6006E-01	48	.7993E-01	25	9	.8974E-01	..2819E-05
.9980E-01	48	.1058E+00	25	9	.1099E+00	..2766E-05
.1105E+00	48	.1197E+00	25	9	.1228E+00	..2542E-05
.1261E+00	48	.1285E+00	25	9	.1305E+00	..2191E-05
.1330E+00	48	.1350E+00	25	9	.1370E+00	..1734E-05
.1392E+00	48	.1417E+00	25	9	.1440E+00	..1040E-05
.1464E+00	48	.1479E+00	25	9	.1495E+00	..3182E-06
.1504E+00	48	.1521E+00	25	9	.1520E+00	0.
.1000E+01	48	.1000E+01	25	9	0.	0.
.9989E-01	48	.7985E-01	25	9	.9351E-01	..3378E-05
.1003E+00	48	.1056E+00	25	9	.1126E+00	..3272E-05
.1180E+00	48	.1207E+00	25	9	.1248E+00	..3043E-05
.1285E+00	48	.1323E+00	25	9	.1363E+00	..2521E-05
.1393E+00	48	.1423E+00	25	9	.1446E+00	..1848E-05
.1463E+00	48	.1493E+00	25	9	.1519E+00	..9057E-06
.1537E+00	48	.1559E+00	25	9	.1574E+00	..2652E-06
.1594E+00	48	.1602E+00	25	9	.1500E+00	0.

49	5	24	13	39	26	51	52	53
.595E-01	-.285E-05	.8017E-01	-.2860E-05	.5569E+00	.6586E+00	.1502E-04	.3199E+00	.500E+00
.999E-01	-.2839E-05	.1043E+00	-.2831E-05	.7162E+00	.8697E+00	.1518E-04	.3195E+00	.6817E+00
.1144E+00	-.2733E-05	.1199E+00	-.2639E-05	.7162E+00	.1056E+01	.1174E-04	.3195E+00	.7578E+00
.1268E+00	-.2407E-05	.1294E+00	-.2248E-05	.8682E+00	.1236E+01	.2207E-04	.3282E+00	.9530E+00
.1355E+00	-.1355E-05	.1376E+00	-.1677E-05	.1008E+01	.1370E+01	.2730E-04	.3535E+00	.9530E+00
.1422E+00	-.1228E-05	.1442E+00	-.1016E-05	.1097E+01	.1553E+01	.3300E-04	.3854E+00	.1017E+01
.1470E+00	-.5956E-06	.1466E+00	-.4039E-06	.1172E+01	.1706E+01	.3576E-04	.4114E+00	.1076E+01
.1519E+00	-.1020E-06	.1520E+00	0.	.1210E+01	.1844E+01	.3703E-04	.4174E+00	.1134E+01
50	2	39	13	39	26	51	52	53
.500E+00	.4890E-05	.5569E+00	.4878E-05	.5569E+00	.6586E+00	.1502E-04	.3199E+00	.500E+00
.6699E+00	.4763E-05	.7162E+00	.4683E-05	.7162E+00	.8697E+00	.1518E-04	.3195E+00	.6817E+00
.8216E+00	.4448E-05	.8682E+00	.4283E-05	.8682E+00	.1056E+01	.1174E-04	.3195E+00	.7578E+00
.9590E+00	.3879E-05	.1008E+01	.3572E-05	.1008E+01	.1236E+01	.2207E-04	.3282E+00	.9530E+00
.1073E+01	.3094E-05	.1097E+01	.2835E-05	.1097E+01	.1370E+01	.2730E-04	.3535E+00	.9530E+00
.1149E+01	.2126E-05	.1172E+01	.1736E-05	.1172E+01	.1553E+01	.3300E-04	.3854E+00	.1017E+01
.1200E+01	.1449E-05	.1210E+01	.1413E-05	.1210E+01	.1706E+01	.3576E-04	.4114E+00	.1076E+01
.1233E+01	.1545E-05	.1248E+01	.1641E-05	.1248E+01	.1844E+01	.3703E-04	.4174E+00	.1134E+01
.1287E+01	.1955E-05	.1323E+01	.2214E-05	.1323E+01	.1946E+01	.3807E-04	.4307E+00	.1201E+01
.1424E+01	.2807E-05	.1424E+01	.2983E-05	.1424E+01	.2000E+01	.4000E-04	.4500E+00	.1304E+01
.1537E+01	.3741E-05	.1624E+01	.3441E-05	.1624E+01	.2000E+01	.4000E-04	.4500E+00	.1442E+01
.1744E+01	.3640E-05	.1802E+01	.3741E-05	.1802E+01	.2000E+01	.4000E-04	.4500E+00	.1589E+01
.1902E+01	.3807E-05	.1946E+01	.3839E-05	.1946E+01	.2000E+01	.4000E-04	.4500E+00	.1701E+01
51	2	26	9	26	51	52	53	54
.500E+00	.1502E-04	.6586E+00	.1504E-04	.6586E+00	.1504E-04	.702E+00	.1504E-04	.6586E+00
.8290E+00	.1518E-04	.8697E+00	.1557E-04	.8697E+00	.1557E-04	.9400E+00	.1557E-04	.8697E+00
.1000E+01	.1743E-04	.1056E+01	.1879E-04	.1056E+01	.1879E-04	.1287E+01	.1879E-04	.1056E+01
.1177E+01	.2207E-04	.1236E+01	.2412E-04	.1236E+01	.2412E-04	.1437E+01	.2412E-04	.1236E+01
.1325E+01	.2730E-04	.1370E+01	.2905E-04	.1370E+01	.2905E-04	.1601E+01	.2905E-04	.1370E+01
.1498E+01	.3300E-04	.1553E+01	.3432E-04	.1553E+01	.3432E-04	.1745E+01	.3432E-04	.1553E+01
.1651E+01	.3576E-04	.1706E+01	.3624E-04	.1706E+01	.3624E-04	.1897E+01	.3624E-04	.1706E+01
.1797E+01	.3703E-04	.1844E+01	.3707E-04	.1844E+01	.3707E-04	.2000E+01	.3707E-04	.1844E+01
.1950E+01	.3703E-04	.2000E+01	.3707E-04	.2000E+01	.3707E-04	.2000E+01	.3707E-04	.2000E+01
52	2	40	14	40	52	53	54	55
.500E+00	.3199E+00	.5497E+00	.3195E+00	.5497E+00	.3195E+00	.6187E+00	.3191E+00	.5497E+00
.6817E+00	.3195E+00	.7303E+00	.3195E+00	.7303E+00	.3195E+00	.8646E+00	.3195E+00	.7303E+00
.7578E+00	.3282E+00	.8328E+00	.3351E+00	.8328E+00	.3351E+00	.9378E+00	.3351E+00	.8328E+00
.9530E+00	.3535E+00	.9140E+00	.3631E+00	.9140E+00	.3631E+00	.9957E+00	.3631E+00	.9140E+00
.9530E+00	.3854E+00	.9764E+00	.3955E+00	.9764E+00	.3955E+00	.1057E+01	.3955E+00	.9764E+00
.1017E+01	.4114E+00	.1045E+01	.4174E+00	.1045E+01	.4174E+00	.1144E+01	.4174E+00	.1045E+01
.1076E+01	.4174E+00	.1096E+01	.4196E+00	.1096E+01	.4196E+00	.1180E+01	.4196E+00	.1096E+01
.1134E+01	.4307E+00	.1155E+01	.4307E+00	.1155E+01	.4307E+00	.1275E+01	.4307E+00	.1155E+01
.1201E+01	.4500E+00	.1233E+01	.4500E+00	.1233E+01	.4500E+00	.1393E+01	.4500E+00	.1233E+01
.1304E+01	.4500E+00	.1345E+01	.4500E+00	.1345E+01	.4500E+00	.1537E+01	.4500E+00	.1345E+01
.1442E+01	.4500E+00	.1490E+01	.4500E+00	.1490E+01	.4500E+00	.1667E+01	.4500E+00	.1490E+01
.1589E+01	.4500E+00	.1626E+01	.4500E+00	.1626E+01	.4500E+00	.1801E+01	.4500E+00	.1626E+01
.1701E+01	.4500E+00	.1752E+01	.4500E+00	.1752E+01	.4500E+00	.2000E+01	.4500E+00	.1752E+01
.2000E+01	.4500E+00	.2000E+01	.4500E+00	.2000E+01	.4500E+00	.2000E+01	.4500E+00	.2000E+01
53	1	19	7	19	53	54	55	56
.500E+00	.1453E+00	.7526E-01	-.1425E+00	.7526E-01	.1453E+00	.8656E-01	.1453E+00	.7526E-01
.6817E+00	.1368E+00	.1086E+00	-.1392E+00	.1086E+00	.1368E+00	.1174E+00	.1368E+00	.1086E+00
.7578E+00	.1291E+00	.1291E+00	-.1082E+00	.1291E+00	.1291E+00	.1366E+00	.1291E+00	.1291E+00
.9530E+00	.1146E+00	.1416E+00	-.6626E-01	.1416E+00	.1146E+00	.1444E+00	.1146E+00	.1416E+00
.9530E+00	.1485E+00	.1485E+00	-.2998E-01	.1485E+00	.1485E+00	.1504E+00	.1485E+00	.1485E+00
.1017E+01	.1543E+00	.1543E+00	-.4255E-02	.1543E+00	.1543E+00	.1540E+00	.1543E+00	.1543E+00
.1076E+01	.1543E+00	.1543E+00	-.4255E-02	.1543E+00	.1543E+00	.1540E+00	.1543E+00	.1543E+00
.1134E+01	.1543E+00	.1543E+00	-.4255E-02	.1543E+00	.1543E+00	.1540E+00	.1543E+00	.1543E+00
.1201E+01	.1543E+00	.1543E+00	-.4255E-02	.1543E+00	.1543E+00	.1540E+00	.1543E+00	.1543E+00
.1304E+01	.1543E+00	.1543E+00	-.4255E-02	.1543E+00	.1543E+00	.1540E+00	.1543E+00	.1543E+00
.1442E+01	.1543E+00	.1543E+00	-.4255E-02	.1543E+00	.1543E+00	.1540E+00	.1543E+00	.1543E+00
.1589E+01	.1543E+00	.1543E+00	-.4255E-02	.1543E+00	.1543E+00	.1540E+00	.1543E+00	.1543E+00
.1701E+01	.1543E+00	.1543E+00	-.4255E-02	.1543E+00	.1543E+00	.1540E+00	.1543E+00	.1543E+00
.2000E+01	.1543E+00	.1543E+00	-.4255E-02	.1543E+00	.1543E+00	.1540E+00	.1543E+00	.1543E+00
54	2	26	9	26	54	55	56	57
.500E+00	.2170E+00	.7160E-01	-.2146E+00	.7160E-01	.2170E+00	.8050E-01	.2146E+00	.7160E-01
.6817E+00	.2111E+00	.1000E+00	-.2063E+00	.1000E+00	.2111E+00	.1101E+00	.2063E+00	.1000E+00
.7578E+00	.2000E+00	.1233E+00	-.1933E+00	.1233E+00	.2000E+00	.1298E+00	.1933E+00	.1233E+00
.9530E+00	.1737E+00	.1382E+00	-.1609E+00	.1382E+00	.1737E+00	.1496E+00	.1609E+00	.1382E+00
.9530E+00	.1450E+00	.1450E+00	-.1234E+00	.1450E+00	.1450E+00	.1517E+00	.1234E+00	.1450E+00
.1017E+01	.1565E+00	.1565E+00	-.8227E-01	.1565E+00	.1565E+00	.1595E+00	.8227E-01	.1565E+00
.1076E+01	.1650E+00	.1650E+00	-.3546E-01	.1650E+00	.1650E+00	.1676E+00	.3546E-01	.1650E+00
.1134E+01	.1724E+00	.1724E+00	-.7092E-02	.1724E+00	.1724E+00	.1736E+00	.7092E-02	.1724E+00
.1201E+01	.1724E+00	.1724E+00	-.7092E-02	.1724E+00	.1724E+00	.1736E+00	.7092E-02	.1724E+00
.1304E+01	.1724E+00	.1724E+00	-.7092E-02	.1724E+00	.1724E+00	.1736E+00	.7092E-02	.1724E+00
.1442E+01	.1724E+00	.1724E+00	-.7092E-02	.1724E+00	.1724E+00	.1736E+00	.7092E-02	.1724E+00
.1589E+01	.1724E+00	.1724E+00	-.7092E-02	.1724E+00	.1724E+00	.1736E+00	.7092E-02	.1724E+00
.1701E+01	.1724E+00	.1724E+00	-.7092E-02	.1724E+00	.1724E+00	.1736E+00	.7092E-02	.1724E+00
.2000E+01	.1724E+00	.1724E+00	-.7092E-02	.1724E+00	.1724E+00	.1736E+00	.7092E-02	.1724E+00

53	5993E+00	1714E+00	3030E+01	1714E+00	1002E+00	1574E+00
	1099E+00	1635E+00	1162E+00	1595E+00	1199E+00	1562E+00
	1254E+00	1506E+00	1294E+00	1447E+00	134E+00	1352E+00
	1384E+00	1200E+00	1407E+00	1112E+00	1438E+00	9929E-01
	1465E+00	8673E-01	1490E+00	7514E-01	1533E+00	6261E-01
	1534E+00	5167E-01	1533E+00	4195E-01	1569E+00	3080E-01
	1590E+00	2148E-01	1604E+00	1560E-01	1624E+00	8713E-02
	1647E+00	4458E-02	1650E+00	0.	0.	0.
53	6013E-01	1429E+00	3002E-01	1414E+00	1003E+00	1343E+00
	1102E+00	1329E+00	1201E+00	1234E+00	1257E+00	1147E+00
	1301E+00	1058E+00	1338E+00	9524E-01	1362E+00	8632E-01
	1480E+00	7173E-01	1433E+00	5755E-01	1462E+00	4335E-01
	1529E+00	2817E-01	1499E+00	2164E-01	1515E+00	1479E-01
	1000E+01	8511E-02	1544E+00	4255E-02	1540E+00	0.
55	5606E+00	1891E-02	5979E+00	1920E-02	6970E+00	1920E-02
	8009E+00	1960E-02	8997E+00	2040E-02	9988E+00	2090E-02
	1100E+01	2219E-02	1199E+01	2239E-02	1401E+01	2249E-02
	1601E+01	2388E-02	1802E+01	2405E-02	2000E+01	2416E-02
56	4559E+00	3813E+00	5673E+00	3454E+00	7106E+00	2951E+00
	8400E+00	2592E+00	9455E+00	2193E+00	1055E+01	1811E+00
	1224E+01	1165E+00	1342E+01	5062E-01	1449E+01	1356E-01
	1495E+01	1276E-01	1551E+01	3669E-01	1604E+01	6142E-01
	1674E+01	9811E-01	1775E+01	1422E+00	1863E+01	1787E+00
	1955E+01	2177E+00	2034E+01	2489E+00	2144E+01	2919E+00
	2235E+01	3222E+00	2347E+01	3621E+00	2428E+01	3892E+00
	2504E+01	479E+00	2580E+01	435E+00	2669E+01	4738E+00
	2763E+01	5057E+00	2850E+01	5363E+00	2926E+01	5575E+00
56	4598E+00	3254E+00	5912E+00	2863E+00	7126E+00	2449E+00
	8230E+00	2074E+00	9375E+00	1691E+00	1023E+01	1324E+00
	1177E+01	1013E+00	1168E+01	7178E-01	1256E+01	4068E-01
	1320E+01	8774E-02	1391E+01	2792E-01	1479E+01	6780E-01
	1555E+01	1045E+00	1634E+01	142E+00	1710E+01	1763E+00
	1788E+01	2010E+00	1841E+01	2353E+00	1919E+01	2664E+00
	1992E+01	2935E+00	2068E+01	3222E+00	2154E+01	3533E+00
	2241E+01	3844E+00	2317E+01	4106E+00	2395E+01	4363E+00
	2456E+01	4602E+00	2534E+01	4849E+00	2625E+01	5137E+00
	2703E+01	5376E+00	2779E+01	5631E+00	2860E+01	5978E+00
	2937E+01	6110E+00	3000E+01	6269E+00	0.	0.
56	4598E+00	2656E+00	5932E+00	2337E+00	7205E+00	1986E+00
	8340E+00	1683E+00	9335E+00	1413E+00	1015E+01	1180E+00
	1077E+01	9651E-01	1172E+01	7258E-01	1232E+01	5264E-01
	1342E+01	2552E-01	1409E+01	3190E-02	1493E+01	2074E-01
	1577E+01	4148E-01	1598E+01	5503E-01	1672E+01	7737E-01
	1758E+01	1037E+00	1863E+01	1372E+00	1959E+01	1683E+00
	2000E+01	1930E+00	2096E+01	2154E+00	2201E+01	2449E+00
	2287E+01	2744E+00	2402E+01	3095E+00	2480E+01	3318E+00
	2596E+01	3637E+00	2643E+01	3900E+00	2763E+01	4148E+00
	2842E+01	4347E+00	2902E+01	4514E+00	2946E+01	4674E+00
	3004E+01	4818E+00	0.	0.	0.	0.
56	4986E+00	1356E+00	6290E+00	1157E+00	7683E+00	9332E-01
	8181E+00	8534E-01	1131E+01	3190E-01	1222E+01	1436E-01
	1300E+01	4786E-02	1375E+01	1037E-01	1485E+01	1951E-01
	1600E+01	4546E-01	1734E+01	6859E-01	1865E+01	931E-01
	1998E+01	1133E+00	2110E+01	1332E+00	2251E+01	1599E+00
	2398E+01	1795E+00	2496E+01	1974E+00	2613E+01	2177E+00
	2733E+01	2345E+00	2849E+01	2521E+00	2914E+01	2556E+00
	3000E+01	2744E+00	0.	0.	0.	0.

-57	1	29	14
-9029E+02	5055E+00	8639E+02	5015E+00
-9549E+02	4689E+00	9690E+02	4608E+00
-1056E+03	4730E+00	1095E+03	4689E+00
-1262E+03	4936E+00	1196E+03	5138E+00
-1425E+03	5506E+00	1317E+03	5953E+00
-1560E+03	6932E+00	1667E+03	7339E+00
-1684E+03	8310E+00	1600E+03	8848E+00
-180E+03	9990E+00	1726E+03	1064E+01
-1959E+03	1235E+01	1882E+03	1317E+01
-57	2	22	8
-9046E+02	2039E+00	0606E+02	1998E+00
-9549E+02	2080E+00	1014E+03	2080E+00
-1122E+03	2446E+00	1174E+03	2732E+00
-1310E+03	3670E+00	1356E+03	3996E+00
-1566E+03	4852E+00	1510E+03	5464E+00
-1613E+03	6682E+00	1676E+03	7462E+00
-1837E+03	5419E+01	1896E+03	1032E+01
-2001E+03	1174E+01	1998E+03	1513E+01
-57	3	26	5
-8005E+02	8153E+00	8793E+02	7870E+00
-1003E+03	7666E+00	1042E+03	7706E+00
-1164E+03	7870E+00	1214E+03	8033E+00
-1333E+03	8893E+00	1373E+03	9374E+00
-1463E+03	1032E+01	1515E+03	1089E+01
-160E+03	1187E+01	1607E+03	1264E+01
-1729E+03	1389E+01	1776E+03	1452E+01
-1959E+03	1594E+01	1896E+03	1688E+01
-175E+03	1814E+01	2002E+03	1672E+01
-57	4	25	9
-029E+02	5949E+00	8419E+02	9501E+00
-900E+02	5256E+00	9443E+02	9215E+00
-1061E+03	5297E+00	1135E+03	9541E+00
-1204E+03	6292E+01	1252E+03	1072E+01
-1352E+03	1188E+01	1403E+03	1248E+01
-1521E+03	1399E+01	1570E+03	1501E+01
-1677E+03	1684E+01	1733E+03	1794E+01
-185E+03	2051E+01	1920E+03	2190E+01
-2001E+03	2398E+01		
-58	1	37	13
-9063E+02	7020E+00	8637E+02	7143E+00
-9411E+02	7102E+00	9801E+02	7061E+00
-1053E+03	6653E+00	1089E+03	6367E+00
-1169E+03	5224E+00	1214E+03	5571E+00
-1373E+03	8249E+00	1294E+03	8571E+00
-150E+03	1714E+00	1375E+03	1020E+00
-145E+03	-4490E-01	1452E+03	-1143E+00
-1523E+03	-2653E+00	1535E+03	-3551E+00
-165E+03	-8571E+00	1696E+03	-3796E+00
-1760E+03	-1224E+01	1795E+03	-1376E+01
-1851E+03	-1665E+01	1879E+03	-1776E+01
-192E+03	-2016E+01	1951E+03	-2135E+01
-2000E+03	-2400E+01		
-58	2	39	13
-7982E+02	8571E+00	9616E+02	9571E+00
-9400E+02	8449E+00	9882E+02	8367E+00
-1050E+03	7518E+00	1090E+03	7429E+00
-1160E+03	6612E+00	1188E+03	6163E+00
-126E+03	5061E+00	1283E+03	4406E+00
-1334E+03	3429E+00	1374E+03	2612E+00
-1435E+03	1061E+00	1463E+03	3265E-01
-153E+03	-1347E+00	1551E+03	-2122E+03
-1604E+03	-3588E+00	1618E+03	-3337E+00
-1691E+03	-6000E+00	1713E+03	-7776E+00
-1773E+03	-8490E+00	1797E+03	-9233E+00
-58	3		
-7982E+02	8571E+00	9616E+02	9571E+00
-9400E+02	8449E+00	9882E+02	8367E+00
-1050E+03	7518E+00	1090E+03	7429E+00
-1160E+03	6612E+00	1188E+03	6163E+00
-126E+03	5061E+00	1283E+03	4406E+00
-1334E+03	3429E+00	1374E+03	2612E+00
-1435E+03	1061E+00	1463E+03	3265E-01
-153E+03	-1347E+00	1551E+03	-2122E+03
-1604E+03	-3588E+00	1	

1.157E+03	-1.118E+01	1.133E+03	-1.203E+01	1.133E+03	-1.136E+01
1.154E+03	-1.151E+01	1.197E+03	-1.163E+01	1.200E+03	-1.173E+01
-58		27	9		
7.558E+02	-4.082E-02	84.77E+02	-4.082E-01	9.054E+02	-6.939E-01
9.676E+02	-1.224E+00	99.31E+02	-1.735E+00	1.048E+03	-2.408E+00
1.096E+03	-2.980E+00	1.134E+03	-3.796E+00	1.160E+03	-4.082E+00
1.283E+03	-6.694E+00	1.334E+03	-7.633E+00	1.384E+03	-8.016E+00
1.433E+03	-9.178E+00	1.494E+03	-1.151E+01	1.550E+03	-1.366E+01
1.592E+03	-1.429E+01	1.636E+03	-1.567E+01	1.686E+03	-1.710E+01
1.732E+03	-1.869E+01	1.762E+03	-1.976E+01	1.796E+03	-2.090E+01
1.842E+03	-2.253E+01	1.872E+03	-2.331E+01	1.905E+03	-2.445E+01
1.940E+03	-2.576E+01	1.968E+03	-2.698E+01	2.000E+03	-2.812E+01
-59		27	9		
7.998E+02	-1.107E+01	8.502E+02	-1.103E+01	8.997E+02	-1.107E+01
9.492E+02	-1.106E+01	9.996E+02	-1.107E+01	1.050E+03	-1.139E+01
1.105E+03	-1.184E+01	1.156E+03	-1.233E+01	1.199E+03	-1.318E+01
1.251E+03	-1.392E+01	1.301E+03	-1.473E+01	1.359E+03	-1.588E+01
1.402E+03	-1.665E+01	1.451E+03	-1.816E+01	1.500E+03	-1.918E+01
1.536E+03	-2.020E+01	1.576E+03	-2.110E+01	1.615E+03	-2.216E+01
1.646E+03	-2.392E+01	1.691E+03	-2.441E+01	1.734E+03	-2.563E+01
1.782E+03	-2.727E+01	1.829E+03	-2.882E+01	1.869E+03	-3.024E+01
1.924E+03	-3.208E+01	1.966E+03	-3.380E+01	2.002E+03	-3.494E+01
-55		23	8		
5.000E+00	-7.254E-02	7.384E+00	-7.254E-02	8.699E+00	-7.264E-02
5.720E+00	-7.254E-02	1.035E+01	-7.174E-02	1.091E+01	-7.035E-02
1.129E+01	-7.015E-02	1.165E+01	-6.935E-02	1.201E+01	-6.716E-02
1.249E+01	-6.618E-02	1.294E+01	-6.179E-02	1.348E+01	-5.632E-02
1.396E+01	-5.614E-02	1.435E+01	-4.697E-02	1.494E+01	-4.080E-02
1.527E+01	-3.891E-02	1.593E+01	-3.632E-02	1.653E+01	-3.562E-02
1.700E+01	-3.562E-02	1.753E+01	-3.542E-02	1.805E+01	-3.552E-02
1.898E+01	-3.592E-02	2.000E+01	-3.602E-02		
-56		12	4		
8.426E+00	3.423E-01	1.067E+01	4.199E-01	1.347E+01	5.313E-01
1.566E+01	1.045E-01	1.797E+01	8.896E-01	1.991E+01	1.531E+00
2.214E+01	1.502E+00	2.628E+01	1.393E+00	2.667E+01	1.630E+00
2.944E+01	1.1865E+00	3.145E+01	2.100E+00	3.483E+01	2.196E+00
-56		13	5		
9.337E+00	6.665E-02	1.210E+01	2.229E-01	1.362E+01	3.065E-01
1.485E+01	3.522E-01	1.690E+01	3.980E-01	1.909E+01	4.358E-01
2.075E+01	4.796E-01	2.266E+01	4.836E-01	2.493E+01	4.995E-01
2.746E+01	5.114E-01	2.980E+01	5.174E-01	3.231E+01	5.234E-01
3.486E+01	5.274E-01				
-56		13	5		
8.386E+00	5.692E-01	1.080E+01	1.156E+00	1.368E+01	1.367E+00
1.550E+01	1.504E+00	1.794E+01	1.598E+00	2.032E+01	1.725E+00
2.171E+01	1.791E+00	2.348E+01	1.885E+00	2.500E+01	1.970E+00
2.746E+01	2.064E+00	2.993E+01	2.211E+00	3.185E+01	2.340E+00
3.490E+01	2.501E+00				
-56		15	5		
8.337E+00	7.721E-01	1.092E+01	9.214E-01	1.367E+01	1.061E+00
1.662E+01	1.296E+00	1.911E+01	1.485E+00	1.972E+01	1.550E+00
2.122E+01	1.694E+00	2.297E+01	1.871E+00	2.484E+01	2.030E+00
2.703E+01	2.213E+00	2.901E+01	2.354E+00	3.065E+01	2.482E+00
3.208E+01	2.587E+00	3.363E+01	2.653E+00	3.406E+01	2.714E+00
-57		41	14		
7.300E+02	7.401E+00	7.632E+02	5.743E+00	8.015E+02	4.206E+00
8.299E+02	3.114E+00	8.640E+02	1.901E+00	8.948E+02	1.011E+00
9.216E+02	1.213E-01	9.501E+02	5.671E-01	9.866E+02	1.251E+00
1.013E+03	1.320E+00	1.039E+03	2.164E+00	1.067E+03	2.386E+00
1.096E+03	2.508E+00	1.118E+03	2.667E+00	1.142E+03	2.427E+00
1.166E+03	2.247E+00	1.199E+03	2.386E+00	1.237E+03	2.265E+00
1.265E+03	2.063E+00	1.298E+03	1.780E+00	1.333E+03	1.496E+00
1.363E+03	1.254E+00	1.391E+03	8.493E-01	1.421E+03	6.471E-01
1.440E+03	2.022E-01	1.483E+03	4.449E-01	1.517E+03	8.493E-01
1.547E+03	1.294E+00	1.579E+03	1.829E+00	1.605E+03	2.265E+00
1.644E+03	2.493E+00	1.670E+03	3.000E+00	1.710E+03	4.497E+00

1756E+03	2217E+00	1796E+03	1055E+00	1825E+03	8673E+00
1864E+03	752E+00	1902E+03	833E+00	1933E+03	910E+00
1980E+03	978E+00	1998E+03	1076E+01		
57	2	29	10		
7381E+02	4611E+00	789E+02	3640E+00	824E+02	323E+00
8599E+02	2872E+00	898E+02	2427E+00	9639E+02	1901E+00
1013E+03	1496E+00	1061E+03	1132E+00	1099E+03	1052E+00
1133E+03	8898E+01	118E+03	849E+01	1220E+03	768E+01
1263E+03	7280E+01	133E+03	768E+01	1376E+03	806E+01
1430E+03	6493E+01	148E+03	1092E+00	1518E+03	133E+00
1564E+03	577E+00	160E+03	1780E+00	1647E+03	202E+00
1692E+03	2346E+00	172E+03	266E+00	1768E+03	291E+00
1811E+03	3357E+00	185E+03	392E+00	1903E+03	432E+00
1947E+03	4894E+00	199E+03	554E+00		
57	3	39	13		
7812E+02	1654E+01	798E+02	141E+01	8120E+02	119E+01
828E+02	106E+01	840E+02	857E+00	8640E+02	562E+00
878E+02	3964E+00	893E+02	269E+00	9078E+02	113E+00
922E+02	1618E+01	937E+02	137E+00	9574E+02	295E+00
972E+02	280E+00	990E+02	461E+00	1009E+03	550E+00
1031E+03	5067E+00	105E+03	647E+00	1082E+03	667E+00
1102E+03	779E+00	113E+03	671E+00	1175E+03	647E+00
1260E+03	5501E+00	129E+03	493E+00	1293E+03	489E+00
1378E+03	368E+00	141E+03	291E+00	1457E+03	21E+00
1501E+03	1213E+00	154E+03	484E+01	1589E+03	485E+01
1619E+03	1092E+00	170E+03	295E+00	1757E+03	404E+00
1804E+03	5137E+00	185E+03	606E+00	1893E+03	691E+00
1919E+03	7442E+00	195E+03	817E+00	199E+03	897E+00
57	4	55	19		
792E+02	2071E+01	799E+02	177E+01	808E+02	148E+01
818E+02	1258E+01	825E+02	102E+01	839E+02	829E+00
840E+02	663E+00	851E+02	495E+00	891E+02	323E+00
862E+02	214E+00	877E+02	647E+01	885E+02	970E+01
885E+02	2224E+00	909E+02	396E+00	924E+02	570E+00
940E+02	7199E+00	958E+02	834E+00	978E+02	977E+00
989E+02	1048E+01	101E+03	111E+01	1039E+03	116E+01
102E+03	1197E+01	108E+03	120E+01	111E+03	117E+01
112E+03	1096E+01	118E+03	988E+00	1210E+03	86E+00
124E+03	744E+00	127E+03	582E+00	1294E+03	461E+00
135E+03	2710E+00	134E+03	149E+00	1361E+03	242E+01
138E+03	5707E+01	140E+03	265E+00	1431E+03	461E+00
144E+03	5905E+00	147E+03	74E+00	150E+03	881E+00
152E+03	1019E+01	155E+03	115E+01	158E+03	126E+01
160E+03	135E+01	163E+03	148E+01	167E+03	163E+01
170E+03	1735E+01	169E+03	169E+01	177E+03	195E+01
181E+03	2063E+01	184E+03	218E+01	188E+03	228E+01
190E+03	2374E+01	193E+03	243E+01	195E+03	251E+01
199E+03	2580E+01				
58	1	22	8		
7564E+02	5283E+00	878E+02	542E+00	964E+02	447E+00
102E+03	3778E+00	109E+03	328E+00	1157E+03	275E+00
119E+03	250E+00	124E+03	209E+00	1306E+03	168E+00
1370E+03	135E+00	141E+03	821E+01	1478E+03	657E+01
1521E+03	4107E+01	156E+03	921E+02	1629E+03	369E+01
1682E+03	4517E+01	174E+03	557E+01	1797E+03	903E+01
1849E+03	1109E+00	190E+03	135E+00	1961E+03	16E+00
199E+03	1766E+00				
58	2	19	7		
802E+02	3904E+00	851E+02	361E+00	890E+02	332E+00
959E+02	2916E+00	998E+02	262E+00	1049E+03	238E+00
1120E+03	2136E+00	118E+03	1930E+00	125E+03	188E+00
137E+03	172E+00	137E+03	164E+00	145E+03	168E+00
150E+03	1684E+00	161E+03	164E+00	171E+03	168E+00
179E+03	168E+00	188E+03	168E+00	194E+03	172E+00
199E+03	1807E+00				
54	3	34	17		

3062E+02	-2517E+01	0127E+02	-2284E+11	250E+02	-1453E+11
3354E+02	-1651E+01	3483E+02	-1359E+01	8613E+02	-1068E+01
3759E+02	-7926E+00	8897E+02	-5503E+00	9019E+02	-3696E+00
9230E+02	-5856E+01	3408E+02	123E+00	9651E+02	3450E+00
9576E+02	5298E+00	1022E+03	6448E+00	1047E+02	7105E+00
1090E+03	7639E+00	1122E+03	7721E+00	1163E+03	7885E+00
1203E+03	7803E+00	1249E+03	7745E+00	1282E+03	7146E+00
1321E+03	6653E+00	1374E+03	6119E+00	1413E+03	5544E+00
1457E+03	4428E+00	1499E+03	4193E+00	1522E+03	3450E+00
1595E+03	4233E+00	1637E+03	1643E+00	1674E+03	1232E+00
1716E+03	275E+01	1765E+03	-3214E+01	1798E+03	-1602E+00
1848E+03	2566E+00	1895E+03	-3655E+00	1938E+03	-4205E+00
1988E+03	-2160E+00	2000E+03	-5200E+00		
53	70	24			
3062E+02	-2086E+01	8264E+02	-1405E+01	8459E+02	-8049E+00
8548E+02	-5175E+00	8662E+02	-2423E+00	8808E+02	-1109E+00
9086E+02	4476E+00	9148E+02	7105E+00	9270E+02	3789E+00
9416E+02	1072E+01	9578E+02	1191E+01	9708E+02	1326E+01
9933E+02	1437E+01	1004E+03	1536E+01	1025E+03	1585E+01
1045E+03	1643E+01	1058E+03	1659E+01	1072E+03	1663E+01
1092E+03	1659E+01	1112E+03	1651E+01	1135E+03	1598E+01
1154E+03	1536E+01	1168E+03	1487E+01	1182E+03	1421E+01
1198E+03	1363E+01	1212E+03	1269E+01	1230E+03	1183E+01
1248E+03	1072E+01	1261E+03	9651E+00	1288E+03	7474E+00
1301E+03	8366E+00	1314E+03	5339E+00	1325E+03	4230E+00
1338E+03	3162E+00	1353E+03	1971E+00	1367E+03	6160E+01
1377E+03	-6160E+01	1394E+03	-1971E+00	1406E+03	-3203E+00
1423E+03	-5092E+00	1434E+03	-6160E+00	1445E+03	-7310E+00
1455E+03	-6583E+00	1464E+03	-9528E+00	1474E+03	-1068E+01
1488E+03	-1187E+01	1498E+03	-1290E+01	1512E+03	-1450E+01
1530E+03	-1577E+01	1541E+03	-1659E+01	1556E+03	-1786E+01
1573E+03	-1897E+01	1588E+03	-1932E+01	1603E+03	-2090E+01
1620E+03	-2205E+01	1642E+03	-2337E+01	1667E+03	-2509E+01
1690E+03	-2632E+01	1723E+03	-2813E+01	1748E+03	-2936E+01
1722E+03	-3051E+01	1795E+03	-3154E+01	1819E+03	-3269E+01
1846E+03	-3405E+01	1875E+03	-3540E+01	1895E+03	-3630E+01
1924E+03	-3754E+01	1946E+03	-3864E+01	1972E+03	-3963E+01
1989E+03	-4062E+01				
59	13	5			
1500E+03	1600E+00	5000E+02	1870E+00	1000E+03	2270E+00
2500E+03	4450E+00	2000E+03	3800E+00	2250E+03	4300E+00
3500E+03	4140E+00	2750E+03	4480E+00	3000E+03	4400E+00
5000E+03	3250E+00	4000E+03	3780E+00	4500E+03	3450E+00
60	27	9			
6813E+01	-6015E+01	7075E+01	-5673E+01	7402E+01	-5251E+01
720E+01	-4805E+01	8006E+01	-4510E+01	8341E+01	-4104E+01
8695E+01	-3721E+01	8985E+01	-3402E+01	9256E+01	-3092E+01
9606E+01	-2757E+01	9916E+01	-2510E+01	1026E+00	-2183E+01
1061E+00	-1849E+01	1094E+00	-1657E+01	1131E+00	-1410E+01
1164E+00	-1163E+01	1197E+00	-9641E+02	1233E+00	-7570E+02
1278E+00	-5498E+02	1316E+00	-4223E+02	1355E+00	-2789E+02
1394E+00	-1594E+02	1425E+00	-1036E+02	1460E+00	-3984E+03
1481E+00	-7963E+04	1480E+00	0	1000E+01	0
62	1	1			
5995E+02	5000E+00	2001E+03	5000E+00		
62	2	2			
5963E+02	6999E+00	1999E+03	6999E+00		
62	3	15			
5995E+02	1049E+01	1007E+03	1049E+01	1038E+03	1054E+01
1063E+03	1054E+01	1077E+03	1066E+01	1102E+03	1079E+01
1115E+03	1090E+01	1130E+03	1109E+01	1142E+03	1131E+01
1151E+03	1147E+01	1162E+03	1165E+01	1171E+03	1163E+01
1103E+03	1191E+01	1197E+03	1201E+01	2000E+03	1201E+01
62	4	2			
5670E+02	1484E+01	3000E+03	1484E+01		

70	6964E+02	1	4224E+00	32	7580E+02	11	4513E+00	8172E+02	-4571E+00
	723E+02		4653E+00		9072E+02		4673E+00	9518E+02	-4694E+00
	1003E+03		4694E+00		1034E+03		4551E+00	1064E+03	-4224E+00
	1089E+03		3959E+00		1111E+03		3510E+00	1139E+03	-2959E+00
	1171E+03		2449E+00		1188E+03		2163E+00	1202E+03	-1857E+00
	1223E+03		1755E+00		1264E+03		1796E+00	1310E+03	-2163E+00
	1348E+03		238E+00		1391E+03		2510E+00	1450E+03	-2796E+00
	1493E+03		3082E+00		1546E+03		3184E+00	1595E+03	-3429E+00
	1651E+03		3469E+00		1701E+03		3551E+00	1749E+03	-3694E+00
	1802E+03		3816E+00		1851E+03		3857E+00	1898E+03	-3935E+00
	1946E+03		4009E+00		1996E+03		4184E+00		
71		1		37		13			
	7000E+02		1350E-01		7990E+02		1960E-01	8016E+02	-1770E-01
	9005E+02		1692E-01		9428E+02		1574E-01	9704E+02	-1438E-01
	9547E+02		1365E-01		1045E+03		1247E-01	1034E+03	-1083E-01
	1056E+03		9605E-02		1083E+03		7684E-02	1104E+03	-6253E-02
	1128E+03		4455E-02		1151E+03		3106E-02	1172E+03	-1676E-02
	1196E+03		1226E-03		1245E+03		2493E-02	1265E+03	-5068E-02
	1311E+03		1396E+03		1345E+03		9174E-02	1368E+03	-9605E-02
	1402E+03		6499E-02		1440E+03		1275E-01	1473E+03	-1459E-01
	1495E+03		1116E-01		1528E+03		1688E-01	1570E+03	-1839E-01
	1597E+03		1974E-01		1640E+03		2101E-01	1682E+03	-2228E-01
	1722E+03		2313E-01		1773E+03		2416E-01	1815E+03	-2493E-01
	1857E+03		2550E-01		1900E+03		2609E-01	1946E+03	-2649E-01
72		1		27		9			
	4689E-01		6047E-01		5754E-01		6031E-01	5810E-01	-5990E-01
	7745E-01		5933E-01		8517E-01		5916E-01	9118E-01	-5867E-01
	9817E-01		5802E-01		1052E+00		5736E-01	1119E+00	-5671E-01
	1153E+00		5606E-01		1199E+00		5557E-01	1231E+00	-5344E-01
	1255E+00		5173E-01		1282E+00		4944E-01	1297E+00	-4691E-01
	1309E+00		4478E-01		1328E+00		4886E-01	1349E+00	-3473E-01
	1369E+00		2909E-01		1386E+00		2141E-01	1395E+00	-1749E-01
	1406E+00		1120E-01		1412E+00		8008E-02	1417E+00	-4331E-02
	1422E+00		1634E-03		1420E+00			1400E+01	0.
73		1		32		11			
	6447E+02		1346E+01		7162E+02		1301E+01	7942E+02	-1273E+01
	6697E+02		1220E+01		9229E+02		1176E+01	9769E+02	-1164E+01
	1013E+03		1119E+01		1035E+03		1103E+01	1063E+03	-1030E+01
	1095E+03		9730E+00		1134E+03		8716E+00	1186E+03	-7216E+00
	1211E+03		6941E+00		1264E+03		5027E+00	1302E+03	-3770E+00
	1344E+03		2595E+00		1389E+03		1257E+00	1419E+03	-4459E-01
	1454E+03		4865E-01		1490E+03		1581E+00	1522E+03	-2676E+00
	1548E+03		3203E+00		1591E+03		4500E+00	1622E+03	-5554E+00
	1578E+03		7135E+00		1710E+03		8068E+00	1744E+03	-9041E+00
	1775E+03		5892E+00		1808E+03		1082E+01	1854E+03	-1206E+01
	1927E+03		1439E+01		2000E+03		1626E+01		
74		1		29		10			
	4492E-01		3316E+01		6093E-01		3235E+01	7547E-01	-3196E+01
	8318E-01		3186E+01		9066E-01		3162E+01	9886E-01	-3113E+01
	1073E+00		3113E+01		1136E+00		3101E+01	1184E+00	-3060E+01
	1212E+00		2987E+01		1232E+00		2954E+01	1255E+00	-2881E+01
	1270E+00		2800E+01		1280E+00		2744E+01	1311E+00	-2547E+01
	1335E+00		2519E+01		1349E+00		2153E+01	1363E+00	-1982E+01
	1378E+00		1753E+01		1388E+00		1558E+01	1399E+00	-1322E+01
	1405E+00		1135E+01		1415E+00		927E+00	1426E+00	-6877E+00
	1430E+00		4883E+00		1435E+00		2970E+00	1441E+00	-4069E-02
	1440E+00				1400E+01		0.		
76		1		2		1			
	6954E+02		6988E+00		2000E+03		6993E+00		
76		2		2		1			
	6971E+02		4200E+01		2002E+03		1200E+01		
76		3		2		1			
	6954E+02		1600E+01		2002E+03		1600E+01		
76		6		3		1			

6987E+02	2000E+01	2002E+03	2000E+01	7089E+02	-9593E-01
77	1	27	9	9215E+02	-6578E-01
7035E+02	-1161E+00	7523E+02	-1041E+00	1070E+03	-4114E-01
8190E+02	-819E-01	8711E+02	-7739E-01	1196E+03	-2709E-01
9801E+02	-5519E-01	1026E+03	-4807E-01	1327E+03	-2363E-01
1113E+03	-3523E-01	1154E+03	-3055E-01	1453E+03	-2077E-01
1238E+03	-2566E-01	1288E+03	-2403E-01	1672E+03	-1670E-01
1367E+03	-2261E-01	1405E+03	-2179E-01	1850E+03	-1344E-01
1502E+03	-1914E-01	1541E+03	-1874E-01	2028E+03	-9572E-02
1714E+03	-1548E-01	1771E+03	-1466E-01	3383E+02	8905E+01
1910E+03	-1222E-01	1961E+03	-1059E-01	1030E+03	5755E+01
78	1	23	8	1171E+03	3490E+01
6970E+02	1124E+02	7717E+02	9900E+01	1282E+03	2531E+01
8568E+02	7918E+01	9748E+02	6694E+01	1458E+03	2041E+01
1083E+03	4870E+01	1141E+03	4082E+01	1670E+03	1429E+01
1194E+03	3143E+01	1238E+03	2796E+01	1891E+03	8776E+00
1337E+03	2327E+01	1401E+03	2184E+01	7992E+02	4016E-01
1523E+03	1796E+01	1598E+03	1551E+01	9317E+02	2810E-01
1730E+03	1163E+01	1810E+03	1061E+01	1047E+03	2348E-01
1964E+03	6531E+00	2005E+03	5306E+00	1525E+03	2316E-01
79	1	22	8	1659E+03	2219E-01
7122E+02	5053E-01	7537E+02	4534E-01	1800E+03	1992E-01
8496E+02	3490E-01	8915E+02	3077E-01	1964E+03	1652E-01
9764E+02	2543E-01	1010E+03	2413E-01	1701E+01	2255E-01
1146E+03	2340E-01	1372E+03	2324E-01	2248E+01	2246E-01
1575E+03	2283E-01	1604E+03	2283E-01	2492E+01	1745E-01
1706E+03	2158E-01	1750E+03	2081E-01	2743E+01	8323E-02
1855E+03	1870E-01	1910E+03	1757E-01	2897E+01	8081E-04
2000E+03	1571E-01	17	6	1701E+01	2255E-01
7015E+00	2295E-01	1168E+01	2295E-01	2248E+01	2246E-01
2014E+01	2295E-01	2187E+01	2295E-01	2492E+01	1745E-01
2297E+01	2149E-01	2380E+01	2004E-01	2743E+01	8323E-02
2582E+01	1390E-01	2675E+01	1091E-01	2897E+01	8081E-04
2824E+01	4344E-02	2867E+01	2867E-02	9919E+02	3980E+00
2900E+01	0	4000E+02	0	1302E+03	4283E+00
81	1	20	7	1474E+03	4687E+00
6818E+02	-3939E+00	9022E+02	-3939E+00	1646E+03	5980E+00
1135E+03	-4320E+00	1232E+03	-4162E+00	1802E+03	7758E+00
1376E+03	-4400E+00	1427E+03	-4525E+00	1931E+03	9576E+00
1549E+03	-5253E+00	1598E+03	-5566E+00	1934E+01	3306E+00
1696E+03	-6444E+00	1755E+03	-7192E+00	2347E+01	3024E+00
1844E+03	-8303E+00	1883E+03	-8929E+00	2585E+01	2157E+00
1969E+03	-1012E+01	1995E+03	-1055E+01	2795E+01	1069E+00
82	1	16	6	2927E+01	0
8774E+00	3306E+00	1506E+01	3306E+00	1934E+01	3306E+00
2013E+01	3248E+00	2184E+01	3248E+00	2347E+01	3024E+00
2447E+01	2661E+00	2508E+01	2440E+00	2585E+01	2157E+00
2665E+01	1774E+00	2728E+01	1371E+00	2795E+01	1069E+00
2850E+01	7258E-01	2893E+01	4234E-01	2927E+01	0
4000E+02	0	14	5	2000E+01	2720E+01
4000E+01	9300E+00	-3000E+01	1300E+01	5000E+00	5460E+01
1000E+01	3870E+01	0	5250E+01	5000E+01	2400E+01
1000E+01	5300E+01	2000E+01	4000E+01	3000E+01	0
4000E+01	1050E+01	5000E+01	2500E+00	6000E+01	0
7000E+01	0	1200E+02	0	2000E+01	2280E+01
510	2	16	6	1000E+01	5200E+01
4000E+01	7500E+00	-3000E+01	1500E+01	1000E+01	6200E+01
1000E+01	3100E+01	0	4100E+01	1000E+01	8200E+00
2000E+01	6120E+01	2500E+01	6320E+01	6000E+01	0
4000E+01	4600E+01	5000E+01	2270E+01	9000E+01	0
7000E+01	1000E+00	8000E+01	0	1970E+01	1970E+01
1200E+02	0	15	5	1277E+01	1277E+01
510	3	15	5	-3000E+01	-3000E+01
4000E+01	6200E+00	-3000E+01	1277E+01	1970E+01	1970E+01

-1000E+01	.2670E+01	0.	.3470E+01	.1000E+01	.4470E+01
.2000E+01	.5650E+01	.2500E+01	.6000E+01	.3000E+01	.5900E+01
.4000E+01	.3450E+01	.5000E+01	.1470E+01	.6000E+01	.4200E+00
.7000E+01	0.	.8000E+01	0.	.1200E+02	0.
910	4	14	5		
-4000E+01	.1300E+01	-.3000E+01	.2180E+01	-.2000E+01	.3280E+01
-1000E+01	.4800E+01	0.	.5900E+01	.2500E+00	.6060E+01
-5000E+00	.5920E+01	.1000E+01	.5180E+01	.2000E+01	.2400E+01
.3000E+01	.1130E+01	.4000E+01	.3500E+00	.5000E+01	0.
.6000E+01	0.	.1200E+02	0.		
910	5	15	5		
-4000E+01	.8800E+00	-.3000E+01	.1600E+01	-.2000E+01	.2400E+01
-1000E+01	.3270E+01	0.	.4350E+01	.1000E+01	.5320E+01
.1500E+01	.5450E+01	.2000E+01	.5400E+01	.3000E+01	.4550E+01
.4000E+01	.2600E+01	.5000E+01	.9800E+00	.6000E+01	.1500E+00
.6500E+01	0.	.7000E+01	0.	.1200E+02	0.
911	1	8	3		
-4000E+01	.4200E+01	.7000E+01	.7350E+01	.8000E+01	.8200E+01
.8250E+01	.8230E+01	.9000E+01	.7600E+01	.1000E+02	.5980E+01
.1100E+02	.3970E+01	.1200E+02	.2000E+01		
915	1	11	4		
.5000E+00	.4000E+00	.6000E+00	.1250E+01	.7000E+00	.2100E+01
.8000E+00	.2800E+01	.9000E+00	.3550E+01	.9500E+00	.3900E+01
.1000E+01	.3700E+01	.1050E+01	.3400E+01	.1100E+01	.3000E+01
.1150E+01	.2650E+01	.1200E+01	.2400E+01		
915	2	11	4		
.5000E+00	.2600E+01	.6000E+00	.2400E+01	.7000E+00	.1800E+01
.8000E+00	.1100E+01	.9000E+00	.3500E+00	.9500E+00	-.2000E+00
.1000E+01	-.6000E+00	.1050E+01	-.1000E+01	.1100E+01	-.7500E+00
.1150E+01	.3000E+00	.1200E+01	.2000E+01		
915	3	11	4		
.5000E+00	-.1800E+01	.6000E+00	-.1500E+01	.7000E+00	-.1200E+01
.8000E+01	-.1200E+01	.9000E+00	-.1400E+01	.9500E+00	-.1600E+01
.1000E+01	-.1800E+01	.1050E+01	-.2100E+01	.1100E+01	-.2500E+01
.1150E+01	-.2900E+01	.1200E+01	-.3400E+01		
912	1	18	6		
.5000E+00	-.4400E-03	.5500E+00	-.5100E-03	.6000E+00	-.5700E-03
.6500E+00	-.6200E-03	.7000E+00	-.6600E-03	.7500E+00	-.6900E-03
.8000E+00	-.7100E-03	.8500E+00	-.7300E-03	.9000E+00	-.7500E-03
.9250E+00	-.8300E-03	.9500E+00	-.1000E-02	.9750E+00	-.9600E-03
.1000E+01	-.8300E-03	.1025E+01	-.7100E-03	.1050E+01	-.6300E-03
.1100E+01	-.5800E-03	.1150E+01	-.5600E-03	.1200E+01	-.5500E-03
911	1	13	5		
.5000E+00	.2200E-01	.5500E+00	.2350E-01	.6000E+00	.2500E-01
.6500E+00	.2700E-01	.7000E+00	.3000E-01	.7500E+00	.3400E-01
.8000E+00	.3800E-01	.8500E+00	.4200E-01	.9000E+00	.4500E-01
.1050E+01	.4500E-01	.1100E+01	.4300E-01	.1150E+01	.3940E-01
.1200E+01	.3500E-01				
914	1	8	3		
.4000E-01	.1420E+00	.5000E-01	.1380E+00	.8000E-01	.1300E+00
.1000E+00	.1400E+00	.1200E+00	.1000E+00	.1400E+00	.6200E-01
.1600E+00	0.	.1000E+01	0.		
914	2	8	3		
.4000E-01	.2900E+00	.6000E-01	.2830E+00	.8000E-01	.2700E+00
.1000E+00	.2350E+00	.1200E+00	.1630E+00	.1400E+00	.6800E-01
.1600E+00	0.	.1000E+01	0.		
914	3	8	3		
.4000E-01	.2500E+00	.6000E-01	.2450E+00	.8000E-01	.2300E+00
.1000E+00	.1930E+00	.1200E+00	.1300E+00	.1400E+00	.5000E-01
.1600E+00	0.	.1000E+01	0.		
83	1	26	9		
.6. 7E+02	.1806E-01	.7600E+02	.1927E-01	.8120E+02	.2024E-01
.8672E+02	.2057E-01	.9103E+02	.2113E-01	.9663E+02	.2130E-01
.1004E+03	.2154E-01	.1067E+03	.2154E-01	.1106E+03	.2162E-01
.1168E+03	.2154E-01	.1207E+03	.2154E-01	.1254E+03	.2138E-01
.1292E+03	.2121E-01	.1352E+03	.2089E-01	.1390E+03	.2065E-01

1.044E+03	2316E-01	1.430E+03	1.963E-01	1.533E+03	1.67E-01
1.596E+03	1422E-01	1.672E+03	1.592E-01	1.730E+03	1.587E-01
1.793E+03	1490E-01	1.856E+03	1.377E-01	1.918E+03	1.190E-01
1.950E+03	1037E-01	2.006E+03	0.963E-02		
84	1	25	9		
6.072E+02	1349E+00	7.566E+02	1.164E+00	8.505E+02	9.616E-01
9.098E+02	8162E-01	9.854E+02	0.590E-01	1.054E+03	3.717E-01
1.104E+03	1535E-01	1.193E+03	-1.131E-01	1.274E+03	3.879E-01
1.329E+03	6707E-01	1.322E+03	0.870E-01	1.468E+03	1.220E+00
1.518E+03	-1.487E+00	1.509E+03	-1.737E-01	1.622E+03	2.020E+00
1.673E+03	2.287E+00	1.725E+03	-2.618E+00	1.769E+03	2.861E+00
1.813E+03	3.232E+00	1.855E+03	3.523E+00	1.890E+00	3.798E+00
1.914E+03	-4.040E+00	1.931E+03	-4.372E+00	1.974E+03	4.566E+00
2.002E+03	-4.857E+00				
85	1	19	7		
8.050E+02	-5.223E-05	8.936E+02	-5.551E-05	9.821E+02	6.397E-05
1.058E+03	6.002E-05	1.104E+03	-7.166E-05	1.160E+03	7.287E-05
1.213E+03	7.497E-05	1.290E+03	-7.571E-05	1.348E+03	8.057E-05
1.397E+03	8.097E-05	1.400E+03	-8.097E-05	1.518E+03	8.138E-05
1.565E+03	-6.421E-05	1.672E+03	-8.664E-05	1.724E+03	8.664E-05
1.785E+03	8.704E-05	1.856E+03	-8.826E-05	1.912E+03	8.894E-05
2.000E+03	-0.898E-05				
86	1	16	6		
6.043E-01	5.968E-05	7.504E-01	5.968E-05	8.719E-01	5.9847E-05
9.557E-01	5.645E-05	1.009E+00	5.823E-05	1.083E+00	5.121E-05
1.133E+00	4.556E-05	1.193E+00	4.932E-05	1.234E+00	3.427E-05
1.258E+00	2.661E-05	1.287E+00	1.955E-05	1.312E+00	1.250E-05
1.341E+00	4.435E-06	1.348E+00	5.065E-07	1.350E+00	0.
1.000E+01	0.				
87	1	33	11		
8.019E+02	-2.177E-02	8.605E+02	-3.624E-03	9.131E+02	8.214E-04
9.578E+02	8.624E-03	1.041E+03	1.807E-02	1.052E+03	2.934E-02
1.100E+03	3.368E-02	1.140E+03	3.943E-02	1.184E+03	4.641E-02
1.222E+03	5.092E-02	1.279E+03	5.667E-02	1.330E+03	6.242E-02
1.376E+03	6.489E-02	1.407E+03	6.653E-02	1.444E+03	6.858E-02
1.472E+03	6.958E-02	1.506E+03	6.776E-02	1.541E+03	6.776E-02
1.572E+03	6.571E-02	1.606E+03	6.835E-02	1.644E+03	5.832E-02
1.675E+03	1.133E-02	1.715E+03	4.764E-02	1.742E+03	4.271E-02
1.775E+03	3.655E-02	1.807E+03	3.203E-02	1.834E+03	2.505E-02
1.865E+03	1.725E-02	1.892E+03	1.232E-02	1.925E+03	5.339E-03
1.941E+03	1.643E-03	1.966E+03	-5.571E-03	1.995E+03	-1.150E-02
88	1	16	6		
6.011E-01	-5.172E-02	7.141E-01	-5.172E-02	8.010E-01	-5.051E-02
9.058E-01	-5.010E-02	9.699E-01	-4.977E-02	1.015E+00	-4.889E-02
1.067E+00	-4.687E-02	1.110E+00	-4.525E-02	1.147E+00	-4.323E-02
1.260E+00	-2.961E-02	1.279E+00	-1.144E-02	1.294E+00	-1.088E-03
1.310E+00	-4.848E-03	1.339E+00	0.	1.390E+00	0.
1.000E+01	0.				
89	1	2	1		
6.000E+02	6.939E+00	8.002E+03	5.989E+00		
61	2	2	1		
6.008E+02	1.203E+01	1.998E+03	1.203E+01		
51	3	2	1		

.8002E+02	.120	.9800E+02	.1142E-01	.9411E+02	.1142E-01
.7935E+02	.1061E-01	.1050E+03	.1012E-01	.1133E+03	.9472E-02
.1200E+03	.9024E-02	.1249E+03	.8455E-02	.1233E+03	.8130E-02
.1346E+03	.7764E-02	.1405E+03	.7236E-02	.1488E+07	.6301E-02
.1542E+03	.5225E-02	.1594E+03	.4756E-02	.1629E+03	.4065E-02
.1670E+03	.3293E-02	.1713E+03	.2154E-02	.1756E+03	.1260E-02
.1709E+03	.5691E-03	.1915E+03	.5090E-03	.1847E+03	.1585E-02
.1875E+03	.2724E-02	.1909E+03	.4187E-02	.1935E+03	.5610E-02
.1959E+03	.6707E-02	.1909E+03	.8089E-02	.2002E+03	.9919E-02
.6007E-01	0.	.6000E+00	0.	.1000E+01	0.
.8008E+02	.8753E-05	.8569E+02	.6743E-05	.9008E+02	.5808E-05
.9447E+02	.4581E-05	.9854E+02	.3640E-05	.1034E+03	.2740E-05
.1095E+03	.1963E-05	.1151E+03	.1472E-05	.1199E+03	.1186E-05
.1231E+03	.1268E-05	.1284E+03	.1431E-05	.131E+03	.1677E-05
.1418E+03	.1800E-05	.1493E+03	.2249E-05	.1591E+03	.2658E-05
.1625E+03	.3867E-05	.1704E+03	.3231E-05	.1767E+03	.3640E-05
.1816E+03	.3926E-05	.1876E+03	.4254E-05	.1919E+03	.4499E-05
.1997E+03	.4990E-05	.2002E+03	.4990E-05		
.6000E-01	0.	.1000E+01	0.		
.7980E+02	.1579E-01	.8330E+02	.1377E-01	.8826E+02	.1158E-01
.9285E+02	.5919E-02	.9728E+02	.3745E-02	.1027E+03	.7571E-02
.1083E+03	.6802E-02	.1135E+03	.6316E-02	.1163E+03	.6154E-02
.1270E+03	.5385E-02	.1327E+03	.5182E-02	.1382E+03	.4939E-02
.1419E+03	.4737E-02	.1469E+03	.4575E-02	.1545E+03	.4211E-02
.1673E+03	.3887E-02	.1747E+03	.3369E-02	.1802E+03	.2915E-02
.1862E+03	.2389E-02	.1905E+03	.1862E-02	.1933E+03	.1296E-02
.1967E+03	.7287E-03	.2001E+03	0.		
.6000E-01	0.	.1000E+01	0.		
.7995E+02	.2438E-03	.8369E+02	.2204E-03	.8831E+02	.1496E-03
.9245E+02	.1711E-03	.9756E+02	.1579E-03	.1011E+03	.1488E-03
.1062E+03	.1301E-03	.1108E+03	.1182E-03	.1170E+03	.1051E-03
.1213E+03	.9816E-04	.1260E+03	.9530E-04	.1302E+03	.9448E-04
.1343E+03	.5121E-04	.1398E+03	.9162E-04	.1437E+03	.9407E-04
.1478E+03	.9734E-04	.1544E+03	.1014E-03	.1580E+03	.1072E-03
.1636E+03	.1149E-03	.1693E+03	.1235E-03	.1737E+03	.1355E-03
.1801E+03	.1431E-03	.1847E+03	.1530E-03	.1900E+03	.1665E-03
.1933E+03	.1751E-03	.1998E+03	.1881E-03		
.6031E-01	.1046E-03	.7216E-01	.1034E-03	.8060E-01	.1034E-03
.8823E-01	.1014E-03	.9456E-01	.1002E-03	.1001E+00	.9737E-04
.1056E+00	.9495E-04	.1099E+00	.9019E-04	.1157E+00	.8566E-04
.1202E+00	.7960E-04	.1238E+00	.7192E-04	.1265E+00	.6586E-04
.1287E+00	.5576E-04	.1304E+00	.4727E-04	.1324E+00	.3636E-04
.1330E+00	.2667E-04	.1356E+00	.1737E-04	.1373E+00	.1051E-04
.1389E+00	.6048E-05	.1407E+00	0.	.1000E+01	0.
.7992E+02	.2150E+00	.8667E+02	.1955E+00	.9293E+02	.1858E+00
.9992E+02	.1724E+00	.1061E+03	.1639E+00	.1102E+03	.1582E+00
.1154E+03	.1521E+00	.1191E+03	.1497E+00	.1224E+03	.1481E+00
.1251E+03	.1485E+00	.1295E+03	.1485E+00	.1344E+03	.1485E+00
.1389E+03	.1497E+00	.1436E+03	.1517E+00	.1472E+03	.1533E+00
.1536E+03	.1566E+00	.1570E+03	.1590E+00	.1611E+03	.1611E+00
.1654E+03	.1654E+00	.1693E+03	.1671E+00	.1753E+03	.1732E+00
.1802E+03	.1761E+00	.1854E+03	.1813E+00	.1901E+03	.1866E+00
.1947E+03	.1907E+00	.2003E+03	.1959E+00		
.6000E-01	0.	.7423E-01	.1328E+00	.8000E-01	.1320E+00
.6618E-01	.1316E+00	.9073E-01	.1303E+00	.9602E-01	.1299E+00
.1010E+00	.1287E+00	.1054E+00	.1275E+00	.1098E+00	.1255E+00
.1144E+00	.1214E+00	.1184E+00	.1169E+00	.1215E+00	.1120E+00

1249E+00	1071E+00	1276E+00	9817E-01	1306E+00	8717E-01
1332E+00	7921E-01	1354E+00	6925E-01	1386E+00	5418E-01
1403E+00	4277E-01	1424E+00	3259E-01	1450E+00	2240E-01
1465E+00	1711E-01	1485E+00	9776E-02	1505E+00	5295E-02
1522E+00	0.	1000E+01	0.		
106	1	2	1		
6000E+02	6976E+00	2002E+03	6976E+00		
106	2	2	1		
6000E+02	1201E+01	2002E+03	1201E+01		
106	3	2	1		
5504E+02	1601E+01	2002E+03	1601E+01		
107	1	31	11		
8000E+02	1476E-03	8400E+02	1180E-03	8000E+02	9200E-04
9200E+02	7000E-04	9600E+02	5200E-04	1000E+03	3800E-04
1040E+03	2700E-04	1080E+03	1800E-04	1120E+03	9000E-05
1160E+03	2000E-05	1200E+03	0.	1240E+03	2000E-05
1280E+03	8000E-05	1320E+03	1100E-04	1360E+03	2100E-04
1400E+03	2900E-04	1440E+03	7900E-04	1480E+03	5000E-04
1520E+03	6200E-04	1560E+03	7800E-04	1600E+03	9100E-04
1640E+03	1060E-03	1680E+03	1220E-03	1720E+03	1400E-03
1760E+03	1550E-03	1800E+03	1720E-03	1840E+03	1920E-03
1880E+03	2110E-03	1920E+03	2300E-03	1960E+03	2510E-03
2000E+03	2710E-03				
108	1	18	6		
5997E-01	6012E-04	7746E-01	5971E-04	8682E-01	5971E-04
9349E-01	5971E-04	9902E-01	5930E-04	1033E+00	5849E-04
1076E+00	5603E+00	1108E+00	5481E-04	1158E+00	4990E-04
1205E+00	4622E-04	1248E+00	3804E-04	1266E+00	3332E-04
1315E+00	2454E-04	1347E+00	1636E-04	1379E+00	8998E-05
1400E+00	6135E-05	1423E+00	0.	1000E+01	0.
109	1	38	13		
7955E+02	2504E+00	8295E+02	2248E+00	8555E+02	2033E+00
8823E+02	1813E+00	9075E+02	1654E+00	9286E+02	1484E+00
9562E+02	1297E+00	9830E+02	1150E+00	1006E+03	1004E+00
1032E+03	8821E-01	1069E+03	7764E-01	1096E+03	6992E-01
1127E+03	6829E-01	1153E+03	6707E-01	1188E+03	6707E-01
1213E+03	6789E-01	1265E+03	7398E-01	1301E+03	7805E-01
1347E+03	8496E-01	1373E+03	3187E-01	1409E+03	1016E+00
1453E+03	1134E+00	1492E+03	1215E+00	1524E+03	1389E+00
1562E+03	1439E+00	1594E+03	1537E+00	1624E+03	1650E+00
1654E+03	1732E+00	1682E+03	1850E+00	1717E+03	1976E+00
1752E+03	2134E+00	1795E+03	2305E+00	1831E+03	2472E+00
1864E+03	2608E+00	1901E+03	2797E+00	1942E+03	2959E+00
1976E+03	3128E+00	1997E+03	3224E+00		
110	1	18	6		
5993E-01	6150E-01	7040E-01	6113E-01	8210E-01	76073E-01
9257E-01	5993E-01	9858E-01	5951E-01	1041E+00	5830E-01
1099E+00	5587E-01	1156E+00	5182E-01	1193E+00	4737E-01
1220E+00	4211E-01	1247E+00	3482E-01	1272E+00	2834E-01
1301E+00	1903E-01	1324E+00	1134E-01	1337E+00	6478E-02
1354E+00	3644E-02	1368E+00	0.	1000E+01	0.
111	1	28	10		
7963E+02	9328E-04	8393E+02	1055E-03	9083E+02	1181E-03
9789E+02	1308E-03	1032E+03	1797E-03	1093E+03	1438E-03
1149E+03	1462E-03	1185E+03	1462E-03	1231E+03	1434E-03
1268E+03	1393E-03	1310E+03	1324E-03	1347E+03	1259E-03
1368E+03	1177E-03	1429E+03	1088E-03	1463E+03	9980E-04
1503E+03	8676E-04	1528E+03	7943E-04	1548E+03	7088E-04
1661E+03	3177E-04	1700E+03	1589E-04	1726E+03	6118E-05
1750E+03	6110E-05	1779E+03	1996E-04	1819E+03	3788E-04
1857E+03	5866E-04	1896E+03	7495E-04	1937E+03	9654E-04
2001E+03	1299E-03				
112	1	24	8		
6000E-01	2630E-03	6500E-01	2630E-03	7000E-01	2630E-03
7500E-01	2630E-03	8000E-01	2610E-03	8500E-01	2600E-03
8997E-01	2670E-03				

1050E+00	1100E+00	2500E-03	1150E+00	7967E-01	2500E-03
1200E+00	1250E+00	2180E-03	1300E+00	1325E+00	2180E-03
1300E+00	1400E+00	2320E-03	1450E+00	1557E+00	1310E-03
1400E+00	1500E+00	4900E-04	1600E+00	1606E+00	2000E-04
1500E+00	1600E+00	0.	1700E+00	1240E+00	0.
1600E+00	1700E+00	15	1800E+00	9065E-01	0.
1700E+00	1800E+00	43	1900E+00	1438E+03	7967E-01
1800E+00	1900E+00	1	2000E+00	1510E+03	1325E+00
1900E+00	2000E+00	1	2100E+00	1588E+03	1557E+00
2000E+00	2100E+00	1	2200E+00	1659E+03	1606E+00
2100E+00	2200E+00	1	2300E+00	1746E+03	1484E+00
2200E+00	2300E+00	1	2400E+00	1809E+03	1240E+00
2300E+00	2400E+00	1	2500E+00	1885E+03	9065E-01
2400E+00	2500E+00	1	2600E+00	1959E+03	1569E-01
2500E+00	2600E+00	1	2700E+00	2024E+03	2195E-01
2600E+00	2700E+00	1	2800E+00	2098E+03	1504E-01
2700E+00	2800E+00	1	2900E+00	2172E+03	6545E-01
2800E+00	2900E+00	1	3000E+00	2246E+03	1033E+00
2900E+00	3000E+00	1	3100E+00	2320E+03	1545E+00
3000E+00	3100E+00	1	3200E+00	2394E+03	2024E-05
3100E+00	3200E+00	1	3300E+00	2468E+03	2429E-05
3200E+00	3300E+00	1	3400E+00	2542E+03	7500E-05
3300E+00	3400E+00	1	3500E+00	2616E+03	777E-05
3400E+00	3500E+00	1	3600E+00	2690E+03	6331E-05
3500E+00	3600E+00	1	3700E+00	2764E+03	4597E-05
3600E+00	3700E+00	1	3800E+00	2838E+03	1935E-05
3700E+00	3800E+00	1	3900E+00	2912E+03	8065E-07
3800E+00	3900E+00	1	4000E+00	2986E+03	0.
3900E+00	4000E+00	1	4100E+00	3060E+03	0.
4000E+00	4100E+00	1	4200E+00	3134E+03	0.
4100E+00	4200E+00	1	4300E+00	3208E+03	0.
4200E+00	4300E+00	1	4400E+00	3282E+03	0.
4300E+00	4400E+00	1	4500E+00	3356E+03	0.
4400E+00	4500E+00	1	4600E+00	3430E+03	0.
4500E+00	4600E+00	1	4700E+00	3504E+03	0.
4600E+00	4700E+00	1	4800E+00	3578E+03	0.
4700E+00	4800E+00	1	4900E+00	3652E+03	0.
4800E+00	4900E+00	1	5000E+00	3726E+03	0.
4900E+00	5000E+00	1	5100E+00	3800E+03	0.
5000E+00	5100E+00	1	5200E+00	3874E+03	0.
5100E+00	5200E+00	1	5300E+00	3948E+03	0.
5200E+00	5300E+00	1	5400E+00	4022E+03	0.
5300E+00	5400E+00	1	5500E+00	4096E+03	0.
5400E+00	5500E+00	1	5600E+00	4170E+03	0.
5500E+00	5600E+00	1	5700E+00	4244E+03	0.
5600E+00	5700E+00	1	5800E+00	4318E+03	0.
5700E+00	5800E+00	1	5900E+00	4392E+03	0.
5800E+00	5900E+00	1	6000E+00	4466E+03	0.
5900E+00	6000E+00	1	6100E+00	4540E+03	0.
6000E+00	6100E+00	1	6200E+00	4614E+03	0.
6100E+00	6200E+00	1	6300E+00	4688E+03	0.
6200E+00	6300E+00	1	6400E+00	4762E+03	0.
6300E+00	6400E+00	1	6500E+00	4836E+03	0.
6400E+00	6500E+00	1	6600E+00	4910E+03	0.
6500E+00	6600E+00	1	6700E+00	4984E+03	0.
6600E+00	6700E+00	1	6800E+00	5058E+03	0.
6700E+00	6800E+00	1	6900E+00	5132E+03	0.
6800E+00	6900E+00	1	7000E+00	5206E+03	0.
6900E+00	7000E+00	1	7100E+00	5280E+03	0.
7000E+00	7100E+00	1	7200E+00	5354E+03	0.
7100E+00	7200E+00	1	7300E+00	5428E+03	0.
7200E+00	7300E+00	1	7400E+00	5502E+03	0.
7300E+00	7400E+00	1	7500E+00	5576E+03	0.
7400E+00	7500E+00	1	7600E+00	5650E+03	0.
7500E+00	7600E+00	1	7700E+00	5724E+03	0.
7600E+00	7700E+00	1	7800E+00	5798E+03	0.
7700E+00	7800E+00	1	7900E+00	5872E+03	0.
7800E+00	7900E+00	1	8000E+00	5946E+03	0.
7900E+00	8000E+00	1	8100E+00	6020E+03	0.
8000E+00	8100E+00	1	8200E+00	6094E+03	0.
8100E+00	8200E+00	1	8300E+00	6168E+03	0.
8200E+00	8300E+00	1	8400E+00	6242E+03	0.
8300E+00	8400E+00	1	8500E+00	6316E+03	0.
8400E+00	8500E+00	1	8600E+00	6390E+03	0.
8500E+00	8600E+00	1	8700E+00	6464E+03	0.
8600E+00	8700E+00	1	8800E+00	6538E+03	0.
8700E+00	8800E+00	1	8900E+00	6612E+03	0.
8800E+00	8900E+00	1	9000E+00	6686E+03	0.
8900E+00	9000E+00	1	9100E+00	6760E+03	0.
9000E+00	9100E+00	1	9200E+00	6834E+03	0.
9100E+00	9200E+00	1	9300E+00	6908E+03	0.
9200E+00	9300E+00	1	9400E+00	6982E+03	0.
9300E+00	9400E+00	1	9500E+00	7056E+03	0.
9400E+00	9500E+00	1	9600E+00	7130E+03	0.
9500E+00	9600E+00	1	9700E+00	7204E+03	0.
9600E+00	9700E+00	1	9800E+00	7278E+03	0.
9700E+00	9800E+00	1	9900E+00	7352E+03	0.
9800E+00	9900E+00	1	10000E+00	7426E+03	0.
9900E+00	10000E+00	1	10100E+00	7500E+03	0.
10000E+00	10100E+00	1	10200E+00	7574E+03	0.
10100E+00	10200E+00	1	10300E+00	7648E+03	0.
10200E+00	10300E+00	1	10400E+00	7722E+03	0.
10300E+00	10400E+00	1	10500E+00	7796E+03	0.
10400E+00	10500E+00	1	10600E+00	7870E+03	0.
10500E+00	10600E+00	1	10700E+00	7944E+03	0.
10600E+00	10700E+00	1	10800E+00	8018E+03	0.
10700E+00	10800E+00	1	10900E+00	8092E+03	0.
10800E+00	10900E+00	1	11000E+00	8166E+03	0.
10900E+00	11000E+00	1	11100E+00	8240E+03	0.
11000E+00	11100E+00	1	11200E+00	8314E+03	0.
11100E+00	11200E+00	1	11300E+00	8388E+03	0.
11200E+00	11300E+00	1	11400E+00	8462E+03	0.
11300E+00	11400E+00	1	11500E+00	8536E+03	0.
11400E+00	11500E+00	1	11600E+00	8610E+03	0.
11500E+00	11600E+00	1	11700E+00	8684E+03	0.
11600E+00	11700E+00	1	11800E+00	8758E+03	0.
11700E+00	11800E+00	1	11900E+00	8832E+03	0.
11800E+00	11900E+00	1	12000E+00	8906E+03	0.
11900E+00	12000E+00	1	12100E+00	8980E+03	0.
12000E+00	12100E+00	1	12200E+00	9054E+03	0.
12100E+00	12200E+00	1	12300E+00	9128E+03	0.
12200E+00	12300E+00	1	12400E+00	9202E+03	0.
12300E+00	12400E+00	1	12500E+00	9276E+03	0.
12400E+00	12500E+00	1	12600E+00	9350E+03	0.
12500E+00	12600E+00	1	12700E+00	9424E+03	0.
12600E+00	12700E+00	1	12800E+00	9498E+03	0.
12700E+00	12800E+00	1	12900E+00	9572E+03	0.
12800E+00	12900E+00	1	13000E+00	9646E+03	0.
12900E+00	13000E+00	1	13100E+00	9720E+03	0.
13000E+00	13100E+00	1	13200E+00	9794E+03	0.
13100E+00	13200E+00	1	13300E+00	9868E+03	0.
13200E+00	13300E+00	1	13400E+00	9942E+03	0.
13300E+00	13400E+00	1	13500E+00	10016E+03	0.
13400E+00	13500E+00	1	13600E+00	10090E+03	0.
13500E+00	13600E+00	1	13700E+00	10164E+03	0.
13600E+00	13700E+00	1	13800E+00	10238E+03	0.
13700E+00	13800E+00	1	13900E+00	10312E+03	0.
13800E+00	13900E+00	1	14000E+00	10386E+03	0.
13900E+00	14000E+00	1	14100E+00	10460E+03	0.
14000E+00	14100E+00	1	14200E+00	10534E+03	0.
14100E+00	14200E+00	1	14300E+00	10608E+03	0.
14200E+00	14300E+00	1	14400E+00	10682E+03	0.
14300E+00	14400E+00	1	14500E+00	10756E+03	0.
14400E+00	14500E+00	1	14600E+00	10830E+03	0.
14500E+00	14600E+00	1	14700E+00	10904E+03	0.
14600E+00	14700E+00	1	14800E+00	10978E+03	0.
14700E+00	14800E+00	1	14900E+00	11052E+03	0.
14800E+00	14900E+00	1	15000E+00	11126E+03	0.
14900E+00	15000E+00	1	15100E+00	11200E+03	0.
15000E+00	15100E+00	1	15200E+00	11274E+03	0.
15100E+00	15200E+00	1	15300E+00	11348E+03	0.
15200E+00	15300E+00	1	15400E+00	11422E+03	0.
15300E+00	15400E+00	1	15500E+00	11496E+03	0.
15400E+00	15500E+00	1	15600E+00	11570E+03	0.
15500E+00	15600E+00	1	15700E+00	11644E+03	0.
15600E+00	15700E+00	1	15800E+00	11718E+03	0.
15700E+00	15800E+00	1	15900E+00	11792E+03	0.
15800E+00	15900E+00	1	16000E+00	11866E+03	0.
15900E+00	16000E+00	1	16100E+00	11940E+03	0.
16000E+00	16100E+00	1	16200E+00	12014E+03	0.
16100E+00	16200E+00	1	16300E+00	12088E+03	0.
16200E+00	16300E+00	1	16400E+00	12162E+03	0.
16300E+00	16400E+00	1	16500E+00	12236E+03	0.
16400E+00	16500E+00	1	16600E+00	12310E+03	0.
16500E+00	16600E+00	1	16700E+00	12384E+03	0.
16600E+00	16700E+00	1	16800E+00	12458E+03	0.
16700E+00	16800E+00	1	16900E+00	12532E+03	0.
16800E+00	16900E+00	1	17000E+00	12606E+03	0.
16900E+00	17000E+00	1	17100E+00	12680E+03	0.
17000E+00	17100E+00	1	17200E+00	12754E+03	0.
17100E+00	17200E+00	1	17300E+00	12828E+03	0.
17200E+00	17300E+00	1	17400E+00	12902E+03	0.
17300E+00	17400E+00	1	17500E+00	12976E+03	0.
17400E+00	17500E+00	1	17600E+00	13050E+03	0.
17500E+00	17600E+00	1	17700E+00	13124E+03	0.
17600E+00	17700E+00	1	17800E+00	13198E+03	0.
17700E+00	17800E+00	1	17900E+00	13272E+03	0.
17800E+00	17900E+00	1	18000E+00	13346E+03	0.
17900E+00	18000E+00	1	18100E+00	13420E+03	0.
18000E+00	18100E+00	1	18200E+00	13494E+03	0.
18100E+00	18200E+00	1	18300E+00	13568E+03	0.
18200E+00	18300E+00	1	18400E+00		

[illegible]

1.150E+00	-1.1349E-04	1.406E+00	-1.910F-05	1.486E+00	-1.70E+00
1.503E+00	-5.911E-05	1.524E+00	-3.969E-05	1.546E+00	-0.273E-03
1.75E+00	-1.215E-05	1.589E+00	-6.073E-06	1.615E+00	0.
1.100E+01	0.				
2		31	11		
-6.073E-02	-6.073E-02	9.543E+02	-7.126E-02	8.899E+02	-7.976E-02
-8.704E-02	-8.704E-02	9.565E+02	-9.74E-02	9.86E+02	-1.04E-01
-1.107E-01	-1.107E-01	1.064E+03	-1.117E-01	1.099E+03	-1.16E-01
-1.12E-01	-1.12E-01	1.180E+03	-1.057E-01	1.20E+03	-1.036E-01
-5.028E-02	-5.028E-02	1.307E+03	-8.957E-02	1.352E+03	-6.761E-02
-5.911E-02	-5.911E-02	1.425E+03	-5.563E-02	1.463E+03	-4.211E-02
-3.279E-02	-3.279E-02	1.557E+03	-1.619E-02	1.590E+03	-7.62E-03
1.453E-03	1.453E-03	1.677E+03	1.74E-02	1.720E+03	2.915E-02
9.008E-07	9.008E-07	1.799E+03	5.101E-02	1.841E+03	6.437E-02
7.490E-02	7.490E-02	1.914E+03	8.543E+02	1.945E+03	9.555E-02
1.126E-01	1.126E-01				
2		29	10		
-2.201E-01	-2.201E-01	7.635E-01	-2.201E-01	8.682E-01	-2.201E-01
-2.185E-01	-2.185E-01	9.789E-01	-2.177E-01	1.031E+00	-2.165E-01
-1.968E-01	-1.968E-01	1.140E+00	-2.083E-01	1.176E+00	-2.00E-01
1.698E-01	1.698E-01	1.251E+00	1.587E-00	1.282E+00	1.823E-01
1.326E+00	1.326E+00	1.365E+00	1.541E-01	1.394E+00	1.380E-01
1.428E-01	1.428E-01	1.435E+00	1.03E-01	1.451E+00	9.658E-02
1.474E-02	1.474E-02	1.438E+00	5.996E-02	1.506E+00	3.682E-02
2.41E-02	2.41E-02	1.549E+00	1.489E-02	1.566E+00	7.646E-03
4.629E-03	4.629E-03	1.601E+00	4.024E-04	1.600E+00	0.
1.100E+01	1.100E+01				
100		24	8		
8.003E+02	8.221E-04	8.458E+02	8.139E-04	9.058E+02	7.812E-04
9.724E+02	7.362E-04	1.013E+03	7.362E-04	1.069E+03	7.239E-04
1.103E+03	7.157E-04	1.156E+03	7.157E-04	1.203E+03	7.239E-04
1.566E+03	7.485E-04	1.299E+03	7.853E-04	1.346E+03	8.057E-04
1.404E+03	8.666E-04	1.457E+03	9.162E-04	1.523E+03	9.62E-04
1.594E+03	1.063E-03	1.62E+03	1.141E-03	1.707E+03	1.223E-03
1.56E+03	1.288E-03	1.807E+03	1.149E-03	1.857E+03	1.469E-03
1.514E+03	1.595E-03	1.959E+03	1.669E-03	2.000E+03	1.746E-03
101		21	7		
5.802E-01	-1.13E-03	7.241E-01	-1.13E-03	8.06E-01	-1.131E-03
8.791E-01	-1.119E-03	9.261E-01	-1.115E-03	9.35E-01	-1.09E-03
1.05E+03	-1.071E-03	1.103E+00	-1.042E-03	1.158E+00	-9.737E-04
1.01E+00	-9.374E-04	1.288E+00	-8.768E-04	1.28E+00	-7.758E-04
1.316E+00	-6.707E-04	1.335E+00	-5.535E-04	1.363E+00	-4.1E-04
1.37E+00	-3.030E-04	1.403E+00	-1.939E-04	1.423E+00	-1.051E-04
1.40E+00	-4.44E-05	1.460E+00	0.	1.000E+01	0.
102		33	11		
8.00E+02	-6.531E-01	8.602E+02	-7.7099E-01	9.130E+02	-7.748E-01
9.683E+02	-8.235E-01	1.017E+03	-8.641E-01	1.058E+03	-9.006E-01
1.085E+03	-9.128E-01	1.128E+03	-9.93E-01	1.173E+03	-9.53E-01
1.233E+03	-9.736E-01	1.271E+03	-9.777E-01	1.310E+03	-9.55E-01
1.349E+03	-1.006E+00	1.393E+03	-1.051E+03	1.433E+03	-1.103E+00
1.472E+03	-1.164E+00	1.535E			

105	6033E+02	1065E+01	53	10	9801E+00
	7325E+02	5459E+00			7024E+02
	7927E+02	8727E+00			7700E+02
	8610E+02	8054E+02			8325E+02
	9415E+02	7035E+00			9154E+02
	1005E+03	6922E+00			9700E+02
	1072E+03	1026E+03			1053E+03
	1112E+03	1091E+03			1104E+03
	1140E+03	8020E+00			1133E+03
	1182E+03	8451E+00			1167E+03
	1231E+03	8857E+00			1213E+03
	1245E+03	9126E+00			1272E+03
	1250E+03	9109E+00			1333E+03
	1408E+03	9104E+00			1389E+03
	1496E+03	9987E+00			1476E+03
	1616E+03	8849E+00			1571E+03
	1733E+03	8589E+00			1675E+03
	1911E+03	8125E+00			1850E+03
105	6008E+02	1205E+01	23	8	1166E+01
	7228E+02	1140E+01			1118E+01
	8220E+02	1086E+01			1087E+01
	9301E+02	1080E+01			1079E+01
	1020E+03	1089E+01			1128E+01
	1116E+03	1152E+01			1188E+01
	1192E+03	1200E+01			1203E+01
	1756E+03	1203E+01			
105	6024E+02	1599E+01	2	1	
	3000E+02	3280E+02	31	11	3800E+02
	9200E+02	1610E+03			1000E+03
	1040E+03	6900E+04			1120E+03
	1160E+03	1900E+04			1240E+03
	1280E+03	5000E+05			1360E+03
	1400E+03	5000E+05			1480E+03
	1520E+03	1400E+04			1600E+03
	1640E+03	5700E+04			1720E+03
	1760E+03	1100E+03			1840E+03
	1880E+03	2680E+03			1960E+03
	2000E+03	2310E+03			
108	6005E-01	1000E-04	15	5	3356E-01
	9558E-01	1800E-04			1133E-04
	1166E+00	1434E-04			1247E+00
	1264E+00	4509E-05			1317E+00
	1334E+00	3272E-05			1000E+01
109	8275E+02	4293E+00	34	12	8758E+02
	9042E+02	3244E+00			9472E+02
	9643E+02	2533E+00			1016E+03
	1037E+03	11907E+00			1083E+03
	1104E+03	1451E+00			1158E+03
	1190E+03	1220E+00			1231E+03
	1271E+03	1264E+00			1357E+03
	1401E+03	1423E+00			1500E+03
	1554E+03	1663E+00			1651E+03
	1696E+03	1939E+00			1797E+03
	1854E+03	2268E+00			1940E+03
	1900E+03	2549E+00			
110	5985E-01	2713E-01	14	5	9298E-01
	1005E+00	2672E-01			1098E+00
	1142E+00	2348E-01			1214E+00
	1247E+00	1534E-01			1294E+00

.1320E+00	0.	2	.1000E+01	0.	.8709E+02	.1507E-04
.7971E+02	.4766E-04	22	.8231E+02	6	.1006E+03	-.2525E-04
.9107E+02	.2444E-05	9610E+02	-.1385E-04		.1177E+03	-.3951E-04
.1050E+03	-.3216E-04	.1098E+03	-.3910E-04		.1326E+03	-.5499E-04
.1265E+03	-.4644E-04	.1317E+03	-.4888E-04		.1541E+03	-.5051E-04
.1419E+03	-.5051E-04	.1494E+03	-.5051E-04		.1781E+03	-.4236E-04
.1659E+03	-.4847E-04	.1731E+03	-.4521E-04		.1939E+03	-.3361E-04
.1841E+03	-.4073E-04	.1899E+03	-.3707E-04			
.1998E+03	-.3055E-04					
.6000E-01	.1340E-03	24	.6500E-01	8	.7000E-01	.1340E-03
.7500E-01	.1340E-03	.8000E-01	.1340E-03		.8500E-01	.1330E-03
.9000E-01	.1320E-03	.9500E-01	.1310E-03		.1000E+00	.1220E-03
.1050E+00	.1290E-03	.1100E+00	.1270E-03		.1150E+00	.1200E-03
.1200E+00	.1150E-03	.1250E+00	.1040E-03		.1300E+00	.8700E-04
.1350E+00	.6900E-04	.1400E+00	.4200E-04		.1450E+00	.2100E-04
.1500E+00	.4000E-05	.1550E+00	0.		.1600E+00	0.
.1650E+00	0.	.1700E+00	0.		.1003E+01	0.
.7980E+02	.1545E+00	32	.8330E+02	11	.8761E+02	-.8577E-01
.9078E+02	-.5976E-01	.9395E+02	-.3740E-01		.9638E+02	-.1992E-01
.9890E+02	.5285E-02	.1004E+03	.8130E-02		.1032E+03	.2154E-01
.1067E+03	.3293E-01	.1103E+03	.3591E-01		.1141E+03	.4756E-01
.1177E+03	.5244E-01	.1206E+03	.5447E-01		.1237E+03	.5732E-01
.1291E+03	.5813E-01	.1326E+03	.5813E-01		.1375E+03	.5732E-01
.1410E+03	.5691E-01	.1447E+03	.5569E-01		.1490E+03	.5203E-01
.1529E+03	.5081E-01	.1568E+03	.4715E-01		.1620E+03	.8268E-01
.1675E+03	.3406E-01	.1729E+03	.2805E-01		.1774E+03	.2236E-01
.1818E+03	.1585E-01	.1868E+03	.8537E-02		.1923E+03	.2033E-02
.1960E+03	-.5285E-02	.1998E+03	-.1138E-01			
.5974E-01	-.1572E+00	25	.6997E-01	9	.7987E-01	-.1560E+00
.8553E-01	-.1522E+00	.8945E-01	-.1552E+00		.1000E+00	-.1536E+00
.1038E+00	-.1511E+00	.1088E+00	-.1491E+00		.1137E+00	-.1470E+00
.1178E+00	-.1426E+00	.1213E+00	-.11369E+00		.1248E+00	-.1271E+00
.1273E+00	-.1189E+00	.1292E+00	-.1079E+00		.1315E+00	-.9572E-01
.1334E+00	-.7902E-01	.1351E+00	-.6554E-01		.1367E+00	-.5458E-01
.1380E+00	-.4033E-01	.1393E+00	-.2933E-01		.1407E+00	-.2159E-01
.1422E+00	-.1303E-01	.1441E+00	-.6925E-02			0.
.1000E+01	0.	19		7		
.5000E+00	.8758E-03	.5494E+00	.1059E-02		.8257E+00	.1405E-02
.7036E+00	.1609E-02	.7551E+00	.1833E-02		.8002E+00	.1976E-02
.8578E+00	.2179E-02	.9065E+00	.2220E-02		.9552E+00	.2322E-02
.1014E+01	.2342E-02	.1055E+01	.2383E-02		.1100E+01	.2424E-02
.1155E+01	.2648E-02	.1211E+01	.2525E-02		.1251E+01	.2505E-02
.1322E+01	.2525E-02	.1621E+01	.2525E-02		.1849E+01	.2525E-02
.2000E+01	.2525E-02					
.9318E+02	-.3984E+00	26	.9675E+02	9	.9968E+02	-.3182E+00
.1042E+03	-.2826E+00	.1083E+03	-.2437E+00		.1115E+03	-.2121E+00
.1157E+03	-.1773E+00	.1189E+03	-.1611E+00		.1227E+03	-.1522E+00
.1258E+03	-.1466E+00	.1302E+03	-.1441E+00		.1337E+03	-.1425E+00
.1414E+03	-.1425E+00	.1467E+03	-.1433E+00		.1500E+03	-.1433E+00
.1541E+03	-.1441E+00	.1591E+03	-.1441E+00		.1630E+03	-.1474E+00
.1668E+03	-.1490E+00	.1707E+03	-.1506E+00		.1760E+03	-.1530E+00
.1809E+03	-.1579E+00	.1862E+03	-.1619E+00		.1907E+03	-.1644E+00
.1955E+03	-.1700E+00	.2000E+03	-.1717E+00			
.2000E+00	0.	5	.1997E+00	2	.7633E+00	0.
.2000E+00	0.	.7600E+00	0.			
.6036E+02	.7006E+00	2	.2002E+03	1		
.6003E+02	.1199E+01	2	.2007E+03	1		

[illegible]

.9010E+02	.1920E-02	.9218E+02	.4000E-02	.9401E+02	.6640E-02
.9585E+02	.840E-02	.9048E+02	.1040E-01	.1005E+03	.1176E-01
.1035E+03	.136E-01	.1058E+03	.1524E-01	.1084E+03	.1472E-01
.1105E+03	.149E-01	.1128E+03	.1488E-01	.1172E+03	.1472E-01
.1213E+03	.1392E-01	.1233E+03	.1288E-01	.1291E+03	.1152E-01
.1329E+03	.936E-02	.1373E+03	.7520E-02	.1402E+03	.5600E-02
.1441E+03	.340E-02	.1476E+03	.6400E-03	.1511E+03	.1600E-02
.1547E+03	.4480E-02	.1578E+03	.7704E-02	.1606E+03	.1000E-01
.1673E+03	.1616E-01	.1702E+03	.1856E-01	.1743E+03	.2312E-01
.1776E+03	.2684E-01	.1802E+03	.2976E-01	.1838E+03	.3408E-01
.1868E+03	.2684E-01	.1896E+03	.436E-01	.2000E+03	.5600E-01
123	2	25	9		
.8008E+02	.2736E-03	.8367E+02	.1610E-04	.8972E+02	.2414E-03
.9546E+02	.4740E-03	.1013E+03	.5553E-03	.1076E+03	.6439E-03
.1103E+03	.6519E-03	.1137E+03	.6761E-03	.1175E+03	.6600E-03
.1211E+03	.6356E-03	.1271E+03	.5795E-03	.1332E+03	.4829E-03
.1374E+03	.3702E-03	.1416E+03	.2736E-03	.1454E+03	.1690E-03
.1501E+03	.4024E-04	.1533E+03	.1764E-03	.1597E+03	.2867E-03
.1661E+03	.5714E-03	.1712E+03	.8043E-03	.1780E+03	.1103E-02
.1852E+03	.1473E-02	.1908E+03	.1730E-02	.1951E+03	.1980E-02
.2002E+03	.2221E-02	31	11		
.7597E+02	.4000E+00	.8403E+02	.2000E+00	.8801E+02	.4800E-01
.9200E+02	.1040E+00	.9598E+02	.2320E+00	.1000E+03	.3200E+00
.1040E+03	.4000E+00	.1060E+03	.4240E+00	.1120E+03	.4480E+00
.1160E+03	.8000E+00	.1200E+03	.4720E+00	.1240E+03	.4240E+00
.1280E+03	.4000E+00	.1320E+03	.3840E+00	.1350E+03	.3200E+00
.1400E+03	.2400E+00	.1440E+03	.1920E+00	.1480E+03	.8800E-01
.1520E+03	0.	.1560E+03	.8800E-01	.1600E+03	.2000E+00
.1640E+03	.3040E+00	.1680E+03	.4000E+00	.1720E+03	.5440E+00
.1760E+03	.6800E+00	.1800E+03	.8001E+00	.1840E+03	.9440E+00
.1880E+03	.1104E+01	.1920E+03	.1232E+01	.1960E+03	.1472E+01
.2000E+03	.1590E+01	22	8		
.3018E+02	.1849E-04	.3917E+02	.1643E-04	.9737E+02	.1349E-04
.1076E+03	.9843E-05	.1143E+03	.6745E-05	.1189E+03	.5000E-05
.1234E+03	.3492E-05	.1283E+03	.8730E-06	.1332E+03	.2063E-05
.1378E+03	.3988E-05	.1420E+03	.6429E-05	.1466E+03	.8730E-05
.1509E+03	.1119E-04	.1572E+03	.1476E-04	.1614E+03	.1730E-04
.1650E+03	.1929E-04	.1701E+03	.2230E-04	.1761E+03	.2613E-04
.1814E+03	.2913E-04	.1883E+03	.3381E-04	.1932E+03	.3643E-04
.1998E+03	.4032E-04	16	6		
.7951E+02	.7952E-02	.8602E+02	.4930E-02	.9320E+02	.3499E-02
.9956E+02	.1431E-02	.1051E+03	.1590E-03	.1114E+03	.1590E-02
.1187E+03	.3161E-02	.1264E+03	.4851E-02	.1347E+03	.6918E-02
.1410E+03	.1793E-02	.1500E+03	.9861E-02	.1542E+03	.1050E-01
.1667E+03	.136E-01	.1730E+03	.1463E-01	.1816E+03	.1622E-01
.1895E+03	.1765E-01	.1953E+03	.1869E-01	.1998E+03	.1940E-01
127	2	35	12		
.8167E+02	.1157E-03	.8390E+02	.2942E-03	.8701E+02	.2386E-03
.9004E+02	.7237E-03	.9235E+02	.1010E-02	.9402E+02	.1392E-02
.9689E+02	.1638E-02	.9912E+02	.1781E-02	.1010E+03	.1932E-02
.1030E+03	.2060E-02	.1054E+03	.2131E-02	.1080E+03	.2147E-02
.1116E+03	.2331E-02	.1157E+03	.1988E-02	.1195E+03	.1861E-02
.1249E+03	.1022E-02	.1293E+03	.1384E-02	.1344E+03	.1082E-02
.1383E+03	.8580E-03	.1416E+03	.6215E-03	.1449E+03	.4056E-03
.1500E+03	.3976E-04	.1547E+03	.3499E-03	.1582E+03	.5885E-03
.1603E+03	.7237E-03	.1661E+03	.1192E-02	.1697E+03	.1559E-02
.1739E+03	.1924E-02	.1771E+03	.2195E-02	.1803E+03	.2449E-02
.1849E+03	.2895E-02	.1884E+03	.3276E-02	.1930E+03	.3675E-02
.1965E+03	.4024E-02	.1998E+03	.4437E-02		
128	2	20	7		
.8037E+02	.7631E+00	.8562E+02	.1606E+00	.8929E+02	.2329E+00
.9359E+02	.6667E+00	.9765E+02	.896E+00	.1009E+03	.1100E+01
.1042E+03	.1197E+01	.1074E+03	.1229E+01	.1111E+03	.1221E+01

114E+03	-	1213E+01	1286E+03	-9317E+00	137E+03	-7068E+00
1477E+03	-	3695E+00	1552E+03	-1124E+00	1632E+03	2008E+00
1724E+03	-	5703E+00	1796E+03	-8996E+00	1885E+03	1333E+01
1942E+03	1	1631E+01	1998E+03	1355E+01		
129			24	8		
2477E+00	4666E-02	2766E+00	2766E+00	4662E-02	3031E+00	4650E-02
3274E+00	4582E-02	3552E+00	3552E+00	4527E-02	3783E+00	4471E-02
3994E+00	4498E-02	4205E+00	4205E+00	4336E-02	4405E+00	4261E-02
4592E+00	4189E-02	4795E+00	4795E+00	4114E-02	5038E+00	4063E-02
5284E+00	3911E-02	5464E+00	5464E+00	3800E-02	5643E+00	3713E-02
5794E+00	3625E-02	5982E+00	5982E+00	3542E-02	6221E+00	3415E-02
6396E+00	3308E-02	6571E+00	6571E+00	3201E-02	6770E+00	3097E-02
6937E+00	2998E-02	7109E+00	7109E+00	2915E-02	7376E+00	2752E-02
130	1		12	4		
2653E+02	3024E+00	3024E+00	5179E+02	2628E+00	7155E+02	2336E+00
9315E+02	2009E+00	1077E+03	1077E+03	1785E+00	1195E+03	1619E+00
1329E+03	1403E+00	1460E+03	1460E+03	1201E+00	1583E+03	1029E+00
1703E+03	8366E-01	1849E+03	1849E+03	6164E-01	2013E+03	3763E-01
121	1		3	1		
1594E-02	1009E+01	9012E+00	9012E+00	1009E+01	2398E+01	1483E+01
132	1		31	11		
2652E-01	1501E+00	3364E-01	3364E-01	1645E+00	4018E-01	1780E+00
4713E-01	1964E+00	5269E-01	5269E-01	2140E+00	5811E-01	2323E+00
6211E-01	2547E+00	6664E-01	6664E-01	2818E+00	7071E-01	3056E+00
7359E-01	3297E+00	7748E-01	7748E-01	3641E+00	8027E-01	3944E+00
8386E-01	4423E+00	8681E-01	8681E-01	4636E+00	8960E-01	5277E+00
9263E-01	5780E+00	9589E-01	9589E-01	6355E+00	9837E-01	6850E+00
1012E+00	7425E+00	1049E+00	1049E+00	7904E+00	1087E+00	8407E+00
1117E+00	8798E+00	1153E+00	1153E+00	9134E+00	1195E+00	9485E+00
1232E+00	9733E+00	1278E+00	1278E+00	9868E+00	1323E+00	9940E+00
1365E+00	9972E+00	1400E+00	1400E+00	9988E+00	2000E+00	9988E+00
1000E+01						
133	1		19	7		
1801E+01	2300E+02	2300E+02	1001E+01	2318E+02	2318E+02	9372E+00
2351E+02	2389E+02	2389E+02	7644E+00	2430E+02	2430E+02	6617E+00
2471E+02	2509E+02	2509E+02	4849E+00	2543E+02	2543E+02	4186E+00
2573E+02	2614E+02	2614E+02	2779E+00	2649E+02	2649E+02	2142E+00
2680E+02	2717E+02	2717E+02	1139E+00	2745E+02	2745E+02	7963E-01
2778E+02	2797E+02	2797E+02	7963E-02	2800E+02	2800E+02	0.
4000E+03	0.					
134	1		21	7		
8000E+00	4719E+02	4719E+02	8000E+00	4970E+02	4970E+02	7963E+00
8096E+00	5599E+02	5599E+02	8255E+00	5905E+02	5905E+02	8446E+00
8200E+02	5455E+02	5455E+02	8988E+00	6746E+02	6746E+02	9299E+00
6957E+02	7124E+02	7124E+02	9841E+00	7347E+02	7347E+02	1018E+01
7606E+02	7817E+02	7817E+02	1104E+01	7984E+02	7984E+02	1138E+01
8127E+02	8267E+02	8267E+02	1206E+01	8466E+02	8466E+02	1250E+01
8617E+02	8741E+02	8741E+02	1321E+01	8872E+02	8872E+02	1359E+01
135	1		33	11		
2004E+00	5991E+00	5991E+00	2637E+00	3991E+00	3991E+00	9951E+00
3060E+00	9335E+00	9335E+00	3327E+00	9744E+00	9744E+00	9632E+00
3769E+00	5938E+00	5938E+00	3988E+00	9134E+00	9134E+00	8890E+00
4335E+00	8611E+00	8611E+00	4990E+00	8245E+00	8245E+00	8053E+00
4761E+00	7823E+00	7823E+00	4924E+00	7272E+00	7272E+00	6929E+00
5179E+00	6411E+00	6411E+00	5291E+00	6004E+00	6004E+00	5550E+00
5530E+00	5095E+00	5095E+00	5618E+00	4641E+00	4641E+00	4106E+00
5821E+00	3628E+00	3628E+00	5904E+00	3221E+00	3221E+00	2958E+00
6028E+00	2791E+00	2791E+00	6088E+00	2647E+00	2647E+00	2376E+00
6331E+00	2289E+00	2289E+00	6462E+00	2009E+00	2009E+00	1908E+00
6745E+00	1746E+00	1746E+00	6908E+00	1627E+00	1627E+00	1555E+00
0.	1		3	1		
1000E-01	4600E+02	4600E+02	1000E-01	1200E+03	1200E+03	6400E-01
137	1		56	19		
5286E-01	2506E-01	2506E-01	2626E-01	4575E-01	4575E-01	4615E-01
1078E+00	7480E-01	7480E-01	9867E-01	9429E-01	9429E-01	1257E+00
	1509E+00	1509E+00	1902E+00	1325E+00	1325E+00	2282E+00

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.421	.835E+00	.473E+00	.312E+00	.455E+00	.430E+00
.523	.575E+00	.542E+00	.100E+01	.573E+00	.106E+01
.591	.110E+01	.606E+00	.113E+01	.620E+00	.117E+01
.637	.122E+01	.653E+00	.127E+01		
146	1	19	7		
.800	.148E-03	.873E+02	.190E-03	.960E+02	.250E-03
.106	.298E-03	.114E+03	.306E-03	.120E+03	.308E-03
.126	.314E-03	.132E+03	.312E-03	.141E+03	.304E-03
.149	.282E-03	.156E+03	.244E-03	.163E+03	.198E-03
.169	.146E-03	.175E+03	.921E-04	.181E+03	.360E-04
.185	.220E-04	.190E+03	.741E-04	.195E+03	.146E-03
.200	.198E-03				
147	1	20	7		
.599	.418E-03	.717E-01	.419E-03	.815E-01	.418E-03
.899	.418E-03	.969E-01	.406E-03	.103E+00	.402E-03
.109	.383E-03	.115E+00	.361E-03	.119E+00	.341E-03
.120	.322E-03	.124E+00	.306E-03	.125E+00	.247E-03
.148	.198E-03	.130E+00	.139E-03	.132E+00	.726E-04
.134	.334E-04	.136E+00	.119E-04	.138E+00	.196E-05
.138	0.	.100E+01	0.		
148	1	22	8		
.793	.205E-01	.832E+02	.224E-01	.873E+02	.240E-01
.902	.258E-01	.942E+02	.369E-01	.972E+02	.279E-01
.100	.203E-03	.102E+03	.288E-01	.104E+03	.288E-01
.107	.287E-01	.110E+03	.279E-01	.118E+03	.257E-01
.127	.127E+03	.139E+03	.178E-01	.150E+03	.140E-01
.162	.913E-02	.172E+03	.529E-02	.179E+03	.244E-02
.184	.160E-03	.190E+03	.212E-02	.196E+03	.428E-02
.200	.589E-02				
149	1	21	7		
.600	.176E-01	.650E-01	.175E-01	.700E-01	.173E-01
.750	.172E-01	.800E-01	.171E-01	.850E-01	.170E-01
.900	.169E-01	.950E-01	.168E-01	.100E+00	.167E-01
.105	.165E-01	.110E+00	.161E-01	.115E+00	.159E-01
.120	.152E-01	.125E+00	.144E-01	.130E+00	.126E-01
.135	.950E-02	.140E+00	.520E-02	.145E+00	.170E-02
.150	0.	.155E+00	0.	.100E+01	0.
152	1	2	1		
.598	.702E+00	.200E+03	.702E+00		
152	2	2	1		
.599	.902E+00	.200E+03	.902E+00		
152	3	2	1		
.600	.105E+01	.199E+03	.105E+01		
152	4	2	1		
.600	.120E+01	.199E+03	.120E+01		
152	5	2	1		
.599	.160E+01	.199E+03	.160E+01		
153	1	24	8		
.797	.317E-03	.841E+02	.241E-03	.903E+02	.134E-03
.946	.664E-04	.100E+03	.161E-04	.106E+03	.885E-04
.110	.138E-03	.115E+03	.179E-03	.119E+03	.215E-03
.123	.243E-03	.126E+03	.275E-03	.130E+03	.277E-03
.135	.287E-03	.140E+03	.287E-03	.145E+03	.269E-03
.151	.229E-03	.159E+03	.177E-03	.169E+03	.114E-03
.175	.684E-04	.180E+03	.362E-04	.184E+03	.106E-04
.188	.342E-04	.192E+03	.503E-04	.199E+03	.965E-04
154	1	18	6		
.692	.321E-03	.736E-01	.313E-03	.834E-01	.305E-03
.910	.297E-03	.976E-01	.287E-03	.103E+00	.275E-03
.109	.267E-03	.115E+00	.241E-03	.120E+00	.219E-03
.124	.187E-03	.127E+00	.153E-03	.131E+00	.107E-03
.135	.678E-04	.138E+00	.419E-04	.142E+00	.139E-04
.143	.598E-05	.143E+00	0.	.100E+01	0.
155	1	27	9		
.934	.182E-01	.957E+02	.141E-01	.980E+02	.104E-01
.904	.628E-02	.928E+02	.246E-02	.947E+02	.79E-04

.9721E+02	.2704E-02	.9936E+02	.5013E-02	.1016E+03	.5660E-02
.1037E+03	.2270E-02	.1063E+03	.9622E-02	.1096E+03	.1042E-01
.1149E+03	.1042E-01	.1108E+03	.9061E-02	.1240E+03	.8668E-02
.1290E+03	.8032E-02	.1360E+03	.6918E-02	.1428E+03	.5805E-02
.1495E+03	.4533E-02	.1553E+03	.3579E-02	.1606E+03	.1309E-02
.1670E+03	.8748E-03	.1745E+03	.6362E-03	.1809E+03	.1988E-02
.1879E+03	.3419E-02	.1945E+03	.4051E-02	.1996E+03	.5964E-02
.6022E-01	.8350E-02	.9263E-01	.8350E-02	.1000E+00	.8270E-02
.1092E+00	.8191E-02	.1147E+00	.7634E-02	.1266E+00	.4056E-02
.1298E+00	.2068E-02	.1321E+00	.1113E-02	.1355E+00	0.
.1000E+01	0.				
.8440E+02	.9800E-04	.9390E+02	.3600E-04	.1016E+03	.6000E-05
.1123E+03	.5800E-04	.1245E+03	.7400E-04	.1363E+03	.5400E-04
.1467E+03	.2000E-04	.1562E+03	.2200E-04	.1672E+03	.6200E-04
.1761E+03	.1020E-03	.1844E+03	.1480E-03	.1935E+03	.1880E-03
.2000E+03	.2300E-03				
.6015E-01	.2322E-03	.8010E-01	.2322E-03	.9334E-01	.2312E-03
.1031E+00	.2312E-03	.1114E+00	.2194E-03	.1189E+00	.2016E-03
.1256E+00	.1640E-03	.1297E+00	.1383E-03	.1315E+00	.1008E-03
.1338E+00	.7312E-04	.1370E+00	.4348E-04	.1402E+00	.3162E-04
.1432E+00	.1976E-04	.1454E+00	0.	.1000E+01	0.
.3022E+02	.5770E-02	.1002E+03	.5395E-02	.1096E+03	.5259E-02
.1220E+03	.5259E-02	.1312E+03	.5339E-02	.1443E+03	.5498E-02
.1530E+03	.5375E-02	.1604E+03	.5976E-02	.1707E+03	.6375E-02
.1808E+03	.6534E-02	.1896E+03	.6853E-02	.1997E+03	.7251E-02
.6040E-01	.1781E-01	.7809E-01	.1813E-01	.9482E-01	.1821E-01
.1076E+00	.1321E-01	.1126E+00	.1813E-01	.1193E+00	.1750E-01
.1333E+00	.1614E-01	.1288E+00	.1344E-01	.1325E+00	.1034E-01
.1265E+00	.6839E-02	.1402E+00	.4374E-02	.1434E+00	.2386E-02
.1460E+00	.1590E-02	.1477E+00	.1113E-02	.1509E+00	0.
.1000E+01	0.				
.7990E+02	.2854E-03	.8317E+02	.2136E-03	.9155E+02	.5190E-04
.9761E+02	.4391E-04	.1041E+03	.1457E-03	.1105E+03	.2156E-03
.1160E+03	.2794E-03	.1234E+03	.3333E-03	.1285E+03	.3433E-03
.1308E+03	.3473E-03	.1304E+03	.3453E-03	.1453E+03	.3253E-03
.1510E+03	.2934E-03	.1589E+03	.2656E-03	.1650E+03	.2236E-03
.1715E+03	.1677E-03	.1782E+03	.1098E-03	.1837E+03	.5389E-04
.1887E+03	.9980E-05	.1938E+03	.5988E-04	.1999E+03	.1397E-03
.6004E-01	.5972E-03	.9669E-01	.5972E-03	.1030E+00	.5972E-03
.1102E+00	.5872E-03	.1151E+00	.5711E-03	.1202E+00	.5531E-03
.1258E+00	.5070E-03	.1290E+00	.4369E-03	.1325E+00	.3407E-03
.1352E+00	.2766E-03	.1390E+00	.1743E-03	.1412E+00	.1182E-03
.1436E+00	.6413E-04	.1465E+00	.3803E-04	.1486E+00	0.
.1000E+01	0.				
.7974E+02	.1333E-01	.9557E+02	.6946E-02	.9011E+02	.3273E-02
.9439E+02	.1597E-03	.9912E+02	.3513E-02	.1036E+03	.5938E-02
.1067E+03	.6866E-02	.1100E+03	.7585E-02	.1143E+03	.7585E-02
.1203E+03	.4707E-03	.1270E+03	.5828E-02	.1333E+03	.5110E-02
.1395E+03	.4311E-02	.1463E+03	.3353E-02	.1522E+03	.2635E-02
.1598E+03	.1677E-02	.1679E+03	.1597E-03	.1749E+03	.9581E-03
.1812E+03	.1677E-02	.1897E+03	.3034E-02	.1959E+03	.4232E-02
.1998E+03	.5110E-02				
.5911E-01	.2000E-01	.7970E-01	.1982E-01	.9469E-01	.1920E-01
.1056E+00	.1873E-01	.1143E+00	.1865E-01	.1193E+00	.1817E-01
.1217E+00	.1737E-01	.1248E+00	.1614E-01	.1292E+00	.1347E-01
.1328E+00	.1100E-01	.1362E+00	.8207E-02	.1395E+00	.5657E-02
.1429E+00	.3745E-03	.1454E+00	.1471E-02	.1472E+00	.5662E-03

.1490E+00	0.	17	.1000E+01	0.	6	.1013E+03	--.1630E-03
.7963E+02	1	17	.9089E+02	17	6	.1296E+03	--.2354E-03
.1109E+03	1	17	.1210E+03	17	6	.1490E+03	--.2575E-03
.1358E+03	1	17	.1412E+03	17	6	.1632E+03	--.2555E-03
.1514E+03	1	17	.1560E+03	17	6	.1874E+03	--.2072E-03
.1714E+03	1	17	.1794E+03	17	6		
.1916E+03	1	17	.1998E+03	17	6		
.5994E+01	1	17	.7358E+01	17	6	.0292E+01	.1437E-03
.9162E+01	1	17	.1006E+01	17	6	.1109E+01	.1138E-03
.1169E+00	1	17	.1214E+00	17	6	.1264E+00	.5389E-04
.1303E+00	1	17	.1356E+00	17	6	.1360E+00	0.
.1000E+01	0.	17		17	6		
.7976E+02	1	19	.9703E+02	19	7	.9174E+02	.1143E-01
.9663E+02	1	19	.1001E+03	19	7	.1029E+03	.1492E-01
.1060E+03	1	19	.1107E+03	19	7	.1200E+03	.1556E-01
.1295E+03	1	19	.1377E+03	19	7	.1432E+03	.1516E-01
.1527E+03	1	19	.1602E+03	19	7	.1689E+03	.1429E-01
.1767E+03	1	19	.1816E+03	19	7	.1900E+03	.1389E-01
.2000E+03	1	19		19	7		
.6010E+01	1	18	.7765E+01	18	6	.9210E+01	--.8242E-02
.1009E+00	1	18	.1069E+00	18	6	.1116E+00	--.7758E-02
.1152E+00	1	18	.1184E+00	18	6	.1219E+00	--.7030E-02
.1255E+00	1	18	.1291E+00	18	6	.1310E+00	--.4444E-02
.1338E+00	1	18	.1366E+00	18	6	.1390E+00	--.1455E-02
.1409E+00	1	18	.1437E+00	18	6	.1000E+01	0.
.7998E+02	1	21	.9019E+02	21	7	.9577E+02	--.1532E-02
.1028E+03	1	21	.1095E+03	21	7	.1157E+03	--.1352E-02
.1216E+03	1	21	.1274E+03	21	7	.1326E+03	--.1132E-02
.1304E+03	1	21	.1419E+03	21	7	.1473E+03	--.1012E-02
.1510E+03	1	21	.1551E+03	21	7	.1604E+03	--.1016E-02
.1667E+03	1	21	.1725E+03	21	7	.1789E+03	--.1156E-02
.1844E+03	1	21	.1895E+03	21	7	.2000E+03	--.1476E-02
.2006E+00	0.	14	.8010E+00	14	5		
.5975E+01	1	14	.7132E+01	14	5	.6799E+01	--.2655E-03
.1053E+00	1	14	.1108E+00	14	5	.1143E+00	--.2575E-03
.1188E+00	1	14	.1205E+00	14	5	.1248E+00	--.1577E-03
.1284E+00	1	14	.1313E+00	14	5	.1342E+00	--.2794E-04
.1374E+00	0.	14	.1000E+01	14	5		
.8022E+02	1	17	.8979E+02	17	6	.9952E+02	.1843E+00
.1190E+03	1	17	.1195E+03	17	6	.1202E+03	.1364E+00
.1392E+03	1	17	.1475E+03	17	6	.1569E+03	.1078E+00
.1638E+03	1	17	.1705E+03	17	6	.1764E+03	.9779E-01
.1821E+03	1	17	.1869E+03	17	6	.1903E+03	.1014E+00
.1947E+03	1	17	.2002E+03	17	6		
.1992E+00	0.	16	.7022E+00	16	6		
.6032E+01	1	16	.8311E+01	16	6	.9131E+01	--.4192E-01
.9992E+01	1	16	.1065E+01	16	6	.1129E+01	--.3673E-01
.1174E+00	1	16	.1205E+00	16	6	.1235E+00	--.2595E-01
.1249E+00	1	16	.1269E+00	16	6	.1283E+00	--.9182E-02
.1304E+00	1	16	.1318E+00	16	6	.1343E+00	0.
.1000E+01	0.	16		16	6		
.6010E+02	1	2	.2004E+03	2	1	.7017E+00	
.6010E+02	1	2	.2004E+03	2	1	.9024E+00	
.6010E+02	1	2	.2004E+03	2	1	.9024E+00	

.600E+02	.1055E+01	.2006E+03	.1055E+01		
177	4	2	1		
.602E+02	.1204E+01	.2002E+03	.1204E+01		
177	5	2	1		
.601E+02	.1602E+01	.2001E+03	.1602E+01		
178	1	21	7		
.607E+02	.1394E+03	.9907E+02	.1394E+03		
103E+03	.1566E+03	.1103E+03	.1566E+03		
.1296E+03	.1076E+02	.1347E+03	.1076E+02		
.1451E+03	.1076E+02	.1493E+03	.1076E+02		
.1595E+03	.8964E+03	.1634E+03	.8964E+03		
.1768E+03	.4781E+03	.1832E+03	.4781E+03		
.1915E+03	.1992E+03	.1949E+03	.1992E+03		
179	1	12	4		
.6007E+01	.8000E+03	.7292E+01	.8000E+03		
.9500E+01	.7800E+03	.1075E+00	.7800E+03		
.1230E+00	.5600E+03	.1264E+00	.5600E+03		
.1392E+00	.4000E+04	.1390E+00	.4000E+04		
180	1	10	4		
.8002E+02	.1800E+01	.1002E+03	.1800E+01		
.1283E+03	.1400E+01	.1394E+03	.1400E+01		
.1728E+03	.8400E+02	.1836E+03	.8400E+02		
.2001E+03	.5200E+02				
181	1	16	6		
.5990E+01	.3770E+01	.7997E+01	.3770E+01		
.1001E+00	.3651E+01	.1091E+00	.3651E+01		
.1200E+00	.2778E+01	.1254E+00	.2778E+01		
.1348E+00	.1032E+01	.1398E+00	.1032E+01		
.1477E+00	.3175E+02	.1522E+00	.3175E+02		
.1000E+01	0.				
182	1	24	8		
.7957E+02	.2401E+02	.8690E+02	.2401E+02		
.9438E+02	.2185E+03	.1002E+03	.2185E+03		
.1098E+03	.2282E+02	.1137E+03	.2282E+02		
.1235E+03	.3155E+02	.1279E+03	.3155E+02		
.1363E+03	.3234E+02	.1405E+03	.3234E+02		
.1510E+03	.2956E+02	.1549E+03	.2956E+02		
.1714E+03	.1885E+02	.1761E+03	.1885E+02		
.1866E+03	.5357E+03	.1940E+03	.5357E+03		
183	1	17	6		
.5983E+01	.1996E+02	.7922E+01	.1996E+02		
.9916E+01	.1876E+02	.1064E+00	.1876E+02		
.1150E+00	.1617E+02	.1192E+00	.1617E+02		
.1251E+00	.1038E+02	.1277E+00	.1038E+02		
.1342E+00	.3992E+03	.1374E+00	.3992E+03		
.1420E+00	0.	.1000E+01			
184	1	19	7		
.7931E+02	.1070E+00	.8330E+02	.1070E+00		
.9194E+02	.2405E+01	.9597E+02	.2405E+01		
.1043E+03	.3567E+01	.1094E+03	.3567E+01		
.1201E+03	.4310E+01	.1267E+03	.4310E+01		
.1404E+03	.3768E+01	.1490E+03	.3768E+01		
.1712E+03	.1443E+01	.1810E+03	.1443E+01		
.1598E+03	.4008E+03				
185	1	13	5		
.6040E+01	.6032E+01	.7936E+01	.6032E+01		
.1018E+00	.5516E+01	.1111E+00	.5516E+01		
.1253E+00	.4718E+01	.1310E+00	.4718E+01		
.1425E+00	.9127E+02	.1464E+00	.9127E+02		
.1000E+01	0.				
186	1	23	8		
.8027E+02	.6800E+03	.8960E+02	.6800E+03		
.1083E+03	.3105E+02	.1171E+03	.3105E+02		
.1302E+03	.5620E+02	.1348E+03	.5620E+02		
.1407E+03	.5800E+02	.1450E+03	.5800E+02		
.1533E+03	.5580E+02	.1574E+03	.5580E+02		
187	1	23	8		
.8027E+02	.6800E+03	.8960E+02	.6800E+03		
.1083E+03	.3105E+02	.1171E+03	.3105E+02		
.1302E+03	.5620E+02	.1348E+03	.5620E+02		
.1407E+03	.5800E+02	.1450E+03	.5800E+02		
.1533E+03	.5580E+02	.1574E+03	.5580E+02		

1.170E+03	-4.160E-02	1.730E+03	1.360E-02	1.777E+03	-3.060E-02
1.181E+03	-2.240E-02	1.185E+03	1.190E-02	1.191E+03	-1.190E-02
1.193E+03	-7.600E-03	2.200E+03	3.200E-03		
187		23			
1.602E-01	1.629E-02	1.801E-01	1.620E-02	1.995E-01	1.624E-02
1.995E-01	1.620E-02	1.106E+00	1.102E-02	1.122E+00	1.604E-02
1.173E+00	1.586E-02	1.203E+00	1.530E-02	1.241E+00	1.523E-02
1.135E+00	1.472E-02	1.129E+00	1.421E-02	1.331E+00	1.338E-02
1.135E+00	1.267E-02	1.137E+00	1.210E-02	1.390E+00	1.163E-02
1.142E+00	1.120E-02	1.142E+00	1.861E-03	1.144E+00	1.649E-03
1.146E+00	1.393E-03	1.148E+00	1.236E-03	1.150E+00	1.161E-03
1.150E+00	0.	1.100E+01	0.		
188		27			
1.808E+02	1.869E-01	1.823E+02	1.672E-01	1.878E+02	1.442E-02
1.910E+02	1.309E-01	1.936E+02	1.623E-01	1.965E+02	1.925E-01
1.920E+02	1.103E+00	1.103E+03	1.250E+00	1.104E+03	1.136E+00
1.170E+03	1.145E+00	1.109E+03	1.520E+00	1.136E+03	1.553E+00
1.122E+03	1.133E+00	1.122E+03	1.154E+00	1.127E+03	1.517E+00
1.146E+03	1.155E+00	1.137E+03	1.136E+00	1.148E+03	1.127E+00
1.164E+03	1.155E+00	1.152E+03	1.103E+00	1.158E+03	1.936E-01
1.184E+03	1.358E-01	1.192E+03	1.684E-01	1.174E+03	1.539E-01
189		21		1.199E+03	1.764E-02
1.604E-01	1.193E+00	1.910E-01	1.193E+00	1.102E+00	-1.937E+00
1.107E+00	1.193E+00	1.134E+00	1.185E+00	1.196E+00	-1.174E+00
1.124E+00	1.160E+00	1.131E+00	1.147E+00	1.135E+00	-1.130E+00
1.138E+00	1.116E+00	1.141E+00	1.956E-01	1.144E+00	-7.352E-01
1.146E+00	1.494E-01	1.148E+00	1.355E-01	1.150E+00	-2.292E-01
1.152E+00	1.126E-01	1.154E+00	1.671E-02	1.156E+00	-3.162E-02
1.158E+00	1.158E-02	1.158E+00	0.	1.100E+01	0.
190		17			
1.806E+02	1.669E-03	1.896E+02	1.608E-04	1.951E+02	1.121E-03
1.990E+02	1.243E-03	1.105E+03	1.324E-03	1.109E+03	1.385E-03
1.126E+03	1.405E-03	1.116E+03	1.405E-03	1.120E+03	1.344E-03
1.128E+03	1.826E-03	1.136E+03	1.405E-04	1.149E+03	1.405E-03
1.158E+03	1.931E-03	1.170E+03	1.140E-02	1.162E+03	1.194E-02
1.150E+03	1.235E-02	1.199E+03	1.275E-02		
191		15			
1.602E-01	1.171E-02	1.780E-01	1.142E-02	1.800E-01	1.141E-02
1.981E-01	1.132E-02	1.103E+00	1.132E-02	1.108E+00	1.123E-02
1.115E+00	1.113E-02	1.120E+00	1.974E-03	1.124E+00	1.755E-03
1.128E+00	1.536E-03	1.133E+00	1.278E-03	1.136E+03	1.178E-03
1.136E+00	1.197E-04	1.137E+00	0.	1.100E+01	0.
192		20			
1.614E+02	1.490E-01	1.855E+02	1.581E-01	1.904E+02	1.673E-01
1.950E+02	1.761E-01	1.100E+03	1.813E-01	1.105E+03	1.861E-01
1.109E+03	1.889E-01	1.118E+03	1.889E-01	1.114E+03	1.889E-01
1.117E+03	1.889E-01	1.120E+03	1.873E-01	1.127E+03	1.813E-01
1.125E+03	1.733E-01	1.130E+03	1.677E-01	1.128E+03	1.613E-01
1.147E+03	1.477E-01	1.152E+03	1.400E-01	1.154E+03	1.364E-01
1.161E+03	1.643E-01	1.166E+03	1.400E-03	1.171E+03	1.172E-01
1.175E+03	1.360E-01	1.179E+03	1.505E-01	1.186E+03	1.577E-01
1.187E+03	1.853E-01	1.191E+03	1.103E+00	1.195E+03	1.120E+00
1.196E+03	1.115E+00				
193		42			
1.602E-01	1.149E+00	1.655E-01	1.149E+00	1.737E-01	1.149E+00
1.796E-01	1.146E+00	1.861E-01	1.143E+00	1.920E-01	1.146E+00
1.995E-01	1.146E+00	1.105E+00	1.143E+00	1.110E+00	1.139E+00
1.119E+00	1.136E+00	1.117E+00	1.136E+00	1.120E+00	1.130E+00
1.122E+00	1.128E+00	1.125E+00	1.119E+00	1.123E+00	1.114E+00
1.130E+00	1.105E+00	1.132E+00	1.103E+00	1.138E+00	1.962E-01
1.134E+00	1.185E-01	1.136E+00	1.650E-01	1.137E+00	1.795E-01
1.139E+00	1.711E-01	1.141E+00	1.621E-01	1.142E+00	1.532E-01
1.144E+00	1.453E-01	1.145E+00	1.421E-01	1.145E+00	1.380E-01
1.147E+00	1.250E-01	1.148E+00	1.218E-01	1.147E+00	1.182E-01
1.149E+00	1.151E-01	1.150E+00	1.127E-01	1.150E+00	1.115E-01

.151CF+00	.5542E-02	.1514E+00	.6362E-02	.1521E+00	.1590E-02
.1531E+00	.7952E-03	.1546E+00	0.	.1563E+00	0.
.1508E+00	0.	.1599E+00	0.	.1000E+01	0.
146	2	17	6		
.8112E+02	-.2425E-03	.8774E+02	-.1944E-03	.9533E+02	-.1603E-03
.1012E+03	-.1303E-03	.1092E+03	-.1082E-03	.1167E+03	-.9419E-04
.1226E+03	-.5419E-04	.1288E+03	-.1062E-03	.1355E+03	-.1222E-03
.1430E+03	-.1343E-03	.1513E+03	-.1583E-03	.1589E+03	-.1703E-03
.1600E+03	-.1944E-03	.1789E+03	-.2004E-03	.1864E+03	-.2144E-03
.1933E+03	-.2305E-03	.1998E+03	-.2485E-03		
147	2	12	4		
.6069E-01	-.9234E-04	.9242E-01	-.9234E-04	.1103E+00	-.8644E-04
.1159E+00	-.8055E-04	.1194E+00	-.7466E-04	.1213E+00	-.6483E-04
.1238E+00	-.4519E-04	.1258E+00	-.2554E-04	.1272E+00	-.9822E-05
.1290E+00	-.3929E-05	.1295E+00	0.	.1000E+01	0.
148	2	19	7		
.7971E+02	.8978E-02	.8642E+02	.7295E-02	.9465E+02	.5331E-02
.1014E+03	.4048E-02	.1096E+03	.3046E-02	.1158E+03	.2405E-02
.1202E+03	.2244E-02	.1236E+03	.2204E-02	.1282E+03	.2244E-02
.1337E+03	.2365E-02	.1397E+03	.3126E-02	.1472E+03	.3808E-02
.1557E+03	.5090E-02	.1617E+03	.6253E-02	.1690E+03	.7735E-02
.1763E+03	.9499E-02	.1823E+03	.1106E-01	.1906E+03	.1319E-01
.2000E+03	.1583E-01				
149	2	19	7		
.6000E-01	.7100E-02	.6500E-01	.7003E-02	.7000E-01	.7000E-02
.7500E-01	.7000E-02	.8000E-01	.6900E-02	.8500E-01	.6800E-02
.9000E-01	.6700E-02	.9500E-01	.6600E-02	.1000E+00	.6400E-02
.1050E+00	.6100E-02	.1100E+00	.6000E-02	.1150E+00	.5800E-02
.1200E+00	.5200E-02	.1250E+00	.6000E-02	.1300E+00	.2900E-02
.1350E+00	.1100E-02	.1400E+00	0.	.1450E+00	0.
.1000E+01	0.				
151	1	25	9		
.6045E+02	.5285E+00	.6675E+02	.5397E+00	.7264E+02	.5660E+00
.7774E+02	.5963E+00	.8068E+02	.6234E+00	.8459E+02	.6568E+00
.8177E+02	.6951E+00	.9176E+02	.7405E+00	.9494E+02	.7900E+00
.9685E+02	.8915E+00	.9900E+02	.8418E+00	.1010E+03	.8625E+00
.1037E+03	.8448E+00	.1064E+03	.8936E+00	.1090E+03	.8984E+00
.1098E+03	.5008E+00	.1123E+03	.8992E+00	.1152E+03	.8888E+00
.1173E+03	.8776E+00	.1198E+03	.8633E+00	.1226E+03	.8370E+00
.1247E+03	.8202E+00	.1271E+03	.8123E+00	.1303E+03	.8035E+00
.2000E+03	.8035E+00				
151	2	14	5		
.6053E+02	.7023E+00	.6539E+02	.7230E+00	.7153E+02	.7565E+00
.7694E+02	.7939E+00	.8124E+02	.8298E+00	.8602E+02	.8729E+00
.9056E+02	.9127E+00	.9534E+02	.9661E+00	.9892E+02	.1000E+01
.1012E+03	.1017E+01	.1040E+03	.1034E+01	.1065E+03	.1043E+01
.1699E+03	.1050E+01	.1999E+03	.1050E+01		
151	3	17	6		
.5639E+02	.8729E+00	.6197E+02	.8848E+00	.6922E+02	.9127E+00
.7360E+02	.9326E+00	.7742E+02	.9613E+00	.8076E+02	.9821E+00
.8435E+02	.1012E+01	.8730E+02	.1039E+01	.9064E+02	.1073E+01
.9335E+02	.1100E+01	.9630E+02	.1128E+01	.9908E+02	.1151E+01
.1019E+03	.1177E+01	.1043E+03	.1192E+01	.1068E+03	.1199E+01
.1103E+03	.1202E+01	.1999E+03	.1202E+01		
151	4	2	1		
.6029E+02	.1603E+01	.2002E+03	.1603E+01		
153	2	15	5		
.8040E+02	.9457E-04	.9046E+02	.9457E-04	.1009E+03	.1066E-03
.1110E+03	.1107E-03	.1210E+03	.1227E-03	.1308E+03	.1308E-03
.1419E+03	.1308E-03	.1510E+03	.1348E-03	.1609E+03	.1348E-03
.1669E+03	.1328E-03	.1729E+03	.1197E-03	.1811E+03	.1147E-03
.1894E+03	.1005E-03	.1933E+03	.8249E-04	.1998E+03	.7243E-04
154	2	15	5		
.6021E-01	.2375E-03	.7384E-01	.2295E-03	.8262E-01	.2236E-03
.9139E-01	.2176E-03	.1010E+00	.2096E-03	.1078E+00	.1936E-03
.1120E+00	.1416E-03	.1416E+00	.1717E-03	.1497E+00	.1497E-03

.1343E+00	.1218E-03	.1274E+00	.7984E-04	.1303E+00	.4990E-04
.1337E+00	.3194E-04	.1270E+00	0.	.1600E+01	0.
155	2	18	6		
.7943E+02	.1527E-01	.8541E+02	-.1097E-01	.9043E+02	-.9332E-02
.9514E+02	.5567E-02	.1019E+03	-.2306E-02	.1081E+03	-.1193E-02
.1147E+03	.7952E-04	.1217E+03	.7952E-03	.1297E+03	.1272E-02
.1380E+03	.1431E-02	.1455E+03	.1193E-02	.1549E+03	.9543E-03
.1627E+03	0.	.1710E+03	-.1272E-02	.1785E+03	-.2068E-02
.1866E+03	.3579E-02	.1941E+03	-.5249E-02	.1998E+03	-.6362E-02
156	2	16	6		
.6006E-01	.1956E-01	.9630E-01	-.1956E-01	.1070E+00	-.1922E-01
.1129E+00	.1093E-01	.1192E+00	-.1821E-01	.1246E+00	-.1686E-01
.1287E+00	.1495E-01	.1315E+00	-.1249E-01	.1336E+00	-.9384E-02
.1356E+00	.6521E-02	.1374E+00	-.4374E-02	.1395E+00	-.2783E-02
.1415E+00	.1670E-02	.1442E+00	-.7952E-03	.1464E+00	0.
.1000E+01	0.				
157	2	20	7		
.8432E+02	.1060E-03	.9398E+02	-.9000E-04	.1016E+03	.6000E-05
.1103E+03	.1080E-03	.1211E+03	.2200E-03	.1288E+03	.3140E-03
.1349E+03	.3020E-03	.1391E+03	.4260E-03	.1421E+03	.4520E-03
.1454E+03	.4780E-03	.1494E+03	.4900E-03	.1533E+03	.4840E-03
.1591E+03	.4400E-03	.1655E+03	.3860E-03	.1714E+03	.3160E-03
.1771E+03	.2460E-03	.1832E+03	.1720E-03	.1876E+03	.1100E-03
.1919E+03	.5400E-04	.1998E+03	-.6600E-04		
158	2	18	6		
.6015E-01	.5850E-03	.7100E-01	-.5771E-03	.7978E-01	-.5711E-03
.9079E-01	.5613E-03	.1013E+00	-.5573E-03	.1091E+00	-.5316E-03
.1154E+00	.5059E-03	.1211E+00	-.4664E-03	.1260E+00	-.4150E-03
.1286E+00	.3478E-03	.1312E+00	-.2806E-03	.1399E+00	-.1957E-03
.1324E+00	.1324E-03	.1381E+00	-.8696E-04	.1403E+00	-.5138E-04
.1422E+00	.2372E-04	.1453E+00	0.	.1000E+01	0.
159	2	18	6		
.7951E+02	.7570E-02	.8369E+02	.5657E-02	.8892E+02	.3108E-02
.9354E+02	.1275E-02	.9825E+02	-.6375E-03	.1026E+03	-.2390E-02
.1070E+03	.3347E-02	.1103E+03	.3984E-02	.1190E+03	-.4064E-02
.1287E+03	.3984E-02	.1373E+03	-.3825E-02	.1446E+03	-.3745E-02
.1537E+03	.3426E-02	.1657E+03	-.2709E-02	.1738E+03	-.2390E-02
.1809E+03	.2072E-02	.1901E+03	-.1594E-02	.1997E+03	-.1036E-02
160	2	17	6		
.6024E-01	.1320E-01	.7530E-01	.1304E-01	.8765E-01	.1260E-01
.9546E-01	.1238E-01	.1050E+00	.1185E-01	.1108E+00	-.1153E-01
.1105E+00	.1009E-01	.1235E+00	.1010E-01	.1280E+00	.9145E-02
.1321E+00	.7952E-02	.1354E+00	.6603E-02	.1388E+00	.4612E-02
.1414E+00	.3022E-02	.1441E+00	.1903E-02	.1468E+00	.9543E-03
.1508E+00	0.	.1000E+01	0.		
161	2	9	3		
.7990E+02	.2854E-03	.9163E+02	-.2475E-03	.1065E+03	-.1836E-03
.1211E+03	.1118E-03	.1412E+03	-.2994E-04	.1549E+03	.8391E-04
.1668E+03	.1118E-03	.1792E+03	.1756E-03	.2000E+03	.2934E-03
162	2	14	5		
.5996E-01	.2966E-03	.7401E-01	.2906E-03	.8990E-01	.2766E-03
.1014E+00	.2605E-03	.1131E+00	.2465E-03	.1214E+00	.2325E-03
.1276E+00	.2044E-03	.1324E+00	.1543E-03	.1356E+00	.1062E-03
.1398E+00	.5812E-04	.1412E+00	.3808E-04	.1434E+00	.1202E-04
.1453E+00	0.	.1000E+01	0.		
163	2	15	5		
.8026E+02	.1565E-01	.9410E+02	.1357E-01	.1077E+03	.1142E-01
.1188E+03	.9820E-02	.1313E+03	.8064E-02	.1404E+03	.6148E-02
.1501E+03	.4790E-02	.1566E+03	.2335E-02	.1620E+03	.5589E-03
.1678E+03	.1756E-02	.1735E+03	-.5589E-02	.1826E+03	-.9741E-02
.1891E+03	.1357E-01	.1934E+03	-.1629E-01	.1999E+03	-.2060E-01
164	2	20	7		
.5678E-01	.2343E-01	.7682E-01	-.2343E-01	.8520E-01	-.2335E-01
.9501E-01	.2311E-01	.1033E+00	-.2287E-01	.1114E+00	-.2207E-01
.1185E+00	.2127E-01	.1234E+00	-.2016E-01	.1272E+00	-.1896E-01
.1311E+00	.1641E-01	.1339E+00	-.1402E-01	.1363E+00	-.1155E-01

1.173E+00	-5163E-02	1394E+00	-653+E-02	1412E+00	-4542E-02
1.142E+00	-294E-02	1455E+00	-1195E-02	1484E+00	-3187E-03
1.180E+00	0.	1000E+01	0.		
169	2	28	10		
7959E+02	-2720E-02	8094E+02	-2684E-02	8262E+02	-2572E-02
8525E+02	-230E-02	8780E+02	-2180E-02	9035E+02	-1916E-02
9274E+02	-174E-02	9482E+02	-1540E-02	9769E+02	-1352E-02
9984E+02	-120E-02	1023E+03	-1060E-02	1051E+03	-930E-03
1071E+03	-860E-03	1092E+03	-8080E-03	1117E+03	-7840E-03
1175E+03	-720E-03	1232E+03	-6360E-03	1305E+03	-5160E-03
1386E+03	-3840E-03	1474E+03	-2320E-03	1545E+03	-1040E-03
1601E+03	-200E-05	1676E+03	-1360E-03	1740E+03	-280E-03
1801E+03	3960E-03	1873E+03	-5280E-03	1939E+03	-6640E-03
2001E+03	8040E-03				
170	2	25	10		
2002E+00	-1341E-02	2429E+00	-1321E-02	2852E+00	-1289E-02
3259E+00	-1257E-02	3598E+00	-1174E-02	3941E+00	-1086E-02
4164E+00	-1014E-02	4372E+00	-8862E-03	4579E+00	-7585E-03
4747E+00	-6267E-03	4990E+00	-5070E-03	4982E+00	-3673E-03
5078E+00	-2076E-03	5162E+00	-1598E-04	5301E+00	-1477E-03
5413E+00	3234E-03	5536E+00	-4790E-03	5692E+00	-647E-03
5848E+00	7665E-03	5999E+00	-8663E-03	6147E+00	-9421E-03
6366E+00	1022E-02	6845E+00	-1074E-02	6845E+00	-1114E-02
7092E+00	1166E-02	7331E+00	-1206E-02	7523E+00	-1236E-02
7944E+00	1285E-02				
171	2	3	1		
5991E-01	0.	1390E+00	0.	1000E+01	0.
172	2	20	7		
8066E+02	2229E+00	8405E+02	-1980E+00	8947E+02	-1678E+00
9450E+02	1418E+00	9936E+02	-1183E+00	1029E+03	-1042E+00
1066E+03	5095E-01	1102E+03	-7807E-01	1128E+03	-7082E-01
1181E+03	6117E-01	1234E+03	-5115E-01	1327E+03	-3380E-01
1416E+03	1690E-01	1498E+03	-2414E-02	1575E+03	-1328E-01
1673E+03	3260E-01	1766E+03	-5231E-01	1856E+03	-6720E-01
1933E+03	-8330E-01	1994E+03	-9537E-01		
173	2	23	8		
1996E+00	4369E-01	2407E+00	-5291E-01	2723E+00	-6132E-01
3002E+00	6635E-01	3285E+00	-6854E-01	3473E+00	-6974E-01
3721E+00	6934E-01	3968E+00	-6693E-01	4275E+00	-5651E-01
4527E+00	4609E-01	4782E+00	-3287E-01	5022E+00	-1643E-01
5190E+00	3607E-02	5481E+00	-1964E-01	5697E+00	-4286E-01
5808E+00	-5371E-01	5956E+00	-6733E-01	6092E+00	-9176E-01
6271E+00	-5739E-01	6419E+00	-1090E+00	6571E+00	-1202E+00
6758E+00	-1339E+00	6994E+00	-1499E+00		
174	2	3	1		
6008E-01	0.	1356E+00	0.	1000E+01	0.
175	1	17	6		
5986E+02	6979E+00	1079E+03	-5979E+00	1098E+03	-7035E+00
1123E+03	7115E+00	1139E+03	-7283E+00	1156E+03	-7411E+00
1172E+03	7563E+00	1183E+03	-7715E+00	1195E+03	-7863E+00
1210E+03	7963E+00	1216E+03	-9099E+00	1231E+03	-8235E+00
1248E+03	8355E+00	1268E+03	-8443E+00	1291E+03	-8467E+00
1301E+03	8491E+00	1399E+03	-8483E+00		
176	2	16	6		
6010E+02	9020E+00	1079E+03	-9020E+00	1100E+03	-9028E+00
1119E+03	9108E+00	1135E+03	-9196E+00	1150E+03	-9340E+00
1163E+03	9460E+00	1175E+03	-9660E+00	1185E+03	-9836E+00
1199E+03	1000E+01	1221E+03	-1019E+01	1238E+03	-1032E+01
1259E+03	1040E+01	1276E+03	-1051E+01	1305E+03	-1049E+01
1597E+03	1048E+01				
176	3	12	4		
5966E+02	1101E+01	1092E+03	-1101E+01	1109E+03	-1108E+01
1138E+03	1118E+01	1159E+03	-1128E+01	1179E+03	-1145E+01
1199E+03	1160E+01	1233E+03	-1177E+01	1239E+03	-1188E+01
1259E+03	1195E+01	1284E+03	-1200E+01	1998E+03	-1200E+01
176	4	2	1		

187	16	2	1614E-02	3709E-01	1614E-02	9195E-01	1614E-02
5648E-01	1076E+00	1594E-02	1135E+00	1135E+00	1135E+00	1135E+00	1575E-02
9944E-01	1222E+00	1378E-02	1253E+00	1253E+00	1253E+00	1253E+00	1161E-03
1179E+00	1315E+00	5512E-03	1339E+00	1339E+00	1339E+00	1339E+00	3543E-03
1287E+00	1409E+00	1772E-03	1409E+00	1409E+00	1409E+00	1409E+00	0.
1362E+00	0.						
1600E+01	12	2	8860E+02	8860E+02	8860E+02	8860E+02	9296E-01
3006E+02	1041E+03	9457E-01	1081E+03	1081E+03	1081E+03	1081E+03	9457E-01
1018E+03	1153E+03	8612E-01	1191E+03	1191E+03	1191E+03	1191E+03	7284E-01
1112E+03	1710E+03	6720E-01	1999E+03	1999E+03	1999E+03	1999E+03	1445E+00
1459E+03	20	2	7135E-01	7135E-01	7135E-01	7135E-01	1395E+00
189	9944E-01	1336E+00	1089E+00	1089E+00	1089E+00	1089E+00	1201E+00
6034E-01	1217E+00	1149E+00	1261E+00	1261E+00	1261E+00	1261E+00	1008E+00
8555E-01	8617E-01	1350E+00	1380E+00	1380E+00	1380E+00	1380E+00	5889E-01
1151E+00	4466E-01	1427E+00	1449E+00	1449E+00	1449E+00	1449E+00	1818E-01
1310E+00	1028E-01	1483E+00	1507E+00	1507E+00	1507E+00	1507E+00	7905E-03
1406E+00	0.						
1466E+00	1	1	6996E+00	6996E+00	6996E+00	6996E+00	
1510E+00	2	2	1998E+03	1998E+03	1998E+03	1998E+03	
197	5028E+00	1997E+03	9012E+00	9012E+00	9012E+00	9012E+00	
6002E+02	1201E+01	1997E+03	1201E+01	1201E+01	1201E+01	1201E+01	
5594E+02	1598E+01	1997E+03	1598E+01	1598E+01	1598E+01	1598E+01	
5569E+02	7003E+00	1997E+03	7003E+00	7003E+00	7003E+00	7003E+00	
5777E+02	9006E+00	2001E+03	9006E+00	9006E+00	9006E+00	9006E+00	
5569E+02	1202E+01	1997E+03	1202E+01	1202E+01	1202E+01	1202E+01	
5937E+02	1603E+01	1998E+03	1603E+01	1603E+01	1603E+01	1603E+01	
194	8137E+02	8137E+02	1538E-03	1538E-03	1538E-03	1538E-03	1498E-03
8019E+02	1367E-03	8802E+02	1267E-03	1267E-03	1267E-03	1267E-03	1167E-03
8608E+02	1064E-03	9552E+02	9552E+02	9552E+02	9552E+02	9552E+02	8327E-04
9262E+02	6494E-04	1065E+03	5378E-04	5378E-04	5378E-04	5378E-04	4064E-04
1029E+03	3108E-04	1171E+03	2151E-04	2151E-04	2151E-04	2151E-04	1036E-04
1138E+03	3187E-05	1266E+03	3586E-05	3586E-05	3586E-05	3586E-05	2390E-05
1237E+03	4382E-05	1328E+03	3584E-06	3584E-06	3584E-06	3584E-06	0.
1304E+03	1992E-05	1408E+03	1315E-04	1315E-04	1315E-04	1315E-04	2390E-05
1377E+03	6773E-05	1518E+03	2669E-04	2669E-04	2669E-04	2669E-04	1912E-04
1471E+03	2390E-04	1617E+03	4582E-04	4582E-04	4582E-04	4582E-04	2388E-04
1591E+03	3705E-04	1826E+03	6773E-04	6773E-04	6773E-04	6773E-04	5299E-04
1667E+03	8287E-04	1926E+03	4964E-04	4964E-04	4964E-04	4964E-04	7291E-04
1784E+03	1016E-03	1994E+03	1076E-03	1076E-03	1076E-03	1076E-03	1859E+03
1891E+03	1006E-01	4212E+02	9889E-02	9889E-02	9889E-02	9889E-02	1949E+03
1969E+03	6465E-02	9782E+02	5172E-02	5172E-02	5172E-02	5172E-02	9602E-04
195	3313E-02	1097E+03	2505E-02	2505E-02	2505E-02	2505E-02	7515E-02
8010E+02	1533E-02	1180E+03	9697E-03	9697E-03	9697E-03	9697E-03	4202E-02
9299E+02	4040E-04	1288E+03	801E-04	801E-04	801E-04	801E-04	1980E-02
1064E+03	1417E+0	1417E+0	7273E-03	7273E-03	7273E-03	7273E-03	6465E-03
1148E+03	1293E-02	1530E+03	1535E-02	1535E-02	1535E-02	1535E-02	801E-04
1246E+03	2384E-02	1658E+03	2903E-02	2903E-02	2903E-02	2903E-02	889E-03
1363E+03	3838E-02	1766E+03	4364E-02	4364E-02	4364E-02	4364E-02	1899E-02
1491E+03	5616E-02	1898E+03	6343E-02	6343E-02	6343E-02	6343E-02	3313E-02
1620E+03	7798E-02	28	7992E-04	7992E-04	7992E-04	7992E-04	5051E-02
1732E+03	5990E-04	9412E+02	1359E-04	1359E-04	1359E-04	1359E-04	7111E-02
1861E+03	3197E-04	9976E+02					
1977E+03							
198							
7933E+02							
9081E+02							

.1085E+03	-.2153E-04	.1146E+03	-.3835E-04	.1180E+03	-.4631E-04
.1207E+03	-.5355E-04	.1237E+03	-.5594E-04	.1269E+03	-.6154E-04
.1305E+03	-.5914E-04	.1344E+03	-.6435E-04	.1406E+03	-.8035E-04
.1422E+03	-.6955E-04	.1501E+03	-.4715E-04	.1557E+03	-.3916E-04
.1501E+03	-.3117E-04	.1670E+03	-.2239E-04	.1716E+03	-.1838E-04
.1741E+03	-.1598E-04	.1800E+03	-.7992E-05	.1852E+03	-.9590E-05
.1880E+03	.1670E-04	.1928E+03	.2637E-04	.1966E+03	.3516E-04
.1977E+03	.4156E-04				
199		22	8		
.8243E+02	-.5130E-02	.8834E+02	-.3327E-02	.9760E+02	-.8417E-03
.1053E+03	.8814E-03	.1117E+03	.2204E-02	.1155E+03	.2685E-02
.1189E+03	.3527E-02	.1214E+03	.3768E-02	.1244E+03	.4048E-02
.1292E+03	.4449E-02	.1338E+03	.4088E-02	.1385E+03	.3647E-02
.1311E+03	.3367E-02	.1518E+03	.2605E-02	.1597E+03	.1764E-02
.1688E+03	.1162E-02	.1695E+03	.6413E-03	.1766E+03	-.3607E-03
.1845E+03	-.1403E-02	.1921E+03	-.2766E-02	.1971E+03	-.3447E-02
.1998E+03	-.4043E-02				
200		14	5		
.8019E+02	.7649E-04	.9000E+02	.6135E-04	.9988E+02	.4303E-04
.1099E+03	.2231E-04	.1196E+03	.3944E-05	.1299E+03	-.2231E-04
.1397E+03	.3665E-04	.1499E+03	-.5179E-04	.1559E+03	-.6454E-04
.1655E+03	-.8207E-04	.1776E+03	-.1052E-03	.1851E+03	-.1179E-03
.1925E+03	-.1371E-03	.1998E+03	-.1450E-03		
201		17	6		
.9016E+02	-.3546E-02	.9980E+02	-.2550E-02	.9546E+02	-.1912E-02
.1000E+03	-.1394E-02	.1052E+03	-.9562E-03	.1096E+03	-.5578E-03
.1147E+03	.3984E-04	.1235E+03	.3586E-03	.1346E+03	.1195E-02
.1377E+03	.1633E-02	.1522E+03	.2151E-02	.1535E+03	.2351E-02
.1675E+03	.2629E-02	.1768E+03	.3108E-02	.1848E+03	.3586E-02
.1526E+03	.3984E-02	.2002E+03	.4064E-02		
202		21	7		
.7995E+02	.8175E-04	.8666E+02	.5317E-04	.9185E+02	.2619E-04
.9856E+02	-.1396E-05	.1039E+03	-.2143E-04	.1079E+03	-.3492E-04
.1125E+03	-.5556E-04	.1158E+03	-.6270E-04	.1270E+03	-.8254E-04
.1291E+03	-.8413E-04	.1324E+03	-.8016E-04	.1381E+03	-.6905E-04
.1439E+03	-.5556E-04	.1506E+03	-.4206E-04	.1588E+03	-.2222E-04
.1636E+03	.7937E-05	.1703E+03	.1271E-04	.1783E+03	.3571E-04
.1850E+03	.3794E-04	.1924E+03	.8571E-04	.2000E+03	.1167E-03
203		29	10		
.8355E+02	-.4990E-02	.8995E+02	-.3050E-02	.9641E+02	-.1228E-02
.1006E+03	.1140E+03	.1051E+03	.1188E-02	.1100E+03	.2297E-02
.1233E+03	.3809E-02	.1177E+03	.3968E-02	.1206E+03	.4396E-02
.1301E+03	.4752E-02	.1262E+03	.5030E-02	.1281E+03	.5267E-02
.1394E+03	.5307E-02	.1330E+03	.4950E-02	.1359E+03	.4792E-02
.1517E+03	.2051E-02	.1429E+03	.4158E-02	.1473E+03	.3604E-02
.1636E+03	.5941E-03	.1577E+03	.1782E-02	.1614E+03	.9505E-03
.1806E+03	-.3050E-02	.1691E+03	-.5545E-03	.1750E+03	-.1861E-02
.1963E+03	-.7168E-02	.1857E+03	-.4277E-02	.1913E+03	-.5663E-02
204		31	11		
.7962E+02	.6190E-03	.8352E+02	.4802E-03	.8782E+02	.3552E-03
.9180E+02	.2262E-03	.9682E+02	.7143E-04	.1015E+03	-.6548E-04
.1063E+03	-.1786E-03	.1101E+03	-.2734E-03	.1136E+03	-.3532E-03
.1179E+03	-.4206E-03	.1201E+03	-.4645E-03	.1229E+03	-.4980E-03
.1263E+03	-.5198E-03	.1306E+03	-.5437E-03	.1333E+03	-.5536E-03
.1365E+03	-.5456E-03	.1404E+03	-.5437E-03	.1455E+03	-.5159E-03
.1498E+03	-.4960E-03	.1535E+03	-.4504E-03	.1544E+03	-.4008E-03
.1613E+03	-.3611E-03	.1636E+03	-.3274E-03	.1689E+03	-.2440E-03
.1744E+03	-.1567E-03	.1787E+03	-.7736E-04	.1822E+03	-.1984E-05
.1864E+03	.6746E-04	.1900E+03	.1389E-03	.1953E+03	-.2500E-03
.1997E+03	.3254E-03				
205		19	7		
.8029E+02	-.1041E+00	.8626E+02	-.9211E-01	.9247E+02	-.7611E-01
.9853E+02	-.6607E-01	.1042E+03	-.5503E-01	.1095E+03	-.4320E-01
.1151E+03	-.3114E-01	.1268E+03	-.1637E-01	.1298E+03	-.1332E-01
.1211E+03	-.4447E-02	.1304E+03	-.0104E-02	.1444E+03	.1187E-02

.1333E+03	.6509E-02	.1619E+03	.1181E-01	.1688E+03	.1538E-01
.1795E+03	.1992E-01	.1876E+03	.2300E-01	.1938E+03	.2544E-01
.1998E+03	.2564E-01				
208	1	26	9		
.8026E+02	-.2505E-03	.8932E+02	-.1312E-03	.9134E+02	-.2783E-04
.9645E+02	.5169E-04	.1034E+03	.1630E-03	.1118E+03	.2664E-03
.1166E+03	.3340E-03	.1214E+03	.3777E-03	.1244E+03	.3857E-03
.1245E+03	.4175E-03	.1284E+03	.4175E-03	.1305E+03	.3976E-03
.1300E+03	.4936E-03	.1394E+03	.4618E-03	.1442E+03	.3141E-03
.1503E+03	.2266E-03	.1544E+03	.1710E-03	.1596E+03	.7952E-04
.1619E+03	.3579E-04	.1663E+03	-.5964E-04	.1738E+03	.1629E-03
.1807E+03	-.3380E-03	.1864E+03	-.4453E-03	.1919E+03	-.5765E-03
.1966E+03	-.6561E-03	.1999E+03	-.7834E-03		
209	1	27	9		
.8021E+02	.1825E+00	.8404E+02	.1590E+00	.9066E+02	.1243E+00
.9681E+02	.5044E-01	.1025E+03	.5777E-01	.1093E+03	.2311E-01
.1137E+03	.4382E-02	.1177E+03	.1594E-01	.1209E+03	.2430E-01
.1232E+03	-.3147E-01	.1246E+03	-.3546E-01	.1268E+03	-.3984E-01
.1282E+03	-.4223E-01	.1299E+03	-.4382E-01	.1322E+03	-.4502E-01
.1354E+03	-.4542E-01	.1399E+03	-.4183E-01	.1461E+03	-.3525E-01
.1540E+03	-.2869E-01	.1616E+03	-.2032E-01	.1691E+03	-.7968E-02
.1749E+03	-.2789E-02	.1826E+03	.1394E-01	.1886E+03	.2311E-01
.1932E+03	.3307E-01	.1970E+03	.3944E-01	.2001E+03	.4741E-01
210	1	31	11		
.3163E+02	-.4810E-03	.8497E+02	-.2846E-03	.9768E+02	-.1283E-03
.8263E+02	.1202E-03	.9693E+02	.2826E-03	.9876E+02	.3928E-03
.1004E+03	.4248E-03	.1035E+03	.5210E-03	.1061E+03	.5611E-03
.1085E+03	.5651E-03	.1114E+03	.5611E-03	.1146E+03	.5331E-03
.1185E+03	.4770E-03	.1231E+03	.4008E-03	.1254E+03	.3527E-03
.1291E+03	.2884E-03	.1328E+03	.2044E-03	.1391E+03	.5611E-04
.1431E+03	-.5611E-04	.1475E+03	-.1683E-03	.1513E+03	-.2565E-03
.1539E+03	-.3447E-03	.1576E+03	-.4369E-03	.1668E+03	-.7575E-03
.1727E+03	-.5579E-03	.1735E+03	-.1118E-02	.1813E+03	-.1271E-02
.1852E+03	-.1391E-02	.1897E+03	-.1571E-02	.1948E+03	-.1764E-02
.2002E+03	-.1972E-02				
211	1	31	11		
.8000E+02	.3500E+00	.8400E+02	.3140E+00	.8800E+02	.2790E+00
.9200E+02	.2430E+00	.9600E+02	.2090E+00	.1000E+03	.1750E+00
.1040E+03	.1420E+00	.1080E+03	.1080E+00	.1120E+03	.7600E-01
.1160E+03	.4300E-01	.1200E+03	.1200E-01	.1240E+03	-.1500E-01
.1280E+03	-.4300E-01	.1320E+03	-.6300E-01	.1360E+03	-.7000E-01
.1400E+03	-.7100E-01	.1440E+03	-.6900E-01	.1480E+03	-.6100E-01
.1520E+03	-.5500E-01	.1560E+03	-.4780E-01	.1600E+03	-.3600E-01
.1640E+03	-.2600E-01	.1680E+03	-.1600E-01	.1720E+03	-.2000E-02
.1760E+03	.1000E-01	.1800E+03	.2200E-01	.1840E+03	.3300E-01
.1880E+03	.4900E-01	.1920E+03	.6100E-01	.1960E+03	.7400E-01
.2000E+03	.5100E-01				
212	1	29	10		
.8317E+02	-.4580E-03	.8939E+02	-.2829E-03	.9625E+02	-.9163E-04
.1034E+03	.1076E-03	.1090E+03	.2629E-03	.1131E+03	.3307E-03
.1169E+03	.4064E-03	.1210E+03	.4781E-03	.1246E+03	.5100E-03
.1274E+03	.5139E-03	.1307E+03	.4861E-03	.1344E+03	.4223E-03
.1388E+03	.3187E-03	.1428E+03	.2072E-03	.1466E+03	.7968E-04
.1508E+03	-.4781E-04	.1538E+03	-.1713E-03	.1551E+03	-.2510E-03
.1608E+03	-.3426E-03	.1600E+03	-.4303E-03	.1677E+03	-.7928E-03
.1730E+03	-.1012E-02	.1767E+03	-.1195E-02	.1809E+03	-.1426E-02
.1845E+03	-.1625E-02	.1885E+03	-.1809E-02	.1934E+03	-.2064E-02
.1966E+03	-.2255E-02	.2001E+03	-.2458E-02		
213	1	28	10		
.8003E+02	.2725E+00	.8481E+02	.2425E+00	.8792E+02	.2261E+00
.9079E+02	.2068E+00	.9446E+02	.1656E+00	.9725E+02	.1675E+00
.1012E+03	.1455E+00	.1047E+03	.1255E+00	.1084E+03	.1054E+00
.1124E+03	.8417E-01	.1157E+03	.6814E-01	.1191E+03	.5210E-01
.1234E+03	.2367E-01	.1267E+03	.1267E-01	.1295E+03	.1242E-01
.1355E+03	.2044E-02	.1374E+03	-.7214E-02	.1406E+03	-.9218E-02
.1477E+03	.1825E-02				

.1574E+03	-.1033E-02	.1564E+03	.5417E-02	.1720E+03	.1723E-01
.1807E+03	.2565E-01	.1860E+03	.3407E-01	.1920E+03	.4210E-01
.1598E+03	.5611E-01				
194	2	41	14		
.7995E+02	-.8327E-04	.8366E+02	-.6534E-04	.8745E+02	-.4960E-04
.9230E+02	-.2869E-04	.9665E+02	-.1755E-04	.9867E+02	-.6773E-05
.1014E+03	.2390E-05	.1033E+03	.7570E-05	.1066E+03	.1394E-04
.1094E+02	.1594E-04	.1100E+03	.1753E-04	.1114E+03	.1753E-04
.1130E+03	.1753E-04	.1152E+03	.1753E-04	.1172E+03	.1514E-04
.1193E+03	.1195E-04	.1220E+03	.1195E-04	.1238E+03	.7968E-05
.1269E+01	.1594E-05	.1299E+03	-.4781E-05	.1330E+03	-.1195E-04
.1363E+03	-.2191E-04	.1409E+03	-.3307E-04	.1447E+03	-.6303E-04
.1486E+03	-.5374E-04	.1520E+03	-.5375E-04	.1559E+03	-.7410E-04
.1603E+03	-.8964E-04	.1643E+03	-.1024E-03	.1670E+03	-.1131E-03
.1708E+03	-.1215E-03	.1734E+03	.1359E-03	.1781E+03	.1510E-03
.1807E+03	-.1610E-03	.1842E+03	-.1721E-03	.1875E+03	-.1861E-03
.1911E+03	-.2002E-03	.1935E+03	-.2113E-03	.1965E+03	-.2255E-03
.1998E+03	-.2307E-03	.2063E+03	-.2347E-03		
195	2	24	8		
.8025E+02	.6102E-02	.8445E+02	.5172E-02	.8920E+02	.4121E-02
.9355E+02	.3232E-02	.9726E+02	.2182E-02	.1019E+03	.1737E-02
.1054E+03	.1374E-02	.1089E+03	.1051E-02	.1128E+03	.1131E-02
.1189E+03	.1293E-02	.1255E+03	.1010E-02	.1307E+03	.2182E-02
.1368E+02	.3030E-02	.1423E+03	.3717E-02	.1483E+03	.4566E-02
.1531E+03	.5172E-02	.1588E+03	.6303E-02	.1653E+03	.7192E-02
.1691E+03	.7840E-02	.1750E+03	.8727E-02	.1815E+03	.9810E-02
.1860E+03	.1079E-01	.1934E+03	.1184E-01	.1996E+03	.1325E-01
198	2	29	10		
.7997E+02	-.3277E-04	.8444E+02	-.5275E-04	.8947E+02	-.7433E-04
.9425E+02	-.9031E-04	.9976E+02	-.1063E-03	.1023E+03	-.1143E-03
.1051E+03	-.1199E-03	.1069E+03	-.1231E-03	.1089E+03	-.1247E-03
.1104E+03	-.1263E-03	.1122E+03	-.1231E-03	.1141E+03	-.1147E-03
.1170E+03	-.9910E-04	.1199E+03	-.9031E-04	.1226E+03	-.7193E-04
.1264E+03	-.4156E-04	.1294E+03	-.1439E-04	.1325E+03	.1918E-04
.1309E+03	.7592E-04	.1446E+03	.1319E-03	.1512E+03	.2046E-03
.1574E+03	.2757E-03	.1628E+03	.3317E-03	.1700E+03	.4100E-03
.1771E+03	.4915E-03	.1843E+03	.5690E-03	.1896E+03	.6330E-03
.1952E+03	.6953E-03	.1998E+03	.7473E-03		
199	2	25	5		
.7971E+02	.4529E-02	.8658E+02	.5050E-02	.9337E+02	.5611E-02
.1002E+03	.5812E-02	.1046E+03	.6293E-02	.1083E+03	.6952E-02
.1112E+03	.5892E-02	.1161E+03	.5571E-02	.1195E+03	.4689E-02
.1223E+03	.4248E-02	.1249E+03	.3367E-02	.1305E+03	.1344E-02
.1338E+02	.1002E-02	.1383E+03	-.4409E-03	.1424E+03	-.1924E-02
.1478E+03	-.3768E-02	.1521E+03	-.5210E-02	.1601E+03	-.8858E-02
.1661E+03	-.1066E-01	.1720E+03	-.1347E-01	.1783E+03	-.1619E-01
.1845E+03	-.1324E-01	.1903E+03	-.2224E-01	.1941E+03	-.2421E-01
.1997E+03	-.2709E-01				
200	2	13	5		
.8011E+02	.0	.8992E+02	-.2151E-04	.9996E+02	-.3665E-04
.1098E+03	-.5259E-04	.1177E+03	-.7012E-04	.1275E+03	-.9004E-04
.1301E+03	-.1076E-03	.1515E+03	-.1299E-03	.1625E+03	-.1516E-03
.1722E+03	-.1665E-03	.1833E+03	-.1057E-03	.1916E+03	-.2024E-03
.1998E+03	-.2159E-03				
201	2	13	5		
.8016E+02	.1355E-02	.9060E+02	.1073E-02	.1000E+03	.2351E-02
.1104E+03	.2629E-02	.1202E+03	.3108E-02	.1300E+03	.3625E-02
.1403E+03	.3944E-02	.1600E+03	.4462E-02	.1595E+03	.4900E-02
.1702E+03	.5458E-02	.1799E+03	.5737E-02	.1904E+03	.6175E-02
.1998E+03	.6773E-02				
202	2	24	8		
.8011E+02	-.1587E-04	.8562E+02	-.4762E-04	.9105E+02	-.7540E-04
.9617E+02	-.1006E-03	.1019E+03	-.1175E-03	.1055E+03	-.1270E-03
.1600E+03	-.1310E-03	.1101E+03	-.1175E-03	.1121E+03	-.1310E-03
.1135E+03	-.1302E-03	.1152E+03	-.1246E-03	.1267E+03	-.7361E-04
.1304E+03	-.4403E-04	.1354E+03	-.1422E-04	.1403E+03	-.2341E-04

1.1-67E+03	2.413E-04	1.558E+03	1.373E-03	1.626E+03	1.873E-03
1.609E+03	2.289E-03	1.763E+03	2.937E-03	1.823E+03	3.492E-03
1.891E+03	4.032E-03	1.951E+03	4.549E-03	2.002E+03	4.929E-03
203		23	8		
8.022E+02	2.051E-02	8.409E+02	4.230E-02	9.027E+02	5.426E-02
9.657E+02	5.693E-02	1.019E+03	7.564E-02	1.053E+03	8.000E-02
1.000E+03	8.230E-02	1.116E+03	8.190E-02	1.155E+03	7.604E-02
1.191E+03	1.653E-02	1.233E+03	3.306E-02	1.268E+03	3.406E-02
1.335E+03	1.347E-02	1.383E+03	6.337E-03	1.445E+03	1.445E-02
1.494E+03	5.826E-02	1.581E+03	9.822E-02	1.660E+03	1.386E-01
1.739E+03	1.766E-01	1.807E+03	2.107E-01	1.887E+03	2.251E-01
1.959E+03	2.907E-01	2.003E+03	3.113E-01		
204		25	9		
7.944E+02	4.087E-03	8.325E+02	2.500E-03	8.877E+02	7.937E-04
9.220E+02	2.279E-04	9.634E+02	1.540E-03	1.009E+03	2.730E-03
1.069E+03	4.206E-03	1.121E+03	4.801E-03	1.153E+03	5.230E-03
1.207E+03	5.595E-03	1.233E+03	5.675E-03	1.262E+03	5.675E-03
1.295E+03	5.556E-03	1.335E+03	5.556E-03	1.375E+03	5.337E-03
1.429E+03	4.841E-03	1.493E+03	4.266E-03	1.531E+03	3.710E-03
1.532E+03	3.892E-03	1.674E+03	1.448E-03	1.740E+03	5.952E-05
1.790E+03	7.738E-04	1.867E+03	2.183E-03	1.936E+03	3.294E-03
1.990E+03	4.405E-03				
205		22	8		
9.339E+02	1.558E-01	9.865E+02	7.280E-02	9.319E+02	9.862E-03
9.701E+02	7.298E-02	1.022E+03	1.282E-01	1.068E+03	1.815E-01
1.128E+03	2.229E-01	1.183E+03	2.465E-01	1.217E+03	2.584E-01
1.260E+03	2.584E-01	1.296E+03	2.584E-01	1.343E+03	2.564E-01
1.411E+03	2.544E-01	1.489E+03	2.446E-01	1.551E+03	2.347E-01
1.612E+03	2.150E-01	1.683E+03	1.815E-01	1.755E+03	1.558E-01
1.815E+03	1.302E-01	1.882E+03	8.679E-02	1.953E+03	4.931E-02
206		26	9		
8.034E+02	4.135E-03	8.440E+02	5.728E-03	9.023E+02	6.799E-03
9.653E+02	8.270E-03	1.014E+03	9.066E-03	1.040E+03	9.662E-03
1.058E+03	5.702E-03	1.040E+03	9.701E-03	1.120E+03	9.513E-03
1.162E+03	9.026E-03	1.208E+03	8.300E-03	1.240E+03	7.674E-03
1.278E+03	6.881E-03	1.326E+03	5.280E-03	1.351E+03	4.294E-03
1.396E+03	2.823E-03	1.449E+03	1.670E-03	1.475E+03	1.980E-04
1.529E+03	1.710E-03	1.572E+03	3.082E-03	1.651E+03	6.401E-03
1.696E+03	6.019E-03	1.785E+03	1.145E-02	1.883E+03	1.511E-02
1.935E+03	1.714E-02	1.999E+03	1.968E-02		
209		21	7		
9.021E+02	3.108E-01	8.603E+02	3.745E-01	9.362E+02	4.622E-01
1.013E+03	5.370E-01	1.064E+03	5.578E-01	1.092E+03	5.817E-01
1.117E+03	5.777E-01	1.140E+03	5.418E-01	1.196E+03	4.622E-01
1.234E+03	4.824E-01	1.281E+03	3.227E-01	1.346E+03	1.633E-01
1.401E+03	2.789E-02	1.474E+03	1.873E-01	1.550E+03	3.865E-01
1.623E+03	8.096E-01	1.700E+03	8.207E-01	1.778E+03	1.056E+00
1.864E+02	1.275E+00	1.938E+03	1.486E+00	1.994E+03	1.677E+00
210		30	10		
8.019E+02	9.940E-03	8.537E+02	6.333E-03	8.792E+02	4.409E-03
9.095E+02	2.445E-03	9.295E+02	1.242E-03	9.534E+02	8.016E-05
9.757E+02	1.162E-03	1.004E+03	2.205E-03	1.036E+03	3.166E-03
1.071E+03	4.180E-03	1.096E+03	4.124E-03	1.121E+03	4.080E-03
1.161E+03	3.607E-03	1.200E+03	2.806E-03	1.250E+03	1.283E-03
1.205E+03	1.603E-04	1.329E+03	1.603E-03	1.384E+03	3.718E-03
1.428E+03	5.691E-03	1.454E+03	6.894E-03	1.499E+03	8.818E-03
1.545E+03	1.118E-02	1.582E+03	1.203E-02	1.623E+03	1.475E-02
1.690E+03	1.800E-02	1.746E+03	2.206E-02	1.792E+03	2.293E-02
1.882E+03	2.778E-02	1.942E+03	3.034E-02	2.001E+03	3.333E-02
211		31	11		
8.000E+02	3.100E-01	8.400E+02	2.000E-01	8.800E+02	9.000E-02
9.200E+02	0.	9.600E+02	1.200E-01	1.000E+03	2.000E-01
1.040E+03	2.700E-01	1.080E+03	3.000E-01	1.120E+03	3.100E-01
1.160E+03	2.900E-01	1.200E+03	2.200E-01	1.240E+03	1.700E-01
1.280E+03	2.000E-01	1.320E+03	1.000E-01	1.360E+03	1.000E-01

111E+02	-117E-02	370E+04	-104E-02	944E+02	-904E-03
988E+02	-810E-03	146E+03	-700E-03	1094E+03	-600E-03
1131E+03	-536E-03	1159E+03	-804E-03	1188E+03	-420E-03
1212E+03	-384E-03	124E+03	-320E-03	1289E+03	-240E-03
1322E+03	-180E-03	1351E+03	-1340E-03	1388E+03	-760E-04
1417E+03	-340E-04	1453E+03	-180E-04	1488E+03	-700E-04
1524E+03	120E-03	1561E+03	-160E-03	1682E+03	-210E-03
1648E+03	-256E-03	1600E+03	-2940E-03	1711E+03	-320E-03
1755E+03	-356E-03	1799E+03	-380E-03	1855E+03	-410E-03
1899E+03	-420E-03	1938E+03	-4360E-03	1981E+03	-4500E-03
2002E+03	-450E-03				
219					
604E+02	304E+00	6547E+02	-2966E+00	6937E+02	-2898E+00
7184E+02	201E+00	7511E+02	-2681E+00	7758E+02	-2533E+00
7909E+02	244E+00	8100E+02	-2311E+00	8307E+02	-2136E+00
8491E+02	196E+00	8642E+02	-1816E+00	8833E+02	-1631E+00
9128E+02	912E+00	9343E+02	-1295E+00	9701E+02	-1090E+00
1018E+03	881E-01	1051E+03	-745E-01	1090E+03	-593E-01
1135E+03	428E-01	1170E+03	-336E-01	1210E+03	-228E-01
1250E+03	136E-01	1301E+03	-804E-03	1368E+03	-928E-02
1412E+03	-180E-01	1471E+03	-264E-01	1522E+03	-3567E-01
1661E+03	-529E-01	1720E+03	-585E-01	1771E+03	-633E-01
1821E+03	-661E-01	1879E+03	-7014E-01	1912E+03	-7214E-01
1952E+03	-749E-01	2000E+03	-749E-01		
220					
3	0.	1450E+01	0.	1500E+01	0.
1550E+01	0.	1600E+01	0.	1650E+01	-2000E-02
1700E+01	-100E-01	1750E+01	-1300E-01	1800E+01	-3000E-01
1850E+01	-410E-01	1900E+01	-5900E-01	1950E+01	-7800E-01
2000E+01	-1020E+00	2050E+01	-1350E+00	2100E+01	-1740E+00
2150E+01	-2200E+00	2200E+01	-2720E+00		
221					
1250E+00	185E-03	1844E+00	-217E-03	2306E+00	-233E-03
275E+00	-253E-03	3266E+00	-279E-03	3648E+00	-301E-03
3994E+00	311E-03	4301E+00	-330E-03	4472E+00	-3470E-03
4731E+00	384E-03	4938E+00	-4120E-03	5094E+00	-4407E-03
5661E+00	474E-03	5440E+00	-516E-03	5568E+00	-552E-03
5711E+00	600E-03	5846E+00	-646E-03	5974E+00	-699E-03
6153E+00	771E-03	6296E+00	-829E-03	6432E+00	-891E-03
6587E+00	969E-03	6790E+00	-107E-02	6993E+00	-114E-02
222					
7767E+02	183E-01	8931E+02	-207E-01	9649E+02	-175E-01
1015E+03	163E-01	1081E+03	-1474E-01	1152E+03	-103E-01
1301E+03	-118E-02	1402E+03	-1594E-01	1490E+03	-262E-01
1531E+03	-322E-01	1636E+03	-4661E-01	1774E+03	-709E-01
1873E+03	-656E-01	2007E+03	-1084E+00		
223					
2804E+00	121E-03	2510E+00	-127E-03	3004E+00	-126E-03
3582E+00	151E-03	4116E+00	-161E-03	4394E+00	-175E-03
4586E+00	1974E-03	4849E+00	-233E-03	5060E+00	-267E-03
5255E+00	313E-03	5506E+00	-3649E-03	5749E+00	-4367E-03
5996E+00	506E-03	6235E+00	-580E-03	6442E+00	-6481E-03
6641E+00	723E-03	6940E+00	-1554E-03	7000E+00	-8714E-03
224					
6470E+02	976E-01	7131E+02	-772E-01	7489E+02	-656E-01
8102E+02	436E-01	8476E+02	-356E-01	8906E+02	-273E-01
9288E+02	108E-01	9998E+02	-840E-02	1040E+03	-172E-01
1089E+03	-2920E-01	1136E+03	-404E-01	1189E+03	-540E-01
1250E+03	-648E-01	1296E+03	-760E-01	1339E+03	-840E-01
1410E+03	-952E-01	1459E+03	-103E+00	1511E+03	-107E+00
1569E+03	-113E+00	1617E+03	-117E+00	1660E+03	-117E+00
1699E+03	-117E+00	1745E+03	-116E+00	1800E+03	-112E+00
1870E+03	-107E+00	1931E+03	-1044E+00	1998E+03	-992E-01
225					
3113E+02	1320E+00	3997E+02	132E+00	4950E+02	1164E+00
5599E+02	1074E+00	711E+03	237E-01	700E+03	200E-01

.3455E+02	.8130E-01	.3980E+02	.7143E-01	.1093E+03	.6300E-01
.1197E+03	.5380E-01	.1294E+03	.4880E-01	.1401E+03	.3560E-01
.1505E+03	.2600E-01	.1601E+03	.1763E-01	.1689E+03	.1340E-01
.1771E+03	.1600E-02	.1843E+03	.4200E-02	.1914E+03	.1100E-01
.2000E+03	.1800E-01				
226	1	16	6		
.3946E+02	.9542E+01	.5046E+02	.3845E+01	.6022E+02	.3088E+01
.7033E+02	.7570E+01	.7995E+02	.6833E+01	.8998E+02	.6175E+01
.9976E+02	.5637E+01	.1103E+03	.4801E+01	.1196E+03	.4233E+01
.1299E+03	.3606E+01	.1400E+03	.2969E+01	.1516E+03	.2112E+01
.1682E+03	.5960E+00	.1786E+03	.3944E+00	.1904E+03	.4781E+00
.1999E+03	.1016E+01				
227	1	2	1		
.3575E+02	.5000E+00	.1999E+03	.5000E+00		
227	2	18	6		
.3598E+02	.8567E+00	.3817E+02	.3535E+00	.1230E+03	.8559E+00
.1265E+03	.8519E+00	.1289E+03	.3527E+00	.1321E+03	.9567E+00
.1356E+03	.8662E+00	.1384E+03	.8750E+00	.1407E+03	.8846E+00
.1423E+03	.8869E+00	.1429E+03	.8949E+00	.1448E+03	.8965E+00
.1568E+03	.8997E+00	.1483E+03	.9013E+00	.1693E+03	.9013E+00
.1819E+03	.9013E+00	.1937E+03	.3013E+00	.1998E+03	.9013E+00
227	3	24	8		
.4014E+02	.1056E+01	.6611E+02	.1056E+01	.8095E+02	.1056E+01
.9136E+02	.1059E+01	.9484E+02	.1061E+01	.9829E+02	.1062E+01
.1012E+03	.1067E+01	.1055E+03	.1073E+01	.1099E+03	.1088E+01
.1143E+03	.1102E+01	.1198E+03	.1149E+01	.1247E+03	.1138E+01
.1293E+03	.1153E+01	.1338E+03	.1165E+01	.1361E+03	.1176E+01
.1383E+03	.1186E+01	.1399E+03	.1173E+01	.1414E+03	.1193E+01
.1438E+03	.1194E+01	.1485E+03	.1193E+01	.1574E+03	.1199E+01
.1705E+03	.1199E+01	.1871E+03	.1199E+01	.1996E+03	.1199E+01
227	4	2	1		
.3990E+02	.1605E+01	.1998E+03	.1605E+01		
227	5	2	1		
.4014E+02	.2002E+01	.1996E+03	.2002E+01		
228	1	17	6		
.4006E+02	.7817E-02	.4954E+02	.7027E-02	.5958E+02	.6309E-02
.6953E+02	.5583E-02	.7917E+02	.4873E-02	.3913E+02	.4211E-02
.9316E+02	.3446E-02	.1094E+03	.2688E-02	.1197E+03	.1914E-02
.1298E+03	.1188E-02	.1396E+03	.4786E-03	.1501E+03	.2871E-03
.1683E+03	.1045E-02	.1694E+03	.1707E-02	.1798E+03	.2457E-02
.1898E+03	.3206E-02	.1996E+03	.3903E-02		
229	1	34	12		
.4444E+02	.3074E+00	.5114E+02	.3752E+00	.6022E+02	.5190E+00
.6930E+02	.6397E+00	.8076E+02	.1263E+00	.9215E+02	.9661E+00
.9882E+02	.1022E+01	.1008E+03	.1046E+01	.1053E+03	.1074E+01
.1003E+03	.1074E+01	.1121E+03	.1078E+01	.1153E+03	.1062E+01
.1185E+03	.1038E+01	.1211E+03	.9661E+00	.1247E+03	.8902E+00
.1292E+03	.7425E+00	.1329E+03	.5829E+00	.1363E+03	.4351E+00
.1397E+03	.2914E+00	.1432E+03	.1198E+00	.1458E+03	0
.1469E+03	.1038E+01	.1517E+03	.2236E+00	.1553E+03	.3273E+00
.1506E+03	.3952E+00	.1633E+03	.4750E+00	.1670E+03	.5110E+00
.1717E+03	.5349E+00	.1770E+03	.5829E+00	.1826E+03	.5749E+00
.1885E+03	.5629E+00	.1914E+03	.5309E+00	.1959E+03	.5309E+00
.1598E+03	.5269E+00				
230	1	31	11		
.6794E+02	.1305E+00	.7072E+02	.1277E+00	.7311E+02	.1239E+00
.7502E+02	.1211E+00	.7789E+02	.1155E+00	.7995E+02	.1102E+00
.8298E+02	.1021E+00	.8473E+02	.9618E-01	.8679E+02	.9076E-01
.8978E+02	.7851E-01	.9157E+02	.6867E-01	.9395E+02	.5844E-01
.9234E+02	.4859E-01	.9887E+02	.3935E-01	.1025E+03	.2711E-01
.1065E+03	.1406E-01	.1091E+03	.5622E-02	.1144E+03	.6024E-03
.1136E+03	.6024E-02	.1269E+03	.2510E-01	.1305E+03	.2822E-01
.1368E+03	.3434E-01	.1409E+03	.7859E-01	.1485E+03	.4297E-01
.1544E+03	.4639E-01	.1616E+03	.5000E-01	.1691E+03	.5241E-01
.1753E+03	.5442E-01	.1837E+03	.5723E-01	.1923E+03	.5904E-01
.2000E+03	.5000E-01				

231	1	27	q	5378E+02	-6667E+01
.4025E+02	.7569E+01	.4654E+02	-7202E+01	.5378E+02	-6667E+01
.6078E+02	.6844E+01	.6794E+02	-5469E+01	.7446E+02	-4950E+01
.7940E+02	.4431E+01	.8457E+02	-3920E+01	.0980E+02	-3401E+01
.9435E+02	.2898E+01	.9920E+02	-2427E+01	.1033E+03	-2068E+01
.1082E+03	.1661E+01	.1122E+03	-1413E+01	.1148E+03	-1182E+01
.1166E+03	.1086E+01	.1262E+03	-5509E+00	.1313E+03	-3273E+00
.1368E+03	.1118E+01	.1461E+03	.1597E+00	.1527E+03	.3114E+00
.1602E+03	.3432E+00	.1712E+03	.4790E+00	.1808E+03	.4950E+00
.1889E+03	.4870E+00	.1960E+03	.4790E+00	.1990E+03	.4551E+00
232	1	22	8	.2916E+00	.4980E+00
.2262E+00	.1275E+00	.2625E+00	.2908E+00	.3734E+00	.1247E+01
.3171E+00	.7809E+00	.3430E+00	.9761E+00	.4276E+00	.1649E+01
.3961E+00	.1426E+01	.4164E+00	.1602E+01	.4807E+00	.1657E+01
.4420E+00	.1689E+01	.4575E+00	.1689E+01	.5481E+00	.1283E+01
.5042E+00	.1570E+01	.5233E+00	.1482E+01	.6334E+00	.6534E+00
.5728E+00	.1131E+01	.5935E+00	.9482E+00	.7140E+00	.2032E+00
.6590E+00	.4661E+00	.6845E+00	.1586E+00		
.7268E+00	.1594E+00				
233	1	12	4	.6377E+02	-2170E-01
.4013E+02	.2444E-01	.5096E+02	-2324E-01	.1117E+03	-1636E-01
.7834E+02	.2016E-01	.9616E+02	-1806E-01	.1508E+03	-1108E-01
.1293E+03	.1430E-01	.1419E+03	-1290E-01	.1997E+03	-6600E-02
.1764E+03	.1740E-02	.1927E+03	-7220E-02		
234	1	22	8	.7093E+02	.1996E+01
.5028E+02	.1385E+01	.6029E+02	.1924E+01	.9500E+02	.2553E+01
.8086E+02	.2135E+01	.8409E+02	.2322E+01	.1096E+03	.3344E+01
.1016E+03	.2071E+01	.1058E+03	.3157E+01	.1260E+03	.3467E+01
.1141E+03	.3535E+01	.1140E+03	.3606E+01	.1420E+03	.2481E+01
.1316E+03	.3173E+01	.1364E+03	.2815E+01	.1655E+03	.1956E+01
.1516E+03	.2254E+01	.1581E+03	.2076E+01	.1914E+03	.1753E+01
.1763E+03	.1824E+01	.1852E+03	.1797E+01		
.2002E+03	.1761E+01				
235	1	17	6	.6075E+02	-2030E-01
.4013E+02	.2167E-01	.4960E+02	-2102E-01	.9108E+02	-1831E-01
.7062E+02	.1968E-01	.9073E+02	-1890E-01	.1213E+03	-1625E-01
.1014E+03	.1763E-01	.1111E+03	-1695E-01	.1520E+03	-1418E-01
.1308E+03	.1552E-01	.1405E+03	-1494E-01	.1811E+03	-1221E-01
.1614E+03	.1363E-01	.1705E+03	-1293E-01		
.1902E+03	.1157E-01	.1999E+03	-1104E-01		
236	1	2	1		
.4008E+02	.4410E+01	.2000E+03	.1650E+01		
237	1	23	8	.1197E+03	.1386E-04
.8002E+02	.1572E+03	.1157E+03	.3960E-05	.1314E+03	.6139E-04
.1244E+03	.1584E-04	.1275E+03	.3366E-04	.1432E+03	.1624E-03
.1355E+03	.9505E-04	.1308E+03	.1366E-03	.1569E+03	.2772E-03
.1471E+03	.2020E-03	.1509E+03	.2376E-03	.1690E+03	.3446E-03
.1611E+03	.2990E-03	.1653E+03	.3307E-03	.1821E+03	.3960E-03
.1738E+03	.3624E-03	.1779E+03	.3902E-03	.1923E+03	.3960E-03
.1859E+03	.3460E-03	.1900E+03	.3960E-03		
.1959E+03	.3941E-03	.2000E+03	.3902E-03		
238	1	3	1	.1000E+01	0.
.5578E-01	.1462E+00	.1462E+00	0.		
239	1	19	7	.9331E+02	.1446E-01
.7978E+02	.1644E-01	.8726E+02	.1624E-01	.1100E+03	.1188E-01
.1800E+03	.1307E-01	.1040E+03	.1220E-01	.1300E+03	.8515E-02
.1178E+03	.1129E-01	.1240E+03	.1032E-01	.1484E+03	.5347E-02
.1357E+03	.3337E-02	.1406E+03	.6139E-02	.1720E+03	.3960E-03
.1547E+03	.3366E-02	.1634E+03	.1782E-02	.1940E+03	-3564E-02
.1811E+03	.1180E-02	.1800E+03	-2179E-02		
.2000E+03	.4350E-02				
240	1	3	1	.1000E+01	0.
.6022E-01	.1500E+00	.1500E+00	0.		
242	1	2	1	.7029E+00	
.6029E+02	.7029E+00	.2002E+03	.7029E+00		
243	2	2	2		

.6029E+02	242	3	7	3	3	1053E+01	.1200E+03	.1050E+01	.1050E+01
.1401E+03						.1050E+01	.1802E+03		
.2002E+03									
.6029E+02	242	4	2	1	1	.1202E+01			
.6000E+02	242	5	2	1	1	.1604E+01			
.7798E+02	243	1	20	7	7	.3912E-03	.9184E+02		.3753E-07
.9805E+02						.3613E-03	.1101E+03		.3533E-03
.1151E+03						.3333E-03	.1259E+03		.3214E-03
.1322E+03						.2314E-03	.1419E+03		.2695E-03
.1472E+03						.2415E-03	.1546E+03		.2236E-03
.1671E+03						.1497E-03	.1649E+03		.1297E-03
.1921E+03	244	1	20	7	7	.6786E-04			
.6006E-01						.2912E-03	.9032E-01		.2912E-03
.1004E+00						.2831E-03	.1161E+00		.2651E-03
.1201E+00						.2028E-03	.1252E+00		.1867E-03
.1268E+00						.1104E-03	.1305E+00		.8032E-04
.1331E+00						.2209E-04	.1402E+00		.1406E-04
.1433E+00						.6024E-05	.1501E+00		.2068E-05
.1500E+00	0.								
.7739E+02	245	1	22	6	6	.1022E-01	.8519E+02		.1222E-01
.8869E+02						.1683E-01	.9912E+02		.1884E-01
.1051E+03						.2204E-01	.1139E+03		.2265E-01
.1185E+03						.2365E-01	.1299E+03		.2365E-01
.1360E+03						.2144E-01	.1499E+03		.2044E-01
.1579E+03						.1623E-01	.1742E+03		.1363E-01
.1820E+03						.6614E-02	.1952E+03		.3368E-02
.1988E+03									
.6011E-01	246	1	16	6	6	.2056E-01	.1002E+00		.2056E-01
.1099E+00						.1936E-01	.1200E+00		.1737E-01
.1294E+00						.1257E-01	.1283E+00		.9782E-02
.1301E+00						.1320E+00	.1341E+00		.9980E-03
.1360E+00						.9980E-03	.1400E+00		0.
.1000E+01	0.								
.7567E+02	247	1	29	10	10	.1012E-03	.8697E+02		.1984E-04
.9087E+02						.1627E-03	.9873E+02		.2401E-03
.1052E+03						.4702E-03	.1202E+03		.5813E-03
.1253E+03						.6607E-03	.1330E+03		.6726E-03
.1362E+03						.6726E-03	.1423E+03		.6627E-03
.1457E+03						.6290E-03	.1542E+03		.5794E-03
.1589E+03						.4544E-03	.1670E+03		.3810E-03
.1720E+03						.1667E-03	.1806E+03		.7341E-04
.1846E+03						.2083E-03	.1948E+03		.3214E-03
.1983E+03						.4583E-03			
.6037E-01	248	1	28	10	10	.5489E-03	.8788E-01		.5489E-03
.9386E-01						.5329E-03	.1045E+00		.5289E-03
.1085E+00						.5130E-03	.1184E+00		.4370E-03
.1207E+00						.4591E-03	.1266E+00		.4311E-03
.1288E+00						.3673E-03	.1336E+00		.3253E-03
.1353E+00						.2255E-03	.1600E+00		.1756E-03
.1424E+00						.1038E-03	.1465E+00		.7386E-04
.1470E+00						.3194E-04	.1510E+00		.1796E-04
.1534E+00						.9980E-05	.1600E+00		0.
.1800E+01	0.								
.7954E+04	249	1	24	8	8	.1992E-03	.8695E+02		.3984E-02
.9774E+02						.1736E-01	.1031E+01		.1375E-01

.1795E+03	.1795E-01	.1194E+03	.1795E-01	.1194E+03	.1795E-01
.1653E-01	.1653E-01	.1342E+03	.1653E-01	.1342E+03	.1653E-01
.1546E+03	.1546E+03	.1546E+03	.1546E+03	.1546E+03	.1546E+03
.1717E-02	.1717E-02	.1861E+03	.1717E-02	.1861E+03	.1717E-02
.1760E+03	.1760E+03	.2000E+03	.1760E+03	.2000E+03	.1760E+03
.1902E+03	.1902E+03	.74E-01	.1902E+03	.74E-01	.1902E+03
.6024E-01	.6024E-01	.1099E+00	.6024E-01	.1099E+00	.6024E-01
.8500E-01	.8500E-01	.1243E+00	.8500E-01	.1243E+00	.8500E-01
.1162E+00	.1162E+00	.1476E+00	.1162E+00	.1476E+00	.1162E+00
.1274E+00	.1274E+00	.1000E+01	.1274E+00	.1000E+01	.1274E+00
.1597E+00	.1597E+00	.5341E+02	.1597E+00	.5341E+02	.1597E+00
.7990E+02	.7990E+02	.3294E-03	.7990E+02	.3294E-03	.7990E+02
.8524E+02	.8524E+02	.7540E-04	.8524E+02	.7540E-04	.8524E+02
.9246E+02	.9246E+02	.3909E-03	.9246E+02	.3909E-03	.9246E+02
.1012E+03	.1012E+03	.1088E+03	.1012E+03	.1088E+03	.1012E+03
.1119E+03	.1119E+03	.1179E+03	.1119E+03	.1179E+03	.1119E+03
.1199E+03	.1199E+03	.1248E+03	.1199E+03	.1248E+03	.1199E+03
.1288E+03	.1288E+03	.1356E+03	.1288E+03	.1356E+03	.1288E+03
.1403E+03	.1403E+03	.1586E+03	.1403E+03	.1586E+03	.1403E+03
.1506E+03	.1506E+03	.1654E+03	.1506E+03	.1654E+03	.1506E+03
.1678E+03	.1678E+03	.1815E+03	.1678E+03	.1815E+03	.1678E+03
.1873E+03	.1873E+03	.1944E+03	.1873E+03	.1944E+03	.1873E+03
.1979E+03	.1979E+03	.7967E-01	.1979E+03	.7967E-01	.1979E+03
.6009E-01	.6009E-01	.1058E+00	.6009E-01	.1058E+00	.6009E-01
.8905E-01	.8905E-01	.1177E+00	.8905E-01	.1177E+00	.8905E-01
.1098E+00	.1098E+00	.1267E+00	.1098E+00	.1267E+00	.1098E+00
.1207E+00	.1207E+00	.1347E+00	.1207E+00	.1347E+00	.1207E+00
.1297E+00	.1297E+00	.1431E+00	.1297E+00	.1431E+00	.1297E+00
.1373E+00	.1373E+00	.1513E+00	.1373E+00	.1513E+00	.1373E+00
.1459E+00	.1459E+00	.1567E+00	.1459E+00	.1567E+00	.1459E+00
.1530E+00	.1530E+00	.1628E+00	.1530E+00	.1628E+00	.1530E+00
.1586E+00	.1586E+00	.1000E+01	.1586E+00	.1000E+01	.1586E+00
.1639E+00	.1639E+00	.3194E-02	.1639E+00	.3194E-02	.1639E+00
.7986E+02	.7986E+02	.1070E-01	.7986E+02	.1070E-01	.7986E+02
.8734E+02	.8734E+02	.2116E-01	.8734E+02	.2116E-01	.8734E+02
.9402E+02	.9402E+02	.2794E-01	.9402E+02	.2794E-01	.9402E+02
.1013E+03	.1013E+03	.3034E-01	.1013E+03	.3034E-01	.1013E+03
.1035E+03	.1035E+03	.2934E-01	.1035E+03	.2934E-01	.1035E+03
.1200E+03	.1200E+03	.2515E-01	.1200E+03	.2515E-01	.1200E+03
.1300E+03	.1300E+03	.1816E-01	.1300E+03	.1816E-01	.1300E+03
.1437E+03	.1437E+03	.1138E-01	.1437E+03	.1138E-01	.1437E+03
.1584E+03	.1584E+03	.4192E-02	.1584E+03	.4192E-02	.1584E+03
.1692E+03	.1692E+03	.4591E-02	.1692E+03	.4591E-02	.1692E+03
.1802E+03	.1802E+03	.1617E-01	.1802E+03	.1617E-01	.1802E+03
.1913E+03	.1913E+03	.3585E-01	.1913E+03	.3585E-01	.1913E+03
.5989E-01	.5989E-01	.1153E+00	.5989E-01	.1153E+00	.5989E-01
.1022E+00	.1022E+00	.1261E+00	.1022E+00	.1261E+00	.1022E+00
.1200E+00	.1200E+00	.1340E+00	.1200E+00	.1340E+00	.1200E+00
.1285E+00	.1285E+00	.1417E+00	.1285E+00	.1417E+00	.1285E+00
.1360E+00	.1360E+00	.1474E+00	.1360E+00	.1474E+00	.1360E+00
.1430E+00	.1430E+00	.1000E+01	.1430E+00	.1000E+01	.1430E+00
.1498E+00	.1498E+00	.9968E+02	.1498E+00	.9968E+02	.1498E+00
.7981E+02	.7981E+02	.1183E+03	.7981E+02	.1183E+03	.7981E+02
.1072E+03	.1072E+03	.1315E+03	.1072E+03	.1315E+03	.1072E+03
.1238E+03	.1238E+03	.1423E+03	.1238E+03	.1423E+03	.1238E+03
.1351E+03	.1351E+03	.1537E+03	.1351E+03	.1537E+03	.1351E+03
.1453E+03	.1453E+03	.1634E+03	.1453E+03	.1634E+03	.1453E+03
.1565E+03	.1565E+03	.1725E+03	.1565E+03	.1725E+03	.1565E+03
.1693E+03	.1693E+03	.1847E-04	.1693E+03	.1847E-04	.1693E+03
.1752E+03	.1752E+03	.1774E-07	.1752E+03	.1774E-07	.1752E+03

.1345E+00	.393E-03	.197E+03	.191E+03	.197E+03	.197E+03
.1957E+03	.6957E-03	.197E+03	.197E+03	.197E+03	.197E+03
256	1	19	7	7	7
.5996E-01	.2113E-03	.6990E-01	.7992E-01	.2113E-03	.2113E-03
.9938E-01	.2072E-03	.9988E-01	.1061E+00	.2032E-03	.2032E-03
.1126E+00	.1871E-03	.1199E+00	.1245E+00	.1549E-03	.1549E-03
.1288E+00	.1187E-03	.1327E+00	.1366E+00	.7342E-04	.7342E-04
.1416E+00	.3923E-04	.1450E+00	.1471E+00	.1408E-04	.1408E-04
.1499E+00	1.	.1559E+00	.1600E+00	0	0
.1000E+01	0.	18	6	6	6
.6011E+02	.2465E-01	.8393E+02	.8886E+02	.1720E-01	.1720E-01
.3867E+02	.1710E-01	.9522E+02	.1066E+03	.1511E-01	.1511E-01
.1130E+03	.1195E+03	.1195E+03	.1277E+03	.1610E-01	.1610E-01
.1261E+03	.1710E-01	.1438E+03	.1533E+03	.2247E-01	.2247E-01
.1623E+03	.2763E-01	.1720E+03	.1730E+03	.3594E-01	.3594E-01
.1858E+03	.4036E-01	.1924E+03	.2000E+03	.4990E-01	.4990E-01
258	1	21	7	7	7
.6033E-01	.1074E-01	.7035E-01	.8029E-01	.1074E-01	.1074E-01
.9927E-01	.1014E-01	.9809E-01	.1049E+00	.1093E-01	.1093E-01
.1104E+00	.5940E-02	.1174E+00	.1202E+00	.9145E-02	.9145E-02
.1237E+00	.6151E-02	.1272E+00	.1308E+00	.5567E-02	.5567E-02
.1341E+00	.3380E-02	.1359E+00	.1388E+00	.1918E-02	.1918E-02
.1408E+00	.7952E-03	.1430E+00	.1480E+00	0.	0.
.1500E+00	0.	.1600E+00	.1000E+01	0.	0.
259	1	18	6	6	6
.7986E+02	.1153E-02	.8774E+02	.9594E+02	.7555E-03	.7555E-03
.1043E+03	.6163E-03	.1143E+03	.1197E+03	.2167E-03	.2167E-03
.1292E+03	.5964E-04	.1361E+03	.1431E+03	.3976E-04	.3976E-04
.1502E+03	.5964E-04	.1555E+03	.1612E+03	.1988E-03	.1988E-03
.1670E+03	.3579E-03	.1741E+03	.1816E+03	.7753E-03	.7753E-03
.1880E+03	.1113E-02	.1955E+03	.2000E+03	.1730E-02	.1730E-02
260	1	21	7	7	7
.6026E-01	.1687E-02	.6927E-01	.7804E-01	.1468E-02	.1468E-02
.9419E-01	.1468E-02	.9004E-01	.9637E-01	.1329E-02	.1329E-02
.1022E+00	.1310E-02	.1079E+00	.1122E+00	.1219E-02	.1219E-02
.1169E+00	.1131E-02	.1208E+00	.1259E+00	.8135E-03	.8135E-03
.1253E+00	.7341E-03	.1271E+00	.1292E+00	.4167E-03	.4167E-03
.1309E+00	.2381E-03	.1334E+00	.1373E+00	0.	0.
.1417E+00	0.	.1498E+00	.1000E+01	0.	0.
261	1	18	6	6	6
.8014E+02	.1020E+00	.8699E+02	.9244E+02	.8964E-01	.8964E-01
.9869E+02	.8327E-01	.1051E+03	.1125E+03	.6773E-01	.6773E-01
.1108E+03	.6056E-01	.1267E+03	.1333E+03	.4104E-01	.4104E-01
.1422E+03	.2789E-01	.1505E+03	.1602E+03	.2769E-02	.2769E-02
.1675E+03	.7570E-02	.1737E+03	.1824E+03	.2948E-01	.2948E-01
.1887E+03	.3825E-01	.1949E+03	.2001E+03	.5538E-01	.5538E-01
262	1	21	7	7	7
.6034E-01	.5857E-01	.7015E-01	.7844E-01	.5857E-01	.5857E-01
.8418E-01	.5777E-01	.9239E-01	.9789E-01	.5498E-01	.5498E-01
.1037E+00	.5498E-01	.1095E+00	.1161E+00	.4741E-01	.4741E-01
.1262E+00	.3705E-01	.1297E+00	.1325E+00	.2271E-01	.2271E-01
.1346E+00	.1673E-01	.1362E+00	.1381E+00	.8367E-02	.8367E-02
.1396E+00	.5578E-02	.1400E+00	.1431E+00	0.	0.
.1472E+00	0.	.1501E+00	.1000E+01	0.	0.
264	1	2	1	1	1
.5966E+02	.7022E+00	.2002E+03	.7022E+00		
264	2	2	1	1	1
.5974E+02	.9066E+00	.2003E+03	.9066E+00		
264	3	2	1	1	1
.5974E+02	.1051E+01	.2002E+03	.1051E+01		
264	4	2	1	1	1
.5982E+02	.1204E+01	.1999E+03	.1204E+01		
264	5	2	1	1	1
.5966E+02	.1631E+01	.2002E+03	.1601E+01		
265	1	29	10	10	10

.7990E+02	.5738E-02	.3404E+00	.433E-02	.3856E+02	.3141E-02
.9320E+02	.2843E-02	.9805E+02	.2605E-02	.1032E+03	.2326E-02
.1090E+03	.2060E-02	.1139E+03	.1829E-02	.1032E+03	.1670E-02
.1242E+03	.1851E-02	.1291E+03	.133E-02	.1339E+03	.1153E-02
.1395E+03	.9145E-03	.1441E+03	.894E-03	.1487E+03	.7555E-03
.1533E+03	.6759E-03	.1569E+03	.5964E-03	.1620E+03	.4771E-03
.1678E+03	.376E-03	.1710E+03	.2982E-03	.1740E+03	.2783E-03
.1759E+03	.2783E-03	.1770E+03	.2782E-03	.1815E+03	.9940E-04
.1874E+03	.940E-04	.1925E+03	.9940E-04	.1966E+03	0.
.2008E+03	.376E-04				
.6006E+01	.4990E-03	11	4	.9014E-01	.4990E-03
.1006E+00	.4990E-03	.1101E+00	.3395E-03	.1149E+00	.2794E-03
.1173E+00	.2794E-03	.1204E+00	.2395E-03	.1249E+00	.1198E-03
.1298E+00	0.	.1000E+01	0.		
267	1	32	11		
.7992E+02	.1189E+00	.8279E+02	.1181E+00	.8622E+02	.1149E+00
.9060E+02	.1116E+00	.9426E+02	.1069E+00	.9865E+02	.1064E+00
.1641E+03	.9478E-01	.1100E+03	.8035E-01	.1135E+03	.8032E-01
.1175E+03	.7550E-01	.1212E+03	.6747E-01	.1238E+03	.6104E-01
.1269E+03	.5462E-01	.1306E+03	.4418E-01	.1336E+03	.3614E-01
.1368E+03	.2570E-01	.1398E+03	.1446E-01	.1421E+03	.4819E-02
.1449E+03	.2410E-02	.1486E+03	.8032E-03	.1526E+03	.4015E-02
.1560E+03	.1044E-01	.1601E+03	.1205E-01	.1643E+03	.1365E-01
.1701E+03	.1365E-01	.1741E+03	.1285E-01	.1786E+03	.9032E-02
.1849E+03	.4819E-02	.1900E+03	.3213E-02	.1935E+03	.4032E-03
.1967E+03	.4819E-02	.2000E+03	.4819E-02		
268	1	12	4		
.6019E-01	.1434E-01	.7014E-01	.1432E-01	.8137E-01	.1434E-01
.9427E-01	.1434E-01	.1035E+00	.1355E-01	.1102E+00	.8765E-02
.1161E+00	.7171E-02	.1221E+00	.3384E-02	.1282E+00	.3984E-02
.1360E+00	.7988E-03	.1386E+00	0.	.1000E+01	0.
269	1	38	13		
.4196E+02	.2675E-02	.8499E+02	.2036E-02	.8722E+02	.1477E-02
.9008E+02	.7565E-03	.9375E+02	.2196E-03	.9717E+02	.3992E-03
.9508E+02	.6786E-03	.1015E+03	.1158E-02	.1044E+03	.1497E-02
.1068E+03	.1816E-02	.1100E+03	.2176E-02	.1132E+03	.2555E-02
.1157E+03	.2735E-02	.1191E+03	.2954E-02	.1219E+03	.3054E-02
.1250E+03	.3253E-02	.1280E+03	.3375E-02	.1319E+03	.3513E-02
.1360E+03	.3533E-02	.1400E+03	.3575E-02	.1439E+03	.3573E-02
.1483E+03	.3533E-02	.1533E+03	.3433E-02	.1579E+03	.3234E-02
.1612E+03	.3054E-02	.1651E+03	.2811E-02	.1689E+03	.2635E-02
.1718E+03	.2395E-02	.1744E+03	.2196E-02	.1768E+03	.1956E-02
.1798E+03	.1717E-02	.1836E+03	.1497E-02	.1871E+03	.1178E-02
.1898E+03	.9301E-03	.1928E+03	.758E-03	.1952E+03	.5788E-03
.1971E+03	.4192E-03	.1999E+03	.3992E-04		
270	1	18	6		
.6015E-01	.2028E-02	.8025E-01	.2028E-02	.9908E-01	.2028E-02
.1101E+00	.1889E-02	.1160E+00	.1730E-02	.1201E+00	.1511E-02
.1240E+00	.1352E-02	.1271E+00	.1113E-02	.1296E+00	.9145E-03
.1325E+00	.7555E-03	.1351E+00	.5765E-03	.1371E+00	.4374E-03
.1396E+00	.1301E-03	.1425E+00	.1590E-03	.1458E+00	.3976E-04
.1499E+00	.3976E-04	.1525E+00	0.	.1000E+01	0.
271	1	32	11		
.3070E+02	.3861E-01	.8341E+02	.7793E-01	.9548E+02	.6441E-01
.4774E+02	.4938E-01	.9661E+02	.3419E-01	.9176E+02	.2385E-01
.9359E+02	.1352E-01	.9678E+02	.3976E-02	.9839E+02	.1750E-01
.1012E+03	.2704E-01	.1039E+03	.4135E-01	.1071E+03	.5110E-01
.1101E+03	.5169E-01	.1121E+03	.5408E-01	.1160E+03	.5089E-01
.1196E+03	.4612E-01	.1232E+03	.4056E-01	.1265E+03	.3579E-01
.1310E+03	.3822E-01	.1343E+03	.2622E-01	.1388E+03	.2386E-01
.1431E+03	.2466E-01	.1476E+03	.1670E-01	.1499E+03	.1750E-01
.1535E+03	.1113E-01	.1589E+03	.7157E-02	.1649E+03	.7157E-02
.1698E+03	.6362E-02	.1768E+03	.3765E-02	.1844E+03	.3976E-02
.1899E+03	0.	.1996E+03	.1590E-02		
272	1	18	7		

..006E-01	..356E-01	..904E-01	..936E-01	..930E-01	..378E-01
..1001E+00	..578E-01	..110E+00	..948E-01	..117E+00	..350E-01
..1216E+00	..819E-01	..126E+00	..126E+00	..130E+00	..628E-01
..133E+03	..540E-01	..135E+00	..421E-01	..136E+00	..326E-01
..1381E+00	..270E-01	..139E+00	..190E-01	..141E+00	..127E-01
..1427E+00	..077E-02	..144E+00	..159E-02	..145E+00	0.
..1000E+01	0.	33	11	..158E+00	0.
..301E+02	..340E-03	..423E+02	..400E-03	..847E+02	..122E-02
..855E+02	..184E-02	..879E+02	..210E-02	..895E+02	..264E-02
..316E+02	..292E-02	..929E+02	..320E-02	..946E+02	..360E-02
..970E+02	..394E-02	..991E+02	..420E-02	..101E+03	..440E-02
..1037E+03	..468E-02	..105E+03	..470E-02	..100E+03	..498E-02
..1095E+03	..504E-02	..114E+03	..502E-02	..120E+03	..498E-02
..168E+03	..494E-02	..132E+03	..470E-02	..139E+03	..474E-02
..144E+03	..464E-02	..150E+03	..440E-02	..157E+03	..426E-02
..163E+03	..414E-02	..169E+03	..320E-02	..174E+03	..372E-02
..179E+03	..336E-02	..184E+03	..320E-02	..189E+03	..284E-02
..153E+03	..266E-02	..196E+03	..250E-02	..193E+03	..228E-02
..603E-01	..515E-02	..703E-01	..515E-02	..902E-01	..515E-02
..903E-01	..547E-02	..957E-01	..511E-02	..100E-02	..499E-02
..105E+00	..497E-02	..109E+00	..477E-02	..146E+00	..474E-02
..110E+00	..464E-02	..121E+00	..434E-02	..124E+00	..424E-02
..127E+00	..398E-02	..129E+00	..374E-02	..131E+00	..338E-02
..132E+00	..394E-02	..134E+00	..279E-02	..136E+00	..226E-02
..137E+00	..174E-02	..138E+00	..134E-02	..140E+00	..162E-02
..141E+00	..701E-03	..142E+00	..420E-03	..144E+00	..200E-03
..147E+00	0.	..153E+00	0.	..160E+00	0.
..100E+01	0.	25	9	..850E+02	..646E-01
..768E+02	..159E-01	..827E+02	..391E-01	..932E+02	..125E+00
..877E+02	..270E-01	..902E+02	..102E-00	..104E+00	..190E+00
..968E+02	..152E+00	..100E+03	..173E+00	..117E+00	..218E+00
..100E+03	..206E+00	..112E+03	..214E+00	..138E+00	..212E+00
..122E+03	..222E+00	..130E+03	..222E+00	..160E+00	..187E+00
..144E+03	..207E+00	..153E+03	..194E+00	..181E+00	..135E+00
..164E+03	..170E+00	..173E+03	..154E+00	..196E+00	..990E-01
..187E+03	..119E+00	..193E+03	..106E+00	..799E-01	..238E+00
..200E+03	..500E-01	20	10	..107E+00	..284E+00
..598E-01	..304E+00	..693E-01	..301E+00	..129E+00	..249E+00
..900E-01	..298E+00	..985E-01	..291E+00	..133E+00	..205E+00
..114E+00	..274E+00	..120E+00	..261E+00	..139E+00	..102E+00
..127E+00	..230E+00	..131E+00	..219E+00	..139E+00	..109E+00
..135E+00	..192E+00	..137E+00	..170E+00	..146E+00	..109E+00
..141E+00	..149E+00	..142E+00	..132E+00	..152E+00	..492E-01
..145E+00	..861E-01	..147E+00	..634E-01	..152E+00	..111E-01
..149E+00	..317E-01	..151E+00	..213E-01	..160E+00	0.
..154E+00	0.	13	5	..100E+03	..138E-03
..100E+01	0.	..996E+02	..119E-03	..130E+03	..138E-03
..021E+02	..297E-03	..120E+03	..139E-03	..160E+03	..476E-03
..110E+03	..130E-03	..150E+03	..196E-03	..190E+03	..773E-03
..140E+03	..555E-03	..160E+03	..734E-03	..782E-01	..412E-03
..200E+03	..692E-03	19	7	..101E+00	..374E-03
..681E-01	..414E-03	..694E-01	..414E-03	..110E+00	..315E-03
..871E-01	..414E-03	..954E-01	..414E-03	..122E+00	..177E-03
..107E+00	..333E-03	..110E+00	..333E-03	..136E+00	..591E-04
..118E+00	..177E-03	..121E+00	..197E-03	..160E+00	0.
..126E+00	..331E-03	..132E+00	..118E-03	..160E+00	0.
..140E+00	0.	..150E+00	0.	..160E+00	0.
..100E+02	0.	27	6	..160E+00	0.

.035E+02	.895E-01	.996E+02	.971E-01	.973E+02	.931E-01
.106E+02	.736E-01	.114E+03	.728E-01	.124E+03	.689E-01
.131E+03	.641E-01	.141E+03	.578E-01	.148E+03	.573E-01
.158E+03	.522E-01	.163E+03	.491E-01	.177E+03	.480E-01
.184E+03	.356E-01	.193E+03	.293E-01	.199E+03	.190E-01
280	1	25	9		
.559E-01	.145E+00	.696E-01	.143E+00	.794E-01	.142E+00
.591E-01	.140E+00	.943E-01	.139E+00	.995E-01	.145E+00
.1054E+00	.122E+00	.122E+00	.122E+00	.117E+00	.127E+00
.1196E+00	.122E+00	.122E+00	.122E+00	.124E+00	.103E+00
.1270E+00	.504E-01	.129E+00	.601E-01	.130E+00	.690E-01
.1317E+00	.579E-01	.133E+00	.404E-01	.134E+00	.309E-01
.1360E+00	.222E-01	.137E+00	.137E+00	.139E+00	.555E-02
.1414E+00	0.	.147E+00	0.	.159E+00	0.
.1060E+01	0.				
237	2	23	8		
.7970E+02	.322E-03	.6670E+02	.360E-03	.909E+02	.390E-03
.9642E+02	.429E-03	.102E+03	.479E-03	.109E+03	.512E-03
.1158E+03	.558E-03	.122E+03	.604E-03	.128E+03	.636E-03
.1356E+03	.677E-03	.139E+03	.701E-03	.143E+03	.720E-03
.1471E+03	.736E-03	.152E+03	.748E-03	.155E+03	.745E-03
.1609E+03	.748E-03	.169E+03	.748E-03	.174E+03	.730E-03
.1803E+03	.714E-03	.184E+03	.693E-03	.189E+03	.673E-03
.1962E+03	.647E-03	.200E+03	.637E-03		
238	2	16	6		
.5470E-01	.140E-03	.799E-01	.130E-03	.894E-01	.142E-03
.998E-01	.130E-03	.104E+00	.134E-03	.110E+00	.126E-03
.1161E+00	.960E-04	.120E+00	.920E-04	.124E+00	.820E-04
.1271E+00	.560E-04	.130E+00	.340E-04	.132E+00	.160E-04
.1362E+00	.180E-04	.143E+00	.600E-05	.146E+00	0.
.1300E+01	0.				
239	2	20	7		
.798E+02	.435E-02	.837E+02	.574E-02	.864E+02	.693E-02
.910E+02	.910E-02	.961E+02	.122E-01	.100E+03	.136E-01
.1049E+03	.162E-02	.109E+03	.178E-01	.114E+03	.178E-01
.1178E+03	.184E-01	.126E+03	.192E-01	.128E+03	.200E-01
.1352E+03	.232E-01	.140E+03	.228E-01	.149E+03	.227E-01
.1507E+03	.233E-01	.167E+03	.247E-01	.180E+03	.257E-01
.190E+03	.267E-01	.199E+03	.267E-01		
240	2	15	5		
.6014E-01	.563E-02	.903E-01	.763E-02	.100E+00	.823E-02
.1083E+00	.803E-02	.113E+00	.682E-02	.120E+00	.622E-02
.1243E+00	.602E-02	.128E+00	.421E-02	.131E+00	.323E-02
.1340E+00	.602E-03	.136E+00	.603E-03	.140E+00	.604E-03
.1499E+00	.401E-03	.150E+00	0.	.100E+01	0.
242	1	2	1		
.6029E+02	.702E+00	.200E+03	.702E+00		
242	2	2	1		
.5598E+02	.502E+00	.200E+03	.902E+00		
242	3	7	3		
.6029E+02	.1053E+01	.100E+03	.1053E+01	.120E+03	.105E+01
.1401E+03	.1050E+01	.160E+03	.1050E+01	.180E+03	.1050E+01
.2002E+03	.1051E+01				
242	4	2	1		
.6029E+02	.120E+01	.200E+03	.120E+01		
242	5	2	1		
.5006E+02	.160E+01	.200E+03	.160E+01		
243	2	24	8		
.7774E+02	.716E-03	.829E+02	.598E-03	.861E+02	.530E-03
.9056E+02	.439E-03	.961E+02	.329E-03	.102E+03	.221E-03
.1062E+03	.161E-03	.110E+03	.101E-03	.114E+03	.339E-04
.1202E+03	.399E-04	.128E+03	.101E-03	.129E+03	.147E-03
.1347E+03	.185E-03	.139E+03	.217E-03	.144E+03	.243E-03
.1500E+03	.275E-03	.158E+03	.291E-03	.160E+03	.305E-03
.1685E+03	.297E-03	.176E+03	.281E-03	.183E+03	.255E-03
.1900E+03	.213E-03	.194E+03	.177E-03		

252	2	21	7	
.6017E-01	.1380E-03	.7027E-01	.1980E-03	.7998E-01
.9029E-01	.1980E-03	.9725E-01	.1980E-03	.1037E+00
.1080E+00	.1980E-03	.1136E+00	.1980E-03	.1037E+00
.1228E+00	.1655E-03	.1250E+00	.1228E-03	.1208E+00
.1306E+00	.7129E-04	.1324E+00	.5347E-04	.1349E+00
.1365E+00	.2574E-04	.1390E+00	.1386E-04	.1419E+00
.1596E+00	.5941E-05	.1702E+00	0.	.1000E+01
253	2	30	10	
.7970E+02	.1297E-01	.8240E+02	.1018E-01	.5559E+02
.8806E+02	.5788E-02	.9104E+02	.3593E-02	.9371E+02
.9777E+02	.3992E-03	.1033E+03	.1795E-02	.1069E+02
.1111E+03	.3992E-02	.1147E+03	.4998E-02	.1199E+03
.1227E+03	.5988E-02	.1273E+03	.5988E-02	.1313E+03
.1346E+03	.5788E-02	.1377E+03	.5788E-02	.1412E+03
.1456E+03	.4391E-02	.1490E+03	.4192E-02	.1520E+03
.1566E+03	.2395E-02	.1627E+03	.2196E-02	.1704E+03
.1695E+03	0.	.1819E+03	.5908E-03	.1878E+03
.1916E+03	.1996E-02	.1959E+03	.2196E-02	.2000E+03
254	2	11	4	
.5973E-01	.3366E-02	.7982E-01	.3366E-02	.1002E+00
.1056E+00	.3366E-02	.1100E+00	.2574E-02	.1151E+00
.1203E+00	.9901E-03	.1261E+00	.9901E-03	.1303E+00
.1300E+00	0.	.1000E+01	0.	0.
255	2	23	8	
.7946E+02	.7075E-03	.8029E+02	.6779E-03	.8402E+02
.8903E+02	.5632E-03	.9642E+02	.6585E-03	.1034E+03
.1094E+03	.2628E-03	.1174E+03	.1403E-03	.1206E+03
.1255E+03	.1976E-04	.1297E+03	.3557E-04	.1355E+03
.1395E+03	.1443E-03	.1439E+03	.1759E-03	.1463E+03
.1500E+03	.2234E-03	.1550E+03	.2510E-03	.1623E+03
.1687E+03	.2877E-03	.1761E+03	.2826E-03	.1335E+03
.1947E+03	.2802E-03	.2002E+03	.2846E-03	0.
256	2	28	10	
.6028E-01	.6015E-03	.6990E-01	.6015E-03	.8000E-01
.9517E-01	.5936E-03	.9002E-01	.5956E-03	.9600E-01
.1006E+00	.5815E-03	.1061E+00	.5694E-03	.1101E+00
.1138E+00	.5473E-03	.1179E+00	.5352E-03	.1209E+00
.1235E+00	.4909E-03	.1270E+00	.4527E-03	.1304E+00
.1331E+00	.3782E-03	.1352E+00	.3280E-03	.1369E+00
.1396E+00	.2394E-03	.1416E+00	.1791E-03	.1435E+00
.1505E+00	.7445E-04	.1470E+00	.5231E-04	.1484E+00
.1000E+01	0.	.3562E+00	0.	.1602E+00
257	2	20	7	
.6011E+02	.4672E-01	.8465E+02	.3877E-01	.8775E+02
.9149E+02	.2703E-01	.9531E+02	.2247E-01	.9785E+02
.1037E+03	.1213E-01	.1108E+03	.5169E-02	.1132E+03
.1200E+03	.1980E-02	.1255E+03	.5765E-02	.1325E+03
.1423E+03	.1195E-01	.1504E+03	.1312E-01	.1602E+03
.1710E+03	.1570E-01	.1800E+03	.1730E-01	.1895E+03
.1559E+03	.1948E-01	.1990E+03	.1948E-01	0.
258	2	26	9	
.6025E-01	.3877E-01	.7027E-01	.3877E-01	.8013E-01
.8760E-01	.9556E-01	.9556E-01	.3757E-01	.1001E+00
.1099E+00	.3718E-01	.1151E+00	.3658E-01	.1187E+00
.1214E+00	.3360E-01	.1237E+00	.3201E-01	.1260E+00
.1286E+00	.2763E-01	.1305E+00	.2465E-01	.1323E+00
.1346E+00	.1709E-01	.1370E+00	.1491E-01	.1386E+00
.1408E+00	.8748E-02	.1427E+00	.7356E-02	.1449E+00
.1471E+00	.1590E-02	.1502E+00	0.	.1558E+00
.1603E+00	0.	.1000E+01	0.	0.
259	2	26	9	
.8010E+02	.3976E-03	.8686E+02	.3976E-03	.8973E+02
.9650E+02	.5169E-03	.1007E+03	.5765E-03	.1069E+03
.1123E+03	.5344E-03	.1142E+03	.1072E-02	.1176E+03

.1231E+03	.1710E-02	.1270E+03	.1933E-02	.1314E+03	.2267E-02
.1376E+03	.2565E-02	.1431E+03	.2763E-02	.1406E+03	.3042E-02
.1520E+03	.3241E-02	.1503E+03	.3380E-02	.1618E+03	.3499E-02
.1666E+03	.3613E-02	.1710E+03	.3598E-02	.1749E+03	.3598E-02
.1802E+03	.3559E-02	.1861E+03	.3340E-02	.1912E+03	.3141E-02
.1966E+03	.2843E-02	.2001E+03	.2525E-02		
260		20	7		
.6026E-01	.2798E-02	.6967E-01	.2417E-02	.7764E-01	.2718E-02
.8729E-01	.2759E-02	.9550E-01	.2659E-02	.1008E+00	.2619E-02
.1079E+00	.2599E-02	.1142E+00	.2460E-02	.1105E+00	.2262E-02
.1224E+00	.2024E-02	.1273E+00	.1647E-02	.1303E+00	.1210E-02
.1336E+00	.2714E-03	.1356E+00	.4563E-03	.1373E+00	.2579E-03
.1391E+00	.1339E-03	.1405E+00	0.	.1453E+00	0.
.1492E+00	0.	.1003E+01	0.		
261		25	9		
.7382E+02	.1904E-01	.8754E+02	.3785E-01	.9437E+02	.3625E-01
.1023E+03	.3386E-01	.1105E+03	.2944E-01	.1163E+03	.2551E-01
.1209E+03	.1873E-01	.1261E+03	.1275E-01	.1298E+03	.4382E-02
.1348E+03	.5976E-02	.1385E+03	.1036E-01	.1437E+03	.1753E-01
.1479E+03	.2271E-01	.1518E+03	.2430E-01	.1546E+03	.2470E-01
.1580E+03	.2430E-01	.1615E+03	.2390E-01	.1656E+03	.2311E-01
.1695E+03	.1912E-01	.1767E+03	.1434E-01	.1830E+03	.6773E-02
.1859E+03	.3187E-02	.1918E+03	.2390E-02	.1952E+03	.5179E-02
.1980E+03	.1116E-01	23	8		
.6810E-01	.5617E-01	.7055E-01	.5697E-01	.7963E-01	.5299E-01
.8560E-01	.5259E-01	.9029E-01	.5299E-01	.1042E+00	.5100E-01
.1098E+00	.4821E-01	.1149E+00	.4701E-01	.1109E+00	.4462E-01
.1220E+00	.4104E-01	.1255E+00	.3546E-01	.1275E+00	.3028E-01
.1302E+00	.2629E-01	.1329E+00	.1992E-01	.1350E+00	.1554E-01
.1638E+00	.1076E-01	.1390E+00	.7969E-02	.1401E+00	.6375E-02
.1503E+00	0.	.1436E+00	0.	.1468E+00	0.
264		2	1		
.5566E+02	.7022E+00	.2002E+03	.7022E+00		
264		2	1		
.5974E+02	.9066E+00	.2003E+03	.9066E+00		
264		2	1		
.5974E+02	.1051E+01	.2002E+03	.1051E+01		
264		2	1		
.5902E+02	.1204E+01	.1999E+03	.1204E+01		
264		2	1		
.5566E+02	.1601E+01	.2002E+03	.1601E+01		
265		33	11		
.7598E+02	.6501E-02	.9213E+02	.5845E-02	.8388E+02	.5229E-02
.8355E+02	.4414E-02	.8618E+02	.3857E-02	.8953E+02	.3404E-02
.9129E+02	.2922E-02	.9367E+02	.2346E-02	.9598E+02	.1809E-02
.9053E+02	.1173E-02	.1017E+03	.3976E-03	.1049E+03	.2386E-03
.1087E+03	.8350E-03	.1114E+03	.1193E-02	.1140E+03	.1531E-02
.1259E+03	.2823E-02	.1294E+03	.3822E-02	.1343E+03	.3260E-02
.1392E+03	.3459E-02	.1447E+03	.3598E-02	.1435E+03	.3658E-02
.1538E+03	.3618E-02	.1600E+03	.3559E-02	.1639E+03	.3419E-02
.1689E+03	.3221E-02	.1723E+03	.2925E-02	.1785E+03	.2624E-02
.1828E+03	.2286E-02	.1873E+03	.1889E-02	.1916E+03	.1392E-02
.1953E+03	.9742E-03	.1982E+03	.5362E-03	.1999E+03	.4374E-03
266		24	8		
.6014E-01	.5509E-02	.7009E-01	.5509E-02	.8003E-01	.5469E-02
.9021E-01	.5449E-02	.9772E-01	.5349E-02	.1022E+00	.521E-02
.1067E+00	.5230E-02	.1107E+00	.5130E-02	.1159E+00	.4950E-02
.1211E+00	.4711E-02	.1248E+00	.4431E-02	.1281E+00	.4092E-02
.1306E+00	.3653E-02	.1330E+00	.3214E-02	.1351E+00	.2515E-02
.1367E+00	.2176E-02	.1387E+00	.1597E-02	.1405E+00	.1078E-02
.1422E+00	.6786E-03	.1439E+00	.3792E-03	.1461E+00	.1766E-03
.1483E+00	0.	.1502E+00	0.	.1000E+01	0.
267		35	12		
.4024E+02	.1992E+02	.3438E+02	.1992E+02	.7071E+02	.1408E+00

.1252E+03	-1720E-02	.1299E+03	-194JE-02	.1327E+03	-2346E-02
.1354E+03	-2120E-02	.1389E+03	-2200E-02	.1425E+03	-2100E-02
.1477E+03	-1820E-02	.1545E+03	-1520E-02	.1612E+03	-1240E-02
.1666E+03	-7400E-03	.1710E+03	-3600E-03	.1764E+03	.1000E-03
.1830E+03	.7200E-03	.1892E+03	.1300E-02	.1936E+03	.1780E-02
.1959E+03	.2160E-02	.1996E+03	.2580E-02		
274		23	8		
.6003E-01	.2385E-02	.6807E-01	.2385E-02	.7834E-01	.2385E-02
.702E-01	.2385E-02	.9546E-01	.2385E-02	.1036E+00	.2385E-02
.1096E+00	.2385E-02	.1154E+00	.2265E-02	.1200E+00	.2244E-02
.1240E+00	.2064E-02	.1268E+00	.1784E-02	.1295E+00	.1633E-02
.1314E+00	.1363E-02	.1333E+00	.1122E-02	.1353E+00	.7416E-03
.1373E+00	.5412E-03	.1394E+00	.3407E-03	.1408E+00	.2405E-03
.1432E+00	0.	.1462E+00	0.	.1548E+00	0.
.1600E+00	0.	.1000E+01	0.		
275	2	29	10		
.3024E+02	-1444E+00	.9573E+02	-1301E+00	.9970E+02	-1030E+00
.9272E+02	-7425E-01	.9590E+02	-5110E-01	.9893E+02	-3114E-01
.1015E+03	-1038E-01	.1052E+03	.7186E-02	.1078E+03	.1437E-01
.1101E+03	.2315E-01	.1132E+03	.2635E-01	.1180E+03	.2635E-01
.1229E+03	.2635E-01	.1268E+03	.2555E-01	.1336E+03	.2156E-01
.1381E+03	.1437E-01	.1440E+03	.9581E-02	.1492E+03	-2395E-02
.1552E+03	-5581E-02	.1592E+03	-2315E-01	.1640E+03	-3353E-01
.1603E+03	-4631E-01	.1746E+03	-6307E-01	.1796E+03	-7984E-01
.1832E+03	-9182E-01	.1878E+03	-1078E+00	.1928E+03	-1285E+00
.1969E+03	-1405E+00	.1997E+03	-1501E+00		
276	2	18	6		
.6006E-01	-2857E-01	.6969E-01	-2857E-01	.7901E-01	-3016E-01
.8467E-01	-3095E-01	.9415E-01	-3175E-01	.1012E+00	-2540E-01
.1085E+00	-2698E-01	.1134E+00	-2778E-01	.1189E+00	-2460E-01
.1220E+00	-1587E-01	.1254E+00	-1111E-01	.1295E+00	-4762E-02
.1320E+00	0.	.1391E+00	0.	.1485E+00	0.
.1565E+00	0.	.1601E+00	0.	.1030E+01	0.
277	2	22	8		
.8068E+02	.2262E-02	.8546E+02	.2043E-02	.8961E+02	.1964E-02
.9606E+02	.1746E-02	.9988E+02	.1647E-02	.1053E+03	.1647E-02
.1098E+03	.1528E-02	.1173E+03	.1567E-02	.1272E+03	.1667E-02
.1362E+03	.1726E-02	.1447E+03	.1905E-02	.1501E+03	.1944E-02
.1560E+03	.2183E-02	.1621E+03	.2262E-02	.1684E+03	.2421E-02
.1741E+03	.2679E-02	.1803E+03	.2857E-02	.1856E+03	.3135E-02
.1902E+03	.3254E-02	.1951E+03	.3472E-02	.1990E+03	.3551E-02
.2002E+03	.3671E-02				
278	2	27	9		
.6014E-01	.2919E-02	.6977E-01	.2919E-02	.7971E-01	.2919E-02
.8974E-01	.2919E-02	.9793E-01	.2899E-02	.1052E+00	.2460E-02
.1107E+00	.2781E-02	.1136E+00	.2761E-02	.1176E+00	.2722E-02
.1210E+00	.2505E-02	.1244E+00	.2388E-02	.1258E+00	.2189E-02
.1272E+00	.2032E-02	.1290E+00	.1834E-02	.1306E+00	.1598E-02
.1317E+00	.1741E-02	.1335E+00	.1203E-02	.1353E+00	.9278E-03
.1372E+00	.7101E-03	.1391E+00	.4931E-03	.1405E+00	.4142E-03
.1414E+00	.3156E-03	.1429E+00	.2767E-03	.1451E+00	0.
.1497E+00	0.	.1598E+00	0.	.1000E+01	0.
279	2	18	6		
.8803E+02	.6099E-01	.8290E+02	.4752E-01	.8767E+02	.1743E-01
.9499E+02	-1267E-01	.1014E+03	-4119E-01	.1065E+03	-6020E-01
.1102E+03	-7287E-01	.1149E+03	-8475E-01	.1278E+03	-1089E+00
.1351E+03	-1204E+00	.1430E+03	-1323E+00	.1508E+03	-1450E+00
.1613E+03	-1592E+00	.1699E+03	-1695E+00	.1791E+03	-1814E+00
.1873E+03	-1309E+00	.1944E+03	-2020E+00	.1997E+03	-2099E+00
280	2	20	7		
.6023E-01	-1222E+00	.6993E-01	-1222E+00	.7961E-01	-1222E+00
.9015E-01	-1222E+00	.9924E-01	-1222E+00	.1075E+00	-1151E+00
.1138E+00	-1079E+00	.1191E+00	-1008E+00	.1228E+00	-9127E-01
.1270E+00	-7063E-01	.1294E+00	-4921E-01	.1314E+00	-3095E-01
.1331E+00	-2222E-01	.1343E+00	-1587E-01	.1356E+00	-3730E-02
.1374E+00	0.	.1427E+00	0.	.1448E+00	0.

1598E+00	0.	1300E+01	0.	100E+03	-151E-04
201	1	13	5	100E+03	199E-05
800E+02	-243E-04	900E+02	-195E-04	100E+03	151E-04
110E+03	-916E-05	119E+03	-478E-05	100E+03	163E-04
1390E+03	597E-05	109E+03	116E-04	100E+03	336E-04
1698E+03	262E-04	181E+03	269E-04	100E+03	191E+03
1998E+03	302E-04	18	6	935E+02	-191E-02
282	1	18	6	108E+03	103E-02
442E+02	-542E-02	980E+02	-163E-02	129E+03	255E-02
982E+02	-782E-03	101E+03	-159E-03	149E+03	239E-02
114E+03	163E-02	121E+03	231E-02	180E+03	-180E-03
1338E+03	283E-03	140E+03	275E-02	200E+03	-247E-02
1593E+03	167E-02	169E+03	798E-03	935E+02	-191E-02
1869E+03	-798E-03	194E+03	-155E-02	108E+03	758E-04
284	1	2	1	105E+03	415E-04
600E+02	700E+00	200E+03	701E+00	126E+03	392E-04
284	2	2	1	164E+03	630E-04
5990E+02	900E+00	1998E+03	900E+00	168E+03	10E-03
284	3	2	1	904E+02	758E-04
600E+02	120E+01	1998E+03	120E+01	105E+03	415E-04
284	4	2	1	126E+03	392E-04
5998E+02	159E+01	1998E+03	159E+01	164E+03	630E-04
285	1	20	7	168E+03	10E-03
804E+02	216E-03	856E+02	170E-03	904E+02	758E-04
999E+02	122E-03	989E+02	966E-04	105E+03	415E-04
1121E+03	636E-04	118E+03	503E-04	126E+03	392E-04
111E+03	375E-04	135E+03	375E-04	141E+03	630E-04
1499E+03	471E-04	158E+03	574E-04	168E+03	10E-03
1726E+03	718E-04	181E+03	910E-04	168E+03	10E-03
1588E+03	122E-03	199E+03	132E-03	921E+02	-896E-02
286	1	17	6	109E+03	-642E-02
421E+02	-112E-01	861E+02	-976E-02	133E+03	-452E-02
370E+02	-801E-02	102E+03	-690E-02	155E+03	-468E-02
1181E+03	-547E-02	124E+03	-476E-02	187E+03	-714E-02
1403E+03	-460E-02	148E+03	-484E-02	102E+03	827E-04
176E+03	-539E-02	179E+03	-650E-02	136E+03	151E-04
1549E+03	-761E-02	200E+03	-737E-02	170E+03	-636E-04
287	1	13	5	192E+03	-116E-03
800E+02	109E-03	919E+02	946E-04	102E+03	827E-04
1159E+03	572E-04	124E+03	389E-04	136E+03	151E-04
1400E+03	-715E-03	160E+03	-381E-04	170E+03	-636E-04
180E+03	-642E-04	187E+03	-102E-03	192E+03	-116E-03
200E+03	-139E-03	13	5	971E+03	-524E-02
288	1	13	5	129E+03	-341E-02
405E+02	-437E-02	800E+02	-469E-02	158E+03	-397E-03
108E+03	-532E-02	118E+03	-421E-02	191E+03	469E-02
137E+03	-270E-02	148E+03	-199E-02	871E+03	148E-03
1724E+03	127E-02	182E+03	278E-02	942E+03	942E-04
199E+03	596E-02	32	11	103E+03	451E-04
289	1	84E+02	164E-03	111E+03	118E-04
803E+02	210E-03	918E+02	110E-03	123E+03	-261E-04
853E+02	129E-03	995E+02	627E-04	135E+03	-475E-04
964E+02	815E-04	109E+03	198E-04	149E+03	538E-04
1061E+03	316E-04	120E+03	-158E-04	161E+03	-615E-04
1160E+03	-316E-05	131E+03	-435E-04	179E+03	-269E-04
1281E+03	-324E-04	145E+03	-514E-04	194E+03	396E-05
1402E+03	-499E-04	156E+03	-522E-04	448E+02	119E-02
151E+03	-538E-04	172E+03	-356E-04	1258E+03	-222E-02
162E+03	-443E-04	182E+03	-594E-05	156E+03	-388E-02
184E+03	118E-04	199E+03	213E-04	190E+03	-49E-02
1974E+03	118E-04	13	5	448E+02	119E-02
290	1	862E+02	238E-02	1258E+03	-222E-02
757E+02	381E-02	117E+03	-158E-02	156E+03	-388E-02
187E+03	0.	145E+03	-325E-02	190E+03	-49E-02
1360E+03	-285E-02	130E+03	-452E-02		
1705E+03	-456E-02				

.1240E+03	.395E+01	.1260E+03	.3540E+01	.1297E+03	.9546E+01
.1359E+03	.6310E+01	.1414E+03	.8915E+01	.1466E+03	.7337E+01
.1420E+03	.6391E+01	.1500E+03	.4410E+01	.1667E+03	.1570E+01
.1730E+03	.7101E+02	.1815E+03	.3787E+01	.1869E+03	.6075E+01
.1930E+03	.8204E+01	.2000E+03	.1200E+00		
281	2	28	10		
.7990E+02	.9323E+04	.8317E+02	.6614E+04	.8540E+02	.4761E+04
.9794E+02	.3108E+04	.9025E+02	.1514E+04	.9168E+02	.5179E+05
.9351E+02	.1195E+04	.9662E+02	.2550E+04	.9877E+02	.3586E+04
.1003E+03	.4422E+04	.1030E+03	.5219E+04	.1057E+03	.5817E+04
.1675E+03	.6335E+03	.1097E+03	.6494E+04	.1137E+03	.6375E+04
.1257E+03	.2988E+04	.1289E+03	.1275E+04	.1305E+03	.5578E+05
.1360E+03	.2550E+04	.1467E+03	.8367E+04	.1542E+03	.1323E+03
.1597E+03	.1657E+03	.1647E+03	.1984E+03	.1686E+03	.2311E+03
.1782E+03	.2825E+03	.1858E+03	.3239E+03	.1933E+03	.3777E+03
.1966E+03	.4179E+03				
282	2	23	8		
.8442E+02	.4232E+02	.8704E+02	.3194E+02	.9191E+02	.1517E+02
.9861E+02	.7186E+03	.1056E+03	.2236E+02	.1103E+03	.2675E+02
.1149E+03	.2435E+02	.1165E+03	.1637E+02	.1231E+03	.5569E+03
.1279E+03	.1158E+02	.1330E+03	.2754E+02	.1382E+03	.4830E+02
.1464E+03	.8224E+02	.1503E+03	.1010E+01	.1573E+03	.1329E+01
.1625E+03	.1581E+01	.1715E+03	.2032E+01	.1774E+03	.2339E+01
.1820E+03	.2551E+01	.1876E+03	.2890E+01	.1920E+03	.3114E+01
.1960E+03	.3125E+01	.1995E+03	.3557E+01		
284	1	2	1		
.6006E+02	.7006E+00	.2000E+03	.7014E+00		
284	2	2	1		
.5990E+02	.5005E+00	.1998E+03	.9005E+00		
284	3	2	1		
.6006E+02	.1202E+01	.1998E+03	.1202E+01		
284	4	2	1		
.5990E+02	.1596E+01	.1998E+03	.1597E+01		
285	2	21	7		
.7982E+02	.5190E+04	.9221E+02	.1118E+04	.8452E+02	.2475E+04
.8794E+02	.6228E+04	.9160E+02	.8862E+04	.9694E+02	.1198E+03
.1025E+03	.1405E+03	.1092E+03	.1597E+03	.1159E+03	.1693E+03
.1203E+03	.1717E+03	.1300E+03	.1693E+03	.1387E+03	.1549E+03
.1443E+03	.1341E+03	.1570E+03	.1078E+03	.1635E+03	.8313E+04
.1702E+03	.5908E+04	.1769E+03	.2954E+04	.1815E+03	.1338E+04
.1879E+03	.2395E+04	.1931E+03	.4790E+04	.1996E+03	.8713E+04
286	2	18	6		
.3013E+02	.3968E+02	.9507E+02	.4921E+02	.9016E+02	.6349E+02
.9462E+02	.7302E+02	.1010E+03	.8254E+02	.1094E+03	.9127E+02
.1166E+03	.9762E+02	.1211E+03	.9941E+02	.1294E+03	.9365E+02
.1385E+03	.8492E+02	.1458E+03	.7694E+02	.1557E+03	.6425E+02
.1643E+03	.5000E+02	.1769E+03	.2698E+02	.1827E+03	.8730E+03
.1912E+03	.1667E+02	.1978E+03	.3095E+02	.2002E+03	.4524E+02
287	2	18	6		
.7928E+02	.3913E+03	.8287E+02	.3443E+03	.8749E+02	.2741E+03
.9315E+02	.2139E+03	.9689E+02	.1702E+03	.1034E+03	.1261E+03
.1080E+03	.8907E+04	.1144E+03	.4692E+04	.1203E+03	.1431E+04
.1279E+03	.2386E+04	.1356E+03	.5089E+04	.1429E+03	.7078E+04
.1468E+03	.4509E+04	.1525E+03	.9622E+04	.1666E+03	.1201E+03
.1708E+03	.1344E+03	.1888E+03	.1471E+03	.2001E+03	.1495E+03
288	2	14	5		
.9466E+02	.1105E+01	.9119E+02	.6588E+02	.9709E+02	.6799E+02
.1065E+03	.4356E+02	.1175E+03	.1034E+02	.1275E+03	.1550E+02
.1376E+03	.3738E+02	.1492E+03	.5686E+02	.1617E+03	.8509E+02
.1711E+03	.1002E+01	.1812E+03	.1153E+01	.1927E+03	.1360E+01
.2001E+03	.1455E+01				
289	2	41	14		
.8045E+02	.3604E+03	.9236E+02	.2927E+03	.9459E+02	.2226E+03
.8618E+02	.1640E+03	.8849E+02	.1030E+03	.9072E+02	.3723E+04
.9223E+02	.7921E+04	.9431E+02	.5627E+04	.9614E+02	.8267E+04

.1947E+03	.2400E+03	.1064E+03	.2574E+03	.1062E+03	.2764E+03
.1107E+03	.2875E+03	.1128E+03	.2923E+03	.1149E+03	.2439E+03
.1176E+03	.2907E+03	.1196E+03	.2859E+03	.1277E+03	.2709E+03
.1237E+03	.2558E+03	.1259E+03	.2337E+03	.1336E+03	.2131E+03
.1295E+03	.1861E+03	.1309E+03	.1671E+03	.1392E+03	.1220E+03
.1358E+03	.7446E+04	.1377E+03	.4736E+04	.1440E+03	.1430E+04
.1409E+03	.2851E+04	.1424E+03	.7366E+04	.1513E+03	.1118E+03
.1463E+03	.1592E+03	.1481E+03	.2139E+03	.1587E+03	.2970E+03
.1536E+03	.3564E+03	.1561E+03	.4317E+03		
.1600E+03	.5410E+03	.1626E+03	.5949E+03		
	290	25	9		
.7994E+02	.9206E+02	.8352E+02	.5475E+02	.8527E+02	.3492E+02
.9766E+02	.1270E+02	.8949E+02	.8733E+02	.9307E+02	.4206E+02
.9850E+02	.6587E+02	.9904E+02	.6492E+02	.1024E+03	.1040E+01
.1059E+03	.1135E+01	.1091E+03	.1230E+01	.1124E+03	.1151E+01
.1172E+03	.1016E+01	.1212E+03	.7540E+02	.1249E+03	.4941E+02
.1293E+03	.1190E+02	.1325E+03	.1503E+02	.1376E+03	.6344E+02
.1456E+03	.1421E+01	.1534E+03	.2222E+01	.1607E+03	.2913E+01
.1664E+03	.3611E+01	.1734E+03	.4325E+01	.1760E+03	.4361E+01
.1812E+03	.5198E+01				
	291	26	5		
.4126E+02	.4427E+03	.8317E+02	.3593E+03	.8651E+02	.1517E+03
.9426E+02	.5980E+04	.9049E+02	.7984E+04	.9439E+02	.2914E+03
.9725E+02	.4351E+03	.1013E+03	.6063E+03	.1051E+03	.6986E+03
.1074E+03	.7425E+03	.1102E+03	.7565E+03	.1145E+03	.7465E+03
.1196E+03	.6587E+03	.1240E+03	.5429E+03	.1270E+03	.4591E+03
.1306E+03	.3313E+03	.1353E+03	.1557E+03	.1416E+03	.6367E+04
.1467E+03	.2675E+03	.1513E+03	.4631E+03	.1608E+03	.8743E+03
.1689E+03	.1210E+02	.1761E+03	.1549E+02	.1835E+03	.1888E+02
.1920E+03	.2248E+02	.1998E+03	.2607E+02		
	292	26	9		
.8002E+02	.3633E+01	.8312E+02	.2395E+01	.8710E+02	.6387E+02
.9076E+02	.5190E+02	.9451E+02	.1876E+01	.9831E+02	.3114E+01
.9914E+03	.3952E+01	.1046E+03	.4591E+01	.1068E+03	.4916E+01
.1049E+03	.5269E+01	.1134E+03	.5030E+01	.1174E+03	.4631E+01
.1229E+03	.3872E+01	.1269E+03	.3234E+01	.1303E+03	.2475E+01
.1338E+03	.1637E+01	.1372E+03	.7186E+02	.1426E+03	.4391E+02
.1486E+03	.2196E+01	.1544E+03	.3573E+01	.1621E+03	.5749E+01
.1693E+03	.7705E+01	.1785E+03	.1034E+01	.1833E+03	.1182E+00
.1914E+03	.1405E+00	.1994E+03	.1641E+00		
	294	2	1		
.5010E+02	.7014E+03	.2000E+03	.7014E+00		
	294	2	1		
.5042E+02	.5029E+00	.2002E+03	.9029E+00		
	294	2	1		
.5046E+02	.1204E+01	.2001E+03	.1204E+01		
	294	2	1		
.5994E+02	.1603E+01	.2002E+03	.1603E+01		
	295	30	10		
.7555E+02	.3406E+03	.8228E+02	.5703E+03	.8467E+02	.3188E+03
.9497E+02	.1267E+02	.9176E+02	.1491E+02	.9454E+02	.1671E+02
.9765E+02	.1909E+02	.9964E+02	.2059E+02	.1033E+03	.2273E+02
.1059E+03	.2321E+02	.1096E+03	.2392E+02	.1136E+03	.2376E+02
.1170E+03	.2257E+02	.1215E+03	.2020E+02	.1247E+03	.1806E+02
.1294E+03	.1442E+02	.1344E+03	.9663E+03	.1382E+03	.6495E+02
.1419E+03	.2614E+03	.1458E+03	.2059E+03	.1509E+03	.7129E+03
.1576E+03	.1552E+02	.1629E+03	.2186E+02	.1702E+03	.3065E+02
.1771E+03	.3976E+02	.1816E+03	.9491E+02	.1872E+03	.5228E+02
.1917E+03	.5798E+02	.1956E+03	.6295E+02	.1994E+03	.6141E+02
	296	22	8		
.9041E+02	.3794E+01	.3839E+02	.6877E+01	.9390E+02	.8196E+01
.1012E+03	.1115E+00	.1057E+03	.1178E+00	.1094E+03	.1217E+00
.1157E+03	.1862E+00	.1189E+03	.1115E+00	.1225E+03	.1012E+00
.1272E+03	.8538E+01	.1311E+03	.6640E+01	.1354E+03	.5136E+01
.1414E+03	.2213E+01	.1402E+03	.1107E+01	.1571E+03	.4980E+01
.1541E+03	.5177E+01			.1774E+03	.1774E+01

1744E+03	-2063E+02	1702E+03	-2531E+01	1960E+03	-2933E+00
1999E+03	-5209E+00	20	7		
297					
7495E+02	-2151E-02	6290E+02	-2207E-02	8577E+02	-2255E-02
9024E+02	-2191E-02	9664E+02	-2143E-02	1002E+03	-2048E-02
1003E+03	-1745E-02	1133E+03	-1506E-02	1267E+03	-7570E-03
1303E+03	-4781E-03	1345E+03	-1594E-03	1301E+03	1355E-03
1449E+03	7570E-03	1515E+03	1363E-02	1508E+03	2024E-02
1600E+03	2092E-02	1748E+03	3602E-02	1617E+03	4311E-02
1894E+03	5004E-02	2001E+03	6191E-02		
298		19	7		
8011E+02	6508E-01	8577E+02	7143E-01	9310E+02	8016E-01
9989E+02	6571E-01	1045E+03	9206E-01	1102E+03	9040E-01
1162E+03	7648E-01	1221E+03	6429E-01	1306E+03	4286E-01
1354E+03	2381E-01	1440E+03	6349E-02	1513E+03	3175E-01
1578E+03	-6270E-01	1600E+03	-1079E+00	1750E+03	-1421E+00
1832E+03	-1841E+00	1910E+03	-2278E+00	1957E+03	-2540E+00
1999E+03	-2762E+00				
299		25	9		
7492E+02	5413E-03	8428E+02	-9552E-04	8715E+02	-5174E-03
9200E+02	-1174E-02	9829E+02	-1910E-02	1030E+03	-2348E-02
1071E+03	-2468E-02	1094E+03	-2563E-02	1110E+03	-2643E-02
1144E+03	-2587E-02	1191E+03	-2348E-02	1226E+03	-2094E-02
1266E+03	-1831E-02	1285E+03	-1705E-02	1320E+03	-7493E-03
1360E+03	-3552E-04	1412E+03	7323E-03	1452E+03	1713E-02
1499E+03	2434E-02	1538E+03	3781E-02	1563E+03	4410E-02
1601E+03	5294E-02	1642E+03	6297E-02	1676E+03	7369E-02
1710E+03	7360E-02				
300		26	9		
7494E+02	-2367E-01	8432E+02	1026E-01	9007E+02	4477E-01
9171E+02	8757E-01	1009E+03	1034E+00	1041E+03	1120E+00
1071E+03	1152E+03	1090E+03	1207E+00	1132E+03	1113E+00
1172E+03	1097E+00	1195E+03	9310E-01	1236E+03	7179E-01
1264E+03	4970E-01	1295E+03	2209E-01	1333E+03	-1163E-01
1371E+03	-4497E-01	1412E+03	-8000E-01	1473E+03	-1460E+00
1543E+03	-2193E+00	1591E+03	-2682E+00	1657E+03	-3432E+00
1715E+03	-4087E+00	1789E+03	4076E+00	1863E+03	-5767E+00
1830E+03	-6477E+00	1999E+03	-7798E+00		
301		42	14		
5000E+00	-6786E-03	5521E+00	-6786E-03	6006E+00	-9980E-03
6531E+00	-1038E-02	6909E+00	-8383E-03	7478E+00	-1477E-02
8003E+00	-1036E-02	8341E+00	-2355E-02	8616E+00	-2794E-02
8522E+00	-3513E-02	9212E+00	-4591E-02	9491E+00	-6060E-02
9678E+00	-7265E-02	9861E+00	-8463E-02	1012E+01	-1066E-01
1025E+01	-1162E-01	1039E+01	-1341E-01	1051E+01	-1449E-01
1065E+01	-1561E-01	1075E+01	-1621E-01	1080E+01	-1665E-01
1105E+01	-1737E-01	1113E+01	-1733E-01	1130E+01	-1637E-01
1181E+01	-1477E-01	1181E+01	-1349E-01	1208E+01	-1234E-01
1239E+01	-1074E-01	1277E+01	-9501E-02	1314E+01	-9263E-02
1346E+01	-7345E-02	1368E+01	-6747E-02	1433E+01	-5190E-02
1473E+01	-4511E-02	1507E+01	-8072E-02	1558E+01	-3713E-02
1590E+01	-2914E-02	1648E+01	-2675E-02	1713E+01	-2275E-02
1796E+01	-2156E-02	1898E+01	-1916E-02	2006E+01	-1717E-02
302		61	21		
5000E+00	6178E-02	4956E+00	6139E-02	5476E+00	6059E-02
5980E+00	5703E-02	6486E+00	5023E-02	6976E+00	5901E-02
7470E+00	5980E-02	7904E+00	6297E-02	8506E+00	6733E-02
8689E+00	7248E-02	8613E+00	7406E-02	9028E+00	7446E-02
9544E+00	7287E-02	9227E+00	5693E-02	9327E+00	6099E-02
9458E+00	4871E-02	9538E+00	5881E-02	9661E+00	2653E-02
9793E+00	8713E-03	9912E+00	-7525E-03	9984E+00	-2139E-02
1008E+01	-3406E-02	1015E+01	-4911E-02	1021E+01	-5743E-02
1030E+01	-7166E-02	1039E+01	-7842E-02	1047E+01	-8277E-02
1059E+01	-8634E-02	1074E+01	-8396E-02	1086E+01	-8119E-02
1096E+01	-7564E-02	1110E+01	-5535E-02	1119E+01	-5713E-02
1133E+01	-4394E-02	1145E+01	-2674E-02	1153E+01	-1744E-02

194E+00	1074E-01	930E+00	1373E-01	431E+00	503E-01
954E+00	150E-01	973E+00	1373E-01	954E+00	125E-01
100E+01	112E-01	102E+01	1024E-01	1053E+01	809E-02
100E+01	112E-01	102E+01	1024E-01	1053E+01	809E-02
115E+01	692E-02	117E+01	674E-02	112E+01	567E-02
123E+01	357E-02	126E+01	337E-02	120E+01	404E-02
134E+01	313E-02	133E+01	313E-02	129E+01	313E-02
149E+01	293E-02	160E+01	293E-02	144E+01	297E-02
179E+01	269E-02	199E+01	269E-02	169E+01	277E-02
200E+01	254E-02	200E+01	254E-02	194E+01	257E-02
304	1	38	13	13	
500E+00	183E-01	549E+00	181E-01	601E+00	100E-01
500E+00	183E-01	549E+00	181E-01	601E+00	100E-01
796E+00	173E-01	796E+00	173E-01	796E+00	173E-01
949E+00	156E-01	100E+01	149E-01	102E+01	142E-01
103E+01	139E-01	103E+01	139E-01	107E+01	127E-01
109E+01	113E-01	110E+01	102E-01	112E+01	856E-02
114E+01	677E-02	117E+01	342E-02	119E+01	155E-02
120E+01	358E-03	121E+01	376E-03	123E+01	171E-02
125E+01	259E-02	127E+01	336E-02	129E+01	402E-02
131E+01	474E-02	135E+01	576E-02	138E+01	661E-02
143E+01	741E-02	149E+01	956E-02	150E+01	924E-02
160E+01	580E-02	170E+01	106E-01	155E+01	924E-02
190E+01	108E-01	200E+01	108E-01	180E+01	109E-01
304	2	35	12	12	
500E+00	540E-02	551E+00	924E-02	599E+00	890E-02
546E+00	826E-02	590E+00	820E-02	749E+00	772E-02
799E+00	713E-02	950E+00	613E-02	900E+00	541E-02
949E+00	434E-02	994E+00	318E-02	105E+01	159E-02
107E+01	438E-03	110E+01	438E-03	117E+01	916E-03
114E+01	247E-02	116E+01	350E-02	119E+01	402E-02
119E+01	466E-02	121E+01	494E-02	124E+01	506E-02
130E+01	529E-02	140E+01	621E-02	147E+01	649E-02
150E+01	697E-02	151E+01	725E-02	160E+01	753E-02
165E+01	733E-02	170E+01	761E-02	175E+01	772E-02
180E+01	757E-02	184E+01	764E-02	189E+01	757E-02
195E+01	757E-02	200E+01	733E-02	190E+01	757E-02
304	3	42	14	14	
500E+00	757E-03	550E+00	796E-03	600E+00	996E-03
533E+00	119E-02	651E+00	151E-02	681E+00	175E-02
717E+00	270E-02	740E+00	386E-02	771E+00	454E-02
797E+00	581E-02	819E+00	705E-02	834E+00	932E-02
853E+00	552E-02	867E+00	114E-01	877E+00	126E-01
886E+00	135E-01	891E+00	145E-01	904E+00	156E-01
912E+00	159E-01	927E+00	162E-01	949E+00	159E-01
970E+00	147E-01	103E+01	127E-01	105E+01	122E-01
1079E+01	109E-01	113E+01	103E-01	119E+01	932E-02
1250E+01	856E-02	130E+01	792E-02	1350E+01	725E-02
1402E+01	653E-02	146E+01	597E-02	1520E+01	565E-02
1566E+01	510E-02	167E+01	470E-02	1693E+01	418E-02
1754E+01	350E-02	179E+01	350E-02	184E+01	311E-02
1898E+01	270E-02	195E+01	262E-02	200E+01	239E-02
305	1	61	21	21	
500E+00	217E+00	551E+00	222E+00	581E+00	224E+00
608E+00	230E+00	642E+00	232E+00	672E+00	237E+00
702E+00	244E+00	736E+00	255E+00	776E+00	266E+00
802E+00	275E+00	837E+00	291E+00	855E+00	303E+00
882E+00	321E+00	903E+00	340E+00	921E+00	362E+00
941E+00	387E+00	956E+00	418E+00	971E+00	454E+00
944E+00	405E+00	994E+00	523E+00	100E+01	551E+00
1006E+01	579E+00	101E+01	610E+00	101E+01	644E+00
1019E+01	636E+00	102E+01	674E+00	102E+01	695E+00
1032E+01	695E+00	103E+01	702E+00	104E+01	707E+00
1054E+01	710E+00	106E+01	710E+00	108E+01	710E+00
1094E+01	706E+00	110E+01	732E+00	111E+01	694E+00
1156E+01	897E+00	115E+01	757E+00	115E+01	897E+00

1178E+01	550E+00	1195E+01	5341E+00	1217E+01	6087E+00
1244E+01	5004E+00	1272E+01	5552E+00	1299E+01	5267E+00
1338E+01	4913E+00	1372E+01	6335E+00	1411E+01	4320E+00
1450E+01	3994E+00	1408E+01	4739E+00	1541E+01	3425E+00
1505E+01	3198E+00	1630E+01	3015E+00	1676E+01	2852E+00
1742E+01	2693E+00	1793E+01	2622E+00	1841E+01	2550E+00
1804E+01	2494E+00	1921E+01	2455E+00	1963E+01	2411E+00
2000E+01	2367E+00				
305					
500E+00	1798E+00	54	1842E+00	5846E+00	1458E+00
6165E+00	1902E+00	5432E+00	1957E+00	6937E+00	2049E+00
7435E+00	2128E+00	6583E+00	2256E+00	8319E+00	2395E+00
8626E+00	2546E+00	7861E+00	2765E+00	9164E+00	2940E+00
9335E+00	3127E+00	8945E+00	3363E+00	9681E+00	3544E+00
9813E+00	3907E+00	9534E+00	4284E+00	1010E+01	4674E+00
1020E+01	5116E+00	9972E+00	5717E+00	1034E+01	6051E+00
1038E+01	6210E+00	1029E+01	6353E+00	1056E+01	6449E+00
1066E+01	6520E+00	1047E+01	6556E+00	1082E+01	6566E+00
1098E+01	6544E+00	1076E+01	6556E+00	1130E+01	6365E+00
1144E+01	6218E+00	1114E+01	6472E+00	1130E+01	6365E+00
1195E+01	5581E+00	1159E+01	6047E+00	1178E+01	5824E+00
1274E+01	4722E+00	1215E+01	5395E+00	1244E+01	5064E+00
1375E+01	3831E+00	1308E+01	4304E+00	1342E+01	4111E+00
1403E+01	3194E+00	1409E+01	3596E+00	1445E+01	3377E+00
1629E+01	2725E+00	1526E+01	3011E+00	1566E+01	2868E+00
1818E+01	2379E+00	1700E+01	2570E+00	1767E+01	2439E+00
1931E+01	2275E+00	1849E+01	2363E+00	1890E+01	2319E+00
305		1970E+01	2244E+00	2000E+01	2232E+00
500E+00	1508E+00	63	1532E+00	5826E+00	1563E+00
6117E+00	1575E+00	5405E+00	1619E+00	6894E+00	1691E+00
7340E+00	1754E+00	6452E+00	1842E+00	8196E+00	1953E+00
8574E+00	2077E+00	7782E+00	2256E+00	9160E+00	2466E+00
9371E+00	2697E+00	8881E+00	2900E+00	9677E+00	3159E+00
1015E+01	3421E+00	9538E+00	3684E+00	1004E+01	3342E+00
1036E+01	4300E+00	9936E+00	4563E+00	1030E+01	4921E+00
1046E+01	5183E+00	1022E+01	5442E+00	1042E+01	5613E+00
1070E+01	5908E+00	1039E+01	5828E+00	1062E+01	5872E+00
1106E+01	5844E+00	1054E+01	5931E+00	1094E+01	5896E+00
1132E+01	5633E+00	1079E+01	5792E+00	1123E+01	5728E+00
1164E+01	5215E+00	1114E+01	5494E+00	1151E+01	5374E+00
1208E+01	4523E+00	1143E+01	4945E+00	1195E+01	4690E+00
1272E+01	3851E+00	1179E+01	4225E+00	1251E+01	4062E+00
1348E+01	3302E+00	1236E+01	3648E+00	1323E+01	3465E+00
1378E+01	2952E+00	1294E+01	3171E+00	1404E+01	3079E+00
1438E+01	2653E+00	1377E+01	2848E+00	1511E+01	2737E+00
1508E+01	2347E+00	1401E+01	2526E+00	1511E+01	2737E+00
1675E+01	2216E+00	1595E+01	2291E+00	1647E+01	2431E+00
1801E+01	2061E+00	1720E+01	2176E+00	1755E+01	2264E+00
1818E+01	2061E+00	1836E+01	2041E+00	1881E+01	2104E+00
305		1960E+01	2041E+00	2000E+01	1981E+00
500E+00	1261E+00	68	1273E+00	6029E+00	1309E+00
6714E+00	1325E+00	5452E+00	1352E+00	7718E+00	1428E+00
8104E+00	1464E+00	7129E+00	1563E+00	8629E+00	1687E+00
9729E+00	2470E+00	8511E+00	2065E+00	9582E+00	2264E+00
1009E+01	3286E+00	9407E+00	2735E+00	9988E+00	3015E+00
1033E+01	4237E+00	9881E+00	3522E+00	1027E+01	3326E+00
1043E+01	4841E+00	1019E+01	4452E+00	1040E+01	4638E+00
1050E+01	5287E+00	1037E+01	5040E+00	1046E+01	5124E+00
1066E+01	5402E+00	1046E+01	5287E+00	1059E+01	5355E+00
1082E+01	5410E+00	1055E+01	5410E+00	1080E+01	5422E+00
1124E+01	5275E+00	1104E+01	5376E+00	1115E+01	5319E+00
1146E+01	5032E+00	1144E+01	5219E+00	1138E+01	5152E+00
1167E+01	4571E+00	1131E+01	4881E+00	1161E+01	4722E+00
1190E+01	4066E+00	1153E+01	4681E+00	1161E+01	4237E+00
1212E+01	3644E+00	1173E+01	4365E+00	1181E+01	3815E+00
		1194E+01	3954E+00	1203E+01	3342E+00
		1223E+01	3637E+00	1237E+01	3342E+00

1450E+01	1264E+01	5123E+00	1244E+01	3315E+00
1306E+01	1335E+01	2745E+00	1369E+01	2626E+00
1419E+01	1460E+01	2375E+00	1497E+01	2315E+00
1551E+01	1605E+01	2136E+00	1656E+01	2861E+00
1715E+01	1765E+01	1965E+00	1814E+01	1937E+00
1856E+01	1902E+01	1870E+00	1939E+01	1866E+00
1973E+01	2000E+01	1810E+00		
5000E+00	5472E+00	9349E-01	5934E+00	9269E-01
6428E+00	6910E+00	9269E-01	7264E+00	9468E-01
7758E+00	8061E+00	9985E-01	8339E+00	1042E+00
8491E+00	8666E+00	1138E+00	8945E+00	1229E+00
9128E+00	9311E+00	1488E+00	9738E+00	1579E+00
9542E+00	1070E+00	1878E+00	10765E+00	2061E+00
9885E+00	9988E+00	2510E+00	1009E+01	2765E+00
1014E+01	1021E+01	3171E+00	1026E+01	3365E+00
1030E+01	1035E+01	3767E+00	1040E+01	4042E+00
1043E+01	1044E+01	4352E+00	1045E+01	4452E+00
1047E+01	1049E+01	4635E+00	1052E+01	4694E+00
1057E+01	1063E+01	4886E+00	1070E+01	4849E+00
1081E+01	1097E+01	4849E+00	1109E+01	4906E+00
1113E+01	1125E+01	4674E+00	1127E+01	4658E+00
1135E+01	1141E+01	4432E+00	1145E+01	4348E+00
1153E+01	1160E+01	3807E+00	1184E+01	3672E+00
1173E+01	1181E+01	3305E+00	1222E+01	3143E+00
1197E+01	1204E+01	2860E+00	1222E+01	2749E+00
1222E+01	1232E+01	2586E+00	1248E+01	2526E+00
1274E+01	1295E+01	2359E+00	1316E+01	2319E+00
1346E+01	1391E+01	2184E+00	1422E+01	2148E+00
1477E+01	1512E+01	2053E+00	1563E+01	2005E+00
1611E+01	1661E+01	1921E+00	1701E+01	1878E+00
1750E+01	1798E+01	1770E+00	1833E+01	1738E+00
1854E+01	1943E+01	1647E+00	1956E+01	1623E+00
1928E+01	2000E+01	1579E+00		
5000E+00	5496E+00	6246E-01	5998E+00	6007E-01
6491E+00	6993E+00	5848E-01	7527E+00	5848E-01
8029E+00	8535E+00	6166E-01	8690E+00	6405E-01
9383E+00	9763E-01	7240E-01	9247E+00	7797E-01
9773E+00	9992E+00	9065E-01	9665E+00	1109E+00
1012E+01	1016E+01	1533E+00	1005E+01	1802E+00
1031E+01	1037E+01	2200E+00	1023E+01	2415E+00
1047E+01	1049E+01	2956E+00	1044E+01	3381E+00
1055E+01	1061E+01	3755E+00	1052E+01	3863E+00
1074E+01	1084E+01	4042E+00	1066E+01	4002E+00
1112E+01	1123E+01	4145E+00	1098E+01	4141E+00
1141E+01	1146E+01	4034E+00	1134E+01	3914E+00
1158E+01	1164E+01	3700E+00	1154E+01	3537E+00
1175E+01	1179E+01	3167E+00	1169E+01	2852E+00
1194E+01	1205E+01	2435E+00	1187E+01	2272E+00
1237E+01	1258E+01	2069E+00	1215E+01	1985E+00
1331E+01	1379E+01	1862E+00	1234E+01	1794E+00
1401E+01	1534E+01	1639E+00	1431E+01	1695E+00
1481E+01	1671E+00	1639E+00	1599E+01	1607E+00
1644E+01	1567E+00	1639E+00	1755E+01	1524E+00
1802E+01	1850E+01	1472E+00	1900E+01	1452E+00
1933E+01	2000E+01	1364E+00		
5000E+00	5429E+00	9215E-01	5756E+00	8692E-01
5587E+00	6298E+00	9772E-01	6490E+00	9592E-01
6801E+00	7016E+00	9500E-01	7176E+00	7150E-01
7357E+00	7495E+00	3257E-01	7623E+00	1033E-01
7734E+00	7862E+00	3496E-01	7986E+00	6117E-01
8045E+00	8237E+00	1160E+00	8396E+00	1557E+00
8652E+00	8867E+00	2677E+00	9003E+00	3351E+00
9258E+00	9419E+00	6119E+00	9577E+00	6605E+00

725E+00	-402E+00	-132E+00	944E+00	-515E+00
100E+01	1016E+01	-566E+00	1028E+01	-5839E+00
1041E+01	1047E+01	-5927E+00	1100E+01	-5982E+00
1076E+01	1092E+01	-5831E+00	1102E+01	-5760E+00
1121E+01	1142E+01	-5291E+00	1172E+01	-4886E+00
1193E+01	1216E+01	-4231E+00	1249E+01	-3925E+00
1276E+01	1311E+01	-3281E+00	1349E+01	-3059E+00
1386E+01	1416E+01	-2645E+00	1454E+01	-2495E+00
1496E+01	1541E+01	-2243E+00	1585E+01	-2169E+00
1635E+01	1650E+01	-2042E+00	1700E+01	-2042E+00
1753E+01	1833E+01	-2010E+00	1899E+01	-1954E+00
1951E+01	2000E+01	-1970E+00		
306	54	18		
500E+00	5381E+00	7627E-01	5844E+00	8024E-01
6107E+00	6474E+00	7865E-01	6773E+00	7706E-01
6961E+00	7335E+00	5402E-01	7631E+00	5463E-01
7795E+00	7978E+00	-1986E-01	8253E+00	-5799E-01
8568E+00	8751E+00	-1365E+00	8971E+00	-1724E+00
9083E+00	9254E+00	-2336E+00	9406E+00	-2661E+00
9565E+00	9705E+00	-3212E+00	9817E+00	-3535E+00
9952E+00	1006E+01	-3940E+00	1020E+01	-4107E+00
1034E+01	1042E+01	-4278E+00	1053E+01	-4314E+00
1069E+01	1085E+01	-4179E+00	1095E+01	-4091E+00
1098E+01	1118E+01	-3766E+00	1127E+01	-3646E+00
1137E+01	1155E+01	-3281E+00	1179E+01	-3011E+00
1202E+01	1225E+01	-2661E+00	1255E+01	-2471E+00
1284E+01	1307E+01	-2173E+00	1344E+01	-2018E+00
1383E+01	1427E+01	-1700E+00	1470E+01	-1573E+00
1513E+01	1554E+01	-1454E+00	1571E+01	-1406E+00
1639E+01	1702E+01	-1343E+00	1753E+01	-1327E+00
1830E+01	1907E+01	-1311E+00	2000E+01	-1300E+00
306	45	15		
500E+00	5449E+00	6435E-01	5792E+00	6673E-01
6115E+00	6470E+00	6594E-01	6893E+00	6276E-01
7260E+00	7491E+00	4131E-01	7655E+00	3019E-01
7815E+00	7986E+00	7150E-02	8157E+00	-9533E-02
8377E+00	8668E+00	-5561E-01	8943E+00	-8559E-01
9134E+00	9394E+00	-1358E+00	9577E+00	-1613E+00
9824E+00	1006E+01	-2081E+00	1017E+01	-2177E+00
1033E+01	1044E+01	-2328E+00	1059E+01	-2344E+00
1077E+01	1093E+01	-2258E+00	1100E+01	-2209E+00
1130E+01	1146E+01	-1772E+00	1162E+01	-1644E+00
1175E+01	1237E+01	-1176E+00	1256E+01	-1112E+00
1273E+01	1306E+01	-9613E-01	1349E+01	-8739E-01
1397E+01	1445E+01	-7309E-01	1500E+01	-6832E-01
1558E+01	1610E+01	-6197E-01	1702E+01	-6276E-01
1803E+01	1901E+01	-5720E-01	2000E+01	-5799E-01
306	32	11		
500E+00	5501E+00	3178E-02	5983E+00	2383E-02
6478E+00	6992E+00	-3972E-02	7423E+00	-1192E-01
7667E+00	8101E+00	-2066E-01	8596E+00	-3257E-01
8507E+00	9222E+00	-4926E-01	9521E+00	-5799E-01
9733E+00	1005E+01	-7468E-01	1030E+01	-7706E-01
1050E+01	1075E+01	-7547E-01	1099E+01	-7229E-01
1134E+01	1156E+01	-5561E-01	1188E+01	-4926E-01
1213E+01	1248E+01	-4211E-01	1301E+01	-3972E-01
1339E+01	1400E+01	-3734E-01	1499E+01	-3734E-01
1601E+01	1701E+01	-3734E-01	1805E+01	-3734E-01
1901E+01	2000E+01	-3734E-01		
307	47	16		
500E+00	5309E+00	6514E-01	5616E+00	6991E-01
5939E+00	6210E+00	7071E-01	6477E+00	7971E-01
6772E+00	7011E+00	6514E-01	7262E+00	5561E-01
7477E+00	7704E+00	2622E-01	7991E+00	3972E-02
8187E+00	8390E+00	-2939E-01	8533E+00	-4687E-01
8820E+00	9000E+00	-2939E-01	9195E+00	-1208E-01

3402E+00	-1.70E+00	9601E+00	-1755E+00	916E+00	-1954E+00
1014E+01	-2161E+00	1039E+01	-2325E+00	1051E+01	-2367E+00
1056E+01	-2375E+00	1077E+01	-2352E+00	1093E+01	-2272E+00
1100E+01	-2244E+00	1130E+01	-1970E+00	1146E+01	-1027E+00
1158E+01	-2700E+00	1169E+01	-1589E+00	1230E+01	-1200E+00
1271E+01	-3104E+00	1306E+01	-1009E+00	131E+01	-954E+01
1373E+01	-3136E+01	1430E+01	-8262E+01	1495E+01	-7229E+01
1500E+01	-7150E+01	1591E+01	-6673E+01	1652E+01	-6276E+01
1703E+01	-3958E+01	1801E+01	-5879E+01	1853E+01	-5799E+01
1902E+01	-5799E+01	2000E+01	-5799E+01		
307	2	33	11		
5800E+00	0	5990E+00	-7944E+03	6517E+00	-7944E+03
7011E+00	-2303E+02	7425E+00	-5561E+02	7736E+00	-9533E+02
8043E+00	-1740E+01	8414E+00	-2701E+01	8633E+00	-3019E+01
8872E+00	-3972E+01	9255E+00	-5482E+01	9601E+00	-6753E+01
9528E+00	-7065E+01	1026E+01	-7865E+01	1055E+01	-7944E+01
1077E+01	-7065E+01	1100E+01	-7786E+01	1137E+01	-6832E+01
1154E+01	-6830E+01	1197E+01	-5482E+01	1229E+01	-4767E+01
1259E+01	-5228E+01	1289E+01	-4131E+01	131E+01	-3972E+01
1349E+01	-3972E+01	1398E+01	-4052E+01	1450E+01	-4052E+01
1500E+01	-4052E+01	1599E+01	-4052E+01	1701E+01	-4052E+01
1801E+01	-4052E+01	1900E+01	-4052E+01	2000E+01	-4052E+01
307	3	41	14		
5000E+00	-1239E+00	5496E+00	-1255E+00	5783E+00	-1255E+00
6500E+00	-1239E+00	6509E+00	-1239E+00	6756E+00	-1231E+00
6967E+00	-1184E+00	7090E+00	-1160E+00	7266E+00	-1096E+00
7497E+00	-1009E+00	7900E+00	-7468E+01	8143E+00	-5720E+01
8346E+00	-8211E+01	8685E+00	-1430E+01	8948E+00	-7150E+02
9267E+00	-3734E+01	9605E+00	-6753E+01	9853E+00	-8262E+01
1017E+01	-1001E+00	1042E+01	-1089E+00	1063E+01	-1144E+00
1099E+01	-1144E+00	1139E+01	-1124E+00	1168E+01	-1080E+00
1210E+01	-1017E+00	1248E+01	-9374E+01	1299E+01	-8262E+01
1348E+01	-6912E+01	1387E+01	-5879E+01	1426E+01	-4687E+01
1463E+01	-3734E+01	1511E+01	-2060E+01	1555E+01	-2066E+01
1607E+01	-1271E+01	1634E+01	-6355E+02	1704E+01	-7944E+03
1775E+01	-6355E+02	1814E+01	-1112E+01	1851E+01	-1430E+01
1900E+01	-1827E+01	2000E+01	-1827E+01		
307	4	46	16		
5000E+00	-2447E+00	5500E+00	-2463E+00	6014E+00	-2455E+00
6353E+00	-2439E+00	6692E+00	-2352E+00	7043E+00	-2256E+00
7794E+00	-2066E+00	7545E+00	-1827E+00	7680E+00	-1621E+00
8322E+00	-1422E+00	8234E+00	-8262E+01	8434E+00	-4846E+01
8657E+00	-7944E+02	8836E+00	-2701E+01	9115E+00	-8262E+01
9426E+00	-1438E+00	9570E+00	-1716E+00	9757E+00	-2050E+00
9916E+00	-2296E+00	1004E+01	-2487E+00	1016E+01	-2606E+00
1020E+01	-2693E+00	1030E+01	-2741E+00	1055E+01	-2773E+00
1075E+01	-2765E+00	1098E+01	-2677E+00	1143E+01	-2423E+00
1176E+01	-2216E+00	1202E+01	-2050E+00	1220E+01	-1851E+00
1250E+01	-1700E+00	1279E+01	-1486E+00	1319E+01	-1287E+00
1355E+01	-1112E+00	1394E+01	-9374E+01	1441E+01	-8024E+01
1497E+01	-6356E+01	1537E+01	-5243E+01	1596E+01	-4052E+01
1650E+01	-3257E+01	1709E+01	-2622E+01	1773E+01	-1748E+01
1836E+01	-1271E+01	1891E+01	-3972E+02	1953E+01	-2363E+02
2000E+01	1	21	7		
4954E+01	1984E+00	5840E+01	-1925E+00	6717E+01	-1885E+00
7435E+01	-1825E+00	8049E+01	-1726E+00	8959E+01	-1488E+00
9597E+01	-1409E+00	1017E+00	-1310E+00	1076E+00	-1131E+00
1155E+00	-9127E+01	1217E+00	-6548E+01	1261E+00	-4563E+01
1491E+00	-2770E+01	1317E+00	-1786E+01	1343E+00	-5952E+02
1822E+00	0	1538E+00	0	1612E+00	0
1822E+00	0	2002E+00	0	1000E+01	0
308	2	33	11		
4954E+01	1613E+01	6055E+01	-1603E+01	6869E+01	-1587E+01
7770E+01	-1585E+01	8815E+01	-1565E+01	9613E+01	-1514E+01
1017E+00	-4744E+01	1099E+00	-1406E+01	1159E+01	-1426E+01

1217E+00	1242E+01	1271E+00	1165E+01	1324E+00	1035E+01
1367E+00	5940E+00	1404E+00	9187E+00	1460E+00	8175E+00
1502E+00	7262E+00	1534E+00	6409E+00	1578E+00	5357E+00
1617E+00	4664E+00	1664E+00	3611E+00	1694E+00	2837E+00
1712E+00	2341E+00	1745E+00	1885E+00	1772E+00	1429E+00
1804E+00	5921E-01	1838E+00	6151E-01	1871E+00	3571E-01
1889E+00	1984E-01	1910E+00	1786E-01	1938E+00	0.
1978E+00	0.	2002E+00	0.	1000E+01	0.
308	3	29	10	0.	0.
4986E-01	6627E+00	5927E-01	6607E+00	6785E-01	6587E+00
7252E-01	6607E+00	7802E-01	6567E+00	8377E-01	6448E+00
9095E-01	6290E+00	9725E-01	6052E+00	1025E+00	5453E+00
1075E+00	5536E+00	1118E+00	5357E+00	1181E+00	4901E+00
1223E+00	4583E+00	1272E+00	4167E+00	1320E+00	3690E+00
1369E+00	3115E+00	1409E+00	2639E+00	1458E+00	1885E+00
1481E+00	1508E+00	1509E+00	1071E+00	1536E+00	7738E-01
1564E+00	4563E-01	1588E+00	2187E-01	1606E+00	9921E-02
1615E+00	0.	1703E+00	0.	1809E+00	0.
2003E+00	0.	1000E+01	0.	0.	0.
308	4	25	5	0.	0.
4946E-01	3571E+00	5967E-01	3571E+00	6733E-01	3512E+00
7411E-01	3413E+00	8145E-01	3353E+00	8831E-01	3353E+00
9438E-01	2095E+00	1024E+00	2817E+00	1094E+00	2579E+00
1165E+00	2282E+00	1211E+00	1905E+00	1258E+00	1647E+00
1265E+00	1647E+00	1279E+00	1290E+00	1330E+00	954E-01
1358E+00	8532E-01	1379E+00	4960E-01	1406E+00	2381E-01
1422E+00	1587E-01	1436E+00	0.	1540E+00	0.
1649E+00	0.	1801E+00	0.	2003E+00	0.
1000E+01	0.	0.	0.	0.	0.
309	1	44	15	0.	0.
5004E+00	3181E-03	5466E+00	3181E-03	5980E+00	3181E-03
6978E+00	3181E-03	7988E+00	3181E-03	8514E+00	3181E-03
8805E+00	3181E-03	8976E+00	3181E-03	9112E+00	3181E-03
9207E+00	3519E-03	9398E+00	4016E-03	9546E+00	4632E-03
9709E+00	5189E-03	9876E+00	5805E-03	1005E+01	6561E-03
1029E+01	7276E-03	1056E+01	8171E-03	1078E+01	8787E-03
1097E+01	9245E-03	1117E+01	9583E-03	1142E+01	9920E-03
1159E+01	1010E-02	1171E+01	1006E-02	1194E+01	1022E-02
1223E+01	1806E-02	1257E+01	9801E-03	1294E+01	9622E-03
1330E+01	9125E-03	1378E+01	8211E-03	1420E+01	7256E-03
1453E+01	6561E-03	1508E+01	5209E-03	1542E+01	4414E-03
1578E+01	3797E-03	1605E+01	3308E-03	1643E+01	2863E-03
1685E+01	2565E-03	1742E+01	2087E-03	1773E+01	1789E-03
1828E+01	1531E-03	1859E+01	1431E-03	1906E+01	1252E-03
1958E+01	1173E-03	2000E+01	1173E-03	0.	0.
310	1	55	19	0.	0.
5080E+00	7281E-02	5474E+00	7341E-02	5997E+00	7361E-02
6487E+00	7401E-02	6786E+00	7460E-02	7081E+00	7460E-02
7364E+00	7560E-02	7648E+00	7619E-02	7811E+00	7658E-02
8026E+00	7798E-02	8278E+00	7917E-02	8561E+00	8135E-02
8868E+00	8333E-02	9135E+00	8671E-02	9350E+00	8909E-02
9510E+00	9067E-02	9697E+00	9444E-02	9888E+00	9722E-02
1009E+01	1082E-01	1017E+01	1010E-01	1025E+01	1022E-01
1038E+01	1830E-01	1050E+01	1038E-01	1065E+01	1032E-01
1078E+01	1920E-01	1091E+01	1010E-01	1103E+01	9821E-02
1120E+01	9563E-02	1130E+01	9266E-02	1146E+01	8909E-02
1165E+01	8611E-02	1172E+01	8373E-02	1187E+01	8175E-02
1198E+01	8056E-02	1210E+01	7857E-02	1224E+01	7659E-02
1242E+01	7619E-02	1259E+01	7440E-02	1286E+01	7321E-02
1308E+01	7163E-02	1341E+01	7103E-02	1366E+01	6905E-02
1409E+01	6786E-02	1439E+01	6687E-02	1503E+01	6488E-02
1557E+01	6329E-02	1611E+01	6290E-02	1672E+01	6131E-02
1720E+01	6052E-02	1768E+01	5913E-02	1814E+01	5744E-02
1868E+01	5754E-02	1917E+01	5675E-02	1963E+01	5635E-02
2000E+01	5635E-02	0.	0.	0.	0.
310	2	57	19	0.	0.

.500E+00	-.117E-03	.585E+01	-.117E-03	.557E+00	-.121E-03
.698E+00	-.115E-03	.719E+00	-.115E-03	.739E+00	-.103E-03
.761E+00	-.115E-04	.786E+00	-.115E-04	.802E+00	-.795E-05
.815E+00	.278E-04	.845E+00	.119E-03	.868E+00	.218E-03
.881E+00	.272E-03	.908E+00	.369E-03	.927E+00	.516E-03
.950E+00	.660E-03	.975E+00	.797E-03	.993E+00	.928E-03
.100E+01	.598E-03	.101E+01	.107E-02	.103E+01	.114E-02
.105E+01	.117E-02	.106E+01	.118E-02	.106E+01	.118E-02
.108E+01	.118E-02	.109E+01	.116E-02	.110E+01	.112E-02
.111E+01	.105E-02	.112E+01	.101E-02	.113E+01	.928E-03
.114E+01	.864E-03	.115E+01	.749E-03	.116E+01	.636E-03
.117E+01	.548E-03	.118E+01	.473E-03	.119E+01	.407E-03
.120E+01	.341E-03	.122E+01	.256E-03	.123E+01	.169E-03
.125E+01	.109E-03	.128E+01	.318E-04	.129E+01	-.238E-04
.132E+01	-.674E-04	.134E+01	-.125E-03	.136E+01	-.171E-03
.143E+01	-.262E-03	.146E+01	-.223E-03	.149E+01	-.304E-03
.152E+01	.324E-03	.157E+01	-.338E-03	.162E+01	-.355E-03
.167E+01	-.369E-03	.174E+01	-.379E-03	.182E+01	-.391E-03
.190E+01	-.403E-03	.196E+01	-.413E-03	.209E+01	-.417E-03
310	2	60	20	564E+00	.339E-02
.500E+00	.319E-02	.536E+00	.339E-02	.642E+00	.335E-02
.592E+00	.339E-02	.616E+00	.337E-02	.721E+00	.263E-02
.671E+00	.317E-02	.698E+00	.289E-02	.773E+00	.144E-02
.739E+00	.226E-02	.761E+00	.186E-02	.815E+00	-.158E-03
.787E+00	.101E-02	.801E+00	.574E-03	.861E+00	-.256E-02
.832E+00	-.912E-03	.850E+00	-.178E-02	.901E+00	-.515E-02
.874E+00	-.321E-02	.887E+00	-.436E-02	.931E+00	-.619E-02
.915E+00	-.573E-02	.925E+00	-.601E-02	.966E+00	-.625E-02
.978E+00	-.625E-02	.998E+00	-.634E-02	.100E+01	-.531E-02
.978E+00	-.663E-02	.989E+00	-.571E-02	.105E+01	-.281E-02
.102E+01	-.436E-02	.103E+01	-.365E-02	.109E+01	-.436E-03
.107E+01	-.210E-02	.108E+01	-.123E-02	.112E+01	.136E-02
.111E+01	.346E-03	.112E+01	.372E-03	.115E+01	.236E-02
.113E+01	.178E-02	.114E+01	.210E-02	.120E+01	.337E-02
.116E+01	.267E-02	.118E+01	.303E-02	.127E+01	.388E-02
.122E+01	.365E-02	.125E+01	.381E-02	.136E+01	.436E-02
.130E+01	.410E-02	.134E+01	.424E-02	.152E+01	.448E-02
.140E+01	.440E-02	.146E+01	.438E-02	.180E+01	.444E-02
.160E+01	.442E-02	.169E+01	.446E-02	.200E+01	.416E-02
.190E+01	.424E-02	.196E+01	.420E-02	.701E+00	-.732E-03
311	1	16	6	.996E+00	-.237E-03
.500E+00	-.112E-02	.601E+00	-.938E-03	.130E+01	.178E-03
.600E+00	-.534E-03	.901E+00	-.554E-03	.159E+01	.811E-03
.110E+01	-.792E-04	.120E+01	.594E-04	.189E+01	.126E-02
.139E+01	.376E-03	.150E+01	.613E-03		
.170E+01	.970E-03	.180E+01	.106E-02		
.200E+01	.142E-02				
313	1	44	15	.649E+00	.216E-01
.500E+00	.218E-01	.598E+00	.218E-01	.800E+00	.162E-01
.699E+00	.200E-01	.747E+00	.186E-01	.949E+00	.297E-02
.851E+00	.127E-01	.896E+00	.833E-02	.105E+01	-.131E-01
.999E+00	-.377E-02	.103E+01	-.982E-02	.111E+01	-.261E-01
.107E+01	-.172E-01	.109E+01	.216E-01	.116E+01	-.337E-01
.113E+01	-.296E-01	.114E+01	-.321E-01	.120E+01	-.382E-01
.117E+01	-.359E-01	.118E+01	-.367E-01	.125E+01	-.329E-01
.121E+01	-.382E-01	.123E+01	-.365E-01	.129E+01	-.236E-01
.126E+01	-.301E-01	.128E+01	-.269E-01	.135E+01	-.134E-01
.130E+01	-.216E-01	.132E+01	-.176E-01	.142E+01	-.436E-02
.137E+01	-.992E-02	.140E+01	-.778E-02	.155E+01	.555E-02
.146E+01	-.198E-03	.150E+01	.297E-02	.169E+01	.109E-01
.159E+01	.793E-02	.163E+01	.932E-02	.187E+01	.129E-01
.174E+01	.389E-01	.179E+01	.117E-01		
.194E+01	.129E-01	.200E+01	.127E-01		
315	1	23	8	.498E-02	0.
.151E+00	-.597E-03	.493E-01	-.115E-03	.236E+00	-.278E-02
	0.	.200E+01			

2702E+00	-3484E-02	3036E+00	-0574E-02	3484E+00	-3765E-02
3932E+00	-1355E-01	4389E+00	-1613E-01	4910E+00	-2371E-01
5277E+00	-2849E-01	5643E+00	-3426E-01	5977E+00	-3845E-01
6462E+00	-4641E-01	6909E+00	-5319E-01	7473E+00	-6295E-01
7495E+00	-6952E-01	8420E+00	-7869E-01	8930E+00	-8805E-01
9435E+00	-5701E-01	1000E+01	-1070E+00		
312		35			
1531E+00	-1269E-02	1742E+00	-1142E-02	2200E+00	-7745E-03
2562E+00	-4711E-03	2828E+00	-1677E-03	3051E+00	-1030E-03
3226E+00	3513E-03	3345E+00	-5828E-03	3425E+00	-8383E-03
3516E+00	1102E-02	3604E+00	1309E-02	3703E+00	-1501E-02
3831E+00	1717E-02	3954E+00	1900E-02	4085E+00	-2044E-02
4204E+00	2076E-02	4399E+00	2101E-02	4602E+00	-2100E-02
4702E+00	2028E-02	4813E+00	1972E-02	4905E+00	-1960E-02
4584E+00	1764E-02	5107E+00	1573E-02	5270E+00	-1309E-02
5410E+00	1022E-02	5605E+00	5669E-03	5704E+00	-3194E-03
5871E+00	-6387E-04	6006E+00	-3433E-03	6114E+00	-5869E-03
6233E+00	-8436E-03	6392E+00	-1094E-02	6571E+00	-1437E-02
6706E+00	-1695E-02	6693E+00	-2012E-02		
314		32			
1943E+00	-3452E-01	2189E+00	-3313E-01	2460E+00	-3135E-01
2763E+00	-2817E-01	3045E+00	-2341E-01	3165E+00	-2113E-01
3308E+00	-1746E-01	3412E+00	-1329E-01	3531E+00	-7143E-02
3646E+00	-1389E-02	3762E+00	-3770E-02	3834E+00	-7540E-02
3949E+00	1151E-01	4120E+00	1509E-01	4232E+00	-1706E-01
4335E+00	1766E-01	4490E+00	1865E-01	4606E+00	-1786E-01
4940E+00	1627E-01	5111E+00	1310E-01	5251E+00	-1171E-01
5414E+00	8333E-02	5581E+00	5556E-02	5800E+00	-1190E-02
5979E+00	-2778E-02	6206E+00	-5357E-02	5409E+00	-7341E-02
6752E+00	-1032E-01	7094E+00	-1230E-01	7488E+00	-1446E-01
7751E+00	-1545E-01	7970E+00	-1567E-01		
312		32			
1523E+00	-1452E-02	1730E+00	-1605E-02	1917E+00	-1533E-02
2247E+00	-1277E-02	2589E+00	-9341E-03	2852E+00	-6707E-03
3130E+00	-3593E-03	3298E+00	-1038E-03	3409E+00	-8782E-04
3576E+00	4391E-03	3731E+00	6946E-03	3850E+00	-9022E-03
3942E+00	1101E-02	4029E+00	1253E-02	4101E+00	-1333E-02
4196E+00	1429E-02	4260E+00	1469E-02	4356E+00	-1477E-02
4503E+00	1461E-02	4618E+00	1421E-02	4745E+00	-1325E-02
4897E+00	1230E-02	5032E+00	1126E-02	5135E+00	-9661E-03
5294E+00	7904E-03	5469E+00	5589E-03	5621E+00	-3333E-03
6002E+00	-1996E-03	6241E+00	-5030E-03	6547E+00	-8762E-03
6746E+00	-1054E-02	6549E+00	-1261E-02		
314		36			
1979E+00	9325E-02	2239E+00	8929E-02	2532E+00	7738E-02
2703E+00	6548E-02	3085E+00	5357E-02	3372E+00	3373E-02
3607E+00	1587E-02	3802E+00	1984E-03	3905E+00	-9321E-03
3997E+00	-2770E-02	4116E+00	-5754E-02	4287E+00	-7738E-02
4439E+00	-1032E-01	4630E+00	-1190E-01	4853E+00	-1270E-01
5036E+00	1230E-01	5147E+00	-1891E-01	5318E+00	-9127E-02
5490E+00	-7143E-02	5577E+00	-4762E-02	5649E+00	-2579E-02
5897E+00	-5952E-03	5776E+00	3173E-02	5832E+00	6944E-02
6060E+00	1012E-01	5904E+00	1389E-01	5947E+00	1687E-01
6267E+00	2044E-01	6135E+00	2381E-01	6270E+00	2679E-01
6409E+00	2857E-01	6592E+00	3135E-01	6707E+00	3254E-01
6994E+00	3333E-01	7321E+00	3373E-01	7615E+00	-3373E-01
7795E+00	3294E-01	8021E+00	3234E-01		
317		26			
5000E+00	-1310E-01	5999E+00	-1310E-01	7002E+00	-1310E-01
6510E+00	-1310E-01	6798E+00	-1310E-01	9196E+00	-1306E-01
9566E+00	-1290E-01	9861E+00	-1270E-01	1020E+01	-1243E-01
1060E+01	-1206E-01	1094E+01	-1171E-01	1142E+01	-1127E-01
1109E+01	-1087E-01	1237E+01	-1063E-01	1299E+01	-9841E-02
1383E+01	-9325E-02	1454E+01	-8770E-02	1513E+01	-8452E-02
1574E+01	-8214E-02	1633E+01	-8016E-02	1701E+01	-7659E-02
1755E+01	-7421E-02	1807E+01	-7141E-02	1947E+01	-7141E-02

.1557E+01	2	2300E+01	11	5641E+00	-4274E-01
.500E+00	317	.5350E+00	11	.6664E+00	-4619E-01
.595E+00		.6350E+00		.8018E+00	-5167E-01
.7038E+00		.4762E-01		.9025E+00	-5667E-01
.8420E+00		.7538E+00		.9988E+00	-6040E-01
.9319E+00		.9701E+00		.1096E+01	-6294E-01
.1025E+01		.1061E+01		.1253E+01	-6421E-01
.1146E+01		.1201E+01		.1401E+01	-6413E-01
.1303E+01		.1394E+01		.1604E+01	-6198E-01
.1453E+01		.1558E+01		.1752E+01	-5968E-01
.1652E+01		.1708E+01		.2000E+01	-5590E-01
.1813E+01		.1861E+01	11	.5959E-01	.912E-02
.3049E-01	310	.3494E-01	31	.8925E-01	.8526E-02
.6957E-01		.7962E-01		.1112E+00	.7649E-02
.9757E-01		.1037E+00		.1345E+00	.6295E-02
.1205E+00		.1272E+00		.1564E+00	.4243E-02
.1418E+00		.1471E+00		.1702E+00	.2351E-02
.1631E+00		.1671E+00		.1779E+00	.1275E-02
.1734E+00		.1757E+00		.1828E+00	.7570E-03
.1795E+00		.1809E+00		.1892E+00	.3187E-03
.1848E+00		.1872E+00		.2001E+00	0.
.1915E+00		.1938E+00			
.1000E+01	0.				
.325E-01	2	.4826E-01	24	.5584E-01	.5637E-02
.6526E-01		.7323E-01	8	.8345E-01	.5028E-02
.9031E-01		.9797E-01		.1039E+00	.4124E-02
.1111E+00		.1186E+00		.1230E+00	.2769E-02
.1288E+00		.1353E+00		.1395E+00	.1275E-02
.1424E+00		.1448E+00		.1475E+00	.5378E-03
.1508E+00		.1525E+00		.1552E+00	0.
.1598E+00	0.	.2001E+00	0.	.1000E+01	0.
.830E+02	319	.8726E+02	29	.9260E+02	.3860E-01
.9697E+02		.1006E+03	10	.1029E+03	.5300E-01
.1054E+03		.1080E+03		.1110E+03	.5160E-01
.1153E+03		.1213E+03		.1256E+03	.3600E-01
.1296E+03		.1342E+03		.1379E+03	.1442E-01
.1401E+03		.1416E+03		.1432E+03	.3800E-02
.1449E+03		.1475E+03		.1491E+03	.3400E-02
.1521E+03		.1538E+03		.1664E+03	.1820E-01
.1702E+03		.1783E+03		.1866E+03	.3140E-01
.1945E+03		.2000E+03			
.8320E+02	319	.8885E+02	24	.9252E+02	.5001E-01
.9530E+02		.1041E+02	8	.1010E+03	.6100E-01
.1040E+03		.1080E+03		.1111E+03	.5320E-01
.1143E+03		.1183E+03		.1223E+03	.3740E-01
.1264E+03		.1291E+03		.1318E+03	.1900E-01
.1344E+03		.1392E+03		.1464E+03	.2400E-02
.1521E+03		.1608E+03		.1749E+03	.1820E-01
.1800E+03		.1907E+03		.1995E+03	.2960E-01
.8333E+02	320	.8549E+02	41	.8716E+02	.4263E-01
.8947E+02		.9075E+02		.9226E+02	.6195E-01
.9246E+02		.9514E+02		.9753E+02	.7420E-01
.1002E+03		.1029E+03		.1042E+03	.8048E-01
.1069E+03		.1094E+03		.1118E+03	.7490E-01
.1140E+03		.1164E+03		.1185E+03	.6056E-01
.1201E+03		.1212E+03		.1220E+03	.5061E-01
.1230E+03		.1241E+03		.1253E+03	.4163E-01
.1274E+03		.1290E+03		.1314E+03	.3207E-01
.1345E+03		.1376E+03		.1411E+03	.1922E-01
.1455E+03		.1614E-01		.1640E+03	.7371E-02

1.86E+03	4202E-02	1024E+03	1594E-01	1675E+03	-1354E-02
1.738E+03	-6175E-02	1798E+03	-9562E-02	1860E+03	-1275E-01
1.933E+03	-1633E-01	2001E+03	-1972E-01		
320	2	40	14		
3349E+02	2311E-01	8684E+02	3904E-01	8860E+02	462E-01
3019E+02	5279E-01	9163E+02	5976E-01	9370E+02	6474E-01
9553E+02	7012E-01	9689E+02	7311E-01	9848E+02	7649E-01
1006E+03	7809E-01	1022E+03	7869E-01	1041E+03	8028E-01
1665E+03	7988E-01	1090E+03	7809E-01	1120E+03	7516E-01
1150E+03	7072E-01	1176E+03	8633E-01	1208E+03	6036E-01
1232E+03	5398E-01	1269E+03	4602E-01	1297E+03	3904E-01
1313E+03	3426E-01	1325E+03	3187E-01	1329E+03	2849E-01
1339E+03	2798E-01	1347E+03	2510E-01	1361E+03	2251E-01
1379E+03	1892E-01	1407E+03	1534E-01	1436E+03	1195E-01
1455E+03	8964E-02	1509E+03	5179E-02	1537E+03	1992E-02
1667E+03	-737E-02	1714E+03	-1036E-01	1778E+03	-135E-01
1825E+03	-1693E-01	1903E+03	-2012E-01	1946E+03	-2171E-01
2002E+03	-2430E-01				
321	1	37	13		
8312E+02	-1389E-02	8615E+02	4333E-02	4933E+02	1806E-01
9299E+02	2778E-01	9761E+02	3968E-01	9992E+02	445E-01
1019E+03	4762E-01	1041E+03	5099E-01	1059E+03	5298E-01
1076E+03	5456E-01	1107E+03	5536E-01	1131E+03	5478E-01
1151E+03	5258E-01	1178E+03	4901E-01	1194E+03	4583E-01
1209E+03	4167E-01	1222E+03	3889E-01	1229E+03	3393E-01
1244E+03	2877E-01	1284E+03	2882E-01	1273E+03	1865E-01
1285E+03	1647E-01	1384E+03	1319E-01	1319E+03	9722E-02
1338E+03	8135E-02	1352E+03	5159E-02	1417E+03	1190E-02
1446E+03	-2976E-02	1475E+03	-5357E-02	1511E+03	-778E-02
1537E+03	-9127E-02	1667E+03	-1607E-01	1734E+03	-1845E-01
1801E+03	-2083E-01	1878E+03	-2282E-01	1933E+03	-2421E-01
1599E+03	-2560E-01				
321	2	41	14		
7755E+02	-4008E-01	8392E+02	-3651E-01	8997E+02	-3313E-01
9674E+02	-2778E-01	1010E+03	-2321E-01	1036E+03	-2044E-01
1059E+03	-1647E-01	1077E+03	-1310E-01	1094E+03	-9325E-02
1106E+03	-5357E-02	1122E+03	-1190E-02	1127E+03	3571E-02
1148E+03	8338E-02	1153E+03	1250E-01	1167E+03	1607E-01
1186E+03	1905E-01	1193E+03	2163E-01	1205E+03	2282E-01
1226E+03	2401E-01	1249E+03	2321E-01	1271E+03	2143E-01
1304E+03	1667E-01	1326E+03	1310E-01	1358E+03	750E-02
1384E+03	2976E-02	1409E+03	-1389E-02	1432E+03	-4563E-02
1452E+03	-7341E-02	1473E+03	-1052E-01	1502E+03	-1250E-01
1519E+03	-1607E-01	1564E+03	-2103E-01	1610E+03	-2560E-01
1651E+03	-2837E-01	1689E+03	-3155E-01	1748E+03	-361E-01
1799E+03	-3909E-01	1845E+03	-4206E-01	1892E+03	-4544E-01
1952E+03	-4742E-01	1999E+03	-5119E-01		
322	1	26	9		
9196E+02	-4028E-01	9611E+02	-3571E-01	9074E+02	-3234E-01
9561E+02	-2798E-01	9984E+02	-2421E-01	1044E+03	-1964E-01
1081E+03	-1508E-01	1117E+03	-1032E-01	1132E+03	-7937E-02
1166E+03	-1984E-02	1176E+03	7937E-03	1193E+03	2579E-02
1213E+03	3175E-02	1231E+03	4365E-02	1268E+03	4365E-02
1298E+03	2778E-02	1360E+03	-1190E-02	1408E+03	-5754E-02
1459E+03	-9524E-02	1536E+03	-1627E-01	1581E+03	-2004E-01
1573E+03	-2718E-01	1743E+03	-3254E-01	1824E+03	-3865E-01
1500E+03	-4444E-01	2006E+03	-5198E-01		
323	1	25	9		
1180E+03	4351E+00	1511E+00	4542E+00	2004E+00	4908E+00
1332E+00	5235E+00	2579E+00	5530E+00	2746E+00	5753E+00
2894E+00	6040E+00	3029E+00	5454E+00	3252E+00	7168E+00
3396E+00	7729E+00	3551E+00	8247E+00	3754E+00	8908E+00
4089E+00	9737E+00	4328E+00	1037E+01	4548E+00	1075E+01
4799E+00	1117E+01	4974E+00	1137E+01	5201E+00	1168E+01
5005E+00	1180E+01	5735E+00	1197E+01	6002E+00	1277E+01
6550E+00	1317E+01	6043E+00	1222E+01	7294E+00	1255E+01

7585E+00	1225E+01	20	10	6090E+00	6900E+01	6090E+00
325	1	5904E-01	6090E+00	6900E+01	6090E+00	
5020E-01	6050E+00	9004E-01	6090E+00	9992E-01	6129E+00	
7504E-01	6090E+00	6129E+00	6090E+00	1154E+00	6348E+00	
1057E+00	6129E+00	1245E+00	6090E+00	1275E+00	7085E+00	
1501E+00	6567E+00	1326E+00	7642E+00	1351E+00	7940E+00	
1303E+00	7303E+00	1397E+00	2577E+00	1419E+00	8995E+00	
1379E+00	6398E+00	1463E+00	9612E+00	1488E+00	9791E+00	
1388E+00	5274E+00	1602E+00	1085E+01	1704E+00	1007E+01	
1517E+00	1003E+01	1901E+00	1007E+01	2000E+00	1007E+01	
1522E+00	1007E+01					
1000E+01	1001E+01	20	10	6900E+01	6900E+01	
325	2	5992E-01	4915E+00	6900E+01	6900E+01	
4996E-01	4915E+00	3964E-01	5015E+00	6900E+01	6900E+01	
7592E-01	4915E+00	1100E+00	5015E+00	1261E+00	7224E+00	
1061E+00	4915E+00	1235E+00	5433E+00	1364E+00	8915E+00	
1198E+00	5373E+00	1331E+00	6667E+00	1450E+00	9791E+00	
1298E+00	6189E+00	1426E+00	8414E+00	1515E+00	9970E+00	
1397E+00	7801E+00	1496E+00	9522E+00	1698E+00	1019E+01	
1476E+00	5313E+00	1903E+00	9990E+00	2000E+00		
1536E+00	4910E+00					
1800E+00	5990E+00	25	9	6900E+01	6900E+01	
1000E+01	1001E+01	5960E-01	6925E+00	6900E+01	6900E+01	
325	3	9012E-01	6925E+00	9641E-01	6965E+00	
4996E-01	6925E+00	1065E+00	7085E+00	1118E+00	7184E+00	
7592E-01	7045E+00	1237E+00	7622E+00	1282E+00	7920E+00	
1182E+00	7363E+00	1351E+00	8697E+00	1394E+00	9154E+00	
1217E+00	8219E+00	1452E+00	9811E+00	1473E+00	9950E+00	
1423E+00	9532E+00	1601E+00	9377E+00	1693E+00	9970E+00	
1512E+00	9970E+00	1696E+00	1007E+01	1997E+00	1015E+01	
1798E+00	1007E+01					
1000E+01	1001E+01	35	12	5999E+00	5999E+00	
324	1	5506E+00	1756E-01	6760E+00	6760E+00	
5000E+00	1734E-01	6620E+00	1885E-01	7237E+00	7237E+00	
8441E+00	1845E-01	7018E+00	1972E-01	8495E+00	8495E+00	
6995E+00	1960E-01	8002E+00	2012E-01	1000E+01	1000E+01	
7460E+00	2012E-01	9514E+00	2012E-01	1150E+01	1150E+01	
8597E+00	2012E-01	1098E+01	2012E-01	1302E+01	1302E+01	
1050E+01	2016E-01	1251E+01	1964E-01	1449E+01	1449E+01	
1201E+01	1992E-01	1400E+01	1798E-01	1602E+01	1602E+01	
1314E+01	1873E-01	1549E+01	1520E-01	1752E+01	1752E+01	
1500E+01	1619E-01	1703E+01	1246E-01	1902E+01	1902E+01	
1652E+01	1310E-01	1849E+01	1119E-01	5027E+00	5027E+00	
1803E+01	1147E-01	2000E+01	1024E-01	7325E+00	7325E+00	
1549E+01	1056E-01			8197E+00	8197E+00	
324	2	5510E+00	1663E-01	9061E+00	9061E+00	
5000E+00	1663E-01	6982E+00	1687E-01	1015E+01	1015E+01	
6509E+00	1675E-01	7902E+00	1746E-01	1119E+01	1119E+01	
7588E+00	1713E-01	8782E+00	1845E-01	1206E+01	1206E+01	
8436E+00	1810E-01	9809E+00	1903E-01	1285E+01	1285E+01	
9403E+00	2012E-01	1094E+01	2012E-01	1377E+01	1377E+01	
1050E+01	1964E-01	1186E+01	1913E-01	1499E+01	1499E+01	
1149E+01	1964E-01	1249E+01	1799E-01	1652E+01	1652E+01	
1227E+01	1845E-01	1345E+01	1663E-01	1803E+01	1803E+01	
1316E+01	1690E-01	1455E+01	1536E-01	1951E+01	1951E+01	
1422E+01	1579E-01	1609E+01	1397E-01			
1544E+01	1448E-01	1703E+01	1294E-01			
1703E+01	1321E-01	1902E+01	1210E-01			
1851E+01	1234E-01					
2000E+01	1139E-01	51	17	5984E+00	5984E+00	
326	1	5406E+00	3770E-02	7147E+00	7147E+00	
5000E+00	3770E-02	7000E+00	3770E-02	7944E+00	7944E+00	
6486E+00	5159E-02	7590E+00	0349E-02	8494E+00	8494E+00	
7315E+00	1071E-01	8373E+00	1380E-02			
8127E+00						

8445E+00	1745E-01	1709E+00	1325E-01	3985E+00	1375E-01
9171E+00	2044E-01	9394E+00	2081E-01	9522E+00	2103E-01
9801E+00	2103E-01	1001E+01	2083E-01	1040E+01	2083E-01
1097E+01	2083E-01	1149E+01	2063E-01	1197E+01	2064E-01
1244E+01	1964E-01	1246E+01	2004E-01	1267E+01	2044E-01
1290E+01	2103E-01	1310E+01	2202E-01	1340E+01	2302E-01
1371E+01	2560E-01	1396E+01	2798E-01	1421E+01	3075E-01
1449E+01	3353E-01	1470E+01	3849E-01	1518E+01	4365E-01
1550E+01	4762E-01	1570E+01	5159E-01	1601E+01	5556E-01
1626E+01	5613E-01	1651E+01	6190E-01	1692E+01	6524E-01
1724E+01	6905E-01	1751E+01	7143E-01	1787E+01	7461E-01
1831E+01	7579E-01	1869E+01	7773E-01	1903E+01	7957E-01
1945E+01	7996E-01	1977E+01	8036E-01	2000E+01	8336E-01
-327	1	20	7	2000E+01	8336E-01
1120E+02	-1194E-01	1191E+02	-1230E-01	1263E+02	-1246E-01
1154E+02	-1236E-01	1535E+02	-1195E-01	1675E+02	-1062E-01
1802E+02	-5341E-02	1866E+02	-3303E-02	2106E+02	-5669E-02
2249E+02	-4391E-02	2452E+02	-1916E-02	2615E+02	0
2816E+02	-2395E-02	2985E+02	3392E-02	3184E+02	6080E-02
3367E+02	8224E-02	3502E+02	1046E-01	3717E+02	1198E-01
3804E+02	1405E-01	4000E+02	1493E-01	4000E+02	1493E-01
-327	2	23	5	1187E+02	-1741E-01
1006E+02	-1669E-01	1068E+02	-1709E-01	1609E+02	-1629E-01
1307E+02	-1701E-01	1454E+02	-1597E-01	1872E+02	-1036E-01
1752E+02	-1261E-01	1828E+02	-1126E-01	2339E+02	-4152E-02
2110E+02	-7425E-02	2220E+02	-5749E-02	3011E+02	4711E-02
2621E+02	0	2860E+02	2874E-02	3471E+02	1076E-01
3044E+02	6786E-02	3159E+02	9261E-02	3623E+02	1501E-01
3590E+02	1261E-01	3713E+02	1445E-01	4000E+02	4000E+02
3820E+02	1717E-01	4004E+02	1828E-01	1195E+02	-3174E-01
-327	3	25	9	1521E+02	-2818E-01
1004E+02	-3106E-01	1114E+02	-3194E-01	1879E+02	-1948E-01
1287E+02	-3114E-01	1406E+02	-2970E-01	2339E+02	-7904E-02
1805E+02	-2667E-01	1752E+02	-2283E-01	2584E+02	-1517E-02
2031E+02	-1557E-01	2168E+02	-1182E-01	2896E+02	6467E-02
2452E+02	-5110E-02	2522E+02	-3034E-02	3391E+02	1940E-01
2474E+02	0	2763E+02	3273E-02	3672E+02	3210E-01
3049E+02	1046E-01	3266E+02	1493E-01	1191E+02	-2355E-01
3584E+02	2443E-01	3733E+02	2802E-01	1545E+02	-2004E-01
4002E+02	3537E-01	4000E+02	4000E+02	1927E+02	-1293E-01
-327	4	24	8	2361E+02	-5269E-02
1002E+02	-2371E-01	1098E+02	-2387E-01	2840E+02	4152E-02
1303E+02	-2275E-01	1404E+02	-2220E-01	3232E+02	1150E-01
1685E+02	-1764E-01	1838E+02	-1477E-01	3656E+02	1956E-01
2118E+02	-5541E-02	2247E+02	-7345E-02	4000E+02	2579E-01
2744E+02	-3034E-02	2623E+02	0	2893E+00	2187E-02
2977E+02	6627E-02	3113E+02	9182E-02	4607E+00	1054E-01
3349E+02	1365E-01	3490E+02	1629E-01	5902E+00	1531E-01
3781E+02	2196E-01	3906E+02	2451E-01	6987E+00	1431E-01
-328	1	16	6	7862E+00	1074E-01
2003E+00	-6362E-02	2381E+00	-2584E-02	2377E+00	-4771E-02
3514E+00	5964E-02	4094E+00	8549E-02	2977E+00	-9145E-02
5052E+00	1292E-01	5469E+00	1511E-01	3988E+00	-1750E-01
6184E+00	1531E-01	6606E+00	1511E-01	4976E+00	-2425E-01
7456E+00	1292E-01	7715E+00	1153E-01	6017E+00	-2624E-01
7937E+00	5344E-02	22	8	7114E+00	-2366E-01
-328	2	22	8	7830E+00	-2000E-01
2011E+00	-3567E-02	2234E+00	-4970E-02	2377E+00	-4771E-02
2544E+00	-5169E-02	2762E+00	-6759E-02	3988E+00	-1750E-01
3299E+00	-1252E-01	3669E+00	-1531E-01	4976E+00	-2425E-01
4356E+00	-2808E-01	4646E+00	-2306E-01	6017E+00	-2624E-01
5378E+00	-2604E-01	5767E+00	-2584E-01	7114E+00	-2366E-01
6303E+00	-2505E-01	6781E+00	-2485E-01	7830E+00	-2000E-01
7341E+00	-2266E-01	7579E+00	-2207E-01		
7937E+00	-1089E-01				

2019E+00	-0946E-02	2293E+00	-0742E-02	2504E+00	-1113E-01
2675E+00	-1252E-01	2906E+00	-1570E-01	3072E+00	-1919E-01
3307E+00	-227E-01	3529E+00	-2644E-01	3631E+00	-3082E-01
4022E+00	-3300E-01	4273E+00	-3590E-01	4491E+00	-3837E-01
4805E+00	-4135E-01	5123E+00	-4394E-01	5429E+00	-4612E-01
5703E+00	-4751E-01	6200E+00	-4911E-01	6363E+00	-4990E-01
6757E+00	-4831E-01	7430E+00	-6831E-01	7440E+00	-632E-01
7711E+00	-4294E-01	7886E+00	-4135E-01	7997E+00	-3978E-01
-329	1	20	7		
5755E+02	0	6566E+02	-1304E-03	7496E+02	-1394E-02
6426E+02	-2799E-02	9830E+02	-2900E-02	9905E+02	-2769E-02
1076E+02	-2191E-02	1165E+03	-9960E-03	1246E+03	-7960E-03
1332E+03	5960E-03	1406E+03	1594E-02	1502E+03	2390E-02
1575E+03	4382E-02	1628E+03	4183E-02	1723E+03	4163E-02
1800E+03	4183E-02	1863E+03	4781E-02	1906E+03	4781E-02
1950E+03	4900E-02	1996E+03	5179E-02		
-329	2	18	6		
5755E+02	0	6240E+02	-7960E-03	7734E+02	-2590E-02
6410E+02	-3187E-02	9014E+02	-3566E-02	9960E+02	-3187E-02
1097E+03	-1394E-02	1207E+03	-1922E-03	1287E+03	1195E-02
1362E+03	3566E-02	1426E+03	5575E-02	1506E+03	7968E-02
1614E+03	9900E-02	1780E+03	1116E-01	1793E+03	1215E-01
1868E+03	1315E-01	1938E+03	1454E-01	1998E+03	1534E-01
-329	3	17	6		
5882E+02	-1922E-03	6987E+02	-1195E-02	7949E+02	-2769E-02
6990E+02	-4382E-02	9976E+02	-3904E-02	1065E+03	-1793E-02
1200E+03	0	1247E+03	2191E-02	1293E+03	4741E-02
1378E+03	1016E-01	1485E+03	1813E-01	1577E+03	2211E-01
1632E+03	2629E-01	1742E+03	3187E-01	1845E+03	3665E-01
1914E+03	4044E-01	1989E+03	4283E-01		
-329	4	16	6		
5594E+02	0	6987E+02	-7968E-03	7957E+02	-2350E-02
9065E+02	-2980E-02	9976E+02	-2590E-02	1095E+03	-1753E-02
1153E+03	5980E-03	1191E+03	0	1286E+03	1195E-02
1391E+03	1394E-02	1582E+03	7968E-03	1590E+03	0
1700E+03	-1394E-02	1772E+03	-1594E-02	1832E+03	-1992E-02
1895E+03	-3187E-02				
-329	2	44	15		
5000E+00	1567E-01	6375E+00	1409E-01	5641E+00	1349E-01
5288E+00	1270E-01	6239E+00	1131E-01	6494E+00	8730E-02
6761E+00	6548E-02	7147E+00	2381E-02	7347E+00	-5952E-03
7506E+00	-3770E-02	7737E+00	-7738E-02	7916E+00	-1151E-01
8086E+00	1868E-01	8263E+00	-1746E-01	8434E+00	-2044E-01
8673E+00	2361E-01	8876E+00	-2718E-01	9095E+00	-2857E-01
9378E+00	-3056E-01	9845E+00	-3115E-01	9785E+00	-3115E-01
1030E+01	-3036E-01	1053E+01	-2877E-01	1085E+01	-2738E-01
1122E+01	-2440E-01	1156E+01	-2183E-01	1169E+01	-2123E-01
1235E+01	-1627E-01	1261E+01	-1429E-01	1290E+01	-1449E-01
1314E+01	-1250E-01	1347E+01	-1111E-01	1379E+01	-9921E-02
1398E+01	5921E-02	1438E+01	-9524E-02	1466E+01	-9325E-02
1496E+01	-7738E-02	1582E+01	-7738E-02	1651E+01	-7738E-02
1722E+01	-7937E-02	1771E+01	-7738E-02	1854E+01	-7738E-02
1505E+01	-7361E-02	2000E+01	-6944E-02		
-329	1	22	8		
1004E+02	-3095E-02	1183E+02	-3333E-02	1297E+02	-3413E-02
1436E+02	-3413E-02	1684E+02	-3333E-02	1737E+02	-3016E-02
1800E+02	-2480E-02	1986E+02	-2063E-02	2114E+02	-1825E-02
2217E+02	-1349E-02	2295E+02	-1190E-02	2637E+02	3175E-03
2964E+02	1032E-02	3177E+02	1746E-02	3329E+02	2063E-02
3476E+02	2580E-02	3612E+02	2957E-02	3679E+02	3333E-02
3755E+02	3492E-02	3863E+02	3651E-02	3930E+02	3810E-02
3594E+02	4206E-02				
-329	2	27	9		
1000E+02	-1643E-01	1048E+02	-1698E-01	1122E+02	-1754E-01
1181E+02	-1778E-01	1217E+02	-1794E-01	1293E+02	-1786E-01
1384E+02	-1746E-01	1440E+02	-1731E-01	1529E+02	-1567E-01

1612E+02	-1579E-01	1699E+02	-1475E-01	1771E+02	-1365E-01
1951E+02	-1230E-01	1844E+02	-1167E-01	1122E+02	-9254E-02
2055E+02	-6825E-02	2313E+02	-5159E-02	2629E+02	0.
2870E+02	3492E-02	2994E+02	5714E-02	3127E+02	.7619E-02
3133E+02	1016E-01	3478E+02	1278E-01	3625E+02	.1540E-01
3779E+02	1770E-01	3800E+02	1960E-01	3994E+02	.2111E-01
327	3	31	11		
1066E+02	-2190E-01	1066E+02	-2286E-01	1143E+02	-2310E-01
1253E+02	-2009E-01	1341E+02	-2365E-01	1438E+02	-2302E-01
1520E+02	-2206E-01	1612E+02	-2079E-01	1707E+02	-1861E-01
1785E+02	-1706E-01	1384E+02	-1508E-01	1960E+02	-1317E-01
2010E+02	-1238E-01	2124E+02	-1024E-01	2217E+02	-9413E-02
2267E+02	-7302E-02	2335E+02	-6032E-02	2400E+02	-4841E-02
2470E+02	-3095E-02	2635E+02	0.	2713E+02	.1825E-02
2803E+02	3492E-02	2906E+02	5556E-02	3036E+02	.8333E-02
3209E+02	1198E-01	3345E+02	1476E-01	3488E+02	.1754E-01
3645E+02	2111E-01	3795E+02	.2421E-01	3920E+02	.2667E-01
4004E+02	2841E-01				
327	4	23	6		
1125E+02	-1808E-01	1187E+02	-1024E-01	1253E+02	-1024E-01
1353E+02	-1024E-01	1440E+02	-9762E-02	1540E+02	-9444E-02
1671E+02	-8571E-02	1821E+02	-7222E-02	1894E+02	-6667E-02
2096E+02	-4762E-02	2237E+02	-3492E-02	2339E+02	-2698E-02
2302E+02	-2143E-02	2635E+02	0.	2859E+02	.2222E-02
2995E+02	3254E-02	3143E+02	4524E-02	3261E+02	.5476E-02
3456E+02	7222E-02	3677E+02	9206E-02	3815E+02	.1048E-01
3542E+02	1175E-01	3998E+02	.1230E-01		
328	1	22	6		
1995E+02	5567E-02	2250E+02	6163E-02	2472E+02	.6561E-02
2790E+02	6561E-02	3029E+02	6561E-02	3378E+02	.6561E-02
3788E+02	6163E-02	4197E+02	5567E-02	4559E+02	.4970E-02
4860E+02	4175E-02	5429E+02	2584E-02	5545E+02	.1590E-02
5787E+02	1392E-02	6049E+02	0.	6308E+02	-.5964E-03
6558E+02	7952E-03	6844E+02	-.7952E-03	7011E+02	-.9940E-03
7277E+02	7952E-03	7512E+02	-.7952E-03	7798E+02	-.3976E-03
7877E+02	0.				
328	2	28	10		
1907E+02	-1093E-01	2210E+02	-1213E-01	2472E+02	-1233E-01
2766E+02	-1332E-01	2977E+02	-1332E-01	3188E+02	-1352E-01
3366E+02	-1292E-01	3676E+02	-1173E-01	3959E+02	-1133E-01
4241E+02	-1034E-01	4459E+02	-9145E-02	4726E+02	-7753E-02
4936E+02	-5759E-02	5135E+02	-.5368E-02	5322E+02	-3380E-02
5457E+02	-2703E-02	5771E+02	0.	5906E+02	.9940E-03
6145E+02	2584E-02	6407E+02	3777E-02	6590E+02	.3777E-02
6777E+02	3976E-02	6955E+02	3976E-02	7182E+02	.3777E-02
7329E+02	3579E-02	7560E+02	.3181E-02	7719E+02	.2386E-02
8001E+02	1193E-02				
328	3	27	9		
1907E+02	-1690E-01	1905E+02	-1789E-01	2464E+02	-1869E-01
2782E+02	-1889E-01	2989E+02	-1869E-01	3307E+02	-1869E-01
3649E+02	-1789E-01	3887E+02	-1690E-01	4157E+02	-1571E-01
4428E+02	-1431E-01	4746E+02	-1173E-01	4952E+02	-.9742E-02
5143E+02	-8549E-02	5457E+02	-.4573E-02	5635E+02	0.
5442E+02	3976E-03	6125E+02	1392E-02	6256E+02	-.2584E-02
5671E+02	2703E-02	6475E+02	3380E-02	6987E+02	.3380E-02
7182E+02	2982E-02	7393E+02	2982E-02	7568E+02	.2982E-02
7675E+02	2386E-02	7838E+02	1392E-02	7981E+02	.1193E-02
328	4	26	9		
1971E+02	-2107E-01	2198E+02	-2286E-01	2484E+02	-.2386E-01
2802E+02	-2545E-01	2977E+02	-2545E-01	3235E+02	-.2485E-01
3694E+02	-2425E-01	3812E+02	-.2386E-01	4850E+02	-.2167E-01
4384E+02	-.1849E-01	4730E+02	-1491E-01	5036E+02	-.1233E-01
5354E+02	-.8946E-02	5624E+02	-.5368E-02	5791E+02	-.2187E-02
5855E+02	0.	5922E+02	.9940E-03	6117E+02	.2187E-02
6256E+02	3380E-02	6590E+02	.3777E-02	6916E+02	.4175E-02
7446E+02	3776E-02	7900E+02	.3781E-02	7933E+02	.2781E-02

.778E+00	-2.137E-02	.798E+00	.1795E-02	.4936E+02	--3.187E-02
329	1	31	11	.7859E+02	--4.502E-02
.3434E+02	0.	.8086E+02	--.1793E-02	.9332E+02	--.2590E-03
.5771E+01		.6518E+02	--.4582E-02	.1079E+03	.4300E-02
.7838E+02		.9680E+02	--.3584E-02	.1227E+03	.6375E-02
.9817E+02		.1038E+03	0.	.1397E+03	.4522E-02
.1121E+03		.1165E+03	.3386E-02	.1522E+03	--.4582E-02
.1280E+03		.1337E+03	.6574E-02	.1685E+03	--.1633E-01
.1437E+03		.1466E+03	.5378E-02	.1820E+03	--.2960E-01
.1533E+03		.1626E+03	--.1992E-03	.1957E+03	
.172E+03		.1778E+03	--.1195E-01		
.1878E+03		.1908E+03	--.2498E-01		
.1994E+03					
329	2	38	13	.4049E+02	--.2390E-02
.3680E+02	0.	.4165E+02	--.1594E-02	.6725E+02	--.4382E-02
.5612E+02		.6184E+02	--.4183E-02	.9332E+02	--.3187E-02
.7536E+02		.8362E+02	--.4183E-02	.1140E+03	.8765E-02
.1002E+03		.1089E+03	.3984E-02	.1246E+03	.2291E-01
.1167E+03		.1202E+03	.1733E-01	.1362E+03	.3606E-01
.1281E+03		.1324E+03	.3187E-01	.1440E+03	.3984E-01
.1393E+03		.1414E+03	.3944E-01	.1525E+03	.3924E-01
.1457E+03		.1496E+03	.3984E-01	.1634E+03	.3227E-01
.1568E+03		.1604E+03	.3446E-01	.1725E+03	.2510E-01
.1672E+03		.1700E+03	.2749E-01	.1862E+03	.1175E-01
.1777E+03		.1819E+03	.1554E-01	.1959E+03	.5976E-03
.1908E+03		.1932E+03	.4183E-02		
.1960E+03		.1996E+03	--.3187E-02		
329	3	48	16	.5016E+02	--.2590E-02
.3847E+02		.4396E+02	--.1195E-02	.6916E+02	--.3765E-02
.5624E+02		.6296E+02	--.3785E-02	.9300E+02	--.2390E-02
.7758E+02		.8585E+02	--.3785E-02	.1106E+03	.9153E-02
.1036E+03		.1075E+03	.4183E-02	.1192E+03	.2729E-01
.1135E+03		.1162E+03	.2171E-01	.1282E+03	.4582E-01
.1215E+03		.1245E+03	.3825E-01	.1362E+03	.5797E-01
.1367E+03		.1335E+03	.5458E-01	.1427E+03	.6414E-01
.1383E+03		.1408E+03	.6335E-01	.1506E+03	.6255E-01
.1457E+03		.1485E+03	.6454E-01	.1572E+03	.5538E-01
.1522E+03		.1548E+03	.5857E-01	.1632E+03	.4462E-01
.1585E+03		.1606E+03	.4960E-01	.1712E+03	.2869E-01
.1664E+03		.1637E+03	.3167E-01	.1790E+03	.1016E-01
.1727E+03		.1752E+03	.1932E-01	.1860E+03	--.7371E-02
.1816E+03		.1839E+03	--.1793E-02	.1955E+03	--.3187E-01
.1901E+03		.1924E+03	--.2371E-01	.1998E+03	--.4522E-01
.1975E+03		.1991E+03	--.4521E-01		
329	4	35	12	.4769E+02	--.2986E-02
.3839E+02		.4189E+02	--.1594E-02	.7878E+02	--.3964E-02
.5382E+02		.6940E+02	--.4582E-02	.9960E+02	.9960E-03
.8083E+02		.9801E+02	--.1594E-02	.1049E+03	.1414E-01
.1078E+03		.1121E+03	.9363E-02	.1154E+03	.3486E-01
.1193E+03		.1238E+03	.2829E-01	.1285E+03	.4861E-01
.1288E+03		.1365E+03	.4542E-01	.1405E+03	.5020E-01
.1328E+03		.1455E+03	.5020E-01	.1486E+03	.4064E-01
.1427E+03		.1558E+03	.4582E-01	.1606E+03	.2869E-01
.1522E+03		.1671E+03	.1267E-01	.1701E+03	.1235E-01
.1639E+03		.1702E+03	.1594E-01	.1810E+03	--.4781E-02
.1727E+03		.1897E+03	--.1594E-02	.1917E+03	
.1862E+03		.1995E+03	--.1952E-01		
.1952E+03					

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