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DEVELOPMENT OF A COMPUTER PROGRAM FOR STORE AIRLOADS PREDICTION TECHNIQUE

VOUGHT CORPORATION, SYSTEMS DIVISION
P. O. BOX 5907
DALLAS, TEXAS 75222

OCTOBER 1976

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AIR FORCE ARMAMENT LABORATORY
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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 Development 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 [illegible] in-
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the Air Force Armament Laboratory.

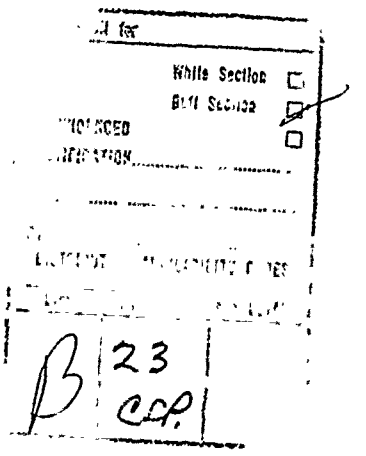
PREFACE

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.
$\frac{Cx}{qS}$	Force coefficient where x can be y, N, A representing side, normal, and axial force, respectively
$\frac{Cx}{qSd}$	Moment coefficient where x can be n, 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
$K_{C_{PM}}$	Pitching moment correlation factor
K_{INTC}	Factor describing the value of a dependent variable where the independent variable is zero
K_{Λ_1}	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
$\Delta\alpha_{BREAK}$	Incremental change in α_{BREAK}, deg
$\alpha_{0_{SF}}$	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 1).
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.

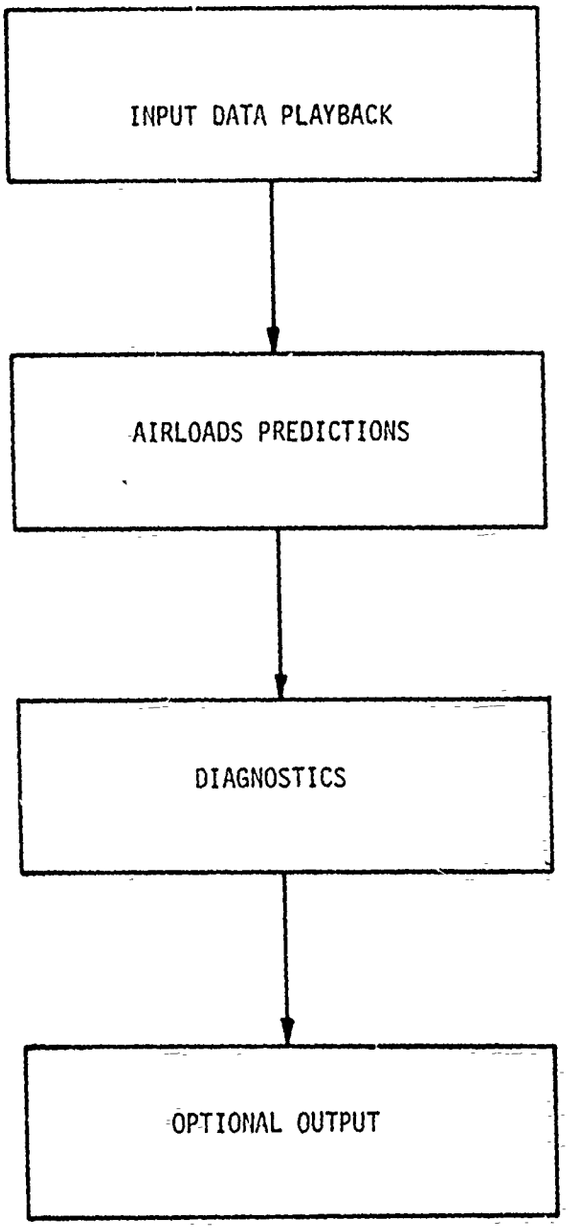


Figure 2. Output Structure

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:

$$C_{x_{TOTAL}} = C_{x_{BASIC}} + \Delta C_{x_{\beta_S}} \cdot \beta_S + \Delta C_{x_{INTF}} \qquad (1)$$

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
- $C_{x_{BASIC}}$ - 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

$\Delta C_{x_{INTF}}$ - 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

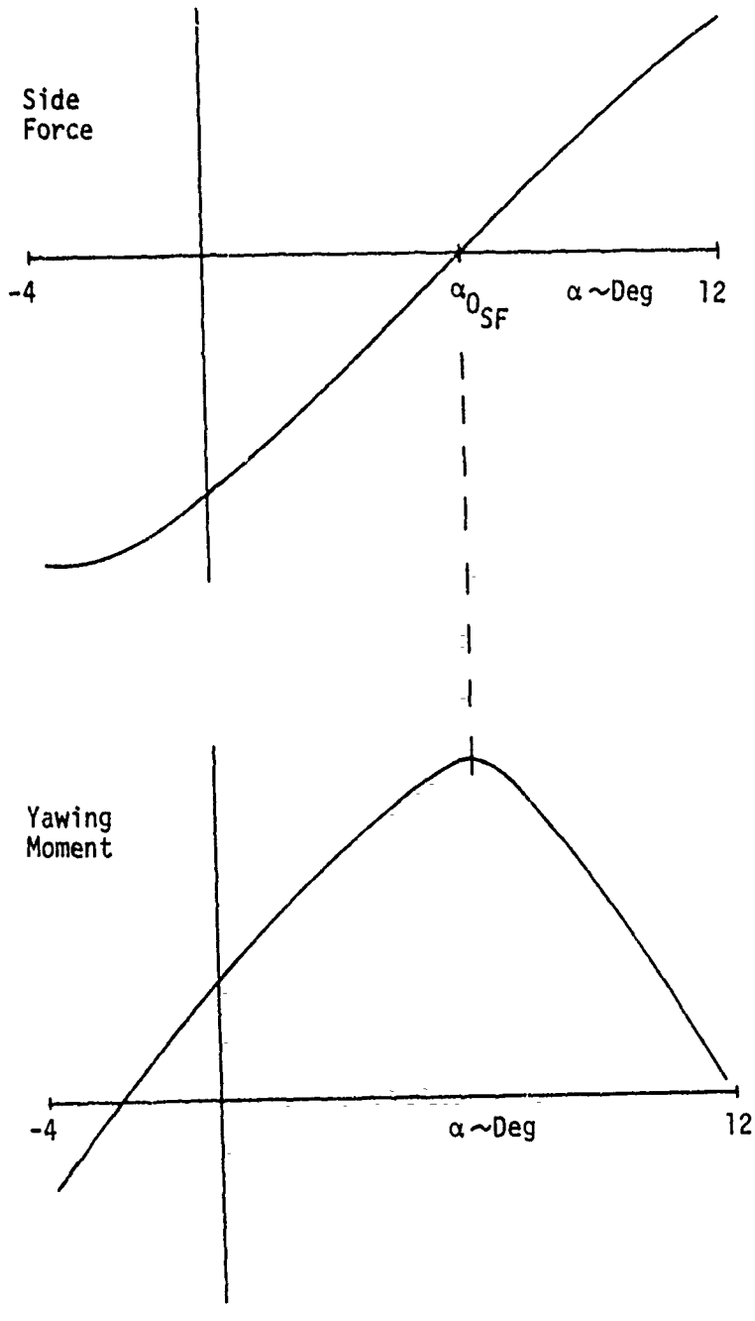


Figure 3. Typical Captive Store Side Force and Yawing Moment

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:

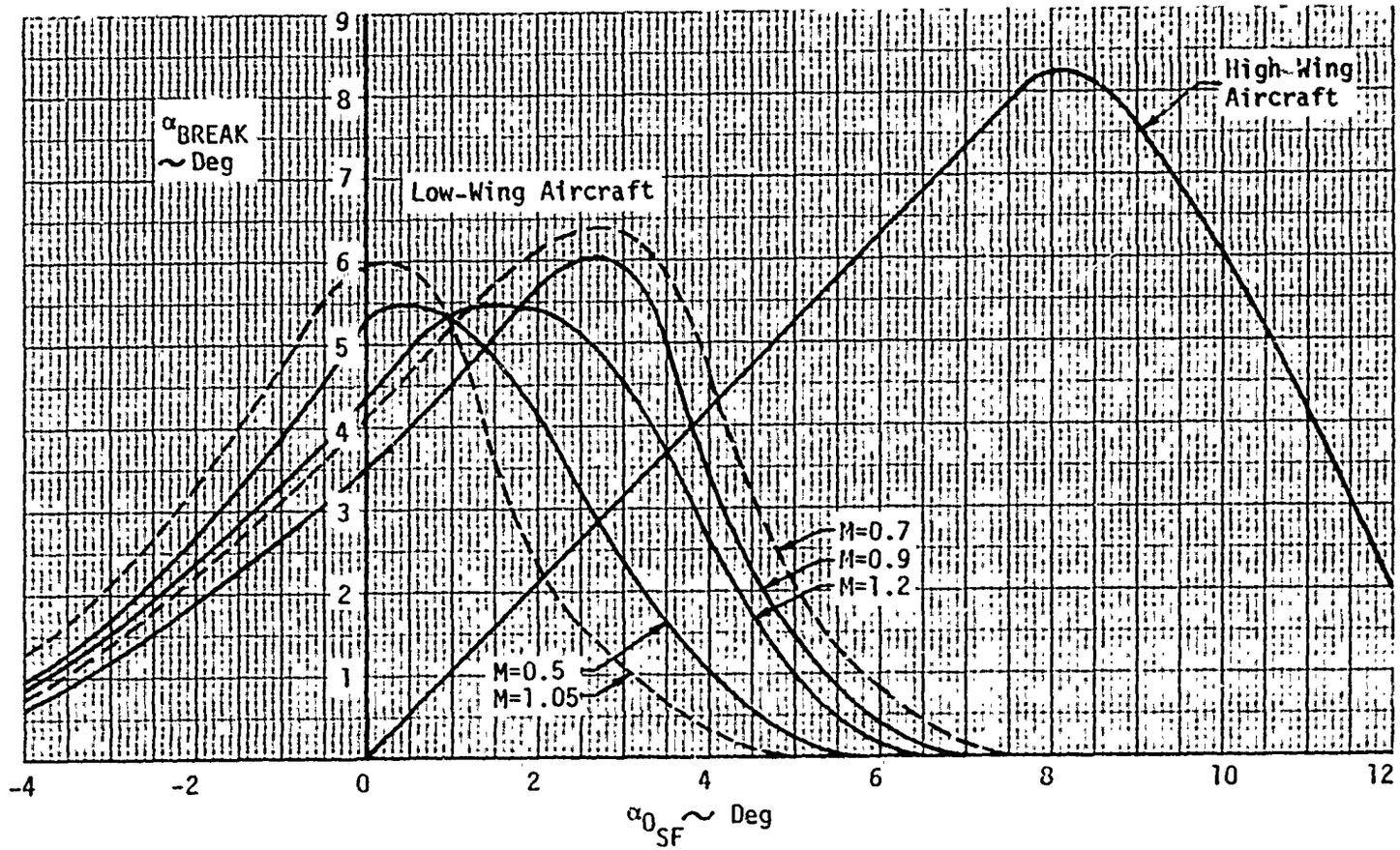
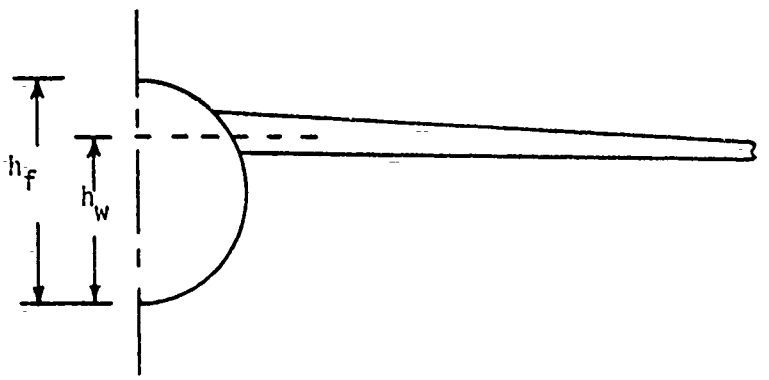


Figure 4. Correlation of α_{BREAK} as a Function of $\alpha_{0_{SF}}$



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

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

Figure 5. Wing-Fuselage Height Definition

$$M_{\substack{BREAK \\ LIMIT}} = 1.2 - 0.2 \frac{h_w}{h_f} \tag{2}$$

If the Mach number for which an airloads computation is desired is less than $M_{\substack{BREAK \\ LIMIT}}$, 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:

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

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, $\frac{ft^2}{deg}$.

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

$\alpha_{BREAK_{\substack{HIGH \\ WING}}}$, deg

$\alpha_{BREAK_{\substack{LOW \\ WING}}}$, deg

Then for the general case,

$$\alpha_{BREAK} = \alpha_{BREAK_{\substack{LOW \\ WING}}} + \frac{h_w}{h_f} \left(\alpha_{BREAK_{\substack{HIGH \\ WING}}} - \alpha_{BREAK_{\substack{LOW \\ WING}}}\right) + \Delta\alpha_{BREAK} \tag{4}$$

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.

$\Delta\alpha_{BREAK}$ - Final correction to α_{BREAK} to account for $\alpha_{0_{SF}}$ 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 $\alpha > \alpha_{BREAK}$: (see Figure 9)

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

where:

K_{SLOPE} - Variation in C_{n_α} as a function of $C_{LOCAL}K_{\Lambda_1}$, 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, $\frac{\sin \Lambda}{\sin 45°}$, 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 $\alpha \leq \alpha_{BREAK}$ 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 $\frac{\text{FIN SPA}}{L} > 5.0$, where FIN refers to the store WING for case 1 stores and TAIL for case 2 stores of Reference 1.

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

Curve 3: Applies for all other configurations.

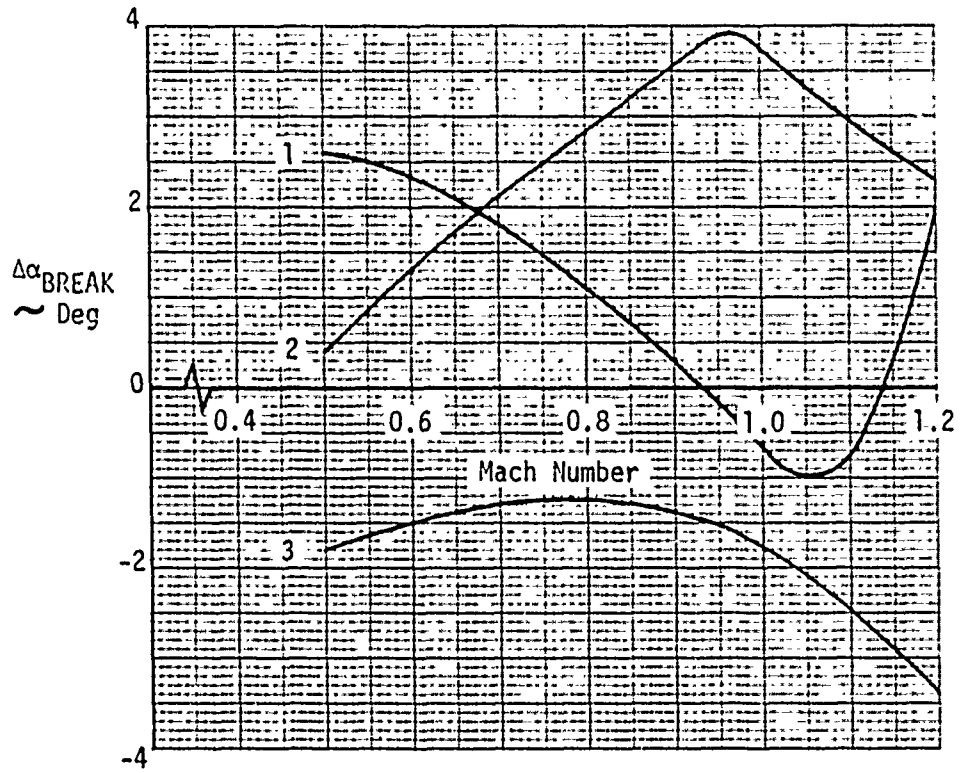
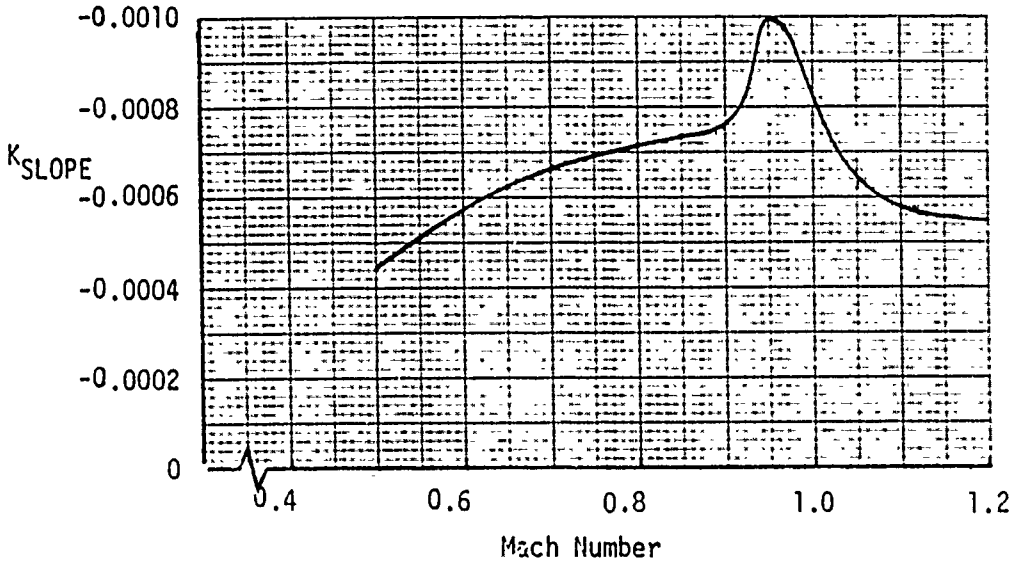


Figure 6. Variation of $\Delta\alpha_{BREAK}$ with Mach Number



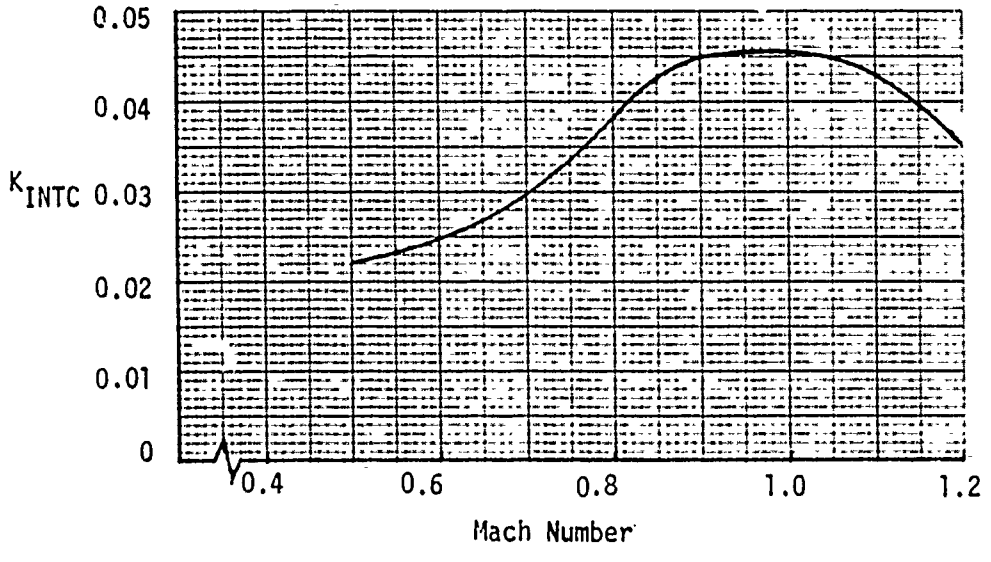
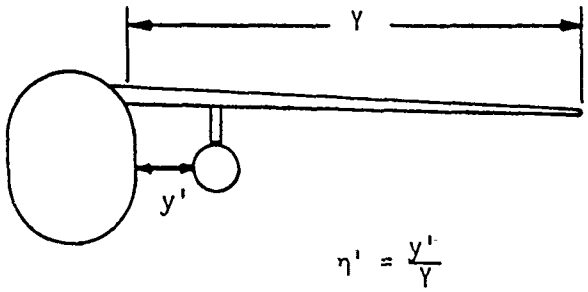


Figure 7. Yawing Moment Modification Parameters - K_{SLOPE} and K_{INTC}



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

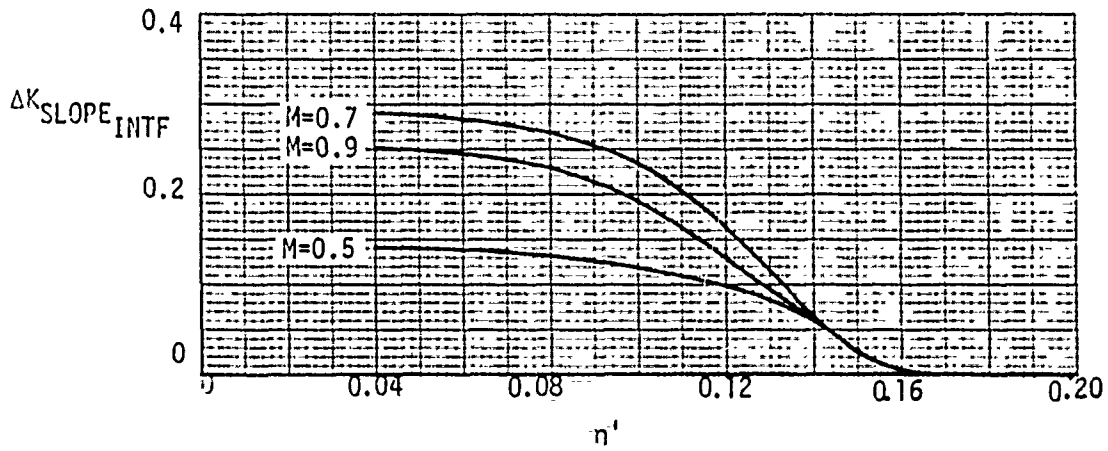


Figure 8. Fuselage Interference Correction - $\Delta K_{SLOPE_{INTF}}$

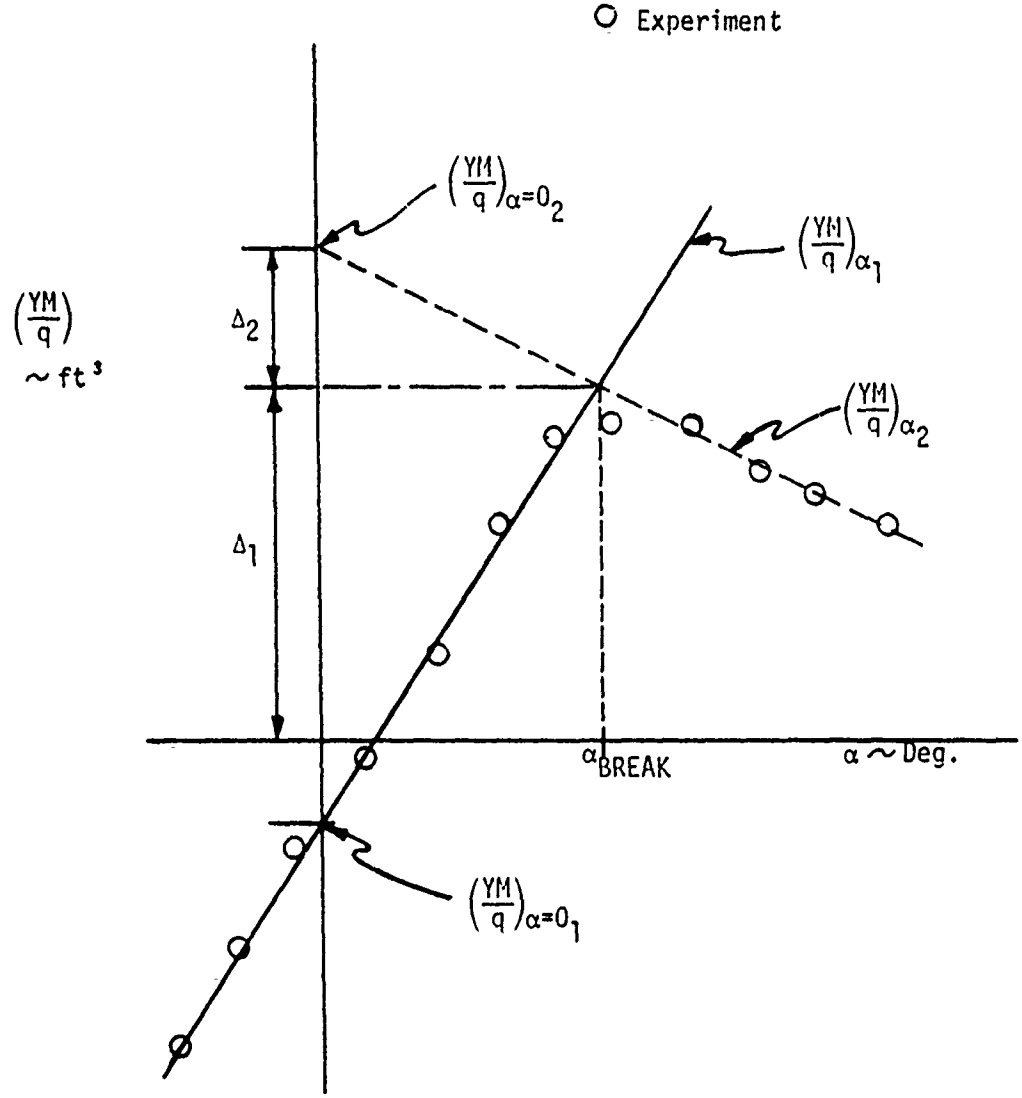


Figure 9. Guide to Derivation of $\left(\frac{YM}{q}\right)_{\alpha=0_2}$

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

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

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 $-4° \leq \alpha \leq \alpha_{BREAK}$. Equations (5) and (6) presented here predict yawing moment slope and intercept, respectively, for the range $\alpha_{BREAK} \leq \alpha \leq 12°$. Therefore, a combination of the two techniques yields a yawing moment prediction method that is valid for the -4° to +12° 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:

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

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

Figure 26		Figure 49		Figure 59	
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

TABLE OF CONTENTS

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 (ANOSEL)	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.

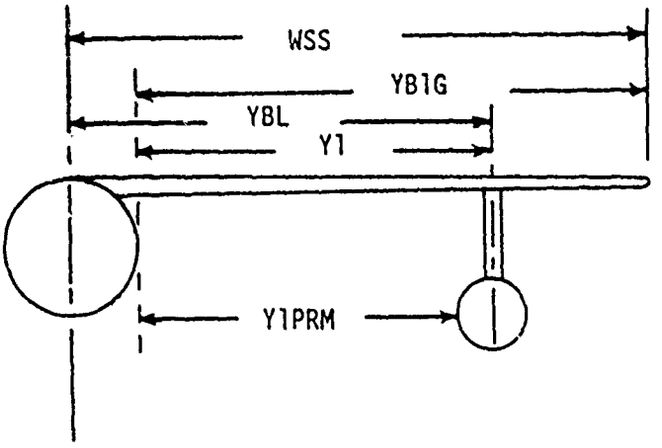
CARD	PARAMETER (FORTRAN SYMBOL)	COLUMN/FORMAT	DESCRIPTION
STORE3	+,x,1 or 2 (ICONFG)	10/A1	Control parameter describing symmetry of store wing/tail. "+" ~ used if wing/tail are in the plus orientation when subject store is in the carriage position. "x" ~ used if wing/tail are in this orientation when 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 Interfering 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 Interfering 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 Outboard Interfering Store, D_{INTF} (DINTFO)	31-40/F10.0	Diameter of the interfering store, in. Required if an infering store is outboard of the subject store.
	Longitudinal Overlap Distance of Inboard Interfering 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 Interfering 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 Inboard Interfering Store, D_{INTF} (DINTFI)	61-70/F10.0	Defined the same as "DINTFO". Required if an interfering store is inboard of the subject store.

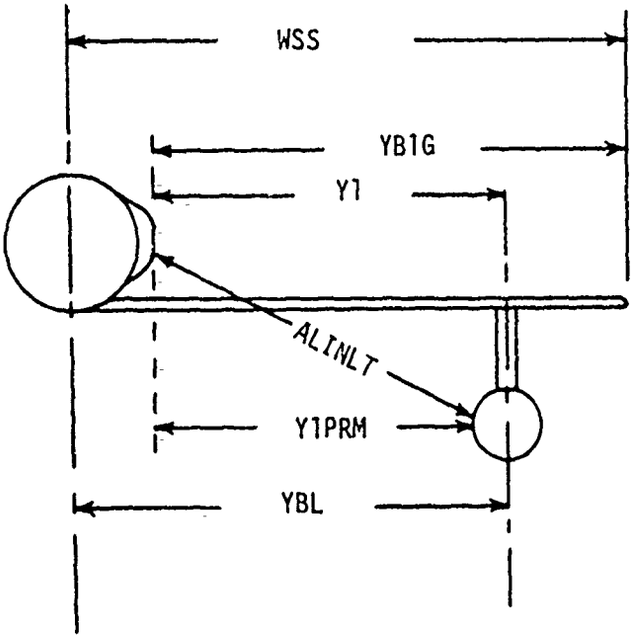
CARD	PARAMETER (FORTRAN SYMBOL)	COLUMN/FORMAT	DESCRIPTION
STORE5	Length of Outboard Interfering Store, L_{INTF} (ALINFO)	11-20/F10.0	Length of the interfering store, in. Required if an interfering store is outboard of the subject store.
	Length of Inboard Interfering Store, L_{INTF} (ALINFI)	21-30/F10.0	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

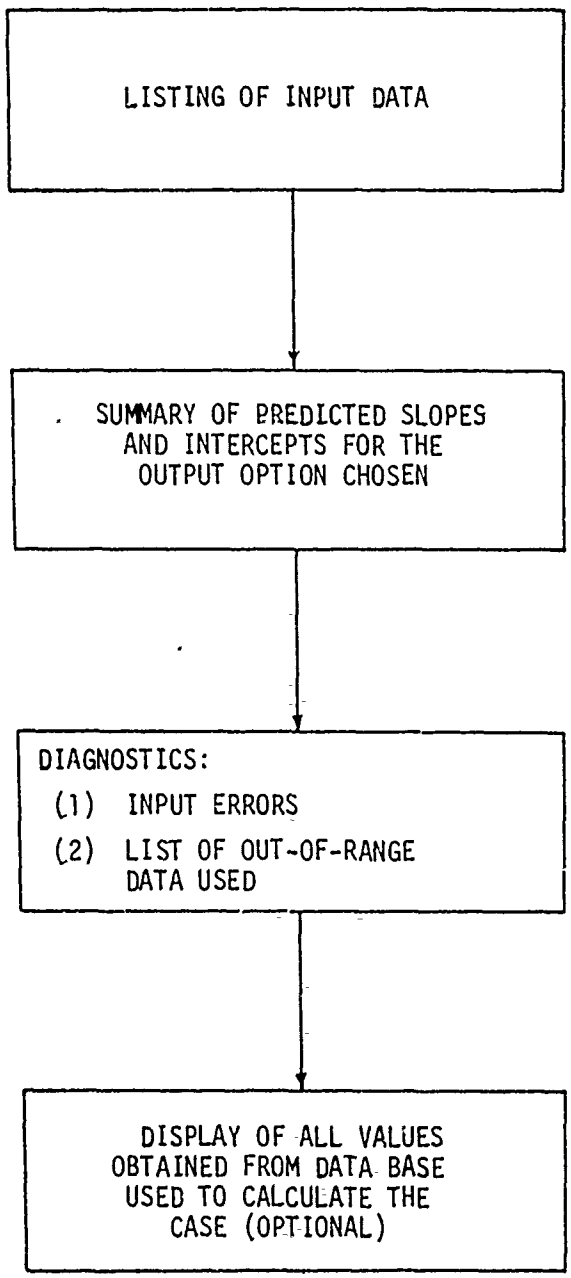


Figure A-2. Schematic of Output

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 techinque. 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 supressed 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 βs 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 (-βs) calculation and the second to the (+βs).

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. INITAL

   INITAL 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.

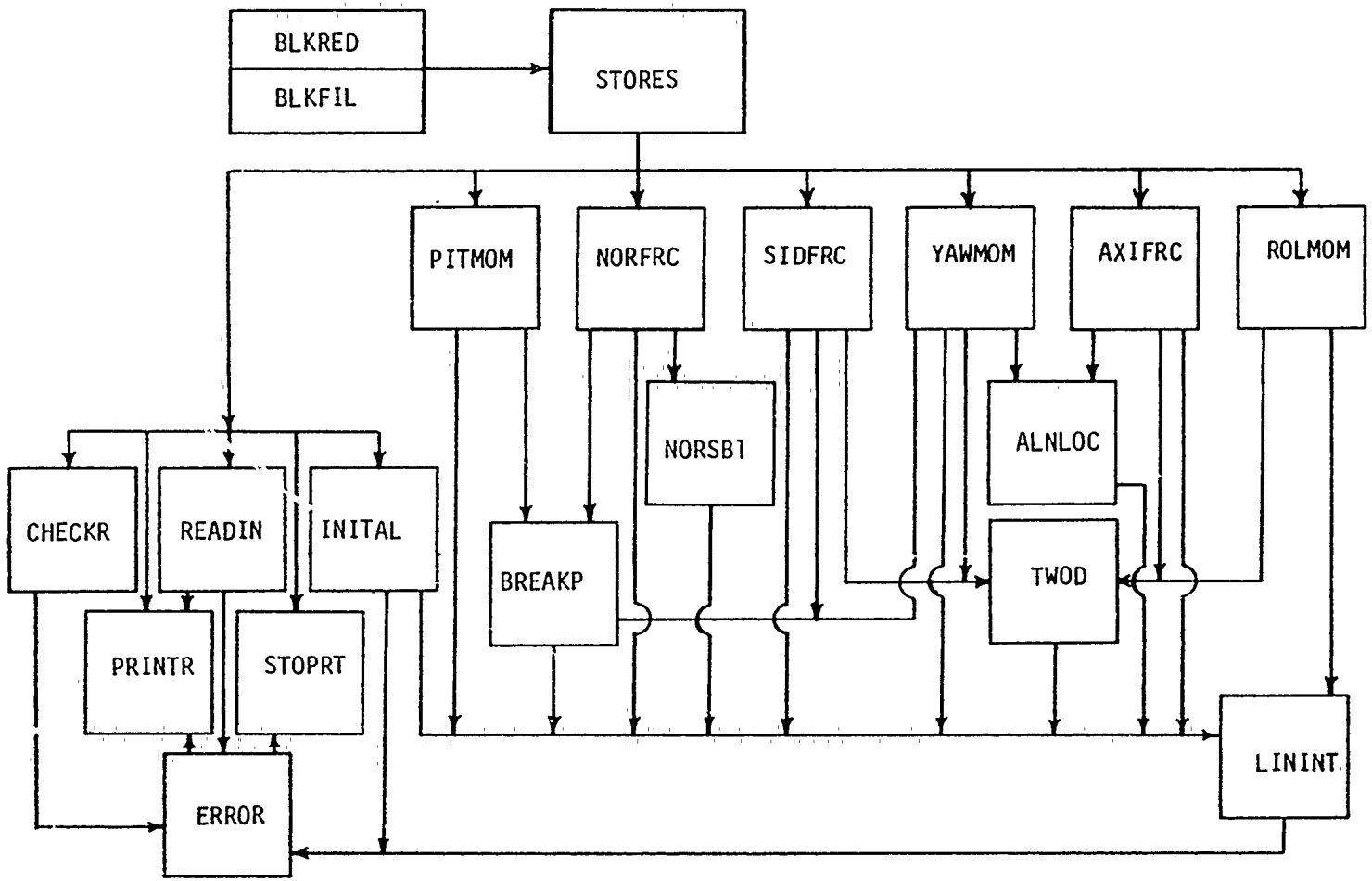


Figure A-3. Computer Routine Structure

SAMPLE CASE

INPUT DATA PLAYBACK FOR CASE NUMBER 1

```
TITLE      CAPTIVE AIRLOADS PREDICTION FOR A
TITLE      300 GALLON TANK ON THE A-7 OUTBOARD
TITLE      PYLON WITH A 300 GALLON TANK ON THE
TITLE      CENTER PYLON FOR INTERFERENCE
STORE1   1 1.23      .495       1.29
STORE2     226.      26.3       80.0       45.0       .0684      .064       98.5
STORE3   +   SPA=PPA
STORE4                                     29.3       12.9       26.52
STORE5                226.       30.       95.5       25.0       94.32      23.72
AERO       0.5        0.7        0.9       1.2        1.4        1.6        2.0
A/C1       103.9      0.16       232.38    202.9      136.6      107.64
A/C2       35.0       19.6       400.      1.0
OPTION     SF,NF,AF,YM,PM,RM                       SF,NF,AF,YM,PM,RM,IP
SPA                  1N    292.
SPA                  2N    548.
SPA                  3N    648.
SPA                  4N    142.
SPA                  4B    520.
SPA                  5B    662.
SPA                  6B    620.
SPA                  7B    531.
SPA                  8B    393.
SPA                  8W    4.5
SPA                  9B    203.
SPA                  9W    443.
SPA                 10B    0.6
END CASE
```

CAPTIVE AIRLOADS PREDICTION TECHNIQUE CALCULATED DATA CASE NUMBER = 1

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	.08066	.08120	.08282	.09359	.10436	.06446
INTERCEPT PREDICTION		-.32576	-.32603	-.34097	-.28943	-.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	-.02381	-.01687	-.01714
INTERCEPT PREDICTION		.13477	.13477	.10857	.22788	.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	.03109	-.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	.83656	.85307	.86959	.61048
INTERCEPT PREDICTION	> ALPHA BREAK	.29010	.45522	.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	.01845	.01312	.05315	.04879	.02273	.00545
INTERCEPT PREDICTION		.07611	.07611	-.25945	-.17815	-.12063	-.06311	-.06253
NORMAL FORCE COEFFICIENTS								
BASIC AIRLOAD								
SLOPE PREDICTION		-.00356	-.00356	-.00165	.00907	.01007	.00598	.00622
INTERCEPT PREDICTION		.34480	.34480	.34511	.34858	.35049	.35321	.35703
INCREMENT-AIRCRAFT YAW								
SLOPE PREDICTION	(+BS)	-.00813	-.00813	-.01078	-.01234	-.01082	-.00931	-.00929
INTERCEPT PREDICTION	(+BS)	.01199	.01172	-.01412	-.00906	-.02603	-.04298	-.04315
SLOPE PREDICTION	(-BS)	-.00919	-.00919	-.00787	-.01090	-.00826	-.00562	-.00560
INTERCEPT PREDICTION	(-BS)	.06886	.06886	.05950	.04186	.02123	.00076	.00056
INCREMENT-ADJACENT STORE INTERFERENCE								
SLOPE PREDICTION		.02836	.02840	.04064	.03826	.04356	.04884	.04884
INTERCEPT PREDICTION		-.04095	-.04095	-.06354	-.13942	-.14125	.02311	.02253

CAPTIVE AIRLOADS PREDICTION TECHNIQUE CALCULATED DATA CASE NUMBER = :

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
PITCHING MOMENT COEFFICIENTS								
BASIC AIRLOAD								
SLOPE PREDICTION		.07177	.07075	-.01048	-.13232	-.01786	.10059	.09457
INTERCEPT PREDICTION		-.36414	-.23832	-.21308	-.99607	-1.68305	-2.36942	-1.76536
INCREMENT-AIRCRAFT YAW								
SLOPE PREDICTION	(+BS)	.01476	.01476	.00753	.01941	.01879	.01824	.01823
INTERCEPT PREDICTION	(+BS)	-.01564	-.01564	.04674	.02369	.06830	.11222	.11244
SLOPE PREDICTION	(-BS)	.01559	.01559	.00832	.01799	.01499	.01195	.01189
INTERCEPT PREDICTION	(-BS)	-.14208	-.14208	-.07060	-.08655	-.06628	-.04785	-.04776
INCREMENT-ADJACENT STORE INTERFERENCE								
SLOPE PREDICTION		-.02280	-.02280	-.05290	.08745	-.01367	-.11480	-.11480
INTERCEPT PREDICTION		-.00007	-.00007	-.12532	-1.70905	-.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	(+BS)	-.00012	-.00012	.00037	.00036	-.00021	-.00035	-.00042
INTERCEPT PREDICTION	(+BS)	.00319	.00288	-.00505	.00333	.00459	.00443	.00417
SLOPE PREDICTION	(-BS)	.00032	.00032	.00032	.00102	.00077	.00035	.00012
INTERCEPT PREDICTION	(-BS)	-.00738	-.00746	-.00851	-.00804	-.00681	-.00630	-.00564
INCREMENT-ADJACENT STORE INTERFERENCE								
INTERCEPT PREDICTION		-.02422	-.00655	-.00450	-.02564	.02076	.05304	.05299
ROLLING MOMENT COEFFICIENTS								
BASIC AIRLOAD								
SLOPE PREDICTION		-.00781	-.00781	-.00780	-.00645	-.00548	-.00484	-.00402
INTERCEPT PREDICTION		.02399	.02462	.02459	.00206	-.01501	-.03208	-.03333
INCREMENT-AIRCRAFT YAW								
INTERCEPT PREDICTION	(+BS)	-.00996	-.01011	-.01139	-.01136	-.00963	-.00841	-.00686
INTERCEPT PREDICTION	(-BS)	-.01039	-.01180	-.01207	-.01195	-.01081	-.00842	-.00617
INCREMENT-ADJACENT STORE INTERFERENCE								
INTERCEPT PREDICTION		.00946	.00066	-.02277	-.01629	-.00960	-.00794	-.00735

REFERENCE DIMENSIONS

STORE CENTER OF GRAVITY TO FORWARD LUG = 18.00 INCHES
STORE REFERENCE AREA = 3.83 FEET**2
STORE REFERENCE LENGTH = 2.21 FEET

CAPTIVE STORE AIRLOADS PREDICTION GENERAL MESSAGES CASE NUMBER = 1

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

CAPTIVE STORE AIRLOADS PREDICTION OUT OF RANGE DATA

CASE NUMBER = 1
MACH NUMBER = .5

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 = .1611E+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 1
MACH NUMBER .50

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
5	1	-.639E+00	.
5	1	.830E-01	.
5	1	.564E+00	.
5	1	.105E+01	.
5	1	.153E+01	.242E+00
4	1	-.158E+00	.151E+01
4	1	.324E+00	.575E+00
4	1	.105E+01	.430E+00
4	1	.129E+01	.421E+00
14	1	.406E+01	.999E+00
31	1	.843E+02	-.886E-03
34	1	.843E+02	.409E+00
49	1	.349E+00	0.
50	1	.500E+00	.115E-05
53	2	.465E+00	0.
50	2	.500E+00	.489E-05
53	1	.465E+00	0.
57	1	.843E+02	.266E+00
60	1	.465E+00	0.
73	1	.843E+02	.124E+01
911	1	.404E+01	.424E+01
913	1	.500E+00	.220E-01
86	1	.465E+00	0.
100	1	.843E+02	.218E-03
103	1	.465E+00	0.
87	2	.843E+02	-.191E-01
101	2	.465E+00	0.
115	2	.500E+00	.137E-02
129	1	.588E+00	.359E-02
132	1	.465E+00	.999E+00
138	1	.897E+02	.134E+01
141	1	.383E+01	.112E+01
148	1	.897E+02	-.255E-01
170	1	.588E+00	0.
173	1	.588E+00	0.
147	2	.465E+00	0.
169	2	.897E+02	-.198E-02
172	2	.897E+02	.167E+00
197	1	.897E+02	.700E+00
195	2	.897E+02	.402E-02
214	1	.983E+00	-.525E+00
226	1	.897E+02	-.619E+01
239	1	.897E+02	.155E-01
260	1	.465E+00	0.
237	2	.897E+02	.381E-03
240	2	.465E+00	0.
261	2	.897E+02	-.374E-01
282	2	.897E+02	-.243E-02

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
5	1	-.398E+00	.191E+00
5	1	.830E-01	.876E+00
5	1	.805E+00	.422E+00
5	1	.129E+01	.266E+00
4	1	-.639E+00	.145E+01
4	1	.830E-01	.110E+01
4	1	.564E+00	.382E+00
4	1	.105E+01	.430E+00
4	1	.153E+01	.397E+00
15	1	.218E+01	.142E+01
32	1	.406E+01	0.
35	1	.406E+01	0.
47	1	.500E+00	.193E-05
51	1	.500E+00	.722E-05
47	2	.500E+00	.402E-05
51	2	.500E+00	.150E-04
56	2	.500E+00	-.725E-02
58	1	.843E+02	-.579E+00
71	1	.843E+02	-.180E-01
74	1	.465E+00	0.
915	3	.500E+00	-.180E+01
914	1	.465E+00	0.
87	1	.843E+02	-.137E-02
101	1	.465E+00	0.
85	2	.843E+02	.510E-05
88	2	.465E+00	0.
102	2	.843E+02	-.693E-01
116	2	.843E+02	.659E-01
130	1	.104E+03	.184E+00
133	1	.400E+03	0.
139	1	.136E+02	0.
146	1	.897E+02	.207E-03
149	1	.465E+00	0.
171	1	.465E+00	0.
174	1	.465E+00	0.
148	2	.897E+02	.651E-02
170	2	.588E+00	.787E-03
173	2	.588E+00	-.602E-01
207	1	.897E+02	.700E+00
204	2	.897E+02	.512E-04
215	1	.406E+01	.100E+01
237	1	.897E+02	.107E-05
240	1	.465E+00	0.
261	1	.897E+02	-.917E-01
238	2	.465E+00	0.
259	2	.897E+02	.358E-03
262	2	.465E+00	0.
291	2	.897E+02	.295E-04

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
5	1	-.158E+00	.458E+00
5	1	.324E+00	.828E+00
5	1	.105E+01	.306E+00
5	1	.129E+01	.266E+00
4	1	-.398E+00	.150E+01
4	1	.830E-01	.110E+01
4	1	.805E+00	.386E+00
4	1	.129E+01	.421E+00
13	1	.588E+00	.978E+00
16	1	.196E+02	.997E+00
33	1	.789E+02	0.
36	1	.789E+02	-.400E-02
48	1	.465E+00	0.
52	1	.500E+00	.319E+00
48	1	.465E+00	0.
52	2	.500E+00	.320E+00
56	1	.331E+01	.224E+00
59	1	.115E+03	.245E+00
72	1	.465E+00	0.
910	1	.404E+01	.102E+01
912	1	.500E+00	-.440E-03
85	1	.843E+02	-.553E-05
88	1	.465E+00	0.
102	1	.843E+02	-.202E+00
86	2	.465E+00	0.
100	2	.843E+02	.814E-04
103	2	.465E+00	0.
117	2	.588E+00	-.277E-01
131	1	.218E+01	.141E+01
134	1	.450E+02	.800E+00
140	1	.160E+00	0.
147	1	.465E+00	0.
169	1	.897E+02	-.171E-02
172	1	.897E+02	.204E+00
146	2	.897E+02	-.186E-03
149	2	.465E+00	0.
171	2	.465E+00	0.
174	2	.465E+00	0.
194	2	.897E+02	-.401E-04
205	2	.897E+02	-.540E-02
225	1	.104E+03	.673E-01
238	1	.465E+00	0.
259	1	.897E+02	-.831E-03
262	1	.465E+00	0.
239	2	.897E+02	-.838E-02
260	2	.465E+00	0.
281	2	.897E+02	.190E-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 .59

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
301	1	.500E+00	-.679E-03
305	4	.500E+00	.126E+00
307	3	.500E+00	-.124E+00
310	1	.500E+00	-.738E-02
311	1	.500E+00	-.113E-02
312	2	.588E+00	-.259E-04
318	1	.465E+00	0.
325	1	.465E+00	.101E+01
326	2	.500E+00	.157E-01
329	1	.843E+02	-.484E-02
303	1	.500E+00	-.417E-02
305	5	.500E+00	.943E-01
308	1	.465E+00	0.
309	2	.500E+00	-.117E-03
313	1	.500E+00	.218E-01
314	2	.588E+00	.117E-01
319	1	.843E+02	.272E-01
324	1	.500E+00	-.173E-01
327	1	.265E+02	.346E-03
303	2	.500E+00	.191E-02
307	2	.500E+00	-.278E-16
309	1	.500E+00	.318E-03
310	2	.500E+00	.319E-02
315	1	.153E+00	-.629E-03
317	1	.500E+00	-.131E-01
323	1	.588E+00	.120E+01
324	2	.500E+00	-.166E-01
328	1	.588E+00	.907E-03

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 .70

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	1	.843E+02	.699E+00
20	1	.843E+02	-.301E-01
39	1	.843E+02	-.132E-02
47	1	.700E+00	.212E-05
51	1	.700E+00	.967E-05
47	2	.700E+00	.401E-05
51	2	.700E+00	.150E-04
55	2	.700E+00	-.725E-02
58	1	.843E+02	-.579E+00
62	3	.843E+02	.105E+01
65	1	.843E+02	.280E-02
76	2	.843E+02	.120E+01
910	2	.404E+01	.450E+01
912	1	.700E+00	-.660E-03
91	1	.843E+02	.700E+00
93	1	.465E+00	0.
106	1	.843E+02	.698E+00
108	1	.465E+00	0.
90	1	.843E+02	.703E+00
119	1	.843E+02	.703E+00
177	1	.897E+02	.702E+00
176	2	.897E+02	.902E+00
180	2	.897E+02	.258E-01
197	2	.897E+02	.902E+00
199	2	.897E+02	.525E-02
218	1	.897E+02	-.100E-02
227	1	.897E+02	.500E+00
229	1	.897E+02	-.936E+00
242	1	.897E+02	.703E+00
294	1	.897E+02	.701E+00
303	2	.700E+00	.532E-02
307	2	.700E+00	-.235E-02
309	1	.700E+00	.318E-03
310	2	.700E+00	.288E-02
315	1	.153E+00	-.629E-03
317	1	.700E+00	-.131E-01
323	1	.588E+00	.120E+01
324	2	.700E+00	-.169E-01
328	1	.588E+00	.907E-03
18	2	.843E+02	.105E+01
38	1	.843E+02	.696E+00
40	1	.843E+02	.117E+01
48	1	.465E+00	0.
52	1	.700E+00	.320E+00
48	1	.465E+00	0.
52	2	.700E+00	.320E+00
56	1	.331E+01	.224E+00
62	1	.843E+02	.500E+00
63	1	.843E+02	.904E-03
66	1	.843E+02	-.456E+00
77	1	.843E+02	-.833E-01
911	1	.404E+01	.424E+01
913	1	.700E+00	.300E-01
91	2	.843E+02	.120E+01
94	1	.843E+02	.117E-01
106	2	.843E+02	.120E+01
109	1	.843E+02	-.214E+00
105	1	.843E+02	.794E+00
154	1	.450E+02	.800E+00
151	1	.897E+02	.717E+00
178	2	.897E+02	-.860E-03
181	2	.465E+00	0.
207	1	.897E+02	.700E+00
217	1	.104E+03	.698E+00
219	1	.897E+02	.154E+00
227	2	.897E+02	.854E+00
242	1	.897E+02	.703E+00
264	1	.897E+02	.702E+00
301	1	.700E+00	-.853E-03
305	4	.700E+00	.134E+00
307	3	.700E+00	-.118E+00
310	1	.700E+00	-.746E-02
311	1	.700E+00	-.735E-03
312	2	.588E+00	-.259E-04
318	1	.465E+00	0.
325	1	.465E+00	.101E+01
326	2	.700E+00	.397E-02
329	1	.843E+02	-.404E-02
19	1	.843E+02	.341E-04
38	2	.843E+02	.105E+01
49	1	.349E+00	0.
50	1	.700E+00	.198E-05
53	2	.465E+00	0.
50	2	.700E+00	.471E-05
53	1	.465E+00	0.
57	1	.843E+02	.266E+00
62	2	.843E+02	.700E+00
64	1	.843E+02	.381E-01
76	1	.843E+02	.700E+00
76	1	.843E+02	.890E+01
915	3	.700E+00	-.120E+01
914	2	.465E+00	0.
92	1	.843E+02	-.110E-04
95	1	.465E+00	0.
107	1	.843E+02	.116E-03
110	1	.465E+00	0.
115	2	.700E+00	.104E-02
152	1	.897E+02	.703E+00
176	1	.897E+02	.699E+00
179	2	.465E+00	0.
197	1	.897E+02	.700E+00
198	2	.897E+02	-.751E-04
217	2	.104E+03	.120E+01
220	1	.218E+01	-.246E+00
226	1	.897E+02	.417E-02
264	1	.897E+02	.702E+00
284	1	.897E+02	.701E+00
303	1	.700E+00	-.282E-02
305	5	.700E+00	.932E-01
308	1	.465E+00	0.
309	2	.700E+00	-.115E-03
313	1	.700E+00	.208E-01
314	2	.588E+00	.117E-01
319	2	.843E+02	.279E-01
324	1	.700E+00	-.197E-01
327	1	.265E+02	.346E-03

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 .90

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	1	.843E+02	.699E+00
20	1	.843E+02	-.301E-01
39	1	.843E+02	-.132E-02
47	1	.900E+00	.235E-05
51	1	.900E+00	.179E-04
47	2	.900E+00	.383E-05
51	2	.900E+00	.159E-04
55	2	.900E+00	-.726E-02
58	2	.843E+02	-.368E+00
62	3	.843E+02	.105E+01
65	1	.843E+02	.280E-02
76	2	.843E+02	.120E+01
910	2	.420E+01	.414E+01
912	1	.900E+00	-.750E-03
91	1	.843E+02	.700E+00
93	1	.465E+00	0.
106	1	.843E+02	.698E+00
108	1	.465E+00	0.
90	1	.843E+02	.703E+00
93	2	.465E+00	0.
105	1	.843E+02	.794E+00
108	2	.465E+00	0.
115	2	.900E+00	.736E-03
121	2	.843E+02	.107E-05
124	2	.843E+02	-.190E+00
136	1	.512E+02	.138E-01
142	1	.205E+04	.117E-01
152	1	.897E+02	.703E+00
154	1	.465E+00	0.
177	1	.897E+02	.702E+00
179	1	.465E+00	0.
151	1	.897E+02	.717E+00
154	2	.465E+00	0.
176	1	.897E+02	.698E+00
179	2	.465E+00	0.
197	1	.897E+02	.700E+00
207	2	.897E+02	.901E+00
208	2	.897E+02	.666E-03
217	2	.104E+03	.120E+01
220	1	.218E+01	-.246E+00
227	3	.897E+02	.106E+01
230	1	.897E+02	.764E-01
242	1	.897E+02	.703E+00
244	1	.465E+00	0.
264	1	.897E+02	.702E+00
266	1	.465E+00	0.
242	1	.897E+02	.703E+00
244	2	.465E+00	0.
18	2	.843E+02	.105E+01
38	1	.843E+02	.696E+00
40	1	.843E+02	.117E+01
48	2	.465E+00	0.
52	1	.900E+00	.337E+00
48	2	.465E+00	0.
52	2	.900E+00	.357E+00
56	2	.331E+01	.525E-01
62	1	.843E+02	.500E+00
63	1	.843E+02	.904E-03
66	1	.843E+02	-.456E+00
77	1	.843E+02	-.833E-01
911	1	.420E+01	.441E+01
913	1	.900E+00	.450E-01
91	2	.843E+02	.120E+01
94	1	.843E+02	.117E-01
106	2	.843E+02	.120E+01
109	1	.843E+02	-.214E+00
90	2	.843E+02	.110E+01
94	2	.843E+02	.195E-01
105	2	.843E+02	.110E+01
109	2	.843E+02	-.405E+00
119	1	.843E+02	.703E+00
122	2	.843E+02	-.832E-02
134	1	.450E+02	.800E+00
137	1	.100E+00	.140E+00
143	1	.302E+01	.101E+01
152	2	.897E+02	.902E+00
155	1	.897E+02	-.757E-02
177	2	.897E+02	.902E+00
180	1	.897E+02	.186E-01
151	2	.897E+02	.905E+00
155	2	.897E+02	-.847E-02
176	2	.897E+02	.902E+00
180	2	.897E+02	.258E-01
197	2	.897E+02	.902E+00
198	2	.897E+02	-.751E-04
209	2	.897E+02	-.417E-01
218	1	.897E+02	-.100E-02
227	1	.897E+02	.500E+00
228	1	.897E+02	.417E-02
231	1	.897E+02	-.342E+01
242	2	.897E+02	.902E+00
245	1	.897E+02	.157E-01
264	2	.897E+02	.907E+00
267	1	.897E+02	-.112E+00
242	2	.897E+02	.902E+00
245	2	.897E+02	.204E-01
19	1	.843E+02	.341E-04
39	2	.843E+02	.105E+01
49	1	.349E+00	0.
50	1	.900E+00	.320E-05
53	2	.465E+00	0.
50	2	.900E+00	.415E-05
53	1	.465E+00	0.
57	2	.843E+02	.305E+00
62	2	.843E+02	.700E+00
64	1	.843E+02	.381E-01
76	1	.843E+02	.700E+00
78	1	.843E+02	.890E+01
915	3	.900E+00	-.140E+01
914	2	.465E+00	0.
92	1	.843E+02	-.110E-04
95	1	.465E+00	0.
107	1	.843E+02	.116E-03
110	1	.465E+00	0.
92	2	.843E+02	-.926E-05
95	2	.465E+00	0.
107	2	.843E+02	.261E-03
110	2	.465E+00	0.
119	2	.843E+02	.903E+00
123	2	.843E+02	-.982E-05
135	1	.588E+00	.335E+00
144	1	.531E+00	.398E+01
145	1	.588E+00	.109E+01
153	1	.897E+02	.147E-03
156	1	.465E+00	0.
178	1	.897E+02	-.463E-03
181	1	.465E+00	0.
153	2	.897E+02	.946E-04
156	2	.465E+00	0.
178	2	.897E+02	-.860E-03
181	2	.465E+00	0.
207	1	.897E+02	.700E+00
199	2	.897E+02	.525E-02
217	1	.104E+03	.698E+00
219	1	897E+02	.154E+00
227	2	.897E+02	.854E+00
229	1	.897E+02	-.936E+00
232	1	.588E+00	.998E+00
243	1	.897E+02	-.380E-03
246	1	.465E+00	0.
265	1	.897E+02	.307E-02
268	1	.465E+00	0.
243	2	.897E+02	-.457E-03
246	2	.465E+00	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 .90

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
264	1	.897E+02	.702E+00
266	2	.465E+00	0.
284	1	.897E+02	.701E+00
286	2	.897E+02	-.622E-02
295	2	.897E+02	-.132E-02
303	1	.900E+00	-.221E-02
305	5	.900E+00	.126E+00
308	1	.465E+00	0.
309	2	.900E+00	.366E-03
313	1	.900E+00	.829E-02
314	2	.588E+00	.117E-01
320	1	.843E+02	.278E-01
324	1	.900E+00	-.201E-01
327	2	.265E+02	.295E-03
328	3	.588E+00	.161E-03

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
264	2	.897E+02	.907E+00
267	2	.897E+02	-.139E+00
284	2	.897E+02	.901E+00
294	1	.897E+02	.701E+00
296	2	.897E+02	.731E-01
303	2	.900E+00	.114E-01
307	2	.900E+00	-.448E-01
309	1	.900E+00	.320E-03
310	2	.900E+00	-.505E-02
315	1	.153E+01	-.629E-03
317	1	.900E+00	-.131E-01
323	1	.588E+00	.120E+01
324	2	.900E+00	-.190E-01
327	3	.265E+02	.351E-03
329	2	.843E+02	-.412E-02

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
265	2	.897E+02	.336E-02
268	2	.465E+00	-.497E-03
285	2	.897E+02	.746E-04
294	2	.897E+02	.903E+00
301	1	.900E+00	-.380E-02
305	4	.900E+00	.178E+00
307	3	.900E+00	.121E-01
310	1	.900E+00	-.851E-02
311	1	.900E+00	-.456E-03
312	2	.588E+00	-.259E-04
318	1	.465E+00	0.
325	2	.465E+00	.101E+01
326	2	.900E+00	-.280E-01
328	2	.588E+00	.790E-03
329	3	.843E+02	-.379E-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 1.20

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	.160E+01	21	1	.588E+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	.696E+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	.120E+01	.217E-05	48	4	.465E+00	0.
50	1	.120E+01	.188E-05	51	1	.120E+01	.265E-04	52	1	.120E+01	.339E+00
53	3	.465E+00	0.	47	2	.120E+01	.351E-05	48	4	.465E+00	0.
50	2	.120E+01	.145E-05	51	2	.120E+01	.229E-04	52	2	.120E+01	.363E+00
53	3	.465E+00	0.	55	2	.120E+01	-.672E-02	56	3	.331E+01	.240E+00
57	3	.843E+02	.828E+00	58	3	.843E+02	-.148E+01	62	1	.843E+02	.500E+00
62	2	.843E+02	.700E+00	62	3	.843E+02	.105E+01	62	4	.843E+02	.160E+01
65	1	.843E+02	.280E-02	66	1	.843E+02	-.456E+00	67	1	.843E+02	.553E-02
68	1	.843E+02	-.497E+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	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	.693E+00
106	2	.843E+02	.120E+01	107	1	.843E+02	.116E-03	108	1	.465E+00	0.
109	1	.843E+02	-.214E+00	110	1	.465E+00	0.	90	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	.110E+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	.120E+01	.298E-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	.400E+00	.900E+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
157	1	.897E+02	-.635E-04	158	1	.465E+00	0.	159	1	.897E+02	.546E-02
160	1	.465E+00	0.	161	1	.897E+02	-.878E-04	162	1	.465E+00	0.
163	1	.897E+02	.361E-02	164	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
182	1	.897E+02	.527E-03	183	1	.465E+00	0.	184	1	.897E+02	-.383E-01
185	1	.465E+00	0.	186	1	.897E+02	-.713E-03	187	1	.465E+00	0.
188	1	.897E+02	.157E-01	189	1	.465E+00	0.	151	1	.897E+02	.717E+00
151	2	.897E+02	.905E+00	151	3	.897E+02	.106E+01	151	4	.897E+02	.160E+01
157	2	.897E+02	-.133E-03	158	2	.465E+00	0.	159	2	.897E+02	.280E-02
160	2	.465E+00	0.	161	2	.897E+02	-.254E-03	162	2	.465E+00	0.
163	2	.897E+02	.142E-01	164	2	.465E+00	0.	176	1	.897E+02	.698E+00
176	2	.897E+02	.902E+00	176	3	.897E+02	.110E+01	176	4	.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 1.20

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
182	2	.897E+02	-.323E-03
185	2	.465E+00	0.
188	2	.897E+02	-.888E-01
197	2	.897E+02	.902E+00
207	2	.897E+02	.901E+00
199	2	.897E+02	.525E-02
208	2	.897E+02	.666E-03
211	2	.897E+02	.520E-02
218	1	.897E+02	-.100E-02
227	1	.897E+02	.500E+00
227	4	.897E+02	.161E+01
232	1	.588E+00	.998E+00
242	1	.897E+02	.703E+00
242	4	.897E+02	.120E+01
249	1	.897E+02	.496E-02
252	1	.465E+00	0.
264	1	.897E+02	.702E+00
264	4	.897E+02	.120E+01
271	1	.897E+02	.338E-01
274	1	.465E+00	0.
242	1	.897E+02	.703E+00
242	4	.897E+02	.120E+01
249	2	.897E+02	-.897E-02
252	2	.465E+00	0.
264	1	.897E+02	.702E+00
264	4	.897E+02	.120E+01
271	2	.897E+02	.157E+00
274	2	.465E+00	0.
284	1	.897E+02	.701E+00
285	2	.897E+02	.746E-04
288	2	.897E+02	-.915E-02
294	3	.897E+02	.120E+01
297	2	.897E+02	-.220E-02
303	1	.120E+01	-.115E-02
305	5	.120E+01	.292E+00
308	1	.465E+00	0.
309	2	.120E+01	.364E-03
313	1	.120E+01	-.383E-01
314	2	.588E+00	.117E-01
321	1	.843E+02	.233E-02
324	1	.120E+01	-.199E-01
327	3	.265E+02	.351E-03

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
183	2	.465E+00	0.
186	2	.897E+02	.556E-03
189	2	.465E+00	0.
197	3	.897E+02	.120E+01
207	3	.897E+02	.120E+01
200	2	.897E+02	-.210E-04
209	2	.897E+02	-.417E-01
217	1	.104E+03	.698E+00
219	1	.897E+02	.154E+00
227	2	.897E+02	.854E+00
230	1	.897E+02	.764E-01
233	1	.897E+02	-.188E-01
242	2	.897E+02	.902E+00
247	1	.897E+02	-.396E-04
250	1	.465E+00	0.
253	1	.897E+02	.618E-02
264	2	.897E+02	.907E+00
269	1	.897E+02	-.992E-03
272	1	.465E+00	0.
275	1	.897E+02	-.103E+00
242	2	.897E+02	.902E+00
247	2	.897E+02	.317E-03
250	2	.465E+00	0.
253	2	.897E+02	.460E-02
264	2	.897E+02	.907E+00
269	2	.897E+02	-.290E-02
272	2	.465E+00	0.
275	2	.897E+02	-.103E+00
284	2	.897E+02	.901E+00
286	2	.897E+02	-.622E-02
294	1	.897E+02	.701E+00
295	2	.897E+02	-.132E-02
298	2	.897E+02	.761E-01
303	2	.120E+01	.984E-03
307	2	.120E+01	-.541E-01
309	1	.120E+01	.102E-02
310	2	.120E+01	.333E-02
315	1	.153E+00	-.629E-03
317	1	.120E+01	-.108E-01
323	1	.588E+00	.120E+01
324	2	.120E+01	-.189E-01
328	3	.588E+00	.161E-03

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
184	2	.897E+02	.692E-02
187	2	.465E+00	0.
197	1	.897E+02	.700E+00
207	1	.897E+02	.700E+00
198	2	.897E+02	-.751E-04
201	2	.897E+02	.183E-02
210	2	.897E+02	-.326E-03
217	2	.104E+03	.120E+01
220	1	.218E+01	-.246E+00
227	3	.897E+02	.106E+01
231	1	.897E+02	-.342E+01
234	1	.897E+02	.238E+01
242	3	.897E+02	.105E+01
248	1	.465E+00	0.
251	1	.897E+02	-.624E-04
254	1	.465E+00	0.
264	3	.897E+02	.105E+01
270	1	.465E+00	0.
273	1	.897E+02	.266E-02
276	1	.465E+00	0.
242	3	.897E+02	.105E+01
248	2	.465E+00	0.
251	2	.897E+02	-.477E-06
254	2	.465E+00	0.
264	3	.897E+02	.105E+01
270	2	.465E+00	0.
273	2	.897E+02	.237E-02
276	2	.465E+00	0.
284	3	.897E+02	.120E+01
287	2	.897E+02	.254E-03
294	2	.897E+02	.903E+00
296	2	.897E+02	.731E-01
301	1	.120E+01	-.127E-01
305	4	.120E+01	.386E+00
307	3	.120E+01	.103E+00
310	1	.120E+01	-.804E-02
311	1	.120E+01	.580E-04
312	2	.588E+00	-.259E-04
318	1	.465E+00	0.
325	2	.465E+00	.101E+01
326	2	.120E+01	-.169E-01
329	3	.843E+02	-.379E-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 1.40

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	1	.843E+02	.699E+00
18	4	.843E+02	.150E+01
23	1	.588E+00	.993E+00
26	1	.811E+00	-.382E-04
38	1	.843E+02	.696E+00
39	1	.843E+02	-.132E-02
42	1	.406E+01	0.
49	1	.349E+00	0.
48	5	.465E+00	0.
52	1	.140E+01	.272E+00
47	2	.140E+01	.365E-05
50	2	.140E+01	.266E-05
53	3	.465E+00	0.
56	3	.331E+01	.240E+00
57	4	.843E+02	.626E+00
62	1	.843E+02	.509E+00
62	4	.843E+02	.160E+01
67	1	.843E+02	.553E-02
76	2	.843E+02	.120E+01
78	1	.843E+02	.890E+01
81	1	.843E+02	-.395E+00
91	2	.843E+02	.120E+01
93	1	.465E+00	0.
96	1	.843E+02	.725E-05
99	1	.465E+00	0.
106	3	.843E+02	.160E+01
109	1	.843E+02	-.214E+00
112	1	.465E+00	0.
90	1	.843E+02	.703E+00
92	2	.843E+02	-.926E-05
95	2	.465E+00	0.
98	2	.843E+02	-.668E-02
105	2	.843E+02	.110E+01
108	2	.465E+00	0.
111	2	.843E+02	.275E-04
114	2	.465E+00	0.
119	2	.843E+02	.903E+00
122	2	.843E+02	-.832E-02
125	2	.843E+02	-.176E-04
128	2	.843E+02	.314E+00
136	1	.512E+02	.138E-01
142	1	.205E+04	.117E-01
152	1	.897E+02	.703E+00
152	4	.897E+02	.120E+01
162	1	.465E+00	0.
165	1	.897E+02	-.117E-03
168	1	.465E+00	0.
177	3	.897E+02	.196E+01

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	2	.843E+02	.105E+01
21	1	.538E+00	.101E+01
24	1	.811E+00	.135E-01
27	1	.588E+00	.102E+01
38	2	.843E+02	.105E+01
40	1	.843E+02	.117E+01
43	1	.843E+02	-.228E+00
47	1	.140E+01	.216E-05
50	1	.140E+01	.350E-05
53	3	.465E+00	0.
48	4	.465E+00	0.
51	2	.140E+01	.301E-04
53	4	.465E+00	0.
56	4	.331E+01	.262E+00
58	3	.843E+02	-.148E+01
62	2	.843E+02	.700E+00
65	1	.843E+02	.280E-02
68	1	.843E+02	-.497E+00
76	3	.843E+02	.160E+01
79	1	.843E+02	.356E-01
82	1	.406E+01	0.
91	3	.843E+02	.160E+01
94	1	.843E+02	.117E-01
97	1	.465E+00	0.
106	1	.843E+02	.698E+00
107	1	.843E+02	.116E-01
110	1	.465E+00	0.
113	1	.843E+02	.591E-01
90	2	.843E+02	.110E+01
93	2	.465E+00	0.
96	2	.843E+02	.413E-05
99	2	.465E+00	0.
105	3	.843E+02	.160E+01
109	2	.843E+02	-.405E+00
112	2	.465E+00	0.
115	2	.140E+01	.274E-02
119	3	.843E+02	.160E+01
123	2	.843E+02	-.932E-05
126	2	.843E+02	.626E-02
134	1	.450E+02	.800E+00
137	1	.600E+00	.992E+00
143	1	.302E+01	.101E+01
152	2	.897E+02	.902E+00
152	5	.897E+02	.160E+01
163	1	.897E+02	.361E-02
166	1	.465E+00	0.
177	1	.897E+02	.702E+00
177	4	.897E+02	.120E+01

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	3	.843E+02	.120E+01
22	1	.811E+00	-.440E-05
25	1	.588E+00	.100E+01
28	1	.811E+00	.575E-01
38	3	.843E+02	.160E+01
41	1	.843E+02	.761E-03
44	1	.406E+01	0.
46	4	.465E+00	0.
51	1	.140E+01	.287E-04
53	4	.465E+00	0.
48	5	.465E+00	0.
52	2	.140E+01	.297E+00
55	2	.140E+01	-.512E-02
57	3	.843E+02	.828E+00
58	4	.843E+02	-.901E+00
62	3	.843E+02	.105E+01
66	1	.843E+02	-.456E+00
76	1	.843E+02	.700E+00
77	1	.843E+02	-.833E-01
80	1	.406E+01	0.
91	1	.843E+02	.700E+00
92	1	.843E+02	-.110E-04
95	1	.465E+00	0.
98	1	.843E+02	-.133E-01
106	2	.843E+02	.120E+01
108	1	.465E+00	0.
111	1	.843E+02	-.106E-03
114	1	.465E+00	0.
90	3	.843E+02	.160E+01
94	2	.843E+02	.195E-01
97	2	.465E+00	0.
105	1	.843E+02	.794E+00
107	2	.843E+02	.261E-03
110	2	.465E+00	0.
113	2	.843E+02	-.116E+00
119	1	.843E+02	.703E+00
121	2	.843E+02	.107E-05
124	2	.843E+02	-.190E+00
127	2	.843E+02	-.229E-03
135	1	.588E+00	.335E+00
144	1	.531E+00	.398E+01
145	1	.588E+00	.109E+01
152	3	.897E+02	.105E+01
161	1	.897E+02	-.878E-04
164	1	.465E+00	0.
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	.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	.106E+01	151	4	.897E+02	.160E+01
157	2	.897E+02	-.133E-03	158	2	.465E+00	0.	159	2	.897E+02	.280E-02
160	2	.465E+00	0.	161	2	.897E+02	-.254E-03	162	2	.465E+00	0.
163	2	.897E+02	.142E-01	164	2	.465E+00	0.	176	1	.897E+02	.698E+00
176	2	.897E+02	.902E+00	176	3	.897E+02	.110E+01	176	4	.897E+02	.160E+01
182	2	.897E+02	-.323E-03	183	2	.465E+00	0.	184	2	.897E+02	.692E-02
185	2	.465E+00	0.	186	2	.897E+02	.556E-03	187	2	.465E+00	0.
188	2	.897E+02	-.888E-01	189	2	.465E+00	0.	197	1	.897E+02	.700E+00
197	2	.897E+02	.902E+00	197	3	.897E+02	.120E+01	197	4	.897E+02	.160E+01
207	1	.897E+02	.700E+00	207	2	.897E+02	.901E+00	207	3	.897E+02	.120E+01
207	4	.897E+02	.160E+01	200	2	.897E+02	-.210E-04	201	2	.897E+02	.183E-02
202	2	.897E+02	-.684E-04	203	2	.897E+02	.530E-02	210	2	.897E+02	-.326E-03
211	2	.897E+02	.520E-02	212	2	.897E+02	.523E-03	213	2	.897E+02	-.282E-01
217	1	.104E+03	.698E+00	217	2	.104E+03	.120E+01	217	3	.104E+03	.160E+01
218	1	.897E+02	-.100E-02	219	1	.897E+02	.154E+00	220	1	.218E+01	-.246E+00
221	1	.588E+00	.660E-03	222	1	.897E+02	.206E-01	227	1	.897E+02	.500E+00
227	2	.897E+02	.854E+00	227	3	.897E+02	.106E+01	227	4	.897E+02	.161E+01
230	1	.897E+02	.764E-01	231	1	.897E+02	-.342E+01	232	1	.588E+00	.998E+00
233	1	.897E+02	-.188E-01	234	1	.897E+02	.238E+01	242	1	.897E+02	.703E+00
242	2	.897E+02	.902E+00	242	3	.897E+02	.105E+01	242	4	.897E+02	.120E+01
242	5	.897E+02	.160E+01	251	1	.897E+02	-.624E-04	252	1	.465E+00	0.
253	1	.897E+02	.618E-02	254	1	.465E+00	0.	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	273	1	.897E+02	.266E-02
274	1	.465E+00	0.	275	1	.897E+02	-.103E+00	276	1	.465E+00	0.
277	1	.897E+02	.119E-03	278	1	.465E+00	0.	279	1	.897E+02	.871E-01
280	1	.465E+00	0.	242	1	.897E+02	.703E+00	242	2	.897E+02	.902E+00
242	3	.897E+02	.105E+01	242	4	.897E+02	.120E+01	242	5	.897E+02	.160E+01
251	2	.897E+02	-.477E-06	252	2	.465E+00	0.	253	2	.897E+02	.460E-02
254	2	.465E+00	0.	255	2	.897E+02	.554E-03	256	2	.465E+00	0.
257	2	.897E+02	-.301E-01	258	2	.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	273	2	.897E+02	.237E-02	274	2	.465E+00	0.
275	2	.897E+02	-.103E+00	276	2	.465E+00	0.	277	2	.897E+02	.196E-02
278	2	.465E+00	0.	279	2	.897E+02	.913E-02	280	2	.465E+00	0.
284	1	.897E+02	.701E+00	284	2	.897E+02	.901E+00	284	3	.897E+02	.120E+01
284	4	.897E+02	.160E+01	287	2	.897E+02	.254E-03	288	2	.897E+02	-.915E-02
289	2	.897E+02	-.676E-04	290	2	.897E+02	-.106E-02	294	1	.897E+02	.701E+00
294	2	.897E+02	.903E+00	294	3	.897E+02	.120E+01	294	4	.897E+02	.160E+01
297	2	.897E+02	-.220E-02	298	2	.897E+02	.761E-01	299	2	.897E+02	-.858E-03
300	2	.897E+02	.427E-01	301	1	.140E+01	-.598E-02	303	1	.140E+01	-.744E-03
303	2	.140E+01	.952E-03	305	4	.140E+01	.254E+00	305	5	.140E+01	.217E+00
307	2	.140E+01	-.405E-01	307	3	.140E+01	.548E-01	308	1	.465E+00	0.
309	1	.140E+01	.771E-03	310	1	.140E+01	-.681E-02	309	2	.140E+01	-.215E-03

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
310	2	.140E+01	.439E-02
315	1	.153E+00	-.629E-03
317	1	.140E+01	-.919E-02
321	1	.843E+02	.233E-02
325	2	.465E+00	.101E+01
324	2	.140E+01	-.160E-01
327	4	.265E+02	.149E-03
329	3	.843E+02	-.379E-02
311	1	.140E+01	.379E-03
312	2	.588E+00	-.259E-04
318	1	.465E+00	0.
321	2	.843E+02	-.363E-01
325	3	.465E+00	.101E+01
326	2	.140E+01	-.990E-02
328	3	.588E+00	.161E-03
329	4	.843E+02	-.356E-02
313	1	.140E+01	-.774E-02
314	2	.588E+00	.117E-01
316	2	.465E+00	0.
323	1	.588E+00	.120E+01
324	1	.140E+01	-.180E-01
327	3	.265E+02	.351E-03
328	4	.588E+00	.346E-03

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 1.60

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	1	.843E+02	.699E+00
18	4	.843E+02	.160E+01
23	1	.588E+00	.993E+00
26	1	.811E+00	-.382E-04
38	1	.843E+02	.696E+00
38	4	.843E+02	.200E+01
43	1	.843E+02	-.228E+00
46	1	.843E+02	.403E+00
48	5	.465E+00	0.
52	1	.160E+01	.221E+00
48	5	.465E+00	0.
52	2	.160E+01	.270E+00
56	4	.331E+01	.262E+00
62	1	.843E+02	.500E+00
62	4	.843E+02	.160E+01
67	1	.843E+02	.553E-02
76	2	.843E+02	.120E+01
78	1	.843E+02	.890E+01
81	1	.843E+02	-.395E+00
91	2	.843E+02	.120E+01
93	1	.465E+00	0.
96	1	.843E+02	.725E-05
99	1	.465E+00	0.
106	3	.843E+02	.160E+01
109	1	.843E+02	-.214E+00
112	1	.465E+00	0.
90	1	.843E+02	.703E+00
96	2	.843E+02	.413E-05
99	2	.465E+00	0.
105	3	.843E+02	.160E+01
113	2	.843E+02	-.116E+00
119	1	.843E+02	.703E+00
121	2	.843E+02	.107E-05
124	2	.843E+02	-.190E+00
127	2	.843E+02	-.229E-03
135	1	.588E+00	.335E+00
144	1	.531E+00	.398E+01
145	1	.588E+00	.109E+01
152	3	.897E+02	.105E+01
161	1	.897E+02	-.878E-04
164	1	.465E+00	0.
167	1	.897E+02	.107E-01
177	2	.897E+02	.902E+00
177	5	.897E+02	.150E+01
138	1	.897E+02	.157E-01
191	1	.465E+00	0.
151	1	.897E+02	.717E+00
151	4	.897E+02	.160E+01

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	2	.843E+02	.105E+01
21	1	.588E+00	.101E+01
24	1	.811E+00	.135E-01
27	1	.588E+00	.102E+01
38	2	.843E+02	.105E+01
41	1	.843E+02	.761E-03
44	1	.406E+01	0.
49	1	.349E+00	0.
50	1	.160E+01	.433E-05
53	4	.465E+00	0.
50	2	.160E+01	.338E-05
53	4	.465E+00	0.
57	4	.843E+02	.626E+00
62	2	.843E+02	.700E+00
65	1	.843E+02	.280E-02
68	1	.843E+02	-.497E+00
76	3	.843E+02	.160E+01
79	1	.843E+02	.356E-01
82	1	.406E+01	0.
91	3	.843E+02	.160E+01
94	1	.843E+02	.117E-01
97	1	.465E+00	0.
106	1	.843E+02	.698E+00
107	1	.843E+02	.116E-03
110	1	.465E+00	0.
113	1	.843E+02	.591E-01
90	2	.843E+02	.110E+01
97	2	.465E+00	0.
105	1	.843E+02	.794E+00
111	2	.843E+02	.275E-04
114	2	.465E+00	0.
119	2	.843E+02	.903E+00
122	2	.843E+02	-.832E-02
125	2	.843E+02	-.176E-04
128	2	.843E+02	.314E+00
136	1	.512E+02	.138E-01
142	1	.205E+04	.117E-01
152	1	.897E+02	.703E+00
152	4	.897E+02	.120E+01
162	1	.465E+00	0.
165	1	.897E+02	-.117E-03
168	1	.465E+00	0.
177	3	.897E+02	.106E+01
186	1	.897E+02	-.713E-03
189	1	.465E+00	0.
192	1	.897E+02	-.659E-01
151	2	.897E+02	.905E+00
157	2	.897E+02	-.133E-03

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	3	.843E+02	.120E+01
22	1	.811E+00	-.440E-05
25	1	.588E+00	.100E+01
28	1	.811E+00	.579E-01
38	3	.843E+02	.160E+01
42	1	.406E+01	0.
45	1	.843E+02	.153E-03
47	1	.160E+01	.216E-05
51	1	.160E+01	.301E-04
47	2	.160E+01	.359E-05
51	2	.160E+01	.349E-04
55	2	.160E+01	-.362E-02
58	4	.843E+02	-.901E+00
62	3	.843E+02	.105E+01
66	1	.843E+02	-.456E+00
76	1	.843E+02	.700E+00
77	1	.843E+02	-.833E-01
80	1	.406E+01	0.
91	1	.843E+02	.700E+00
92	1	.843E+02	-.110E-04
95	1	.465E+00	0.
98	1	.843E+02	-.133E-01
106	2	.843E+02	.120E+01
108	1	.465E+00	0.
111	1	.843E+02	-.106E-03
114	1	.465E+00	0.
90	3	.843E+02	.160E+01
98	2	.843E+02	-.668E-02
105	2	.843E+02	.110E+01
112	2	.465E+00	0.
115	2	.160E+01	.128E-02
119	3	.843E+02	.160E+01
123	2	.843E+02	-.982E-05
126	2	.843E+02	.626E-02
134	1	.450E+02	.800E+00
137	1	.800E+00	.986E+00
143	1	.302E+01	.101E+01
152	2	.897E+02	.902E+00
152	5	.897E+02	.160E+01
162	1	.897E+02	.361E-02
166	1	.465E+00	0.
177	1	.897E+02	.702E+00
177	4	.897E+02	.120E+01
187	1	.465E+00	0.
190	1	.897E+02	-.395E-04
193	1	.465E+00	0.
151	3	.897E+02	.106E+01
158	2	.465E+00	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 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
159	2	.897E+02	.280E-02	160	2	.465E+00	0.	161	2	.897E+02	-.254E-03
162	2	.465E+00	0.	163	2	.897E+02	.142E-01	164	2	.465E+00	0.
176	1	.897E+02	.698E+00	176	2	.897E+02	.932E+00	176	3	.897E+02	.110E+01
176	4	.897E+02	.160E+01	182	2	.897E+02	-.323E-03	183	2	.465E+00	0.
184	2	.897E+02	.692E-02	185	2	.465E+00	0.	186	2	.897E+02	.556E-03
187	2	.465E+00	0.	188	2	.897E+02	-.838E-01	189	2	.465E+00	0.
197	1	.897E+02	.700E+00	197	2	.897E+02	.902E+00	197	3	.897E+02	.120E+01
197	4	.897E+02	.160E+01	207	1	.897E+02	.700E+00	207	2	.897E+02	.901E+00
207	3	.897E+02	.120E+01	207	4	.897E+02	.160E+01	208	2	.897E+02	-.684E-04
208	2	.897E+02	.530E-02	210	2	.897E+02	-.326E-03	211	2	.897E+02	.520E-02
212	2	.897E+02	.523E-03	213	2	.897E+02	-.282E-01	217	1	.104E+03	.698E+00
217	2	.104E+03	.120E+01	217	3	.104E+03	.160E+01	218	1	.897E+02	-.100E-02
219	1	.897E+02	.154E+00	220	1	.218E+01	-.246E+00	221	1	.588E+00	.660E-03
222	1	.897E+02	.206E-01	227	1	.897E+02	.500E+00	227	2	.897E+02	.854E+00
227	3	.897E+02	.106E+01	227	4	.897E+02	.161E+01	230	1	.897E+02	.764E-01
231	1	.897E+02	-.342E+01	232	1	.588E+00	.993E+00	233	1	.897E+02	-.188E-01
234	1	.897E+02	.238E+01	242	1	.897E+02	.703E+00	242	2	.897E+02	.902E+00
242	3	.897E+02	.105E+01	242	4	.897E+02	.120E+01	242	5	.897E+02	.160E+01
251	1	.897E+02	-.624E-04	252	1	.465E+00	0.	253	1	.897E+02	.618E-02
254	1	.465E+00	0.	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	273	1	.897E+02	.266E-02	274	1	.465E+00	0.
275	1	.897E+02	-.103E+00	276	1	.465E+00	0.	277	1	.897E+02	.119E-03
278	1	.465E+00	0.	279	1	.897E+02	.871E-01	280	1	.465E+00	0.
242	1	.897E+02	.703E+00	242	2	.897E+02	.902E+00	242	3	.897E+02	.105E+01
242	4	.897E+02	.120E+01	242	5	.897E+02	.160E+01	251	2	.897E+02	-.477E-06
252	2	.465E+00	0.	253	2	.897E+02	.460E-02	254	2	.465E+00	0.
255	2	.897E+02	.554E-03	256	2	.465E+00	0.	257	2	.897E+02	-.301E-01
258	2	.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
273	2	.897E+02	.237E-02	274	2	.465E+00	0.	275	2	.897E+02	-.103E+00
276	2	.465E+00	0.	277	2	.897E+02	.196E-02	278	2	.465E+00	0.
279	2	.897E+02	.913E-02	280	2	.465E+00	0.	284	1	.897E+02	.701E+00
284	2	.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	-.106E-02	294	1	.897E+02	.701E+00
294	2	.897E+02	.903E+00	294	3	.897E+02	.120E+01	294	4	.897E+02	.160E+01
297	2	.897E+02	-.220E-02	298	2	.897E+02	.761E-01	299	2	.897E+02	-.858E-03
300	2	.897E+02	.427E-01	301	1	.160E+01	-.290E-02	303	1	.160E+01	-.512E-03
303	2	.160E+01	.954E-03	305	4	.160E+01	.214E+00	305	5	.160E+01	.197E+00
307	2	.160E+01	-.405E-01	307	3	.160E+01	.138E-01	308	1	.465E+00	0.
309	1	.160E+01	.346E-03	310	1	.160E+01	-.630E-02	309	2	.160E+01	-.347E-03
310	2	.160E+01	.443E-02	311	1	.160E+01	.813E-03	313	1	.160E+01	.804E-02
315	1	.153E+00	-.629E-03	312	2	.588E+00	-.259E-04	314	2	.588E+00	.117E-01
317	1	.160E+01	-.813E-02	318	2	.465E+00	0.	321	2	.843E+02	-.363E-03
323	1	.588E+00	.120E+01	325	3	.465E+00	.101E+01	324	1	.160E+01	-.140E-01
324	2	.160E+01	-.140E-01	326	2	.160E+01	-.774E-02	327	4	.265E+02	.149E-03
328	4	.588E+00	.346E-03	329	4	.843E+02	-.356E-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 2.00

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	1	.843E+02	.699E+00
18	4	.843E+02	.160E+01
26	1	.811E+00	-.382E-04
29	1	.843E+02	.228E-04
38	2	.843E+02	.105E+01
41	1	.843E+02	.761E-03
44	1	.406E+01	0.
49	1	.349E+00	0.
50	1	.200E+01	.497E-05
53	4	.465E+00	0.
56	2	.200E+01	.384E-05
53	4	.465E+00	0.
57	4	.843E+02	.626E+00
62	2	.843E+02	.700E+00
62	5	.843E+02	.200E+01
69	1	.843E+02	.473E-02
76	2	.843E+02	.120E+01
79	1	.843E+02	.356E-01
82	1	.406E+01	0.
91	1	.843E+02	.700E+00
96	1	.843E+02	.725E-05
99	1	.465E+00	0.
106	3	.843E+02	.160E+01
113	1	.843E+02	.591E-01
90	2	.843E+02	.110E+01
97	2	.465E+00	0.
105	1	.843E+02	.794E+00
111	2	.843E+02	.275E-04
114	2	.465E+00	0.
119	2	.843E+02	.903E+00
126	2	.843E+02	.626E-02
134	1	.450E+02	.800E+00
137	1	.120E+01	.712E+00
143	1	.302E+01	.101E+01
152	2	.897E+02	.902E+00
152	5	.897E+02	.160E+01
167	1	.897E+02	.107E-01
177	2	.897E+02	.902E+00
177	5	.897E+02	.160E+01
192	1	.897E+02	-.659E-01
151	2	.897E+02	.905E+00
161	2	.897E+02	-.254E-03
164	2	.465E+00	0.
176	3	.897E+02	.110E+01
187	2	.465E+00	0.
197	1	.897E+02	.700E+00
197	4	.897E+02	.160E+01
207	3	.897E+02	.120E+01

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	2	.843E+02	.105E+01
18	5	.843E+02	.200E+01
	1	.588E+00	.102E+01
30	1	.843E+02	-.370E-01
38	3	.843E+02	.160E+01
42	1	.406E+01	0.
45	1	.843E+02	.153E-03
47	1	.200E+01	.216E-05
51	1	.200E+01	.302E-04
47	2	.200E+01	.338E-05
51	2	.200E+01	.371E-04
55	2	.200E+01	-.368E-02
58	4	.843E+02	-.901E+00
62	3	.843E+02	.105E+01
67	1	.843E+02	.553E-02
70	1	.843E+02	-.461E+00
76	3	.843E+02	.160E+01
80	1	.406E+01	0.
83	1	.843E+02	.204E-01
91	2	.843E+02	.120E+01
97	1	.465E+00	0.
106	1	.843E+02	.698E+00
111	1	.843E+02	-.106E-03
114	1	.465E+00	0.
90	3	.843E+02	.160E+01
98	2	.843E+02	-.668E-02
105	2	.843E+02	.110E+01
112	2	.465E+00	0.
115	2	.200E+01	.306E-03
119	3	.843E+02	.160E+01
127	2	.843E+02	-.229E-03
135	1	.588E+00	.335E+00
144	1	.531E+00	.398E+01
145	1	.588E+00	.109E+01
152	3	.897E+02	.105E+01
165	1	.897E+02	-.117E-03
168	1	.465E+00	0.
177	3	.897E+02	.106E+01
190	1	.897E+02	-.395E-04
193	1	.465E+00	0.
151	3	.897E+02	.106E+01
162	2	.465E+00	0.
176	1	.897E+02	.698E+00
176	4	.897E+02	.160E+01
188	2	.897E+02	-.888E-01
197	2	.897E+02	.902E+00
207	1	.897E+02	.700E+00
207	4	.897E+02	.160E+01

FIGURE NUMBER	LINE NUMBER	X VALUE	Y VALUE
18	3	.843E+02	.120E+01
25	1	.588E+00	.100E+01
28	1	.811E+00	.575E-01
38	1	.843E+02	.696E+00
38	4	.843E+02	.200E+01
43	1	.843E+02	-.228E+00
46	1	.843E+02	.403E+00
48	5	.465E+00	0.
52	1	.200E+01	.194E+00
48	5	.465E+00	0.
52	2	.200E+01	.264E+00
56	4	.331E+01	.262E+00
62	1	.843E+02	.500E+00
62	4	.843E+02	.160E+01
68	1	.843E+02	-.497E+00
76	1	.843E+02	.700E+00
76	4	.843E+02	.200E+01
81	1	.843E+02	-.395E+00
84	1	.843E+02	.977E-01
91	3	.843E+02	.160E+01
98	1	.843E+02	-.133E-01
106	2	.8[illegible]E+02	.120E+01
112	1	.465E+00	0.
90	1	.843E+02	.703E+00
96	2	.843E+02	.413E-05
99	2	.465E+00	0.
105	3	.843E+02	.160E+01
113	2	.843E+02	-.116E+00
119	1	.843E+02	.703E+00
125	2	.843E+02	-.176E-04
128	2	.843E+02	.314E+00
136	1	.512E+02	.138E-01
142	1	.205E+04	.117E-01
152	1	.897E+02	.703E+00
152	4	.897E+02	.120E+01
166	1	.465E+00	0.
177	1	.897E+02	.702E+00
177	4	.897E+02	.120E+01
191	1	.465E+00	0.
151	1	.897E+02	.717E+00
151	4	.897E+02	.160E+01
163	2	.897E+02	.142E-01
176	2	.897E+02	.902E+00
186	2	.897E+02	.556E-03
189	2	.465E+00	0.
197	3	.897E+02	.120E+01
207	2	.897E+02	.901E+00
202	2	.897E+02	-.684E-04

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
203	2	.897E+02	.530E-02	212	2	.897E+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	4	.104E+03	.201E+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	.106E+01	227	4	.897E+02	.161E+01
227	5	.897E+02	.200E+01	233	1	.897E+02	-.188E-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	.105E+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	.112E-03	278	1	.465E+00	0.
279	1	.897E+02	.871E-01	280	1	.465E+00	0.	242	1	.897E+02	.703E+00
242	2	.897E+02	.902E+00	242	3	.897E+02	.105E+01	242	4	.897E+02	.120E+01
242	5	.897E+02	.160E+01	255	2	.897E+02	.554E-03	256	2	.465E+00	0.
257	2	.897E+02	-.301E-01	258	2	.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	2	.897E+02	.196E-02	278	2	.465E+00	0.
279	2	.897E+02	.913E-02	280	2	.465E+00	0.	284	1	.897E+02	.701E+00
284	2	.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	-.106E-02	294	1	.897E+02	.701E+00
294	2	.897E+02	.903E+00	294	3	.897E+02	.120E+01	294	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	312	2	.588E+00	-.259E-04
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-03	329	4	.843E+02	-.356E-02

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

ROUTINE LISTING

```
      BLOCK DATA BLKRED
C     ***********************************************************
C     *                                                         *
C     *  THIS BLOCK DATA ROUTINE STORES VALUES INTO THE PROGRAM *
C     *  WHICH WILL NOT CHANGE DURING EXECUTION.                *
C     *   NOFTNS(*) = THE INITIALS OF THE ROUTINES TO BE SELECTED *
C     *               FOR CALCULATION OR OUTPUT                 *
C     *   ITYPE(*)  = THE TYPES OF INPUT CARDS                  *
C     *   NTYPES(*) = THE TYPE OF BODY SEGMENT USED ON AREA CARDS *
C     *   ICNFGS(*) = THE TYPE OF STORE CONFIGURATION USED IN   *
C     *               THE ROLLING MOMENT ROUTINE.               *
C     *                      1 = SYMMETRIC  CURVE               *
C     *                      2 = NON SYMMETRIC CURVE            *
C     *                      + = FINS AT 90 DEGREES             *
C     *                      X = FINS AT 45 DEGREES             *
C     *                        = NOT USED                       *
C     *   REALM(1)  = THE FIRST MACH NUMBER RUN IS ALWAYS 0.5   *
C     *   ISTARS(*,*)=ARRAY CONTAINING THE OUT-OF-RANGE INDICATORS *
C     *               SUBSCRIPT 1 = CALCULATION NUMBER          *
C     *               SUBSCRIPT 2 = MACH NUMBER                 *
C     *                                                         *
C     ***********************************************************
      COMMON/COMSTR/ ISTARS(46,7),IDSTAR
      COMMON/COMINB/ ITYPE(14),NTYPES( 4),NOFTNS(7),ICNFGS(5)
      COMMON/COMINF/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLI(5),ANOSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWOHF,
     *               ICASE,ICONFG,IMAGE( 3),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(8),SFGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      DATA NOFTNS/2HSF,2HNF,2HPM,2HYM,2HAF,2HRM,2HIF/
      DATA  ITYPE /8HTITLE     ,8HSPA       ,
     *            8HPPA       ,8HSTORE1    ,
     *            8HSTORE2    ,8HSTORE3    ,
     *            8HSTORE4    ,8HSTORE5    ,
     *            8HAERO      ,8HA/C1      ,
     *            8HA/C2      ,8HOPTION    ,
     *            8HEND CASE  ,8H          /
      DATA NTYPES /1HN,1H3,1HB,1HT/
      DATA ICNFGS/1H+,1HX,1H1,1H2,1H  /
      DATA ISTARS/322 * 1H  /
      DATA REALM(1) / 0.5/
      DATA ITITLE /36 * 3H          /
      END
```

```
      BLOCK DATA BLKFIL
C     ******************************************************************
C     *                                                                *
C     *  LOADS FILE IDENTIFICATION WITH FILE NUMBER.                   *
C     *                                                                *
C     ******************************************************************
      COMMON/FILES/DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN
      INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
      DATA DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN  /
     *          2,    5,     1,     3,     4,     6,     7,     8  /
      END
```

```
      PROGRAM STORES(INPUT,OUTPUT,TAPE1,TAPE2,TAPE3,TAPE4,TAPE7,TAPE
     *               5=INPUT,TAPE6=OUTPUT)
C     ****************************************************************
C     *                                                              *
C     *        EXTERNAL STORE AIRLOAD PREDICTION TECHNIQUE           *
C     *                     MAIN  ROUTINE                            *
C     *                                                              *
C     ****************************************************************
C     *                                                              *
C     *  THIS ROUTINE CYCLES ON CASE NUMBER AND THE NUMBER OF        *
C     *  MACH NUMBERS WITHIN THAT CASE                               *
C     *                                                              *
C     ****************************************************************
      COMMON/COMINC/ DUM1,IMACH,KPDTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANOSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOPEL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      COMMON/REMOV2/ ICALSR(7),IFIND,INPGRA(7),IPRNT
      COMMON/COMSET/ ADPDSL,AKCPM,AKCYM,AKNOSE(2),AKTAIL(2),
     *               AKWING(2),ALEDSL,ALEL,ANUPM,AREASP(4,2),
     *               CDCL45,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IDSYM,IEND,IMACH1,PPAJFW,PPAXC,SADJSP(4,2),SHOARA,
     *               SLOSSF,SLOS45,SPADJS(2),SPATSP(2),SREF,
     *               SPTSTO,STLOCL,STPOWS,YDSTO
      CALL CHECKR
C ****
C ****  MAIN LOOP IN ROUTINE.  NCASE = THE TOTAL NUMBER OF
C ****  CASES AS DEFINED BY THE DATA CHECKER ROUTINE.
C ****
      DO 100 NUMCAS=1,NCASE
      DUM1 = REALM(1)
      CALL READIN
      CALL INITAL
      IMACH = 1
      DO 50 MACHCT = 1,NMACH
C ****
C ****  MACH NUMBER LOOP.  NMACH = THE TOTAL NUMBER OF MACH NUMBERS
C ****  AS DEFINED BY THE READ ROUTINE.
C ****
      IF(MACHCT.GT.1)IMACH = MACHCT - IMACH1
      DUM1 = REALM(MACHCT)
      CALL SIDFRC
      CALL YAWMOM
      CALL NORFRC
      CALL PITMOM
      CALL AXIFRC
      CALL ROLMOM
   50 CONTINUE
      CALL STOPRT
      CALL PRINTR(3)
      IF(IFIND.EQ.1)CALL PRINTR(3)
```

PROGRAM STORES 74/74 OPT=1

```
      100 CONTINUE
          STOP
          END
```

CARD NR. SEVERITY DETAILS DIAGNOSIS OF PROBLEM

36 I CONTROL VARIABLE IN COMMON OR EQUIVALENCED, OPTIMIZATION MAY BE INHIBITED.

```
      SUBROUTINE CHECKP
C*****************************************************************
C*                                                               *
C*  THIS ROUTINE ASSIGNS AN INPUT CODE TO EACH CARD IN THE       *
C*  INPUT STREAM.  THE ASSIGNED VALUES ARE GATHERED INTO         *
C*  GROUPS ACCORDING TO CASE NUMBER AS WELL AS CARD NUMBER.      *
C*  IN THIS ROUTINE SEVERAL DATA FIELDS ARE CHECKED TO           *
C*  DETERMINE IF DATA HAS BEEN ENTERED.                          *
C*   NCASES(*,*)=  ARRAY CONTAINING THE INPUT CODES FOR EACH     *
C*                 CARD INPUT    (ITYPE 1-14)                   *
C*                      SUBSCRIPT 1 = CASE NUMBER                *
C*                      SUBSCRIPT 2 = INPUT CODE AS DEFINED      *
C*                                    IN BLKRED                  *
C*                                                               *
C*****************************************************************
      COMMON/COMIN8/ ITYPE(14),NTYPES( 4),NOPTNS(7),ICNFGS(5)
      COMMON/COMINC/ DUM1,IMACH,KRDTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/FILES/DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN
      INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANGSEC,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HHUBF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXCOML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      COMMON/COMERR/ IERR
      NCARD = 0
      NCASE = 1
  100 READ(DATIN,1)IMAGE
    1 FORMAT(8A,A2,7A10)
      IF(EOF(DATIN).NE.0)GO TO 1000
      IF(IMAGE(1).EQ.8HEND CASE.AND.NCARD.EQ.0) GO TO 15
      IF(NCASE.EQ.6)CALL EPROP(17)
      NCARD = NCARD + 1
      NUMCRD(NCASE) = NCARD
      DO 200 I=1,14
      IF(IMAGE(1).EQ.ITYPE(I))GO TO 300
  200 CONTINUE
      NUMCAS = 1
      CALL EPROP(11)
  300 CONTINUE
C ****
C **** TEST IF THE ANGLE OF THE LEADING EDGE OF THE FIN IS UNDEFINED
C ****
      IF(I.EQ.5.AND.IMAGE(6).EQ.10H            )ALEFIN(NCASE)=1234321.
C ****
C **** TEST IF THE LENGTH OF THE INLET IS DEFINED
C ****
      IF(I.EQ.11.AND.IMAGE(5).EQ.10H           )ALINLT(NCASE)=1234321.
      NCASES(NCASE,NCARD) = I
   15 CONTINUE
      WRITE(TAPEIN,1)IMAGE
      IF(IMAGE(1).EQ.8HEND CASE) GO TO 10
      GO TO 100
```

```
      10 CONTINUE
C **** END OF CASE FOUND
60        NCASE = NCASE + 1
          NCARD = 0
          GO TO 100
 1000 IF(NCARD.EQ.0)NCASE = NCASE - 1
          IF(NCASE.EQ.0)CALL ERROR(16)
          REWIND TAPEIN
65        IF(IERR.EQ.0)GO TO 1001
          CALL PRINTP(4)
          STOP
 1001 RETURN
70        END
```

```
      SUBROUTINE READIN
C     ******************************************************************
C     *                                                                *
C     *  THIS ROUTINE READS INPUT INTO EACH CASE.                      *
C     *   STOPED    = STORE DIAMETER                                   *
C     *   STOPEL    = STORE LENGTH                                     *
C     *  INPUTS REQUIRED FOR ICASE = 1                                 *
C     *   AKN       = KN    FROM AFATL TR-75-87                        *
C     *   AK3W      = K3(W) FROM AFATL TR-75-87                        *
C     *   AKWB      = KW(B) FROM AFATL TR-75-87                        *
C     *  INPUTS REQUIRED FOR ICASE   2                                 *
C     *   AKN8      = KN/B FROM AFATL TR-75-87                         *
C     *   AKTB      = KT/B FROM AFATL TR-75-87                         *
C     *   AKWBI     = KW/B FROM AFATL TR-75-87                         *
C     *   AKINTF    = KINTF FROM AFATL TR-75-87                        *
C     *  INPUTS REQUIRED FOR ICASE   3                                 *
C     *   *** ONLY ICASE = 3 ***                                       *
C     *   ICONFG    = CONFIGURATION STORE IS IN (+) = WING VERT.       *
C     *                                         (X) = WING 45 DEG.     *
C     *                                         (1) = SYMMETRIC PM     *
C     *                                         (2) = NO SYMMETRY      *
C     *                                         ( ) = NOT USED         *
C     *   ALAMDA    = AIRCRAFT WING SWEEP ANGLE                        *
C     *   ALEFIN    = STORE FIN SWEEP ANGLE                            *
C     *   ALINLT(*) = MINIMUM DISTANCE FROM STORE TO INLET             *
C     *   ANOSEL    = LENGTH OF NOSE                                   *
C     *   ALINFI    = LENGTH OF INBOARD  INTERFERING  STORE            *
C     *   ALINFO    = LENGTH OF OUTBOARD INTERFERING  STORE            *
C     *   CDOISO    = ISOLATED STORE DRAG COEFFICIENT                  *
C     *   CLAISO    = ISOLATED STORE LIFT CURVE SLOPE                  *
C     *   CLOCAL    = LOCAL CHORD LENGTH                               *
C     *   DINTFI    = DIAMETER OF  INBOARD INTERFERING  STORE          *
C     *   DINTFO    = DIAMETER OF OUTBOARD INTERFERING  STORE          *
C     *   INPGRA(*) = INPUT  OPTION   DEFINED IN BLKRED WHICH          *
C     *               TURNS ON BOTH CALCULATION AND PRINT GRAPH        *
C     *               DUMP FOR THE CHOSEN COMPONENT                    *
C     *   INPTOP(*) = INPUT OPTION DEFINED IN BLKRED WHICH WILL        *
C     *               TURN ON THE CALCULATION FOR THE CHOSEN           *
C     *               COMPONENT                                        *
C     *   ISYM      = OPTION TO CHOOSE PLAN PROJECTED AREA EQUAL       *
C     *               TO SIDE PROJECTED AREA      (SPA=PPA)            *
C     *                        OR                 (     )              *
C     *   KRDYIP(*) = ARRAY CONTAINING THE NUMBER OF CARDS FOR         *
C     *                EACH INPUT CODE AS REFERENCED BY ITYPE 1-14     *
C     *   NSEG(*,*) = SEGMENT NUMBER OF SECTION                        *
C     *                 1) SUBSCRIPT 1 = SEGMENT NUMBER                *
C     *                 2) SUBSCRIPT 2                                 *
C     *                          A) 1 = SIDE PROJECTED AREA            *
C     *                          B) 2 = PLAN PROJECTED AREA            *
C     *   SPAT(*,*) = SECTIONAL AREAS (SQ.IN.)                         *
C     *               SUBSCRIPT 1 = NUMBER OF SEGMENT                  *
C     *               SUBSCRIPT 2 = A) SPA ,B) PPA                     *
C     *   SEGL      = SEGMENT CONSTANT LENGTH AS MEASURED ALONG        *
C     *               THE LONGITUDIONAL POSITIVE AXIS.                 *
C     *   SML       = MID LUG POSITION OF STORE                        *
C     *   NSTYPE(*,*)= SEGMENT TYPE                                    *
C     *                 1) SUBSCRIPT 1 = N=NOSE,B=BODY,W=WING,         *
```

```
C     *                              T=TAIL                           *
C     *                2) SUBSCRIPT 2 =                               *
C     *                         A) 1 = SIDE PROJECTED AREA            *
C     *                         B) 2 = PLAN PROJECTED AREA            *
C     *  PXDCML    = X/CML FOR PYLON                                  *
C     *  REALM(*)  =  ARRAY OF UP TO EIGHT MACH NUMBERS THE           *
C     *               FIRST  ALWAYS BEING 0.5                         *
C     *  SUMPA     = SUM OF ALL WING AND TAIL PLANFORM AREAS          *
C     *              (SQ.IN.)                                         *
C     *  TAILPA    = STORE TAIL PLANFORM AREA (SQ.IN.)                *
C     *  WINGPA    = STORE WING PLANFORM AREA (SQ.IN.)                *
C     *  WSS       = WING SEMI SPAN                                   *
C     *  XINTFI    = INBOARD ADJACENT STORE NOSE OVERLAP              *
C     *              DISTANCE                                         *
C     *  XINTFO    = OUTBOARD ADJACENT STORE NOSE OVERLAP             *
C     *              DISTANCE                                         *
C     *  YBIG      = DISTANCE FROM FUSELAGE TO WING TIP FOR HIGH      *
C     *              WING AIRCRAFT                                    *
C     *  XCG       =  STORE CENTER OF GRAVITY                         *
C     *  Y1        = DISTANCE BETWEEN PYLON CENTERLINE AND THE        *
C     *              FUSELAGE FOR HIGH-WING AIRCRAFT                  *
C     *  Y1PRM     = MINIMUM CLEARANCE BETWEEN INSTALLED STORE        *
C     *              AND FUSELAGE FOR HIGH-WING AIRCRAFT              *
C     *  YBL       = PYLON BUTTLINE                                   *
C     *  YINTFI    = MINIMUM INBOARD STORE-TO-STORE SEPARATION        *
C     *              DISTANCE MEASURED IN WING PLAN VIEW              *
C     *  YINTFO    = MINIMUM OUTBOARD STORE-TO-STORE SEPARATION       *
C     *              DISTANCE MEASURED IN WING PLAN VIEW              *
C     *  ZPH       = PYLON HEIGHT                                     *
C     *  ZPLNSP    = STORE LUG SPACING                                *
C     ***************************************************************
      COMMON/COMINB/ ITYPE(14),NTYPES( 4),NOPTNS(7),ICNFGS(5)
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANUSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      COMMON/CONINC/ DUM1,IMACH,KROTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/FILES/DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN
      INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
      COMMON/COMERR/ IERR
      COMMON/REMOV2/ ICALSP(7),IFIND,INPGRA(7),IFPNT
      COMMON/COMSET/ ADPDSL,AKCPM,AKCYM,AKNOSE(2),AKTAIL(2),
     *               AKWING(2),ALFDSL,ALEL,ANUPI,AREASP(4,2),
     *               CDCL45,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IDSYM,IEND,IMACH1,PPAJFW,PPAXC,SADJSP(4,2),SHDAPA,
     *               SLDSRF,SLDS45,SPADJS(2),SPAISP(2),SPEF,
     *               SRTSTD,STLDCL,STPDWS,YCSTD
      DIMENSION INPTOP(7)
      INDO = NUMCRD(NUMCAS)
      DO 1 NCARD=1,INDO
      KROTYP(NCASES(NUMCAS,NCARD))=0
    1 CONTINUE
```

```
      DO 1000 NCARD=1,IND)
      INPTYP = NCASES(NUMCAS,ICARD)
      KRDTYP(INPTYP) = KRDTYP(INPTYP) + 1
      I = KRDTYP(INPTYP)
      IF(INPTYP.LE.3.OR.I.LE.1.OR.INPTYP.GT.14)GO TO 5
      IOERR = IERR
      IERR = INPTYP
      CALL ERROR(15)
      IERR = IOERR
    5 CONTINUE
      GO TO(10,20,20,40,50,60,70,75,80,90,95,100,500 ,500),INPTYP
   10 CONTINUE
      IF(I.GT.4)CALL ERROR(3)
      IF(I.GT.4)GO TO 500
      ISTRT = (I-1) * 9 + 1
      ISTOP = I * 9
      READ(TAPEIN,1010)(ITITLE(J),J=ISTRT,ISTOP)
 1010 FORMAT(8X,9A8)
      GO TO 1000
C ****
C **** READ IN STORE AREA (EITHER SIDE PROJECTED OR PLAN PROJECTED)
C ****
   20 INAREA = INPTYP - 1
      IF(I.GT.40)CALL ERROR(7)
      READ(TAPEIN,1020)NSEG(I,INAREA),NSTYPE(I,INAREA),SPAT(I,INAREA)
 1020 FORMAT(14X,I5,A1,F10.4)
      IF(SPAT(I,INAREA).LE.0.0) IERR = INPTYP
      IF(SPAT(I,INAREA).LE.0.0)CALL ERROR(21)
      DO 23 IPOSTN = 1,4
      IF(NSTYPE(I,INAREA).NE.NTYPES(IPOSTN))GO TO 23
      NSTYPE(I,INAREA) = IPOSTN
      IF(NSEG(I,INAREA).EQ.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
C **** STORES TYPE CARD
   40 READ(TAPEIN,1040)ICASE,AKN,AKBW,AKWB,AKNB,AKTB,AKWBI,
     *                 AKINTF
 1040 FORMAT(8X,I2,7F10.4)
      IF(ICASE.LT.1.OR.ICASE.GT.3)CALL ERROR(8)
C **** STORE WITH WING AT AFT END OF BODY
      IF(ICASE.NE.1)GO TO 41
      IF((AKNB+AKTB+AKWBI+AKINTF).NE.0.0)CALL ERROR(9)
      IF(AKN.EQ.0.0.OR.AKBW.EQ.0.0.OR.AKWB.EQ.0.0)CALL ERROR(22)
      GO TO 47
   41 CONTINUE
C **** STORE WITH WING ON FORWARD BODY AND TAIL ON AFT END
      IF(ICASE.NE.2)GO TO 42
      IF((AKN+AKBW+AKWB).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
```

```
C **** UNFINNED STORE
   42 CONTINUE
      IF((AKN+AKSW+AKWB+AKNB+AKTB+AKWBI).NE.0.0)CALL ERROR(9)
   47 CONTINUE
      GO TO 1000
C **** STORE2 TYPE CARD
   50 READ(TAPEIN,1080)STOREL,STORED,ANOSEL,ALFN,CLAISO,CDOISO,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)
      ANOSEL = ANOSEL / 12.0
      STOREL = STOREL / 12.0
      CLAISO = CLAISO * 0.785398164 * STORED * STORED
      GO TO 1000
C **** STORE3 TYPE CARD
   60 READ(TAPEIN,1050) ICONFG,ISYM,WINGPA,TAILPA,SUMPA
      IF((ISYM.EQ.1H+.OR.ISYM.EQ.1HX).AND.(WINGPA+TAILPA+SUMPA).NE.0)
     *   CALL ERROR(23)
 1050 FORMAT(9X,A1,3X,A7,6F10.4)
      IF(ISYM.EQ.7HSPA=PPA.OR.ISYM.EQ.7H          )GO TO 62
      IERR = ISYM
      CALL ERROR(13)
   62 DO 63 J=1,5
      IF(ICONFG.NE.ICNFGS(J))GO TO 63
      ICSYM = J
      GO TO 64
   63 CONTINUE
      IERR = ICONFG
      CALL ERROR(14)
   64 CONTINUE
      GO TO 1000
C **** STORE4 TYPE CARD
   70 READ(TAPEIN,1080)XINTFO,YINTFO,DINTFO,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,SML,SEGL,YLPRM
      IF(SML.EQ.0.0.OR.SEGL.EQ.0.0)CALL ERROR(19)
      GO TO 1000
C **** AERO TYPE CARD
   80 READ(TAPEIN,1080)(REALM(IMACH),IMACH=2,8)
      IMACH1 = 1
 1080 FORMAT(10X,7F10.4)
      NMACH = 1
      DO 85 I=2,8
      IF(REALM(I).LE.0.0)GO TO 85
      IF(REALM(I).LT.0.5.OR.REALM(I).GT.2.0)GO TO 83
      IF(REALM(I).EQ.0.5)IMACH1 = 0
      IF(REALM(I).EQ.0.5)GO TO 85
      NMACH = NMACH + 1
      REALM(NMACH) = REALM(I)
      GO TO 85
   83 DUM1 = REALM(I)
      CALL ERROR(10)
```

```
                85 CONTINUE
                   GO TO 1000
C **** A/C1 TYPE CARD
                90 READ(TAPEIN,1080)CLOCAL,PXDOML,WSS,YBIG,YBL,Y1
                   IF(CLOCAL.EQ.0.0.OR.WSS.EQ.0.0.OR.YBIG.EQ.0.0.OR.YBL.EQ.0.0)
                  *     CALL ERROR(23)
                   Y1 = Y1 / 12.0
                   GO TO 1000
C **** A/C2 TYPE CARD
                95 READ(TAPEIN,1080)ALAMDA,ZFH,ALZZ,HWOHF
                   IF(ALINLT(NUMCAS).NE.1234321.)ALINLT(NUMCAS) = ALZZ
                   DO 97 ICK=NUMCAS,5
                   ALINLT(ICK) = ALINLT(NUMCAS)
                97 CONTINUE
                   ALAMDA = ALAMDA * 0.01745329252
                   GO TO 1000
C **** OPTION TYPE CARD
               100 READ(TAPEIN,1100)INPTOP,INPGRA
              1100 FORMAT(10X,7(A2,1X),9X,7(A2,1X))
                   IFIND = 0
                   DO 105 I=1,7
                   ICALSG(I) = 0
                   ICALGR(I) = 0
                105 CONTINUE
                   DO 120 I=1,7
                   DO 110 J=1,7
                   IF(INPTOP(I).NE.NOPINS(J))GO TO 108
                   ICALSG(J) = 1
                108 IF(INPGRA(I).NE.NOPINS(J))GO TO 110
                   ICALSG(J) = 1
                   ICALGR(J) = 1
                   IFIND = 1
                   GO TO 120
                110 CONTINUE
                120 CONTINUE
                   GO TO  800
                500 READ(TAPEIN,1100)
               1000 CONTINUE
                   JOUTPT = 0
                   DO 505 JFIND=1,7
                   IF(ICALSG(JFIND).NE.0)JOUTPT = 1
                505 CONTINUE
                   IF(JOUTPT.EQ.0)CALL ERROR(30)
                   DO 507 J=1,12
                   IF(J.EQ.1.OR.J.EQ.3.OR.J.EQ.7.OR.KROTYP(J).NE.0)GO TO 507
                   IERR = J
                   CALL ERROR(24)
                507 CONTINUE
                   IF(ICALSG(5).NE.0.AND.CEOISO.EQ.0.0)CALL ERROR(25)
                   DO 508 J=1,4
                   IF(ICALSG(J).EQ.0.OR.CLAISO.NE.0.0.OR.KROTYP(12).EQ.0.OR.
                  *  KROTYP(5).EQ.0)GO TO 508
                   IERR = J
                   CALL ERROR(26)
                508 CONTINUE
                   IF(ICONFG.EQ.7H        .AND.KROTYP(3).EQ.0)CALL ERROR(27)
                   IF(KROTYP(1).EQ.0.AND.NUMCAS.EQ.1)CALL ERROR(1)
```

```
      IF(KRDTYP(1).GT.0.AND.KRDTYP(1).LT.4)CALL ERROR(2)
      IF(IER0.EQ.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 INDXSP =1,2
      INDX1 = KRDTYP(INDXSP+1)
      IF(INDX1.EQ.0)GO TO 600
      INDX2 = INDX1 - 1
      DO 560 I=1,INDX2
      IP1 = I + 1
      DO 560 J=IP1,INDX1
      IF(NSEG(I,INDXSP) - NSEG(J,INDXSP))560,540,550
  540 IF(NSTYPE(I,INDXSP) - NSTYPE(J,INDXSP))560,560,550
  550 ITEMP1 = NSEG(I,INDXSP)
      ITEMP2 = NSTYPE(I,INDXSP)
      TEMP1 = SPAT(I,INDXSP)
      NSEG(I,INDXSP) = NSEG(J,INDXSP)
      NSTYPE(I,INDXSP) = NSTYPE(J,INDXSP)
      SPAT(I,INDXSP) = SPAT(J,INDXSP)
      NSEG(J,INDXSP) = ITEMP1
      NSTYPE(J,INDXSP) = ITEMP2
      SPAT(J,INDXSP) = TEMP1
  560 CONTINUE
  600 CONTINUE
      RETURN
      END
```

```
      SUBROUTINE INITAL
C*****************************************************************
C*                                                               *
C*  SUBROUTINE TO DO INITIAL SETUP AS WELL AS CALCULATE          *
C*  THE INITIAL PREDICTIONS                                      *
C*                                                               *
C*   DLLE       = DISTANCE FROM FORWARD MOST POINT OF            *
C*                THE INSTALLED STORE TO THE WING                *
C*                LEADING EDGE AS MEASURED IN THE WING           *
C*                PLAN VIEW (POSITIVE).                          *
C*   SEGT(*)    = SUM OF PLAN PROJECTED AREAS CUMULATIVE         *
C*                SEGMENT                                        *
C*   SEGADJ(*)  = SUM OF ADJUSTED PLAN PROJECTED AREAS           *
C*                CUMULATIVE SEGMENTS                            *
C*   SMID(*)    = MIDPOINT OF A SECTIONAL SEGMENT                *
C*   SMID1(*)   = SEGMENT MIDPOINTS RELATIVE TO STORE            *
C*                SEGMENTS                                       *
C*   AREASP(*,*)= SEGMENT TYPE CUMULATIVE AREAS                  *
C*                 1) SABSCRIPT 1                                *
C*                       A) 1 = NOSE    B) 2 = BODY             *
C*                       C) 3 = WING    D) 4 = TAIL             *
C*                 2) SUBSCRIPT 2                                *
C*                       A) 1 = SIDE PROJECTED AREAS             *
C*                       B) 2 = PLAN PROJECTED AREAS             *
C*   AKNOSE(*) = 1=KNOSE FOR SPA                                 *
C*               2=KNOSE FOR PPA                                 *
C*   AKWING(*) = 1=KWING FOR SPA                                 *
C*             = 2=KWING FOR PPA                                 *
C*   AKTAIL(*) = 1=KTAIL FOR SPA                                 *
C*               2=KTAIL FOR PPA                                 *
C*   SADJSP(*,*)=SUM OF ADJUSTED SPA                             *
C*               SUBSCRIPT 1 = TYPE OF SEGMENT                   *
C*               SUBSCRIPT 2 = 1 SIDE FORCE                      *
C*                             2 NORMAL FORCE                    *
C*   INDX       = 1=SIDE FORCE CALCULATION                       *
C*                2=NORMAL FORCE CALCULATION                     *
C*   SPAADJ(*,*)=ADJUSTED AREAS FOR EACH SEGMENT                 *
C*               SUBSCRIPT 1 = NUMBER OF SEGMENT                 *
C*               SUBSCRIPT 2 = 1=SPA                             *
C*                             2=PPA                             *
C*   SPADJS(*) = 1=ADJUSTED SPA TOTAL FOR SIDE FORCE             *
C*               2=ADJUSTED PPA TOTAL FOR NORMAL FORCE           *
C*   SPATSP(*) = 1=SPA TOTAL FOR SIDE FORCE                      *
C*               2=PPA TOTAL FOR NORMAL FORCE                    *
C*   AKCSF(*)  = 1= ADJUSTED SPA /  SPA TOTAL                    *
C*               2= ADJUSTED PPA /  PPA TOTAL                    *
C*   PREDN(*)  = 1=SIDE FORCE INITIAL PREDICTION                 *
C*               2=NORMAL FORCE INITIAL PREDICTION               *
C*   KRDTYP(*) = THE NUMBER OF CARDS OF A PARTICULAR TYPE        *
C*               FOR THE CASE BEING CALCULATED                   *
C*   NCASES(*,*)=THE TYPE OF CASE FOR (CASE NO. ,CARD NO.)       *
C*                                                               *
C*   XMOM(*)   = DISTANCE FROM STORE MLP TO AREA SEGMENT         *
C*   PPAJFW    = ADJUSTED PLAN PROJECTED AREA FORWARD OF THE     *
C*               WING                                            *
C*   PPFW      = PLAN PROJECTED AREA FORWARD OF THE WING         *
C*   PREPM     = INITIAL PREDICTION PITCHING MOMENT              *
```

```
C     *    PREYM      = INITIAL PREDICTION YAWING MOMENT                *
C     *    SHDARA     = SHADOWED AREA                                   *
C     *    SPXMPM     = SUM OF (ADJUSTED PPA * XMOM(N))                 *
C     *    PXMOPM(*)  = XMOM(*) * SADJSP(*,*)                           *
C     ***************************************************************
      COMMON/COMINB/ ITYPE(14),NTYPES( 4),NOPINS(7),ICNFGS(5)
      COMMON/COMINC/ DUM1,IMACH,KRDTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/COMINT/ AKCSP(2),PREDN(2),PREPM,PREYM,PXMOPM(40),
     *               PXMOYM(40),XMOM(40)
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANOSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(8),SEGL,
     *               SML,SPAN(40,2),STOREO,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      COMMON/FILES/DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN
      INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
      COMMON/COMERR/ IERR
      COMMON/COMSET/ ADPOSL,AKCPM,AKCYM,AKNUSE(2),AKTAIL(2),
     *               AKWING(2),ALEDSL,ALEL,ANUPM,AREASP(4,2),
     *               CDCL45,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IDSYM,IEND,IMACH1,PPAJFK,PPAXC,SADJSP(4,2),SHDARA,
     *               SLOSRF,SLOS45,SPADJS(2),SPATSP(2),SREF,
     *               SRTSTO,STLOCL,STPOWS,YOSTO
      COMMON/REMOV2/ ICALGP(7),IFIND,INPGRA(7),IPRNT
      DIMENSION SEGADJ(40),SEGT(40),SMID1(40),SMID(40),SPAADJ(40,2)
      IPRNT = 7
      ADPOSL = SPADJS(2) / STOREL
      ANUPM = Y1PRM / YBIG
      SLOS45 = SIN(ALAMDA) / 0.70711
      CLSL45= CLOCAL * SLOS45
      STLOCL = STOREL / CLOCAL
      STPOWS = YBL / WSS
      YOSTO = Y1 / STOREO
      SREF  = STOREO * STOREO * 0.78539816
      SRTSTO = SREF * STOREO
      SLOSRF = SLOS45 * SREF
      CLDC45 = COS(ALAMDA) / 0.70711
      DVALUE(1) =(DINTFO * (XINTFO + 200.0))/(STOREO * YINTFO)
      DVALUE(2) =(DINTFI * (XINTFI + 200.0))/(STOREO * YINTFI)
      CDCL45 = CLOCAL / CLDC45
C ****
C ****  SETUP FOR INBOARD AND OUTBOARD STORE POSITION LOOP
C ****
      IBEGN = 1
      IEND  = 2
      IF(DINTFI.EQ.0.0)IEND = 1
      IF(DINTFO.EQ.0.0)IBEGN = 2
      DO 5 I=1,2
      DO 6 J=1,4
      SADJSP(J,I) = 0
      AREASP(J,I) = 0
    6 CONTINUE
      SPADJS(I) = 0
```

```
      SPATSP(I) = 0
      AKOSP(I) = 0
      PREJN(I) = 0
      AKWING(I) = 0
      AKNOSE(I) = 0
      AKTAIL(I) = 0
    5 CONTINUE
C ****
C ****  TEST FOR + OR X CONFIGURATION
C ****
      ACONFG = 1.0
      IF(ICONFG.EQ.1HX) ACONFG = 0.7071
      ALEL = SNL + PXOCHL * GLOBAL
      ALEJSL = ALEL / STOREL
      IXS = KROTYP(2)
      XSUM = -.5 * SEGL / 2.0
      XMOM(1) = -ALEL + XSUM
      IDLAST = -1
      SEGMNT = 0.0
      DO 20 I = 1,IXS
      IF(NSEG(I,1).NE.IDLAST)GO TO 10
      XMOM(I) = XMOM(I-1)
      SMID(I) = SMID(I-1)
      GO TO 15
   10 XSUM = XSUM + SEGL
      XMOM(I) = (XCG - XSUM) / 12.0
      SMID(I) = SMID(1) + SEGMNT * SEGL
      SEGMNT = SEGMNT + 1.0
   15 IDLAST = NSEG(I,1)
   20 CONTINUE
      IF(ISYM.EQ.7H        ) GO TO 100
      DO 50 I=1,IXS
      NSEG(I,2) = NSEG(I,1)
      NSTYPE(I,2) = NSTYPE(I,1)
      SPAT(I,2) = SPAT(I,1)
   50 CONTINUE
      KROTYP(3) = KROTYP(2)
  100 CONTINUE
C ****
C **** SETUP TO CALCULATE INITIAL PREDICTION FOR SIDE FORCE AND
C **** NORMAL FORCE
C ****
      DO 475 INDX = 1,2
      INDO = KROTYP(INDX+1)
      DO 150 I=1,INDO
      J = NSTYPE(I,INDX)
      AREASP(J,INDX) = AREASP(J,INDX) + SPAT(I,INDX)
  150 CONTINUE
      IF(ICASE.EQ.2.AND.AREASP(4,1)+AREASP(4,2).EQ.0.0)CALL ERROR(29)
      IF(ICASE - 2)200,225,250
  200 AKNB = AKN / AKBW
      AREAWG = AREASP(3,INDX)
      IF(IDSYM .GE.3) AREAWG = WINGPA
      AKNOSE(INDX)=AKNB*AREASP(2,INDX) / AREASP(1,INDX)
      AKWB1  = AKWB  / (AKBW  + AKN)
      AKWING(INDX)=AKWB1 * (AREASP(2,INDX) + AREASP(1,INDX)  )    /
     *      (APEAWG / ACONFG)
```

```
                AKINTF = 1.0
                GO TO 300
            225 AKNOSE(INDX) = AKNB  * AREASP(2,INDX) / AREASP(1,INDX)
175             AREAWG = AREASP(3,INDX)
                AREATL = AREASP(4,INDX)
                IF(IDSYM .GE.3) AREAWG = WINGPA
                IF(IDSYM .GE.3)AREATL = TAILPA
                AKTAIL(INDX) = AKTB  * (AREASP(2,INDX)+AREASP(1,INDX))   /
180            *      (AREATL / ACONFG)
                AKWING(INDX) = AKWBI * (AREASP(2,INDX)+AREASP(1,INDX))   /
               *       (AREAWG / ACONFG)
                GO TO 300
            250 AKNOSE(INDX) = 2.0
185             AKWING(INDX) = 1.0
                AKINTF = 1.0
            300 CONTINUE
                DO 450 I=1,INDO
                XDC = SMID(I) / GLOBAL
190             CALL LININT(6-INDX,1,XDC,DEPT)
                KTP = NSTYPE(I,INDX)
                GO TO (400,410,420,430),KTP
            400 ANOSEK = AKNOSE(INDX)
                AWINGK = 1.0
195             GO TO 440
            410 ANOSEK = 1.0
                AWINGK = 1.0
                GO TO 440
            420 ANOSEK = 1.0
200             AWINGK = AKWING(INDX)
                GO TO 440
            430 ANOSEK = 1.0
                AWINGK = AKTAIL(INDX) * AKINTF
            440 CONTINUE
205             SPADJ = DEPT * ANOSEK * AWINGK * SPAT(I,INDX)
                SPAADJ(I,INDX) = SPADJ
                SADJSP(KTP,INDX) = SADJSP(KTP,INDX) + SPADJ
                SPADJS(INDX) = SPADJS(INDX) + SPADJ
                SPATSP(INDX) = SPAT(I,INDX) + SPATSP(INDX)
210         450 CONTINUE
                AKCSF(INDX) = SPADJS(INDX) / SPATSP(INDX)
                PREDN(INDX) = CLAISO * AKCSF(INDX)
            475 CONTINUE
            C ****
215         C **** SETUP TO CALCULATE ADJUSTED PLAN PROJECTED AREA FORWARD
            C **** OF WING AND ALSO SHADOWED AREA
            C ****
                NSGPM1 = KRDTYP(3) - 1
                SEGADJ(1) = SPAADJ(1,2)
220             SEGT(1) = SPAT(1,2)
                SMIDJ(1) = SMID(1)
                NSGTOT = 1
                DO 575 I=1,NSGPM1
                IF(NSEG(I,2).EQ.NSEG(I+1,2))GO TO 570
225             NSGTOT = NSGTOT + 1
                SEGT(NSGTOT) = 0.0
                SEGADJ(NSGTOT) = 0.0
                SMIDJ(NSGTOT) = 0.0
```

```
      570 SEGT(NSGTOT) = SEGT(NSGTOT) + SPAT(I+1,2)
          SEGADT(NSGTOT) = SEGADT(NSGTOT) + SPAADJ(I+1,2)
          SMID1(NSGTOT) = SMID(I+1)
      575 CONTINUE
C ****
C **** CALCULATION OF FIN AND WING ADJUSTED PLAN PROJECTED AREA
C **** BETWEEN X/C OF 1.0 AND 1.1
C ****
          PPAXC = 0.0
          NPPAS = KFDTYP(3)
          DO 515 I=1,NPPAS
          IF(NSTYPE(I,2).NE.2)GO TO 515
          TEMP1 = SMID(I) / CLOCAL
          IF(TEMP1.GT.1.0.AND.TEMP1.LT.1.1)PPAXC = PPAXC + SPAADJ(I,2)
      515 CONTINUE
          PPAJFW = 0.0
          PPFW = 0.0
          XOUM2 = SEGL / 2.0
          DO 590 I=1,NSGTOT
          XOUM3 = SMID1(I) + XOUM2
          IF(XOUM3.GT.0.0) GO TO 595
          IF((XOUM3+SEGL).GT.1.0)GO TO 580
          PPAJFW = PPAJFW + SEGADT(I)
          PPFW = PPFW + SEGT(I)
          GO TO 590
      580 PPAJFW = PPAJFW - XOUM3 / SEGL * SEGADT(I)
          PPFW = PPFW - XOUM3/SEGL * SEGT(I)
          GO TO 595
      590 CONTINUE
      595 CONTINUE
          SHOARA = (SPATSP(2) - PPFW) / 144.
C **** PITCHING MOMENT SLOPE PREDICTION
          SPXMPM = 0.0
          DO 550 I=1,INDO
          PXMOPM(I) = XMOM(I) * SPAADJ(I,2)
          SPXMPM = SPXMPM + PXMOPM(I)
      550 CONTINUE
          AKCPM = SPXMPM / SPATSP(2)
          PREPM = CLAISO * AKCPM
C **** YAWING MOMENT INITIAL PREDICTION
          SPXMYM = 0.0
          IFIN = 3
          IF(ICASE.EQ.2)IFIN = 4
          DO 600 I=1,INDO
          PXMOYM(I) = XMOM(I) * SPAADJ(I,1)
          IF(NSTYPE(I,1).EQ.IFIN) GO TO 600
          SPXMYM = SPXMYM + PXMOYM(I)
      600 CONTINUE
          AKCYM = SPXMYM / SPATSP(2)
          PREYM = AKCYM * CLAISO
          RETURN
          END
```

```
      SUBROUTINE PRINTR(IFILE)
C     ****************************************************************
C     *                                                              *
C     *  SUBROUTINE TO COPY FILES TO OUTPUT                          *
C     *   1) ALL COPIES OF INTAPE  WILL POSITION INTAPE AT           *
C     *      THE BEGINNING OF THE NEXT DATA SET.                     *
C     *   2) IN ALL CASES THE ENTIRE DATA SET IS COPIED TO           *
C     *      OUTPUT                                                  *
C     *   3) VARIABLES                                               *
C     *        IFILE =1  COPIES FILE TAPEIN                          *
C     *        IFILE =2  COPIES FILE TAPEIN AND DATAC                *
C     *        IFILE =3  COPIES FILE TAPEIN,DATAC,IERROR AND         *
C     *                  IERSUM                                      *
C     *        IFILE =4  COPIES FILE TAPEIN AND IERROR               *
C     *        IFILE =5  COPIES FILE DATAC                           *
C     *        IFILE =6  COPIES FILE DATAC AND IERROR                *
C     *        IFILE =7  COPIES FILE IERROR                          *
C     *        IFILE =8  COPIES FILE REMOVE                          *
C     *                                                              *
C     *   4) THIS ROUTINE ASSUMES FILES ARE DEFINED (BLKFIL)         *
C     *                                                              *
C     ****************************************************************
      COMMON/COMINC/ DUM1,IMACH,KROTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/FILES/DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN
      INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
      COMMON/COMERR/ IERR
      DIMENSION ICOPY(17)
      IF(IFILE.EQ.8)GO TO 410
      IF(IFILE.GT.4)GO TO 200
      WRITE(OUTPT,1000)NUMCAS
 1000 FORMAT(1H1,40X,35HINPUT DATA PLAYBACK FOR CASE NUMBER  ,I5)
      IF(IERR.EQ.1)WRITE(OUTPT,1150)NCASE
 1150 FORMAT(1H+,83X,2H-  ,I5)
      REWIND TAPEIN
      IF(IERR.EQ.1)GO TO 75
      DO 50 I=1,NUMCAS
      ILINAS = 1
      NCARDS = NUMCRD(I)
      DO 25 J=1,NCARDS
      ILINAS = ILINAS + 1
      READ(TAPEIN,101)ICOPY
      IF(I.EQ.NUMCAS)WRITE(OUTPT,102)ICOPY
      IF(ILINAS.LT.50)GO TO 25
      WRITE(OUTPT,1000)NUMCAS
      IF(IERR.EQ.1)WRITE(OUTPT,1150)NCASE
      ILINAS = 1
   25 CONTINUE
   50 CONTINUE
      GO TO 200
   75 CONTINUE
      ILINAS = 1
  100 READ(TAPEIN,101)ICOPY
      ILINAS = ILINAS + 1
  101 FORMAT(16A8,A4)
      IF(EOF(TAPEIN).NE.0)GO TO 200
      WRITE(OUTPT,102)ICOPY
```

```
      102 FORMAT(1X,16A8,A4)
          IF(ILINAS.LT.59)GO TO 104
          WRITE(OUTPT,1000)NUMCAS
          WRITE(OUTPT,1150)NCASE
          ILINAS = 1
      104 CONTINUE
          GO TO 100
      200 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
          ITEMP = 1
          REWIND IERROR
      310 READ(IERROR,101)ICOPY
          IF(EOF(IERROR).NE.0)GO TO 320
          ITEMP = ITEMP + 1
          WRITE(OUTPT,101)ICOPY
          GO TO 310
      320 CONTINUE
          IF(ITEMP.LE.7.AND.IERR.NE.1)WRITE(OUTPT,1300)
     1300 FORMAT(//60X,12H*** NONE *** )
          REWIND IERROR
          ENDFILE IERROR
          REWIND IERROR
          IF(IFILE.NE.3)GO TO 400
          REWIND IERSUM
          ITEMP = 1
      330 READ(IERSUM,101)ICOPY
          IF(EOF(IERSUM).NE.0.0)GO TO 360
          ITEMP = ITEMP + 1
          WRITE(OUTPT,101)ICOPY
          GO TO 330
      360 IF(ITEMP.LE.5)WRITE(OUTPT,1300)
          REWIND IERSUM
          ENDFILE IERSUM
          REWIND IERSUM
      400 CONTINUE
          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
          REWIND REMOVE
          RETURN
          END
```

```
      SUBROUTINE ERROR(INDEX)
C     ******************************************************************
C     *  ROUTINE CALLED WHENEVER A WARNING MESSAGE OR AN ERROR         *
C     *  MESSAGE IS OUTPUT.                                            *
C     ******************************************************************
      COMMON/COMLIN/ NGPRE,NLPRE,NPOINT,X(80),Y(80),BADX,BADY
      COMMON/FILES/DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN
      INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINF1,ALINFO,ALINLT(5),ANGSEL,
     *               CBOISO,CLAISO,CLOCAL,DINTF1,DINTFO,HWDHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXLCHL,PEALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTF1,XINTFO,YBIG,YBL,
     *               YINTF1,YINTFO,Y1,Y1FRM,ZPH,ZPLNSP
      COMMON/COMINC/ DUM1,IMACH,KRDTYP(14),NCASE,NCASES(5,84),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/COMERR/ IERR
      COMMON/COMINB/ ITYPE(14),NTYPES( 4),NOPINS(7),ICNFGS(5)
      COMMON/REMOV2/ ICALGR(7),IFIND,INPGRA(7),IPRNT
      ILINA = ILINA + 1
      IF(NEXT.EQ.NUMCAS.AND.ILINA.LT.56)GO TO 6
      WRITE(IERROR,1000)NUMCAS, ITITLE
 1000 FORMAT(1H1,/40X,50HCAPTIVE STORE AIRLOADS PREDICTION GENERAL MESSA
     *GES ,10X,14HCASE NUMBER = ,I5, 4(/29X,9A8),/)
      ILINA = 7
    6 CONTINUE
      IF(NEXT.EQ.NUMCAS.AND.ILINB.LT.56)GO TO 8
      WRITE(IERSUM,1005)NUMCAS,(ITITLE(I),I=1,9),DUM1,
     *                  (ITITLE(I),I=10,36)
 1005 FORMAT(1H1,/45X,52HCAPTIVE STORE AIRLOADS PREDICTION OUT OF RANGE
     * DATA   ,13X,14HCASE NUMBER = ,I6,/29X,9A8,9X,14HMACH NUMBER = ,
     * F6.2,3(/29X,9A8))
      ILINB = 7
      IF(NEXT.NE.NUMCAS.OR.ILINB.GE.56) NEXT = NUMCAS
    8 CONTINUE
      GO TO(10,20,30,40,50,60,70,80,90,100,110,120,130,140,150,160,
     *170,180,190,200,210,220,230,240,250,260,270,280,290,300
     *   ) ,INDEX
   10 WRITE(IERROR,1010)
 1010 FORMAT(1X,56HWARNING - NO TITLE CARDS ENCOUNTERED PLEASE INCLUDE
     * 4     )
      RETURN
   20 WRITE(IERROR,1020)
 1020 FORMAT(1X,52HWARNING - INCLUDE 4 TITLE CARDS     )
      RETURN
   30 WRITE(IERROR,1030)
 1030 FORMAT(1X,52HERROR TOO MANY TITLES ONLY FIRST 4 USED          )
      RETURN
   40 WRITE(IERROR,1040)ITYPE(IERR)
 1040 FORMAT(1X,42HFATAL ERROR - INCORRECT SEGMENT TYPE ON A ,A8,4HCARD)
      RETURN
   50 WRITE(IERROR,1050)ITYPE(IERR)
 1050 FORMAT(1X,44HFATAL ERROR - INCORRECT SEGMENT NUMBER ON A ,A8,
     *     4HCARD)
      RETURN
```

```
      60 WRITE(IOPROR,1060)IABS(NGPRE),NLPRE
    1060 FORMAT(1X,24HFATAL ERROR-GRAPH NUMBER,I5,12H LINE NUMBER,I5,
     * 30H MISSING IN DATA BASE ATTACHED)
      50 CALL STOPPT
         CALL POINTR(3)
         IF(IFIND.GT.0)CALL POINTR(8)
      64 STOP
      70 WRITE(IERROR,1070)ITYPE(IERR)
    1070 FORMAT(1X,33HFATAL ERROR - A MAXIMUM OF FORTY ,A4,38HCARDS ARE ALL
     *OWED, RESPACE YOUR SPEAS.  )
      65 RETURN
      80 WRITE(IERROR,1080)
    1080 FORMAT(1X,38HFATAL ERROR - ICASE MUST BE 1 2 OR 3       )
      70 RETURN
      90 WRITE(IERROR,1090)ICASE
    1090 FORMAT(1X,72HWARNING - INPUT DATA INCLUDES EXTRANEOUS DATA ON STOR
     *E CARD FOR ICASE =   ,I5)
      75 RETURN
     100 WRITE(IERROR,1100)DUM1
    1100 FORMAT(1X,61HERROR - MACH NUMBER OUT OF RANGE FOR THIS METHOD. MAC
     *H NUMBER ,F5.2,30H NOT INCLUDED IN PREDICTIONS.    )
      80 RETURN
     110 WRITE(IERROR,1110)IMAGE
    1110 FORMAT(1X,52HFATAL ERROR - SPECIFICATION FIELD BAD FOR INPUT CARD,
     *  /5X,3H***,5X,18,A2,7A10,5X,3H***  )
         ILINA = ILINA + 1
         IERR = 1
         RETURN
      85 IF(DUM1.EQ.DUMX.AND.NUMCAS.EQ.NXTCAS)GO TO 115
         WRITE(IERSUM,2000)DUM1
         ILINB = ILINB + 3
     115 CONTINUE
    2000 FORMAT(/3X,14HMACH NUMBER = ,F5.2,/)
      90 WRITE(IERSUM,1120)BADX,BADY,IABS(NGPRE),NLPRE
    1120 FORMAT(5X,24HWARNING - DATA POINT X =,F10.4,5H, Y =,E10.4,24H OUT
     *OF RANGE FOR FIGURE,I5,5H LINE,I5)
         DUMX = DUM1
         NXTCAS = NUMCAS
      95 ILINB = ILINB + 1
         ILINA = ILINA - 1
         RETURN
     130 WRITE(IERROR,1130)IERR
    1130 FORMAT(1X,113HFATAL ERROR - INCORRECT DEFINITION ON STORES CARD FO
     *R AREA SPECIFICATIO. (ONLY (       ) OR (SPA=PPA) ALLOWED)     ,
     * 7H INPUT=,A7)
     100 RETURN
     140 WRITE(IERROR,1140)IERR
    1140 FORMAT(1X,78HFATAL ERROR - INCORRECT STORE CONFIGURATION TYPE.  CO
     *NFIGURATION STORE TYPE = ,1A1,9H INVALID )
     105 RETURN
     150 WRITE(IERROR,1150)ITYPE(IERR)
    1150 FORMAT(1X,22HERROR - MORE THAN ONE ,A8,48H CARD READ IN THIS CASE
     *LAST CARD READ IS USED       )
     110 RETURN
     160 WRITE(IERROR,1160)
    1160 FORMAT(1X,21HINPUT DATA NOT FOUND       )
         IERR = 1
```

```
      RETURN
  170 WRITE(IERROR,1170)
 1170 FORMAT(1X,46HFATAL ERROR - TOO MANY CASES INCLUDED IN DATA.   )
      CALL PRINTR(4)
      STOP
  180 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
  190 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
  200 WRITE(IERROR,1200)
 1200 FORMAT(1X,53HFATAL ERROR - ONE OF THE FOLLOWING PARAMETERS IS ZERO
     *                     ,/20X,12H Y BUTTLINE  ,
     *                       /20X,15H WING SEMI-SPAN  ,
     *                       /20X,59H DISTANCE FROM FUSELAGE TO WING TIP
     * FOR HIGH WING AIRCRAFT   )
      ILINA = ILINA + 3
      IERR = 1
      RETURN
  210 WRITE(IERROR,2210)ITYPE(IERR)
 2210 FORMAT(1X,35HFATAL ERROR - AREA NOT VALID ON AN ,A8,4HCARD)
      RETURN
  220 WRITE(IERROR,2220)
 2220 FORMAT(1X,84HFATAL ERROR - WHEN ICASE = 1 NONE OF THE FOLLOWING MA
     *Y BE ZERO. KN, KB(H) OR KB(B)       )
      IERR = 1
      RETURN
  230 WRITE(IERROR,2230)
 2230 FORMAT(1X,90HFATAL ERROR - WHEN ICASE = 2 NONE OF THE FOLLOWING MA
     *Y BE ZERO. KN/B, KT/B, KH/B, OR KINTF      )
      IERR = 1
      RETURN
  240 WRITE(IERROR,2240)ITYPE(IERR)
 2240 FORMAT(1X,14HFATAL ERROR -  ,A8,12HCARD MISSING  )
      RETURN
  250 WRITE(IERROR,2250)
 2250 FORMAT(1X,80HFATAL ERROR - AXIAL FORCE CALCULATION REQUIRES A NON-
     *ZERO CDMISC                          )
      IERR = 1
      RETURN
  260 WRITE(IERROR,2260) IOPTS(IERR)
 2260 FORMAT(1X,51HFATAL ERROR - LIFT CURVE SLOPE MUST NOT BE ZERO IF  ,
     *A2,29H IS CHOSEN ON THE OPTION CARD  )
      RETURN
  270 WRITE(IERROR,2270)
 2270 FORMAT(1X,46HFATAL ERROR - REQUIRED PLANFORM AREAS MISSING    )
      IERR = 1
```

```
      RETURN
  280 WRITE(IERROR,2281)
 2280 FORMAT(1X,52HWARNING, + OR * CONFIGURATION CHOSEN WITH AREAS INPUT)
      RETURN
  290 WRITE(IERROR,2290)
 2290 FORMAT(1X,48HFATAL ERROR - ICASE=2 AND NO TAIL AREA INCLUDED  )
      CALL PRINTR(4)
      STOP
  300 WRITE(IERROR,3010)
 3300 FORMAT(1X,45HFATAL ERROR - INCORRECT VALUES ON OPTION CARD  )
      RETURN
      END
```

```
      SUBROUTINE LININT(NGCUP,NLCUR,XINDEP,YDEPT)
C     ***************************************************************
C     *                                                             *
C     *   THIS ROUTINE LOOKS UP DEPENDENT VALUES IN THE DATA BASE   *
C     *   AND LINEARLY INTERPOLATES WHEN NECESSARY TO DEFINE A      *
C     *   VALUE.  ALL INDEPENDENT VALUES USED ARE ACCEPTABLE WITH   *
C     *   THE RESULT (FOR OUT OF RANGE VARIABLES) BEING             *
C     *   EXTRAPOLATED LINEARILLY BEYOND THE SCOPE OF DATA WHEN     *
C     *   NECESSARY.  ALL OUT OF RANGE VALUES ARE INCLUDED IN AN    *
C     *   ERROR SUMMARY AT THE END OF EACH SECTIONAL OUTPUT         *
C     *   X(*)       = INDEPENDENT VALUES FETCHED FROM THE          *
C     *                DATA BASE                                    *
C     *   Y(*)       = DEPENDENT   VALUES FETCHED FROM THE          *
C     *                DATA BASE                                    *
C     *   NGCUR      = THE CURRENT GRAPH BEING LOOKED UP            *
C     *   NLCUR      = THE CURRENT LINE  BEING LOOKED UP            *
C     *   XINDEP     = THE CURRENT INDEPENDENT VARIABLE             *
C     *   YDEPT      = THE CURRENT INTERPOLATED DEPENDENT           *
C     *                VARIABLE                                     *
C     *                                                             *
C     ***************************************************************
      COMMON/COMLIN/ NGPRE,NLPRE,NPOINT,X(80),Y(80),BADX,BADY
      COMMON/FILES/DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN
      INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
      COMMON/COMINC/ DUM1,IMACH,KRDTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/REMOV2/ ICALGR(7),IFIND,INPGRA(7),IPRNT
      COMMON/COMSTR/ ISTARS(46,7),IDSTAR
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLI(5),ANUSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDNF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               XINGFA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      NTRIES = 0
      IBAD = 0
      IF(NGCUR.EQ.NGPRE.AND.NLCUP.EQ.NLPRE) GO TO 20
   10 READ(GRAPHS,1010)NGPRE,NLPRE,NPOINT,NCARDS
      IF(EOF(GRAPHS).NE.0)GO TO 75
      IF(NGPRE.EQ.NGCUP.AND.NLPRE.EQ.NLCUR) GO TO 15
      READ(GRAPHS,1020)(X(I),I=1,NCARDS)
 1020 FORMAT(A10)
      GO TO 10
   15 READ(GRAPHS,1000)(X(I),Y(I),I=1,NPOINT)
 1000 FORMAT(3(2(1X,E11.4)))
 1010 FORMAT(4I10)
   20 IF(X(1).LE.XINDEP)GO TO 30
      INDX = 2
      GO TO 50
   30 IF(X(NPOINT).GE.XINDEP) GO TO 40
      INDX = NPOINT
      GO TO 60
   40 DO 50 INDX = 2, NPOINT
      IF(X(INDX-1).LE.XINDEP.AND.X(INDX).GE.XINDEP) GO TO 70
   50 CONTINUE
   60 BADX = XINDEP
```

```
      IBAD = 1
      ISTARS(ISTAR,I=1,4) = 1H*
   60 70 X1 = X(INDX - 1)
      YY1 = Y(INDX-1)
      X2 = X(INDX)
      Y2 = Y(INDX)
      XSLOPE = (Y2 - YY1) / (X2 - X1)
   65 X8 = Y2 - XSLOPE * X2
      YDEPT = XSLOPE * XINDEP + X8
      IF(IBAD.EQ.0)GO TO 75
      BADY = YDEPT
      CALL ERROR(12)
   70 75 CONTINUE
      NGRAPH = IABS(NGCUR)
      IF(ICALGR(IPRNT).EQ.0)GO TO 80
      IF(ILINE.LT.151.AND.NUMCAS.EQ.LAST.AND.DUMX.EQ.DUM1) GO TO 65
      WRITE(REMOVE,1065)(ITITLE(I),I=1,9),NUMCAS,(ITITLE(I),I=10,18),
   75 *                    DUM1,(ITITLE(I),I=19,36)
 1065 FORMAT(1H1,//30X,70HVALUES USED FROM GRAPHS IN CALCULATION OF CAPT
     *IVE AIRLOADS PREDICTIONS,/20X,9A8,18X,11HCASE NUMBER,I6,
     *                        /20X,9A8,18X,11HMACH NUMBER,F6.2,
     *                       2(/20X,9A8),/)
   80 WRITE(REMOVE,1070)
 1070 FORMAT(/6X,3(28HFIGURE  LINE        X        Y,11X),/6X,
     *          3(30HNUMBER  NUMBER   VALUE    VALUE,9X))
      ILINE = 7
      NPLACE = 0
   85 LAST = NUMCAS
      DUMX = DUM1
      ILINE = ILINE + 1
      NPLACE = NPLACE + 1
      IF(NPLACE-2)71,72,73
   90 71 WRITE(REMOVE,1071)NGRAPH,NLCUR,XINDEP,YDEPT
 1071 FORMAT(3X,I5,3X,I5,2X,E9.3,2X,E9.3)
      GO TO 74
   72 WRITE(REMOVE,1072)NGRAPH,NLCUR,XINDEP,YDEPT
 1072 FORMAT(1H+,43X,I5,3X,I5,2X,E9.3,2X,E9.3)
   95 GO TO 74
   73 WRITE(REMOVE,1073)NGRAPH,NLCUR,XINDEP,YDEPT
 1073 FORMAT(1H+,82X,I5,3X,I5,2X,E9.3,2X,E9.3)
      NPLACE = 0
   74 CONTINUE
  100 80 RETURN
   75 REWIND GRAPHS
      NTRIES = NTRIES + 1
      IF(NTRIES.LT.2)GO TO 10
      NGPRE = NGCUR
  105 NLPRE = NLCUR
      CALL ERROR(6)
      END
```

```
      SUBROUTINE TWOD(NGR,LN1,LN2,AM1,AM2,XINDEP,YDEP)
C     ************************************************************
C     *                                                          *
C     * SUBROUTINE TO LINEARLY INTERPOLATE BETWEEN MACH NUMBER   *
C     * GRAPH LINES RETURNING THE DEPENDENT VARIABLE DESIRED     *
C     *   NGR       = NUMBER OF GRAPH                            *
C     *   LN1       = LINE NUMBER AT MACH NUMBER 1               *
C     *   LN2       = LINE NUMBER AT MACH NUMBER 2               *
C     *   AM1       = LOW MACH NUMBER                            *
C     *   AM2       = HIGH MACH NUMBER                           *
C     *   XINDEP    = INDEPENDENT VARIABLE EVALUATED             *
C     *   YDEP      = DEPENDENT VARIABLE                         *
C     ************************************************************
      COMMON/COMMAC/ XLINTD
      CALL LININT(NGR,LN1,XINDEP,YDEP1)
      CALL LININT(NGR,LN2,XINDEP,YDEP2)
      YDEP =(YDEP2 - YDEP1) * (XLINTD - AM1) / (AM2 - AM1) + YDEP1
      RETURN
      END
```

```
      SUBROUTINE STOPRT
C*****************************************************************
C*                                                               *
C*   THIS ROUTINE PRINTS, ONTO THE FILE CONTAINING THE           *
C*   CALCULATED OUTPUT, ALL PREDICTIONS FOR ALL MACH NUMBERS     *
C*   DESIRED FOR THE CASE BEING CALCULATED                       *
C*   STOGFL    = STORE CENTER OF GRAVITY TO FORWARD LUG          *
C*               DISTANCE                                        *
C*                                                               *
C*****************************************************************
      COMMON/COMSTR/ ISTARS(46,7),IDSTAR
      COMMON/COMSID/ SFBASP,SFBASC(7),SFBAIP,SFBAIC(7),SFYSPP(7),
     *               SFYSPM(7),SFYIPP(7),SFYIPM(7),SFIASP(7),SFIAIP(7)
      COMMON/COMYAW/ YMBASP,YMBASC(7),YMBAIP,YMBAIC(7),YMYSPP,
     *               YMYSPM,YMYSCP(7),YMYSCM(7),YMYIPP,YMYIPM,
     *               YMYICP(7),YMYICM(7),YMIASP(7),YMIAIP,YMIAIC(7),
     *               YMBMSC(7),YMBMIC(7),YMBREK(7)
      COMMON/COMNOR/ANBASP,ANBASC(7),ANBAIP,ANBAIC(7),ANYSPP,
     *               ANYSPM,ANYSCP(7),ANYSCM(7),ANYIPP,ANYIPM,
     *               ANYICP(7),ANYICM(7),ANIASP,ANIASC(7),ANIAIP,
     *               ANIAIC(7)
      COMMON/COMPIT/ PMBASP,PMBASC(7),PMBAIP,PMBAIC(7),PMYSPP,
     *               PMYSPM,PMYSCP(7),PMYSCM(7),PMYIPP,PMYIPM,
     *               PMYICP(7),PMYICM(7),PMIASP,PMIASC(7),PMIAIP,
     *               PMIAIC(7)
      COMMON/COMAXI/ AXBASP(7),AXBAIP(7),AXYSPP(7),AXYIPP(7),AXIAIP(7),
     *               AXYSPM(7),AXYIPM(7)
      COMMON/COMROL/ RMBASP(7),RMBAIP(7),RMYIPP(7),RMYIPM(7),
     *               RMIAIP(7)
      COMMON/COMINC/ DUM1,IMACH,KROTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/FILES/DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN
      INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANOSFL,
     *               CDDISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      COMMON/COMSET/ ADPDSL,AKCPM,AKCYM,AKNOSE(2),AKTAIL(2),
     *               AKWING(2),ALEDSL,ALEL,ANUPM,AREASP(4,2),
     *               CDCL45,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IDSYM,IEND,IMACH1,PPAJFW,PFAXC,SADJSP(4,2),SHDAPA,
     *               SLDSRF,SLDS45,SPADJS(2),SPATSP(2),SREF,
     *               SRTSTD,STLDCL,STPDWS,YDSTD
      IPTS = 1 + IMACH1
      JMACH = IMACH + IMACH1
      STOGFL = XCG - SML + 0.5 * ZPLNSP
      WRITE(DATAC,600)NUMCAS,ITITLE,
     *   (REALM(I),I=IPTS,JMACH)
      ILINES = 7
      IF(ICALSG(1).NE.1)GO TO 100
      ILINES = ILINES + 13
      WRITE(DATAC,1000)
      WRITE(DATAC,1800)(SFBASC(1),ISTARS(1,I),I=1,IMACH)
```

```
      WRITE(DATAC,2000)(SFBAIC(I),ISTARS(2,I),I=1,IMACH)
      WRITE(DATAC,1600)
      WRITE(DATAC,1850)(SFYSPF(I),ISTARS(3,I),I=1,IMACH)
      WRITE(DATAC,2050)(SFYIPF(I),ISTARS(5,I),I=1,IMACH)
      WRITE(DATAC,1875)(SFYSPF(I),ISTARS(4,I),I=1,IMACH)
      WRITE(DATAC,2075)(SFYIPF(I),ISTARS(6,I),I=1,IMACH)
      WRITE(DATAC,1700)
      WRITE(DATAC,1800)(SFIASF(I),ISTARS(7,I),I=1,IMACH)
      WRITE(DATAC,2000)(SFIAIF(I),ISTARS(8,I),I=1,IMACH)
  100 CONTINUE
      IF(ICALSG(4).NE.1)GO TO 110
      ILINES = ILINES + 16
      WRITE(DATAC,1100)
      WRITE(DATAC,850)(YMBREK(I),I=1,IMACH)
      WRITE(DATAC,1810)(YMBASC(I),ISTARS( 9,I),I=1,IMACH)
      WRITE(DATAC,1820)(YMBMSC(I),ISTARS(45,I),I=1,IMACH)
      WRITE(DATAC,2010)(YMBAIC(I),ISTARS(10,I),I=1,IMACH)
      WRITE(DATAC,2020)(YMBMIC(I),ISTARS(46,I),I=1,IMACH)
      WRITE(DATAC,1600)
      WRITE(DATAC,1850)(YMYSCF(I),ISTARS(12,I),I=1,IMACH)
      WRITE(DATAC,2050)(YMYICF(I),ISTARS(14,I),I=1,IMACH)
      WRITE(DATAC,1875)(YMYSCF(I),ISTARS(11,I),I=1,IMACH)
      WRITE(DATAC,2075)(YMYICF(I),ISTARS(13,I),I=1,IMACH)
      WRITE(DATAC,1700)
      WRITE(DATAC,1800)(YMIASF(I),ISTARS(15,I),I=1,IMACH)
      WRITE(DATAC,2000)(YMIAIC(I),ISTARS(16,I),I=1,IMACH)
  110 CONTINUE
      IF(ICALSG(2).NE.1)GO TO 120
      ILINES = ILINES + 13
      WRITE(DATAC,1200)
      WRITE(DATAC,1800)(ANBASC(I),ISTARS(17,I),I=1,IMACH)
      WRITE(DATAC,2000)(ANBAIC(I),ISTARS(18,I),I=1,IMACH)
      WRITE(DATAC,1600)
      WRITE(DATAC,1850)(ANYSCF(I),ISTARS(20,I),I=1,IMACH)
      WRITE(DATAC,2050)(ANYICF(I),ISTARS(22,I),I=1,IMACH)
      WRITE(DATAC,1875)(ANYSCF(I),ISTARS(19,I),I=1,IMACH)
      WRITE(DATAC,2075)(ANYICF(I),ISTARS(21,I),I=1,IMACH)
      WRITE(DATAC,1700)
      WRITE(DATAC,1800)(ANIASC(I),ISTARS(23,I),I=1,IMACH)
      WRITE(DATAC,2000)(ANIAIC(I),ISTARS(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)NUMPAS,ITITLE,
     *   (PEALM(I),I=1,5),IMACH)
  125 CONTINUE
      WRITE(DATAC,1300)
      WRITE(DATAC,1800)(PMBASC(I),ISTARS(25,I),I=1,IMACH)
      WRITE(DATAC,2000)(PMBAIC(I),ISTARS(26,I),I=1,IMACH)
      WRITE(DATAC,1600)
      WRITE(DATAC,1850)(PMYSCF(I),ISTARS(28,I),I=1,IMACH)
      WRITE(DATAC,2050)(PMYICF(I),ISTARS(30,I),I=1,IMACH)
      WRITE(DATAC,1875)(PMYSCF(I),ISTARS(27,I),I=1,IMACH)
      WRITE(DATAC,2075)(PMYICF(I),ISTARS(29,I),I=1,IMACH)
      WRITE(DATAC,1700)
```

```
      WRITE(DATAC,1800)(RMIASC(I),ISTARS(31,I),I=1,IMACH)
      WRITE(DATAC,2000)(RMIAIC(I),ISTARS(32,I),I=1,IMACH)
  100 CONTINUE
      IF(ICALSG(5).NE.1)GO TO 140
      ILINES = ILINES + 12
      IF(ILINES.LT.50)GO TO 135
      ILINES = 7
      WRITE(DATAC,800)NUMCAS,ITITLE,
     *   (REALM(I),I=IPTS,JMACH)
  135 CONTINUE
      WRITE(DATAC,1400)
      WRITE(DATAC,1800)(AXBASF(I),ISTARS(33,I),I=1,IMACH)
      WRITE(DATAC,2000)(AXBAIF(I),ISTARS(34,I),I=1,IMACH)
      WRITE(DATAC,1600)
      WRITE(DATAC,1850)(AXYSPF(I),ISTARS(36,I),I=1,IMACH)
      WRITE(DATAC,2050)(AXYIPF(I),ISTARS(38,I),I=1,IMACH)
      WRITE(DATAC,1875)(AXYSPR(I),ISTARS(35,I),I=1,IMACH)
      WRITE(DATAC,2075)(AXYIPR(I),ISTARS(37,I),I=1,IMACH)
      WRITE(DATAC,1700)
      WRITE(DATAC,2000)(AXIAIF(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(DATAC,800)NUMCAS,ITITLE,
     *   (REALM(I),I=IPTS,JMACH)
  145 CONTINUE
      WRITE(DATAC,1500)
      WRITE(DATAC,1800)(RMBASF(I),ISTARS(40,I),I=1,IMACH)
      WRITE(DATAC,2000)(RMBAIF(I),ISTARS(41,I),I=1,IMACH)
      WRITE(DATAC,1600)
      WRITE(DATAC,2050)(RMYIPF(I),ISTARS(42,I),I=1,IMACH)
      WRITE(DATAC,2075)(RMYIPR(I),ISTARS(43,I),I=1,IMACH)
      WRITE(DATAC,1700)
      WRITE(DATAC,2000)(RMIAIF(I),ISTARS(44,I),I=1,IMACH)
  150 CONTINUE
      WRITE(DATAC,875) STOGFL,SREF,STORED
  800 FORMAT(1H1,//39X,53HCAPTIVE AIRLOADS PREDICTION TECHNIQUE CALCULAT
     *ED DATA  ,19X,14HCASE NUMBER = ,I5,/,4(/29X,9A8),/2X,11HMACH NUMBE
     *R  ,32X,7(4X,F8.2))
  875 FORMAT(//2X,21HREFERENCE DIMENSIONS    ,
     *//6X,40HSTORE CENTER OF GRAVITY TO FORWARD LUG =  ,F6.2,7H INCHES,
     *  /6X,24HSTORE REFERENCE AREA    =  ,F6.2,8H FEET**2     ,
     *  /6X,24HSTORE REFERENCE LENGTH =  ,F6.2,6H FEET   )
  850 FORMAT(6X,21HALPHA BREAK (DEGREES)  ,18X,7(6X,F6.2))
 1000 FORMAT(/2X,23HSIDE FORCE COEFFICIENTS,/4X,13HBASIC AIRLOAD  )
 1100 FORMAT(/2X,26HYAWING MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD)
 1200 FORMAT(/2X,26HNORMAL FORCE  COEFFICIENTS,/4X,13HBASIC AIRLOAD)
 1300 FORMAT(/2X,28HPITCHING MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD)
 1400 FORMAT(/2X,24HAXIAL FORCE COEFFICIENTS,/4X,13HBASIC AIRLOAD)
 1500 FORMAT(/2X,27HROLLING MOMENT COEFFICIENTS,/4X,13HBASIC AIRLOAD)
 1600 FORMAT(4X,23HINCREMENT-AIRCRAFT YAW  )
 1700 FORMAT(4X,37HINCREMENT-ADJACENT STORE INTERFERENCE )
 1800 FORMAT(6X,16HSLOPE PREDICTION,24X,7(2X,F9.5,A1) )
 1810 FORMAT(6X,35HSLOPE PREDICTION      < ALPHA BREAK ,5X,7(2X,F9.5,A1))
 1820 FORMAT(6X,35HSLOPE PREDICTION      > ALPHA BREAK ,5X,7(2X,F9.5,A1))
```

```
      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))
175   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))
      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
180        END
```

```
      SUBROUTINE SIDEBC
C*****************************************************************
C*  SUBROUTINE TO CALCULATE THE SIDE FORCE CONTRIBUTION          *
C*  FOR SINGLE CARRIAGE TYPE STORES.                             *
C*   SFQAL(*)  = INCREMENTAL SIDE FORCE SLOPE                    *
C*               1 = LOW MACH NUMBER                             *
C*               2 = HIGH MACH NUMBER                            *
C*   SIDE FORCE                                                  *
C*   SIDE FORCE                                                  *
C*     BASIC AIRLOAD                                             *
C*       SFBASP    = SLOPE PREDICTION AT MACH = 0.5              *
C*       SFBASC(*) = SFBASP + SLOPE CORRECTION AT MACH = X       *
C*       SFBAIP    = INTERCEPT PREDICTION AT MACH = 0.5          *
C*       SFBAIC(*) = SFBAIP + INTERCEPT CORRECTION AT MACH=X     *
C*     INCREMENT-AIRCRAFT YAW                                    *
C*       SFYSPP(*) = SLOPE PREDICTION                  (+BS)     *
C*       SFYSPM(*) = SLOPE PREDICTION                  (-BS)     *
C*       SFYIPP(*) = INTERCEPT PREDICTION              (+BS)     *
C*       SFYIPM(*) = INTERCEPT PREDICTION              (-BS)     *
C*     INCREMENT-ADJACENT STORE INTERFERENCE                     *
C*       SFIASP(*) = SLOPE PREDICTION                            *
C*       SFIAIP(*) = INTERCEPT PREDICTION                        *
C*****************************************************************
      COMMON/COMINC/ DUM1,IMACH,KRDTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKW9,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINET(5),ANUSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWOHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXOCML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      COMMON/COMINT/ AKCSF(2),PREON(2),PREPM,PREYM,PXMOPM(40),
     *               PXMOYM(40),XMOM(40)
      COMMON/COMSID/ SFBASP,SFBASC(7),SFBAIP,SFBAIC(7),SFYSPP(7),
     *               SFYSPM(7),SFYIPP(7),SFYIPM(7),SFIASP(7),SFIAIP(7)
      COMMON/FILES/DATAC,DATIN,GRAPHS,IERROR,IERSUM,OUTPT,REMOVE,TAPEIN
      INTEGER DATAC,DATIN,GRAPHS,OUTPT,REMOVE,TAPEIN
      COMMON/COMSET/ AUPDSL,AKCPM,AKCYM,AKNOSE(2),AKTAIL(2),
     *               AKWING(2),ALEDSL,ALEL,ANUPM,AREASP(4,2),
     *               CDCL45,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IDSYM,IEND,IMACH1,PPAJFW,PPAXC,SAUJSP(4,2),SHOARA,
     *               SLDSRF,SLDS45,SPADJS(2),SPATSP(2),SPEF,
     *               SPTSTD,STLOCL,STPOHS,YDSTD
      COMMON/COMMAC/ XLINTD
      COMMON/REMOV2/ ICALSP(7),IFIND,INPGRA(7),IPRNT
      COMMON/COMSTR/ ISTARS(46,7),IDSTAR
      DIMENSION SFQAL(2),SFMNO(2)
      SFBASC(IMACH) = 0.0
      SFBAIC(IMACH) = 0.0
      SFYSPP(IMACH) = 0.0
      SFYSPM(IMACH) = 0.0
      SFYIPP(IMACH) = 0.0
      SFYIPM(IMACH) = 0.0
      SFIASP(IMACH) = 0.0
      SFIAIP(IMACH) = 0.0
```

```
      IPRNT = 1
      IF(ICALSG(IPRNT).EQ.0.AND.ICALSG(4).EQ.0)GO TO 20000
      XLINTO = REALM(IMACH)
      ANOSES = SADJSP(1,1)
      AWINGS = SADJSP(3,1)
      IF(ICASE.EQ.2) AWINGS = SADJSP(4,1)
C **** SFBASP = BASIC AIRLOAD SIDE FORCE SLOPE PREDICTION
      DO 50 I=1,8
      ISTARS(I,IMACH) = 1H
   50 CONTINUE
      IOSTAR = 1
      IF(DUM1.GT.0.5)GO TO 100
      CALL LININT(13,1,STPDWS,DEP13)
      CALL LININT(14,1,YDSTO,DEP14)
      DEP14 = 1.0 - (1.0 - DEP14) * HWDHT
      CALL LININT(15,1,STLOCL,DEP15)
      CALL LININT(16,1,ZPH,DEP16)
      SFBASP = PPEON(1) * DEP13 * DEP14 * DEP15 * DEP16 * SLDS45
  100 CONTINUE
C ****
C ****  SFBASD(*) = SLOPE PREDICTION AT MACH = 0.5  * SLOPE MACH
C ****              NUMBER CORRECTION FOR SIDE FORCE BASIC AIRLOAD
C ****
      XDELTA = 0.0
      IADD = 0
      IF(DUM1.EQ.0.5)GO TO 150
      CALL BREAKP(18,4,IBREAK,CLSL45,DEP18L,DEP18H)
      IF(DEP18L.LT.0.0)GO TO 150
      GO TO (105,110,120,130),IBREAK
  105 IADD = IADD + 1
      SFDAL(IADD) = 0.0
  110 IADD=IADD + 1
      CALL LININT(19,1,CLSL45,DEP19)
      CALL LININT(20,1,CLSL45,DEP20)
      SFDAL(IADD) = (DEP19 * AWINGS + DEP20 ) * SREF
      IF(IADD.EQ.2) GO TO 150
  120 IADD = IADD + 1
      CALL LININT(21,1,STPDWS,DEP21)
      CALL LININT(22,1,SLDS45,DEP22)
      CALL LININT(23,1,STPDWS,DEP23)
      CALL LININT(24,1,SLDS45,DEP24)
      SFDAL(IADD) = (DEP21 * DEP22 * ANOSES + DEP23 * DEP24) * SREF
      IF(IADD.EQ.2) GO TO 150
  130 IADD = IADD + 1
      CALL LININT(25,1,STPDWS,DEP25)
      CALL LININT(26,1,SLDS45,DEP26)
      CALL LININT(27,1,STPDWS,DEP27)
      CALL LININT(28,1,SLDS45,DEP28)
      SFDAL(IADD) = (DEP25 + DEP26 * AWINGS + DEP27 * DEP28 ) * SREF
      IF(IADD.EQ.2)GO TO 150
      IADD = IADD + 1
      CALL LININT(29,1,CLSL45,DEP29)
      CALL LININT(30,1,CLSL45,DEP30)
      SFDAL(IADD) = (DEP29 * AWINGS + DEP30) * SREF
  150 CONTINUE
      XDELTA = SFDAL(1) + (DUM1 - DEP18L)   /
     *                  (DEP18H - DEP18L) * (SFDAL(2) - SFDAL(1))
```

```
      160 SFBASC(IMACH) = (SFBASE + XDELTA)  / SREF
C ****
C **** SFBAIP = SIDE FORCE BASIC AIRLOAD INTERCEPT PREDICTION AT
C ****          MACH = 0.5
C ****
      IDSTAB = 2
      IF(DUM1.GT.0.5)GO TO 165
      CALL LININT(31,1,CLSL45,DEP31)
      CALL LININT(32,1,YDSTD,DEP32)
      DEP32 = DEP32 * HHDHF
      CALL LININT(33,1,ALEL,DEP33)
      CALL LININT(34,1,CLSL45,DEP34)
      CALL LININT(35,1,YDSTD,DEP35)
      DEP35 = DEP35 * HHDHF
      CALL LININT(36,1,ALEL,DEP36)
      SFBAIP = ((DEP31 + DEP32 + DEP33) * AWINGS + DEP34 + DEP35 +
     *          DEP36) * SLOS45 * SREF
  165 CONTINUE
C ****
C **** SFBAIC(M) = SIDE FORCE BASIC AIRLOAD INTERCEPT PREDICTION AT
C ****              MACH = 0.5  + INTERCEPT CORRECTION AT MACH = X
C ****
      XDELTA = 0.0
      IADD = 0
      IF(DUM1.EQ.0.5) GO TO 255
      CALL BREAKP(38,3,IBREAK,CLSL45,DEP38L,DEP38H)
      IF(DEP38L.LT.0.0)GO TO 255
      IF(IBREAK-2)208,210,220
  208 IADD = IADD + 1
      SFMN0(IADD) = 0.0
  210 IADD = IADD + 1
      CALL LININT(39,1,CLSL45,DEP39)
      CALL LININT(40,1,CLSL45,DEP40)
      SFMN0(IADD) =  (DEP39 * AWINGS + DEP40) * SLOS45 * SREF
      IF(IADD.EQ.2)GO TO 250
  220 IADD = IADD + 1
      CALL LININT(41,1,CLSL45,DEP41)
      CALL LININT(42,1,YDSTD,DEP42)
      DEP42 = DEP42 * HHDHF
      CALL LININT(43,1,CLSL45,DEP43)
      CALL LININT(44,1,YDSTD,DEP44)
      DEP44 = DEP44 * HHDHF
      SFMN0(IADD) = ((DEP41 + DEP42) * AWINGS + DEP43 + DEP44) *
     *              SLOS45  * SREF
      IF(IADD.EQ.2)GO TO 250
      IADD = IADD + 1
      CALL LININT(45,1,CLSL45,DEP45)
      CALL LININT(46,1,CLSL45,DEP46)
      SFMN0(IADD) = (DEP45 * AWINGS + DEP46) * SLOS45 * SREF
  250 CONTINUE
      XDELTA = SFMN0(1) + (DUM1 - DEP38L)   /
     *                    (DEP38H - DEP38L) * (SFMN0(2) - SFMN0(1))
  255 SFBAIC(IMACH) = (SFBAIP + XDELTA) / SREF
      IF(ICALSG(1).EQ.0)GO TO 20000
C ****
C ****                    INCREMENTAL AIRCRAFT YAW
C ****
```

```
C **** SEYSPP(*)=INCREMENTAL SIDE FORCE YAW SLOPE PREDICTION
C ****            AT MACH =  X    (+BS)
C **** SFYSPM(*)=INCREMENTAL SIDE FORCE YAW SLOPE PREDICTION
C
C ****            AT MACH =  X    (-BS)
C ****
      IDSTAR = 3
      CALL LININT(49,1,ALEDSL,DEP49)
      ISTARS(4,IMACH) = ISTARS(3,IMACH)
      DO 490 I=1,2
      IDSTAR = 2 + I
      CALL LININT(47,I,DUM1,DEP47)
      IF(I.EQ.1)NG = +48
      IF(I.EQ.2)NG = +48
      IF(DUM1.GT.0.7)GO TO 270
      CALL LININT(NG,1,ANUPM,DEP48)
      GO TO 370
  270 IF(DUM1.GE.0.9)GO TO 280
      CALL TWOD(NG,1,2,0.7,0.9,ANUPM,DEP48)
      GO TO 370
  280 IF(DUM1.GT.0.9)GO TO 290
      CALL LININT(NG,2,ANUPM,DEP48)
      GO TO 370
  290 IF(DUM1.GE.1.05     ) GO TO 300
      CALL TWOD(NG,2,3,0.9,1.05,ANUPM,DEP48)
      GO TO 370
  300 IF(DUM1.NE.1.05)GO TO 310
      CALL LININT(NG,3,ANUPM,DEP48)
      GO TO 370
  310 IF(DUM1.GE.1.2      ) GO TO 320
      CALL TWOD(NG,3,4,1.05,1.2,ANUPM,DEP48)
      GOTO  370
  320 IF(DUM1.NE.1.2)GO TO 330
      CALL LININT(NG,4,ANUPM,DEP48)
      GO TO 370
  330 IF(DUM1.GE.1.6) GO TO 340
      CALL TWOD(NG,4,5,1.20,1.6,ANUPM,DEP48)
      GO TO 370
  340 CALL LININT(NG,5,ANUPM,DEP48)
  370 CONTINUE
      DEP48 = DEP48 * HWDHF
      CALL LININT(50,I,DUM1,DEP50)
      XDELTA = (DEP47 + DEP48 + DEP49 * DEP50) * SPAGJS(1)
      IF(I.EQ.1)SFYSPM(IMACH) = XDELTA / SREF
      IF(I.EQ.2)SFYSPP(IMACH) = XDELTA / SREF
C ****
C ****  SFYIPP(*) = INCREMENTAL SIDE FORCE YAW INTERCEPT
C ****              PREDICTION AT MACH = X          (+BS)
C ****  SFYIPM(*) = INCREMENTAL SIDE FORCE YAW INTERCEPT
C ****              PREDICTION AT MACH = X          (-BS)
C ****
      IDSTAR = 4 + I
      CALL LININT(51,I,DUM1,DEP51)
      CALL LININT(52,I,DUM1,DEP52)
      IF(I.EQ.1)GO TO 425
      NG = 53
      IF(DUM1.GT.0.9)GO TO 390
```

```
                  CALL LININT(NG,1,ANUPM,DEP53)
                  GO TO 500
              390 IF(DUM1.GE.1.05)GO TO 400
                  CALL TWOD(NG,1,2,0.3,1.05,ANUPM,DEP53)
                  GO TO 500
              400 IF(DUM1.GT.1.05)GO TO 410
                  CALL LININT(NG,2,ANUPM,DEP53)
                  GO TO 500
              410 IF(DUM1.GE.1.2)GO TO 420
                  CALL TWOD(NG,2,3,1.05,1.2,ANUPM,DEP53)
                  GO TO 500
              420 IF(DUM1.GT.1.2)GO TO 470
                  CALL LININT(NG,3,ANUPM,DEP53)
                  GO TO 500
              425 NG = NG3
                  IF(DUM1.GT.0.7)GO TO 430
                  CALL LININT(NG,2,ANUPM,DEP53)
                  GO TO 500
              430 IF(DUM1.GE.0.9)GO TO 440
                  CALL TWOD(NG,1,2,0.7,0.9,ANUPM,DEP53)
                  GO TO 500
              440 IF(DUM1.GT.0.9)GO TO 450
                  CALL LININT(NG,2,ANUPM,DEP53)
                  GO TO 500
              450 IF(DUM1.GE.1.05)GO TO 460
                  CALL TWOD(NG,2,3,0.9,1.05,ANUPM,DEP53)
                  GO TO 500
              460 IF(DUM1.GT.1.20) GO TO 470
                  CALL LININT(NG,3,ANUPM,DEP53)
                  GO TO 500
              470 IF(DUM1.GE.1.6) GO TO 480
                  CALL TWOD(NG,3,4,1.2,1.6, ANUPM,DEP53)
                  GO TO 500
              480 CALL LININT(NG,4,ANUPM,DEP53)
              500 CONTINUE
                  DEP53 = DEP53 * FWDMF
                  XDELTA = DEP51 * ANOSES + DEP52 * DEP53
                  IF(I.EQ.1) SFYIPM(IMACH) = XDELTA / SREF
                  IF(I.EQ.2) SFYIPP(IMACH) = XDELTA / SREF
              490 CONTINUE
                  IF(DINTFI.EQ.0.0.AND.DINTFO.EQ.0.0)GO TO 20000
                  XIND56 = STOREL / (SLOS45 * SLOS45 * CLOCAL)
                  DO 575 I=IBEGN,IEND
              C ****
              C **** SFIASP(*) = SIDE FORCE INCREMENT ADJACENT STORE SLOPE
              C ****             PREDICTION
              C ****
                  IDSTAR = 7
                  IF(I.EQ.1)SLP55 = DINTFO * (XINTFO + 200.0) / (STORED * YINTFO)
                  IF(I.EQ.2)SLP55 = DINTFI * (XINTFI + 200.0) / (STORED * YINTFI)
                  CALL LININT(55,I,0.041, DP55)
                  SFIASP(IMACH)= SFIASP(IMACH) + DEP55  * SLP55
              C ****
              C ****  SFIAIP(*) = ADJACENT STORE INTERCEPT PREDICTION
              C ****
                  IDSTAR = 8
                  IND = 1
```

```
      IF(I.EQ.1)IND = - 1
      NG = 56 * IND
      XIND56 = STOREL / (SLOS45 * SLOS45 * CLOCAL)
      IF(DUM1.GT.0.7) GO TO 510
290   CALL LININT(NG,1,XIND56,DEP56)
      CALL LININT(NG+IND,1,CLSL45,DEP57)
      CALL LININT(NG+IND+IND,1,CLSL45,DEP58)
      GO TO 570
  510 IF(DUM1.GE.0.9)GO TO 520
295   CALL TWOD(NG,1,2,0.7,0.9,ANUPM,DEP56)
      CALL TWOD(NG+IND,1,2,0.7,0.9,CLSL45,DEP57)
      CALL TWOD(NG+IND+IND,1,2,0.7,0.9,CLSL45,DEP58)
      GOTO 570
  520 IF(DUM1.GT.0.9)GO TO 530
300   CALL LININT(NG,2,XIND56,DEP56)
      CALL LININT(NG+IND,2,CLSL45,DEP57)
      CALL LININT(NG+IND+IND,2,CLSL45,DEP58)
      GO TO 570
  530 IF(DUM1.GE.1.2)GO TO 540
305   CALL TWOD(NG,2,3,0.9,1.2,XIND56,DEP56)
      CALL TWOD(NG+IND,2,3,0.9,1.2,CLSL45,DEP57)
      CALL TWOD(NG+IND+IND,2,3,0.9,1.2,CLSL45,DEP58)
      GOTO 570
  540 IF(DUM1.GT.1.2)GO TO 550
310   CALL LININT(NG,3,XIND56,DEP56)
      CALL LININT(NG+IND,3,CLSL45,DEP57)
      CALL LININT(NG+IND+IND,3,CLSL45,DEP58)
      GO TO 570
  550 IF(DUM1.GE.1.6) GO TO 560
315   CALL TWOD(NG,3,4,1.2,1.6,XIND56,DEP56)
      CALL TWOD(NG+IND,3,4,1.2,1.6,CLSL45,DEP57)
      CALL TWOD(NG+IND+IND,3,4,1.2,1.6,CLSL45,DEP58)
      GO TO 570
  560 CALL LININT(NG,4,XIND56,DEP56)
320   CALL LININT(NG+IND,4,CLSL45,DEP57)
      CALL LININT(NG+IND+IND,4,CLSL45,DEP58)
  570 CONTINUE
      AKINC1= DEP57 * STOREL / CLOCAL  + DEP58
      IF(I.EQ.1)DUMX1 = OINTFO * XINTFO / YINTFO
325   IF(I.EQ.2)DUMX1 = OINTFI * XINTFI / YINTFI
      SFIAIP(IMACH) = SFIAIP(IMACH) + DEP56 * DUMX1 / STORED + AKINC1
  575 CONTINUE
      SFIASP(IMACH) = SFIASP(IMACH) / SREF
      SFIAIP(IMACH) = SFIAIP(IMACH) / SREF
330 20000 RETURN
      END
```

```
      SUBROUTINE YAWMOM
C*****************************************************************
C*  YAWING MOMENT                                                *
C*    BASIC AIRLOAD                                              *
C*      YMBASP     = SLOPE PREDICTION AT MACH = 0.5              *
C*      YMBASC(*)  = YMBASP + SLOPE CORRECTION AT MACH=X         *
C*      YMBAIP     = INTERCEPT PREDICTION AT MACH = 0.5          *
C*      YMBAIC(*)  = YMBAIP + INTERCEPT CORRECTION AT MACH=X     *
C*    INCREMENT-AIRCRAFT YAW                                     *
C*      YMYSPP     = SLOPE PREDICTION AT MACH = 0.5      (+BS)  *
C*      YMYSPM     = SLOPE PREDICTION AT MACH = 0.5      (-BS)  *
C*      YMYSCP(*)  = YMYSPP + SLOPE CORRECTION MACH = X  (+BS)  *
C*      YMYSCM(*)  = YMYSPP + SLOPE CORRECTION MACH = X  (-BS)  *
C*      YMYIPP     = INTERCEPT PREDICTION AT MACH=0.5    (+BS)  *
C*      YMYIPM     = INTERCEPT PREDICTION AT MACH=0.5    (-BS)  *
C*      YMYICP(*)  = YMYIPP + INTERCEPT CORRECTION MACH=X(+BS)  *
C*      YMYICM(*)  = YMYIPP + INTERCEPT CORRECTION MACH=X(-BS)  *
C*    INCREMENT-ADJACENT STORE INTERFERENCE                      *
C*      YMIASP(*)  = SLOPE PREDICTION                            *
C*      YMIAIP     = INTERCEPT PREDICTION AT MACH = 0.5          *
C*      YMIAIC(*)  = YMIAIP + INTERCEPT CORRECTION MACH = X      *
C*****************************************************************
      COMMON/COMINC/ DUM1,IMACH,KPUTYP(14),NCASE,NCASES(5,34),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/COMINP/ AKBH,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANOSCL,
     *               BODISO,CLAISO,CLOCAL,DINTFI,DINTFO,HHCMF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               MS_G(40,2),NSTYPE(40,2),PXFCML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STOREO,STOREL,SUMPA,TAILPM,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,YL,YIPRM,ZPM,ZPLMSP
      COMMON/COMINT/ AKCSF(2),PREON(2),PREPM,PREYM,PXMOPM(40),
     *               PXMOYM(40),XMON(40)
      COMMON/COMSET/ ADPOSL,AKCPM,AKCYM,AKNOSE(2),AKTAIL(2),
     *               AKWING(2),ALEDSL,ALEL,ANUPP,AREASP(4,2),
     *               CDCL45,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IDSYM,IEND,IMACH1,PPAJFM,PPAXC,SADJSP(4,2),SHDAFA,
     *               SLOSRF,SLOS45,SPADJS(2),SPAISP(2),SPEF,
     *               SRTSTD,STLOCL,STPOWS,YOSTD
      COMMON/COMYAW/ YMBASP,YMBASC(7),YMBAIP,YMBAIC(7),YMYSPP,
     *               YMYSPM,YMYSCP(7),YMYSCM(7),YMYIPP,YMYIPM,
     *               YMYICP(7),YMYICM(7),YMIASP(7),YMIAIP,YMIAIC(7),
     *               YMBMSC(7),YMBMIC(7),YMBREK(7)
      COMMON/COMMAC/ XLINTD
      COMMON/PEMOV2/ ICALSR(7),IFIND,INPORA(7),IFPNT
      COMMON/COMSTR/ ISTARS(46,7),IDSTAR
      COMMON/COMSID/ SFBASP,SFBASC(7),SFBAIP,SFBAIC(7),SFYSPP(7),
     *               SFYSPM(7),SFYIPP(7),SFYIPM(7),SFIASP(7),SFIAIP(7)
      DIMENSION YMBAX(2),YMBAI(2),YMBSCP(2),YMBSIP(2),YMBAIC(2)
      YMBASC(IMACH) = 0.0
      YMBAIC(IMACH) = 0.0
      YMYSCP(IMACH) = 0.0
      YMYSCM(IMACH) = 0.0
      YMYICP(IMACH) = 0.0
      YMYICM(IMACH) = 0.0
      YMIASP(IMACH) = 0.0
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```
      YMIAIC(IMACH) = 0.0
      YMBMSC(IMACH) = 0.0
      YMBMIC(IMACH) = 0.0
      YMBREX(IMACH) = 0.0
      ISTARS(45,IMACH) = 1H
      ISTARS(46,IMACH) = 1H
      DO 100 I=9,16
      ISTARS(I,IMACH) = 1H
  100 CONTINUE
      IPPNT = 4
      IF(ICALSG(IPPNT).EQ.0)GO TO 20000
      XLINID = REALM(IMACH)
      ALNOD = ANOSEL / STOPED
      AREAN1 = AREASP(1,1)
      AREAW1 = AREASP(3,1)
      IF(ICASE.EQ.2) AREAW1 = AREASP(4,1)
      ANOSED = SADJSP(1,1)
C **** YMBASP= YAWING MOMENT BASIC AIRLOAD SLOPE PREDICTION
      IOSTAP = 9
      IF(DUM1.GT.0.5)GO TO 105
      DUMX = AREAW1 * ALNOD * AREAN1  / ( SREF * SPATSP(1))
      CALL LININT(59,1,DUMX,DEP59)
      IF(ALEL.GT.82.0)DEP59 = DEP59 + 0.1404
      CALL LININT(60,1,ANUEM,DEP60)
      DEP60 = DEP60 * HWDMF
      YMBASP = PREYM * SLOS45 + (-0.0016 * CLSL45 * DEP59 +
     *                  DEP60) * SLOSRF * STOPED
  105 CONTINUE
C **** YMB SC(*) = YAWING MOMENT BASIC AIRLOAD SLOPE MACH NUMBER
C ****                CORRECTION
      IADD = 0
      XDELTA = 0.0
      IF(DUM1.EQ.0.5) GO TO 130
      CALL BREAKP(62,4,I,CLSL45,DEP62L,DEP62H)
      IF(DEP62L.LT.0.0)GO TO 130
      IF(I.GT.1) GO TO 120
      I = I + 1
      IADD = IADD + 1
      YMDAX(IADD) = 0.0
  120 CONTINUE
      IADD = IADD + 1
      NG = 61 + 2 * (I-1)
      CALL LININT(NG,1,CLSL45,DEPY1)
      CALL LININT(NG+1,1,CLSL45,DEPY2)
      YMDAX(IADD) = (DEPY1 * AKCYM * SPATSP(1) / (ALEL * SREF) +
     *                  DEPY2)  * SLOSRF
      I = I + 1
      IF(IADD.EQ.1) GO TO 120
      XDELTA = YMDAX(1) + (DUM1 - DEP62L) /
     *                  (DEP62H - DEP62L) * ( YMDAX(2) - YMDAX(1))
  130 YMBAS(IMACH) = (YMBASP + XDELTA)  / SPTSTE
C **** YMBAIP = YAWING MOMENT BASIC AIRLOAD INTERCEPT PREDICTION
      IOSTAP = 10
      IF(DUM1.GT.0.5) GO TO 145
      CALL LININT(71,1,CLSL45,DEP71)
C
C
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                      CALL LININT,72,1,ANUPM,DEP72)
                      DEP72 = DEP72 * HWDHF
                      CALL LININT(73,1,CLSL45,DEP73)
                      CALL LININT(74,1,ANUPM,DEP74)
                      DEP74 = DEP74 * HWDHF
      120             YMBAIP = ((DEP71 + DEP72) * ALEL + DEP73 + DEP74) * SLDS45
                    145 CONTINUE
                  C **** YMBAIC(*) = YAWING MOMENT BASIC AIRLOAD INTERCEPT MACH NUMBER
                  C ****             CORRECTION
                  C **** YMQAI(*) = INTERCEPT MACH NUMBER INCREMENTAL CHANGE
      125             IADD = 0
                      XDELTA = 0.0
                      IF(JUM1.EQ.0.5)GO TO 180
                      CALL BREAKP(76,3,JUMP,CLSL45,DEP76L,DEP76H)
                      IF(DEP76L.LT.0.3)GO TO 180
      130             IF(JUMP-2)160,170,175
                    160 IADD = IADD + 1
                      YMQAI(IADD) = 0.0
                      JUMP = JUMP + 1
                    170 NG = 73 + 3 *(JUMP - 1) + 1
      135             IADD = IADD + 1
                      CALL LININT(NG,1,CLSL45,DEPY1)
                      CALL LININT(NG+1,1,CLSL45,DEPY2)
                      YMQAI(IADD) = (DEPY1 * ALEL + DEPY2) * SLDSPF
                      IF(IADD.EQ.2)GO TO 177
      140           175 IADD = IADD + 1
                      CALL LININT(79,1,CLSL45,DEP79)
                      CALL LININT(80,1, YDSTC,DEP80)
                      DEP80 = DEP80 * HWDHF
                      CALL LININT(81,1,CLSL45,DEP81)
      145             CALL LININT(82,1, YDSTC,DEP82)
                      DEP82 = DEP82 * HWDHF
                      YMQAI(IADD) = ((DEP79 + DEP80) * ALEL + DEP81 + DEP82) * SLDSPF
                      JUMP = JUMP + 1
                      IF(IADD.LT.2) GO TO 170
      150           177 XDELTA  = YMQAI(1) + ( DUM1 - DEP76L)  / (DEP76H - DEP76L) *
                     *            (YMQAI(2) -  YMQAI(1))
                    180 YMBAIC(IMACH) = (YMBAIP + XDELTA) / SRTSTC
                  C ****
                  C **** YAWING MOMENT MODIFICATION FOR INTERMEDIATE WING LOCATIONS
      155         C ****
                      IF(DUM1.GT.(1.2-0.2*HWDHF))GO TO 187
                      IOSTAR = 46
                      ALPOSF = - SFBAIC(IMACH) / SFBASC(IMACH)
                      IF(DUM1.GT.0.9) GO TO 181
      160             DEP910 = ALNLOC(910,0.6,0.9,0.2,ALPOSF)
                      GO TO 186
                    181 IF(DUM1.GE.1.05) GO TO 182
                      CALL TWOD(910,3.4,3.9,1.05,ALPOSF,DEP,10)
                      GO TO 186
      165             182 IF(DUM1.GT.1.05) GO TO 183
                      CALL LININT(910,4,ALPOSF,DEP910)
                      GO TO 186
                    183 IF(DUM1.EQ.1.2) GO TO 184
                      CALL TWOD(910,4,5,0.9,1.2,ALPOSF,DEP910)
      170             GO TO 186
                    184 CALL LININT(910,5,ALPOSF,DEP910)
```

```
  185 CONTINUE
      CALL LININT(911,1,ALPOSF,DEP911)
      IF(ALEL.LE.82.0)GO TO 188
      CALL LININT(915,1,DUM1,DEP915)
      GO TO 191
  188 IF(AREAW1/STOREL.LE.5.0)GO TO 189
      CALL LININT(915,2,DUM1,DEP915)
      GO TO 191
  189 CALL LININT(915,3,DUM1,DEP915)
  191 CONTINUE
      YMBREK(IMACH) = DEP910 + DEP915 + HWDHF * (DEP911 - DEP910)
      CALL LININT(912,1,DUM1,DEP912)
      CALL LININT(913,1,DUM1,DEP913)
      DEP914 = ALNLOC(914,0.5,0.9,0.2,ANUPM)
      YMBMSC(IMACH) = (DEP912 * CLSL45 + DEP913) * SRTSTO + HWDHF*DEP914
      YMBMSC(IMACH) = YMBMSC(IMACH) / SRTSTO
      YMBMIC(IMACH) = (YMBASC(IMACH) - YMBMSC(IMACH)) * YMBREK(IMACH) +
     *                YMBAIC(IMACH)
      ISTARS(46,IMACH) = ISTARS(45,IMACH)
  187 CONTINUE
C ****  INCREMENT AIRCRAFT YAW
      DO 245 I=1,2
C ****YMYSPP =  YAWING MOMENT INCREMENT-AIRCRAFT YAW SLOPE          (+BS)
C ****          PREDICTION
C ****YMYSPM =  YAWING MOMENT INCREMENT-AIRCRAFT YAW SLOPE          (-BS)
C ****          PREDICTION
      IDSTAR = 10 + I
      DUMY3 = ANOSES * ALEL / STOPEL
      IF(DUM1.GT.0.5)GO TO 185
      CALL LININT(85,I,CLSL45,DEP85)
      CALL LININT(86,I,ANUPM,DEP86)
      DEP86 = DEP86 * HWDHF
      CALL LININT(87,I,CLSL45,DEP87)
      CALL LININT(88,I,ANUPM,DEP88)
      DEP88 = DEP88 * HWDHF
      XDELTA = ((DEP85 + DEP86) * DUMY3 + DEP87 + DEP88)* SRTSTO
      IF(I.EQ.1) YMYSPM = XDELTA
      IF(I.EQ.2) YMYSPP = XDELTA
  245 CONTINUE
C **** YMYSCP(*) = YAWING MOMENT INCREMENTAL AIRCRAFT YAW SLOPE      (+BS)
C ****            MACH NUMBER CORRECTION
C **** YMYSCM(*) = YAWING MOMENT INCREMENTAL AIRCRAFT YAW SLOPE      (+BS)
C ****            MACH NUMBER CORRECTION
      NG = 92- I
      IADD = 0
      XDELTA = 0.0
      IF(DUM1.EQ.0.5)GO TO 215
      CALL BREAKP(NG,2,JUMP,CLSL45,DEPYL,DEPYH)
      IF(DEPYL.LT.0.0)GO TO 215
      IF(JUMP-2)190,193,195
  190 IADD = IADD + 1
      YMQSCP(IADD) = 0.0
  193 IADD = IADD + 1
      CALL LININT(92,I,CLSL45,DEP92)
      CALL LININT(93,I,ANUPM,DEP93)
      DEP93 = DEP93 * HWDHF
      CALL LININT(94,I,CLSL45,DEP94)
```

```
      CALL LININT(95,I, ANUPM,DEP95)
      DEP95 = DEP95 * HWDHF
      YMOSCP(IADD) =  ((DEP92 + DEP93) * DUMY3 + DEP94 + DEP95) * SRTSTO
      IF(IADD.EQ.2)GO TO 210
  196 IADD = IADD + 1
      CALL LININT(96,I,CLSL45,DEP96)
      CALL LININT(97,I,ANUPM ,DEP97)
      DEP97 = DEP97 * HWDHF
      CALL LININT(98,I,CLSL45,DEP98)
      CALL LININT(99,I,ANUPM ,DEP99)
      DEP99 = DEP99 * HWDHF
      YMOSCP(IADD) = ((DEP96 + DEP97) * DUMY3 + DEP98 + DEP99) * SRTSTO
      IF(IADD.EQ.2)GO TO 210
C
      YMOSCP(2) = YMOSCP(1)
  210 XDELTA = YMOSCP(1) + (DUM1 - DEPYL) / (DEPYH - DEPYL)
     *           (YMOSCP(2) - YMOSCP(1))
  215 IF(I.EQ.1) YMYSCM(IMACH) = (YMYSPM + XDELTA) / SRTSTO
      IF(I.EQ.2) YMYSCP(IMACH) = (YMYSPP + XDELTA) / SRTSTO
C **** YMYIPP = YAWING MOMENT INCREMENTAL-AIRCRAFT YAW INTERCEPT
C ****                                                          (+BS)
C ****          PREDICTION
C **** YMYIPM = YAWING MOMENT INCREMENTAL-AIRCRAFT YAW INTERCEPT
C ****                                                          (-BS)
C ****          PREDICTION
      IDSTAR = 12 + I
      IF(DUM1.GT.0.5)  GO TO 217
      CALL LININT(100,I,CLSL45,DEP100)
      CALL LININT(101,I, ANUPM,DEP101)
      DEP101 = DEP101 * HWDHF
      CALL LININT(102,I,CLSL45,DEP102)
      CALL LININT(103,I, ANUPM,DEP103)
      DEP103 = DEP103 * HWDHF
      XDELTA = ((DEP100 + DEP101) * DUMY3 + DEP102 + DEP103) * SRTSTO
      IF(I.EQ.1) YMYIPM = XDELTA
      IF(I.EQ.2) YMYIPP = XDELTA
  217 CONTINUE
C **** YMYICP(*) = YAWING MOMENT INCREMENTAL-AIRCRAFT YAW INTERCEPT
C ****                                                          (+BS)
C ****            MACH  NUMBER CORRECTION
C **** YMYICM(*) = YAWING MOMENT INCREMENTAL-AIRCRAFT YAW INTERCEPT
C ****                                                          (-BS)
C ****            MACH  NUMBER CORRECTION
      NG = 107 - I
      XDELTA = 0.0
      IF(DUM1.EQ.0.5)GO TO 240
      IADD = 0
      CALL BREAKP(NG,2,JUMP,CLSL45,DEPYL,DEPYH)
      IF(DEPYL.LT.0.0) GO TO 240
      IF(JUMP-2)230,233,235
  230 IADD = IADD + 1
      YMOSIP(IADD) = 0.0
  233 IADD = IADD + 1
      CALL LININT(107,I,CLSL45,DEP107)
      CALL LININT(108,I,ANUPM ,DEP108)
      DEP108 = DEP108 * HWDHF
      CALL LININT(109,I,CLSL45,DEP109)
      CALL LININT(110,I,ANUPM ,DEP110)
      DEP110 = DEP110 * HWDHF
      YMOSIP(IADD) = ((DEP107 + DEP108) * DUMY3 + DEP109 + DEP110) *
     *                SRTSTO
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```
      IF(IADD.EQ.2)GO TO 237
  235 IADD = IADD + 1
      CALL LININT(111,I,CLSL45,DEP111)
      CALL LININT(112,I, ANUPM,DEP112)
      DEP112 = DEP112 * HWDHF
      CALL LININT(113,I,CLSL45,DEP113)
      CALL LININT(114,I, ANUPM,DEP114)
      DEP114 = DEP114 * HWDHF
      YMQSIP(IADD)=((DEP111 + DEP112) * DUMY3 + DEP113 + DEP114) *
     *                    SQTSTO
      IF(IADD.EQ.2)GO TO 237
      YMQSIP(2) = YMQSIP(1)
  237 XDELTA = YMQSIP(1)+(DUM1 - DEPYL) / (DEPYH - DEPYL) *
     *           (YMQSIP(2) - YMQSIP(1))
  240 IF(I.EQ.1) YMYICM(IMACH) = (XDELTA + YMYIPM) / SRTSTO
      IF(I.EQ.2) YMYICP(IMACH) = (XDELTA + YMYIPP) / SRTSTO
C **** YMYICP(*) = YAWING MOMENT INCREMENTAL-AIRCRAFT YAW INTERCEPT
C ****               MACH  NUMBER CORRECTION                (+BS)
C **** YMYICM(*) = YAWING MOMENT INCREMENTAL-AIRCRAFT YAW INTERCEPT
C ****               MACH  NUMBER CORRECTION                (-BS)
  245 CONTINUE
C ****
C ****    YAWING MOMENT ADJACENT STORE INTERFERENCE
C ****
      IF(DINTFI.EQ.0.0.AN).DINTFO.EQ.0.0)GO TO 26000
      IF(DUM1.EQ.0.5)YMIAIP = 0.0
      DO 300 I=IBEGN,IEND
C **** YMIASP(*) =  YAWING MOMENT INCREMENT-ADJACENT STORE SLOPE
C ****                PREDICTION
      IDSTAR = 15
      IF(I.EQ.1)YDUM3 = DINTFO * (XINTFO + 240.0) / (STORED * YINTFO)
      IF(I.EQ.2)YDUM3 = DINTFI * (XINTFI + 200.0) / (STORED * YINTFI)
      CALL LININT(115,I,DUM1,DEP115)
      YMIASP(IMACH) = YMIASP(IMACH) + DEP115 * YDUM3
C ****
C ****  YMIAIP = YAWING MOMENT INCREMENT - ADJACENT STORE INTERCEPT
C ****                PREDICTION
      IF(I.EQ.1) DUMY4 = DINTFO * (200.0 - ALEL) / (STORED * YINTFO)
      IF(I.EQ.2)DUMY4 = DINTFI * (200.0 - ALEL) / (STORED * YINTFI)
      IDSTAR = 15
      IF(DUM1.GT.0.5)GO TO 246
      CALL LININT(116,I,CLSL45,DEP116)
      DEP116 = DEP116 * HWDHF
      CALL LININT(117,I,STPDWS,DEP117)
      DEP117 = DEP117 * HWDHF
      YMIAIP = YMIAIP + (DEP116 + DEP117) * DUMY4 * SLOS45
     *                * STORED
  246 CONTINUE
C **** YMIAIC(*) = YAWING MOMENT INCREMENTAL-ADJACENT STORE
C ****               INTERCEPT MACH NUMBER CORRECTION
      NG = 121 - I
      XDELTA = 0.0
      IF(DUM1.EQ.0.5) GO TO 265
      IADD = 0
      CALL BREAKR(NG,2,JUMP,CLSL45,DEPYL,DEPYH)
      IF(DEPYL.LT.0.0) GO TO 265
      IF(I.EQ.1) DUMY3 = DINTFO * XINTFO / STORED
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```
                  IF(I.EQ.2) DUMY3 = DINTFI * XINTFI / STOREO
                  DUMY4 = ALEL * ANOSES / STOREL
345               IF(JUMP-2)247,250,255
              247 IADJ = IADJ + 1
                  YMOAIC(IADD) = 0.0
              250 IADJ = IADJ + 1
                  CALL LININT(121,I,CLSL45,DEP121)
350               CALL LININT(122,I,CLSL45,DEP122)
                  CALL LININT(123,I,CLSL45,DEP123)
                  CALL LININT(124,I,CLSL45,DEP124)
                  YMOAIC(IADD) = ((DEP121 * DUMY4 + DEP122) * DUMY3 + (DEP123 *DUMY4
                 *                + DEP124))* SLOSRF * STOREO
355               IF(IADJ.EQ.2)GO TO 260
              255 IADD = IADD + 1
                  CALL LININT(125,I,CLSL45,DEP125)
                  CALL LININT(126,I,CLSL45,DEP126)
                  CALL LININT(127,I,CLSL45,DEP127)
360               CALL LININT(128,I,CLSL45,DEP128)
                  YMOAIC(IADD) = ((DEP125 * DUMY4 + DEP126) * DUMY3 + (DEP127 *
                 *                DUMY4 + DEP128)) * SLOSRF * STOREO
                  IF(IADD.EQ.2)GO TO 260
                  YMOAIC(2) =  YMOAIC(1)
365           260 XDELTA =  YMOAIC(1) + (LUM1 - DEPYL) / (DEPYH - DEPYL) *
                 *          (YMOAIC(2) - YMOAIC(1))
              265 YMIAIC(IMACH) = YMIAIC(IMACH) + XDELTA
              300 CONTINUE
                  YMIAIC(IMACH) = (YMIAIC(IMACH) + YMIAIF) / SRTSTO
370           20000 CONTINUE
                  END
```

```
      SUBROUTINE NORFRC
C*****************************************************************
C*  NORMAL FORCE                                                 *
C*    BASIC AIRLOAD                                              *
C*      ANBASP    = SLOPE PREDICTION  MACH = 0.5                 *
C*      ANBASC(*) = ANBASP + SLOPE CORRECTION MACH=X             *
C*      ANBAIP    = INTERCEPT PREDICTION MACH = 0.5              *
C*      ANBAIC(*) = ANBAIP + INTERCEPT CORRECTION MACH=X         *
C*    INCREMENT-AIRCRAFT YAW                                     *
C*      ANYSPP    = SLOPE PREDICTION  MACH = 0.5        (+BS)  *
C*      ANYSPM    = SLOPE PREDICTION  MACH = 0.5        (-BS)  *
C*      ANYSCP(*) = ANYSPP + SLOPE CORRECTION    MACH=X (+BS)  *
C*      ANYSCM(*) = ANYSPP + SLOPE CORRECTION    MACH=X (-BS)  *
C*      ANYIPP    = INTERCEPT PREDICTION MACH = 0.5     (+BS)  *
C*      ANYIPM    = INTERCEPT PREDICTION MACH = 0.5     (-BS)  *
C*      ANYICP(*) = ANYIPP + INTERCEPT CORRECTION MACH=X(+BS)  *
C*      ANYICM(*) = ANYIPP + INTERCEPT CORRECTION MACH=X(-BS)  *
C*    INCREMENT-ADJACENT STORE INTERFERENCE                      *
C*      ANIASP(*) = SLOPE PREDICTION                             *
C*      ANIASC(*) = SLOPE MACH NUMBER CORRECTION                 *
C*      ANIAIP(*) = INTERCEPT PREDICTION                         *
C*      ANIAIC(*) = INTERCEPT MACH NUMBER CORRECTION             *
C*    ANOSEL = STORE NOSE LENGTH                                 *
C*    YBIG      = DISTANCE FROM THE FUSELAGE TO THE WING         *
C*                TIP FOR HIGH-WING AIRCRAFT                     *
C*    ADFNXC = ADJUSTED FIN PPA FROM X/C = 1.1 TO X/C = 1.6      *
C*    ANFABN(*) = UPPER AND LOWER BREAK MACH NUMBER              *
C*                CORRECTION FOR INCREMENT YAW SLOPE MACH        *
C*                 NUMBER CORRECTION                             *
C*    PPAJFW    = THAT PART OF THE ADJUSTED PLAN PROJECTED       *
C*                AREA FORWARD OF THE WING LEADING EDGE          *
C*    ANFABI(*) = UPPER AND LOWER BREAK MACH NUMBER              *
C*                CORRECTION FOR INCREMENT YAW INTERCEPT         *
C*                MACH NUMBERS                                   *
C*    ANFABS(*) = UPPER AND LOWER BREAK MACH NUMBER              *
C*                CORRECTION FOR INCREMENT-ADJACENT STORE        *
C*                SLOPE MACH NUMBER CORRECTION                   *
C*    ANFAIX(*) = UPPER AND LOWER BREAK MACH NUMBER              *
C*                CORRECTION FOR INCREMENT-ADJACENT STORE        *
C*                INTERCEPT MACH NUMBER CORRECTION               *
C*****************************************************************
      COMMON/COMSET/ ADFDSL,AKCFM,AKCYN,AKNOSE(2),AKTAIL(2),
     *               AKWING(2),ALEDSL,ALEL,ANUPR,AREASP(4,2),
     *               CDCL45,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IDSYM,IEND,IMACH1,PPAJFW,PPAXC,SADJSP(4,2),SHDAFA,
     *               SLOSRF,SLOS45,SPADJS(2),SPATSP(2),SREF,
     *               SRTSTD,STLOCL,STPOWS,YDSTD
      COMMON/COMNOP/ANBASP,ANBASC(7),ANBAIP,ANBAIC(7),ANYSPP,
     *              ANYSPM,ANYSCP(7),ANYSCM(7),ANYIPP,ANYIPM,
     *              ANYICP(7),ANYICM(7),ANIASP,ANIASC(7),ANIAIP,
     *              ANIAIC(7)
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANOSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWCHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(5),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMFA,TAILFA,
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*                 WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
*                 YINTFI,YINTFO,Y1,YIPRM,ZPM,/PLNSP
      COMMON/COMINT/ AKCSP(2),PREJN(2),PREPM,PREYM,PXMOPM(40),
*                 PXMOYM(40),XMOM(40)
      COMMON/COMINC/ DUM1,IMACH,KRDTYP(14),NCASE,NCASES(3,94),NUMCAS,
*                 NUMCRD(5),NMACH
      COMMON/COMMAC/ XLINTO
      COMMON/REMOV2/ ICALSR(7),IFIND,INPGRA(7),IPRNT
      COMMON/COMSTR/ ISTARS(46,7),IOSTAR
      DIMENSION ANFARN(2),ANFABI(2)
      ANBASC(IMACH) = 0.0
      ANBAIC(IMACH) = 0.0
      ANYSCP(IMACH) = 0.0
      ANYSCM(IMACH) = 0.0
      ANYICP(IMACH) = 0.0
      ANYICM(IMACH) = 0.0
      ANIASC(IMACH) = 0.0
      ANIAIC(IMACH) = 0.0
      DO 110 I=17,24
      ISTARS(I,IMACH) = 14
  110 CONTINUE
      IPRNT = 2
      IF(ICALSG(IPRNT).EQ.0)GO TO 20010
      ADPOSL = SPADJS(2) / STOREL
      ALNOSD = ANOSEL / STORED
      Y1OYBG = Y1 * 12.0 / YBIG
      XLINTO = REALM(IMACH)
C **** ANBASP = NORMAL FORCE BASIC AIRLOAD SLOPE PREDICTION
      IOSTAR = 17
       IF(DUM1.GT.0.5)GO TO 130
      CALL LININT(129,1,STPOWS,DEP129)
      CALL LININT(130,1,CLOCAL,DEP130)
      CALL LININT(131,1,STLOCL,DEP131)
      CALL LININT(132,1, ANOPR,DEP132)
      DEP132 = 1.0 - (1.0 - DEP132) * HWOHF
      DEP133 = 0.0
      IF(ALINLT(NUMCAS).NE.1234321.)
*           CALL LININT(133,1,ALINLT(NUMCAS),DEP133)
      AREA =(SPADJS(2)-(1.0-DEP133)*PPADJFW)/(STORED*12.0)
      VAR1 = CLOC45 * CLOC45 * DEP131 * DEP132 * PREDN(2) * AREA
      ANBASP = CLOC45 * PREDN(2) - (DEP130 + DEP129*VAR1)
  130 CONTINUE
C **** ANBASC(*) = NORMAL FORCE BASIC AIRLOAD SLOPE MACH NUMBER
C ****                CORRECTION
      XDELTA = 0.0
      DEP134 = 1.5
      IF(ALEFIN(NUMCAS).NE.1234321.)
*           CALL LININT(134,1,ALEFIN(NUMCAS),DEP134)
      IF(DUM1.LE.DEP134)GO TO 140
      CALL LININT(135,1,STPOWS,DEP135)
      DUMX3 = DEP135 * CLOC45 * SPADJS(2) / CLOCAL
      CALL LININT(136,1,DUMX3,DEP136)
      XIN137 = DUM1 - DEP134
      CALL LININT(137,1,XIN137,DEP137)
      XDELTA = SREF * DEP137 * DEP136
  140 ANBASC(IMACH) = (ANBASP+ XDELTA) / SREF
C **** ANBAIP = NORMAL FORCE BASIC AIRLOAD INTERCEPT PREDICTION
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      IDSTAR = 18
      IF(DUM1.GT.0.5) GO TO 142
      CALL LININT(138,1,CDCL45,DEP138)
      CALL LININT(139,1,ZPH,DEP139)
      CALL LININT(140,1,PXDCML,DEP140)
      CALL LININT(141,1,SREF,DEP141)
      ANBAIF = SREF * (DEP138 - 0.0109 * CLDC45 * ALEL * DEP139 +
     *                 DEP140 * DEP141)
  142 CONTINUE
C **** ANBAIC(*) = NORMAL FORCE BASIC AIRLOAD INTERCEPT MACH NUMBER
C ****             CORRECTION
      XDELTA = 0.0
      IF(DUM1.LE.DEP134)GO TO 143
      CALL LININT(144,1,YLOYBC,DEP144)
      XI142   = SAOJSP(1,2) / (SREF * CLDC45 * CLDC45) -
     *          DEP144 * PRAXC / SREF
      CALL LININT(142,1, XI142,DEP142)
      CALL LININT(143,1,ALNDSL,DEP143)
      CALL LININT(145,1,STPDWS,DEP145)
      XDELTA = SPEF * DEP142 * (DUM1 - DEP145 * DEP134) / DEP143
  143 ANBAIC(IMACH) = (ANBAIP + XDELTA) / SREF
C ****
C ****      INCREMENTAL - AIRCRAFT YAW
C ****
C **** ANYSPP = NORMAL FORCE INCREMENTAL- AIRCRAFT YAW SLOPE
C ****              PREDICTION                                  (+BS)
C **** ANYSPM = NORMAL FORCE INCREMENTAL- AIRCRAFT YAW SLOPE
C ****              PREDICTION                                  (-BS)
      DO 218 J=1,2
      IDSTAR = 18 + J
      IF(DUM1.GT.0.5)GO TO 144
      XDELTA = 0.0
      CALL LININT(146,J,CDCL45,DEP146)
      CALL LININT(147,J,ANUPM ,DEP147)
      DEP147 = DEP147 * HWDHF
      CALL LININT(148,J,CDCL45,DEP148)
      CALL LININT(149,J,ANUPM ,DEP149)
      DEP149 = DEP149 * HWDHF
      XDELTA = ((DEP146 + DEP147) * ALEL + DEP148 + DEP149) * SPEF
      IF(J.EQ.1)ANYSPM = XDELTA
      IF(J.EQ.2)ANYSPP = XDELTA
  144 CONTINUE
C **** ANYSCP(*) = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW SLOPE
C ****                 MACH NUMBER CORRECTION                  (+BS)
C **** ANYSCM(*) = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW SLOPE
C ****                 MACH NUMBER CORRECTION                  (-BS)
      XDELTA = 0.0
      IADJ = 0
      IF(DUM1.EQ.0.5) GO TO 160
C
      NLINES = 5 - J
      NG = 153 - J
      CALL BREAKP(NG,NLINES,JUMP,CDCL45,DEPYLO,DEPYHI)
      IF(DEPYLO.LT.0.0)GO TO 160
      IF(JUMP.NE.1)GO TO 145
      JUMP = JUMP + 1
      JUMPP1 = JUMP
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                  IADD = IADD + 1
                  ANFABN(IADD) = 0.0
                  GO TO 150
175           145 JUMPP1 = JUMP + 1
              150 DO 155 I=JUMP,JUMPP1
                  IF(I.GT.(NLINES+1))ANFABN(2) = ANFABN(1)
                  IF(I.GT.(NLINES+1))GO TO 165
                  NG = 153 + 4 * (I-2)
180               CALL LININT(NG,J,CDCL45,DEPY1)
                  IADD = IADD + 1
                  CALL LININT(NG+1,J,ANUPM,DEPY2)
                  DEPY2 = DEPY2 * HWDHF
                  CALL LININT(NG+2,J,CDCL45,DEPY3)
185               CALL LININT(NG+3,J,ANUPM,DEPY4)
                  DEPY4 = DEPY4 * HWDHF
                  ANFABN(IADD) = ((DEPY1 + DEPY2) * ADPDSL + DEPY3 + DEPY4) * SREF
              155 CONTINUE
              165 XDELTA = ANFABN(1) + (DUM1 - DEPYLO) / (DEPYHI - DEPYLO) *
190              *          (ANFABN(2) - ANFABN(1))
              180 IF(J.EQ.1)ANYSCM(IMACH) = (ANYSPM + XDELTA) / SREF
                  IF(J.EQ.2) ANYSCP(IMACH) = (ANYSPP + XDELTA) / SREF
            C **** ANYIPP = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW INTERCEPT
            C ****                PREDICTION                                  (+BS)
195         C **** ANYIPM = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW INTERCEPT
            C ****                PREDICTION                                  (-BS)
                  IOSTAP = 20 + J
                  IF(DUM1.GT.0.5) GO TO 182
                  CALL LININT(169,J,CDCL45,DEP169)
200               CALL LININT(170,J,STEDWS,DEP170)
                  CALL LININT(171,J,ANUPM ,DEP171)
                  DEP171 = DEP171 * HWDHF
                  CALL LININT(172,J,CDCL45,DEP172)
                  CALL LININT(173,J,STEDWS,DEP173)
205               CALL LININT(174,J,ANUPM ,DEP174)
                  DEP174 = DEP174 * HWDHF
                  XDELTA = ((DEP169 + DEP170 + DEP171) * ALEL + DEP172 + DEP173  +
                 *           DEP174) * SREF
                  IF(J.EQ.1)ANYIPM = XDELTA
210               IF(J.EQ.2)ANYIPP = XDELTA
              182 CONTINUE
            C **** ANYICP(*) = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW INTERCEPT
            C ****                MACH NUMBER CORRECTION                      (+BS)
            C **** ANYICM(*) = NORMAL FORCE INCREMENTAL-AIRCRAFT YAW INTERCEPT
215         C ****                MACH NUMBER CORRECTION                      (-BS)
                  IADD = 0
                  NG = 178 + J
                  XDELTA = 0.0
                  IF(DUM1.EQ.0.5) GO TO 200
220               CALL BREAKP(NG,NLINES,JUMP,CDCL45,DEPYLO,DEPYHI)
                  IF(DEPYLO.LT.0.0)GO TO 200
                  IF(JUMP.NE.1)GO TO 183
                  JUMP = JUMP + 1
                  JUMPP1 = JUMP
225               IADD = IADD + 1
                  ANFABI(IADD) = 0.0
                  GO TO 185
              183 JUMPP1 = JUMP + 1
```

```
      185 DO 186 I=JUMP,JUMPP1
      IF(I.GT.(NLINES+1)) ANFABI(2) = ANFABI(1)
      IF(I.GT.(NLINES+1))GO TO 190
      NG = 178 + 4 *(I-2)
      IADD = IADD + 1
      CALL LININT(NG,J,CDCL45,DEPY1)
      CALL LININT(NG+1,J,ANUPM,DEPY2)
      DEPY2 = DEPY2 * HWDHF
      CALL LININT(NG+2,J,CDCL45,DEPY3)
      CALL LININT(NG+3,J,ANUPM ,DEPY4)
      DEPY4 = DEPY4 * HWDHF
      ANFABI(IADD) = ((DEPY1 + DEPY2) * ADPDSL + DEPY3 + DEPY4)*SREF
  186 CONTINUE
  190 XDELTA = ANFABI(1) + (DUM1 - DEPYLO) / (DEPYHI - DEPYLO) *
     *          (ANFABI(2) - ANFABI(1))
      IF(J.EQ.1)ANYICM(IMACH) = (ANYIPM + XDELTA) / SREF
      IF(J.EQ.2)ANYICP(IMACH) = (ANYIPP + XDELTA) / SREF
  210 CONTINUE
C ****
C ****                    ADJACENT STORE CALCULATIONS
C ****
      IF(DINTFI.EQ.0.0.AND.DINTFO.EQ.0.0) GO TO 29000
      IF(DUM1.EQ.0.5)ANIASP = 0.0
      IF(DUM1.EQ.0.5) ANIAIP = 0.0
      CALL BREAKP(197,3,JUMP,CDCL45,DEPY1,DEPY2)
      CALL BREAKP(207,3,JUMPA,CDCL45,DEPY1A,DEPY2A)
      DO 300 J=IBEGN,IEND
C **** ANIASP = NORMAL FORCE INCREMENT-ADJACENT STORE INTERFERENCE
C ****                  SLOPE PREDICTION
      IDSTAP = 23
      IF(DUM1.GT.0.5)GO TO 232
      CALL LININT(194,J,CDCL45,DEP194)
      CALL LININT(195,J,CDCL45,DEP195)
      AKSLP1 = DEP194 * ADPDSL + DEP195
      ANIASP = ANIASP + AKSLP1 * DVALUE(J) * SREF
  232 CONTINUE
C **** ANIASC(*) = NORMAL FORCE INCREMENT-ADJACENT STORE INTERFERENCE
C ****                  SLOPE MACH NUMBER CORRECTION
      XDELTA = 0.0
      JMP = JUMP
      IF(DUM1.EQ.0.5.OR.DEPY1.LT.0.0)GO TO 245
      CALL NORSBI(J,JMP,178,DEPY1,DEPY2,XDELTA)
  245 ANIASC(IMACH) = ANIASC(IMACH) + XDELTA
C **** ANIAIP = NORMAL FORCE INCREMENT-ADJACENT STORE INTERFERENCE
C ****                  INTERCEPT PREDICTION
      IDSTAP = 24
      IF(DUM1.GT.0.5)GO TO 247
      CALL LININT(204,J,CDCL45,DEP204)
      CALL LININT(205,J,CDCL45,DEP205)
      AKSLP1 = DEP204 * ADPDSL + DEP205
      ANIAIP = ANIAIP + AKSLP1 * DVALUE(J) * SREF
  247 CONTINUE
C **** ANIAIC(*) = NORMAL FORCE INCREMENT-ADJACENT STORE INTERFERENCE
C ****                  INTERCEPT MACH NUMBER CORRECTION
      XDELTA = 0.0
      IF(DUM1.EQ.0.5.OR.DEPY1A.LT.0.0)GO TO 270
      JMP = JUMPA
```

```
      CALL NORSB1(J,JMP,235,DEPY1A,DEPY2A,XDELTA)
  270 ANIAIC(IMACH) = ANIAIC(IMACH) + XDELTA
  300 CONTINUE
      ANIASC(IMACH) = (ANIASC(IMACH) + ANIASP) / SREF
290   ANIAIC(IMACH) = (ANIAIC(IMACH) + ANIAIP) / SREF
20000 RETURN
      END
```

```
      SUBROUTINE NORSB1(J,JUMP,NGRPH,DEP1,DEP2,XDELTA)
C     ******************************************************************
C     *                                                                *
C     *  THIS ROUTINE CALCULATES THE INCREMENTAL ADJACENT -            *
C     *  STORE INTERFERENCE MACH NUMBER CORRECTION FOR BOTH SLOPE      *
C     *   AND INTERCEPT FOR NORMAL FORCE.                              *
C     *                                                                *
C     ******************************************************************
      COMMON/COMINC/ DUM1,IMACH,KRDTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/COMSET/ ADPDSL,AKCPM,AKCYM,AKNOSE(2),AKTAIL(2),
     *               AKWING(2),ALEDSL,ALEL,ANUPM,AREASP(4,2),
     *               CDCL45,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IDSY4,IEND,IMACH1,PPAJFM,PPAXC,SADJSP(4,2),SHDARA,
     *               SLDSRF,SLDS45,SPADJS(2),SPATSP(2),SREF,
     *               SRTSTD,STLDCL,STPDWS,YDSTD
      DIMENSION BREAK(2)
      IADD = 0
      IF(JUMP.NE.1)GO TO 100
      JUMP = JUMP + 1
      JUMPP1 = JUMP
      IADD = IADD + 1
      BREAK(IADD) = 0.0
      GO TO 110
  100 JUMPP1 = JUMP + 1
  110 DO 120 I=JUMP,JUMPP1
      IF(I.GT.4)BREAK(2) = BREAK(1)
      IF(I.GT.4)GO TO 130
      NG = NGRPH + 2 *(I-2)
      CALL LININT(NG,J,CDCL45,DEPY3)
      CALL LININT(NG+1,J,CDCL45,DEPY4)
      IADD = IADD + 1
      AKSLP1 = DEPY3 * ADPDSL + DEPY4
      BREAK(IADD) = AKSLP1 * DVALUE(J) * SREF
  120 CONTINUE
  130 XDELTA = BREAK(1) + (DUM1 - DEP1)    / (DEP2 - DEP1) *
     *         (BREAK(2) - BREAK(1))
      RETURN
      END
```

```
      SUBROUTINE PITMOM
C*****************************************************************
C*                                                               *
C*  PITCHING MOMENT                                              *
C*    BASIC AIRLOAD                                              *
C*      PMBASP    = SLOPE PREDICTION  MACH = 0.5                 *
C*      PMBASC(*) = PMBASP + SLOPE CORRECTION AT MACH=X          *
C*      PMBAIP    = INTERCEPT PREDICTION  MACH = 0.5             *
C*      PMBAIC(*) = PMBAIP + INTERCEPT CORRECTION MACH=X         *
C*    INCREMENT-AIRCRAFT YAW                                     *
C*      PMYSPP    = SLOPE PREDICTION      MACH = 0.5    (+BS)    *
C*      PMYSPM    = SLOPE PREDICTION      MACH = 0.5    (-BS)    *
C*      PMYSCP(*) = PMYSPP + SLOPE CORRECTION     MACH=X(+BS)    *
C*      PMYSCM(*) = PMYSPP + SLOPE CORRECTION     MACH=X(-BS)    *
C*      PMYIPP    = INTERCEPT PREDICTION  MACH = 0.5    (+BS)    *
C*      PMYIPM    = INTERCEPT PREDICTION  MACH = 0.5    (-BS)    *
C*      PMYICP(*) = PMYIPP + INTERCEPT CORRECTION MACH=X(+BS)    *
C*      PMYICM(*) = PMYIPP + INTERCEPT CORRECTION MACH=X(-BS)    *
C*    INCREMENT-ADJACENT STORE INTERFERENCE                      *
C*      PMIASP    = SLOPE PREDICTION      MACH = 0.5           *
C*      PMIASC(*) = PMIASP + SLOPE CORRECTION MACH=X           *
C*      PMIAIP    = INTERCEPT PREDICTION  MACH = 0.5           *
C*      PMIAIC(*) = PMIAIP + INTERCEPT CORRECTION MACH=X       *
C*    APMBMC(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR   *
C*                PITCHING MOMENT BASIC AIRLOAD SLOPE MACH     *
C*                NUMBER CORRECTION                            *
C*    APMBIC(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR   *
C*                PITCHING MOMENT BASIC AIRLOAD INTERCEPT      *
C*                MACH NUMBER CORRECTION                       *
C*    APMYMC(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR   *
C*                PITCHING MOMENT INCREMENT-AIRCRAFT YAW       *
C*                SLOPE MACH NUMBER CORRECTION                 *
C*    APMYIC(*) = ARRAY CONTAINING THE MACH  BREAK POINTS FOR  *
C*                PITCHING MOMENT INCREMENT-AIRCRAFT YAW       *
C*                INTERCEPT MACH NUMBER CORRECTION             *
C*    APMYAC(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR   *
C*                PITCHING MOMENT INCREMENT-ADJACENT STORE     *
C*                INTERFERENCE SLOPE MACH NUMBER CORRECTION    *
C*    APMIAC(*) = ARRAY CONTAINING THE MACH BREAK POINTS FOR   *
C*                PITCHING MOMENT INCREMENT-ADJACENT STORE     *
C*                INTERFERENCE INTERCEPT MACH NUMBER           *
C*                CORRECTION                                   *
C*****************************************************************
      COMMON/COMINC/ DUM1,IMACH,KRDTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/COMINT/ AKCSF(2),PREDN(2),PREPM,PREYM,PXMOPM(40),
     *               PXMOYM(40),XMOM(40)
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANGSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      COMMON/COMMAC/ XLINTO
      COMMON/COMPIT/ PMBASP,PMBASC(7),PMBAIP,PMBAIC(7),PMYSPP,
```

```
     *                PMYSPM,PMYSCP(7),PMYSCM(7),PMYIPP,PMYIPM,
     *                PMYICP(7),PMYICM(7),PMIASP,PMIASC(7),PMIAIP,
     *                PMIAIC(7)
      COMMON/COMSET/ AOPOSL,AKCPM,AKCYM,AKNOSE(2),AKTAIL(2),
     *                AKWING(2),ALEDSL,ALEL,ANUPM,AREASP(4,2),
     *                CDCL45,CLOC45,CLSL45,OVALUE(2),IBEGN,ICALSG(7),
     *                IOSYM,IFNO,IMACH1,PPAJFW,PPAXC,SADJSP(4,2),SMOAFA,
     *                SLOSRF,SLOS45,SPADJS(2),SPATSP(2),SREF,
     *                SRTSTO,STLOCL,STPOWS,YOSTO
      COMMON/REMO/2/ ICALGP(7),IFIND,INPGRA(7),IPRNT
      COMMON/COMSTR/ ISTARS(46,7),IDSTAR
      DIMENSION APMBMC(2),APMBIC(2),APMYMC(2),APMYIC(2),APMYAC(2),
     *          APMIAC(2)
      PMBASC(IMACH) = 0.0
      PMBAIC(IMACH) = 0.0
      PMYSCP(IMACH) = 0.0
      PMYSCM(IMACH) = 0.0
      PMYICP(IMACH) = 0.0
      PMYICM(IMACH) = 0.0
      PMIASC(IMACH) = 0.0
      PMIAIC(IMACH) = 0.0
      DO 110 I=25,34
      ISTARS(I,IMACH) = 14
  110 CONTINUE
      IPRNT = 2
      IF(ICALSG(IPRNT).EQ.0)GO TO 20000
      ANOSEF = AREASP(1,2)
      AKPONL = AKCPM  * SPATSP(2) / ALEL
      ALNOSL = ANOSEL / STOREC
      PPAOSL = SPADJS(2) / STOREL
      XLINTO = REALM(IMACH)
C **** PMBASP = PITCHING MOMENT BASIC AIRLOAD SLOPE PREDICTION
      IDSTAR = 25
      IF(DUM1.GT.0.5)GO TO 115
      DUM2 = ANOSEF * ANOSEL / (SPATSP(2) * STOREO)
      CALL LININT(214,1,DUM2,DEP214)
      CALL LININT(215,1,YOSTO,DEP215)
      DEP215 = 1.0 - (1.0 - DEP215) * HWOHF
      PMOBOY = SREF * DEP215 * ( DEP214 + 0.03260 * CDCL45 )
      PMBASP =      CLOC45  * PPEPM + PMOBOY
  115 CONTINUE
C **** PMBASC(*) = PITCHING MOMENT BASIC AIRLOAD SLOPE MACH NUMBER
C ****              CORRECTION
      IADD = 1
      XDELTA = 0.0
      IF(DUM1.EQ.0.5)GO TO 170
      CALL SPEAKF(217,3,JUMP,CLOCAL,DEPYLO,DEPYHI)
      IF(DEPYLO.LT.0.0) GO TO 170
      IF(JUMP-2)120,130,140
  120 IADD = IADD + 1
      APMBMC(IADD) = 0.0
  130 IADD = IADD + 1
      CALL LININT(218,1,CDCL45,DEP218)
      CALL LININT(219,1,CDCL45,DEP219)
      CALL LININT(220,1,STLOCL,DEP220)
      APMBMC(IADD) = (DEP219 + DEP220 + DEP218 * AKPONL) * SREF
      IF(IADD.EQ.2)GO TO 150
```

```
      140 IADD = IADD + 1
          CALL LININT(221,1,STPOWS,DEP221)
          CALL LININT(222,1,CDCL45,DEP222)
          APMBMC(IADD) = DEP222 + DEP221 * AKPONL
          IF(IADD.EQ.2) GO TO 160
          IADD = IADD + 1
          CALL LININT(223,1,STPOWS,DEP223)
          CALL LININT(224,1,CDCL45,DEP224)
          APMBMC(IADD) = DEP224 + DEP223 * AKPONL
      160 CONTINUE
          XDELTA = APMBMC(1) + (DUM1 - DEPYLO)/(DEPYHI - DEPYLO)    *
     *                          (APMBMC(2) - APMBMC(1))
      170 PMBASC(IMACH) = (PMBASE + XDELTA) / SRTSTC
C     **** PMBAIP = PITCHING MOMENT BASIC AIRLOAD INTERCEPT PREDICTION
          IDSTAR = 26
          IF(DUM1.GT.0.5) GO TO 185
          CALL LININT(225,1,CLOCAL,DEP225)
          CALL LININT(226,1,CDCL45,DEP226)
          PMBAIP = SREF * (DEP226 + DEP225 * ALEL)
      185 CONTINUE
C     **** PMBAIC(*) = PITCHING MOMENT BASIC AIRLOAD INTERCEPT MACH
C     ****             NUMBER CORRECTION
          IADD = 0
          XDELTA = 0.0
          IF(DUM1.EQ.0.5)GO TO 235
          CALL BREAKP(227,4,I,CDCL45,DEPYLO,DEPYHI)
          IF(DEPYLO.LT.0.0)GO TO 235
          IF(I.GT.1) GO TO 210
          I = I + 1
          IP1 = I
          IADD = IADD + 1
          APMBIC(IADD) = 0.0
          GO TO 211
      210 IP1 = I + 1
      211 NG = 228 + 2 * (I-2)
          IF(I.EQ.4)NG = NG + 1
          DO 230 J=I,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,STPOWS,DEPY3)
          NG = NG + 1
          DEPY1 = DEPY1 * ALNDSO / (STORED * 12.0)
          DEPY2 = DEPY2 * DEPY3
      220 CONTINUE
          APMBIC(IADD) = SREF * ( DEPY2  + DEPY1 * AKPONL )
          NG = NG + 2
      230 CONTINUE
          XDELTA = APMBIC(1) + (DUM1  -  DEPYLO)  /
     *                 (DEPYHI - DEPYLO) * (APMBIC(2) - APMBIC(1))
      235 PMBAIC(IMACH) = (PMBAIP + XDELTA) / SRTSTC
C     ****
C     ****                    INCREMENTAL-AIRCRAFT  YAW
C     ****
C     **** PMYSPP = PITCHING MOMENT INCREMENT-AIRCRAFT YAW SLOPE
C     ****              PREDICTION                              (+BS)
```

```
C **** PMYSPM = PITCHING MOMENT INCREMENT-AIRCRAFT YAW SLOPE
C ****                PREDICTION                                  (-BS)
      DO 357 NL = 1,2
175   IDSTAR = NL + 26
      IF(DUM1.GT.0.5)GO TO 250
      XDELTA = 0.0
      CALL LININT(237,NL,CDCL45,DEP237)
      CALL LININT(238,NL,ANUPM ,DEP238)
180   DEP238 = DEP238 * HWDHF
      CALL LININT(239,NL,CDCL45,DEP239)
      CALL LININT(240,NL,ANUPM ,DEP240)
      DEP240 = DEP240 * HWDHF
      XDELTA = ((DEP237 + DEP238) * PPADSL + DEP239 + DEP240) * SRTSTD
185   IF(NL.EQ.1)PMYSPM = XDELTA
      IF(NL.EQ.2)PMYSPP = XDELTA
  250 CONTINUE
C **** PMYSCP(*) = PITCHING MOMENT INCREMENT-AIRCRAFT YAW SLOPE
C ****                MACH NUMBER CORRECTION                      (+BS)
190   C **** PMYSCM(*) = PITCHING MOMENT INCREMENT-AIRCRAFT YAW SLOPE
C ****                MACH NUMBER CORRECTION                      (-BS)
      IADD = 0
      XDELTA = 0.0
      IF(DUM1.EQ.0.5)GO TO 295
195   CALL SPEAKP(242,4,I,CDCL45,DEPYLO,DEPYHI)
      IF(DEPYLO.LT.0.0)GO TO 295
      IF(I.GT.1) GO TO 270
      IADD = IADD + 1
      I = I + 1
200   IP1 = I
      APMYMC(IADD) = 0.0
      GO TO 271
  270 IP1 = I + 1
  271 DO 280 J=I,IP1
205   IF(J.GT.5)APMYMC(2) = APMYMC(1)
      IF(J.GT.5)GO TO 290
      NG = 243 + 4 * (J-2)
      IADD = IADD + 1
      CALL LININT(NG,NL,CDCL45,DEPY1)
210   CALL LININT(NG+1,NL,ANUPM ,DEPY2)
      DEPY2 = DEPY2 * HWDHF
      CALL LININT(NG+2,NL,CDCL45,DEPY3)
      CALL LININT(NG+3,NL,ANUPM ,DEPY4)
      DEPY4 = DEPY4 * HWDHF
215   APMYMC(IADD) = (( DEPY1 + DEPY2) * PPADSL + DEPY3 + DEPY4) *SRTSTD
  280 CONTINUE
  290 XDELTA = APMYMC(1) + (DUM1 - DEPYLO) / (DEPYHI - DEPYLO) *
     *                     (APMYMC(2) - APMYMC(1))
  295 IF(NL.EQ.1) PMYSCM(IMACH) = (PMYSPM + XDELTA) / SRTSTD
220   IF(NL.EQ.2) PMYSCP(IMACH) = (PMYSPP + XDELTA) / SRTSTD
C **** PMYIPP = PITCHING MOMENT INCREMENT-AIRCRAFT YAW INTERCEPT
C ****                PREDICTION                                  (+BS)
C **** PMYIPM = PITCHING MOMENT INCREMENT-AIRCRAFT YAW INTERCEPT
C ****                PREDICTION                                  (-BS)
225   IDSTAR = NL + 28
      IF(DUM1.GT.0.5)GO TO 300
      XDELTA = 0.0
      CALL LININT(259,NL,CDCL45,DEP259)
```

```
                CALL LININT(260,NL,ANUPM ,DEP260)
      230       DEP260 = DEP260 * HWDHF
                CALL LININT(261,NL,CDCL45,DEP261)
                CALL LININT(262,NL,ANUPM ,DEP262)
                DEP262 = DEP262 * HWDHF
                XDELTA = ((DEP259 + DEP260) * PPADSL + DEP261 + DEP262) * SRTSTD
      235       IF(NL.EQ.1)PMYIPM = XDELTA
                IF(NL.EQ.2)PMYIPP = XDELTA
              300 CONTINUE
            C ****  PMYICP(*) = PITCHING MOMENT INCREMENT-AIRCRAFT YAW
            C ****              MACH NUMBER CORRECTION                (+BS)
      240   C ****  PMYICM(*) = PITCHING MOMENT INCREMENT-AIRCRAFT YAW
            C ****              MACH NUMBER CORRECTION                (-BS)
                IADD = 0
                XDELTA = 0.0
                IF(DUM1.EQ.0.5) GO TO 350
      245       CALL BREAKP(264,4,I,CDCL45,DEPYLO,DEPYHI)
                IF(DEPYLO.LT.0.0) GO TO 350
                IF(I.GT.1)GO TO 330
                IADD = IADD + 1
                I = I + 1
      250       IP1 = I
                APMYIC(IADD) = 0.0
                GO TO 335
              330 IP1 = I + 1
              335 DO 340 J=I,IP1
      255       IF(J.GT.5) APMYIC(2) = APMYIC(1)
                IF(J.GT.5) GO TO 345
                NG = 265 + 4 * (J-2)
                IADD = IADD + 1
                CALL LININT(NG,NL,CDCL45,DEPY1)
      260       CALL LININT(NG+1,NL,ANUPM,DEPY2)
                DEPY2 = DEPY2 * HWDHF
                CALL LININT(NG+2,NL,CDCL45,DEPY3)
                CALL LININT(NG+3,NL,ANUPM ,DEPY4)
                DEPY4 = DEPY4 * HWDHF
      265       APMYIC(IADD) = ((DEPY1 + DEPY2) * PPADSL + DEPY3 + DEPY4) * SRTSTD
              340 CONTINUE
              345 XDELTA = APMYIC(1) + (DUM1 - DEPYLO) / (DEPYHI - DEPYLO) *
                  *                    (APMYIC(2) - APMYIC(1))
              350 IF(NL.EQ.1) PMYICM(IMACH) = (PMYIPM + XDELTA) / SRTSTD
      270         IF(NL.EQ.2) PMYICP(IMACH) = (PMYIPP + XDELTA) / SRTSTD
              357 CONTINUE
                  IF(DINTF0.EQ.0.0.AND.DINTF1.EQ.0.0)GO TO 20000
            C ****
            C ****                        ADJACENT STORE CALCULATIONS
      275   C ****
                IF(DUM1.EQ.0.5) PMIASP = 0.0
                IF(DUM1.EQ.0.5) PMIAIP = 0.0
            C **** PMIASP     = PITCHING MOMENT INCREMENT-ADJACENT STORE
            C ****              INTERFERENCE SLOPE PREDICTION
      280       DO 530 NL = IBEGN,IENO
                IDSTAR = 31
                IF(DUM1.GT.0.5) GO TO 375
                CALL LININT(281,NL,CDCL45,DEP281)
                CALL LININT(282,NL,CDCL45,DEP282)
      285       PMIASP = PMIASP + (DEP281 * PPADSL + DEP282) *
```

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     *                  DVALUE(NL) * SRTSTD
  375 CONTINUE
C **** PMIASC(*) = PITCHING MOMENT INCREMENT-ADJACENT STORE
C ****             INTERFERENCE SLOPE MACH NUMBER CORRECTION
      XDELTA = 0.0
      IADD = 0
      IF(DUM1.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
      APMYAC(I,...) = 0.0
      GO TO 395
  390 IP1 = I + 1
  395 DO 400 J=I,IP1
      IF(J.GT.4) APMYAC(2) = APMYAC(1)
      IF(J.GT.4) GO TO 405
      NG = 295 + 2 * (J-2)
      CALL LININT(NG,NL,CDCL45,DEPY1)
      CALL LININT(NG+1,NL,CDCL45,DEPY2)
      IADD = IADD + 1
      APMYAC(IADD) = (DEPY1 * PPADSL + DEPY2) * DVALUE(NL) * SRTSTD
  400 CONTINUE
  405 XDELTA = APMYAC(1) + (DUM1 - DEPYLO) / ( DEPYHI - DEPYLO)  *
     *                     (APMYAC(2) - APMYAC(1))
  410 PMIASC(IMACH) = PMIASC(IMACH) + XDELTA
C **** PMIAIP = PITCHING MOMENT INCREMENT-ADJACENT STORE
C ****             INTERFERENCE INTERCEPT PREDICTION
      IDSTAP = 32
      IF(DUM1.GT.0.5)GO TO 425
      CALL LININT(291,NL,CDCL45,DEP291)
      CALL LININT(292,NL,CDCL45,DEP292)
      PMIAIP = PMIAIP + (DEP291 * PPADSL + DEP292) *
     *                  DVALUE(NL) * SRTSTD
  425 CONTINUE
C **** PMIAIC(*) = PITCHING MOMENT INCREMENT-ADJACENT STORE
C ****             INTERFERENCE INTERCEPT MACH NUMBER CORRECTION
      XDELTA = 0.0
      IADD = 0.0
      IF(DUM1.EQ.0.5) GO TO 470
      CALL BREAKP(294,3,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 LININT(NG,NL,CDCL45,DEPY1)
      CALL LININT(NG+1,NL,CDCL45,DEPY2)
```

```
                IADD = IADD + 1
                APMIAC(IADD) = (DEPY1 * PPADSL + DEPY2) * CVALUE(NL) * SRTSTD
345           460 CONTINUE
              465 XDELTA = APMIAC(1) + (DUM1 - DEPYLO) / (DEPYHI  - DEPYLO)  *
                                       (APMIAC(2) - APMIAC(1))
              470 PMIAIC(IMACH) = PMIAIC(IMACH) + XDELTA
              500 CONTINUE
350               PMIASC(IMACH) = (PMIASC(IMACH) + PMIASP) / SRTSTD
                  PMIAIC(IMACH) = (PMIAIC(IMACH) + PMIAIP) / SRTSTD
             20000 RETURN
                   END
```

```
      SUBROUTINE AXIFRC
C     ******************************************************************
C     *  AXIAL FORCE                                                   *
C     *    BASIC AIRLOAD                                               *
C     *      AXBASP(*) = SLOPE PREDICTION                              *
C     *      AXBAIP(*) = INTERCEPT PREDICTION                          *
C     *    INCREMENT-AIRCRAFT YAW                                      *
C     *      AXYSPP(*) = SLOPE PREDICTION              (+BS)           *
C     *      AXYSPM(*) = SLOPE PREDICTION              (-BS)           *
C     *      AXYIPP(*) = INTERCEPT PREDICTION          (+BS)           *
C     *      AXYIPM(*) = INTERCEPT PREDICTION          (-BS)           *
C     *    INCREMENT-ADJACENT STORE INTERFERENCE                       *
C     *      *NONE*    = SLOPE PREDICTION                            *
C     *      AXIAIP(*) = INTERCEPT PREDICTION                          *
C     *  SHDARA      = SHADED AREA                                     *
C     ******************************************************************
      COMMON/COMINC/ DUM1,IMACH,KRDTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/COMAXI/ AXBASP(7),AXBAIP(7),AXYSPP(7),AXYIPP(7),AXIAIP(7),
     *               AXYSPM(7),AXYIPM(7)
      COMMON/COMINP/ AKBW,AKINTF,AKN,AKNB,AKTB,AKWB,AKWBI,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANOSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      COMMON/COMSET/ ADPOSL,AKCPM,AKCYM,AKNOSE(2),AKTAIL(2),
     *               AKWING(2),ALEDSL,ALEL,ANUPP,AREASP(4,2),
     *               CDCL45,CLOC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IDSYM,IFND,IMACH1,PPAJFW,PPAXC,SADJSP(4,2),SHDAPA,
     *               SLOSRF,SLOS45,SPADJS(2),SPATSP(2),SPEF,
     *               SRTSTD,STLOCL,STPOWS,YDSTO
      COMMON/COMMAC/ XLINTD
      COMMON/REMOV2/ ICALGR(7),IFIND,INPGRA(7),IPRNT
      COMMON/COMSTR/ ISTARS(46,7),IDSTAR
      AXBASP(IMACH) = 0.0
      AXBAIP(IMACH) = 0.0
      AXYSPP(IMACH) = 0.0
      AXYIPP(IMACH) = 0.0
      AXIAIP(IMACH) = 0.0
      AXYSPM(IMACH) = 0.0
      AXYIPM(IMACH) = 0.0
      DO 125 IDSTR =33,39
      ISTARS(IDSTR,IMACH) = 1H
  125 CONTINUE
      IPRNT = 5
      IF(ICALSG(IPRNT).EQ.0)GO TO 20000
C **** AXBASP(*) = AXIAL FORCE BASIC AIRLOAD SLOPE PREDICTION
      IDSTAR = 33
      CALL LININT(301,1,DUM1,DEP301)
      XLINTD = STPOWS
      IF(STPOWS.LE.0.4)DEPY1 = ALNLOC(302,0.0,0.4,0.2,DUM1)
      IF(STPOWS.GT.0.4.AND.STPOWS.LE.0.8)
     *    DEPY1 = ALNLOC(303,0.4,0.8,0.2,DUM1)
```

```
      IF(STPOWS.GT.0.8)CALL TWOD(303,2,3,0.6,0.8,DUM1,DEPY1)
      XLINTD = ANUPM
      DEP304 = 0.0
      IF(XLINTD.GE.0.0.AND.XLINTD.LE.0.2)
     *   DEP304 = ALNLOC(304,0.0,0.2,0.1,DUM1)
      DEP304 = DEP304 * HHDHF
      AXBASP(IMACH) = DEP301 + DEPY1 + DEP304
      IOSTAR = 34
C **** AXBAIP(*) = AXIAL FORCE BASIC AIRLOAD INTERCEPT PREDICTION
      XLINTD = SHOARA
      DEP305 = ALNLOC(305,5.0,30.0,5.0,DUM1)
      XLINTD  = STPOWS
      IF(STPOWS.LT.0.4)DEPY1 = ALNLOC(306,0.2,0.4,0.1,DUM1)
      IF(STPOWS.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 TWOD(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 TWOD(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 200
      CALL TWOD(308,3,4,1.2,1.6,ANUPM,DEP308)
      GO TO 210
  200 CALL LININT(308,4,ANUPM,DEP308)
  210 CONTINUE
      DEP308 = DEP308 * HHDHF
      AXBAIP(IMACH) = (CODISO + DEP305) * (1.0 + DEPY1 + DEP308)
      DO 205 I=1,2
      IOSTAR = 34 + I
C **** AXYSPP(*) = AXIAL FORCE INCREMENTAL-AIRCRAFT YAW SLOPE
C ****            PREDICTION                              (+BS)
C **** AXYSPM(*) = AXIAL FORCE INCREMENTAL-AIRCRAFT YAW SLOPE
C ****            PREDICTION                              (-BS)
C
      CALL LININT(309,I,DUM1,DEP309)
      IF(I.EQ.1)AXYSPM(IMACH) = DEP309
      IF(I.EQ.2) AXYSPP(IMACH) = DEP309
C **** AXYIPP(*) = AXIAL FORCE INCREMENT-AIRCRAFT YAW
C ****            INTERCEPT PREDICTION                    (+BS)
C **** AXYIPM(*) = AXIAL FORCE INCREMENT-AIRCRAFT YAW
C ****            INTERCEPT PREDICTION                    (-BS)
      IOSTAR = 36 + I
      CALL LININT(310,I,DUM1,DEP310)
      IF(I.EQ.1) AXYIPM(IMACH) = DEP310
      IF(I.EQ.2) AXYIPP(IMACH) = DEP310
  205 CONTINUE
C **** AYIASP(*) = AXIAL FORCE INCREMENT-ADJACENT STORE INTERFERENCE
```

```
115          C ****              SLOPE PREDICTION
             IF(DINTFI.EQ.0.0.AND.DINTFO.EQ.0.0)GO TO 20000
             IOSTAR = 39
             CALL LININT(311,1,DUM1,DEP311)
             CALL LININT(313,1,DUM1,DEP313)
120          XDUM = (AREASP(3,2) + AREASP(4,2)) / AREASP(2,2)
             CALL LININT(315,1,XDUM,DEP315)
             DO 220 I=IBEGN,IEND
             IF(I.EQ.1)DUMX = YINTFO * DINTFO * ALINFO
             IF(I.EQ.2)DUMX = YINTFI * DINTFI * ALINFI
125          CALL LININT(312,I,STPOWS,DEP312)
             CALL LININT(314,I,STPOWS,DEP314)
             AXIAIP(IMACH) = AXIAIF(IMACH) + ((DEP311 + DEP312) * SREF *DUMX /
            *                (STOREL * STORED) + DEP313 + DEP314 + DEP315 )
           220 CONTINUE
130        20000 RETURN
             END
```

```
      SUBROUTINE ROLMOM
C     ******************************************************************
C     *  ROLLING MOMENT                                                *
C     *    BASIC AIRLOAD                                               *
C     *      RMBASP(*) = SLOPE PREDICTION                              *
C     *      RMBAIP(*) = INTERCEPT PREDICTION                          *
C     *    INCREMENT-AIRCRAFT YAW                                      *
C     *      *NONE*    = SLOPE PREDICTION                              *
C     *      RMYIPP(*) = INTERCEPT PREDICTION       (+BS)              *
C     *      RMYIPM(*) = INTERCEPT PREDICTION       (-BS)              *
C     *    INCREMENT-ADJACENT STORE INTERFERENCE                       *
C     *      *NONE*    = SLOPE PREDICTION                              *
C     *      RMIAIP(*) = INTERCEPT PREDICTION                          *
C     *                                                                *
C     ******************************************************************
      COMMON/COMINC/ DUM1,IMACH,KROTYP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      COMMON/COMROL/ RMBASP(7),RMBAIP(7),RMYIPP(7),RMYIPM(7),
     *               RMIAIP(7)
      COMMON/COMINF/ AKBW,AKINTF,AKN,AKN8,AKT8,AKW8,AKW8I,
     *               ALAMDA,ALEFIN(5),ALINFI,ALINFO,ALINLT(5),ANOSEL,
     *               CDOISO,CLAISO,CLOCAL,DINTFI,DINTFO,HWDHF,
     *               ICASE,ICONFG,IMAGE( 9),ISYM,ITITLE(36),
     *               NSEG(40,2),NSTYPE(40,2),PXDCML,REALM(8),SEGL,
     *               SML,SPAT(40,2),STORED,STOREL,SUMPA,TAILPA,
     *               WINGPA,WSS,XCG,XINTFI,XINTFO,YBIG,YBL,
     *               YINTFI,YINTFO,Y1,Y1PRM,ZPH,ZPLNSP
      COMMON/COMSET/ ADFOSL,AKCPM,AKCYM,AKNOSE(2),AKTAIL(2),
     *               AKWING(2),ALEOSL,ALEL,ANUPM,AREASP(4,2),
     *               CDCL45,CLDC45,CLSL45,DVALUE(2),IBEGN,ICALSG(7),
     *               IOSYM,IEND,IMACH1,PPAUFM,PPAXC,SADJSP(4,2),SHOARA,
     *               SLOSRF,SLOS45,SPADJS(2),SPATSP(2),SREF,
     *               SRTSTD,STLOCL,STPOWS,YUSTD
      COMMON/COMMAC/ XLINTD
      COMMON/REMOV2/ ICALGP(7),IFINO,INPGRA(7),IPRNT
      COMMON/COMSTR/ ISTARS(46,7),IDSTAR
      RMBASP(IMACH) = 0.0
      RMBAIP(IMACH) = 0.0
      RMYIPP(IMACH) = 0.0
      RMYIPM(IMACH) = 0.0
      RMIAIP(IMACH) = 0.0
      DO 110 IDSTR = 40 ,44
      ISTARS(IDSTR,IMACH) = 1H
  110 CONTINUE
      IPRNT = 6
      IOSM = 1
      IF(IOSYM.GT.3)IOSM = 2
      IF(ICALSG(IPRNT ).EQ.0.OR.ICASE.EQ.3)GO TO 20000
      IDSTAR = 40
      AREAS = SUMPA / 144.
      IF(ICONFG.EQ.1HX)AREAS = 2.8284 * (AREASP(3,2)+AREASP(4,2))/144.0
      IF(ICONFG.EQ.1H+)AREAS=2.0*(AREASP(3,2)+AREASP(4,2))/144.0
      STOT12 = STORED * 12.0
C **** RMBASP(*) = ROLLING MOMENT BASIC AIRLOAD SLOPE PREDICTION
      CALL LININT(317,IOSM,DUM1,DEP317)
      IF(DUM1.GT.1.2) GO TO 120
      CALL LININT(318.1,ANUPM,DEP318)
```

```
                GO TO 140
            120 IF(DUM1.GE.1.6) GO TO 130
 60             CALL TWOD(318,1,2,1.2,1.6,ANUPM,DEP318)
                GO TO 140
            130 CALL LININT(318,2,ANUPM,DEP318)
            140 CONTINUE
                DEP318 = DEP318 * HWDHF
 65             RMBASP(IMACH) = (DEP317 + DEP318) *AREAS * SLOS45 / SPTSTO
           C **** RMBAIP(*) = ROLLING MOMENT BASIC AIRLOAD INTERCEPT
           C ****               PREDICTION
                IDSTAR = 41
                IF(DUM1.GT.0.5) GO TO 150
 70             CALL LININT(319,1,CLSL45,DEPY1)
                GO TO 270
            150 IF(DUM1.GE.0.7) GO TO 160
                CALL TWOD(319,1,2,0.5,0.7,CLSL45,DEPY1)
                GO TO 270
 75         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,YDEP1)
 80             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)
 85             GO TO 270
            190 IF(DUM1.GE.1.05) GO TO 200
                CALL TWOD(320,1,2,0.9,1.05,CLSL45,DEPY1)
                GO TO 270
            200 IF(DUM1.GT.1.05) GO TO 210
 90             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)
 95             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
100         230 IF(DUM1.GE.1.6) GO TO 240
                CALL TWOD(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)
105             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) / 0.4  + YDEP1
110             GO TO 270
            260 CALL LININT(322,1,CLSL45,DEPY1)
            270 CONTINUE
                CALL LININT(323,1,STRDWS,DEP323)
                RMBAIP(IMACH) = DEPY1 * DEP323 * AREAS / SPTSTO
```

```
C ****  RMYIPP(*) = ROLLING MOMENT INCREMENT-AIRCRAFT YAW INTERCEPT
C ****              PREDICTION                                    (+BS)
      IDSTAR = 42
      IF(DUM1.GT.0.7) GO TO 280
      CALL LININT(325,1,ANUPM,DEP325)
      GO TO 315
  280 IF(DUM1.GE.0.9) GO TO 290
      CALL TWOD(325,1,2,0.7,0.9,ANUPM,DEP325)
      GO TO 315
  290 IF(DUM1.GT.1.2) GO TO 300
      CALL LININT(325,2,ANUPM,DEP325)
      GO TO 315
  300 IF(DUM1.GE.1.6) GO TO 310
      CALL TWOD(325,2,3,1.2,1.6,ANUPM,DEP325)
      GO TO 315
  310 CALL LININT(325,3,ANUPM,DEP325)
  315 CONTINUE
      ISTARS(43,IMACH) = ISTARS(42,IMACH)
      DEP325 = 1.0 + (1.0 - DEP325) * HWDHF
      DO 325 NL = 1,2
      IDSTAR = 41 + NL
      XDELTA = 0.0
      CALL LININT(324,NL,DUM1,DEP324)
      XDELTA = DEP325 * DEP324  * AREAS * SLOS45 / SRTSTD
      IF(NL.EQ.1)RMYIPM(IMACH) = XDELTA
      IF(NL.EQ.2)RMYIPP(IMACH) = XDELTA
  325 CONTINUE
C ****  RMYIPM(*) = ROLLING MOMENT INCREMENT-AIRCRAFT YAW INTERCEPT
C ****              PREDICTION                                    (-BS)
C ****  RMIAIP(*) = 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,IEND
      IDSTAR = 44
      IF(NL.EQ.1) ITP = -1
      IF(NL.EQ.2) ITP = 1
      NG = 327 * ITP
      CALL LININT(326,NL,DUM1,DEP326)
      IF(DUM1.GT.0.7) GO TO 335
      CALL LININT(NG,1,STOT12,DEP327)
      CALL LININT(NG+ITP,1,STPOWS,DEP328)
      CALL LININT(NG+ITP+ITP,1,CLSL45,DEP329)
      GO TO 390
  335 IF(DUM1.GE.0.9) GO TO 345
      CALL TWOD(NG,1,2,0.7,0.9,STOT12,DEP327)
      CALL TWOD(NG+ITP,1, 2,0.7,0.9,STPOWS,DEP327)
      CALL TWOD(NG+ITP+ITP,1,2,0.7,0.9,CLSL45,DEP329)
      GO TO 390
  345 IF(DUM1.GT.0.1) GO TO 355
      CALL LININT(NG,2,STOT12,DEP327)
      CALL LININT(NG+ITP,2,STPOWS,DEP328)
      CALL LININT(NG+ITP+ITP,2,CLSL45,DEP329)
      GO TO 390
  355 IF(DUM1.GE.1.2)GO TO 365
```

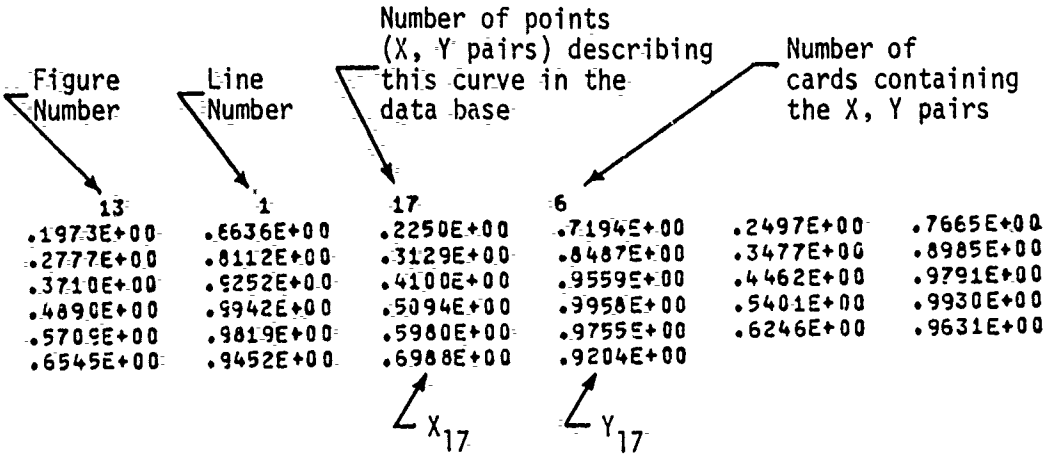
```
                  CALL TWOD(NG,2,3,0.9,1.2,STOT12,DEP327)
                  CALL TWOD(NG+ITP,2,3,0.9,1.2,STPOWS,DEP328)
                  CALL TWOD(NG+ITP+ITP,2,3,0.9,1.2,CLSL45,DEP329)
                  GO TO 390
              365 IF(DUM1.GT.1.2)GO TO 375
                  CALL LININT(NG,3,STOT12,DEP327)
                  CALL LININT(NG+ITP,3,STPOWS,DEP328)
                  CALL LININT(NG+ITP+ITP,3,CLSL45,DEP329)
                  GO TO 390
              375 IF(DUM1.GE.1.6)GO TO 385
                  CALL TWOD(NG,3,4,1.2,1.6,STOT12,DEP327)
                  IF(NL.EQ.1)CALL LININT(NG+ITP,3,STPOWS,DEP328)
                  IF(NL.EQ.2)CALL TWOD(NG+ITP,3,4,1.2,1.6,STPOWS,DEP328)
                  CALL TWOD(NG+ITP+ITP,3,4,1.2,1.6,CLSL45,DEP329)
                  GO TO 390
              385 CALL LININT(NG,4,STOT12,DEP327)
                  IF(NL.EQ.1)CALL LININT(NG+ITP,3,STPOWS,DEP328)
                  IF(NL.EQ.2)CALL LININT(NG+ITP,4,STPOWS,DEP328)
                  CALL LININT(NG+ITP+ITP,4,CLSL45,DEP329)
              390 RMIAIP(IMACH) = RMIAIP(IMACH) + (DEP326 + DEP327 + DEP328 +
                 *        DEP329 ) * AREAS
              395 CONTINUE
                  RMIAIP(IMACH) = RMIAIP(IMACH) / SRTSTD
             2000 RETURN
                  END
```

```
      FUNCTION ALNLOC(NGRAPH,XLO,XHI,XINC,XIND)
C     ****************************************************************
C     *   THIS ROUTINE LOOKS UP A DEPENDENT VALUE FROM THE DATA      *
C     *   BASE ASSUMING THE INDEPENDENT VALUES ARE EVENLY SPACED     *
C     *     NGRAPH = THE NUMBER OF THE GRAPH BEING CONSIDERED        *
C     *     XLOW   = STARTING X VALUE                                *
C     *     XHI    = ENDING   X VALUE                                *
C     *     XIND   = INDEPENDENT VALUE                               *
C     *     XINC   = X INCREMENT                                     *
C     ****************************************************************
      COMMON/COMMAC/ XLINTO
      XLOW = XLO
      XHIGH = XINC + XLOW
      LINE = 1
      LINEP1 = 2
      IF(XLINTO.GE.XHI) LINE = (XHI - XLOW) / XINC + 1.
      IF(XLINTO.LE.XLOW.OR.XLINTO.GE.XHI)GO TO 105
  100 IF(XLINTO.GT.XLOW)GO TO 110
  105 CALL LININT(NGRAPH,LINE,XIND,YDEP)
      GO TO 130
  110 IF(XLINTO.GE.XHIGH)GO TO 120
      CALL TWOD(NGRAPH,LINE,LINEP1,XLOW,XHIGH,XIND,YDEP)
      GO TO 130
  120 XLOW = XHIGH
      XHIGH = XHIGH + XINC
      LINE = LINE + 1
      LINEP1 = LINEP1 + 1
      GO TO 100
  130 ALNLOC = YDEP
      RETURN
      END
```

```
      SUBROUTINE BREAKP(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     ************************************************************
      COMMON/COMINC/ DUM1,IMACH,KRDTAP(14),NCASE,NCASES(5,94),NUMCAS,
     *               NUMCRD(5),NMACH
      DO 110 I=1,IEND
      IF(I.GT.1)GO TO 100
      CALL LININT(NGRAPH,I,XIND,XHI)
      IF(DUM1.LE.XHI)GO TO 200
  100 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.



```
       5           1          40          14
-.5000E+00   .1750E+00  -.4500E+00   .1800E+00  -.4250E+00   .1850E+00
-.4000E+00   .1900E+00  -.3750E+00   .2050E+00  -.3500E+00   .2200E+00
-.3000E+00   .2600E+00  -.2500E+00   .3200E+00  -.2000E+00   .3900E+00
-.1500E+00   .4700E+00  -.1000E+00   .5700E+00  -.5000E-01   .6750E+00
-.2500E-01   .7250E+00   0.           .7700E+00   .5000E-01   .8400E+00
 .1000E+00   .8950E+00   .1500E+00   .9150E+00   .2000E+00   .9050E+00
 .2500E+00   .8750E+00   .3000E+00   .8450E+00   .3500E+00   .8100E+00
 .4000E+00   .7700E+00   .4500E+00   .7350E+00   .5000E+00   .6900E+00
 .5500E+00   .6500E+00   .6000E+00   .6050E+00   .6500E+00   .5550E+00
 .7000E+00   .5100E+00   .7500E+00   .4650E+00   .8000E+00   .4250E+00
 .8500E+00   .3900E+00   .9000E+00   .3600E+00   .9500E+00   .3350E+00
 .1000E+01   .3200E+00   .1050E+01   .3050E+00   .1100E+01   .2950E+00
 .1150E+01   .2850E+00   .1200E+01   .2800E+00   .1250E+01   .2700E+00
 .1300E+01   .2650E+00
       4           1          40          14
-.5000E+00   .1480E+01  -.4500E+00   .1490E+01  -.4000E+00   .1500E+01
-.3500E+00   .1510E+01  -.3000E+00   .1515E+01  -.2500E+00   .1520E+01
-.2000E+00   .1515E+01  -.1500E+00   .1505E+01  -.1000E+00   .1490E+01
-.7000E-01   .1470E+01  -.5000E-01   .1450E+01  -.2500E-01   .1410E+01
0.           .1360E+01   .2500E-01   .1290E+01   .5000E-01   .1210E+01
 .1000E+00   .1040E+01   .1500E+00   .9100E+00   .2000E+00   .7900E+00
 .2500E+00   .6900E+00   .3000E+00   .6100E+00   .3500E+00   .5350E+00
 .4000E+00   .4700E+00   .4500E+00   .4300E+00   .5000E+00   .4050E+00
 .5500E+00   .3850E+00   .6000E+00   .3750E+00   .6500E+00   .3750E+00
 .7000E+00   .3750E+00   .7500E+00   .3800E+00   .8000E+00   .3850E+00
 .8500E+00   .3950E+00   .9000E+00   .4100E+00   .9500E+00   .4200E+00
 .1000E+01   .4250E+00   .1050E+01   .4300E+00   .1100E+01   .4350E+00
 .1150E+01   .4350E+00   .1200E+01   .4300E+00   .1250E+01   .4250E+00
 .1300E+01   .4200E+00
      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
      14           1          15           5
 .4960E+00   .4099E+00   .8237E+00   .4164E+00   .1237E+01   .4292E+00
 .1599E+01   .4372E+00   .1868E+01   .4473E+00   .2052E+01   .4589E+00
 .2221E+01   .4870E+00   .2338E+01   .5126E+00   .2420E+01   .5624E+00
 .2452E+01   .6586E+00   .2477E+01   .7312E+00   .2501E+01   .8227E+00
 .2542E+01   .9992E+00   .4003E+01   .9992E+00   .4000E+02   .1000E+01
      15           1           3           1
0.           .1000E+01   .1017E+01   .1000E+01   .2398E+01   .1500E+01
      16           1          12           4
 .1984E+01   .2117E+01   .3165E+01   .1860E+01   .5485E+01   .1494E+01
 .7367E+01   .1297E+01   .9036E+01   .1195E+01   .1221E+02   .1085E+01
 .1721E+02   .1024E+01   .2090E+02   .9818E+00   .2492E+02   .9696E+00
 .2823E+02   .9474E+00   .3139E+02   .9342E+00   .3394E+02   .9190E+00
      18           1           2           1
 .3983E+02   .6986E+00   .1996E+03   .6986E+00
      18           2          29          10
 .3979E+02   .1045E+01   .1016E+03   .1045E+01   .1047E+03   .1044E+01
 .1076E+03   .1039E+01   .1105E+03   .1025E+01   .1131E+03   .9998E+00
 .1164E+03   .9702E+00   .1177E+03   .9524E+00   .1193E+03   .9305E+00
 .1209E+03   .9074E+00   .1228E+03   .8899E+00   .1251E+03   .8721E+00
 .1279E+03   .8640E+00   .1307E+03   .8599E+00   .1334E+03   .8607E+00
 .1375E+03   .8644E+00   .1410E+03   .8774E+00   .1449E+03   .8928E+00
 .1496E+03   .9175E+00   .1535E+03   .9451E+00   .1571E+03   .9661E+00
 .1599E+03   .9884E+00   .1625E+03   .1008E+01   .1656E+03   .1024E+01
 .1686E+03   .1035E+01   .1714E+03   .1042E+01   .1753E+03   .1048E+01
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.1792E+03   .1051E+01   .1993E+03   .1051E+01
     18          3          31          11
.3963E+02   .1198E+01   .1015E+03   .1198E+01   .1047E+03   .1195E+01
.1069E+03   .1185E+01   .1086E+03   .1176E+01   .1109E+03   .1165E+01
.1128E+03   .1148E+01   .1150E+03   .1127E+01   .1169E+03   .1104E+01
.1186E+03   .1085E+01   .1202E+03   .1063E+01   .1217E+03   .1043E+01
.1238E+03   .1025E+01   .1277E+03   .1010E+01   .1307E+03   .1007E+01
.1318E+03   .1005E+01   .1339E+03   .1007E+01   .1371E+03   .1012E+01
.1405E+03   .1023E+01   .1448E+03   .1045E+01   .1495E+03   .1063E+01
.1531E+03   .1088E+01   .1572E+03   .1111E+01   .1596E+03   .1133E+01
.1625E+03   .1156E+01   .1658E+03   .1172E+01   .1694E+03   .1182E+01
.1724E+03   .1188E+01   .1757E+03   .1195E+01   .1787E+03   .1197E+01
.1994E+03   .1197E+01
     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
.4530E+02   .6966E-04   .7887E+02   .3471E-04   .1122E+03   .1046E-04
.1440E+03  -.1357E-04   .1712E+03  -.3111E-04   .1998E+03  -.4791E-04
     20          1          53          18
.3896E+02  -.3845E-01   .4514E+02  -.3849E-01   .4997E+02  -.3845E-01
.5554E+02  -.3833E-01   .5923E+02  -.3763E-01   .6269E+02  -.3723E-01
.6646E+02  -.3646E-01   .7077E+02  -.3532E-01   .7418E+02  -.3413E-01
.7894E+02  -.3255E-01   .8182E+02  -.3120E-01   .8548E+02  -.2957E-01
.8909E+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   .1984E-01   .1494E+03   .2269E-01
.1517E+03   .2538E-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   .5193E-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+00   .4099E+00   .2812E+00   .4565E+00   .3504E+00   .5466E+00
.4093E+00   .6468E+00   .4760E+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
0.          0.          .5964E+00   .1233E-06   .6763E+00  -.4522E-06
.7529E+00  -.2302E-05   .8160E+00  -.4604E-05   .8672E+00  -.7359E-05
.9325E+00  -.1122E-04   .9795E+00  -.1464E-04   .1012E+01  -.1727E-04
.1057E+01  -.1883E-04   .1098E+01  -.2088E-04   .1152E+01  -.2257E-04
.1199E+01  -.2360E-04   .1258E+01  -.2528E-04   .1302E+01  -.2598E-04
.1356E+01  -.2647E-04   .1391E+01  -.2693E-04   .1504E+01  -.2693E-04
     23          1          15           5
.1993E+00   .1450E+00   .2653E+00   .2612E+00   .3189E+00   .3575E+00
.3705E+00   .4588E+00   .3988E+00   .5303E+00   .4369E+00   .6068E+00
.4750E+00   .6991E+00   .5061E+00   .7766E+00   .5352E+00   .8550E+00
.5605E+00   .9156E+00   .5942E+00   .1011E+01   .6253E+00   .1099E+01
.6538E+00   .1186E+01   .6767E+00   .1242E+01   .7000E+00   .1318E+01
     24          1          22           8
.1992E+00  -.4444E-01   .3390E+00  -.4283E-01   .4390E+00  -.3475E-01
.5051E+00  -.2929E-01   .5756E+00  -.2202E-01   .6365E+00  -.1394E-01
.6955E+00  -.6667E-02   .7544E+00   .5051E-02   .8062E+00   .1273E-01
.8636E+00   .2182E-01   .9217E+00   .3354E-01   .9851E+00   .4444E-01
.1033E+01   .5515E-01   .1091E+01   .6747E-01   .1138E+01   .7717E-01
.1189E+01   .8869E-01   .1251E+01   .1036E+00   .1316E+01   .1202E+00
.1405E+01   .1436E+00   .1465E+01   .1590E+00   .1520E+01   .1758E+00
.1579E+01   .1913E+00
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      25                    14                    5
 .1988E+00   .1484E+00   .2523E+00   .2359E+00   .3014E+00   .3163E+00
 .3408E+00   .4077E+00   .3771E+00   .4769E+00   .4233E+00   .5958E+00
 .4606E+00   .6965E+00   .4998E+00   .7982E+00   .5396E+00   .8948E+00
 .5712E+00   .9751E+00   .6026E+00   .1030E+01   .6444E+00   .1101E+01
 .6807E+00   .1145E+01   .6994E+00   .1157E+01
      26          1       17                    6
 0.          0.          .1000E+00   0.          .2000E+00   0.
 .3000E+00   0.          .4000E+00   -.1000E-05  .5000E+00   -.9000E-05
 .6000E+00   -.1100E-04  .7000E+00   -.1900E-04  .8000E+00   -.3300E-04
 .9000E+00   -.8000E-04  .1000E+01   -.1250E-03  .1100E+01   -.1610E-03
 .1200E+01   -.1840E-03  .1300E+01   -.2040E-03  .1400E+01   -.2200E-03
 .1500E+01   -.2310E-03  .1600E+01   -.2430E-03
      27          1       22                    8
 .1984E+00   .7666E-01   .2566E+00   .9258E-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   -.3807E-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   -.3988E-01  .1445E+03   -.4076E-01  .1604E+03   -.4201E-01
 .1790E+03   -.4285E-01  .2000E+03   -.4482E-01
      31          1       27                    9
 .4014E+02   -.9710E-03  .5231E+02   -.9720E-03  .5911E+02   -.9580E-03
 .6643E+02   -.9460E-03  .7880E+02   -.9110E-03  .8305E+02   -.8920E-03
 .9193E+02   -.8510E-03  .9833E+02   -.8000E-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
 .1518E+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   .9560E-03   .1997E+03   .1000E-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.          .4000E+02   0.
      33          1       3                     1
 0.          0.          .8020E+02   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  .1343E+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   -.8472E+00  .1817E+03   -.9221E+00
 .1883E+03   -.1004E+01  .1933E+03   -.1064E+01  .2001E+03   -.1132E+01
      35          1       17                    6
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 .7876E+00  -.1440E+00   .1047E+01  -.1383E+00   .1289E+01  -.1363E+00
 .1538E+01  -.1344E+00   .1819E+01  -.1595E+00   .2090E+01  -.1283E+00
 .2179E+01  -.1260E+00   .2241E+01  -.1242E+00   .2326E+01  -.1130E+00
 .2383E+01  -.9888E-01   .2439E+01  -.8437E-01   .2483E+01  -.6456E-01
 .2511E+01  -.4576E-01   .2540E+01  -.2308E-01   .2554E+01  -.1634E-02
 .2550E+01  0.           .4000E+02  0.
      36         1          3          1
0.          0.           .8007E+02  -.4065E-02   .9986E+02  -.1216E+01
      38         1          2          1
 .5999E+02   .6964E+00    .2002E+03   .6964E+00
      38         2         13          5
 .5975E+02   .1046E+01    .1093E+03   .1046E+01   .1132E+03   .1047E+01
 .1156E+03   .1063E+01    .1194E+03   .1080E+01   .1229E+03   .1106E+01
 .1260E+03   .1131E+01    .1290E+03   .1154E+01   .1319E+03   .1165E+01
 .1355E+03   .1181E+01    .1394E+03   .1191E+01   .1417E+03   .1196E+01
 .2003E+03   .1196E+01
      38         3          2          1
 .5983E+02   .1598E+01    .2001E+03   .1598E+01
      38         4          2          1
 .5991E+02   .2000E+01    .2003E+03   .2000E+01
      39         1         18          6
 .7639E+02  -.1607E-02    .8659E+02  -.1241E-02   .9302E+02  -.1023E-02
 .1017E+03  -.7569E-03    .1127E+03  -.4995E-03   .1213E+03  -.3085E-03
 .1293E+03  -.1675E-03    .1360E+03  -.4597E-04   .1410E+03   .5312E-04
 .1471E+03   .1502E-03    .1551E+03   .2482E-03   .1627E+03   .3258E-03
 .1702E+03   .3871E-03    .1770E+03   .4280E-03   .1825E+03   .4597E-03
 .1879E+03   .4648E-03    .1944E+03   .4648E-03   .2000E+03   .4484E-03
      40         1         19          7
 .7140E+02   .1585E+01    .7717E+02   .1387E+01   .8541E+02   .1138E+01
 .9434E+02   .8866E+00    .1038E+03   .6399E+00   .1145E+03   .3560E+00
 .1235E+03   .1605E+00    .1301E+03   .2366E-01   .1346E+03  -.7613E-01
 .1424E+03  -.2305E+00    .1517E+03  -.3961E+00   .1578E+03  -.4887E+00
 .1645E+03  -.5741E+00    .1723E+03  -.5636E+00   .1792E+03  -.7253E+00
 .1873E+03  -.7829E+00    .1945E+03  -.8158E+00   .2001E+03  -.8333E+00
 .2020E+03  -.8333E+00
      41         1         30         10
 .6987E+02   .7208E-03    .7911E+02   .7411E-03   .8511E+02   .7645E-03
 .9123E+02   .7736E-03    .9836E+02   .7726E-03   .1019E+03   .7604E-03
 .1079E+03   .7371E-03    .1114E+03   .7005E-03   .1151E+03   .6640E-03
 .1181E+03   .6183E-03    .1202E+03   .5807E-03   .1254E+03   .4619E-03
 .1284E+03   .3927E-03    .1324E+03   .3096E-03   .1358E+03   .2447E-03
 .1389E+03   .2010E-03    .1415E+03   .1563E-03   .1444E+03   .1107E-03
 .1481E+03   .4975E-04    .1504E+03   .1523E-04   .1532E+03  -.2030E-04
 .1562E+03  -.5584E-04    .1658E+03  -.1645E-03   .1703E+03  -.1858E-03
 .1755E+03  -.2142E-03    .1797E+03  -.2416E-03   .1838E+03  -.2508E-03
 .1890E+03  -.2741E-03    .1949E+03  -.2873E-03   .2000E+03  -.3036E-03
      42         1         20          7
 .7670E+00   .2340E-03    .1002E+01   .2275E-03   .1184E+01   .2193E-03
 .1340E+01   .2181E-03    .1528E+01   .2157E-03   .1733E+01   .2063E-03
 .1945E+01   .2059E-03    .2068E+01   .2031E-03   .2162E+01   .2031E-03
 .2216E+01   .1957E-03    .2284E+01   .1860E-03   .2333E+01   .1709E-03
 .2383E+01   .1493E-03    .2427E+01   .1270E-03   .2451E+01   .1025E-03
 .2484E+01   .8220E-04    .2524E+01   .4395E-04   .2553E+01   .6104E-05
 .2550E+01  0.            .4000E+02  0.
      43         1         24          8
 .6937E+02  -.2226E+00    .7759E+02  -.2307E+00   .8472E+02  -.2276E+00
 .9003E+02  -.2276E+00    .9485E+02  -.2276E+00   .9955E+02  -.2073E+00
 .1043E+03  -.1992E+00    .1092E+03  -.1717E+00   .1141E+03  -.1423E+00
 .1194E+03  -.8638E-01    .1238E+03  -.5183E-01   .1302E+03   .2846E-01
 .1344E+03   .8841E-01    .1389E+03   .1626E+00   .1415E+03   .1911E+00
 .1444E+03   .2287E+00    .1494E+03   .2642E+00   .1541E+03   .2978E+00
 .1596E+03   .3333E+00    .1673E+03   .3699E+00   .1735E+03   .4024E+00
 .1796E+03   .4116E+00    .1875E+03   .4350E+00   .1999E+03   .4583E+00
      44         1         15          5
 .9461E+00  -.6336E+00    .1316E+01  -.6066E+00   .1623E+01  -.5956E+00
 .1887E+01  -.5766E+00    .2041E+01  -.5676E+00   .2211E+01  -.5606E+00
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.2464E+01  -.3043E+00  .2500E+01  -.2352E+00  .2533E+01  -.1201E+00
.2551E+01  -.9009E-02  .2550E+01  0.          .4000E+02  0.
     45         1         22         8
.7002E+02   .3532E-04  .9124E+02   .1322E-03  .9165E+02   .2008E-03
.1007E+03   .2603E-03  .1098E+03   .3158E-03  .1187E+03   .3300E-03
.1267E+03   .3512E-03  .1326E+03   .3522E-03  .1365E+03   .3502E-03
.1424E+03   .3249E-03  .1499E+03   .2624E-03  .1545E+03   .2129E-03
.1596E+03   .1292E-03  .1546E+03   .3734E-04  .1702E+03  -.6862E-04
.1762E+03  -.2006E-03  .1804E+03  -.3078E-03  .1853E+03  -.4299E-03
.1895E+03  -.5489E-03  .1933E+03  -.5609E-03  .1976E+03  -.8022E-03
.2000E+03  -.8940E-03
     46         1         20         7
.6871E+02   .5563E+00  .7993E+02   .4429E+00  .8904E+02   .3592E+00
.9860E+02   .2755E+00  .1094E+03   .1980E+00  .1194E+03   .1439E+00
.1292E+03   .1224E+00  .1359E+03   .1184E+00  .1398E+03   .1153E+00
.1488E+03   .1214E+00  .1559E+03   .1520E+00  .1616E+03   .2000E+00
.1653E+03   .2490E+00  .1712E+03   .3306E+00  .1769E+03   .4347E+00
.1827E+03   .5531E+00  .1867E+03   .5531E+00  .1913E+03   .7684E+00
.1955E+03   .9051E+00  .2003E+03   .1080E+01
     49         1         10         4
0.          0.        .3750E+00   0.          .3900E+00   .5200E+00
.4000E+00   .7700E+00  .4100E+00   .9300E+00  .4200E+00   .1020E+01
.4500E+00   .1200E+01  .4750E+00   .1290E+01  .5000E+00   .1310E+01
.6500E+00   .1400E+01
     47         1         24         8
.5000E+00   .1930E-05  .5577E+00   .1950E-05  .6015E+00   .1980E-05
.6467E+00   .2037E-05  .6981E+00   .2112E-05  .7362E+00   .2181E-05
.7782E+00   .2263E-05  .8147E+00   .2306E-05  .8512E+00   .2336E-05
.8801E+00   .2348E-05  .9036E+00   .2354E-05  .9456E+00   .2352E-05
.9853E+00   .2350E-05  .1022E+01   .2306E-05  .1052E+01   .2290E-05
.1084E+01   .2263E-05  .1124E+01   .2211E-05  .1156E+01   .2191E-05
.1194E+01   .2166E-05  .1228E+01   .2164E-05  .1397E+01   .2158E-05
.1557E+01   .2158E-05  .1681E+01   .2160E-05  .2000E+01   .2160E-05
     -48        1         19         7
.5998E-01  -.1543E-05  .8548E-01  -.1543E-05  .9986E-01  -.1526E-05
.1097E+00  -.1452E-05  .1167E+00  -.1440E-05  .1237E+00  -.1325E-05
.1281E+00  -.1206E-05  .1311E+00  -.1104E-05  .1341E+00  -.9559E-06
.1364E+00  -.8985E-06  .1388E+00  -.7426E-06  .1406E+00  -.6318E-06
.1423E+00  -.5087E-06  .1445E+00  -.3774E-06  .1470E+00  -.2503E-06
.1492E+00  -.1313E-06  .1509E+00  -.4923E-07  .1510E+00  0.
.1000E+01  0.
     -48        2         16         6
.5990E-01  -.1333E-05  .7996E-01  -.1333E-05  .9084E-01  -.1321E-05
.1010E+00  -.1264E-05  .1101E+00  -.1247E-05  .1181E+00  -.1182E-05
.1237E+00  -.1075E-05  .1292E+00  -.9518E-06  .1345E+00  -.7549E-06
.1375E+00  -.6277E-06  .1408E+00  -.4144E-06  .1443E+00  -.2133E-06
.1469E+00  -.8205E-07  .1485E+00  -.6154E-07  .1490E+00  0.
.1000E+01  0.
     -48        3         24         8
.6002E-01  -.2482E-05  .8077E-01  -.2482E-05  .9052E-01  -.2482E-05
.1005E+00  -.2474E-05  .1092E+00  -.2429E-05  .1168E+00  -.2379E-05
.1232E+00  -.2285E-05  .1271E+00  -.2248E-05  .1310E+00  -.2133E-05
.1336E+00  -.2035E-05  .1360E+00  -.1904E-05  .1397E+00  -.1682E-05
.1420E+00  -.1510E-05  .1448E+00  -.1301E-05  .1469E+00  -.1120E-05
.1490E+00  -.9026E-06  .1512E+00  -.6723E-06  .1531E+00  -.4800E-06
.1546E+00  -.3405E-06  .1563E+00  -.2338E-06  .1576E+00  -.1477E-06
.1594E+00  -.5744E-07  .1590E+00  0.          .1000E+01  0.
     -48        4         18         6
.5986E-01  -.1538E-05  .7870E-01  -.1538E-05  .9507E-01  -.1530E-05
.1045E+00  -.1526E-05  .1118E+00  -.1461E-05  .1182E+00  -.1428E-05
.1220E+00  -.1378E-05  .1260E+00  -.1296E-05  .1311E+00  -.1124E-05
.1348E+00  -.9641E-06  .1388E+00  -.7713E-06  .1421E+00  -.5744E-06
.1448E+00  -.3405E-06  .1471E+00  -.2174E-06  .1487E+00  -.1026E-06
.1508E+00  -.6564E-07  .1510E+00  0.          .1000E+01  0.
     -48        5         16         6
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.6006E-01  -.3082E-06   .7302E-01  -.7915E-06   .8260E-01  -.7590E-06
.9137E-01  -.7426E-06   .9970E-01  -.6892E-06   .1083E+00  -.6728E-06
.1152E+00  -.6154E-06   .1208E+00  -.5374E-06   .1273E+00  -.4021E-06
.1318E+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          1          50          17
.5000E+00   .1147E-05   .5671E+00   .1402E-05   .6215E+00   .1537E-05
.6661E+00   .1768E-05   .7077E+00   .2023E-05   .7614E+00   .2437E-05
.7943E+00   .2692E-05   .8297E+00   .2951E-05   .8572E+00   .3106E-05
.8718E+00   .3202E-05   .8819E+00   .3218E-05   .8992E+00   .3206E-05
.9177E+00   .3134E-05   .9369E+00   .2999E-05   .9528E+00   .2855E-05
.9753E+00   .2656E-05   .9855E+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   .1060E+01   .9876E-06
.1072E+01   .8880E-06   .1089E+01   .8243E-06   .1102E+01   .8323E-06
.1122E+01   .9398E-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   .4014E-05   .1559E+01   .4197E-05   .1607E+01   .4356E-05
.1658E+01   .4464E-05   .1711E+01   .4599E-05   .1751E+01   .4655E-05
.1792E+01   .4715E-05   .1844E+01   .4814E-05   .1890E+01   .4842E-05
 1931E+01   .4906E-05   .2000E+01   .4970E-05
    51          1          28          10
.5000E+00   .7216E-05   .5695E+00   .7581E-05   .6401E+00   .8655E-05
.6956E+00   .9568E-05   .7499E+00   .1078E-04   .7900E+00   .1257E-04
.8290E+00   .1443E-04   .8749E+00   .1691E-04   .9209E+00   .1869E-04
.9656E+00   .2080E-04   .1024E+01   .2297E-04   .1068E+01   .2400E-04
.1135E+01   .2538E-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
.1599E+01   .3014E-04   .1655E+01   .3016E-04   .1742E+01   .3016E-04
.1818E+01   .3018E-04   .1883E+01   .3020E-04   .1949E+01   .3020E-04
.2000E+01   .3018E-04
    52          1          34          12
.5000E+00   .3187E+00   .6018E+00   .3187E+00   .6707E+00   .3189E+00
.7265E+00   .3203E+00   .7736E+00   .3235E+00   .8237E+00   .3274E+00
.8800E+00   .3341E+00   .9302E+00   .3420E+00   .9772E+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   .1294E+01   .3162E+00
.1324E+01   .3057E+00   .1357E+01   .2897E+00   .1385E+01   .2775E+00
.1422E+01   .2645E+00   .1469E+01   .2505E+00   .1512E+01   .2385E+00
.1561E+01   .2282E+00   .1605E+01   .2205E+00   .1662E+01   .2093E+00
.1702E+01   .2071E+00   .1739E+01   .2039E+00   .1787E+01   .2002E+00
.1837E+01   .1998E+00   .1883E+01   .1961E+00   .1927E+01   .1951E+00
.2000E+01   .1937E+00
   -53          1          16           6
.5997E-01  -.1414E+00   .8050E-01  -.1404E+00   .1002E+00  -.1333E+00
.1111E+00  -.1293E+00   .1202E+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.
   -53          2          23           8
.5993E-01  -.1913E+00   .7579E-01  -.1901E+00   .9071E-01  -.1850E+00
.1016E+00  -.1830E+00   .1102E+00  -.1799E+00   .1173E+00  -.1761E+00
.1234E+00  -.1706E+00   .1285E+00  -.1633E+00   .1325E+00  -.1566E+00
.1365E+00  -.1461E+00   .1409E+00  -.1319E+00   .1458E+00  -.1104E+00
.1498E+00  -.9141E-01   .1532E+00  -.7437E-01   .1567E+00  -.5350E-01
.1596E+00  -.3526E-01   .1614E+00  -.2796E-01   .1634E+00  -.1803E-01
.1650E+00  -.9321E-02   .1669E+00  -.5876E-02   .1691E+00  -.2634E-02
.1690E+00   0.          .1000E+01   0.
   -53          3          21           7
.5993E-01  -.1725E+00   .8017E-01  -.1736E+00   .1021E+00  -.1649E+00
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.1103E+00  -.1609E+00   .1201E+00  -.1534E+00   .1259E+00  -.1455E+00
.1299E+00  -.1374E+00   .1340E+00  -.1283E+00   .1395E+00  -.1102E+00
.1422E+00  -.9848E-01   .1456E+00  -.8470E-01   .1473E+00  -.7660E-01
.1496E+00  -.6586E-01   .1520E+00  -.4944E-01   .1539E+00  -.3587E-01
.1564E+00  -.2391E-01   .1587E+00  -.1236E-01   .1603E+00  -.5268E-02
.1619E+00  -.2026E-02   .1620E+00   0.          .1000E+01   0.
    -53         4          16          6
.6009E-01  -.1431E+00   .8046E-01  -.1382E+00   .1019E+00  -.1331E+00
.1123E+00  -.1297E+00   .1222E+00  -.1224E+00   .1284E+00  -.1129E+00
.1333E+00  -.1031E+00   .1372E+00  -.8875E-01   .1406E+00  -.7639E-01
.1447E+00  -.5795E-01   .1471E+00  -.4174E-01   .1500E+00  -.2472E-01
.1530E+00  -.1074E-01   .1554E+00  -.2837E-02   .1550E+00   0.
.1000E+01   0.
     47         2          43          15
.5000E+00   .4018E-05   .6015E+00   .4018E-05   .6637E+00   .4018E-05
.7010E+00   .4013E-05   .7320E+00   .4007E-05   .7741E+00   .3965E-05
.8066E+00   .3945E-05   .8471E+00   .3896E-05   .8765E+00   .3852E-05
.9010E+00   .3832E-05   .9282E+00   .3755E-05   .9533E+00   .3638E-05
.9776E+00   .3492E-05   .1001E+01   .3320E-05   .1016E+01   .3175E-05
.1026E+01   .3112E-05   .1036E+01   .3015E-05   .1050E+01   .2959E-05
.1064E+01   .2942E-05   .1077E+01   .2950E-05   .1095E+01   .3072E-05
.1115E+01   .3193E-05   .1145E+01   .3330E-05   .1172E+01   .3438E-05
.1209E+01   .3530E-05   .1247E+01   .3565E-05   .1286E+01   .3605E-05
.1322E+01   .3640E-05   .1362E+01   .3648E-05   .1441E+01   .3650E-05
.1488E+01   .3648E-05   .1526E+01   .3640E-05   .1558E+01   .3613E-05
.1596E+01   .3591E-05   .1636E+01   .3575E-05   .1683E+01   .3533E-05
.1727E+01   .3516E-05   .1761E+01   .3501E-05   .1811E+01   .3468E-05
.1850E+01   .3460E-05   .1900E+01   .3427E-05   .1938E+01   .3391E-05
.2000E+01   .3381E-05
     48         1          19          7
.6006E-01  -.3427E-05   .7985E-01  -.3402E-05   .9964E-01  -.3357E-05
.1074E+00  -.3333E-05   .1150E+00  -.3260E-05   .1207E+00  -.3174E-05
.1270E+00  -.2962E-05   .1333E+00  -.2639E-05   .1391E+00  -.2313E-05
.1434E+00  -.1966E-05   .1461E+00  -.1632E-05   .1492E+00  -.1285E-05
.1520E+00  -.9261E-06   .1543E+00  -.5956E-06   .1564E+00  -.3712E-06
.1590E+00  -.1591E-06   .1603E+00  -.1265E-06   .1600E+00   0.
.1000E+01   0.
     48         2          23          8
.5994E-01  -.3092E-05   .8195E-01  -.3092E-05   .9120E-01  -.3084E-05
.1005E+00  -.3056E-05   .1083E+00  -.3007E-05   .1161E+00  -.2929E-05
.1202E+00  -.2852E-05   .1261E+00  -.2693E-05   .1303E+00  -.2542E-05
.1349E+00  -.2293E-05   .1378E+00  -.2076E-05   .1409E+00  -.1807E-05
.1430E+00  -.1595E-05   .1445E+00  -.1407E-05   .1467E+00  -.1183E-05
.1489E+00  -.8730E-06   .1502E+00  -.6650E-06   .1515E+00  -.4691E-06
.1527E+00  -.3386E-06   .1538E+00  -.2203E-06   .1556E+00  -.9791E-07
.1550E+00   0.          .1000E+01   0.
     48         3          25          9
.6006E-01  -.2819E-05   .7993E-01  -.2819E-05   .8974E-01  -.2819E-05
.8980E-01  -.2815E-05   .1058E+00  -.2815E-05   .1099E+00  -.2766E-05
.1150E+00  -.2709E-05   .1197E+00  -.2631E-05   .1228E+00  -.2542E-05
.1261E+00  -.2456E-05   .1285E+00  -.2325E-05   .1305E+00  -.2191E-05
.1330E+00  -.2064E-05   .1350E+00  -.1905E-05   .1370E+00  -.1754E-05
.1392E+00  -.1558E-05   .1417E+00  -.1330E-05   .1440E+00  -.1040E-05
.1464E+00  -.7425E-06   .1479E+00  -.4691E-06   .1495E+00  -.3182E-06
.1508E+00  -.1550E-06   .1521E+00  -.1061E-06   .1520E+00   0.
.1000E+01   0.
     48         4          25          9
.5989E-01  -.3423E-05   .7985E-01  -.3406E-05   .9351E-01  -.3378E-05
.1003E+00  -.3378E-05   .1056E+00  -.3345E-05   .1126E+00  -.3272E-05
.1180E+00  -.3207E-05   .1207E+00  -.3129E-05   .1248E+00  -.3043E-05
.1285E+00  -.2901E-05   .1325E+00  -.2733E-05   .1363E+00  -.2521E-05
.1393E+00  -.2329E-05   .1423E+00  -.2072E-05   .1446E+00  -.1848E-05
.1483E+00  -.1403E-05   .1500E+00  -.1191E-05   .1519E+00  -.9057E-06
.1537E+00  -.7302E-06   .1559E+00  -.3998E-06   .1574E+00  -.2652E-06
.1594E+00  -.1713E-06   .1602E+00  -.1101E-06   .1600E+00   0.
.1000E+01   0.
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     48          5          24          *
.9969E-01  -.2456E-05  .8017E-01  -.2860E-05  .8994E-01  -.2848E-05
.9992E-01  -.2839E-05  .1043E+00  -.2831E-05  .1102E+00  -.2750E-05
.1144E+00  -.2733E-05  .1199E+00  -.2639E-05  .1236E+00  -.2542E-05
.1266E+00  -.2407E-05  .1298E+00  -.2248E-05  .1326E+00  -.2068E-05
.1355E+00  -.1856E-05  .1376E+00  -.1677E-05  .1400E+00  -.1460E-05
.1422E+00  -.1228E-05  .1442E+00  -.1016E-05  .1454E+00  -.7955E-06
.1470E+00  -.5956E-06  .1486E+00  -.4039E-06  .1501E+00  -.2040E-06
.1519E+00  -.1020E-06  .1520E+00  0.          .1000E+01  0.
     50          2          39          13
.5000E+00   .4890E-05  .5569E+00   .4878E-05  .6213E+00   .4826E-05
.6699E+00   .4763E-05  .7162E+00   .4683E-05  .7722E+00   .4556E-05
.8216E+00   .4448E-05  .8682E+00   .4289E-05  .9042E+00   .4133E-05
.9590E+00   .3879E-05  .1008E+01   .3572E-05  .1050E+01   .3301E-05
.1073E+01   .3094E-05  .1097E+01   .2835E-05  .1116E+01   .2576E-05
.1149E+01   .2126E-05  .1172E+01   .1736E-05  .1186E+01   .1577E-05
.1200E+01   .1449E-05  .1210E+01   .1418E-05  .1226E+01   .1434E-05
.1233E+01   .1545E-05  .1248E+01   .1641E-05  .1271E+01   .1828E-05
.1287E+01   .1955E-05  .1323E+01   .2214E-05  .1376E+01   .2521E-05
.1424E+01   .2807E-05  .1472E+01   .2983E-05  .1523E+01   .3150E-05
.1583E+01   .3341E-05  .1624E+01   .3441E-05  .1692E+01   .3568E-05
.1744E+01   .3640E-05  .1802E+01   .3747E-05  .1863E+01   .3791E-05
.1902E+01   .3807E-05  .1946E+01   .3839E-05  .2000E+01   .3839E-05
     51          2          26          9
.5000E+00   .1502E-04  .6586E+00   .1504E-04  .7702E+00   .1504E-04
.8290E+00   .1518E-04  .8697E+00   .1557E-04  .9400E+00   .1630E-04
.1000E+01   .1743E-04  .1056E+01   .1879E-04  .1118E+01   .2031E-04
.1177E+01   .2207E-04  .1236E+01   .2412E-04  .1287E+01   .2591E-04
.1325E+01   .2730E-04  .1370E+01   .2905E-04  .1437E+01   .3132E-04
.1498E+01   .3300E-04  .1553E+01   .3432E-04  .1601E+01   .3493E-04
.1651E+01   .3576E-04  .1706E+01   .3624E-04  .1745E+01   .3669E-04
.1797E+01   .3703E-04  .1844E+01   .3707E-04  .1897E+01   .3707E-04
.1950E+01   .3707E-04  .2000E+01   .3707E-04
     52          2          40          14
.5000E+00   .3199E+00  .5497E+00   .3195E+00  .6187E+00   .3191E+00
.6817E+00   .3195E+00  .7303E+00   .3199E+00  .7679E+00   .3241E+00
.7978E+00   .3282E+00  .8328E+00   .3351E+00  .8646E+00   .3434E+00
.8930E+00   .3535E+00  .9140E+00   .3631E+00  .9378E+00   .3751E+00
.9551E+00   .3854E+00  .9764E+00   .3955E+00  .9957E+00   .4047E+00
.1017E+01   .4114E+00  .1045E+01   .4174E+00  .1057E+01   .4181E+00
.1076E+01   .4176E+00  .1096E+01   .4109E+00  .1114E+01   .4039E+00
.1134E+01   .3968E+00  .1155E+01   .3846E+00  .1180E+01   .3728E+00
.1201E+01   .3629E+00  .1233E+01   .3450E+00  .1275E+01   .3327E+00
.1304E+01   .3203E+00  .1345E+01   .3087E+00  .1393E+01   .2984E+00
.1442E+01   .2899E+00  .1490E+01   .2793E+00  .1537E+01   .2757E+00
.1589E+01   .2712E+00  .1626E+01   .2667E+00  .1653E+01   .2651E+00
.1701E+01   .2651E+00  .1752E+01   .2643E+00  .1801E+01   .2633E+00
.2000E+01   .2637E+00
     53          1          19          7
.6001E-01  -.1453E+00  .7526E-01  -.1425E+00  .8656E-01  -.1392E+00
.9803E-01  -.1368E+00  .1086E+00  -.1329E+00  .1174E+00  -.1262E+00
.1248E+00  -.1157E+00  .1291E+00  -.1082E+00  .1336E+00  -.9524E-01
.1378E+00  -.8085E-01  .1416E+00  -.6626E-01  .1444E+00  -.5086E-01
.1464E+00  -.4032E-01  .1485E+00  -.2898E-01  .1504E+00  -.1905E-01
.1524E+00  -.9726E-02  .1543E+00  -.4255E-02  .1540E+00  0.
.1000E+01  0.
     53          2          26          9
.5993E-01  -.2170E+00  .7160E-01  -.2146E+00  .8050E-01  -.2126E+00
.9026E-01  -.2111E+00  .1000E+00  -.2063E+00  .1101E+00  -.2041E+00
.1164E+00  -.2000E+00  .1233E+00  -.1933E+00  .1298E+00  -.1844E+00
.1347E+00  -.1737E+00  .1382E+00  -.1609E+00  .1419E+00  -.1510E+00
.1450E+00  -.1368E+00  .1487E+00  -.1234E+00  .1517E+00  -.1090E+00
.1542E+00  -.9585E-01  .1565E+00  -.8227E-01  .1595E+00  -.6505E-01
.1620E+00  -.5127E-01  .1650E+00  -.3546E-01  .1676E+00  -.2168E-01
.1702E+00  -.1256E-01  .1724E+00  -.7092E-02  .1736E+00  -.4255E-02
.1740E+00  0.          .1800E+01  0.
```

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     53          1          24          2
.5993E+01  -.1714E+00  .1030E-01  -.1710E+00  .1002E+00  -.1674E+00
.1098E+00  -.1635E+00  .1162E+00  -.1595E+00  .1199E+00  -.1562E+00
.1256E+00  -.1506E+00  .1294E+00  -.1447E+00  .1334E+00  -.1352E+00
.1384E+00  -.1200E+00  .1407E+00  -.1121E+00  .1438E+00  -.9929E-01
.1465E+00  -.8673E-01  .1490E+00  -.7518E-01  .1513E+00  -.6261E-01
.1534E+00  -.5167E-01  .1553E+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.          .2000E+01  0.
     53          4          19          7
.6013E-01  -.1429E+00  .8002E-01  -.1414E+00  .1403E+00  -.1343E+00
.1102E+00  -.1329E+00  .1201E+00  -.1238E+00  .1257E+00  -.1147E+00
.1301E+00  -.1058E+00  .1338E+00  -.9524E-01  .1362E+00  -.8632E-01
.1349E+00  -.7173E-01  .1433E+00  -.5755E-01  .1462E+00  -.4335E-01
.1484E+00  -.2817E-01  .1499E+00  -.2168E-01  .1515E+00  -.1479E-01
.1529E+00  -.8511E-02  .1544E+00  -.4255E-02  .1540E+00  0.
.1000E+01  0.
     55          1          12          4
.5606E+00  -.1891E-02  .5979E+00  -.1920E-02  .6970E+00  -.1920E-02
.8009E+00  -.1960E-02  .8997E+00  -.2040E-02  .9988E+00  -.2080E-02
.1100E+01  -.2219E-02  .1199E+01  -.2239E-02  .1401E+01  -.2249E-02
.1601E+01  -.2338E-02  .1802E+01  -.2408E-02  .2000E+01  -.2416E-02
    -56          1          23         10
.4558E+00  -.3813E+00  .5673E+00  -.3454E+00  .7106E+00  -.2991E+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   .1412E+00  .1863E+01   .1787E+00
.1959E+01   .2177E+00  .2034E+01   .2489E+00  .2144E+01   .2919E+00
.2239E+01   .3222E+00  .2347E+01   .3621E+00  .2428E+01   .3892E+00
.2504E+01   .4179E+00  .2580E+01   .4435E+00  .2669E+01   .4738E+00
.2763E+01   .5057E+00  .2850E+01   .5368E+00  .2926E+01   .5575E+00
.3010E+01   .5823E+00
    -56          2          32         11
.4598E+00  -.3254E+00  .5912E+00  -.2863E+00  .7126E+00  -.2449E+00
.8280E+00  -.2074E+00  .9375E+00  -.1691E+00  .1023E+01  -.1324E+00
.1107E+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   .1412E+00  .1710E+01   .1763E+00
.1768E+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   .4108E+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   .5878E+00
.2938E+01   .6110E+00  .3000E+01   .6269E+00
    -56          3          31         11
.4598E+00  -.2656E+00  .5932E+00  -.2337E+00  .7205E+00  -.1986E+00
.8340E+00  -.1683E+00  .9335E+00  -.1412E+00  .1015E+01  -.1180E+00
.1097E+01  -.9651E-01  .1172E+01  -.7258E-01  .1232E+01  -.5264E-01
.1342E+01  -.2552E-01  .1409E+01  -.3190E-02  .1493E+01   .2074E-01
.1557E+01   .4148E-01  .1598E+01   .5503E-01  .1672E+01   .7737E-01
.1758E+01   .1037E+00  .1863E+01   .1372E+00  .1959E+01   .1683E+00
.2030E+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  .2683E+01   .3900E+00  .2763E+01   .4148E+00
.2842E+01   .4347E+00  .2902E+01   .4514E+00  .2946E+01   .4674E+00
.3004E+01   .4818E+00
    -56          4          22          8
.4936E+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   .3951E-01
.1600E+01   .4546E-01  .1734E+01   .6859E-01  .1885E+01   .9731E-01
.1998E+01   .1133E+00  .2110E+01   .1332E+00  .2251E+01   .1539E+00
.2398E+01   .1795E+00  .2496E+01   .1979E+00  .2613E+01   .2177E+00
.2733E+01   .2345E+00  .2849E+01   .2523E+00  .2914E+01   .2656E+00
.3002E+01   .2784E+00
```

-57	1	29	16		
.8029E+02	.5956E+00	.8639E+02	.5015E+00	.9102E+02	.4771E+00
.9549E+02	.4689E+00	.9890E+02	.4608E+00	.1013E+03	.4567E+00
.1056E+03	.4730E+00	.1095E+03	.4689E+00	.1124E+03	.4689E+00
.1156E+03	.4934E+00	.1198E+03	.5138E+00	.1232E+03	.5423E+00
.1262E+03	.5586E+00	.1317E+03	.5953E+00	.1373E+03	.6483E+00
.1425E+03	.6932E+00	.1467E+03	.7339E+00	.1514E+03	.8033E+00
.1560E+03	.8318E+00	.1600E+03	.8848E+00	.1639E+03	.9337E+00
.1684E+03	.9990E+00	.1726E+03	.1064E+01	.1783E+03	.1138E+01
.1830E+03	.1235E+01	.1882E+03	.1317E+01	.1924E+03	.1382E+01
.1959E+03	.1443E+01	.1998E+03	.1513E+01		
-57	2	22	8		
.8046E+02	.2039E+00	.8606E+02	.1998E+00	.9021E+02	.1998E+00
.9549E+02	.2080E+00	.1014E+03	.2080E+00	.1071E+03	.2263E+00
.1122E+03	.2446E+00	.1174E+03	.2732E+00	.1238E+03	.3017E+00
.1310E+03	.3670E+00	.1356E+03	.3996E+00	.1401E+03	.4444E+00
.1456E+03	.4852E+00	.1510E+03	.5464E+00	.1566E+03	.6035E+00
.1613E+03	.6687E+00	.1676E+03	.7462E+00	.1756E+03	.8481E+00
.1837E+03	.9419E+00	.1898E+03	.1032E+01	.1952E+03	.1105E+01
.2001E+03	.1174E+01				
-57	3	26	9		
.8005E+02	.8155E+00	.8793E+02	.7870E+00	.9622E+02	.7706E+00
.1003E+03	.7666E+00	.1042E+03	.7706E+00	.1100E+03	.7706E+00
.1164E+03	.7870E+00	.1214E+03	.8033E+00	.1263E+03	.8359E+00
.1323E+03	.8889E+00	.1373E+03	.9578E+00	.1416E+03	.9745E+00
.1463E+03	.1032E+01	.1515E+03	.1089E+01	.1551E+03	.1129E+01
.1600E+03	.1187E+01	.1647E+03	.1264E+01	.1689E+03	.1321E+01
.1729E+03	.1386E+01	.1776E+03	.1452E+01	.1812E+03	.1521E+01
.1859E+03	.1594E+01	.1898E+03	.1668E+01	.1937E+03	.1745E+01
.1975E+03	.1814E+01	.2002E+03	.1872E+01		
-57	4	25	9		
.8029E+02	.9949E+00	.8419E+02	.9501E+00	.8842E+02	.9297E+00
.9200E+02	.9256E+00	.9443E+02	.9215E+00	.1001E+03	.9215E+00
.1061E+03	.9297E+00	.1113E+03	.9541E+00	.1156E+03	.9745E+00
.1204E+03	.1023E+01	.1252E+03	.1072E+01	.1304E+03	.1125E+01
.1352E+03	.1182E+01	.1403E+03	.1248E+01	.1469E+03	.1341E+01
.1521E+03	.1399E+01	.1570E+03	.1501E+01	.1624E+03	.1594E+01
.1677E+03	.1688E+01	.1733E+03	.1794E+01	.1782E+03	.1896E+01
.1858E+03	.2051E+01	.1920E+03	.2190E+01	.1963E+03	.2279E+01
.2001E+03	.2398E+01				
-58	1	37	13		
.8063E+02	.7020E+00	.8697E+02	.7143E+00	.9022E+02	.7184E+00
.9411E+02	.7102E+00	.9801E+02	.7061E+00	.1019E+03	.7061E+00
.1053E+03	.6653E+00	.1089E+03	.6367E+00	.1131E+03	.5837E+00
.1169E+03	.5224E+00	.1211E+03	.4571E+00	.1240E+03	.4082E+00
.1273E+03	.3429E+00	.1294E+03	.2857E+00	.1325E+03	.2327E+00
.1350E+03	.1714E+00	.1375E+03	.1020E+00	.1400E+03	.4082E-01
.1425E+03	-.4490E-01	.1451E+03	-.1143E+00	.1474E+03	-.1755E+00
.1503E+03	-.2653E+00	.1535E+03	-.3551E+00	.1639E+03	-.7469E+00
.1665E+03	-.8571E+00	.1696E+03	-.9796E+00	.1734E+03	-.1122E+01
.1760E+03	-.1224E+01	.1795E+03	-.1376E+01	.1826E+03	-.1514E+01
.1851E+03	-.1665E+01	.1879E+03	-.1776E+01	.1906E+03	-.1918E+01
.1929E+03	-.2016E+01	.1951E+03	-.2135E+01	.1977E+03	-.2273E+01
.2000E+03	-.2400E+01				
-58	2	39	13		
.7982E+02	.8571E+00	.8616E+02	.8571E+00	.9086E+02	.8490E+00
.9460E+02	.8449E+00	.9882E+02	.8367E+00	.1027E+03	.8163E+00
.1050E+03	.7918E+00	.1090E+03	.7429E+00	.1133E+03	.7020E+00
.1160E+03	.6612E+00	.1186E+03	.6163E+00	.1214E+03	.5796E+00
.1256E+03	.5061E+00	.1282E+03	.4408E+00	.1312E+03	.3918E+00
.1334E+03	.3429E+00	.1374E+03	.2612E+00	.1407E+03	.1796E+00
.1435E+03	.1061E+00	.1463E+03	.3265E-01	.1500E+03	-.4898E-01
.1533E+03	-.1347E+00	.1551E+03	-.2122E+00	.1583E+03	-.2776E+00
.1604E+03	-.3388E+00	.1618E+03	-.3837E+00	.1666E+03	-.5224E+00
.1691E+03	-.6000E+00	.1713E+03	-.6776E+00	.1747E+03	-.7959E+00
.1773E+03	-.8694E+00	.1797E+03	-.9633E+00	.1826E+03	-.1060E+01

.1857E+03	-.1188E+01	.1883E+03	-.1209E+01	.1913E+03	-.1346E+01
.1946E+03	-.1510E+01	.1976E+03	-.1633E+01	.2004E+03	-.1739E+01
-58	3	27	9		
.7958E+02	-.4082E-02	.8477E+02	-.4082E-01	.9054E+02	-.6939E-01
.9476E+02	-.1224E+00	.9931E+02	-.1735E+00	.1048E+03	-.2408E+00
.1096E+03	-.2980E+00	.1134E+03	-.3796E+00	.1160E+03	-.4082E+00
.1283E+03	-.6694E+00	.1334E+03	-.7633E+00	.1384E+03	-.8815E+00
.1433E+03	-.9878E+00	.1494E+03	-.1151E+01	.1550E+03	-.1306E+01
.1592E+03	-.1429E+01	.1636E+03	-.1567E+01	.1686E+03	-.1710E+01
.1732E+03	-.1869E+01	.1767E+03	-.1976E+01	.1796E+03	-.2090E+01
.1842E+03	-.2253E+01	.1872E+03	-.2331E+01	.1905E+03	-.2445E+01
.1940E+03	-.2576E+01	.1968E+03	-.2698E+01	.2000E+03	-.2812E+01
-58	4	27	9		
.7998E+02	-.1073E+01	.8502E+02	-.1053E+01	.8997E+02	-.1057E+01
.9492E+02	-.1065E+01	.9996E+02	-.1079E+01	.1050E+03	-.1139E+01
.1100E+03	-.1184E+01	.1154E+03	-.1233E+01	.1199E+03	-.1318E+01
.1251E+03	-.1392E+01	.1301E+03	-.1473E+01	.1359E+03	-.1588E+01
.1402E+03	-.1665E+01	.1451E+03	-.1816E+01	.1500E+03	-.1918E+01
.1566E+03	-.2020E+01	.1576E+03	-.2110E+01	.1615E+03	-.2216E+01
.1648E+03	-.2302E+01	.1691E+03	-.2441E+01	.1734E+03	-.2563E+01
.1782E+03	-.2727E+01	.1829E+03	-.2882E+01	.1869E+03	-.3024E+01
.1924E+03	-.3208E+01	.1966E+03	-.3380E+01	.2002E+03	-.3494E+01
55	2	23	8		
.5000E+00	-.7254E-02	.7384E+00	-.7254E-02	.8969E+00	-.7264E-02
.9720E+00	-.7254E-02	.1035E+01	-.7174E-02	.1091E+01	-.7035E-02
.1129E+01	-.7015E-02	.1165E+01	-.6935E-02	.1201E+01	-.6716E-02
.1249E+01	-.6418E-02	.1294E+01	-.6179E-02	.1348E+01	-.5632E-02
.1396E+01	-.5164E-02	.1435E+01	-.4697E-02	.1494E+01	-.4080E-02
.1527E+01	-.3891E-02	.1593E+01	-.3632E-02	.1653E+01	-.3562E-02
.1700E+01	-.3562E-02	.1753E+01	-.3542E-02	.1805E+01	-.3552E-02
.1898E+01	-.3592E-02	.2000E+01	-.3682E-02		
56	1	12	4		
.8426E+00	.3423E-01	.1067E+01	.4199E-01	.1347E+01	.5313E-01
.1566E+01	.6045E-01	.1797E+01	.8896E-01	.1991E+01	.1031E+00
.2214E+01	.1202E+00	.2428E+01	.1393E+00	.2667E+01	.1630E+00
.2948E+01	.1885E+00	.3145E+01	.2100E+00	.3483E+01	.2396E+00
56	2	13	5		
.9337E+00	.6965E-02	.1210E+01	.2229E-01	.1362E+01	.3065E-01
.1485E+01	.3522E-01	.1690E+01	.3980E-01	.1909E+01	.4398E-01
.2075E+01	.4796E-01	.2266E+01	.4836E-01	.2493E+01	.4995E-01
.2746E+01	.5114E-01	.2980E+01	.5174E-01	.3231E+01	.5234E-01
.3486E+01	.5274E-01				
56	3	13	5		
.8386E+00	.9692E-01	.1080E+01	.1156E+00	.1368E+01	.1367E+00
.1550E+01	.1504E+00	.1794E+01	.1598E+00	.2032E+01	.1725E+00
.2171E+01	.1791E+00	.2348E+01	.1885E+00	.2500E+01	.1970E+00
.2746E+01	.2064E+00	.2993E+01	.2211E+00	.3185E+01	.2340E+00
.3490E+01	.2501E+00				
56	4	15	5		
.8337E+00	.7721E-01	.1092E+01	.9214E-01	.1367E+01	.1061E+00
.1662E+01	.1296E+00	.1911E+01	.1485E+00	.1972E+01	.1550E+00
.2122E+01	.1694E+00	.2297E+01	.1871E+00	.2484E+01	.2030E+00
.2703E+01	.2213E+00	.2901E+01	.2358E+00	.3065E+01	.2482E+00
.3208E+01	.2587E+00	.3383E+01	.2653E+00	.3486E+01	.2714E+00
57	1	41	14		
.7300E+02	.7401E+00	.7632E+02	.5743E+00	.8015E+02	.4206E+00
.8299E+02	.3114E+00	.8640E+02	.1901E+00	.8948E+02	.1011E+00
.9216E+02	.1213E-01	.9501E+02	-.6471E-01	.9866E+02	-.1254E+00
.1013E+03	-.1820E+00	.1039E+03	-.2184E+00	.1067E+03	-.2386E+00
.1096E+03	-.2508E+00	.1118E+03	-.2467E+00	.1142E+03	-.2427E+00
.1166E+03	-.2427E+00	.1199E+03	-.2386E+00	.1237E+03	-.2265E+00
.1265E+03	-.2063E+00	.1298E+03	-.1780E+00	.1333E+03	-.1496E+00
.1363E+03	-.1254E+00	.1391E+03	-.8493E-01	.1421E+03	-.6471E-01
.1440E+03	-.2022E-01	.1483E+03	.4449E-01	.1517E+03	.8493E-01
.1547E+03	.1294E+00	.1579E+03	.1829E+00	.1605E+03	.2265E+00
.1648E+03	.2493E+00	.1679E+03	.3600E+00	.1710E+03	.4287E+00

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.1756E+03   .5217E+00   .1796E+03   .5405E+00   .1825E+03   .6673E+00
.1864E+03   .7523E+00   .1902E+03   .8332E+00   .1933E+03   .9100E+00
.1960E+03   .9788E+00   .1999E+03   .1076E+01
    57          2          29          10
.7381E+02   .4611E+00   .7893E+02   .3640E+00   .8242E+02   .3236E+00
.8599E+02   .2872E+00   .8981E+02   .2427E+00   .9639E+02   .1901E+00
.1013E+03   .1496E+00   .1061E+03   .1132E+00   .1099E+03   .1052E+00
.1143E+03   .8898E-01   .1185E+03   .8493E-01   .1220E+03   .7685E-01
.1263E+03   .7280E-01   .1333E+03   .7685E-01   .1376E+03   .8069E-01
.1430E+03   .8493E-01   .1484E+03   .1092E+00   .1518E+03   .1335E+00
.1564E+03   .1577E+00   .1600E+03   .1780E+00   .1647E+03   .2022E+00
.1692E+03   .2346E+00   .1726E+03   .2669E+00   .1768E+03   .2912E+00
.1811E+03   .3357E+00   .1858E+03   .3923E+00   .1903E+03   .4328E+00
.1947E+03   .4894E+00   .1998E+03   .5541E+00
    57          3          39          13
.7812E+02   .1654E+01   .7982E+02   .1412E+01   .8120E+02   .1193E+01
.8258E+02   .1060E+01   .8404E+02   .8574E+00   .8640E+02   .5662E+00
.8786E+02   .3964E+00   .8932E+02   .2629E+00   .9078E+02   .1132E+00
.9225E+02   -.1618E-01  .9371E+02   -.1375E+00  .9574E+02   -.2952E+00
.9728E+02   -.3802E+00  .9907E+02   -.4611E+00  .1009E+03   -.5501E+00
.1031E+03   -.6067E+00  .1052E+03   -.6471E+00  .1082E+03   -.6673E+00
.1102E+03   -.6795E+00  .1134E+03   -.6714E+00  .1175E+03   -.6471E+00
.1260E+03   -.5501E+00  .1292E+03   -.4934E+00  .1293E+03   -.4894E+00
.1378E+03   -.3680E+00  .1412E+03   -.2912E+00  .1457E+03   -.2103E+00
.1501E+03   -.1213E+00  .1544E+03   -.4044E-01  .1589E+03   .4853E-01
.1619E+03   .1092E+00   .1700E+03   .2952E+00   .1757E+03   .4044E+00
.1804E+03   .5137E+00   .1854E+03   .6067E+00   .1893E+03   .6916E+00
.1919E+03   .7442E+00   .1951E+03   .8170E+00   .1998E+03   .8979E+00
    57          4          55          19
.7925E+02   .2071E+01   .7990E+02   .1771E+01   .8080E+02   .1484E+01
.8185E+02   .1258E+01   .8258E+02   .1023E+01   .8339E+02   .8291E+00
.8404E+02   .6633E+00   .8510E+02   .4975E+00   .8591E+02   .3236E+00
.8672E+02   .2144E+00   .8770E+02   .6471E-01   .8851E+02   -.9707E-01
.8965E+02   -.2224E+00  .9095E+02   -.3964E+00  .9249E+02   -.5703E+00
.9403E+02   -.7199E+00  .9582E+02   -.8534E+00  .9728E+02   -.9747E+00
.9898E+02   -.1048E+01  .1012E+03   -.1112E+01  .1039E+03   -.1169E+01
.1062E+03   -.1197E+01  .1086E+03   -.1201E+01  .1116E+03   -.1177E+01
.1156E+03   -.1096E+01  .1182E+03   -.9828E+00  .1210E+03   -.8696E+00
.1240E+03   -.7442E+00  .1272E+03   -.5824E+00  .1294E+03   -.4611E+00
.1325E+03   -.2710E+00  .1345E+03   -.1496E+00  .1361E+03   -.2427E-01
.1380E+03   .9707E-01   .1400E+03   .2265E+00   .1431E+03   .4611E+00
.1449E+03   .5905E+00   .1475E+03   .7482E+00   .1500E+03   .8817E+00
.1527E+03   .1019E+01   .1557E+03   .1153E+01   .1585E+03   .1282E+01
.1608E+03   .1355E+01   .1639E+03   .1488E+01   .1675E+03   .1630E+01
.1709E+03   .1735E+01   .1749E+03   .1869E+01   .1778E+03   .1958E+01
.1811E+03   .2063E+01   .1847E+03   .2180E+01   .1884E+03   .2289E+01
.1909E+03   .2374E+01   .1933E+03   .2435E+01   .1956E+03   .2512E+01
.1996E+03   .2580E+01
    58          1          22          8
.7964E+02   -.6283E+00  .8783E+02   -.5421E+00  .9643E+02   -.4476E+00
.1028E+03   -.3778E+00  .1093E+03   -.3285E+00  .1157E+03   -.2752E+00
.1195E+03   -.2505E+00  .1248E+03   -.2094E+00  .1306E+03   -.1684E+00
.1370E+03   -.1355E+00  .1419E+03   -.8214E-01  .1478E+03   -.6571E-01
.1521E+03   -.4107E-01  .1561E+03   -.8214E-02  .1629E+03   .3696E-01
.1682E+03   .4517E-01   .1742E+03   .5571E-01   .1797E+03   .9035E-01
.1849E+03   .1109E+00   .1904E+03   .1355E+00   .1961E+03   .1602E+00
.1999E+03   .1766E+00
    58          2          19          7
.8029E+02   -.3984E+00  .8516E+02   -.3614E+00  .8986E+02   -.3326E+00
.9594E+02   -.2916E+00  .9984E+02   -.2628E+00  .1049E+03   -.2382E+00
.1120E+03   -.2136E+00  .1182E+03   -.1930E+00  .1252E+03   -.1889E+00
.1317E+03   -.1725E+00  .1378E+03   -.1643E+00  .1451E+03   -.1684E+00
.1509E+03   -.1684E+00  .1617E+03   -.1684E+00  .1711E+03   -.1684E+00
.1795E+03   -.1684E+00  .1883E+03   -.1684E+00  .1942E+03   -.1725E+00
.1999E+03   -.1807E+00
    58          3          38          17
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.8062E+02  -.2517E+01   .8127E+02  -.2283E+01   .8256E+02  -.1993E+01
.8354E+02  -.1651E+01   .8483E+02  -.1359E+01   .8613E+02  -.1068E+01
.8759E+02  -.7926E+00   .8897E+02  -.5503E+00   .9019E+02  -.3696E+00
.9230E+02  -.9856E-01   .9408E+02   .1232E+00   .9651E+02   .3450E+00
.9976E+02   .5298E+00   .1022E+03   .6448E+00   .1047E+03   .7105E+00
.1090E+03   .7639E+00   .1122E+03   .7721E+00   .1163E+03   .7885E+00
.1203E+03   .7803E+00   .1249E+03   .7474E+00   .1282E+03   .7146E+00
.1321E+03   .6653E+00   .1374E+03   .6119E+00   .1413E+03   .5544E+00
.1457E+03   .4928E+00   .1499E+03   .4189E+00   .1552E+03   .3450E+00
.1595E+03   .2423E+00   .1637E+03   .1643E+00   .1674E+03   .1232E+00
.1716E+03   .7175E-01   .1765E+03  -.3214E-01   .1798E+03  -.1602E+00
.1848E+03  -.2546E+00   .1895E+03  -.3659E+00   .1938E+03  -.4805E+00
.1998E+03  -.6160E+00   .2000E+03  -.6200E+00
     53          4          70          24
.8062E+02  -.2986E+01   .8264E+02  -.1405E+01   .8459E+02  -.8049E+00
.8548E+02  -.9175E+00   .8662E+02  -.2423E+00   .8808E+02   .1109E+00
.8986E+02   .4476E+00   .9148E+02   .7105E+00   .9270E+02   .8789E+00
.9416E+02   .1072E+01   .9578E+02   .1191E+01   .9708E+02   .1326E+01
.9903E+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
.1246E+03   .1072E+01   .1261E+03   .9651E+00   .1288E+03   .7474E+00
.1301E+03   .6366E+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  -.8583E+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  -.1992E+01   .1603E+03  -.2090E+01
.1620E+03  -.2205E+01   .1640E+03  -.2337E+01   .1667E+03  -.2509E+01
.1690E+03  -.2632E+01   .1723E+03  -.2813E+01   .1748E+03  -.2936E+01
.1772E+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          1          13           5
0.           .1600E+00   .5000E+02   .1870E+00   .1000E+03   .2270E+00
.1500E+03   .2880E+00   .2000E+03   .3800E+00   .2250E+03   .4300E+00
.2500E+03   .4450E+00   .2750E+03   .4480E+00   .3000E+03   .4400E+00
.3500E+03   .4140E+00   .4000E+03   .3780E+00   .4500E+03   .3450E+00
.5000E+03   .3250E+00
     60          1          27           9
.6813E-01  -.6016E-01   .7075E-01  -.5673E-01   .7402E-01  -.5251E-01
.7728E-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
.1168E+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  -.7968E-04   .1480E+00   0.           .1000E+01   0.
     62          1           2           1
.5995E+02   .5000E+00   .2001E+03   .5000E+00
     62          2           2           1
.5963E+02   .6999E+00   .1999E+03   .6999E+00
     62          3          15           5
.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   .1162E+01
.1183E+03   .1191E+01   .1197E+03   .1201E+01   .2000E+03   .1201E+01
     62          4           2           1
.5979E+02   .1003E+01   .2002E+03   .1003E+01
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62	5	2	1		
.5995E+02	.2000E+01	.2000E+03	.2000E+01		
63	1	37	13		
.7216E+02	.1218E-02	.7541E+02	.1120E-02	.7914E+02	.1037E-02
.8295E+02	.9430E-03	.8701E+02	.8248E-03	.9115E+02	.7413E-03
.9448E+02	.6558E-03	.9959E+02	.5438E-03	.1032E+03	.4603E-03
.1072E+03	.3788E-03	.1095E+03	.3340E-03	.1131E+03	.2709E-03
.1179E+03	.1874E-03	.1210E+03	.1283E-03	.1253E+03	.7739E-04
.1281E+03	.3259E-04	.1311E+03	-.1018E-04	.1355E+03	-.6110E-04
.1385E+03	-.9572E-04	.1420E+03	-.1283E-03	.1454E+03	-.1548E-03
.1486E+03	-.1731E-03	.1509E+03	-.1792E-03	.1545E+03	-.1833E-03
.1666E+03	-.7128E-04	.1694E+03	-.2648E-04	.1718E+03	.8147E-05
.1753E+03	.8350E-04	.1779E+03	.1426E-03	.1819E+03	.2424E-03
.1856E+03	.3605E-03	.1885E+03	.4745E-03	.1918E+03	.6049E-03
.1945E+03	.7352E-03	.1962E+03	.8330E-03	.1981E+03	.9267E-03
.1998E+03	.1024E-02				
64	1	26	9		
.7351E+02	.2252E-01	.7667E+02	.2759E-01	.8162E+02	.3469E-01
.8803E+02	.4300E-01	.9176E+02	.4625E-01	.9680E+02	.4807E-01
.9988E+02	.4970E-01	.1043E+03	.4787E-01	.1070E+03	.4462E-01
.1093E+03	.4158E-01	[illegible]	.3895E-01	.1133E+03	.3448E-01
.1160E+03	.3245E-01	[illegible]	.2961E-01	.1211E+03	.2779E-01
.1267E+03	.2637E-01	[illegible]	.2312E-01	.1395E+03	.2130E-01
.1471E+03	.1826E-01	[illegible]	.1602E-01	.1628E+03	.1237E-01
.1701E+03	.1055E-01	[illegible]	.7302E-02	.1867E+03	.5071E-02
.1924E+03	.3448E-02	.1992E+03	.1014E-02		
65	1	11	4		
.7000E+02	.3000E-02	.8000E+02	.2800E-02	.1000E+03	.2800E-02
.1200E+03	.2800E-02	.1400E+03	.3400E-02	.1500E+03	.4000E-02
.1600E+03	.5200E-02	.1700E+03	.7300E-02	.1800E+03	.1050E-01
.1900E+03	.1460E-01	.2000E+03	.2000E-01		
66	1	15	5		
.7073E+02	-.5668E+00	.7951E+02	-.4939E+00	.8561E+02	-.4453E+00
.9333E+02	-.3765E+00	.1007E+03	-.3421E+00	.1071E+03	-.3178E+00
.1128E+03	-.3077E+00	.1195E+03	-.2996E+00	.1281E+03	-.2915E+00
.1366E+03	-.2874E+00	.1477E+03	-.2814E+00	.1577E+03	-.2773E+00
.1686E+03	-.2713E+00	.1798E+03	-.2692E+00	.2001E+03	-.2692E+00
67	1	26	9		
.6818E+02	.5510E-02	.7629E+02	.5571E-02	.8058E+02	.5551E-02
.8772E+02	.5510E-02	.9388E+02	.5388E-02	.9866E+02	.5327E-02
.1050E+03	.5224E-02	.1101E+03	.5143E-02	.1162E+03	.4959E-02
.1206E+03	.4673E-02	.1270E+03	.4286E-02	.1303E+03	.3960E-02
.1355E+03	.3612E-02	.1398E+03	.3143E-02	.1459E+03	.2776E-02
.1497E+03	.2367E-02	.1558E+03	.2204E-02	.1599E+03	.1959E-02
.1655E+03	.1837E-02	.1700E+03	.1714E-02	.1734E+03	.1633E-02
.1773E+03	.1633E-02	.1801E+03	.1612E-02	.1841E+03	.1469E-02
.1927E+03	.1469E-02	.2000E+03	.1469E-02		
68	1	17	6		
.6987E+02	-.5111E+00	.7849E+02	-.5071E+00	.8418E+02	-.4970E+00
.9036E+02	-.4768E+00	.9573E+02	-.4667E+00	.1004E+03	-.4465E+00
.1039E+03	-.4263E+00	.1076E+03	-.3980E+00	.1108E+03	-.3677E+00
.1140E+03	-.3374E+00	.1170E+03	-.3253E+00	.1196E+03	-.3152E+00
.1208E+03	-.3091E+00	.1472E+03	-.3091E+00	.1688E+03	-.3071E+00
.1897E+03	-.2970E+00	.2002E+03	-.2949E+00		
69	1	31	11		
.6948E+02	.5761E-02	.7581E+02	.5314E-02	.8198E+02	.4909E-02
.8937E+02	.4341E-02	.9497E+02	.4016E-02	.1009E+03	.3671E-02
.1084E+03	.3225E-02	.1149E+03	.2840E-02	.1204E+03	.2535E-02
.1278E+03	.2312E-02	.1335E+03	.2110E-02	.1386E+03	.1968E-02
.1412E+03	.1866E-02	.1446E+03	.1905E-02	.1489E+03	.1826E-02
.1546E+03	.1866E-02	.1591E+03	.2150E-02	.1625E+03	.2394E-02
.1685E+03	.3144E-02	.1717E+03	.3489E-02	.1739E+03	.3935E-02
.1768E+03	.4462E-02	.1800E+03	.5193E-02	.1846E+03	.6105E-02
.1873E+03	.6937E-02	.1898E+03	.7667E-02	.1927E+03	.8600E-02
.1946E+03	.9249E-02	.1965E+03	.9939E-02	.1979E+03	.1051E-01
.1998E+03	.1124E-01				

70	1	32	11		
.6964E+02	-.4224E+00	.7580E+02	-.4510E+00	.8172E+02	-.4571E+00
.9723E+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	-.2388E+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	.7998E+02	-.1860E-01	.8016E+02	-.1770E-01
.9005E+02	-.1692E-01	.9428E+02	-.1574E-01	.9704E+02	-.1438E-01
.9947E+02	-.1365E-01	.1008E+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	.6499E-02	.1345E+03	.8174E-02	.1368E+03	.9605E-02
.1402E+03	.1116E-01	.1440E+03	.1275E-01	.1473E+03	.1459E-01
.1495E+03	.1557E-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
.2003E+03	.2689E-01				
72	1	27	9		
.4689E-01	.6047E-01	.5754E-01	.6031E-01	.6819E-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	.4086E-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	0.	.1000E+01	0.
73	1	32	11		
.6447E+02	.1346E+01	.7162E+02	.1301E+01	.7942E+02	.1273E+01
.8697E+02	.1220E+01	.9225E+02	.1176E+01	.9769E+02	.1164E+01
.1013E+03	.1119E+01	.1033E+03	.1103E+01	.1063E+03	.1030E+01
.1099E+03	.9730E+00	.1134E+03	.8716E+00	.1186E+03	.7216E+00
.1231E+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
.1678E+03	-.7135E+00	.1710E+03	-.8068E+00	.1744E+03	-.9041E+00
.1775E+03	-.9892E+00	.1808E+03	-.1082E+01	.1854E+03	-.1208E+01
.1927E+03	-.1439E+01	.2000E+03	-.1626E+01		
74	1	29	10		
.4492E-01	-.3316E+01	.6093E-01	-.3235E+01	.7547E-01	-.3198E+01
.8318E-01	-.3186E+01	.9066E-01	-.3162E+01	.9886E-01	-.3133E+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	.1288E+00	-.2714E+01	.1311E+00	-.2547E+01
.1335E+00	-.2319E+01	.1349E+00	-.2153E+01	.1363E+00	-.1982E+01
.1378E+00	-.1752E+01	.1388E+00	-.1558E+01	.1399E+00	-.1322E+01
.1409E+00	-.1135E+01	.1415E+00	-.9276E+00	.1426E+00	-.6877E+00
.1430E+00	-.4883E+00	.1435E+00	-.2970E+00	.1441E+00	-.4069E-02
.1440E+00	0.	.1000E+01	0.		
76	1	2	1		
.6954E+02	.6998E+00	.2000E+03	.6998E+00		
76	2	2	1		
.6971E+02	.1200E+01	.2002E+03	.1200E+01		
76	3	2	1		
.6954E+02	.1600E+01	.2003E+03	.1600E+01		
76	4	2	1		

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.6987E+02   .2000E+01   .2002E+03   .2000E+01
     77          1          27          9
.7035E+02  -.1161E+00   .7523E+02  -.1041E+00   .7889E+02  -.9593E-01
.8198E+02  -.8819E-01   .8711E+02  -.7739E-01   .9215E+02  -.6578E-01
.9801E+02  -.5519E-01   .1026E+03  -.4807E-01   .1070E+03  -.4114E-01
.1113E+03  -.3523E-01   .1154E+03  -.3055E-01   .1196E+03  -.2709E-01
.1238E+03  -.2566E-01   .1288E+03  -.2403E-01   .1327E+03  -.2363E-01
.1367E+03  -.2261E-01   .1405E+03  -.2179E-01   .1453E+03  -.2077E-01
.1502E+03  -.1914E-01   .1541E+03  -.1874E-01   .1672E+03  -.1670E-01
.1714E+03  -.1548E-01   .1771E+03  -.1466E-01   .1858E+03  -.1344E-01
.1910E+03  -.1222E-01   .1961E+03  -.1059E-01   .2028E+03  -.9572E-02
     78          1          23          8
.6970E+02   .1124E+02   .7717E+02   .9980E+01   .8383E+02   .8980E+01
.8968E+02   .7918E+01   .9748E+02   .6694E+01   .1030E+03   .5755E+01
.1083E+03   .4878E+01   .1141E+03   .4082E+01   .1171E+03   .3490E+01
.1194E+03   .3143E+01   .1238E+03   .2796E+01   .1282E+03   .2531E+01
.1337E+03   .2327E+01   .1401E+03   .2184E+01   .1458E+03   .2041E+01
.1523E+03   .1796E+01   .1598E+03   .1551E+01   .1670E+03   .1429E+01
.1730E+03   .1163E+01   .1810E+03   .1061E+01   .1891E+03   .8776E+00
.1964E+03   .6531E+00   .2005E+03   .5306E+00
     79          1          22          8
.7122E+02   .5053E-01   .7537E+02   .4534E-01   .7992E+02   .4016E-01
.8496E+02   .3490E-01   .8951E+02   .3077E-01   .9317E+02   .2810E-01
.9764E+02   .2543E-01   .1010E+03   .2413E-01   .1047E+03   .2348E-01
.1146E+03   .2340E-01   .1372E+03   .2324E-01   .1525E+03   .2316E-01
.1575E+03   .2283E-01   .1604E+03   .2283E-01   .1659E+03   .2219E-01
.1706E+03   .2154E-01   .1750E+03   .2081E-01   .1800E+03   .1992E-01
.1855E+03   .1870E-01   .1910E+03   .1757E-01   .1964E+03   .1652E-01
.2000E+03   .1571E-01
     80          1          17          6
.7019E+00   .2295E-01   .1168E+01   .2295E-01   .1701E+01   .2295E-01
.2014E+01   .2295E-01   .2187E+01   .2295E-01   .2248E+01   .2246E-01
.2297E+01   .2149E-01   .2380E+01   .2004E-01   .2492E+01   .1745E-01
.2582E+01   .1390E-01   .2675E+01   .1091E-01   .2743E+01   .8323E-02
.2824E+01   .4848E-02   .2867E+01   .2667E-02   .2897E+01   .8081E-04
.2900E+01  0.           .4000E+02  0.
     81          1          20          7
.6818E+02  -.3939E+00   .8052E+02  -.3939E+00   .9919E+02  -.3980E+00
.1135E+03  -.4020E+00   .1232E+03  -.4162E+00   .1302E+03  -.4283E+00
.1376E+03  -.4404E+00   .1427E+03  -.4525E+00   .1474E+03  -.4687E+00
.1549E+03  -.5253E+00   .1598E+03  -.5556E+00   .1646E+03  -.5980E+00
.1696E+03  -.6444E+00   .1755E+03  -.7192E+00   .1802E+03  -.7758E+00
.1844E+03  -.8303E+00   .1883E+03  -.8929E+00   .1931E+03  -.9576E+00
.1969E+03  -.1012E+01   .1995E+03  -.1055E+01
     82          1          16          6
.8774E+00   .3306E+00   .1506E+01   .3306E+00   .1934E+01   .3306E+00
.2013E+01   .3246E+00   .2184E+01   .3226E+00   .2347E+01   .3024E+00
.2447E+01   .2661E+00   .2506E+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.
     910         1          14          5
-.4000E+01   .9300E+00  -.3000E+01   .1300E+01  -.2000E+01   .2720E+01
-.1000E+01   .3870E+01  0.           .5250E+01   .5000E+00   .5460E+01
 .1000E+01   .5300E+01   .2000E+01   .4080E+01   .3000E+01   .2400E+01
 .4000E+01   .1050E+01   .5000E+01   .2500E+00   .6000E+01  0.
 .7000E+01  0.           .1200E+02  0.
     910         2          16          6
-.4000E+01   .7500E+00  -.3000E+01   .1500E+01  -.2000E+01   .2280E+01
-.1000E+01   .3100E+01  0.           .4100E+01   .1000E+01   .5200E+01
 .2000E+01   .6120E+01   .2500E+01   .6320E+01   .3000E+01   .6200E+01
 .4000E+01   .4600E+01   .5000E+01   .2270E+01   .6000E+01   .8200E+00
 .7000E+01   .1000E+00   .8000E+01  0.           .9000E+01  0.
 .1200E+02  0.
     910         3          15          5
-.4000E+01   .8200E+00  -.3000E+01   .1277E+01  -.2000E+01   .1970E+01
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-.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   .6000E+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+00  -.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
    913          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   .6000E-01   .1380E+00   .8000E-01   .1300E+00
 .1000E+00   .1200E+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
 .6372E+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
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.1434E+03   .2316E-01   .1490E+03   .1960E-01   .1553E+03   .1587E-01
.1596E+03   .1622E-01   .1672E+03   .1692E-01   .1730E+03   .1587E-01
.1793E+03   .1498E-01   .1856E+03   .1377E-01   .1918E+03   .1190E-01
.1950E+03   .1093E-01   .2006E+03   .8583E-02
      84          1          25          9
.6872E+02   .1349E+00   .7506E+02   .1164E+00   .8505E+02   .9616E-01
.9098E+02   .8162E-01   .9854E+02   .5980E-01   .1054E+03   .3717E-01
.1108E+03   .1535E-01   .1193E+03  -.1131E-01   .1274E+03  -.3879E-01
.1329E+03  -.6707E-01   .1392E+03  -.8970E-01   .1468E+03  -.1220E+00
.1518E+03  -.1487E+00   .1569E+03  -.1737E+00   .1622E+03  -.2020E+00
.1673E+03  -.2287E+00   .1725E+03  -.2618E+00   .1768E+03  -.2861E+00
.1813E+03  -.3232E+00   .1853E+03  -.3523E+00   .1890E+03  -.3798E+00
.1918E+03  -.4040E+00   .1951E+03  -.4372E+00   .1974E+03  -.4566E+00
.2002E+03  -.4857E+00
      85          1          19          7
.8050E+02  -.5223E-05   .8936E+02  -.5951E-05   .9821E+02  -.6397E-05
.1058E+03  -.6802E-05   .1104E+03  -.7166E-05   .1160E+03  -.7287E-05
.1213E+03  -.7449E-05   .1290E+03  -.7571E-05   .1348E+03  -.8057E-05
.1397E+03  -.8097E-05   .1460E+03  -.8097E-05   .1518E+03  -.8138E-05
.1565E+03  -.8421E-05   .1672E+03  -.8664E-05   .1724E+03  -.8664E-05
.1785E+03  -.8704E-05   .1856E+03  -.8826E-05   .1912E+03  -.8947E-05
.2000E+03  -.8988E-05
      86          1          16          6
.6043E-01   .5968E-05   .7548E-01   .5968E-05   .8719E-01   .5847E-05
.9557E-01   .5645E-05   .1009E+00   .5323E-05   .1083E+00   .5121E-05
.1133E+00   .4556E-05   .1193E+00   .4032E-05   .1234E+00   .3427E-05
.1258E+00   .2661E-05   .1287E+00   .1895E-05   .1312E+00   .1250E-05
.1341E+00   .4439E-06   .1348E+00   .8065E-07   .1350E+00   0.
.1000E+01   0.
      87          1          33          11
.8019E+02  -.2177E-02   .8685E+02  -.3624E-03   .9131E+02   .8214E-04
.9578E+02   .8624E-03   .1011E+03   .1807E-02   .1052E+03   .2834E-02
.1100E+03   .3368E-02   .1140E+03   .3943E-02   .1184E+03   .4641E-02
.1222E+03   .5092E-02   .1279E+03   .5667E-02   .1330E+03   .6242E-02
.1376E+03   .6489E-02   .1407E+03   .6653E-02   .1444E+03   .6858E-02
.1472E+03   .6858E-02   .1506E+03   .6776E-02   .1541E+03   .6776E-02
.1572E+03   .6571E-02   .1606E+03   .6283E-02   .1644E+03   .5832E-02
.1679E+03   .5133E-02   .1715E+03   .4764E-02   .1742E+03   .4271E-02
.1775E+03   .3655E-02   .1807E+03   .3203E-02   .1834E+03   .2505E-02
.1865E+03   .1725E-02   .1892E+03   .1232E-02   .1925E+03   .5339E-03
.1941E+03   .1643E-03   .1966E+03  -.6571E-03   .1995E+03  -.1150E-02
      88          1          16          6
.6011E-01  -.5172E-02   .7141E-01  -.5172E-02   .8010E-01  -.5051E-02
.9058E-01  -.5010E-02   .9699E-01  -.4971E-02   .1015E+00  -.4889E-02
.1067E+00  -.4687E-02   .1110E+00  -.4525E-02   .1147E+00  -.4326E-02
.1260E+00  -.2061E-02   .1279E+00  -.1414E-02   .1294E+00  -.8889E-03
.1310E+00  -.4848E-03   .1330E+00   0.          .1390E+00   0.
.1000E+01   0.
      91          1           2          1
.6000E+02   .6998E+00   .2002E+03   .6989E+00
      91          2           2          1
.6000E+02   .1203E+01   .1998E+03   .1203E+01
      91          3           2          1
.6000E+02   .1600E+01   .2000E+03   .1600E+01
      92          1          23          8
.8080E+02  -.1177E-04   .8705E+02  -.1039E-04   .9119E+02  -.9572E-05
.9639E+02  -.8595E-05   .1006E+03  -.7943E-05   .1063E+03  -.7251E-05
.1126E+03  -.6314E-05   .1259E+03  -.4684E-05   .1351E+03  -.3992E-05
.1401E+03  -.3299E-05   .1462E+03  -.2892E-05   .1501E+03  -.2688E-05
.1550E+03  -.2159E-05   .1579E+03  -.1589E-05   .1615E+03  -.9776E-06
.1646E+03  -.1222E-06   .1695E+03   .1018E-05   .1739E+03   .2200E-05
.1800E+03   .4236E-05   .1846E+03   .5906E-05   .1890E+03   .7413E-05
.1927E+03   .9124E-05   .1999E+03   .1132E-04
      93          1           3          1
0.          0.          .2000E+00   0.          .1000E+01   0.
      94          1          27          9
```

.8005E+02	.120 E-01	.88[illegible]	.1142E-01	.9411E+02	.1102E-01
.9939E+02	.1061E-01	.1050E+03	.1012E-01	.1133E+03	.9472E-02
.1200E+03	.9024E-02	.1249E+03	.8455E-02	.1293E+03	.8130E-02
.1346E+03	.7764E-02	.1405E+03	.7236E-02	.1488E+03	.6301E-02
.1542E+03	.5325E-02	.1594E+03	.4756E-02	.1629E+03	.4065E-02
.1670E+03	.3293E-02	.1713E+03	.2154E-02	.1756E+03	.1260E-02
.1788E+03	.5691E-03	.1815E+03	-.5098E-03	.1847E+03	-.1585E-02
.1874E+03	-.2724E-02	.1909E+03	-.4187E-02	.1935E+03	-.5610E-02
.1959E+03	-.6707E-02	.19[illegible]9E+03	-.8089E-02	.2002E+03	-.9919E-02
95	1	3	1		
.6007E-01	0.	.6000E+00	0.	.1000E+01	0.
96	1	23	8		
.8008E+02	.8753E-05	.8569E+02	.6748E-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	.1351E+03	.1677E-05
.1418E+03	.1800E-05	.1493E+03	.2249E-05	.1591E+03	.2658E-05
.1652E+03	.3067E-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		
97	1	2	1		
.6000E-01	0.	.1000E+01	0.		
98	1	23	8		
.7980E+02	-.1579E-01	.8330E+02	-.1377E-01	.8826E+02	-.1158E-01
.9289E+02	-.9919E-02	.9728E+02	-.8745E-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	-.3687E-02	.1747E+03	-.3360E-02	.1802E+03	-.2915E-02
.1862E+03	-.2389E-02	.1905E+03	-.1862E-02	.1933E+03	-.1296E-02
.1967E+03	-.7287E-03	.2001E+03	0.		
99	1	2	1		
.6000E-01	0.	.1000E+01	0.		
100	1	26	9		
.7995E+02	.2438E-03	.8369E+02	.2204E-03	.8831E+02	.1996E-03
.9245E+02	.1791E-03	.9756E+02	.1579E-03	.1011E+03	.1448E-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	.9121E-04	.1398E+03	.9162E-04	.1437E+03	.9407E-04
.1478E+03	.9734E-04	.1[illegible]E+03	.1014E-03	.1580E+03	.1072E-03
.1636E+03	.1149E-03	.1693E+03	.1235E-03	.1737E+03	.1305E-03
.1801E+03	.1431E-03	.1847E+03	.1539E-03	.1900E+03	.1665E-03
.1933E+03	.1751E-03	.1998E+03	.1881E-03		
101	1	21	7		
.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	-.9010E-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
.1338E+00	-.2667E-04	.1356E+00	-.1737E-04	.1373E+00	-.1051E-04
.1389E+00	-.4848E-05	.1407E+00	0.	.1000E+01	0.
102	1	26	9		
.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	-.1489E+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	-.1651E+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		
103	1	26	9		
.6000E-01	.1328E+00	.7423E-01	.1328E+00	.8000E-01	.1320E+00
.8618E-01	.1316E+00	.9073E-01	.1303E+00	.9602E-01	.1299E+00
.1010E+00	.1287E+00	.1054E+00	.1275E+00	.1098E+00	.1255E+00
.1148E+00	.1214E+00	.1184E+00	.1169E+00	.1215E+00	.1120E+00

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.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
.5984E+02   .1601E+01   .2002E+03   .1601E+01
    107         1          31          11
.8000E+02   .1470E-03   .8400E+02   .1180E-03   .8800E+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   .3900E-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-04   .1108E+00   .5481E-04   .1158E+00   .4990E-04
.1205E+00   .4622E-04   .1248E+00   .3804E-04   .1266E+00   .3313E-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
.7995E+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   -.9187E-01   .1409E+03   -.1016E+00
.1453E+03   -.1134E+00   .1492E+03   -.1215E+00   .1524E+03   -.1309E+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   -.2606E+00   .1901E+03   -.2797E+00   .1942E+03   -.2959E+00
.1976E+03   -.3126E+00   .1997E+03   -.3224E+00
    110         1          18           6
.5993E-01   -.6154E-01   .7048E-01   -.6113E-01   .8210E-01   -.6073E-01
.9257E-01   -.5992E-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   -.1303E-03   .1032E+03   -.1397E-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
.1388E+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   -.6110E-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
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.1050E+00   .4580E-03   .1100E+00   .2550E-03   .1150E+00   .2500E-03
.1200E+00   .2420E-03   .1250E+00   .2320E-03   .1300E+00   .2180E-03
.1350E+00   .1990E-03   .1400E+00   .1580E-03   .1450E+00   .1310E-03
.1500E+00   .9000E-04   .1550E+00   .4900E-04   .1600E+00   .2000E-04
.1650E+00   .1000E-05   .1700E+00   0.          .1000E+01   0.
   113          1          43          15
.8005E+02   .3171E-01   .8371E+02   .5569E-01   .8769E+02   .7867E-01
.9183E+02   .1004E+00   .9606E+02   .1187E+00   .9923E+02   .1325E+00
.1016E+03   .1407E+00   .1042E+03   .1500E+00   .1069E+03   .1557E+00
.1097E+03   .1589E+00   .1123E+03   .1610E+00   .1164E+03   .1606E+00
.1194E+03   .1577E+00   .1235E+03   .1545E+00   .1258E+03   .1484E+00
.1287E+03   .1423E+00   .1323E+03   .1337E+00   .1351E+03   .1240E+00
.1382E+03   .1130E+00   .1408E+03   .1016E+00   .1438E+03   .9065E-01
.1469E+03   .7927E-01   .1497E+03   .6545E-01   .1518E+03   .5691E-01
.1536E+03   .4593E-01   .1566E+03   .3130E-01   .1588E+03   .2195E-01
.1612E+03   .8537E-02   .1634E+03   -.2033E-02   .1659E+03   -.1504E-01
.1690E+03   -.3211E-01   .1716E+03   -.4634E-01   .1746E+03   -.6545E-01
.1768E+03   -.7805E-01   .1790E+03   -.9512E-01   .1809E+03   -.1033E+00
.1842E+03   -.1224E+00   .1860E+03   -.1370E+00   .1885E+03   -.1545E+00
.1911E+03   -.1707E+00   .1929E+03   -.1813E+00   .1959E+03   -.2024E+00
.1998E+03   -.2321E+00
   114          1          29          10
.5990E-01   -.2635E+00   .7054E-01   -.2635E+00   .7719E-01   -.2619E+00
.8295E-01   -.2619E+00   .9229E-01   -.2619E+00   .1000E+00   -.2611E+00
.1031E+00   -.2603E+00   .1081E+00   -.2574E+00   .1131E+00   -.2517E+00
.1173E+00   -.2456E+00   .1213E+00   -.2371E+00   .1242E+00   -.2305E+00
.1274E+00   -.2196E+00   .1309E+00   -.2061E+00   .1344E+00   -.1874E+00
.1373E+00   -.1674E+00   .1377E+00   -.1670E+00   .1417E+00   -.1360E+00
.1438E+00   -.1153E+00   .1458E+00   -.9613E-01   .1484E+00   -.7373E-01
.1500E+00   -.5580E-01   .1515E+00   -.3992E-01   .1528E+00   -.2770E-01
.1544E+00   -.1874E-01   .1558E+00   -.1141E-01   .1576E+00   -.6517E-02
.1594E+00   0.          .1000E+01   0.
    85          2          17          6
.7969E+02   .7814E-05   .8278E+02   .5030E-05   .8684E+02   .3846E-05
.9220E+02   .1215E-05   .9561E+02   -.1619E-06   .9959E+02   -.1377E-05
.1025E+03   -.1498E-05   .1105E+03   -.1619E-05   .1201E+03   -.1660E-05
.1288E+03   -.1862E-05   .1392E+03   -.1984E-05   .1515E+03   -.2024E-05
.1614E+03   -.2146E-05   .1703E+03   -.2429E-05   .1793E+03   -.2429E-05
.1909E+03   -.2510E-05   .2002E+03   -.2672E-05
    86          2          20          7
.6035E-01   .7500E-05   .7458E-01   .7500E-05   .8849E-01   .7500E-05
.9410E-01   .7500E-05   .9801E-01   .7339E-05   .1035E+00   .7177E-05
.1079E+00   .6855E-05   .1115E+00   .6613E-05   .1154E+00   .6331E-05
.1194E+00   .6008E-05   .1234E+00   .5282E-05   .1270E+00   .4597E-05
.1296E+00   .3710E-05   .1314E+00   .2823E-05   .1343E+00   .1935E-05
.1368E+00   .1210E-05   .1392E+00   .5242E-06   .1418E+00   .8065E-07
.1420E+00   0.          .1000E+01   0.
    87          2          32          11
.7971E+02   -.2349E-01   .8336E+02   -.1992E-01   .8693E+02   -.1671E-01
.9042E+02   -.1429E-01   .9399E+02   -.1199E-01   .9643E+02   -.1055E-01
.9678E+02   -.9322E-02   .1011E+03   -.8583E-02   .1040E+03   -.7310E-02
.1063E+03   -.6324E-02   .1088E+03   -.5544E-02   .1112E+03   -.4723E-02
.1139E+03   -.4271E-02   .1180E+03   -.3450E-02   .1224E+03   -.3121E-02
.1276E+03   -.2793E-02   .1312E+03   -.2546E-02   .1351E+03   -.2505E-02
.1380E+03   -.2546E-02   .1412E+03   -.2587E-02   .1450E+03   -.2752E-02
.1495E+03   -.2998E-02   .1528E+03   -.3244E-02   .1574E+03   -.3655E-02
.1664E+03   -.4764E-02   .1727E+03   -.5667E-02   .1791E+03   -.6612E-02
.1847E+03   -.7433E-02   .1885E+03   -.8214E-02   .1923E+03   -.8912E-02
.1955E+03   -.9405E-02   .1994E+03   -.1010E-01
    88          2          19          7
.6003E-01   -.7192E-02   .6499E-01   -.7192E-02   .7002E-01   -.7192E-02
.7498E-01   -.7192E-02   .8002E-01   -.7192E-02   .8497E-01   -.7192E-02
.9001E-01   -.7192E-02   .9496E-01   -.7111E-02   .1000E+00   -.7111E-02
.1050E+00   -.6990E-02   .1100E+00   -.6788E-02   .1150E+00   -.6101E-02
.1200E+00   -.5697E-02   .1250E+00   -.4283E-02   .1300E+00   -.2788E-02
.1350E+00   -.1081E-02   .1400E+00   0.          .1500E+00   0.
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 .1000E+01  0.
      90          1           2           1
 .6016E+02  .7028E+00  .2002E+03  .7028E+00
      90          2           3           1
 .5984E+02  .1040E+01  .1224E+03  .1198E+01   .1999E+03   .1198E+01
      90          3           2           1
 .6000E+02  .1599E+01  .1999E+03  .1599E+01
      92          2          37          13
 .8096E+02 -.1128E-04  .8380E+02 -.9532E-05   .8762E+02  -.7332E-05
 .9078E+02 -.5703E-05  .9306E+02 -.4725E-05   .9476E+02  -.3992E-05
 .9704E+02 -.3177E-05  .9980E+02 -.2403E-05   .1026E+03  -.1507E-05
 .1058E+03 -.8147E-06  .1084E+03 -.3666E-06   .1112E+03   .3259E-06
 .1163E+03  .7332E-05  .1203E+03  .9776E-06   .1255E+03   .1181E-05
 .1301E+03  .1222E-05  .1344E+03  .1222E-05   .1388E+03   .1181E-05
 .1430E+03  .1059E-05  .1455E+03  .9776E-06   .1486E+03   .6110E-06
 .1508E+03  .4481E-06  .1534E+03  .4073E-07   .1577E+03  -.7739E-06
 .1616E+03 -.1670E-05  .1646E+03 -.2729E-05   .1682E+03  -.3625E-05
 .1714E+03 -.4888E-05  .1740E+03 -.6110E-05   .1778E+03  -.7413E-05
 .1813E+03 -.9532E-05  .1843E+03 -.1100E-04   .1881E+03  -.1295E-04
 .1907E+03 -.1454E-04  .1926E+03 -.1605E-04   .1955E+03  -.1804E-04
 .1996E+03 -.2086E-04
      93          2          24           8
 0.          0.          .6003E-01 -.9073E-05   .7880E-01  -.9073E-05
 .8806E-01 -.9073E-05  .9155E-01 -.9032E-05   .1004E+00  -.8952E-05
 .1075E+00 -.8871E-05  .1110E+00 -.8669E-05   .1158E+00  -.8347E-05
 .1202E+00 -.8105E-05  .1255E+00 -.7339E-05   .1288E+00  -.6895E-05
 .1321E+00 -.5847E-05  .1332E+00 -.5323E-05   .1347E+00  -.4597E-05
 .1355E+00 -.4032E-05  .1369E+00 -.3145E-05   .1377E+00  -.2581E-05
 .1389E+00 -.1935E-05  .1402E+00 -.1411E-05   .1413E+00  -.9274E-06
 .1425E+00 -.4839E-06  .1438E+00  0.          .1000E+01  0.
      94          2          26           9
 .8021E+02  .2354E-01  .8200E+02  .2146E-01   .8541E+02   .1846E-01
 .8618E+02  .1654E-01  .9110E+02  .1443E-01   .9419E+02   .1252E-01
 .9646E+02  .1102E-01  .9963E+02  .9959E-02   .1024E+03   .8943E-02
 .1064E+03  .8293E-02  .1119E+03  .7805E-02   .1169E+03   .7764E-02
 .1210E+03  .7642E-02  .1252E+03  .7724E-02   .1306E+03   .7846E-02
 .1351E+03  .8171E-02  .1408E+03  .8821E-02   .1468E+03   .9268E-02
 .1511E+03  .9878E-02  .1555E+03  .1024E-01   .1610E+03   .1061E-01
 .1693E+03  .1183E-01  .1769E+03  .1260E-01   .1833E+03   .1341E-01
 .1896E+03  .1407E-01  .2000E+03  .1528E-01
      95          2          20           7
 .6015E-01  .7918E-02  .8360E-01  .8000E-02   .9678E-01   .8000E-02
 .1044E+00  .7918E-02  .1086E+00  .7837E-02   .1131E+00   .7469E-02
 .1177E+00  .7347E-02  .1219E+00  .6653E-02   .1257E+00   .5918E-02
 .1284E+00  .5306E-02  .1302E+00  .4531E-02   .1327E+00   .3714E-02
 .1350E+00  .2898E-02  .1368E+00  .2367E-02   .1389E+00   .1755E-02
 .1404E+00  .1102E-02  .1427E+00  .6939E-03   .1451E+00   .2857E-03
 .1470E+00  0.         .1000E+01  0.
      96          2          33          17
 .8041E+02  .2986E-05  .8455E+02  .4213E-05   .8764E+02   .5153E-05
 .9122E+02  .6053E-05  .9439E+02  .6912E-05   .9837E+02   .7689E-05
 .1024E+03  .8384E-05  .1060E+03  .9080E-05   .1096E+03   .9611E-05
 .1144E+03  .1006E-04  .1198E+03  .1043E-04   .1240E+03   .1059E-04
 .1285E+03  .1063E-04  .1320E+03  .1067E-04   .1370E+03   .1067E-04
 .1411E+03  .1055E-04  .1473E+03  .1018E-04   .1517E+03   .9816E-05
 .1559E+03  .9325E-05  .1589E+03  .8793E-05   .1615E+03   .8384E-05
 .1645E+03  .7689E-05  .1691E+03  .6462E-05   .1732E+03   .5317E-05
 .1763E+03  .4540E-05  .1761E+03  .4581E-05   .1811E+03   .2945E-05
 .1843E+03  .1800E-05  .1870E+03  .7362E-06   .1892E+03  -.2454E-06
 .1915E+03 -.1268E-05  .1947E+03 -.2699E-05   .2000E+03  -.5200E-05
      97          2          25           9
 .6006E-01 -.2287E-04  .6981E-01 -.2279E-04   .8070E-01  -.2243E-04
 .9045E-01 -.2219E-04  .9874E-01 -.2194E-04   .1060E+00  -.2138E-04
 .1130E+00 -.2085E-04  .1189E+00 -.2016E-04   .1244E+00  -.1927E-04
 .1295E+00 -.1802E-04  .1334E+00 -.1680E-04   .1370E+00  -.1518E-04
 .1394E+00 -.1401E-04  .1412E+00 -.1290E-04   .1426E+00  -.1194E-04
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.1450E+00  -.1049E-04   .1466E+00  -.9190E-05   .1480E+00  -.7944E-05
.1503E+00  -.5911E-05   .1524E+00  -.3969E-05   .1546E+00  -.2755E-05
.1575E+00  -.1215E-05   .1589E+00  -.6073E-06   .1615E+00  0.
.1000E+01  0.
    98          2          31          11
.8273E+02  -.6073E-02   .8541E+02  -.7126E-02   .8899E+02  -.7976E-02
.9183E+02  -.8704E-02   .9565E+02  -.9474E-02   .9866E+02  -.1024E-01
.1030E+03  -.1073E-01   .1064E+03  -.1117E-01   .1099E+03  -.1126E-01
.1134E+03  -.1121E-01   .1180E+03  -.1057E-01   .1208E+03  -.1036E-01
.1258E+03  -.9028E-02   .1307E+03  -.8057E-02   .1352E+03  -.6761E-02
.1396E+03  -.5911E-02   .1425E+03  -.5263E-02   .1463E+03  -.4211E-02
.1501E+03  -.3279E-02   .1557E+03  -.1619E-02   .1590E+03  -.7692E-03
.1633E+03   .4453E-03   .1677E+03   .1741E-02   .1720E+03   .2915E-02
.1756E+03   .4008E-02   .1798E+03   .5101E-02   .1841E+03   .6437E-02
.1876E+03   .7490E-02   .1914E+03   .8543E-02   .1945E+03   .9555E-02
.1998E+03   .1126E-01
    99          2          28          10
.6029E-01   .2201E-01   .7632E-01   .2201E-01   .8682E-01   .2201E-01
.9276E-01   .2185E-01   .9788E-01   .2177E-01   .1031E+00   .2165E-01
.1088E+00   .2125E-01   .1140E+00   .2082E-01   .1176E+00   .2040E-01
.1217E+00   .1968E-01   .1251E+00   .1907E-01   .1282E+00   .1823E-01
.1326E+00   .1698E-01   .1365E+00   .1541E-01   .1394E+00   .1380E-01
.1420E+00   .1243E-01   .1434E+00   .1103E-01   .1451E+00   .9658E-02
.1471E+00   .7847E-02   .1488E+00   .5996E-02   .1506E+00   .3662E-02
.1526E+00   .2414E-02   .1544E+00   .1489E-02   .1566E+00   .7646E-03
.1586E+00   .4829E-03   .1601E+00   .4024E-04   .1600E+00  0.
.1000E+01  0.
   100          2          24           8
.8003E+02   .8221E-04   .8458E+02   .8139E-04   .9056E+02   .7812E-04
.9724E+02   .7362E-04   .1013E+03   .7362E-04   .1069E+03   .7239E-04
.1103E+03   .7157E-04   .1156E+03   .7157E-04   .1203E+03   .7239E-04
.1256E+03   .7485E-04   .1299E+03   .7853E-04   .1346E+03   .8957E-04
.1404E+03   .8466E-04   .1457E+03   .9162E-04   .1523E+03   .9652E-04
.1594E+03   .1063E-03   .1642E+03   .1141E-03   .1707E+03   .1223E-03
.1756E+03   .1288E-03   .1807E+03   .1419E-03   .1857E+03   .1489E-03
.1914E+03   .1595E-03   .1959E+03   .1669E-03   .2000E+03   .1746E-03
   101          2          21           7
.5982E-01  -.1131E-03   .7281E-01  -.1131E-03   .8068E-01  -.1131E-03
.8791E-01  -.1119E-03   .9261E-01  -.1115E-03   .9935E-01  -.1099E-03
.1058E+00  -.1071E-03   .1103E+00  -.1042E-03   .1158E+00  -.9737E-04
.1201E+00  -.9374E-04   .1248E+00  -.8768E-04   .1289E+00  -.7758E-04
.1316E+00  -.6707E-04   .1343E+00  -.5535E-04   .1363E+00  -.4162E-04
.1377E+00  -.3030E-04   .1403E+00  -.1939E-04   .1423E+00  -.1051E-04
.1440E+00  -.4444E-05   .1460E+00  0.          .1000E+01  0.
   102          2          33          11
.8000E+02  -.6531E-01   .8602E+02  -.7099E-01   .9130E+02  -.7748E-01
.9683E+02  -.8235E-01   .1017E+03  -.8641E-01   .1058E+03  -.9006E-01
.1089E+03  -.9128E-01   .1128E+03  -.9493E-01   .1173E+03  -.9533E-01
.1233E+03  -.9736E-01   .1271E+03  -.9777E-01   .1310E+03  -.9556E-01
.1349E+03  -.1006E+00   .1393E+03  -.1051E+00   .1433E+03  -.1103E+00
.1472E+03  -.1164E+00   .1513E+03  -.1229E+00   .1554E+03  -.1302E+00
.1590E+03  -.1367E+00   .1633E+03  -.1485E+00   .1670E+03  -.1570E+00
.1702E+03  -.1639E+00   .1732E+03  -.1712E+00   .1762E+03  -.1801E+00
.1797E+03  -.1899E+00   .1826E+03  -.2000E+00   .1859E+03  -.2085E+00
.1891E+03  -.2178E+00   .1917E+03  -.2284E+00   .1937E+03  -.2353E+00
.1960E+03  -.2422E+00   .1980E+03  -.2483E+00   .1999E+03  -.2535E+00
   103          2          27           9
.6016E-01   .1149E+00   .6829E-01   .1149E+00   .7309E-01   .1141E+00
.8057E-01   .1132E+00   .8691E-01   .1124E+00   .9537E-01   .1112E+00
.1023E+00   .1100E+00   .1068E+00   .1084E+00   .1109E+00   .1067E+00
.1149E+00   .1039E+00   .1183E+00   .9939E-01   .1221E+00   .9328E-01
.1248E+00   .8432E-01   .1275E+00   .7617E-01   .1294E+00   .6762E-01
.1320E+00   .5866E-01   .1349E+00   .4644E-01   .1368E+00   .3707E-01
.1388E+00   .2811E-01   .1407E+00   .2159E-01   .1424E+00   .1548E-01
.1435E+00   .1018E-01   .1450E+00   .7332E-02   .1465E+00   .4073E-02
.1474E+00   .2851E-02   .1473E+00   0.          .1000E+01
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   105          1          53          16
.6033E+02   .1065E+01   .6496E+02   .1031E+01   .7024E+02   .9801E+00
.7325E+02   .9459E+00   .7512E+02   .9191E+00   .7780E+02   .8955E+00
.7927E+02   .8727E+00   .8114E+02   .8377E+00   .8325E+02   .8068E+00
.8618E+02   .7702E+00   .8654E+02   .7401E+00   .9154E+02   .7149E+00
.9415E+02   .7035E+00   .9593E+02   .6930E+00   .9780E+02   .6905E+00
.1005E+03   .6922E+00   .1026E+03   .6987E+00   .1053E+03   .7166E+00
.1072E+03   .7336E+00   .1091E+03   .7564E+00   .1104E+03   .7808E+00
.1113E+03   .8028E+00   .1122E+03   .8166E+00   .1131E+03   .8337E+00
.1140E+03   .8451E+00   .1153E+03   .8597E+00   .1167E+03   .8703E+00
.1182E+03   .8857E+00   .1197E+03   .8939E+00   .1213E+03   .9012E+00
.1231E+03   .9101E+00   .1251E+03   .9118E+00   .1272E+03   .9118E+00
.1285E+03   .9126E+00   .1313E+03   .9126E+00   .1333E+03   .9126E+00
.1350E+03   .9109E+00   .1369E+03   .9109E+00   .1389E+03   .9109E+00
.1408E+03   .9101E+00   .1450E+03   .9061E+00   .1476E+03   .9052E+00
.1496E+03   .8987E+00   .1541E+03   .8947E+00   .1571E+03   .8906E+00
.1616E+03   .8849E+00   .1644E+03   .8768E+00   .1675E+03   .8719E+00
.1733E+03   .8589E+00   .1799E+03   .8451E+00   .1850E+03   .8312E+00
.1911E+03   .8125E+00   .1998E+03   .7898E+00
   105          2          23          8
.6008E+02   .1205E+01   .6390E+02   .1187E+01   .6821E+02   .1166E+01
.7228E+02   .1148E+01   .7593E+02   .1132E+01   .7935E+02   .1118E+01
.8220E+02   .1106E+01   .8626E+02   .1092E+01   .8927E+02   .1087E+01
.9301E+02   .1080E+01   .9496E+02   .1078E+01   .9837E+02   .1079E+01
.1020E+03   .1089E+01   .1054E+03   .1106E+01   .1085E+03   .1128E+01
.1116E+03   .1152E+01   .1137E+03   .1170E+01   .1162E+03   .1188E+01
.1192E+03   .1200E+01   .1224E+03   .1204E+01   .1272E+03   .1203E+01
.1756E+03   .1203E+01   .2002E+03   .1203E+01
   105          3          2          1
.6024E+02   .1599E+01   .2000E+03   .1599E+01
   107          2          31          11
.8000E+02   .3280E-03   .8400E+02   .2650E-03   .8800E+02   .2060E-03
.9200E+02   .1610E-03   .9600E+02   .1210E-03   .1000E+03   .9100E-04
.1040E+03   .6900E-04   .1080E+03   .4800E-04   .1120E+03   .3000E-04
.1160E+03   .1900E-04   .1200E+03   .7000E-05   .1240E+03  -.2000E-05
.1280E+03  -.8000E-05   .1320E+03  -.1000E-04   .1360E+03  -.1000E-04
.1400E+03  -.9000E-05   .1440E+03  -.3000E-05   1480E+03   .1000E-05
.1520E+03   .1400E-04   .1560E+03   .2800E-04   .1600E+03   .4200E-04
.1640E+03   .5700E-04   .1680E+03   .7300E-04   .1720E+03   .9100E-04
.1760E+03   .1100E-03   .1800E+03   .1280E-03   .1840E+03   .1470E-03
.1880E+03   .2680E-03   .1920E+03   .1880E-03   .1960E+03   .2100E-03
.2000E+03   .2310E-03
   108          2          15          5
.6005E-01   .1800E-04   .7339E-01   .1800E-04   .8356E-01   .1800E-04
.9658E-01   .1800E-04   .1059E+00   .1759E-04   .1133E+00   .1718E-04
.1186E+00   .1431E-04   .1223E+00   .1350E-04   .1247E+00   .1063E-04
.1264E+00   .8589E-05   .1288E+00   .6953E-05   .1317E+00   .5317E-05
.1334E+00   .3272E-05   .1358E+00   0.          .1000E+01   0.
   109          2          34          12
.8279E+02  -.4293E+00   .8515E+02  -.3907E+00   .8758E+02  -.3577E+00
.9042E+02  -.3244E+00   .9278E+02  -.2959E+00   .9472E+02  -.2711E+00
.9643E+02  -.2533E+00   .9903E+02  -.2280E+00   .1016E+03  -.2069E+00
.1037E+03  -.1907E+00   .1063E+03  -.1703E+00   .1083E+03  -.1581E+00
.1104E+03  -.1451E+00   .1133E+03  -.1341E+00   .1158E+03  -.1272E+00
.1190E+03  -.1220E+00   .1206E+03  -.1203E+00   .1231E+03  -.1207E+00
.1271E+03  -.1264E+00   .1313E+03  -.1301E+00   .1357E+03  -.1358E+00
.1401E+03  -.1423E+00   .1459E+03  -.1520E+00   .1500E+03  -.1573E+00
.1554E+03  -.1663E+00   .1601E+03  -.1756E+00   .1651E+03  -.1841E+00
.1696E+03  -.1939E+00   .1736E+03  -.2020E+00   .1797E+03  -.2167E+00
.1854E+03  -.2268E+00   .1898E+03  -.2370E+00   .1940E+03  -.2463E+00
.1990E+03  -.2549E+00
   110          2          14          5
.5985E-01  -.2713E-01   .7536E-01  -.2672E-01   .9298E-01  -.2672E-01
.1005E+00  -.2672E-01   .1060E+00  -.2591E-01   .1098E+00  -.2470E-01
.1142E+00  -.2348E-01   .1182E+00  -.2186E-01   .1214E+00  -.1862E-01
.1247E+00  -.1538E-01   .1268E+00  -.1211E-02   .1294E+00  -.5263E-02
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.1320E+00  0.          .1000E+01  0.
   111        2           22         8
.7971E+02   .4766E-04  .8231E+02   .3625E-04  .8709E+02   .1507E-04
.9107E+02   .2444E-05  .9610E+02  -.1385E-04  .1006E+03  -.2525E-04
.1050E+03  -.3218E-04  .1098E+03  -.3910E-04  .1137E+03  -.3951E-04
.1265E+03  -.4644E-04  .1317E+03  -.4888E-04  .1326E+03  -.5499E-04
.1419E+03  -.5051E-04  .1494E+03  -.5051E-04  .1541E+03  -.5051E-04
.1659E+03  -.4847E-04  .1731E+03  -.4521E-04  .1781E+03  -.4236E-04
.1841E+03  -.4073E-04  .1899E+03  -.3707E-04  .1939E+03  -.3381E-04
.1998E+03  -.3055E-04
   112        2           24         8
.6000E-01   .1340E-03  .6500E-01   .1340E-03  .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   .1300E-03
.1050E+00   .1290E-03  .1100E+00   .1270E-03  .1150E+00   .1220E-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.
   113        2           32        11
.7980E+02  -.1545E+00  .8338E+02  -.1236E+00  .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   .4350E-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   .4268E-01
.1675E+03   .3496E-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
   114        2           25         9
.5974E-01  -.1572E+00  .6997E-01  -.1560E+00  .7987E-01  -.1560E+00
.8953E-01  -.1552E+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  -.1369E+00  .1248E+00  -.1271E+00
.1273E+00  -.1189E+00  .1292E+00  -.1079E+00  .1315E+00  -.9572E-01
.1334E+00  -.7902E-01  .1351E+00  -.6558E-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  .1467E+00  0.
.1000E+01  0.
   115        1           19         7
.5000E+00   .8758E-03  .5494E+00   .1059E-02  .6257E+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
   115        1           26         9
.9318E+02  -.3984E+00  .9675E+02  -.3587E+00  .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
   117        1           5          2
0.         0.          .1997E+00  0.          .7633E+00  0.
.2000E+00  0.          .7600E+00  0.
   120        1           2          1
.6036E+02   .7006E+00  .2002E+03   .7006E+00
   120        2           2          1
.6003E+02   .1199E+01  .2002E+03   .1199E+01
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    120          3           2           4
.6019E+02   .1602E+01   .2000E+03   .1602E+01
    121          1          28          10
.7962E+02   .2869E-04   .8233E+02   .2422E-04   .8504E+02   .1944E-04
.8815E+02   .1522E-04   .9118E+02   .1131E-04   .9396E+02   .8367E-05
.9685E+02   .5498E-05   .9892E+02   .4303E-05   .1035E+03   .1355E-05
.1073E+03  -.9562E-06   .1130E+03  -.3028E-05   .1170E+03  -.4781E-05
.1218E+03  -.6215E-05   .1264E+03  -.7171E-05   .1312E+03  -.7968E-05
.1372E+03  -.8606E-05   .1417E+03  -.9004E-05   .1479E+03  -.9402E-05
.1504E+03  -.9402E-05   .1533E+03  -.9323E-05   .1580E+03  -.9243E-05
.1644E+03  -.8345E-05   .1694E+03  -.8446E-05   .1750E+03  -.7729E-05
.1810E+03  -.6773E-05   .1869E+03  -.6375E-05   .1927E+03  -.5179E-05
.1998E+03  -.3984E-05
    122          1          18           6
.7989E+02   .1408E-01   .8571E+02   .1200E-01   .9010E+02   .1056E-01
.9473E+02   .9040E-02   .9968E+02   .7440E-02   .1071E+03   .5520E-02
.1133E+03   .3680E-02   .1210E+03   .2000E-02   .1276E+03   .6400E-03
.1334E+03  -.3200E-03   .1422E+03  -.1600E-02   .1491E+03  -.2400E-02
.1559E+03   .2880E-02   .1619E+03  -.3440E-02   .1696E+03  -.3920E-02
.1781E+03  -.4400E-02   .1871E+03  -.4400E-02   .2003E+03  -.4400E-02
    123          1          25           9
.8000E+02   .1336E-02   .8263E+02   .1046E-02   .8637E+02   .6680E-03
.9116E+02   .3541E-03   .9675E+02   .6439E-04   .9960E+02  -.9658E-04
.1050E+03  -.2897E-03   .1087E+03  -.3783E-03   .1146E+03  -.4909E-03
.1183E+03  -.5634E-03   .1246E+03  -.6439E-03   .1296E+03  -.7082E-03
.1352E+03  -.7163E-03   .1396E+03  -.7082E-03   .1455E+03  -.6841E-03
.1523E+03  -.6439E-03   .1590E+03  -.5795E-03   .1656E+03  -.4829E-03
.1731E+03  -.3702E-03   .1783E+03  -.2817E-03   .1837E+03  -.1771E-03
.1873E+03  -.7243E-04   .1915E+03   .4829E-04   .1954E+03   .1207E-03
.1998E+03   .2414E-03
    124          1          27           9
.7941E+02  -.2200E+01   .8236E+02  -.1872E+01   .8554E+02  -.1544E+01
.9072E+02  -.1096E+01   .9343E+02  -.8880E+00   .9574E+02  -.7280E+00
.9877E+02  -.5360E+00   .1015E+03  -.4080E+00   .1050E+03  -.1840E+00
.1076E+03  -.1120E+00   .1102E+03   .8000E-02   .1136E+03   .1360E+00
.1177E+03   .2720E+00   .1243E+03   .4080E+00   .1301E+03   .5440E+00
.1364E+03   .6560E+00   .1402E+03   .6880E+00   .1456E+03   .7520E+00
.1528E+03   .7840E+00   .1571E+03   .8160E+00   .1612E+03   .8160E+00
.1677E+03   .8160E+00   .1740E+03   .8000E+00   .1805E+03   .8000E+00
.1865E+03   .7600E+00   .1912E+03   .7200E+00   .2001E+03   .6400E+00
    125          1          15           5
.7978E+02  -.1071E-04   .9084E+02  -.8889E-05   .9928E+02  -.7698E-05
.1068E+03  -.5635E-05   .1155E+03  -.4365E-05   .1209E+03  -.3095E-05
.1267E+03  -.1825E-05   .1334E+03   0.          .1436E+03   .2063E-05
.1557E+03   .5238E-05   .1648E+03   .7222E-05   .1760E+03   .9683E-05
.1852E+03   .1198E-04   .1933E+03   .1405E-04   .2001E+03   .1540E-04
    126          1          16           6
.7935E+02   .2402E-01   .8563E+02   .2052E-01   .9160E+02   .1765E-01
.9916E+02   .1479E-01   .1074E+03   .1113E-01   .1143E+03   .8509E-02
.1230E+03   .5726E-02   .1299E+03   .3817E-02   .1370E+03   .1352E-02
.1442E+03  -.3976E-03   .1541E+03  -.2863E-02   .1638E+03  -.5408E-02
.1719E+03  -.7475E-02   .1862E+03  -.1074E-01   .1937E+03  -.1209E-01
.1997E+03  -.1368E-01
    127          1          24           8
.8008E+02  -.1590E-02   .8446E+02  -.1296E-02   .8813E+02  -.1074E-02
.9195E+02  -.8191E-03   .9753E+02  -.4692E-03   .1025E+03  -.1750E-03
.1057E+03   .2386E-04   .1106E+03   .2068E-03   .1153E+03   .4135E-03
.1192E+03   .4930E-03   .1232E+03   .5726E-03   .1296E+03   .5726E-03
.1343E+03   .5567E-03   .1425E+03   .5567E-03   .1488E+03   .5567E-03
.1547E+03   .5169E-03   .1598E+03   .4692E-03   .1649E+03   .4056E-03
.1698E+03   .3499E-03   .1759E+03   .2306E-03   .1802E+03   .1431E-03
.1872E+03   .2386E-04   .1933E+03  -.9543E-04   .1995E+03  -.2545E-03
    128          1          27           9
.8037E+02   .4201E+01   .8347E+02   .3510E+01   .8706E+02   .2779E+01
.9056E+02   .2112E+01   .9407E+02   .1438E+01   .9725E+02   .8434E+00
.9880E+02   .4739E+00   .1027E+03   .5622E-01   .1062E+03  -.5301E+00
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.1098E+03  -.9237E+00   .1124E+03  -.1245E+01   .1146E+03  -.1390E+01
.1190E+03  -.1703E+01   .1211E+03  -.1791E+01   .1242E+03  -.1839E+01
.1274E+03  -.1823E+01   .1325E+03  -.1695E+01   .1391E+03  -.1534E+01
.1462E+03  -.1357E+01   .1528E+03  -.1124E+01   .1659E+03  -.6667E+00
.1731E+03  -.3855E+00   .1791E+03  -.1285E+00   .1849E+03   .1446E+00
.1917E+03   .4337E+00   .1968E+03   .7068E+00   .1999E+03   .8514E+00
    115         2           45          15
.5000E+00   .1365E-02   .5364E+00   .1324E-02   .5774E+00   .1263E-02
.6253E+00   .1161E-02   .6508E+00   .1120E-02   .6983E+00   .1039E-02
.7507E+00   .9165E-03   .7994E+00   .8554E-03   .8436E+00   .8147E-03
.8842E+00   .7332E-03   .8988E+00   .7332E-03   .9166E+00   .7739E-03
.9328E+00   .9165E-03   .9552E+00   .1181E-02   .9734E+00   .1385E-02
.9961E+00   .1731E-02   .1018E+01   .1894E-02   .1038E+01   .2077E-02
.1063E+01   .2240E-02   .1095E+01   .2546E-02   .1135E+01   .2749E-02
.1173E+01   .2892E-02   .1198E+01   .2974E-02   .1214E+01   .3035E-02
.1248E+01   .3035E-02   .1268E+01   .3035E-02   .1293E+01   .3035E-02
.1320E+01   .2994E-02   .1346E+01   .2974E-02   .1376E+01   .2831E-02
.1402E+01   .2729E-02   .1437E+01   .2505E-02   .1476E+01   .2220E-02
.1515E+01   .1976E-02   .1551E+01   .1670E-02   .1599E+01   .1283E-02
.1654E+01   .8554E-03   .1696E+01   .7536E-03   .1725E+01   .6517E-03
.1776E+01   .5092E-03   .1802E+01   .4481E-03   .1843E+01   .3055E-03
.1894E+01   .3055E-03   .1952E+01   .3055E-03   .2000E+01   .3055E-03
    116         2           32          11
.7994E+02   .6397E-01   .8530E+02   .6640E-01   .9025E+02   .7368E-01
.9504E+02   .7854E-01   .9984E+02   .8097E-01   .1024E+03   .8178E-01
.1065E+03   .8097E-01   .1106E+03   .7592E-01   .1140E+03   .7206E-01
.1174E+03   .6235E-01   .1201E+03   .5344E-01   .1231E+03   .4372E-01
.1272E+03   .2834E-01   .1314E+03   .1457E-01   .1349E+03   0.
.1387E+03  -.1700E-01   .1419E+03  -.2672E-01   .1453E+03  -.4211E-01
.1493E+03  -.6073E-01   .1543E+03  -.8421E-01   .1645E+03  -.1279E+00
.1668E+03  -.1441E+00   .1700E+03  -.1563E+00   .1726E+03  -.1668E+00
.1760E+03  -.1798E+00   .1800E+03  -.1927E+00   .1835E+03  -.2081E+00
.1868E+03  -.2121E+00   .1902E+03  -.2227E+00   .1925E+03  -.2267E+00
.1950E+03  -.2275E+00   .1999E+03  -.2283E+00
    117         2           30          10
.1997E+00   .1279E+00   .2253E+00   .1279E+00   .2501E+00   .1270E+00
.2749E+00   .1262E+00   .3001E+00   .1189E+00   .3245E+00   .1180E+00
.3497E+00   .1139E+00   .3701E+00   .1066E+00   .3928E+00   .1033E+00
.4022E+00   .1016E+00   .4144E+00   .9426E-01   .4278E+00   .8607E-01
.4469E+00   .7459E-01   .4616E+00   .6066E-01   .4811E+00   .4754E-01
.4941E+00   .3525E-01   .5100E+00   .1639E-01   .5222E+00   .4918E-02
.5360E+00   0.          .5510E+00  -.1148E-01   .5681E+00  -.1803E-01
.5836E+00  -.2705E-01   .5998E+00  -.2951E-01   .6153E+00  -.3279E-01
.6348E+00  -.4098E-01   .6600E+00  -.4426E-01   .6840E+00  -.5082E-01
.7060E+00  -.5246E-01   .7336E+00  -.5410E-01   .7613E+00  -.5902E-01
    119         1           2           1
.6009E+02   .7027E+00   .2002E+03   .7027E+00
    119         2           2           1
.6009E+02   .9025E+00   .2001E+03   .9025E+00
    119         3           2           1
.6009E+02   .1602E+01   .2001E+03   .1602E+01
    121         2           31          11
.7970E+02   .6295E-05   .8249E+02   .3028E-05   .8504E+02   .2390E-06
.8815E+02  -.1753E-05   .9230E+02  -.4622E-05   .9661E+02  -.6295E-05
.1004E+03  -.7331E-05   .1046E+03  -.8127E-05   .1083E+03  -.8446E-05
.1135E+03  -.8685E-05   .1176E+03  -.8606E-05   .1206E+03  -.8367E-05
.1246E+03  -.7888E-05   .1276E+03  -.7171E-05   .1310E+03  -.6534E-05
.1379E+03  -.5020E-05   .1430E+03  -.3108E-05   .1477E+03  -.1195E-05
.1518E+03   .7968E-06   .1569E+03   .3108E-05   .1614E+03   .5020E-05
.1651E+03   .7490E-05   .1694E+03   .9960E-05   .1730E+03   .1243E-04
.1769E+03   .1450E-04   .1809E+03   .1721E-04   .1848E+03   .2000E-04
.1884E+03   .2223E-04   .1914E+03   .2454E-04   .1948E+03   .2733E-04
.1998E+03   .3050E-04
    122         2           39          13
.8013E+02  -.1968E-01   .8053E+02  -.1752E-01   .8268E+02  -.1224E-01
.8428E+02  -.8324E-02   .8634E+02  -.3920E-02   .8811E+02  -.9600E-03
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.9010E+02	.1920E-02	.9218E+02	.4400E-02	.9401E+02	.6640E-02
.9585E+02	.8480E-02	.9848E+02	.1048E-01	.1005E+03	.1176E-01
.1035E+03	.1336E-01	.1058E+03	.1424E-01	.1084E+03	.1472E-01
.1105E+03	.1496E-01	.1128E+03	.1488E-01	.1172E+03	.1472E-01
.1213E+03	.1392E-01	.1253E+03	.1288E-01	.1291E+03	.1152E-01
.1329E+03	.9360E-02	.1373E+03	.7520E-02	.1402E+03	.5600E-02
.1441E+03	.3440E-02	.1476E+03	.6400E-03	.1511E+03	-.1600E-02
.1547E+03	-.4480E-02	.1578E+03	-.7040E-02	.1606E+03	-.1000E-01
.1673E+03	-.1616E-01	.1702E+03	-.1856E-01	.1742E+03	-.2312E-01
.1776E+03	-.2664E-01	.1802E+03	-.2976E-01	.1838E+03	-.3408E-01
.1868E+03	-.3760E-01	.1896E+03	-.4136E-01	.2000E+03	-.5600E-01
123	2	25	9		
.8008E+02	.2736E-03	.8367E+02	.1610E-04	.8972E+02	-.2414E-03
.9546E+02	-.4748E-03	.1013E+03	-.5553E-03	.1076E+03	-.6439E-03
.1103E+03	-.6519E-03	.1137E+03	-.6761E-03	.1175E+03	-.6600E-03
.1211E+03	-.6358E-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	.1553E+03	.1368E-03	.1597E+03	.2897E-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				
124	2	31	11		
.7997E+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	.1080E+03	.4240E+00	.1120E+03	.4480E+00
.1160E+03	.4800E+00	.1200E+03	.4720E+00	.1240E+03	.4240E+00
.1280E+03	.4000E+00	.1320E+03	.3840E+00	.1360E+03	.3200E+00
.1400E+03	.2480E+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	-.6480E+00	.1800E+03	-.8000E+00	.1840E+03	-.9440E+00
.1880E+03	-.1104E+01	.1920E+03	-.1232E+01	.1960E+03	-.1472E+01
.2000E+03	-.1590E+01				
125	2	22	8		
.8018E+02	-.1849E-04	.8917E+02	-.1643E-04	.9737E+02	-.1349E-04
.1076E+03	-.9683E-05	.1143E+03	-.6745E-05	.1169E+03	-.5000E-05
.1234E+03	-.3492E-05	.1283E+03	-.8730E-06	.1332E+03	.2063E-05
.1378E+03	.3968E-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	.2603E-04
.1818E+03	.2913E-04	.1883E+03	.3381E-04	.1932E+03	.3643E-04
.1999E+03	.4032E-04				
126	2	18	6		
.7951E+02	.7952E-02	.8802E+02	.4930E-02	.9320E+02	.3499E-02
.9956E+02	.1431E-02	.1051E+03	.1590E-03	.1116E+03	-.1590E-02
.1187E+03	-.3181E-02	.1264E+03	-.4851E-02	.1347E+03	-.6918E-02
.1410E+03	-.7793E-02	.1500E+03	-.9861E-02	.1542E+03	-.1050E-01
.1667E+03	-.1336E-01	.1738E+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	-.7157E-03	.8390E+02	-.2942E-03	.8701E+02	.2386E-03
.9004E+02	.7237E-03	.9235E+02	.1010E-02	.9482E+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	.2131E-02	.1157E+03	.1988E-02	.1195E+03	.1861E-02
.1249E+03	.1622E-02	.1293E+03	.1384E-02	.1344E+03	.1082E-02
.1383E+03	.8588E-03	.1416E+03	.6521E-03	.1449E+03	.4056E-03
.1500E+03	.3976E-04	.1547E+03	-.3499E-03	.1582E+03	-.5885E-03
.1602E+03	-.7237E-03	.1661E+03	-.1193E-02	.1697E+03	-.1559E-02
.1739E+03	-.1924E-02	.1771E+03	-.2195E-02	.1803E+03	-.2449E-02
.1849E+03	-.2895E-02	.1888E+03	-.3276E-02	.1930E+03	-.367 E-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	-.8996E+00	.1009E+03	-.1100E+01
.1042E+03	-.1197E+01	.1074E+03	-.1229E+01	.1111E+03	-.1261E+01

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 .1148E+03  -.1213E+01   .1286E+03  -.9317E+00   .1374E+03  -.7068E+00
 .1477E+03  -.3695E+00   .1552E+03  -.1124E+00   .1632E+03   .2066E+00
 .1724E+03   .5703E+00   .1796E+03   .8996E+00   .1885E+03   .1333E+01
 .1942E+03   .1631E+01   .1998E+03   .1855E+01
     129         1          24          8
 .2477E+00   .4686E-02   .2786E+00   .4662E-02   .3031E+00   .4650E-02
 .3274E+00   .4582E-02   .3552E+00   .4527E-02   .3783E+00   .4471E-02
 .3994E+00   .4408E-02   .4205E+00   .4336E-02   .4405E+00   .4261E-02
 .4592E+00   .4189E-02   .4795E+00   .4114E-02   .5038E+00   .4003E-02
 .5281E+00   .3911E-02   .5464E+00   .3800E-02   .5643E+00   .3713E-02
 .5798E+00   .3625E-02   .5982E+00   .3542E-02   .6221E+00   .3415E-02
 .6396E+00   .3308E-02   .6571E+00   .3201E-02   .6770E+00   .3097E-02
 .6937E+00   .2998E-02   .7109E+00   .2915E-02   .7376E+00   .2752E-02
     130         1          12          4
 .2653E+02   .3024E+00   .5179E+02   .2628E+00   .7155E+02   .2336E+00
 .9315E+02   .2009E+00   .1077E+03   .1785E+00   .1195E+03   .1619E+00
 .1329E+03   .1403E+00   .1460E+03   .1203E+00   .1583E+03   .1029E+00
 .1703E+03   .8386E-01   .1849E+03   .6164E-01   .2013E+03   .3763E-01
     131         1           3          1
-.1594E-02   .1009E+01   .9012E+00   .1009E+01   .2398E+01   .1485E+01
     132         1          31         11
 .2652E-01   .1501E+00   .3364E-01   .1645E+00   .4018E-01   .1780E+00
 .4719E-01   .1964E+00   .5269E-01   .2140E+00   .5811E-01   .2323E+00
 .6218E-01   .2547E+00   .6664E-01   .2818E+00   .7071E-01   .3058E+00
 .7358E-01   .3297E+00   .7748E-01   .3641E+00   .8027E-01   .3944E+00
 .8386E-01   .4423E+00   .8681E-01   .4838E+00   .8960E-01   .5277E+00
 .9263E-01   .5780E+00   .9589E-01   .6355E+00   .9837E-01   .6890E+00
 .1012E+00   .7425E+00   .1049E+00   .7904E+00   .1087E+00   .8407E+00
 .1117E+00   .8798E+00   .1153E+00   .9134E+00   .1195E+00   .9485E+00
 .1232E+00   .9733E+00   .1278E+00   .9868E+00   .1323E+00   .9940E+00
 .1365E+00   .9972E+00   .1400E+00   .9988E+00   .2000E+00   .9988E+00
 .1000E+01   .1000E+01
     133         1          19          7
 0.          .1001E+01   .2300E+02   .1001E+01   .2318E+02   .9372E+00
 .2351E+02   .8576E+00   .2389E+02   .7644E+00   .2430E+02   .6617E+00
 .2471E+02   .5701E+00   .2509E+02   .4849E+00   .2543E+02   .4188E+00
 .2573E+02   .3536E+00   .2614E+02   .2779E+00   .2649E+02   .2142E+00
 .2680E+02   .1656E+00   .2717E+02   .1139E+00   .2745E+02   .7963E-01
 .2778E+02   .3663E-01   .2797E+02   .7963E-02   .2800E+02   0.
 .4000E+03   0.
     134         1          21          7
 0.          .8000E+00   .4719E+02   .8000E+00   .4970E+02   .7968E+00
 .5276E+02   .8096E+00   .5599E+02   .8255E+00   .5905E+02   .8446E+00
 .6200E+02   .8725E+00   .6455E+02   .8988E+00   .6746E+02   .9299E+00
 .6957E+02   .9578E+00   .7124E+02   .9841E+00   .7347E+02   .1018E+01
 .7606E+02   .1059E+01   .7817E+02   .1104E+01   .7984E+02   .1138E+01
 .8127E+02   .1169E+01   .8287E+02   .1206E+01   .8466E+02   .1250E+01
 .8617E+02   .1286E+01   .8741E+02   .1321E+01   .8872E+02   .1359E+01
     135         1          33         11
 .2004E+00   .9991E+00   .2637E+00   .9991E+00   .2876E+00   .9951E+00
 .3060E+00   .9935E+00   .3327E+00   .9744E+00   .3558E+00   .9632E+00
 .3769E+00   .9393E+00   .3988E+00   .9138E+00   .4175E+00   .8890E+00
 .4335E+00   .8611E+00   .4490E+00   .8245E+00   .4610E+00   .8053E+00
 .4761E+00   .7623E+00   .4924E+00   .7272E+00   .5036E+00   .6929E+00
 .5179E+00   .6411E+00   .5291E+00   .6004E+00   .5398E+00   .5550E+00
 .5530E+00   .5095E+00   .5618E+00   .4641E+00   .5729E+00   .4106E+00
 .5821E+00   .3628E+00   .5904E+00   .3221E+00   .5968E+00   .2958E+00
 .6028E+00   .2791E+00   .6088E+00   .2647E+00   .6195E+00   .2376E+00
 .6331E+00   .2209E+00   .6462E+00   .2009E+00   .6614E+00   .1906E+00
 .6745E+00   .1746E+00   .6908E+00   .1627E+00   .7064E+00   .1555E+00
     136         1           3          1
 0.          .1000E-01   .4600E+02   .1000E+01   .1200E+03   .6400E-01
     137         1          56         19
 0.          0.          .2506E-01   .2626E-01   .4575E-01   .4615E-01
 .6286E-01   .7480E-01   .7877E-01   .9867E-01   .9429E-01   .1257E+00
 .1078E+00   .1599E+00   .1209E+00   .1902E+00   .1325E+00   .2262E+00
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.1468E+00   .2737E+00   .1575E+00   .3199E+00   .1695E+00   .3597E+00
.1794E+00   .4122E+00   .1898E+00   .4679E+00   .1957E+00   .5156E+00
.2101E+00   .5674E+00   .2232E+00   .6223E+00   .2407E+00   .6764E+00
.2530E+00   .7210E+00   .2725E+00   .7599E+00   .2924E+00   .7926E+00
.3135E+00   .8276E+00   .3366E+00   .8602E+00   .3628E+00   .8849E+00
.3839E+00   .9072E+00   .4157E+00   .9318E+00   .4484E+00   .9454E+00
.4882E+00   .9676E+00   .5255E+00   .9740E+00   .5562E+00   .9867E+00
.5908E+00   .9915E+00   .6274E+00   .9931E+00   .6636E+00   .9963E+00
.6998E+00   .9947E+00   .7324E+00   .9947E+00   .7631E+00   .9939E+00
.7897E+00   .9883E+00   .8287E+00   .9780E+00   .8677E+00   .9621E+00
.8963E+00   .9485E+00   .9345E+00   .9223E+00   .9755E+00   .8992E+00
.1007E+01   .8745E+00   .1039E+01   .8483E+00   .1069E+01   .8204E+00
.1097E+01   .8045E+00   .1130E+01   .7767E+00   .1161E+01   .7528E+00
.1193E+01   .7202E+00   .1224E+01   .6859E+00   .1254E+01   .6557E+00
.1281E+01   .6302E+00   .1309E+01   .5963E+00   .1347E+01   .5570E+00
.1382E+01   .5180E+00   .1399E+01   .4997E+00
    138         1           3           1
.1940E+02   .1874E+01   .1122E+03   .1170E+01   .2001E+03   .5048E+00
    139         1          21           7
.3076E+01  -.4249E+00   .4470E+01  -.4225E+00   .5251E+01  -.4129E+00
.6263E+01  -.3984E+00   .7259E+01  -.3839E+00   .8271E+01  -.3663E+00
.9323E+01  -.3446E+00   .1043E+02  -.3133E+00   .1130E+02  -.2900E+00
.1217E+02  -.2618E+00   .1301E+02  -.2378E+00   .1380E+02  -.2104E+00
.1458E+02  -.1783E+00   .1530E+02  -.1478E+00   .1609E+02  -.1108E+00
.1683E+02  -.7068E-01   .1726E+02  -.4337E-01   .1757E+02  -.2008E-01
.1775E+02  -.7229E-02   .1780E+02   0.          .1000E+03   0.
    140         1          23           8
0.          .1110E+01   .1361E-01   .1108E+01   .2483E-01   .1098E+01
.3494E-01   .1080E+01   .4361E-01   .1058E+01   .5038E-01   .1030E+01
.5850E-01   .9861E+00   .6665E-01   .9283E+00   .7346E-01   .8466E+00
.8046E-01   .7550E+00   .8635E-01   .6733E+00   .9240E-01   .5876E+00
.9956E-01   .4920E+00   .1066E+00   .3964E+00   .1134E+00   .3127E+00
.1196E+00   .2430E+00   .1265E+00   .1673E+00   .1335E+00   .1116E+00
.1399E+00   .6175E-01   .1442E+00   .3984E-01   .1473E+00   .2789E-01
.1556E+00   0.          .1000E+01   0.
    141         1           3           1
0.          -.6700E+00   .1439E+01   0.          .4002E+01   .1199E+01
    144         1          14           5
0.          0.          .3589E-01   .2823E+00   .7376E-01   .6680E+00
.1013E+00   .9940E+00   .1388E+00   .1586E+01   .1635E+00   .2008E+01
.1906E+00   .2481E+01   .2137E+00   .2990E+01   .2333E+00   .3412E+01
.2508E+00   .3682E+01   .2711E+00   .3881E+01   .2879E+00   .3944E+01
.3054E+00   .3980E+01   .1002E+01   .3980E+01
    142         1          31          11
.1624E+03  -.2346E+01   .2380E+03  -.2180E+01   .2977E+03  -.2032E+01
.3868E+03  -.1838E+01   .4736E+03  -.1660E+01   .5476E+03  -.1500E+01
.6025E+03  -.1382E+01   .6813E+03  -.1240E+01   .7322E+03  -.1134E+01
.7864E+03  -.1046E+01   .8500E+03  -.9500E+00   .9256E+03  -.8160E+00
.9925E+03  -.7180E+00   .1062E+04  -.6180E+00   .1157E+04  -.4920E+00
.1237E+04  -.4020E+00   .1329E+04  -.2960E+00   .1396E+04  -.2420E+00
.1481E+04  -.1860E+00   .1524E+04  -.1640E+00   .1704E+04  -.8800E-01
.1782E+04  -.5800E-01   .1866E+04  -.3400E-01   .1971E+04  -.8000E-02
.2101E+04   .2400E-01   .2272E+04   .3400E-01   .2412E+04   .5200E-01
.2583E+04   .6800E-01   .2769E+04   .7600E-01   .2900E+04   .8400E-01
.3005E+04   .9400E-01
    143         1          17           6
0.          0.          .2863E+00   .5000E-01   .4612E+00   .1180E+00
.6600E+00   .2080E+00   .8569E+00   .3080E+00   .1022E+01   .4120E+00
.1241E+01   .5400E+00   .1382E+01   .6400E+00   .1515E+01   .7200E+00
.1690E+01   .8200E+00   .1885E+01   .9120E+00   .2034E+01   .9740E+00
.2175E+01   .1006E+01   .2276E+01   .1018E+01   .2513E+01   .1014E+01
.4502E+01   .1014E+01   .1000E+02   .1000E+01
    145         1          20           7
.2358E+00   .1172E+01   .2569E+00   .1117E+01   .2832E+00   .1053E+01
.3094E+00   .1001E+01   .3341E+00   .9638E+00   .3532E+00   .9344E+00
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.5237E+00	.9750E+00	.5452E+00	.1005E+01	.5739E+00	.1061E+01
.5918E+00	.1100E+01	.6069E+00	.1136E+01	.6209E+00	.1172E+01
.6376E+00	.1222E+01	.6535E+00	.1275E+01		
146	1	19	7		
.8008E+02	.1483E-03	.8735E+02	.1904E-03	.9605E+02	.2505E-03
.1064E+03	.2986E-03	.1149E+03	.3066E-03	.1208E+03	.3086E-03
.1269E+03	.3146E-03	.1334E+03	.3126E-03	.1416E+03	.3046E-03
.1491E+03	.2826E-03	.1566E+03	.2445E-03	.1638E+03	.1984E-03
.1698E+03	.1463E-03	.1761E+03	.9219E-04	.1811E+03	.3607E-04
.1856E+03	-.2204E-04	.1908E+03	-.7415E-04	.1953E+03	-.1463E-03
.2001E+03	-.1984E-03				
147	1	20	7		
.5997E-01	-.4185E-03	.7177E-01	-.4185E-03	.8158E-01	-.4185E-03
.8995E-01	-.4185E-03	.9697E-01	-.4067E-03	.1035E+00	-.4028E-03
.1098E+00	-.3831E-03	.1156E+00	-.3615E-03	.1192E+00	-.3418E-03
.1205E+00	-.3222E-03	.1224E+00	-.3065E-03	.1256E+00	-.2475E-03
.1281E+00	-.1984E-03	.1305E+00	-.1395E-03	.1325E+00	-.7269E-04
.1347E+00	-.3340E-04	.1364E+00	-.1965E-04	.1384E+00	-.1965E-05
.1380E+00	0.	.1000E+01	0.		
148	1	22	8		
.7939E+02	-.2052E-01	.8323E+02	-.2244E-01	.8730E+02	-.2409E-01
.9026E+02	-.2581E-01	.9425E+02	-.2697E-01	.9728E+02	-.2794E-01
.1002E+03	-.2838E-01	.1027E+03	-.2882E-01	.1049E+03	-.2882E-01
.1073E+03	-.2870E-01	.1108E+03	-.2790E-01	.1185E+03	-.2577E-01
.1276E+03	-.2244E-01	.1399E+03	-.1784E-01	.1500E+03	-.1407E-01
.1623E+03	-.9138E-02	.1722E+03	-.5291E-02	.1792E+03	-.2445E-02
.1841E+03	-.1603E-03	.1908E+03	.2124E-02	.1960E+03	.4289E-02
.2002E+03	.5892E-02				
149	1	21	7		
.6000E-01	.1760E-01	.6500E-01	.1750E-01	.7000E-01	.1730E-01
.7500E-01	.1720E-01	.8000E-01	.1710E-01	.8500E-01	.1700E-01
.9000E-01	.1690E-01	.9500E-01	.1680E-01	.1000E+00	.1670E-01
.1050E+00	.1650E-01	.1100E+00	.1610E-01	.1150E+00	.1590E-01
.1200E+00	.1520E-01	.1250E+00	.1440E-01	.1300E+00	.1260E-01
.1350E+00	.9500E-02	.1400E+00	.5200E-02	.1450E+00	.1700E-02
.1500E+00	0.	.1550E+00	0.	.1000E+01	0.
152	1	2	1		
.5989E+02	.7028E+00	.2000E+03	.7028E+00		
152	2	2	1		
.5997E+02	.9020E+00	.2002E+03	.9020E+00		
152	3	2	1		
.6005E+02	.1052E+01	.1998E+03	.1052E+01		
152	4	2	1		
.6005E+02	.1200E+01	.1998E+03	.1200E+01		
152	5	2	1		
.5997E+02	.1601E+01	.1998E+03	.1601E+01		
153	1	24	8		
.7976E+02	.3179E-03	.8415E+02	.2414E-03	.9038E+02	.1348E-03
.9461E+02	.6640E-04	.1008E+03	-.1610E-04	.1067E+03	-.8853E-04
.1108E+03	-.1388E-03	.1152E+03	-.1791E-03	.1191E+03	-.2153E-03
.1239E+03	-.2435E-03	.1289E+03	-.2757E-03	.1330E+03	-.2777E-03
.1359E+03	-.2877E-03	.1403E+03	-.2877E-03	.1453E+03	-.2696E-03
.1515E+03	-.2294E-03	.1594E+03	-.1771E-03	.1692E+03	-.1147E-03
.1753E+03	-.6841E-04	.1807E+03	-.3622E-04	.1848E+03	-.1006E-04
.1889E+03	.3421E-04	.1928E+03	.5030E-04	.1998E+03	.9658E-04
154	1	18	6		
.6021E-01	.3214E-03	.7360E-01	.3134E-03	.8341E-01	.3054E-03
.9107E-01	.2974E-03	.9761E-01	.2874E-03	.1033E+00	.2754E-03
.1090E+00	.2675E-03	.1152E+00	.2415E-03	.1206E+00	.2196E-03
.1243E+00	.1876E-03	.1278E+00	.1537E-03	.1317E+00	.1078E-03
.1356E+00	.6786E-04	.1388E+00	.4192E-04	.1427E+00	.1397E-04
.1432E+00	.5988E-05	.1430E+00	0.	.1000E+01	0.
155	1	27	9		
.8341E+02	-.1821E-01	.8557E+02	-.1416E-01	.8804E+02	-.1342E-01
.9043E+02	-.6282E-0[illegible]	.9298E+02	-.2465E-02	.9474E+02	[illegible]

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.9721E+02   .2704E-02   .9956E+02   .5015E-02   .1016E+03   .6680E-02
.1037E+03   .8270E-02   .1063E+03   .9622E-02   .1096E+03   .1042E-01
.1140E+03   .1042E-01   .1188E+03   .9861E-02   .1240E+03   .8668E-02
.1298E+03   .8032E-02   .1360E+03   .6918E-02   .1428E+03   .5805E-02
.1499E+03   .4533E-02   .1553E+03   .3579E-02   .1606E+03   .1909E-02
.1670E+03   .8748E-03   .1745E+03  -.6362E-03   .1809E+03  -.1988E-02
.1879E+03  -.3419E-02   .1945E+03  -.4851E-02   .1996E+03  -.5964E-02
    156         1          10          4
.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.
    157         1          13          5
.8440E+02  -.9800E-04   .9390E+02  -.3600E-04   .1016E+03   .6000E-05
.1123E+03   .5600E-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
    158         1          15          5
.6015E-01   .2332E-03   .8010E-01   .2332E-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.
    159         1          12          4
.8022E+02   .5578E-02   .1002E+03   .5339E-02   .1096E+03   .5259E-02
.1220E+03   .5259E-02   .1312E+03   .5339E-02   .1443E+03   .5498E-02
.1530E+03   .5737E-02   .1604E+03   .5976E-02   .1707E+03   .6375E-02
.1808E+03   .6534E-02   .1896E+03   .6853E-02   .1937E+03   .7251E-02
    160         1          16          6
.6040E-01  -.1781E-01   .7809E-01  -.1813E-01   .9482E-01  -.1821E-01
.1076E+00  -.1821E-01   .1126E+00  -.1813E-01   .1193E+00  -.1750E-01
.1233E+00  -.1614E-01   .1288E+00  -.1344E-01   .1325E+00  -.1034E-01
.1369E+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.
    161         1          21          7
.7990E+02  -.2854E-03   .8317E+02  -.2136E-03   .9155E+02  -.5190E-04
.9761E+02   .4391E-04   .1041E+03   .1457E-03   .1105E+03   .2156E-03
.1168E+03   .2794E-03   .1234E+03   .3333E-03   .1285E+03   .3433E-03
.1330E+03   .3473E-03   .1384E+03   .3453E-03   .1453E+03   .3253E-03
.1518E+03   .2934E-03   .1589E+03   .2635E-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
    162         1          16          6
.6004E-01  -.5972E-03   .9669E-01  -.5972E-03   .1030E+00  -.5972E-03
.1102E+00  -.5972E-03   .1151E+00  -.5711E-03   .1202E+00  -.5531E-03
.1252E+00  -.5070E-03   .1290E+00  -.4349E-03   .1325E+00  -.3407E-03
.1352E+00  -.2766E-03   .1390E+00  -.1743E-03   .1412E+00  -.1182E-03
.1436E+00  -.6413E-04   .1465E+00  -.3808E-04   .1486E+00   0.
.1000E+01   0.
    163         1          22          8
.7974E+02   .1333E-01   .8557E+02   .6946E-02   .9011E+02   .3273E-02
.9434E+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  -.6707E-02   .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
    164         1          17          6
.5911E-01   .2000E-01   .7970E-01   .1952E-01   .9469E-01   .1920E-01
.1056E+00   .1873E-01   .1143E+00   .1865E-01   .1193E+00   .1817E-01
.1217E+00   .1737E-01   .1248E+00   .1619E-01   .1292E+00   .1347E-01
.1328E+00   .1100E-01   .1362E+00   .8207E-02   .1395E+00   .5657E-02
.1422E+00   .3745E-02   .1453E+00   .1477E-02   .1472E+00   .9562E-03
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.1494E+00  0.          .1000E+01  0.
    165        1          17         6
.7963E+02  -.8451E-04  .9089E+02  -.1207E-03  .1013E+03  -.1630E-03
.1109E+03  -.1851E-03  .1210E+03  -.2153E-03  .1296E+03  -.2354E-03
.1355E+03  -.2435E-03  .1412E+03  -.2455E-03  .1490E+03  -.2575E-03
.1514E+03  -.2575E-03  .1560E+03  -.2555E-03  .1632E+03  -.2555E-03
.1714E+03  -.2414E-03  .1794E+03  -.2354E-03  .1874E+03  -.2072E-03
.1916E+03  -.1952E-03  .1998E+03  -.1650E-03
    166        1          13         5
.5994E-01   .1517E-03  .7358E-01   .1517E-03  .8292E-01   .1437E-03
.9162E-01   .1317E-03  .1006E+00   .1218E-03  .1109E+00   .1138E-03
.1169E+00   .9581E-04  .1214E+00   .6986E-04  .1264E+00   .5389E-04
.1303E+00   .3194E-04  .1356E+00   .3992E-05  .1360E+00  0.
.1000E+01  0.
    167        1          19         7
.7976E+02   .6349E-02  .8703E+02   .9683E-02  .9174E+02   .1143E-01
.9669E+02   .1310E-01  .1001E+03   .1397E-01  .1029E+03   .1492E-01
.1060E+03   .1548E-01  .1107E+03   .1563E-01  .1200E+03   .1556E-01
.1299E+03   .1556E-01  .1377E+03   .1548E-01  .1432E+03   .1516E-01
.1527E+03   .1500E-01  .1602E+03   .1484E-01  .1689E+03   .1429E-01
.1767E+03   .1405E-01  .1816E+03   .1405E-01  .1900E+03   .1389E-01
.2000E+03   .1373E-01
    168        1          18         6
.6018E-01  -.8646E-02  .7765E-01  -.8242E-02  .9210E-01  -.8242E-02
.1009E+00  -.8242E-02  .1069E+00  -.8162E-02  .1116E+00  -.7758E-02
.1152E+00  -.7515E-02  .1184E+00  -.7192E-02  .1219E+00  -.7030E-02
.1255E+00  -.6384E-02  .1291E+00  -.5495E-02  .1310E+00  -.4444E-02
.1338E+00  -.3475E-02  .1366E+00  -.2101E-02  .1390E+00  -.1455E-02
.1409E+00  -.1131E-02  .1437E+00  0.          .1000E+01  0.
    169        1          21         7
.7998E+02  -.1840E-02  .9019E+02  -.1704E-02  .9577E+02  -.1632E-02
.1026E+03  -.1516E-02  .1095E+03  -.1440E-02  .1157E+03  -.1352E-02
.1216E+03  -.1276E-02  .1274E+03  -.1208E-02  .1326E+03  -.1132E-02
.1384E+03  -.1080E-02  .1419E+03  -.1036E-02  .1473E+03  -.1012E-02
.1510E+03  -.1000E-02  .1551E+03  -.1008E-02  .1604E+03  -.1016E-02
.1667E+03  -.1052E-02  .1725E+03  -.1096E-02  .1789E+03  -.1156E-02
.1844E+03  -.1236E-02  .1895E+03  -.1304E-02  .2000E+03  -.1476E-02
    170        1          2          1
.2006E+00  0.          .8010E+00  0.
    171        1          14         5
.5979E-01  -.2695E-03  .7132E-01  -.2655E-03  .8799E-01  -.2655E-03
.1053E+00  -.2655E-03  .1108E+00  -.2655E-03  .1143E+00  -.2575E-03
.1188E+00  -.2415E-03  .1205E+00  -.2096E-03  .1248E+00  -.1577E-03
.1284E+00  -.9780E-04  .1313E+00  -.5389E-04  .1342E+00  -.2794E-04
.1374E+00  0.          .1000E+01  0.
    172        1          17         6
.8022E+02   .2221E+00  .8979E+02   .2036E+00  .9952E+02   .1843E+00
.1100E+03   .1650E+00  .1195E+03   .1521E+00  .1292E+03   .1384E+00
.1392E+03   .1256E+00  .1475E+03   .1151E+00  .1569E+03   .1078E+00
.1638E+03   .1018E+00  .1705E+03   .9819E-01  .1764E+03   .9779E-01
.1821E+03   .9819E-01  .1869E+03   .9980E-01  .1903E+03   .1014E+00
.1947E+03   .1054E+00  .2002E+03   .1115E+00
    173        1          2          1
.1992E+00  0.          .7002E+00  0.
    174        1          16         6
.6032E-01  -.4271E-01  .8311E-01  -.4271E-01  .9131E-01  -.4192E-01
.9992E-01  -.4112E-01  .1065E+00  -.3952E-01  .1129E+00  -.3673E-01
.1176E+00  -.3473E-01  .1205E+00  -.2914E-01  .1235E+00  -.2595E-01
.1249E+00  -.2236E-01  .1269E+00  -.1437E-01  .1283E+00  -.9182E-02
.1304E+00  -.4798E-02  .1318E+00  -.1996E-02  .1343E+00  0.
.1000E+01  0.
    177        1          2          1
.6010E+02   .7017E+00  .2004E+03   .7017E+00
    177        2          2          1
.6019E+02   .9024E+00  .2004E+03   .9024E+00
    177        ?          ?          ?
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.6002E+02   .1055E+01   .2006E+03   .1055E+01
    177           4           2           1
.6026E+02   .1204E+01   .2002E+03   .1204E+01
    177           5           2           1
.6018E+02   .1602E+01   .2001E+03   .1602E+01
    178           1          21           7
.8078E+02  -.1394E-03   .8907E+02  -.4382E-03   .9697E+02  -.7570E-03
.1030E+03  -.6566E-03   .1103E+03  -.9761E-03   .1192E+03  -.1076E-02
.1296E+03  -.1076E-02   .1347E+03  -.1116E-02   .1392E+03  -.1116E-02
.1451E+03  -.1076E-02   .1493E+03  -.1056E-02   .1544E+03  -.9163E-03
.1595E+03  -.8964E-03   .1634E+03  -.8367E-03   .1702E+03  -.6175E-03
.1768E+03  -.4781E-03   .1832E+03  -.3386E-03   .1877E+03  -.2988E-03
.1915E+03  -.1992E-03   .1949E+03  -.7968E-04   .2000E+03   .7968E-04
    179           1          12           4
.6007E-01   .8000E-03   .7292E-01   .7600E-03   .8520E-01   .7000E-03
.9900E-01   .7000E-03   .1075E+00   .6200E-03   .1180E+00   .5600E-03
.1238E+00   .5600E-03   .1264E+00   .4000E-03   .1308E+00   .2800E-03
.1392E+00   .4000E-04   .1390E+00  0.           .1000E+01  0.
    180           1          10           4
.8002E+02   .1880E-01   .1002E+03   .1840E-01   .1137E+03   .1600E-01
.1283E+03   .1440E-01   .1394E+03   .1280E-01   .1587E+03   .1040E-01
.1728E+03   .8400E-02   .1836E+03   .6000E-02   .1919E+03   .5600E-02
.2001E+03   .5200E-02
    181           1          16           6
.5990E-01   .3770E-01   .7997E-01   .3770E-01   .9335E-01   .3770E-01
.1001E+00   .3651E-01   .1091E+00   .3452E-01   .1151E+00   .3016E-01
.1200E+00   .2778E-01   .1254E+00   .2222E-01   .1301E+00   .1587E-01
.1348E+00   .1032E-01   .1398E+00   .5556E-02   .1444E+00   .5159E-02
.1477E+00   .3175E-02   .1522E+00   .7937E-03   .1520E+00  0.
.1000E+01  0.
    182           1          24           8
.7957E+02   .2401E-02   .8690E+02   .1032E-02   .9008E+02   .4563E-03
.9438E+02  -.2183E-03   .1002E+03  -.1171E-02   .1054E+03  -.1766E-02
.1098E+03  -.2282E-02   .1137E+03  -.2460E-02   .1188E+03  -.2917E-02
.1235E+03  -.3155E-02   .1279E+03  -.3214E-02   .1315E+03  -.3254E-02
.1363E+03  -.3234E-02   .1405E+03  -.3214E-02   .1467E+03  -.3095E-02
.1510E+03  -.2956E-02   .1549E+03  -.2837E-02   .1663E+03  -.2183E-02
.1714E+03  -.1885E-02   .1761E+03  -.1607E-02   .1824E+03  -.1032E-02
.1886E+03  -.5357E-03   .1940E+03  -.9921E-04   .1995E+03   .4167E-03
    183           1          17           6
.5983E-01   .1996E-02   .7922E-01   .1996E-02   .9134E-01   .1996E-02
.9916E-01   .1876E-02   .1064E+00   .1836E-02   .1108E+00   .1756E-02
.1150E+00   .1617E-02   .1192E+00   .1437E-02   .1229E+00   .1238E-02
.1251E+00   .1038E-02   .1277E+00   .7984E-03   .1308E+00   .5190E-03
.1342E+00   .3992E-03   .1374E+00   .2794E-03   .1423E+00   .1597E-03
.1420E+00  0.           .1000E+01  0.
    184           1          19           7
.7931E+02  -.1070E+00   .8330E+02  -.8056E-01   .8745E+02  -.5210E-01
.9194E+02  -.2405E-01   .9597E+02  0.           .9972E+02   .1643E-01
.1043E+03   .3567E-01   .1094E+03   .4409E-01   .1130E+03   .4810E-01
.1201E+03   .4810E-01   .1267E+03   .4649E-01   .1324E+03   .4208E-01
.1404E+03   .3766E-01   .1498E+03   .3086E-01   .1606E+03   .2244E-01
.1712E+03   .1443E-01   .1810E+03   .1042E-01   .1900E+03   .4810E-02
.1998E+03   .4008E-03
    185           1          13           5
.6040E-01   .6032E-01   .7936E-01   .5952E-01   .9036E-01   .5714E-01
.1018E+00   .5516E-01   .1111E+00   .5238E-01   .1175E+00   .4683E-01
.1253E+00   .4048E-01   .1310E+00   .3214E-01   .1371E+00   .1984E-01
.1425E+00   .9127E-02   .1464E+00   .4762E-02   .1500E+00  0.
.1000E+01  0.
    186           1          23           8
.8027E+02   .6800E-03   .8960E+02  -.7000E-03   .9876E+02  -.2020E-02
.1083E+03  -.3100E-02   .1171E+03  -.4140E-02   .1250E+03  -.4900E-02
.1302E+03  -.5420E-02   .1348E+03  -.5660E-02   .1382E+03  -.5840E-02
.1407E+03  -.5860E-02   .1450E+03  -.5840E-02   .1495E+03  -.5740E-02
.1538E+03  -.5580E-02   .1574E+03  -.5220E-02   .1614E+03  -.4980E-02
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.1670E+03  -.4160E-02   .1730E+03  -.3860E-02   .1777E+03  -.3060E-02
.1811E+03  -.2540E-02   .1851E+03  -.1960E-02   .1891E+03  -.1400E-02
.1931E+03  -.7600E-03   .2000E+03   .3200E-03
    187         1           23          8
.6024E-01   .6299E-02   .8016E-01   .6280E-02   .8956E-01   .6240E-02
.9952E-01   .6201E-02   .1069E+00   .6102E-02   .1122E+00   .6004E-02
.1173E+00   .5866E-02   .1203E+00   .5630E-02   .1241E+00   .5236E-02
.1276E+00   .4724E-02   .1299E+00   .4213E-02   .1331E+00   .3386E-02
.1355E+00   .2697E-02   .1374E+00   .2106E-02   .1390E+00   .1634E-02
.1412E+00   .1220E-02   .1426E+00   .8661E-03   .1445E+00   .6496E-03
.1463E+00   .3937E-03   .1484E+00   .2362E-03   .1504E+00   .1161E-03
.1500E+00   0.          .1000E+01   0.
    188         1           27          9
.8086E+02  -.8692E-01   .8230E+02  -.6720E-01   .8788E+02  -.4427E-02
.9107E+02   .3099E-01   .9362E+02   .6237E-01   .9665E+02   .9256E-01
.9920E+02   .1103E+00   .1013E+03   .1256E+00   .1040E+03   .1360E+00
.1062E+03   .1445E+00   .1098E+03   .1525E+00   .1136E+03   .1553E+00
.1170E+03   .1561E+00   .1220E+03   .1545E+00   .1270E+03   .1517E+00
.1322E+03   .1433E+00   .1370E+03   .1368E+00   .1418E+03   .1276E+00
.1468E+03   .1155E+00   .1526E+03   .1034E+00   .1581E+03   .9336E-01
.1642E+03   .7928E-01   .1705E+03   .6841E-01   .1774E+03   .5392E-01
.1848E+03   .3581E-01   .1920E+03   .2334E-01   .1999E+03   .7646E-02
    189         1           21          7
.6049E-01  -.1953E+00   .9106E-01  -.1953E+00   .1002E+00  -.1937E+00
.1076E+00  -.1913E+00   .1134E+00  -.1854E+00   .1196E+00  -.1747E+00
.1247E+00  -.1660E+00   .1310E+00  -.1478E+00   .1354E+00  -.1304E+00
.1382E+00  -.1162E+00   .1411E+00  -.9565E-01   .1441E+00  -.7352E-01
.1461E+00  -.4941E-01   .1480E+00  -.3557E-01   .1500E+00  -.2292E-01
.1520E+00  -.1265E-01   .1543E+00  -.6719E-02   .1561E+00  -.3162E-02
.1583E+00  -.1581E-02   .1580E+00   0.          .1000E+01   0.
    190         1           17          6
.8067E+02  -.6694E-03   .8896E+02  -.6085E-04   .9518E+02   .1217E-03
.9980E+02   .2434E-03   .1053E+03   .3245E-03   .1098E+03   .3854E-03
.1126E+03   .4057E-03   .1165E+03   .4057E-03   .1208E+03   .3448E-03
.1281E+03   .1826E-03   .1361E+03   .4057E-04   .1469E+03  -.4057E-03
.1582E+03  -.9331E-03   .1701E+03  -.1440E-02   .1824E+03  -.1947E-02
.1904E+03  -.2353E-02   .1990E+03  -.2759E-02
    191         1           15          5
.6024E-01  -.1471E-02   .7880E-01  -.1412E-02   .8908E-01  -.1412E-02
.9817E-01  -.1372E-02   .1036E+00  -.1312E-02   .1084E+00  -.1233E-02
.1154E+00  -.1113E-02   .1202E+00  -.9742E-03   .1248E+00  -.7555E-03
.1284E+00  -.5368E-03   .1313E+00  -.2783E-03   .1336E+00  -.1789E-03
.1367E+00  -.3976E-04   .1370E+00   0.          .1000E+01   0.
    192         1           28          10
.8145E+02  -.4890E-01   .8551E+02  -.5812E-01   .9045E+02  -.6733E-01
.9586E+02  -.7615E-01   .1005E+03  -.8136E-01   .1055E+03  -.8617E-01
.1093E+03  -.8898E-01   .1118E+03  -.8898E-01   .1143E+03  -.8898E-01
.1174E+03  -.8898E-01   .1209E+03  -.8737E-01   .1267E+03  -.8136E-01
.1325E+03  -.7535E-01   .1382E+03  -.6774E-01   .1428E+03  -.6132E-01
.1479E+03  -.4770E-01   .1522E+03  -.4008E-01   .1543E+03  -.3647E-01
.1614E+03  -.1643E-01   .1661E+03  -.4008E-03   .1711E+03   .1723E-01
.1757E+03   .3607E-01   .1798E+03   .5050E-01   .1836E+03   .6774E-01
.1877E+03   .8537E-01   .1918E+03   .1034E+00   .1952E+03   .1206E+00
.1996E+03   .1415E+00
    193         1           42          14
.6025E-01   .1499E+00   .6550E-01   .1499E+00   .7377E-01   .1495E+00
.7965E-01   .1467E+00   .8617E-01   .1403E+00   .9285E-01   .1467E+00
.9952E-01   .1463E+00   .1056E+00   .1443E+00   .1110E+00   .1392E+00
.1159E+00   .1356E+00   .1178E+00   .1328E+00   .1203E+00   .1308E+00
.1227E+00   .1260E+00   .1254E+00   .1197E+00   .1283E+00   .1141E+00
.1305E+00   .1050E+00   .1320E+00   .1034E+00   .1328E+00   .9622E-01
.1347E+00   .9185E-01   .1362E+00   .8509E-01   .1370E+00   .7952E-01
.1393E+00   .7316E-01   .1411E+00   .6521E-01   .1426E+00   .5328E-01
.1445E+00   .4533E-01   .1453E+00   .4215E-01   .1458E+00   .3380E-01
.1475E+00   .2505E-01   .1480E+00   .2187E-01   .1487E+00   .1829E-01
.1495E+00   .1511E-01   .1502E+00   .1273E-01   .1506E+00   .1153E-01
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.1510E+00   .9543E-02   .1514E+00   .6362E-02   .1521E+00   .1590E-02
.1531E+00   .7952E-03   .1546E+00   0.          .1563E+00   0.
.1588E+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  -.9419E-04   .1288E+03  -.1062E-03   .1355E+03  -.1222E-03
.1430E+03  -.1343E-03   .1513E+03  -.1583E-03   .1589E+03  -.1703E-03
.1680E+03  -.1944E-03   .1789E+03  -.2004E-03   .1864E+03  -.2144E-03
.1933E+03  -.2385E-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  -.9823E-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   .7000E-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   .4600E-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
.8777E+02   .6951E+00   .9176E+02   .7405E+00   .9494E+02   .7900E+00
.9685E+02   .8171E+00   .9900E+02   .8418E+00   .1010E+03   .8625E+00
.1037E+03   .8848E+00   .1064E+03   .8936E+00   .1090E+03   .8984E+00
.1098E+03   .9008E+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
.1099E+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   .1157E-03   .1811E+03   .1147E-03
.1894E+03   .1006E-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
.1129E+00   .1816E-03   .1161E+00   .1717E-03   .1202E+00   .1497E-03
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.1243E+00   .1218E-03   .1274E+00   .7984E-04   .1303E+00   .4990E-04
.1337E+00   .3194E-04   .1370E+00   0.          .1000E+01   0.
    155         2           18          6
.7943E+02  -.1527E-01   .8541E+02  -.1097E-01   .9043E+02  -.8032E-02
.9514E+02  -.5567E-02   .1019E+03  -.2386E-02   .1081E+03  -.1193E-02
.1147E+03  -.7952E-04   .1217E+03   .7952E-03   .1297E+03   .1272E-02
.1380E+03   .1431E-02   .1465E+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  -.1932E-01
.1129E+00  -.1893E-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  -.1860E-03   .9398E+02  -.9000E-04   .1016E+03   .6000E-05
.1103E+03   .1080E-03   .1211E+03   .2200E-03   .1288E+03   .3140E-03
.1349E+03   .3820E-03   .1391E+03   .4260E-03   .1421E+03   .4520E-03
.1454E+03   .4780E-03   .1494E+03   .4900E-03   .1533E+03   .4840E-03
.1591E+03   .4440E-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
.1288E+00  -.3478E-03   .1312E+00  -.2806E-03   .1339E+00  -.1957E-03
.1362E+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   .8389E+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   .1328E-01   .7530E-01   .1304E-01   .8765E-01   .1260E-01
.9546E-01   .1233E-01   .1050E+00   .1185E-01   .1109E+00   .1153E-01
.1189E+00   .1089E-01   .1235E+00   .1018E-01   .1280E+00   .9145E-02
.1321E+00   .7952E-02   .1354E+00   .6680E-02   .1388E+00   .4612E-02
.1414E+00   .3022E-02   .1441E+00   .1909E-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   .4391E-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
.1388E+00   .5812E-04   .1412E+00   .3808E-04   .1434E+00   .1202E-04
.1453E+00   0.          .1000E+01   0.
    163         2           15          5
.8022E+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   .2236E-02   .1620E+03   .5589E-03
.1678E+03  -.1756E-02   .1753E+03  -.5589E-02   .1826E+03  -.9741E-02
.1891E+03  -.1357E-01   .1934E+03  -.1629E-01   .1999E+03  -.2060E-01
    164         2           20          7
.5672E-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
.1317E+00  -.1641E-01   .1339E+00  -.1402E-01   .1363E+00  -.1155E-01
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.1373E+00  -.9163E-02   .1394E+00  -.6534E-02   .1412E+00  -.4542E-02
.1429E+00  -.2948E-02   .1455E+00  -.1195E-02   .1484E+00  -.3187E-03
.1480E+00  0.           .1000E+01  0.
    169        2           28          10
.7959E+02  -.2720E-02   .8094E+02  -.2684E-02   .8262E+02  -.2572E-02
.8525E+02  -.2360E-02   .8780E+02  -.2180E-02   .9035E+02  -.1916E-02
.9274E+02  -.1734E-02   .9482E+02  -.1540E-02   .9769E+02  -.1352E-02
.9984E+02  -.1200E-02   .1023E+03  -.1060E-02   .1051E+03  -.9320E-03
.1071E+03  -.8680E-03   .1092E+03  -.8080E-03   .1117E+03  -.7840E-03
.1175E+03  -.7200E-03   .1232E+03  -.6360E-03   .1304E+03  -.5160E-03
.1386E+03  -.3840E-03   .1474E+03  -.2320E-03   .1545E+03  -.1040E-03
.1601E+03  -.8000E-05   .1676E+03   .1360E-03   .1740E+03   .2880E-03
.1801E+03   .3960E-03   .1873E+03   .5280E-03   .1939E+03   .6640E-03
.2001E+03   .8040E-03
    170        2           28          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   .4890E+00  -.5070E-03   .4982E+00  -.3673E-03
.5078E+00  -.2076E-03   .5162E+00  -.5988E-04   .5301E+00   .1477E-03
.5413E+00   .3234E-03   .5536E+00   .4790E-03   .5692E+00   .6467E-03
.5848E+00   .7665E-03   .5999E+00   .8663E-03   .6147E+00   .9421E-03
.6366E+00   .1022E-02   .6645E+00   .1074E-02   .6845E+00   .1114E-02
.7092E+00   .1166E-02   .7331E+00   .1206E-02   .7523E+00   .1238E-02
.7994E+00   .1285E-02
    171        2           3           1
.5991E-01  0.           .1390E+00  0.           .1000E+01  0.
    172        2           20          7
.8006E+02   .2229E+00   .8405E+02   .1980E+00   .8947E+02   .1678E+00
.9450E+02   .1416E+00   .9936E+02   .1183E+00   .1029E+03   .1042E+00
.1066E+03   .9095E-01   .1102E+03   .7807E-01   .1128E+03   .7082E-01
.1181E+03   .6117E-01   .1234E+03   .5111E-01   .1327E+03   .3380E-01
.1416E+03   .1690E-01   .1498E+03   .2414E-02   .1576E+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   .6653E-01   .3265E+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   .1663E-01
.5190E+00   .3607E-02   .5481E+00  -.1964E-01   .5697E+00  -.4248E-01
.5808E+00  -.5371E-01   .5956E+00  -.6733E-01   .6092E+00  -.8176E-01
.6271E+00  -.9739E-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.
    176        1           17          6
.5986E+02   .6979E+00   .1079E+03   .6979E+00   .1099E+03   .7035E+00
.1123E+03   .7115E+00   .1139E+03   .7283E+00   .1156E+03   .7411E+00
.1172E+03   .7563E+00   .1183E+03   .7715E+00   .1196E+03   .7863E+00
.1210E+03   .7963E+00   .1216E+03   .8099E+00   .1231E+03   .8235E+00
.1248E+03   .8355E+00   .1268E+03   .8443E+00   .1291E+03   .8467E+00
.1301E+03   .8491E+00   .1999E+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
.1997E+03   .1048E+01
    176        3           12          4
.5986E+02   .1101E+01   .1092E+03   .1101E+01   .1109E+03   .1108E+01
.1138E+03   .1114E+01   .1159E+03   .1128E+01   .1179E+03   .1145E+01
.1199E+03   .1160E+01   .1223E+03   .1177E+01   .1239E+03   .1188E+01
.1259E+03   .1195E+01   .1284E+03   .1200E+01   .1998E+03   .1200E+01
    176        4           2           1
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.5978E+02   .1602E+01   .1999E+03   .1602E+01
   178          2          24          8
.7967E+02  -.2271E-02  .8413E+02  -.1574E-02  .8812E+02  -.1056E-02
.9179E+02  -.5976E-03  .9561E+02  -.3984E-04  .1005E+03   .3187E-03
.1041E+03   .6375E-03  .1079E+03   .7570E-03  .1116E+03   .7371E-03
.1163E+03   .6375E-03  .1221E+03   .4980E-03  .1267E+03   .3785E-03
.1311E+03   .2988E-03  .1369E+03   .1594E-03  .1425E+03   0.
.1487E+03  -.1394E-03  .1554E+03  -.3187E-03  .1599E+03  -.4382E-03
.1650E+03  -.5179E-03  .1701E+03  -.6375E-03  .1789E+03  -.8765E-03
.1872E+03  -.1036E-02  .1931E+03  -.1215E-02  .2001E+03  -.1394E-02
   179          2          18          6
.5999E-01  -.3120E-02  .9579E-01  -.3120E-02  .1181E+00  -.3120E-02
.1195E+00  -.3100E-02  .1213E+00  -.2980E-02  .1237E+00  -.2820E-02
.1262E+00  -.2440E-02  .1286E+00  -.2080E-02  .1307E+00  -.1680E-02
.1324E+00  -.1280E-02  .1342E+00  -.9600E-03  .1358E+00  -.7600E-03
.1371E+00  -.6000E-03  .1387E+00  -.3400E-03  .1404E+00  -.1800E-03
.1427E+00  -.1000E-03  .1430E+00  0.          .1000E+01  0.
   180          2          14          5
.7986E+02   .6720E-01  .8520E+02   .4440E-01  .9983E+02   .2520E-01
.9454E+02   .6000E-02  .9940E+02  -.6800E-02  .1029E+03  -.1520E-01
.1059E+03  -.1920E-01  .1082E+03  -.2080E-01  .1108E+03  -.1840E-01
.1264E+03  -.4400E-02  .1398E+03   .1360E-01  .1653E+03   .4160E-01
.1835E+03   .6120E-01  .1998E+03   .7960E-01
   181          2          20          7
.6014E-01   .1798E+00  .7599E-01   .1782E+00  .3634E-01   .1758E+00
.9709E-01   .1722E+00  .1075E+00   .1679E+00  .1148E+00   .1607E+00
.1194E+00   .1536E+00  .1242E+00   .1417E+00  .1286E+00   .1222E+00
.1323E+00   .1000E+00  .1363E+00   .7540E-01  .1395E+00   .5714E-01
.1417E+00   .3849E-01  .1431E+00   .2937E-01  .1458E+00   .1508E-01
.1478E+00   .9524E-02  .1500E+00   .3968E-02  .1544E+00   .3968E-03
.1540E+00  0.          .1000E+01  0.
   182          2          11          4
.8029E+02   .9921E-04  .9000E+02  -.3373E-03  .1014E+03  -.5357E-03
.1090E+03  -.7738E-03  .1191E+03  -.9722E-03  .1300E+03  -.1111E-02
.1407E+03  -.1190E-02  .1494E+03  -.1230E-02  .1546E+03  -.1290E-02
.1674E+03  -.1290E-02  .2001E+03  -.1270E-02
   183          2          19          7
.6007E-01   .2954E-02  .7076E-01   .2834E-02  .8600E-01   .2814E-02
.9629E-01   .2814E-02  .1050E+00   .2794E-02  .1128E+00   .2715E-02
.1162E+00   .2715E-02  .1189E+00   .2635E-02  .1225E+00   .2355E-02
.1256E+00   .2076E-02  .1287E+00   .1677E-02  .1313E+00   .1337E-02
.1335E+00   .9980E-03  .1355E+00   .7186E-03  .1383E+00   .4391E-03
.1408E+00   .2395E-03  .1429E+00   .1397E-03  .1420E+00   0.
.1000E+01   0.
   184          2          15          5
.7979E+02  -.1563E-01  .8808E+02   .3607E-02  .9430E+02   .1643E-01
.1001E+03   .2886E-01  .1060E+03   .3487E-01  .1137E+03   .4088E-01
.1241E+03   .4569E-01  .1338E+03   .4930E-01  .1420E+03   .5291E-01
.1524E+03   .5852E-01  .1604E+03   .6172E-01  .1707E+03   .6573E-01
.1810E+03   .7054E-01  .1908E+03   .7735E-01  .1998E+03   .7936E-01
   185          2          19          7
.6008E-01  -.1250E+00  .7474E-01  -.1230E+00  .8542E-01  -.1214E+00
.9570E-01  -.1222E+00  .1036E+00  -.1218E+00  .1100E+00  -.1194E+00
.1178E+00  -.1139E+00  .1225E+00  -.1071E+00  .1275E+00  -.9167E-01
.1308E+00  -.7738E-01  .1351E+00  -.5794E-01  .1382E+00  -.3849E-01
.1402E+00  -.2540E-01  .1422E+00  -.1627E-01  .1444E+00  -.9524E-02
.1464E+00  -.4762E-02  .1495E+00  -.2381E-02  .1500E+00  0.
.1000E+01  0.
   186          2          20          7
.8035E+02  -.1400E-03  .8442E+02   .1800E-03  .9031E+02   .6000E-03
.9701E+02   .1060E-02  .1020E+03   .1320E-02  .1067E+03   .1460E-02
.1098E+03   .1480E-02  .1134E+03   .1380E-02  .1176E+03   .1240E-02
.1241E+03   .8600E-03  .1321E+03   .5200E-03  .1401E+03   .2200E-03
.1460E+03   .2000E-04  .1533E+03  -.3800E-03  .1630E+03  -.7400E-03
.1720E+03  -.1100E-02  .1806E+03  -.1460E-02  .1866E+03  -.1680E-02
.1941E+03  -.2020E-02  .2000E+03  -.2301E-02
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   187          2          16          5
.6048E-01  -.1614E-02  .3709E-01  -.1614E-02   .9195E-01  -.1614E-02
.9944E-01  -.1614E-02  .1076E+00  -.1594E-02   .1135E+00  -.1575E-02
.1179E+00  -.1535E-02  .1222E+00  -.1378E-02   .1253E+00  -.1181E-02
.1287E+00  -.9055E-03  .1315E+00  -.5512E-03   .1339E+00  -.3543E-03
.1362E+00  -.1772E-03  .1409E+00   .1969E-04   .1400E+00   0.
.1000E+01   0.
   188          2          12          4
.8006E+02  -.7767E-01  .8860E+02  -.3813E-01   .9593E+02  -.9296E-01
.1018E+03  -.9457E-01  .1041E+03  -.9577E-01   .1081E+03  -.9457E-01
.1112E+03  -.9215E-01  .1153E+03  -.8612E-01   .1191E+03  -.7284E-01
.1459E+03   .8048E-03  .1710E+03   .6720E-01   .1999E+03   .1445E+00
   189          2          20          7
.6034E-01   .1411E+00  .7135E-01   .1407E+00   .8029E-01   .1395E+00
.8955E-01   .1356E+00  .9944E-01   .1336E+00   .1089E+00   .1281E+00
.1151E+00   .1217E+00  .1216E+00   .1119E+00   .1261E+00   .1008E+00
.1310E+00   .8617E-01  .1350E+00   .7273E-01   .1380E+00   .5889E-01
.1406E+00   .4466E-01  .1427E+00   .2925E-01   .1449E+00   .1818E-01
.1466E+00   .1028E-01  .1483E+00   .5929E-02   .1507E+00   .7905E-03
.1510E+00   0.         .1000E+01   0.
   197          1          2          1
.6002E+02   .6996E+00  .1998E+03   .6996E+00
   197          2          2          1
.5994E+02   .9028E+00  .1997E+03   .9012E+00
   197          3          2          1
.6026E+02   .1201E+01  .1997E+03   .1201E+01
   197          4          2          1
.5994E+02   .1598E+01  .1997E+03   .1599E+01
   207          1          2          1
.5969E+02   .7003E+00  .1997E+03   .7003E+00
   207          2          2          1
.5977E+02   .9006E+00  .2001E+03   .9006E+00
   207          3          2          1
.5969E+02   .1202E+01  .1997E+03   .1202E+01
   207          4          2          1
.5937E+02   .1603E+01  .1996E+03   .1603E+01
   194          1          41         14
.8019E+02  -.1618E-03  .8157E+02  -.1538E-03   .8302E+02  -.1498E-03
.8608E+02  -.1367E-03  .8802E+02  -.1267E-03   .9012E+02  -.1167E-03
.9262E+02  -.1064E-03  .9552E+02  -.9522E-04   .9939E+02  -.8327E-04
.1029E+03  -.6494E-04  .1065E+03  -.5378E-04   .1109E+03  -.4064E-04
.1138E+03  -.3108E-04  .1171E+03  -.2151E-04   .1212E+03  -.1036E-04
.1237E+03  -.3187E-05  .1266E+03   0.         .1280E+03   .2390E-05
.1304E+03   .4382E-05  .1328E+03   .3586E-05   .1353E+03   0.
.1377E+03   .1992E-05  .1408E+03  -.3984E-06   .1438E+03  -.2390E-05
.1471E+03  -.6773E-05  .1518E+03  -.1315E-04   .1562E+03  -.1912E-04
.1591E+03  -.2390E-04  .1617E+03  -.2669E-04   .1635E+03  -.2988E-04
.1667E+03  -.3705E-04  .1710E+03  -.4582E-04   .1746E+03  -.5299E-04
.1784E+03  -.6016E-04  .1826E+03  -.6773E-04   .1859E+03  -.7291E-04
.1891E+03  -.8287E-04  .1926E+03  -.8964E-04   .1949E+03  -.9602E-04
.1969E+03  -.1016E-03  .1994E+03  -.1076E-03
   195          1          31         11
.8010E+02   .1006E-01  .8421E+02   .9889E-02   .8904E+02   .7515E-02
.9299E+02   .6465E-02  .9782E+02   .5172E-02   .1018E+03   .4202E-02
.1064E+03   .3313E-02  .1097E+03   .2505E-02   .1120E+03   .1980E-02
.1148E+03   .1535E-02  .1180E+03   .9697E-03   .1214E+03   .6465E-03
.1246E+03  -.4040E-04  .1280E+03  -.8081E-04   .1310E+03  -.8081E-04
.1363E+03   .4040E-03  .1417E+0    .7273E-03   .1453E+03   .8889E-03
.1491E+03   .1293E-02  .1530E+03   .1535E-02   .1569E+03   .1899E-02
.1620E+03   .2384E-02  .1658E+03   .2909E-02   .1691E+03   .3313E-02
.1732E+03   .3838E-02  .1766E+03   .4364E-02   .1815E+03   .5051E-02
.1861E+03   .5616E-02  .1898E+03   .6343E-02   .1950E+03   .7111E-02
.1997E+03   .7798E-02
   198          1          28         10
.7933E+02   .9990E-04  .8412E+02   .7992E-04   .8970E+02   .5115E-04
.9481E+02   .3197E-04  .9976E+02   .1359E-04   .1049E+03  -.7392E-05
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.1089E+03  -.2158E-04   .1146E+03  -.3836E-04   .1180E+03  -.4635E-04
.1207E+03  -.9359E-04   .1237E+03  -.5594E-04   .1269E+03  -.6154E-04
.1305E+03  -.5914E-04   .1344E+03  -.9435E-04   .1406E+03  -.5035E-04
.1452E+03  -.4955E-04   .1501E+03  -.4715E-04   .1557E+03  -.3916E-04
.1601E+03  -.3117E-04   .1670E+03  -.2239E-04   .1716E+03  -.1038E-04
.1741E+03  -.1598E-04   .1800E+03  -.7992E-05   .1852E+03   .9590E-05
.1888E+03   .1678E-04   .1928E+03   .2637E-04   .1966E+03   .3516E-04
.1997E+03   .4156E-04
    199         1          22          8
.8243E+02  -.5130E-02   .8834E+02  -.3327E-02   .9760E+02  -.8417E-03
.1053E+03   .8818E-03   .1117E+03   .2204E-02   .1155E+03   .2685E-02
.1189E+03   .3527E-02   .1214E+03   .3769E-02   .1249E+03   .4048E-02
.1292E+03   .4449E-02   .1333E+03   .4048E-02   .1385E+03   .3647E-02
.1431E+03   .3367E-02   .1518E+03   .2605E-02   .1597E+03   .1764E-02
.1668E+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         1          14          5
.8019E+02   .7649E-04   .9000E+02   .6135E-04   .9968E+02   .4303E-04
.1099E+03   .2231E-04   .1196E+03   .3984E-05   .1299E+03  -.2231E-04
.1397E+03  -.3665E-04   .1499E+03  -.5179E-04   .1559E+03  -.6454E-04
.1665E+03  -.8207E-04   .1778E+03  -.1052E-03   .1851E+03  -.1179E-03
.1925E+03  -.1371E-03   .1998E+03  -.1450E-03
    201         1          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
.1437E+03   .1633E-02   .1522E+03   .2151E-02   .1535E+03   .2351E-02
.1679E+03   .2629E-02   .1763E+03   .3108E-02   .1848E+03   .3586E-02
.1928E+03   .3984E-02   .2002E+03   .4064E-02
    202         1          21          7
.7995E+02   .8175E-04   .8666E+02   .5317E-04   .9185E+02   .2619E-04
.9856E+02  -.3968E-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   .1321E+03  -.8016E-04   .1381E+03  -.6905E-04
.1439E+03  -.5556E-04   .1506E+03  -.4286E-04   .1588E+03  -.2222E-04
.1636E+03  -.7937E-05   .1703E+03   .1271E-04   .1783E+03   .3571E-04
.1850E+03   .5794E-04   .1924E+03   .8571E-04   .2000E+03   .1167E-03
    203         1          29         10
.8365E+02  -.4990E-02   .8995E+02  -.3050E-02   .9641E+02  -.1228E-02
.1006E+03   0.          .1051E+03   .1188E-02   .1100E+03   .2297E-02
.1140E+03   .3089E-02   .1177E+03   .3960E-02   .1206E+03   .4396E-02
.1233E+03   .4752E-02   .1262E+03   .5030E-02   .1281E+03   .5267E-02
.1301E+03   .5307E-02   .1330E+03   .4950E-02   .1359E+03   .4792E-02
.1394E+03   .4436E-02   .1429E+03   .4158E-02   .1473E+03   .3604E-02
.1517E+03   .2851E-02   .1577E+03   .1782E-02   .1614E+03   .9505E-03
.1636E+03   .5941E-03   .1691E+03  -.5545E-03   .1750E+03  -.1861E-02
.1806E+03  -.3050E-02   .1857E+03  -.4277E-02   .1913E+03  -.5663E-02
.1963E+03  -.7168E-02   .2001E+03  -.8158E-02
    204         1          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  -.2738E-03   .1136E+03  -.3532E-03
.1173E+03  -.4206E-03   .1201E+03  -.4643E-03   .1229E+03  -.4980E-03
.1263E+03  -.5198E-03   .1306E+03  -.5437E-03   .1333E+03  -.5536E-03
.1369E+03  -.5456E-03   .1404E+03  -.5437E-03   .1455E+03  -.5159E-03
.1498E+03  -.4960E-03   .1535E+03  -.4504E-03   .1584E+03  -.4008E-03
.1612E+03  -.3611E-03   .1636E+03  -.3274E-03   .1689E+03  -.2440E-03
.1744E+03  -.1567E-03   .1787E+03  -.7738E-04   .1822E+03  -.1984E-05
.1861E+03   .6746E-04   .1900E+03   .1389E-03   .1953E+03   .2500E-03
.1997E+03   .3254E-03
    205         1          19          7
.8029E+02  -.1041E+00   .8626E+02  -.9211E-01   .9247E+02  -.7811E-01
.9853E+02  -.6607E-01   .1042E+03  -.5503E-01   .1095E+03  -.4320E-01
.1151E+03  -.3314E-01   .1268E+03  -.1537E-01   .1298E+03  -.1332E-01
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.1533E+03   .6509E-02   .1619E+03   .1183E-01   .1688E+03   .1538E-01
.1795E+03   .1992E-01   .1876E+03   .2308E-01   .1938E+03   .2544E-01
.1998E+03   .2564E-01
    208          1          26          9
.8026E+02  -.2505E-03   .8592E+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
.1265E+03   .4175E-03   .1284E+03   .4175E-03   .1305E+03   .3976E-03
.1330E+03   .3936E-03   .1394E+03   .3618E-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  -.1829E-03
.1807E+03  -.3380E-03   .1864E+03  -.4453E-03   .1919E+03  -.5765E-03
.1966E+03  -.6561E-03   .1999E+03  -.7634E-03
    209          1          27          9
.8021E+02   .1825E+00   .8404E+02   .1590E+00   .9066E+02   .1243E+00
.9681E+02   .9044E-01   .1026E+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  -.3384E-01
.1282E+03  -.4223E-01   .1299E+03  -.4382E-01   .1322E+03  -.4562E-01
.1354E+03  -.4542E-01   .1399E+03  -.4183E-01   .1461E+03  -.3625E-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
.8163E+02  -.4810E-03   .8497E+02  -.2846E-03   .8768E+02  -.1283E-03
.9263E+02   .1202E-03   .9693E+02   .2926E-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
.1189E+03   .4770E-03   .1231E+03   .4008E-03   .1254E+03   .3527E-03
.1291E+03   .2846E-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   .1570E+03  -.4569E-03   .1668E+03  -.7575E-03
.1727E+03  -.9579E-03   .1773E+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  -.6200E-01   .1360E+03  -.7000E-01
.1400E+03  -.7100E-01   .1440E+03  -.6900E-01   .1480E+03  -.6100E-01
.1520E+03  -.5500E-01   .1560E+03  -.4700E-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   .4500E-01   .1920E+03   .6100E-01   .1960E+03   .7400E-01
.2000E+03   .9100E-01
    212          1          29          10
.8317E+02  -.4980E-03   .8939E+02  -.2829E-03   .9525E+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   .1530E+03  -.1713E-03   .1551E+03  -.2510E-03
.1580E+03  -.3426E-03   .1600E+03  -.4303E-03   .1677E+03  -.7928E-03
.1730E+03  -.1012E-02   .1767E+03  -.1195E-02   .1809E+03  -.1426E-02
.1849E+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   .1856E+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   .3367E-01   .1267E+03   .2204E-01   .1295E+03   .1242E-01
.1335E+03   .2044E-02   .1374E+03  -.7214E-02   .1406E+03  -.9218E-02
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.1578E+03	-.1603E-02	.1644E+03	.5413E-02	.1726E+03	.1523E-01
.1807E+03	.2565E-01	.1860E+03	.3407E-01	.1920E+03	.4206E-01
.1998E+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	-.1753E-04	.9867E+02	-.6773E-05
.1014E+03	.2390E-05	.1033E+03	.7570E-05	.1066E+03	.1394E-04
.1094E+03	.1594E-04	.1100E+03	.1753E-04	.1114E+03	.1753E-04
.1130E+03	.1753E-04	.1152E+03	.1753E-04	.1172E+03	.1514E-04
.1192E+03	.1195E-04	.1220E+03	.1195E-04	.1238E+03	.7968E-05
.1269E+03	.1594E-05	.1299E+03	-.4781E-05	.1330E+03	-.1195E-04
.1365E+03	-.2191E-04	.1409E+03	-.3307E-04	.1447E+03	-.4303E-04
.1486E+03	-.5378E-04	.1520E+03	-.6375E-04	.1559E+03	-.7410E-04
.1603E+03	-.8964E-04	.1643E+03	-.1024E-03	.1670E+03	-.1131E-03
.1703E+03	-.1215E-03	.1734E+03	-.1339E-03	.1781E+03	-.1518E-03
.1807E+03	-.1618E-03	.1842E+03	-.1721E-03	.1875E+03	-.1861E-03
.1911E+03	-.2000E-03	.1935E+03	-.2112E-03	.1965E+03	-.2235E-03
.1994E+03	-.2307E-03	.2003E+03	-.2347E-03		
195	2	24	8		
.8026E+02	.6182E-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	.1818E-02	.1307E+03	.2182E-02
.1366E+03	.3030E-02	.1423E+03	.3717E-02	.1483E+03	.4566E-02
.1531E+03	.5172E-02	.1588E+03	.6303E-02	.1653E+03	.7192E-02
.1691E+03	.7838E-02	.1750E+03	.8727E-02	.1811E+03	.9818E-02
.1868E+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	-.1167E-03
.1178E+03	-.9910E-04	.1199E+03	-.9031E-04	.1226E+03	-.7193E-04
.1264E+03	-.4156E-04	.1294E+03	-.1439E-04	.1325E+03	.1918E-04
.1389E+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	9		
.7971E+02	.4529E-02	.8658E+02	.5050E-02	.9537E+02	.5611E-02
.1002E+03	.5812E-02	.1046E+03	.6293E-02	.1083E+03	.6052E-02
.1112E+03	.5892E-02	.1161E+03	.5571E-02	.1195E+03	.4689E-02
.1223E+03	.4248E-02	.1249E+03	.3367E-02	.1305E+03	.1844E-02
.1338E+03	.1002E-02	.1383E+03	-.4409E-03	.1424E+03	-.1924E-02
.1478E+03	-.3768E-02	.1521E+03	-.5210E-02	.1601E+03	-.8858E-02
.1661E+03	-.1086E-01	.1720E+03	-.1347E-01	.1783E+03	-.1619E-01
.1846E+03	-.1924E-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
.1381E+03	-.1076E-03	.1515E+03	-.1299E-03	.1625E+03	-.1506E-03
.1722E+03	-.1665E-03	.1833E+03	-.1857E-03	.1916E+03	-.2024E-03
.1999E+03	-.2159E-03				
201	2	13	5		
.8016E+02	.1355E-02	.9060E+02	.1873E-02	.1000E+03	.2351E-02
.1104E+03	.2629E-02	.1202E+03	.3108E-02	.1300E+03	.3625E-02
.1402E+03	.3944E-02	.1500E+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	-.1008E-03	.1019E+03	-.1175E-03	.1055E+03	-.1270E-03
.1080E+03	-.1310E-03	.1101E+03	-.1317E-03	.1121E+03	-.1310E-03
.1139E+03	-.1302E-03	.1152E+03	-.1246E-03	.1267E+03	-.7381E-04
.1308E+03	-.4603E-04	.1354E+03	-.1423E-04	[illegible]	.2381E-04

.1487E+03	.2413E-04	.1598E+03	.1373E-03	.1626E+03	.1873E-03
.1688E+03	.2389E-03	.1763E+03	.2937E-03	.1823E+03	.3492E-03
.1891E+03	.4032E-03	.1950E+03	.4549E-03	.2002E+03	.4929E-03
203	2	23	8		
.8022E+02	.2851E-02	.8485E+02	.4238E-02	.9027E+02	.5426E-02
.9657E+02	.6693E-02	.1018E+03	.7564E-02	.1053E+03	.8000E-02
.1088E+03	.8238E-02	.1116E+03	.8198E-02	.1155E+03	.7604E-02
.1191E+03	.6653E-02	.1233E+03	.5386E-02	.1288E+03	.3406E-02
.1335E+03	.1347E-02	.1383E+03	-.6337E-03	.1445E+03	-.3168E-02
.1494E+03	-.5426E-02	.1581E+03	-.9822E-02	.1660E+03	-.1386E-01
.1738E+03	-.1766E-01	.1807E+03	-.2107E-01	.1887E+03	-.2519E-01
.1959E+03	-.2907E-01	.2003E+03	-.3113E-01		
204	2	25	9		
.7994E+02	.4087E-03	.8392E+02	.2500E-03	.8877E+02	.7937E-04
.9220E+02	-.2579E-04	.9634E+02	-.1548E-03	.1009E+03	-.2738E-03
.1069E+03	-.4206E-03	.1121E+03	-.4881E-03	.1153E+03	-.5238E-03
.1205E+03	-.5595E-03	.1233E+03	-.5675E-03	.1262E+03	-.5675E-03
.1295E+03	-.5556E-03	.1335E+03	-.5556E-03	.1375E+03	-.5337E-03
.1429E+03	-.4881E-03	.1493E+03	-.4266E-03	.1531E+03	-.3710E-03
.1553E+03	-.3492E-03	.1674E+03	-.1448E-03	.1748E+03	-.5952E-05
.1798E+03	.2738E-04	.1867E+03	.2183E-03	.1936E+03	.3294E-03
.1998E+03	.4405E-03				
205	2	22	8		
.8339E+02	-.1558E-01	.8865E+02	-.7298E-02	.9319E+02	.9862E-03
.9781E+02	.7298E-02	.1022E+03	.1282E-01	.1088E+03	.1815E-01
.1129E+03	.2229E-01	.1183E+03	.2465E-01	.1217E+03	.2584E-01
.1260E+03	.2584E-01	.1296E+03	.2584E-01	.1343E+03	.2564E-01
.1411E+03	.2544E-01	.1489E+03	.2446E-01	.1551E+03	.2347E-01
.1612E+03	.2150E-01	.1683E+03	.1815E-01	.1755E+03	.1558E-01
.1815E+03	.1302E-01	.1882E+03	.8679E-02	.1953E+03	.4931E-02
.2002E+03	.9862E-03				
209	2	26	9		
.8034E+02	.4135E-03	.8440E+02	.5328E-03	.9023E+02	.6799E-03
.9653E+02	.8270E-03	.1014E+03	.9066E-03	.1040E+03	.9662E-03
.1058E+03	.9702E-03	.1080E+03	.9781E-03	.1120E+03	.9503E-03
.1162E+03	.9026E-03	.1200E+03	.8390E-03	.1248E+03	.7674E-03
.1278E+03	.6481E-03	.1326E+03	.5238E-03	.1351E+03	.4294E-03
.1396E+03	.2823E-03	.1449E+03	.1670E-03	.1479E+03	-.1988E-04
.1529E+03	-.1710E-03	.1557E+03	-.3062E-03	.1651E+03	-.6481E-03
.1696E+03	-.8191E-03	.1785E+03	-.1145E-02	.1883E+03	-.1511E-02
.1932E+03	-.1714E-02	.1999E+03	-.1968E-02		
209	2	21	7		
.8021E+02	-.3108E-01	.8603E+02	-.3745E-01	.9362E+02	-.4622E-01
.1013E+03	-.5378E-01	.1064E+03	-.5578E-01	.1092E+03	-.5817E-01
.1117E+03	-.5777E-01	.1148E+03	-.5418E-01	.1196E+03	-.4622E-01
.1238E+03	-.4024E-01	.1281E+03	-.3227E-01	.1346E+03	-.1633E-01
.1401E+03	-.2789E-02	.1474E+03	.1873E-01	.1550E+03	.3665E-01
.1623E+03	.6096E-01	.1700E+03	.8207E-01	.1778E+03	.1056E+00
.1864E+03	.1275E+00	.1930E+03	.1486E+00	.1998E+03	.1677E+00
210	2	30	10		
.8019E+02	-.9940E-03	.8537E+02	-.6333E-03	.8792E+02	-.4409E-03
.9095E+02	-.2445E-03	.9295E+02	-.1242E-03	.9534E+02	.8016E-05
.9757E+02	.1162E-03	.1004E+03	.2285E-03	.1036E+03	.3166E-03
.1071E+03	.4388E-03	.1096E+03	.4124E-03	.1121E+03	.4088E-03
.1161E+03	.3607E-03	.1200E+03	.2806E-03	.1250E+03	.1283E-03
.1285E+03	.1603E-04	.1329E+03	-.1603E-03	.1384E+03	-.3768E-03
.1428E+03	-.5691E-03	.1454E+03	-.6894E-03	.1499E+03	-.8818E-03
.1545E+03	-.1118E-02	.1582E+03	-.1283E-02	.1623E+03	-.1475E-02
.1690E+03	-.1800E-02	.1746E+03	-.2056E-02	.1792E+03	-.2293E-02
.1888E+03	-.2770E-02	.1942E+03	-.3034E-02	.2001E+03	-.3303E-02
211	2	31	11		
.8000E+02	.3100E-01	.8400E+02	.2000E-01	.8800E+02	.9300E-02
.9200E+02	0.	.9600E+02	-.1200E-01	.1000E+03	-.2000E-01
.1040E+03	-.2700E-01	.1080E+03	-.3000E-01	.1120E+03	-.3100E-01
.1160E+03	-.2900E-01	.1200E+03	-.2200E-01	.1240E+03	-.1700E-01
.1280E+03	-.2000E-02	.1320E+03	.1033E-02	.1360E+03	.1225E-01

.1400E+03	.2200E-01	.1440E+03	.3300E-01	.1480E+03	.4400E-01
.1520E+03	.5900E-01	.1560E+03	.7190E-01	.1600E+03	.8300E-01
.1640E+03	.9800E-01	.1680E+03	.1110E+00	.1720E+03	.1240E+00
.1760E+03	.1400E+00	.1800E+03	.1550E+00	.1840E+03	.1710E+00
.1880E+03	.1890E+00	.1920E+03	.2040E+00	.1960E+03	.2220E+00
.2000E+03	.2400E+00				
212	2	34	12		
.8014E+02	.1514E-03	.8397E+02	.2983E-03	.8748E+02	.4462E-03
.9147E+02	.5857E-03	.9530E+02	.7171E-03	.9872E+02	.8127E-03
.1020E+03	.8884E-03	.1056E+03	.9402E-03	.1063E+03	.9641E-03
.1094E+03	.9721E-03	.1124E+03	.9522E-03	.1159E+03	.8924E-03
.1195E+03	.7729E-03	.1229E+03	.6534E-03	.1268E+03	.4661E-03
.1310E+03	.2470E-03	.1335E+03	.1036E-03	.1361E+03	-.5578E-04
.1409E+03	-.3546E-03	.1451E+03	-.6335E-03	.1481E+03	-.8486E-03
.1511E+03	-.1056E-02	.1541E+03	-.1267E-02	.1585E+03	-.1542E-02
.1629E+03	-.1845E-02	.1659E+03	-.2060E-02	.1691E+03	-.22[illegible]E-02
.1730E+03	-.2550E-02	.1768E+03	-.2841E-02	.1826E+03	-.3243E-02
.1873E+03	-.3570E-02	.1902E+03	-.3745E-02	.1940E+03	-.4040E-02
.2006E+03	-.4526E-02				
213	2	32	11		
.8027E+02	.2804E-02	.8521E+02	-.1443E-01	.8896E+02	-.2645E-01
.9334E+02	-.3687E-01	.9717E+02	-.4649E-01	.1013E+03	-.5611E-01
.1047E+03	-.6132E-01	.1089E+03	-.6613E-01	.1103E+03	-.6653E-01
.1126E+03	-.6413E-01	.1174E+03	-.5651E-01	.1212E+03	-.4689E-01
.1241E+03	-.3567E-01	.1267E+03	-.2645E-01	.1293E+03	-.1483E-01
.1336E+03	.5611E-02	.1389E+03	.2966E-01	.1413E+03	.4289E-01
.1454E+03	.6533E-01	.1491E+03	.8337E-01	.1536E+03	.1098E+00
.1578E+03	.1311E+00	.1621E+03	.1551E+00	.1667E+03	.1816E+00
.1708E+03	.2040E+00	.1748E+03	.2248E+00	.1782E+03	.2453E+00
.1823E+03	.2689E+00	.1857E+03	.2874E+00	.1910E+03	.3166E+00
.1939E+03	.3335E+00	.1998E+03	.3671E+00		
214	1	25	9		
.5582E-01	-.8837E+00	.7337E-01	-.3486E+00	.9649E-01	-.8143E+00
.1156E+00	-.7357E+00	.1396E+00	-.7546E+00	.1707E+00	-.7155E+00
.1954E+00	-.6904E+00	.2209E+00	-.6677E+00	.2496E+00	-.6526E+00
.2743E+00	-.6422E+00	.3134E+00	-.6287E+00	.3517E+00	-.6247E+00
.4179E+00	-.6120E+00	.4928E+00	-.6032E+00	.5710E+00	-.5904E+00
.7161E+00	-.5641E+00	.8884E+00	-.5378E+00	.1036E+01	-.5171E+00
.1169E+01	-.4948E+00	.1292E+01	-.4725E+00	.1432E+01	-.4494E+00
.1571E+01	-.4295E+00	.1711E+01	-.4088E+00	.1832E+01	-.3888E+00
.2001E+01	-.3641E+00				
215	1	23	8		
.1025E+01	.2082E+01	.1173E+01	.1943E+01	.1319E+01	.1821E+01
.1421E+01	.1725E+01	.1534E+01	.1640E+01	.1618E+01	.1576E+01
.1724E+01	.1580E+01	.1824E+01	.1424E+01	.1946E+01	.1346E+01
.2040E+01	.1285E+01	.2198E+01	.1207E+01	.2286E+01	.1161E+01
.2428E+01	.1101E+01	.2565E+01	.1063E+01	.2671E+01	.1031E+01
.2773E+01	.1015E+01	.2873E+01	.1009E+01	.2953E+01	.9993E+00
.2999E+01	.9993E+00	.3051E+01	.1003E+01	.3475E+01	.1003E+01
.4006E+01	.1003E+01	.4000E+02	.3993E+00		
217	1	19	7		
.2019E+02	.6983E+00	.5930E+02	.6975E+00	.1039E+03	.6975E+00
.1087E+03	.6983E+00	.1156E+03	.7047E+00	.1229E+03	.7191E+00
.1268E+03	.7271E+00	.1302E+03	.7430E+00	.1340E+03	.7709E+00
.1365E+03	.7917E+00	.1390E+03	.8236E+00	.1411E+03	.8547E+00
.1427E+03	.8731E+00	.1441E+03	.8827E+00	.1456E+03	.8883E+00
.1472E+03	.8939E+00	.1647E+03	.8947E+00	.1830E+03	.8947E+00
.2006E+03	.8955E+00				
217	2	2	1		
.2035E+02	.1204E+01	.2003E+03	.1204E+01		
217	3	2	1		
.2035E+02	.1603E+01	.2001E+03	.1603E+01		
217	4	2	1		
.2019E+02	.2006E+01	.2001E+03	.2006E+01		
218	1	34	12		
.6316E+02	[illegible]	.6930E+02	[illegible]	[illegible]	[illegible]

.8118E+02	-.1179E-02	.8708E+02	-.1055E-02	.9442E+02	-.9049E-03
.9888E+02	-.8100E-03	.1046E+03	-.7000E-03	.1094E+03	-.6030E-03
.1131E+03	-.5368E-03	.1159E+03	-.4840E-03	.1188E+03	-.4220E-03
.1212E+03	-.3840E-03	.1242E+03	-.3220E-03	.1289E+03	-.2440E-03
.1322E+03	-.1800E-03	.1351E+03	-.1340E-03	.1388E+03	-.7600E-04
.1417E+03	-.3400E-04	.1453E+03	.1800E-04	.1488E+03	.7000E-04
.1524E+03	.1200E-03	.1561E+03	.1660E-03	.1602E+03	.2140E-03
.1640E+03	.2560E-03	.1680E+03	.2940E-03	.1711E+03	.3200E-03
.1755E+03	.3560E-03	.1799E+03	.3800E-03	.1855E+03	.4100E-03
.1899E+03	.4280E-03	.1938E+03	.4360E-03	.1981E+03	.4500E-03
.2002E+03	.4500E-03				
219	1	35	12		
.6045E+02	.3046E+00	.6547E+02	.2966E+00	.6937E+02	.2898E+00
.7184E+02	.2818E+00	.7511E+02	.2681E+00	.7758E+02	.2533E+00
.7909E+02	.2441E+00	.8100E+02	.2311E+00	.8307E+02	.2136E+00
.8491E+02	.1968E+00	.8642E+02	.1816E+00	.8833E+02	.1631E+00
.9128E+02	.1427E+00	.9343E+02	.1299E+00	.9701E+02	.1090E+00
.1016E+03	.8818E-01	.1051E+03	.7455E-01	.1090E+03	.5932E-01
.1135E+03	.4289E-01	.1170E+03	.3367E-01	.1210E+03	.2285E-01
.1250E+03	.1363E-01	.1301E+03	.4004E-03	.1360E+03	-.9218E-02
.1412E+03	-.1804E-01	.1471E+03	-.2645E-01	.1522E+03	-.3567E-01
.1661E+03	-.5291E-01	.1720E+03	-.5852E-01	.1771E+03	-.6333E-01
.1821E+03	-.6613E-01	.1879E+03	-.7014E-01	.1912E+03	-.7214E-01
.1952E+03	-.7495E-01	.2000E+03	-.7496E-01		
220	1	17	6		
0.	0.	.1450E+01	0.	.1500E+01	0.
.1550E+01	0.	.1600E+01	0.	.1650E+01	-.2000E-02
.1700E+01	-.1000E-01	.1750E+01	-.1900E-01	.1800E+01	-.3000E-01
.1850E+01	-.4100E-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	1	24	8		
.1250E+00	.1854E-03	.1844E+00	.2173E-03	.2306E+00	.2333E-03
.2752E+00	.2532E-03	.3266E+00	.2792E-03	.3648E+00	.3011E-03
.3994E+00	.3111E-03	.4301E+00	.3330E-03	.4472E+00	.3470E-03
.4731E+00	.3848E-03	.4938E+00	.4128E-03	.5094E+00	.4407E-03
.5261E+00	.4746E-03	.5440E+00	.5165E-03	.5568E+00	.5523E-03
.5711E+00	.6002E-03	.5846E+00	.6461E-03	.5974E+00	.6999E-03
.6153E+00	.7717E-03	.6296E+00	.8295E-03	.6432E+00	.8913E-03
.6587E+00	.9691E-03	.6790E+00	.1075E-02	.6993E+00	.1184E-02
222	1	14	5		
.7767E+02	.1833E-01	.8931E+02	.2872E-01	.9649E+02	.1793E-01
.1015E+03	.1633E-01	.1081E+03	.1474E-01	.1152E+03	.1036E-01
.1301E+03	-.3187E-02	.1402E+03	-.1394E-01	.1490E+03	-.2629E-01
.1531E+03	-.3227E-01	.1636E+03	-.4661E-01	.1774E+03	-.7092E-01
.1873E+03	-.8566E-01	.2007E+03	-.1084E+00		
223	1	18	6		
.2004E+00	.1216E-03	.2510E+00	.1276E-03	.3004E+00	.1296E-03
.3582E+00	.1515E-03	.4116E+00	.1615E-03	.4394E+00	.1735E-03
.4586E+00	.1974E-03	.4849E+00	.2333E-03	.5060E+00	.2672E-03
.5259E+00	.3131E-03	.5506E+00	.3649E-03	.5749E+00	.4367E-03
.5996E+00	.5065E-03	.6235E+00	.5803E-03	.6442E+00	.6481E-03
.6641E+00	.7238E-03	.6940E+00	.8554E-03	.7000E+00	.8714E-03
224	1	27	9		
.6478E+02	.9760E-01	.7131E+02	.7720E-01	.7489E+02	.6560E-01
.8102E+02	.4360E-01	.8476E+02	.3560E-01	.8906E+02	.2760E-01
.9320E+02	.1080E-01	.9996E+02	-.8400E-02	.1040E+03	-.1720E-01
.1089E+03	-.2920E-01	.1136E+03	-.4080E-01	.1189E+03	-.5400E-01
.1250E+03	-.6480E-01	.1296E+03	-.7600E-01	.1339E+03	-.8480E-01
.1410E+03	-.9520E-01	.1459E+03	-.1036E+00	.1511E+03	-.1076E+00
.1569E+03	-.1132E+00	.1617E+03	-.1176E+00	.1660E+03	-.1176E+00
.1699E+03	-.1176E+00	.1745E+03	-.1168E+00	.1800E+03	-.1120E+00
.1870E+03	-.1076E+00	.1931E+03	-.1044E+00	.1998E+03	-.9920E-01
225	1	19	7		
.3313E+02	.1320E+00	.3997E+02	.1252E+00	.4950E+02	.1164E+00
.5999E+02	.1074E+00	.7316E+02	.9387E-01	.7984E+02	.8305E-01

.4955E+02	.8130E-01	.3980E+02	.7140E-01	.1093E+03	.6300E-01
.1197E+03	.5360E-01	.1294E+03	.4480E-01	.1401E+03	.3560E-01
.1505E+03	.2600E-01	.1601E+03	.1760E-01	.1689E+03	.1040E-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	.5004E+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	-.4223E+01
.1298E+03	-.3606E+01	.1400E+03	-.2969E+01	.1516E+03	-.2112E+01
.1682E+03	-.9960E+00	.1786E+03	-.3984E+00	.1904E+03	.4781E+00
.1998E+03	.1016E+01				
227	1	2	1		
.3975E+02	.5000E+00	.1999E+03	.5000E+00		
227	2	18	6		
.3998E+02	.8567E+00	.3817E+02	.3535E+00	.1230E+03	.8559E+00
.1269E+03	.8519E+00	.1289E+03	.8527E+00	.1321E+03	.8567E+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
.1468E+03	.8997E+00	.1483E+03	.9013E+00	.1693E+03	.9013E+00
.1819E+03	.9013E+00	.1937E+03	.9013E+00	.1998E+03	.9013E+00
227	3	24	8		
.4014E+02	.1056E+01	.6611E+02	.1056E+01	.8809E+02	.1056E+01
.9136E+02	.1059E+01	.9494E+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	.1114E+01	.1247E+03	.1138E+01
.1293E+03	.1153E+01	.1333E+03	.1169E+01	.1361E+03	.1176E+01
.1383E+03	.1186E+01	.1399E+03	.1193E+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	.8913E+02	.4211E-02
.9916E+02	.3446E-02	.1094E+03	.2688E-02	.1197E+03	.1914E-02
.1298E+03	.1188E-02	.1396E+03	.4786E-03	.1501E+03	-.2871E-03
.1603E+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	-.8263E+00	.9215E+02	-.9681E+00
.9582E+02	-.1022E+01	.1008E+03	-.1046E+01	.1053E+03	-.1074E+01
.1083E+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	-.5828E+00	.1363E+03	-.4391E+00
.1397E+03	-.2914E+00	.1432E+03	-.1198E+00	.1458E+03	0.
.1489E+03	.1338E+00	.1517E+03	.2236E+00	.1553E+03	.3273E+00
.1586E+03	.3952E+00	.1633E+03	.4750E+00	.1670E+03	.5110E+00
.1717E+03	.5349E+00	.1770E+03	.5828E+00	.1826E+03	.5749E+00
.1885E+03	.5629E+00	.1918E+03	.5309E+00	.1959E+03	.5309E+00
.1998E+03	.5269E+00				
230	1	31	11		
.6794E+02	.1305E+00	.7072E+02	.1277E+00	.7311E+02	.1239E+00
.7502E+02	.1211E+00	.7788E+02	.1155E+00	.7995E+02	.1102E+00
.8298E+02	.1026E+00	.8473E+02	.9618E-01	.8679E+02	.9076E-01
.8918E+02	.7851E-01	.9157E+02	.6867E-01	.9395E+02	.5884E-01
.9634E+02	.4859E-01	.9883E+02	.3935E-01	.1025E+03	.2711E-01
.1065E+03	.1406E-01	.1091E+03	.5622E-02	.1114E+03	.6024E-03
.1136E+03	-.6024E-02	.1269E+03	-.2510E-01	.1305E+03	-.2892E-01
.1368E+03	-.3434E-01	.1409E+03	-.3855E-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	-.6024E-01				

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    231          1          27          9
.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  -.3928E+01  .8980E+02  -.3401E+01
.9435E+02  -.2898E+01  .9920E+02  -.2427E+01  .1033E+03  -.2068E+01
.1082E+03  -.1661E+01  .1112E+03  -.1413E+01  .1148E+03  -.1182E+01
.1166E+03  -.1086E+01  .1262E+03  -.5509E+00  .1313E+03  -.3273E+00
.1368E+03  -.1118E+00  .1461E+03   .1597E+00  .1527E+03   .3114E+00
.1602E+03   .3832E+00  .1712E+03   .4790E+00  .1808E+03   .4950E+00
.1889E+03   .4870E+00  .1960E+03   .4799E+00  .1998E+03   .4551E+00
    232          1          22          8
.2262E+00   .1275E+00  .2625E+00   .2908E+00  .2916E+00   .4980E+00
.3271E+00   .7809E+00  .3438E+00   .9761E+00  .3734E+00   .1247E+01
.3961E+00   .1426E+01  .4164E+00   .1602E+01  .4276E+00   .1649E+01
.4420E+00   .1689E+01  .4575E+00   .1689E+01  .4807E+00   .1657E+01
.5042E+00   .1570E+01  .5233E+00   .1482E+01  .5481E+00   .1283E+01
.5728E+00   .1131E+01  .5935E+00   .9482E+00  .6334E+00   .6534E+00
.6590E+00   .4662E+00  .6845E+00   .3586E+00  .7140E+00   .2032E+00
.7268E+00   .1594E+00
    233          1          12          4
.4013E+02  -.2444E-01  .5096E+02  -.2324E-01  .6377E+02  -.2170E-01
.7834E+02  -.2016E-01  .9618E+02  -.1806E-01  .1117E+03  -.1636E-01
.1293E+03  -.1430E-01  .1419E+03  -.1290E-01  .1588E+03  -.1108E-01
.1764E+03  -.8740E-02  .1927E+03  -.7220E-02  .1997E+03  -.6600E-02
    234          1          22          8
.5028E+02   .1385E+01  .6029E+02   .1924E+01  .7093E+02   .1996E+01
.8086E+02   .2135E+01  .8409E+02   .2322E+01  .9500E+02   .2553E+01
.1016E+03   .2871E+01  .1058E+03   .3157E+01  .1096E+03   .3344E+01
.1141E+03   .3535E+01  .1140E+03   .3606E+01  .1268E+03   .3467E+01
.1318E+03   .3173E+01  .1364E+03   .2815E+01  .1420E+03   .2481E+01
.1516E+03   .2254E+01  .1581E+03   .2076E+01  .1655E+03   .1956E+01
.1763E+03   .1829E+01  .1852E+03   .1797E+01  .1914E+03   .1753E+01
.2002E+03   .1761E+01
    235          1          17          6
.4013E+02  -.2167E-01  .4960E+02  -.2102E-01  .6075E+02  -.2030E-01
.7062E+02  -.1968E-01  .8073E+02  -.1890E-01  .9108E+02  -.1831E-01
.1014E+03  -.1763E-01  .1111E+03  -.1695E-01  .1213E+03  -.1625E-01
.1308E+03  -.1552E-01  .1405E+03  -.1494E-01  .1520E+03  -.1418E-01
.1614E+03  -.1363E-01  .1705E+03  -.1293E-01  .1811E+03  -.1221E-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
.8042E+02  0.          .1157E+03   .3960E-05  .1197E+03   .1386E-04
.1244E+03   .1584E-04  .1275E+03   .3366E-04  .1314E+03   .6139E-04
.1355E+03   .9505E-04  .1389E+03   .1366E-03  .1432E+03   .1624E-03
.1471E+03   .2020E-03  .1509E+03   .2376E-03  .1569E+03   .2772E-03
.1611E+03   .2990E-03  .1653E+03   .3307E-03  .1690E+03   .3446E-03
.1738E+03   .3624E-03  .1779E+03   .3802E-03  .1821E+03   .3960E-03
.1859E+03   .3960E-03  .1900E+03   .3960E-03  .1923E+03   .3960E-03
.1959E+03   .3941E-03  .2000E+03   .3802E-03
    238          1          3           1
.5978E-01  0.          .1462E+00  0.          .1000E+01  0.
    239          1          19          7
.7978E+02   .1644E-01  .8726E+02   .1624E-01  .9331E+02   .1446E-01
.1000E+03   .1307E-01  .1040E+03   .1220E-01  .1100E+03   .1188E-01
.1178E+03   .1129E-01  .1240E+03   .1030E-01  .1300E+03   .8515E-02
.1357E+03   .6337E-02  .1406E+03   .6139E-02  .1484E+03   .5347E-02
.1547E+03   .3366E-02  .1634E+03   .1782E-02  .1720E+03   .3960E-03
.1811E+03  -.1188E-02  .1888E+03  -.2179E-02  .1948E+03  -.3564E-02
.2000E+03  -.4356E-02
    240          1          3           1
.6022E-01  0.          .1500E+00  0.          .1000E+01  0.
    242          1          2           1
.6029E+02   .7028E+00  .2002E+03   .7028E+00
    242          2          2           1
```

[illegible]	[illegible]	[illegible]	[illegible]		
242	3	7	3		
.6029E+02	.1053E+01	.1003E+03	.1053E+01	.1200E+03	.1050E+01
.1401E+03	.1050E+01	.1602E+03	.1050E+01	.1802E+03	.1050E+01
.2002E+03	.1051E+01				
242	4	2	1		
.6029E+02	.1202E+01	.2300E+03	.1202E+01		
242	5	2	1		
.6006E+02	.1604E+01	.2000E+03	.1604E+01		
243	1	20	7		
.7798E+02	-.3912E-03	.8666E+02	-.3812E-03	.9184E+02	-.3792E-03
.9805E+02	-.3733E-03	.1041E+03	-.3613E-03	.1101E+03	-.3533E-03
.1151E+03	-.3453E-03	.1201E+03	-.3333E-03	.1259E+03	-.3214E-03
.1322E+03	-.3054E-03	.1372E+03	-.2914E-03	.1419E+03	-.2695E-03
.1472E+03	-.2495E-03	.1517E+03	-.2415E-03	.1546E+03	-.2236E-03
.1671E+03	-.1876E-03	.1786E+03	-.1497E-03	.1849E+03	-.1297E-03
.1920E+03	-.1018E-03	.2001E+03	-.6786E-04		
244	1	20	7		
.6006E-01	.2711E-03	.7917E-01	.2912E-03	.9032E-01	.2912E-03
.1004E+00	.2912E-03	.1100E+00	.2831E-03	.1161E+00	.2651E-03
.1201E+00	.2390E-03	.1240E+00	.2028E-03	.1252E+00	.1867E-03
.1268E+00	.1506E-03	.1289E+00	.1104E-03	.1305E+00	.8032E-04
.1331E+00	.6225E-04	.1372E+00	.2209E-04	.1402E+00	.1406E-04
.1433E+00	.1004E-04	.1481E+00	.6024E-05	.1501E+00	.2008E-05
.1500E+00	0.	.1000E+01	0.		
245	1	22	8		
.7739E+02	.7014E-02	.8169E+02	.1022E-01	.8519E+02	.1222E-01
.8869E+02	.1523E-01	.9204E+02	.1683E-01	.9912E+02	.1884E-01
.1051E+03	.2064E-01	.1098E+03	.2204E-01	.1139E+03	.2265E-01
.1185E+03	.2365E-01	.1223E+03	.2365E-01	.1299E+03	.2365E-01
.1360E+03	.2285E-01	.1419E+03	.2144E-01	.1499E+03	.2044E-01
.1579E+03	.1864E-01	.1679E+03	.1623E-01	.1742E+03	.1363E-01
.1820E+03	.1042E-01	.1900E+03	.6814E-02	.1952E+03	.3308E-02
.1998E+03	.1403E-02				
246	1	16	6		
.6011E-01	-.2056E-01	.8033E-01	-.2056E-01	.1002E+00	-.2056E-01
.1099E+00	-.2056E-01	.1147E+00	-.1936E-01	.1200E+00	-.1737E-01
.1229E+00	-.1577E-01	.1260E+00	-.1257E-01	.1283E+00	-.8782E-02
.1301E+00	-.5589E-02	.1320E+00	-.3593E-02	.1341E+00	-.3980E-03
.1360E+00	.9980E-03	.1399E+00	.9980E-03	.1400E+00	0.
.1000E+01	0.				
247	1	29	10		
.7967E+02	.1845E-03	.8348E+02	.1012E-03	.8697E+02	.1984E-04
.9087E+02	-.6548E-04	.9492E+02	-.1627E-03	.9873E+02	-.2401E-03
.1052E+03	-.3651E-03	.1110E+03	-.4702E-03	.1202E+03	-.5813E-03
.1255E+03	-.6270E-03	.1303E+03	-.6607E-03	.1330E+03	-.6726E-03
.1362E+03	-.6766E-03	.1384E+03	-.6726E-03	.1423E+03	-.6627E-03
.1457E+03	-.6587E-03	.1499E+03	-.6290E-03	.1542E+03	-.5794E-03
.1589E+03	-.5258E-03	.1632E+03	-.4544E-03	.1670E+03	-.3810E-03
.1728E+03	-.2579E-03	.1767E+03	-.1667E-03	.1806E+03	-.7341E-04
.1846E+03	.4167E-04	.1908E+03	.2083E-03	.1948E+03	.3214E-03
.1983E+03	.4107E-03	.1998E+03	.4583E-03		
248	1	28	10		
.6037E-01	.5569E-03	.7648E-01	.5489E-03	.8788E-01	.5469E-03
.9386E-01	.5429E-03	.9976E-01	.5329E-03	.1045E+00	.5289E-03
.1085E+00	.5250E-03	.1142E+00	.5130E-03	.1184E+00	.4570E-03
.1207E+00	.4731E-03	.1235E+00	.4591E-03	.1266E+00	.4311E-03
.1288E+00	.4072E-03	.1310E+00	.3673E-03	.1336E+00	.3253E-03
.1353E+00	.2774E-03	.1384E+00	.2255E-03	.1400E+00	.1756E-03
.1429E+00	.1357E-03	.1442E+00	.1038E-03	.1465E+00	.7984E-04
.1478E+00	.5589E-04	.1494E+00	.3194E-04	.1510E+00	.1796E-04
.1534E+00	.7984E-05	.1598E+00	.9980E-05	.1600E+00	0.
.1000E+01	0.				
249	1	24	8		
.7954E+02	-.3187E-02	.8360E+02	.1992E-03	.8669E+02	.3984E-02
.9775E+02	.8964E-02	.9793E+02	.1376E-01	.1031E+03	.1375E-01

.1079E+03	.1994E-01	.1143E+03	.1753E-01	.1194E+03	.1773E-01
.1234E+03	.1753E-01	.1273E+03	.1733E-01	.1342E+03	.1653E-01
.1486E+03	.1514E-01	.1453E+03	.1454E-01	.1546E+03	.1096E-01
.1622E+03	.7371E-02	.1671E+03	.5378E-02	.1717E+03	.3386E-02
.1760E+03	.3984E-03	.1808E+03	-.1992E-02	.1861E+03	-.4183E-02
.1902E+03	-.7570E-02	.1951E+03	-.1116E-01	.2000E+03	-.1394E-01
250	1	15	5		
.6024E-01	-.5812E-02	.7036E-01	-.5611E-02	.7 4E-01	-.5812E-02
.8580E-01	-.6012E-02	.9968E-01	-.5210E-02	.1099E+00	-.4609E-02
.1162E+00	-.4609E-02	.1202E+00	-.3607E-02	.1243E+00	-.2605E-02
.1274E+00	-.1403E-02	.1297E+00	0.	.1476E+00	0.
.1557E+00	0.	.1601E+00	0.	.1000E+01	0.
251	1	35	12		
.7990E+02	.5833E-03	.8181E+02	.4286E-03	.8341E+02	.3294E-03
.8524E+02	.1905E-03	.8747E+02	.5754E-04	.8993E+02	-.7540E-04
.9248E+02	-.1925E-03	.9495E+02	-.2897E-03	.9797E+02	-.3909E-03
.1012E+03	-.5119E-03	.1039E+03	-.5714E-03	.1088E+03	-.6647E-03
.1119E+03	-.7302E-03	.1143E+03	-.7639E-03	.1179E+03	-.7917E-03
.1199E+03	-.8115E-03	.1222E+03	-.8155E-03	.1248E+03	-.8175E-03
.1288E+03	-.8194E-03	.1318E+03	-.8016E-03	.1356E+03	-.7758E-03
.1403E+03	-.7500E-03	.1452E+03	-.7044E-03	.1586E+03	-.6587E-03
.1560E+03	-.5913E-03	.1608E+03	-.5317E-03	.1654E+03	-.4663E-03
.1707E+03	-.3829E-03	.1768E+03	-.2897E-03	.1815E+03	-.2063E-03
.1873E+03	-.1012E-03	.1913E+03	-.1984E-04	.1944E+03	.3968E-04
.1979E+03	.1190E-03	.1999E+03	.1469E-03		
252	1	30	10		
.6009E-01	.9980E-03	.7012E-01	.9980E-03	.7967E-01	.9980E-03
.8985E-01	.9980E-03	.1000E+00	.9980E-03	.1058E+00	.9941E-03
.1098E+00	.9861E-03	.1139E+00	.9782E-03	.1177E+00	.9545E-03
.1207E+00	.9287E-03	.1228E+00	.9109E-03	.1267E+00	.8752E-03
.1297E+00	.8337E-03	.1327E+00	.7881E-03	.1347E+00	.7505E-03
.1373E+00	.6911E-03	.1403E+00	.6158E-03	.1431E+00	.5347E-03
.1459E+00	.4396E-03	.1488E+00	.3465E-03	.1513E+00	.2614E-03
.1530E+00	.2040E-03	.1548E+00	.1168E-03	.1567E+00	.8515E-04
.1586E+00	.4950E-04	.1606E+00	.2376E-04	.1628E+00	.1188E-04
.1663E+00	.1188E-04	.1702E+00	0.	.1000E+01	0.
253	1	36	12		
.7986E+02	-.1317E-01	.8272E+02	-.7385E-02	.8495E+02	-.3194E-02
.8734E+02	.1397E-02	.8989E+02	.6587E-02	.9252E+02	.1078E-01
.9482E+02	.1397E-01	.9658E+02	.1776E-01	.9896E+02	.2116E-01
.1013E+03	.2355E-01	.1033E+03	.2595E-01	.1061E+03	.2794E-01
.1085E+03	.2954E-01	.1104E+03	.3034E-01	.1141E+03	.3034E-01
.1200E+03	.3014E-01	.1235E+03	.3014E-01	.1271E+03	.2934E-01
.1300E+03	.2894E-01	.1340E+03	.2695E-01	.1381E+03	.2515E-01
.1437E+03	.2315E-01	.1485E+03	.2076E-01	.1539E+03	.1816E-01
.1584E+03	.1537E-01	.1621E+03	.1397E-01	.1654E+03	.1138E-01
.1692E+03	.8583E-02	.1733E+03	.6387E-02	.1760E+03	.4192E-02
.1802E+03	.7984E-03	.1839E+03	-.2395E-02	.1871E+03	-.4591E-02
.1913E+03	-.7984E-02	.1956E+03	-.1158E-01	.1999E+03	-.1617E-01
254	1	21	7		
.5989E-01	-.4356E-01	.7855E-01	-.4356E-01	.9585E-01	-.4356E-01
.1022E+00	-.4297E-01	.1100E+00	-.4297E-01	.1153E+00	-.4139E-01
.1200E+00	-.3941E-01	.1235E+00	-.3802E-01	.1261E+00	-.3485E-01
.1285E+00	-.3208E-01	.1318E+00	-.2673E-01	.1340E+00	-.2238E-01
.1368E+00	-.1762E-01	.1392E+00	-.1327E-01	.1417E+00	-.9109E-02
.1438E+00	-.6139E-02	.1455E+00	-.4154E-02	.1474E+00	-.2178E-02
.1498E+00	-.7921E-03	.1600E+00	0.	.1000E+01	0.
255	1	30	10		
.7981E+02	.2510E-03	.8975E+02	.2510E-03	.9968E+02	.2510E-03
.1072E+03	.2451E-03	.1129E+03	.2470E-03	.1183E+03	.2470E-03
.1238E+03	.2352E-03	.1274E+03	.2332E-03	.1315E+03	.2253E-03
.1351E+03	.2233E-03	.1384E+03	.2134E-03	.1423E+03	.1838E-03
.1453E+03	.1621E-03	.1493E+03	.1304E-03	.1537E+03	.9486E-04
.1568E+03	.6522E-04	.1603E+03	.1976E-04	.1634E+03	-.2372E-04
.1663E+03	-.6522E-04	.1693E+03	-.1047E-03	.1725E+03	-.1581E-03
.1762E+03	-.2174E-03	.1778E+03	-.2623E-03	.1 3E+03	-.3349E-03

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.1957E+03  -.6957E-03  .1977E+03  -.7669E-03  .1997E+03  -.8123E-03
    256          1         19          7
.5996E-01   .2113E-03  .6990E-01   .2113E-03  .7992E-01   .2113E-03
.8938E-01   .2072E-03  .9988E-01   .2052E-03  .1061E+00   .2032E-03
.1126E+00   .1871E-03  .1199E+00   .1751E-03  .1245E+00   .1549E-03
.1288E+00   .1187E-03  .1322E+00   .9054E-04  .1366E+00   .7042E-04
.1416E+00   .3923E-04  .1450E+00   .2414E-04  .1471E+00   .1408E-04
.1499E+00   0.         .1559E+00   0.         .1600E+00   0
.1000E+01   0.
    257          1         18          6
.8011E+02  -.2465E-01  .8393E+02  -.2167E-01  .8886E+02  -.1928E-01
.9387E+02  -.1710E-01  .9952E+02  -.1590E-01  .1066E+03  -.1511E-01
.1130E+03  -.1412E-01  .1195E+03  -.1491E-01  .1277E+03  -.1610E-01
.1361E+03  -.1710E-01  .1438E+03  -.1988E-01  .1533E+03  -.2247E-01
.1623E+03  -.2763E-01  .1720E+03  -.3269E-01  .1790E+03  -.3598E-01
.1858E+03  -.4036E-01  .1924E+03  -.4513E-01  .2000E+03  -.4990E-01
    258          1         21          7
.6033E-01   .1074E-01  .7035E-01   .1074E-01  .8029E-01   .1074E-01
.8927E-01   .1014E-01  .9809E-01   .1054E-01  .1049E+00   .1093E-01
.1104E+00   .9940E-02  .1174E+00   .9940E-02  .1202E+00   .9145E-02
.1237E+00   .8151E-02  .1272E+00   .7157E-02  .1308E+00   .5567E-02
.1341E+00   .3380E-02  .1359E+00   .2783E-02  .1388E+00   .1988E-02
.1408E+00   .7952E-03  .1438E+00   0.         .1480E+00   0.
.1500E+00   0.         .1600E+00   0.         .1000E+01   0.
    259          1         18          6
.7986E+02  -.1153E-02  .8774E+02  -.8543E-03  .9594E+02  -.7555E-03
.1043E+03  -.6163E-03  .1143E+03  -.2783E-03  .1197E+03  -.2187E-03
.1292E+03  -.5964E-04  .1361E+03  -.3976E-04  .1431E+03  -.3976E-04
.1502E+03  -.5964E-04  .1555E+03  -.1193E-03  .1612E+03  -.1988E-03
.1670E+03  -.3579E-03  .1741E+03  -.5567E-03  .1816E+03  -.7753E-03
.1880E+03  -.1113E-02  .1955E+03  -.1392E-02  .2000E+03  -.1730E-02
    260          1         21          7
.6026E-01   .1687E-02  .6927E-01   .1567E-02  .7804E-01   .1468E-02
.9419E-01   .1468E-02  .9008E-01   .1349E-02  .9637E-01   .1329E-02
.1022E+00   .1310E-02  .1079E+00   .1230E-02  .1122E+00   .1219E-02
.1169E+00   .1131E-02  .1208E+00   .9127E-03  .1235E+00   .8135E-03
.1253E+00   .7341E-03  .1271E+00   .5952E-03  .1292E+00   .4167E-03
.1309E+00   .2381E-03  .1334E+00   .1587E-03  .1373E+00   0.
.1417E+00   0.         .1498E+00   0.         .1000E+01   0.
    261          1         18          6
.8014E+02  -.1020E+00  .8699E+02  -.9363E-01  .9248E+02  -.8964E-01
.9869E+02  -.8327E-01  .1051E+03  -.7450E-01  .1125E+03  -.6773E-01
.1188E+03  -.6056E-01  .1267E+03  -.5139E-01  .1333E+03  -.4104E-01
.1422E+03  -.2789E-01  .1505E+03  -.1673E-01  .1602E+03  -.2789E-02
.1675E+03   .7570E-02  .1737E+03   .1753E-01  .1824E+03   .2948E-01
.1887E+03   .3825E-01  .1949E+03   .4701E-01  .2001E+03   .5538E-01
    262          1         21          7
.6034E-01  -.5857E-01  .7015E-01  -.5857E-01  .7844E-01  -.5857E-01
.8418E-01  -.5777E-01  .9239E-01  -.5637E-01  .9789E-01  -.5498E-01
.1037E+00  -.5498E-01  .1095E+00  -.5060E-01  .1161E+00  -.4741E-01
.1262E+00  -.3705E-01  .1297E+00  -.2943E-01  .1325E+00  -.2271E-01
.1346E+00  -.1673E-01  .1362E+00  -.1315E-01  .1381E+00  -.8367E-02
.1396E+00  -.5578E-02  .1408E+00  -.3586E-02  .1431E+00   0.
.1472E+00   0.         .1501E+00   0.         .1000E+01   0.
    264          1          2          1
.5966E+02   .7022E+00  .2002E+03   .7022E+00
    264          2          2          1
.5974E+02   .9066E+00  .2003E+03   .9066E+00
    264          3          2          1
.5974E+02   .1051E+01  .2002E+03   .1051E+01
    264          4          2          1
.5982E+02   .1204E+01  .1999E+03   .1204E+01
    264          5          2          1
.5966E+02   .1501E+01  .2002E+03   .1501E+01
    265          1         28         10
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.7990E+02   .3738E-02   .3404E+02   .4439E-02   .3858E+02   .3141E-02
.9320E+02   .2843E-02   .9805E+02   .2604E-02   .1032E+03   .2326E-02
.1090E+03   .2068E-02   .1139E+03   .1829E-02   .1196E+03   .1670E-02
.1242E+03   .1451E-02   .1291E+03   .1332E-02   .1339E+03   .1153E-02
.1399E+03   .9145E-03   .1441E+03   .8946E-03   .1487E+03   .7555E-03
.1533E+03   .6759E-03   .1569E+03   .5964E-03   .1620E+03   .4771E-03
.1670E+03   .3976E-03   .1718E+03   .2982E-03   .1740E+03   .2783E-03
.1759E+03   .2783E-03   .1770E+03   .2783E-03   .1815E+03   .9940E-04
.1870E+03   .9940E-04   .1925E+03   .9940E-04   .1966E+03   0.
.2000E+03   .3976E-04
    266         1           11          4
.6006E-01   .4990E-03   .8003E-01   .4990E-03   .9014E-01   .4990E-03
.1006E+00   .4990E-03   .1101E+00   .3393E-03   .1149E+00   .2794E-03
.1173E+00   .2794E-03   .1204E+00   .2395E-03   .1249E+00   .1198E-03
.1299E+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   -.1068E+00   .9865E+02   -.1004E+00
.1041E+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   .4016E-02
.1560E+03   .1044E-01   .1601E+03   .1205E-01   .1643E+03   .1365E-01
.1701E+03   .1365E-01   .1741E+03   .1285E-01   .1786E+03   .8032E-02
.1849E+03   .4819E-02   .1900E+03   .3213E-02   .1935E+03   .8032E-03
.1967E+03   -.4016E-02   .2000E+03   -.4819E-02
    268         1           12          4
.6019E-01   -.1434E-01   .7014E-01   -.1434E-01   .8137E-01   -.1434E-01
.9427E-01   -.1434E-01   .1035E+00   -.1355E-01   .1102E+00   -.8765E-02
.1161E+00   -.7171E-02   .1221E+00   -.3984E-02   .1282E+00   -.3984E-02
.1360E+00   -.7968E-03   .1386E+00   0.          .1000E+01   0.
    269         1           38          13
.8196E+02   -.2675E-02   .8499E+02   -.2036E-02   .8722E+02   -.1477E-02
.9088E+02   -.7585E-03   .9375E+02   -.2196E-03   .9717E+02   .3992E-03
.9908E+02   .6786E-03   .1019E+03   .1158E-02   .1044E+03   .1497E-02
.1069E+03   .1816E-02   .1100E+03   .2176E-02   .1132E+03   .2555E-02
.1157E+03   .2735E-02   .1191E+03   .2954E-02   .1219E+03   .3094E-02
.1250E+03   .3253E-02   .1280E+03   .3373E-02   .1319E+03   .3513E-02
.1360E+03   .3553E-02   .1400E+03   .3573E-02   .1439E+03   .3573E-02
.1483E+03   .3533E-02   .1533E+03   .3433E-02   .1579E+03   .3234E-02
.1612E+03   .3054E-02   .1651E+03   .2814E-02   .1689E+03   .2635E-02
.1718E+03   .2395E-02   .1744E+03   .2196E-02   .1768E+03   .1996E-02
.1798E+03   .1717E-02   .1836E+03   .1497E-02   .1871E+03   .1178E-02
.1898E+03   .9381E-03   .1928E+03   .7585E-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   .9988E-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   -.3181E-03   .1425E+00   -.1590E-03   .1458E+00   -.3976E-04
.1499E+00   .3976E-04   .1525E+00   0.          .1000E+01   0.
    271         1           32          11
.8070E+02   .9861E-01   .8341E+02   .7793E-01   .8548E+02   .6441E-01
.8778E+02   .4930E-01   .8961E+02   .3419E-01   .9176E+02   .2386E-01
.9359E+02   .1352E-01   .9578E+02   -.3976E-02   .9893E+02   -.1750E-01
.1012E+03   -.2704E-01   .1039E+03   -.4135E-01   .1071E+03   -.5010E-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   -.3022E-01   .1343E+03   -.2624E-01   .1388E+03   -.2386E-01
.1431E+03   -.2068E-01   .1476E+03   -.1670E-01   .1499E+03   -.1750E-01
.1539E+03   -.1113E-01   .1589E+03   -.7157E-02   .1649E+03   -.7157E-02
.1698E+03   -.6362E-02   .1768E+03   -.3976E-02   .1834E+03   -.3976E-02
.1899E+03   0.          .1998E+03   .1590E-02
    272         1           19          7
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.5006E-01  -.9961E-01   .9003E-01  -.9861E-01   .9300E-01  -.9781E-01
.1001E+00  -.9781E-01   .1102E+00  -.9463E-01   .1170E+00  -.9304E-01
.1216E+00  -.8191E-01   .1267E+00  -.7316E-01   .1305E+00  -.6282E-01
.1333E+00  -.5408E-01   .1352E+00  -.4215E-01   .1368E+00  -.3260E-01
.1381E+00  -.2704E-01   .1391E+00  -.1909E-01   .1412E+00  -.1272E-01
.1427E+00  -.4771E-02   .1442E+00  -.1590E-02   .1458E+00  0.
.1000E+01  0.
    273         1          33          11
.3018E+02  -.3400E-03   .8232E+02   .4000E-03   .8447E+02   .1220E-02
.8654E+02   .1840E-02   .8790E+02   .2180E-02   .8957E+02   .2640E-02
.9164E+02   .2920E-02   .9291E+02   .3280E-02   .9467E+02   .3600E-02
.9705E+02   .3940E-02   .9912E+02   .4220E-02   .1015E+03   .4460E-02
.1037E+03   .4680E-02   .1055E+03   .4780E-02   .1080E+03   .4980E-02
.1095E+03   .5040E-02   .1145E+03   .5020E-02   .1200E+03   .4980E-02
.1268E+03   .4940E-02   .1327E+03   .4780E-02   .1395E+03   .4740E-02
.1448E+03   .4640E-02   .1509E+03   .4440E-02   .1571E+03   .4260E-02
.1639E+03   .4140E-02   .1690E+03   .3920E-02   .1745E+03   .3720E-02
.1795E+03   .3360E-02   .1843E+03   .3200E-02   .1891E+03   .2840E-02
.1939E+03   .2660E-02   .1968E+03   .2500E-02   .1998E+03   .2280E-02
    274         1          28          10
.6003E-01  -.5150E-02   .7030E-01  -.5150E-02   .9002E-01  -.5150E-02
.9037E-01  -.5070E-02   .9570E-01  -.5110E-02   .1001E+00  -.4990E-02
.1055E+00  -.4870E-02   .1097E+00  -.4770E-02   .1146E+00  -.4749E-02
.1188E+00  -.4649E-02   .1217E+00  -.4349E-02   .1249E+00  -.4246E-02
.1271E+00  -.3985E-02   .1296E+00  -.3747E-02   .1318E+00  -.3387E-02
.1332E+00  -.3046E-02   .1347E+00  -.2705E-02   .1361E+00  -.2265E-02
.1378E+00  -.1743E-02   .1386E+00  -.1343E-02   .1400E+00  -.1062E-02
.1415E+00  -.7014E-03   .1429E+00  -.4208E-03   .1448E+00  -.2004E-03
.1471E+00  0.           .1531E+00  0.           .1602E+00  0.
.1000E+01  0.
    275         1          25           9
.7968E+02  -.1597E-01   .8270E+02  -.3912E-01   .8581E+02  -.6467E-01
.8779E+02  -.8703E-01   .9002E+02  -.1062E+00   .9320E+02  -.1285E+00
.9686E+02  -.1525E+00   .1008E+03  -.1733E+00   .1040E+03  -.1900E+00
.1080E+03  -.2066E+00   .1128E+03  -.2148E+00   .1176E+03  -.2180E+00
.1225E+03  -.2228E+00   .1306E+03  -.2212E+00   .1382E+03  -.2124E+00
.1447E+03  -.2076E+00   .1530E+03  -.1948E+00   .1605E+03  -.1876E+00
.1664E+03  -.1701E+00   .1738E+03  -.1541E+00   .1815E+03  -.1357E+00
.1875E+03  -.1190E+00   .1934E+03  -.1046E+00   .1961E+03  -.9900E-01
.2000E+03  -.9000E-01
    276         1          28          10
.5998E-01   .3048E+00   .6993E-01   .3016E+00   .7997E-01   .2984E+00
.9000E-01   .2984E+00   .9853E-01   .2921E+00   .1070E+00   .2841E+00
.1144E+00   .2746E+00   .1206E+00   .2651E+00   .1249E+00   .2492E+00
.1274E+00   .2381E+00   .1310E+00   .2198E+00   .1338E+00   .2056E+00
.1356E+00   .1921E+00   .1377E+00   .1770E+00   .1395E+00   .1627E+00
.1413E+00   .1492E+00   .1429E+00   .1325E+00   .1446E+00   .1095E+00
.1456E+00   .8651E-01   .1472E+00   .6349E-01   .1485E+00   .4921E-01
.1496E+00   .3175E-01   .1510E+00   .2143E-01   .1524E+00   .1111E-01
.1544E+00  0.           .1578E+00  0.           .1603E+00  0.
.1000E+01  0.
    277         1          13           5
.8021E+02   .2976E-03   .8961E+02   .1190E-03   .1004E+03   .1389E-03
.1102E+03   .1389E-03   .1202E+03   .1389E-03   .1302E+03   .1984E-03
.1406E+03   .1984E-03   .1501E+03   .3968E-03   .1603E+03   .4762E-03
.1701E+03   .5556E-03   .1803E+03   .7341E-03   .1900E+03   .7738E-03
.2003E+03   .8929E-03
    278         1          19           7
.6014E-01   .4142E-03   .6945E-01   .4142E-03   .7828E-01   .4142E-03
.8719E-01   .4142E-03   .9547E-01   .4142E-03   .1012E+00   .3748E-03
.1079E+00   .3353E-03   .1105E+00   .3353E-03   .1139E+00   .3156E-03
.1158E+00   .1775E-03   .1212E+00   .1972E-03   .1228E+00   .1775E-03
.1268E+00   .1381E-03   .1325E+00   .1183E-03   .1362E+00   .5917E-04
.1402E+00  0.           .1500E+00  0.           .1601E+00  0.
.1000E+01  0.
    279         1          13           6
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.9635E+02   .8950E-01   .8966E+02   .8713E-01   .9737E+02   .8810E-01
.1064E+03   .7366E-01   .1147E+03   .7287E-01   .1246E+03   .6891E-01
.1317E+03   .6416E-01   .1411E+03   .5782E-01   .1487E+03   .5703E-01
.1583E+03   .5228E-01   .1663E+03   .4911E-01   .1774E+03   .4040E-01
.1847E+03   .3564E-01   .1937E+03   .2931E-01   .1998E+03   .1901E-01
   280          1          25          9
.5998E-01  -.1452E+00   .6961E-01  -.1437E+00   .7949E-01  -.1421E+00
.8913E-01  -.1405E+00   .9431E-01  -.1397E+00   .9956E-01  -.1452E+00
.1054E+00  -.1421E+00   .1128E+00  -.1341E+00   .1177E+00  -.1270E+00
.1196E+00  -.1222E+00   .1225E+00  -.1103E+00   .1246E+00  -.1032E+00
.1270E+00  -.9048E-01   .1291E+00  -.8016E-01   .1303E+00  -.6905E-01
.1317E+00  -.5794E-01   .1333E+00  -.4048E-01   .1346E+00  -.3095E-01
.1360E+00  -.2222E-01   .1375E+00  -.1349E-01   .1390E+00  -.5556E-02
.1414E+00   0.          .1476E+00   0.          .1599E+00   0.
.1000E+01   0.
   237          2          23          8
.7970E+02   .3228E-03   .8670E+02   .3604E-03   .9092E+02   .3901E-03
.9642E+02   .4297E-03   .1029E+03   .4792E-03   .1094E+03   .5129E-03
.1158E+03   .5584E-03   .1229E+03   .6040E-03   .1289E+03   .6396E-03
.1356E+03   .6772E-03   .1396E+03   .7010E-03   .1436E+03   .7208E-03
.1471E+03   .7366E-03   .1529E+03   .7485E-03   .1558E+03   .7465E-03
.1609E+03   .7485E-03   .1685E+03   .7406E-03   .1749E+03   .7307E-03
.1803E+03   .7149E-03   .1846E+03   .6931E-03   .1899E+03   .6733E-03
.1962E+03   .6475E-03   .2002E+03   .6376E-03
   238          2          16          6
.5978E-01  -.1400E-03   .7995E-01  -.1380E-03   .8984E-01  -.1420E-03
.9988E-01  -.1380E-03   .1042E+00  -.1340E-03   .1100E+00  -.1260E-03
.1161E+00  -.9600E-04   .1204E+00  -.9200E-04   .1243E+00  -.8200E-04
.1271E+00  -.5600E-04   .1301E+00  -.3400E-04   .1326E+00  -.1600E-04
.1362E+00   .1800E-04   .1438E+00   .8000E-05   .1466E+00   0.
.1000E+01   0.
   239          2          20          7
.7986E+02  -.4356E-02   .8376E+02  -.5743E-02   .8694E+02  -.6931E-02
.9108E+02  -.9109E-02   .9610E+02  -.1228E-01   .1001E+03  -.1366E-01
.1049E+03  -.1624E-02   .1091E+03  -.1782E-01   .1141E+03  -.1782E-01
.1178E+03  -.1842E-01   .1226E+03  -.1921E-01   .1284E+03  -.2000E-01
.1352E+03  -.2020E-01   .1404E+03  -.2238E-01   .1490E+03  -.2277E-01
.1587E+03  -.2337E-01   .1670E+03  -.2475E-01   .1802E+03  -.2574E-01
.1900E+03  -.2673E-01   .1999E+03  -.2673E-01
   240          2          15          5
.6014E-01  -.9639E-02   .9037E-01  -.7631E-02   .1002E+00  -.8233E-02
.1083E+00  -.8032E-02   .1138E+00  -.6827E-02   .1201E+00  -.6225E-02
.1243E+00  -.6024E-02   .1282E+00  -.4217E-02   .1316E+00  -.3213E-02
.1340E+00  -.6024E-03   .1367E+00  -.8032E-03   .1402E+00  -.6024E-03
.1499E+00  -.4016E-03   .1500E+00   0.          .1000E+01   0.
   242          1          2          1
.6029E+02   .7028E+00   .2002E+03   .7028E+00
   242          2          2          1
.5998E+02   .9020E+00   .2002E+03   .9020E+00
   242          3          7          3
.6029E+02   .1053E+01   .1003E+03   .1053E+01   .1200E+03   .1050E+01
.1401E+03   .1050E+01   .1602E+03   .1050E+01   .1802E+03   .1050E+01
.2002E+03   .1051E+01
   242          4          2          1
.6029E+02   .1202E+01   .2000E+03   .1202E+01
   242          5          2          1
.5006E+02   .1604E+01   .2000E+03   .1604E+01
   243          2          34          8
.7774E+02  -.7166E-03   .8299E+02  -.5988E-03   .8610E+02  -.5309E-03
.9056E+02  -.4391E-03   .9614E+02  -.3293E-03   .1022E+03  -.2216E-03
.1062E+03  -.1617E-03   .1101E+03  -.1018E-03   .1145E+03  -.3393E-04
.1202E+03   .3992E-04   .1258E+03   .1018E-03   .1297E+03   .1477E-03
.1347E+03   .1856E-03   .1399E+03   .2176E-03   .1441E+03   .2435E-03
.1500E+03   .2754E-03   .1548E+03   .2914E-03   .1600E+03   .3054E-03
.1685E+03   .2974E-03   .1756E+03   .2814E-03   .1835E+03   .2555E-03
.1900E+03   .2136E-03   .1960E+03   .1726E-03   .2086E+03   .1497E-03
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244		20			
.6014E-01	-.3313E-03	.7997E-01	-.3313E-03	.9032E-01	-.3313E-03
.9988E-01	-.3273E-03	.1102E+00	-.3133E-03	.1169E+00	-.2992E-03
.1225E+00	-.2771E-03	.1268E+00	-.2410E-03	.1294E+00	-.2108E-03
.1317E+00	-.1847E-03	.1330E+00	-.1546E-03	.1344E+00	-.1345E-03
.1354E+00	-.1084E-03	.1365E+00	-.8835E-04	.1385E+00	-.5823E-04
.1409E+00	-.3414E-04	.1434E+00	-.2209E-04	.1459E+00	-.6024E-05
.1500E+00	0.	.1000E+01	0.		
245	2	19	7		
.7723E+02	.2766E-01	.9232E+02	.2405E-01	.8742E+02	.2164E-01
.9076E+02	.1984E-01	.9777E+02	.1563E-01	.1032E+03	.1323E-01
.1160E+03	.1022E-01	.1152E+03	.5617E-02	.1209E+03	.6814E-02
.1264E+03	.5210E-02	.1325E+03	.3206E-02	.1401E+03	.1202E-02
.1498E+03	-.2004E-03	.1561E+03	-.1804E-02	.1633E+03	-.3607E-02
.1718E+03	-.5411E-02	.1799E+03	-.6814E-02	.1898E+03	-.8417E-02
.2000E+03	-.1022E-01				
246	2	13	5		
.6019E-01	.8184E-02	.7014E-01	.8184E-02	.8025E-01	.7984E-02
.8997E-01	.7585E-02	.1002E+00	.7784E-02	.1100E+00	.6587E-02
.1195E+00	.5389E-02	.1234E+00	.3593E-02	.1262E+00	.2395E-02
.1283E+00	.1397E-02	.1307E+00	.1397E-02	.1400E+00	0.
.1000E+01	0.				
247	2	24	8		
.7975E+02	.7877E-03	.8197E+02	.6766E-03	.8491E+02	.5040E-03
.8801E+02	.3790E-03	.8967E+02	.3175E-03	.9373E+02	.2004E-03
.9714E+02	.1369E-03	.1020E+03	.5357E-04	.1056E+03	-.1190E-04
.1113E+03	-.6349E-04	.1174E+03	-.1052E-03	.1211E+03	-.1270E-03
.1268E+03	-.1409E-03	.1349E+03	-.1647E-03	.1409E+03	-.1726E-03
.1473E+03	-.1845E-03	.1564E+03	-.1845E-03	.1627E+03	-.1865E-03
.1701E+03	-.1786E-03	.1740E+03	-.1806E-03	.1793E+03	-.1906E-03
.1865E+03	-.1647E-03	.1931E+03	-.1549E-03	.1998E+03	-.1369E-03
248	2	32	11		
.5989E-01	-.6906E-03	.6882E-01	-.6926E-03	.8078E-01	-.6926E-03
.8828E-01	-.7026E-03	.9769E-01	-.7006E-03	.1022E+00	-.6926E-03
.1085E+00	-.6926E-03	.1140E+00	-.6747E-03	.1184E+00	-.6607E-03
.1210E+00	-.6267E-03	.1238E+00	-.6048E-03	.1264E+00	-.5689E-03
.1279E+00	-.5269E-03	.1289E+00	-.4870E-03	.1305E+00	-.4551E-03
.1318E+00	-.4072E-03	.1333E+00	-.3473E-03	.1352E+00	-.3074E-03
.1367E+00	-.2615E-03	.1382E+00	-.2236E-03	.1396E+00	-.1836E-03
.1407E+00	-.1517E-03	.1423E+00	-.1178E-03	.1435E+00	-.9581E-04
.1455E+00	-.6188E-04	.1476E+00	-.3194E-04	.1495E+00	-.1597E-04
.1507E+00	.9980E-05	.1543E+00	.9980E-05	.1597E+00	.9980E-05
.1600E+00	0.	.1000E+01	0.		
249	2	15	5		
.7978E+02	-.1454E-01	.9005E+02	-.8765E-02	.9984E+02	-.4582E-02
.1079E+03	-.1992E-03	.1143E+03	.2191E-02	.1213E+03	.4382E-02
.1320E+03	.7171E-02	.1396E+03	.9163E-02	.1451E+03	.1056E-01
.1570E+03	.1295E-01	.1679E+03	.1494E-01	.1775E+03	.1693E-01
.1886E+03	.1973E-01	.1968E+03	.2032E-01	.1998E+03	.2072E-01
250	2	26	9		
.5984E-01	.4910E-01	.6972E-01	.4910E-01	.7952E-01	.4910E-01
.8556E-01	.4910E-01	.9976E-01	.4910E-01	.1058E+00	.4850E-01
.1098E+00	.4749E-01	.1162E+00	.4790E-01	.1196E+00	.4629E-01
.1244E+00	.4429E-01	.1265E+00	.4188E-01	.1291E+00	.3908E-01
.1314E+00	.3667E-01	.1332E+00	.3347E-01	.1348E+00	.3026E-01
.1366E+00	.2585E-01	.1382E+00	.2184E-01	.1398E+00	.1663E-01
.1410E+00	.1303E-01	.1423E+00	.1022E-01	.1436E+00	.7014E-02
.1451E+00	.4810E-02	.1462E+00	.3407E-02	.1559E+00	0.
.1602E+00	0.	.1000E+01	0.		
251	2	17	6		
.8022E+02	.4365E-04	.8548E+02	.1786E-04	.9049E+02	-.3968E-05
.9837E+02	-.1984E-04	.1081E+03	-.4365E-04	.1151E+03	-.3968E-04
.1199E+03	-.3968E-04	.1289E+03	-.3373E-04	.1349E+03	-.1984E-04
.1425E+03	-.1389E-04	.1503E+03	0.	.1598E+03	.3770E-04
.1698E+03	.6548E-04	.1776E+03	.3532E-04	.1860E+03	.1171E-03
.1947E+03	.1496E-03	.2009E+03	.1543E-03		

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   252          2           21           7
.6017E-01   .1980E-03   .7027E-01   .1980E-03   .7998E-01   .1980E-03
.9025E-01   .1980E-03   .9725E-01   .1941E-03   .1037E+00   .1901E-03
.1080E+00   .1941E-03   .1136E+00   .1782E-03   .1162E+00   .1604E-03
.1226E+00   .1465E-03   .1258E+00   .1228E-03   .1288E+00   .9109E-04
.1306E+00   .7129E-04   .1324E+00   .5347E-04   .1349E+00   .4156E-04
.1365E+00   .2574E-04   .1390E+00   .1386E-04   .1419E+00   .5941E-05
.1596E+00   .5941E-05   .1702E+00   0.          .1000E+01   0.
   253          2           30          10
.7978E+02   .1297E-01   .8240E+02   .1018E-01   .8559E+02   .7984E-02
.8806E+02   .5788E-02   .9108E+02   .3593E-02   .9371E+02   .2395E-02
.9777E+02   .3992E-03   .1033E+03  -.1796E-02   .1069E+03  -.3393E-02
.1111E+03  -.3992E-02   .1147E+03  -.4990E-02   .1189E+03  -.5589E-02
.1227E+03  -.5988E-02   .1273E+03  -.5988E-02   .1313E+03  -.5788E-02
.1346E+03  -.5788E-02   .1377E+03  -.5788E-02   .1412E+03  -.5389E-02
.1456E+03  -.4391E-02   .1490E+03  -.4192E-02   .1520E+03  -.2994E-02
.1566E+03  -.2395E-02   .1627E+03  -.2196E-02   .1704E+03  -.1996E-03
.1769E+03   0.          .1819E+03   .5988E-03   .1878E+03   .1397E-02
.1916E+03   .1996E-02   .1959E+03   .2196E-02   .2000E+03   .3992E-02
   254          2           11           4
.5973E-01  -.3366E-02   .7982E-01  -.3366E-02   .1002E+00  -.3366E-02
.1056E+00  -.3366E-02   .1100E+00  -.2574E-02   .1151E+00  -.1782E-02
.1203E+00  -.9901E-03   .1261E+00  -.9901E-03   .1303E+00   .9901E-03
.1300E+00   0.          .1000E+01   0.
   255          2           23           8
.7846E+02   .7075E-03   .8029E+02   .6779E-03   .8402E+02   .6324E-03
.8903E+02   .5632E-03   .9642E+02   .4585E-03   .1034E+03   .3419E-03
.1094E+03   .2628E-03   .1174E+03   .1403E-03   .1208E+03   .9091E-04
.1255E+03   .1976E-04   .1297E+03  -.3557E-04   .1353E+03  -.8498E-04
.1396E+03  -.1443E-03   .1439E+03  -.1759E-03   .1463E+03  -.2055E-03
.1500E+03  -.2254E-03   .1550E+03  -.2510E-03   .1623E+03  -.2648E-03
.1687E+03  -.2787E-03   .1761E+03  -.2826E-03   .1835E+03  -.2826E-03
.1947E+03  -.2826E-03   .2002E+03  -.2846E-03
   256          2           29          10
.6028E-01  -.6016E-03   .6990E-01  -.6016E-03   .8000E-01  -.6016E-03
.8517E-01  -.5936E-03   .9002E-01  -.5956E-03   .9606E-01  -.5895E-03
.1006E+00  -.5815E-03   .1061E+00  -.5694E-03   .1101E+00  -.5574E-03
.1138E+00  -.5473E-03   .1179E+00  -.5352E-03   .1209E+00  -.5231E-03
.1236E+00  -.4909E-03   .1270E+00  -.4527E-03   .1304E+00  -.4145E-03
.1331E+00  -.3702E-03   .1352E+00  -.3280E-03   .1369E+00  -.2897E-03
.1396E+00  -.2394E-03   .1416E+00  -.1791E-03   .1435E+00  -.1207E-03
.1457E+00  -.7445E-04   .1470E+00  -.5231E-04   .1484E+00  -.3219E-04
.1505E+00   0.          .1562E+00   0.          .1602E+00   0.
.1000E+01   0.
   257          2           20           7
.8011E+02  -.4672E-01   .8465E+02  -.3877E-01   .8775E+02  -.3280E-01
.9149E+02  -.2763E-01   .9531E+02  -.2247E-01   .9785E+02  -.1948E-01
.1037E+03  -.1213E-01   .1108E+03  -.5169E-02   .1137E+03  -.2584E-02
.1200E+03   .1988E-02   .1255E+03   .5765E-02   .1325E+03   .8151E-02
.1423E+03   .1193E-01   .1504E+03   .1312E-01   .1602E+03   .1511E-01
.1710E+03   .1570E-01   .1800E+03   .1730E-01   .1895E+03   .1909E-01
.1959E+03   .1948E-01   .1998E+03   .1968E-01
   258          2           26           9
.6025E-01   .3877E-01   .7027E-01   .3877E-01   .8013E-01   .3837E-01
.8760E-01   .3718E-01   .9356E-01   .3757E-01   .1001E+00   .3678E-01
.1099E+00   .3718E-01   .1151E+00   .3658E-01   .1187E+00   .3459E-01
.1214E+00   .3360E-01   .1237E+00   .3201E-01   .1260E+00   .3062E-01
.1286E+00   .2763E-01   .1305E+00   .2465E-01   .1323E+00   .2266E-01
.1346E+00   .1789E-01   .1370E+00   .1491E-01   .1386E+00   .9940E-02
.1408E+00   .8748E-02   .1427E+00   .7356E-02   .1449E+00   .3380E-02
.1471E+00   .1590E-02   .1502E+00   0.          .1558E+00   0.
.1603E+00   0.          .1000E+01   0.
   259          2           26           9
.8018E+02   .3976E-03   .8686E+02   .3976E-03   .8973E+02   .3579E-03
.9650E+02   .5169E-03   .1007E+03   .5765E-03   .1069E+03   .6958E-03
.1123E+03   .9344E-03   .1162E+03   .1193E-02   .1193E+03   .1352E-02
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.1231E+03	.1710E-02	.1270E+03	.1909E-02	.1311E+03	.2207E-02
.1376E+03	.2565E-02	.1431E+03	.2763E-02	.1486E+03	.3042E-02
.1528E+03	.3241E-02	.1583E+03	.3380E-02	.1618E+03	.3499E-02
.1666E+03	.3618E-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	2	20	7		
.6026E-01	-.2798E-02	.6967E-01	-.2817E-02	.7764E-01	-.2718E-02
.8729E-01	-.2758E-02	.9550E-01	-.2659E-02	.1008E+00	-.2619E-02
.1079E+00	-.2599E-02	.1142E+00	-.2460E-02	.1185E+00	-.2262E-02
.1224E+00	-.2024E-02	.1273E+00	-.1647E-02	.1308E+00	-.1210E-02
.1336E+00	-.7143E-03	.1356E+00	-.4563E-03	.1373E+00	-.2579E-03
.1391E+00	-.1389E-03	.1405E+00	0.	.1453E+00	0.
.1498E+00	0.	.1000E+01	0.		
261	2	25	9		
.7982E+02	-.3904E-01	.8754E+02	-.3785E-01	.9487E+02	-.3625E-01
.1023E+03	-.3386E-01	.1105E+03	-.2948E-01	.1163E+03	-.2550E-01
.1209E+03	-.1873E-01	.1261E+03	-.1275E-01	.1298E+03	-.4382E-02
.1348E+03	.5976E-02	.1386E+03	.1036E-01	.1437E+03	.1793E-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
.1998E+03	-.1116E-01				
262	2	23	8		
.6018E-01	.5817E-01	.7055E-01	.5697E-01	.7963E-01	.5299E-01
.8568E-01	.5259E-01	.9829E-01	.5299E-01	.1042E+00	.5100E-01
.1098E+00	.4821E-01	.1149E+00	.4701E-01	.1189E+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
.1369E+00	.1076E-01	.1390E+00	.7969E-02	.1401E+00	.6375E-02
.1413E+00	.3586E-02	.1436E+00	0.	.1468E+00	0.
.1503E+00	0.	.1000E+01	0.		
264	1	2	1		
.5966E+02	.7022E+00	.2002E+03	.7022E+00		
264	2	2	1		
.5974E+02	.9066E+00	.2003E+03	.9066E+00		
264	3	2	1		
.5974E+02	.1051E+01	.2002E+03	.1051E+01		
264	4	2	1		
.5982E+02	.1204E+01	.1999E+03	.1204E+01		
264	5	2	1		
.5966E+02	.1601E+01	.2002E+03	.1601E+01		
265	2	33	11		
.7598E+02	.6501E-02	.8213E+02	.5845E-02	.8388E+02	.5229E-02
.8635E+02	.4414E-02	.8818E+02	.3857E-02	.8953E+02	.3400E-02
.9129E+02	.2922E-02	.9367E+02	.2346E-02	.9598E+02	.1809E-02
.9853E+02	.1173E-02	.1017E+03	.3976E-03	.1049E+03	-.2386E-03
.1087E+03	-.8350E-03	.1114E+03	-.1193E-02	.1143E+03	-.1531E-02
.1259E+03	-.2823E-02	.1294E+03	-.3022E-02	.1343E+03	-.3260E-02
.1392E+03	-.3459E-02	.1447E+03	-.3598E-02	.1495E+03	-.3658E-02
.1538E+03	-.3618E-02	.1600E+03	-.3559E-02	.1639E+03	-.3419E-02
.1689E+03	-.3221E-02	.1729E+03	-.2982E-02	.1785E+03	-.2624E-02
.1828E+03	-.2286E-02	.1873E+03	-.1889E-02	.1916E+03	-.1392E-02
.1953E+03	-.9742E-03	.1982E+03	-.6362E-03	.1999E+03	-.4374E-03
266	2	24	8		
.6014E-01	.5509E-02	.7009E-01	.5509E-02	.8003E-01	.5469E-02
.9021E-01	.5449E-02	.9777E-01	.5349E-02	.1022E+00	.52[illegible]E-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	.1796E-03
.1483E+00	0.	.1502E+00	0.	.1000E+01	0.
267	2	35	12		
.8024E+02	-.3929E+[illegible]	.8135E+02	-.3813E+[illegible]	.8383E+[illegible]	-.3498E+[illegible]

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.8454E+02  -.2209E+00   .8614E+02  -.1928E+00   .8749E+02  -.1703E+00
.8908E+02  -.1470E+00   .9060E+02  -.1261E+00   .9315E+02  -.9478E-01
.9522E+02  -.7868E-01   .9697E+02  -.5381E-01   .9888E+02  -.3373E-01
.1013E+03  -.1526E-01   .1044E+03   .8832E-02   .1072E+03   .2570E-01
.1099E+03   .3775E-01   .1127E+03   .4498E-01   .1169E+03   .5301E-01
.1207E+03   .5863E-01   .1249E+03   .6265E-01   .1289E+03   .6747E-01
.1330E+03   .7229E-01   .1381E+03   .7550E-01   .1424E+03   .7631E-01
.1473E+03   .7871E-01   .1520E+03   .7871E-01   .1569E+03   .7871E-01
.1618E+03   .7871E-01   .1659E+03   .7631E-01   .1711E+03   .7470E-01
.1777E+03   .6747E-01   .1825E+03   .6667E-01   .1892E+03   .5944E-01
.1947E+03   .5462E-01   .1998E+03   .4659E-01
   268          2          22           8
.5971E-01  -.1522E+00   .8010E-01  -.1522E+00   .9005E-01  -.1530E+00
.1001E+00  -.1498E+00   .1101E+00  -.1466E+00   .1143E+00  -.1410E+00
.1182E+00  -.1378E+00   .1205E+00  -.1331E+00   .1262E+00  -.1092E+00
.1279E+00  -.9721E-01   .1292E+00  -.8606E-01   .1307E+00  -.7251E-01
.1323E+00  -.5498E-01   .1338E+00  -.4382E-01   .1350E+00  -.3106E-01
.1370E+00  -.1594E-01   .1389E+00  -.9562E-02   .1400E+00  -.3187E-02
.1420E+00  -.7968E-03   .1000E+01  0.           .1400E+00  0.
.1000E+01  0.
   269          2          7            3
.8403E+02  -.3174E-02   .9988E+02  -.2415E-02   .1200E+03  -.1397E-02
.1399E+03  -.3792E-03   .1599E+03   .5748E-03   .1800E+03   .1617E-02
.2000E+03   .2575E-02
   270          2          32          11
.5999E-01   .9841E-02   .8002E-01   .9841E-02   .9995E-01   .9821E-02
.9996E-01   .9702E-02   .1099E+00   .9662E-02   .1139E+00   .9543E-02
.1175E+00   .9304E-02   .1209E+00   .9185E-02   .1228E+00   .8946E-02
.1259E+00   .8708E-02   .1288E+00   .8310E-02   .1310E+00   .7952E-02
.1331E+00   .7535E-02   .1350E+00   .7197E-02   .1371E+00   .6660E-02
.1387E+00   .6223E-02   .1406E+00   .5686E-02   .1422E+00   .5229E-02
.1434E+00   .4612E-02   .1450E+00   .4016E-02   .1464E+00   .3340E-02
.1479E+00   .2783E-02   .1492E+00   .1988E-02   .1502E+00   .1531E-02
.1511E+00   .1074E-02   .1520E+00   .7555E-03   .1531E+00   .5169E-03
.1544E+00   .2982E-03   .1557E+00   .1988E-03   .1572E+00   .1193E-03
.1597E+00  0.           .1000E+01  0.
   271          2          31          11
.7998E+02   .1662E+00   .8444E+02   .1630E+00   .8914E+02   .1583E+00
.9343E+02   .1503E+00   .9781E+02   .1408E+00   .1025E+03   .1304E+00
.1071E+03   .1201E+00   .1113E+03   .1105E+00   .1150E+03   .1002E+00
.1189E+03   .8588E-01   .1226E+03   .7475E-01   .1270E+03   .5726E-01
.1308E+03   .4294E-01   .1340E+03   .2386E-01   .1369E+03   .1193E-01
.1398E+03   .7952E-03   .1424E+03  -.1352E-01   .1471E+03  -.2783E-01
.1519E+03  -.4453E-01   .1560E+03  -.5408E-01   .1600E+03  -.6680E-01
.1647E+03  -.7555E-01   .1692E+03  -.8588E-01   .1731E+03  -.9543E-01
.1780E+03  -.1042E+00   .1836E+03  -.1121E+00   .1875E+03  -.1161E+00
.1919E+03  -.1225E+00   .1952E+03  -.1256E+00   .1965E+03  -.1256E+00
.2000E+03  -.1300E+00
   272          2          35          12
.5990E-01  -.5304E+00   .6977E-01  -.5304E+00   .7995E-01  -.5304E+00
.8990E-01  -.5304E+00   .9714E-01  -.5256E+00   .1023E+00  -.5241E+00
.1069E+00  -.5209E+00   .1114E+00  -.5121E+00   .1149E+00  -.5034E+00
.1178E+00  -.4954E+00   .1213E+00  -.4835E+00   .1242E+00  -.4668E+00
.1268E+00  -.4533E+00   .1287E+00  -.4374E+00   .1309E+00  -.4183E+00
.1323E+00  -.4080E+00   .1345E+00  -.3857E+00   .1368E+00  -.3618E+00
.1383E+00  -.3427E+00   .1396E+00  -.3237E+00   .1416E+00  -.2926E+00
.1436E+00  -.2648E+00   .1453E+00  -.2306E+00   .1473E+00  -.1993E+00
.1490E+00  -.1535E+00   .1506E+00  -.1225E+00   .1517E+00  -.1028E+00
.1536E+00  -.7634E-01   .1549E+00  -.6044E-01   .1586E+00  -.2942E-01
.1601E+00  -.1352E-01   .1616E+00  -.2386E-02   .1632E+00  0.
.1660E+00  0.           .1000E+01  0.
   273          2          29          10
.8002E+02   .4020E-02   .8169E+02   .3760E-02   .8432E+02   .3320E-02
.8726E+02   .2760E-02   .9053E+02   .2240E-02   .9467E+02   .1640E-02
.9841E+02   .1040E-02   .1019E+03   .5400E-03   .1068E+03  -.8000E-04
.1109E+03  -.5400E-03   .1150E+03  -.3800E-03   .1197E+03  -.1315E-03
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.1252E+03  -.1720E-02   .1299E+03  -.1940E-02   .1327E+03  -.2340E-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   .1380E-02   .1936E+03   .1780E-02
.1959E+03   .2160E-02   .1998E+03   .2580E-02
   274          2          23          8
.6003E-01   .2385E-02   .6887E-01   .2385E-02   .7834E-01   .2385E-02
.8702E-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   .1663E-02
.1314E+00   .1363E-02   .1333E+00   .1122E-02   .1353E+00   .7816E-03
.1373E+00   .5812E-03   .1394E+00   .3407E-03   .1408E+00   .2405E-03
.1432E+00  0.           .1482E+00  0.           .1548E+00  0.
.1600E+00  0.           .1000E+01  0.
   275          2          29          10
.8024E+02  -.1644E+00   .8573E+02  -.1301E+00   .8970E+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  -.9581E-02   .1592E+03  -.2315E-01   .1640E+03  -.3353E-01
.1683E+03  -.4631E-01   .1746E+03  -.6387E-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
.1089E+00  -.2698E-01   .1134E+00  -.2778E-01   .1189E+00  -.2460E-01
.1220E+00  -.1587E-01   .1254E+00  -.1111E-01   .1269E+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   .2004E-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
.1382E+03   .1726E-02   .1447E+03   .1905E-02   .1501E+03   .1964E-02
.1560E+03   .2183E-02   .1621E+03   .2262E-02   .1684E+03   .2421E-02
.1741E+03   .2679E-02   .1803E+03   .2857E-02   .1854E+03   .3135E-02
.1902E+03   .3254E-02   .1951E+03   .3472E-02   .1990E+03   .3591E-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   .2860E-02
.1107E+00   .2781E-02   .1138E+00   .2761E-02   .1176E+00   .2722E-02
.1210E+00   .2505E-02   .1244E+00   .2308E-02   .1258E+00   .2189E-02
.1272E+00   .2032E-02   .1290E+00   .1834E-02   .1306E+00   .1598E-02
.1317E+00   .1341E-02   .1335E+00   .1203E-02   .1353E+00   .9270E-03
.1372E+00   .7101E-03   .1391E+00   .4931E-03   .1405E+00   .4142E-03
.1414E+00   .3156E-03   .1429E+00   .2367E-03   .1451E+00  0.
.1497E+00  0.           .1598E+00  0.           .1000E+01  0.
   279          2          19          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
.1106E+03  -.7287E-01   .1149E+03  -.8475E-01   .1278E+03  -.1069E+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  -.1909E+00   .1944E+03  -.2020E+00   .1997E+03  -.2095E+00
   280          2          20          7
.6022E-01  -.1222E+00   .6993E-01  -.1222E+00   .7981E-01  -.1222E+00
.9016E-01  -.1222E+00   .9924E-01  -.1222E+00   .1075E+00  -.1151E+00
.1133E+00  -.1079E+00   .1194E+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  -.9730E-02
.1373E+00  0.           .1423E+00  0.           .1498E+00  0.
```

.1598E+00	0.	.1300E+01	0.		
281	1	13	5		
.8006E+02	-.2430E-04	.9001E+02	-.1952E-04	.1008E+03	-.1514E-04
.1101E+03	-.9163E-05	.1193E+03	-.4781E-05	.1306E+03	.1992E-05
.1390E+03	.5976E-05	.1499E+03	.1116E-04	.1599E+03	.1633E-04
.1698E+03	.2629E-04	.1814E+03	.2869E-04	.1911E+03	.3386E-04
.1998E+03	.3825E-04				
282	1	18	6		
.9442E+02	-.5429E-02	.8800E+02	-.3832E-02	.9350E+02	-.1916E-02
.9821E+02	-.8782E-03	.1010E+03	-.1597E-03	.1083E+03	.1038E-02
.1141E+03	.1637E-02	.1212E+03	.2315E-02	.1299E+03	.2555E-02
.1338E+03	.2834E-02	.1407E+03	.2754E-02	.1491E+03	.2395E-02
.1593E+03	.1677E-02	.1697E+03	.7984E-03	.1801E+03	-.1996E-03
.1869E+03	-.7984E-03	.1940E+03	-.1557E-02	.2001E+03	-.2475E-02
284	1	2	1		
.6006E+02	.7006E+00	.2000E+03	.7014E+00		
284	2	2	1		
.5990E+02	.9005E+00	.1998E+03	.9005E+00		
284	3	2	1		
.6006E+02	.1202E+01	.1998E+03	.1202E+01		
284	4	2	1		
.5998E+02	.1596E+01	.1998E+03	.1597E+01		
285	1	20	7		
.8046E+02	.2164E-03	.8563E+02	.1701E-03	.9041E+02	.1429E-03
.9399E+02	.1222E-03	.9893E+02	.9661E-04	.1055E+03	.7585E-04
.1121E+03	.6368E-04	.1186E+03	.5030E-04	.1262E+03	.4152E-04
.1311E+03	.3752E-04	.1357E+03	.3752E-04	.1416E+03	.3392E-04
.1499E+03	.4711E-04	.1581E+03	.5749E-04	.1648E+03	.6307E-04
.1726E+03	.7186E-04	.1817E+03	.9102E-04	.1887E+03	.1062E-03
.1958E+03	.1222E-03	.1997E+03	.1325E-03		
286	1	17	6		
.8621E+02	-.1127E-01	.8610E+02	-.9762E-02	.9215E+02	-.8968E-02
.9701E+02	-.8016E-02	.1023E+03	-.6905E-02	.1098E+03	-.6429E-02
.1181E+03	-.5476E-02	.1249E+03	-.4762E-02	.1337E+03	-.4524E-02
.1403E+03	-.4603E-02	.1483E+03	-.4841E-02	.1556E+03	-.4683E-02
.1676E+03	-.5397E-02	.1793E+03	-.6508E-02	.1875E+03	-.7143E-02
.1949E+03	-.7619E-02	.2002E+03	-.7937E-02		
287	1	13	5		
.8000E+02	.1097E-03	.9195E+02	.9463E-04	.1028E+03	.8270E-04
.1159E+03	.5726E-04	.1249E+03	.3897E-04	.1367E+03	.1511E-04
.1480E+03	-.7157E-05	.1605E+03	-.3817E-04	.1710E+03	-.6362E-04
.1809E+03	-.8429E-04	.1876E+03	-.1026E-03	.1927E+03	-.1161E-03
.2000E+03	-.1390E-03				
288	1	13	5		
.8051E+02	-.4374E-02	.8880E+02	-.4692E-02	.9717E+02	-.5249E-02
.1088E+03	-.5328E-02	.1188E+03	-.4215E-02	.1290E+03	-.3419E-02
.1377E+03	-.2704E-02	.1489E+03	-.1590E-02	.1580E+03	-.3976E-03
.1724E+03	.1272E-02	.1825E+03	.2783E-02	.1917E+03	.4692E-02
.1996E+03	.5964E-02				
289	1	32	11		
.8037E+02	.2107E-03	.8467E+02	.1687E-03	.8714E+02	.1489E-03
.8553E+02	.1291E-03	.9184E+02	.1101E-03	.9423E+02	.9426E-04
.9646E+02	.8158E-04	.9956E+02	.6257E-04	.1035E+03	.4515E-04
.1061E+03	.3168E-04	.1090E+03	.1980E-04	.1111E+03	.1188E-04
.1160E+03	-.3168E-05	.1204E+03	-.1584E-04	.1238E+03	-.2614E-04
.1281E+03	-.3248E-04	.1313E+03	-.4356E-04	.1358E+03	-.4752E-04
.1402E+03	-.4990E-04	.1450E+03	-.5149E-04	.1496E+03	-.5386E-04
.1516E+03	-.5386E-04	.1560E+03	-.5224E-04	.1615E+03	-.4832E-04
.1662E+03	-.4436E-04	.1727E+03	-.3564E-04	.1793E+03	-.2693E-04
.1846E+03	-.1505E-04	.1892E+03	-.5545E-05	.1940E+03	.3960E-05
.1974E+03	.1188E-04	.1999E+03	.2139E-04		
290	1	13	5		
.7978E+02	.3810E-02	.8822E+02	.2381E-02	.9498E+02	.1190E-02
.1077E+03	0.	.1175E+03	-.1587E-02	.1258E+03	-.2222E-02
.1360E+03	-.2857E-02	.1454E+03	-.3254E-02	.1586E+03	-.3889E-02
.1705E+03	-.4365E-02	.1809E+03	-.4524E-02	.1900E+03	-.4921E-02

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.1998E+03  -.4921E-02
    291          1          14           5
.8014E+02  -.3393E-03  .9017E+02  -.2395E-03  .9972E+02  -.1158E-03
.1051E+03  -.6387E-04  .1138E+03   .4391E-04  .1254E+03   .1876E-03
.1311E+03   .2515E-03  .1413E+03   .3513E-03  .1513E+03   .4930E-03
.1604E+03   .5828E-03  .1737E+03   .7465E-03  .1877E+03   .8942E-03
.1955E+03   .9860E-03  .2000E+03   .1034E-02
    292          1          18           6
.7994E+02   .7106E-01  .8471E+02   .5264E-01  .9863E+02   .3952E-01
.9467E+02   .2315E-01  .9936E+02   .9980E-02  .1065E+03  -.6387E-02
.1142E+03  -.1996E-01  .1209E+03  -.3154E-01  .1269E+03  -.3832E-01
.1346E+03  -.4910E-01  .1415E+03  -.5549E-01  .1505E+03  -.6188E-01
.1669E+03  -.6986E-01  .1752E+03  -.7305E-01  .1811E+03  -.7425E-01
.1893E+03  -.7505E-01  .1935E+03  -.7505E-01  .2000E+03  -.7500E-01
    294          1           2           1
.6010E+02   .7014E+00  .2000E+03   .7014E+00
    294          2           2           1
.6042E+02   .9029E+00  .2002E+03   .9029E+00
    294          3           2           1
.6026E+02   .1204E+01  .2001E+03   .1204E+01
    294          4           2           1
.5994E+02   .1603E+01  .2002E+03   .1603E+01
    295          1          20           7
.7997E+02   .1101E-02  .8554E+02   .3871E-03  .9128E+02   .6653E-03
.9916E+02   .3406E-03  .1052E+03   .1267E-03  .1112E+03  -.7921E-04
.1187E+03  -.2376E-03  .1238E+03  -.3089E-03  .1280E+03  -.4356E-03
.1312E+03  -.4515E-03  .1363E+03  -.4277E-03  .1431E+03  -.3564E-03
.1518E+03  -.2535E-03  .1576E+03  -.1267E-03  .1675E+03   .9505E-04
.1746E+03   .2931E-03  .1817E+03   .4673E-03  .1885E+03   .6653E-03
.1943E+03   .8317E-03  .1995E+03   .1006E-02
    296          1          19           7
.8018E+02  -.7273E-01  .8440E+02  -.5455E-01  .9214E+02  -.3320E-01
.9876E+02  -.1423E-01  .1078E+03   .7905E-02  .1128E+03   .1897E-01
.1199E+03   .3320E-01  .1243E+03   .3715E-01  .1292E+03   .4427E-01
.1362E+03   .4348E-01  .1444E+03   .4111E-01  .1510E+03   .3241E-01
.1611E+03   .1976E-01  .1682E+03   .9486E-02  .1775E+03  -.7115E-02
.1841E+03  -.2292E-01  .1900E+03  -.3478E-01  .1952E+03  -.4301E-01
.2000E+03  -.6008E-01
    297          1          19           7
.8043E+02   .2016E-02  .8629E+02   .1570E-02  .9263E+02   .1100E-02
.9884E+02   .6693E-03  .1062E+03   .1514E-03  .1130E+03  -.2390E-03
.1194E+03  -.5418E-03  .1275E+03  -.8207E-03  .1293E+03  -.8606E-03
.1313E+03  -.8685E-03  .1352E+03  -.8446E-03  .1414E+03  -.7410E-03
.1485E+03  -.5817E-03  .1590E+03  -.3029E-03  .1664E+03  -.1036E-03
.1763E+03   .2390E-03  .1847E+03   .5574E-03  .1918E+03   .8367E-03
.1998E+03   .1179E-02
    298          1          19           7
.8489E+02  -.7302E-01  .9024E+02  -.5476E-01  .9582E+02  -.3175E-01
.1021E+03  -.9524E-02  .1100E+03   .1825E-01  .1157E+03   .2857E-01
.1208E+03   .3651E-01  .1268E+03   .5159E-01  .1313E+03   .5159E-01
.1369E+03   .4921E-01  .1433E+03   .4762E-01  .1509E+03   .4365E-01
.1576E+03   .3333E-01  .1647E+03   .2460E-01  .1740E+03   .3175E-02
.1790E+03  -.7143E-02  .1855E+03  -.2381E-01  .1920E+03  -.3413E-01
.1998E+03  -.5714E-01
    299          1          21           7
.8046E+02   .2277E-02  .8619E+02   .1727E-02  .9081E+02   .1385E-02
.9598E+02   .9313E-03  .1011E+03   .5413E-03  .1064E+03   .1592E-03
.1105E+03  -.1433E-03  .1164E+03  -.4556E-03  .1215E+03  -.7164E-03
.1271E+03  -.8597E-03  .1300E+03  -.9915E-03  .1357E+03  -.7721E-03
.1421E+03  -.6209E-03  .1501E+03  -.3662E-03  .1574E+03  -.1274E-03
.1674E+03   .3264E-03  .1755E+03   .7005E-03  .1828E+03   .1043E-02
.1884E+03   .1385E-02  .1944E+03   .1719E-02  .1999E+03   .2022E-02
    300          1          23           8
.7994E+02  -.2051E+00  .8512E+02  -.1744E+00  .9951E+02  -.1239E+00
.9469E+02  -.7101E-01  .1004E+03  -.2761E-01  .1074E+03   .1341E-01
.1148E+03   .4774E-01  .1169E+03   .6944E-01  .1227E+03   .7274E-01
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.1230E+03   .3994E-01   .1268E+03   .3540E-01   .1297E+03   .9546E-01
.1359E+03   .9310E-01   .1414E+03   .8915E-01   .1466E+03   .7337E-01
.1528E+03   .6391E-01   .1588E+03   .4418E-01   .1667E+03   .1578E-01
.1730E+03  -.7181E-02   .1815E+03  -.3787E-01   .1869E+03  -.6075E-01
.1930E+03  -.8284E-01   .2000E+03  -.1200E+00
    281         2          28          10
.7998E+02   .9323E-04   .8317E+02   .6614E-04   .8540E+02   .4781E-04
.8794E+02   .3108E-04   .9025E+02   .1514E-04   .9168E+02   .5179E-05
.9351E+02  -.1195E-04   .9662E+02  -.2550E-04   .9877E+02  -.3586E-04
.1009E+03  -.4422E-04   .1030E+03  -.5219E-04   .1057E+03  -.5817E-04
.1075E+03  -.6335E-04   .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   .1698E+03   .2311E-03
.1782E+03   .2825E-03   .1858E+03   .3299E-03   .1933E+03   .3777E-03
.1996E+03   .4179E-03
    282         2          23           8
.8442E+02  -.4232E-02   .8784E+02  -.3194E-02   .9191E+02  -.1517E-02
.9861E+02   .7186E-03   .1056E+03   .2236E-02   .1103E+03   .2675E-02
.1149E+03   .2435E-02   .1185E+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  -.3325E-01   .1995E+03  -.3557E-01
    284         1           2           1
.6006E+02   .7006E+00   .2000E+03   .7014E+00
    284         2           2           1
.5990E+02   .9005E+00   .1998E+03   .9005E+00
    284         3           2           1
.6006E+02   .1202E+01   .1998E+03   .1202E+01
    284         4           2           1
.5998E+02   .1596E+01   .1998E+03   .1597E+01
    285         2          21           7
.7982E+02  -.5190E-04   .8221E+02  -.1118E-04   .8452E+02   .2475E-04
.8794E+02   .6228E-04   .9168E+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
.1483E+03   .1341E-03   .1570E+03   .1078E-03   .1635E+03   .8303E-04
.1702E+03   .5908E-04   .1769E+03   .2954E-04   .1815E+03   .1338E-04
.1879E+03  -.2395E-04   .1931E+03  -.4790E-04   .1996E+03  -.8703E-04
    286         2          18           6
.8013E+02  -.3968E-02   .8507E+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  -.9341E-02   .1294E+03  -.9365E-02
.1389E+03  -.8492E-02   .1458E+03  -.7694E-02   .1557E+03  -.6825E-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   .2791E-03
.9315E+02   .2139E-03   .9689E+02   .1702E-03   .1034E+03   .1201E-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
.1488E+03  -.8509E-04   .1525E+03  -.9622E-04   .1666E+03  -.1201E-03
.1789E+03  -.1344E-03   .1888E+03  -.1471E-03   .2001E+03  -.1495E-03
    288         2          13           5
.8466E+02  -.1105E-01   .9119E+02  -.8588E-02   .9709E+02  -.6759E-02
.1069E+03  -.4056E-02   .1175E+03  -.1034E-02   .1275E+03   .1590E-02
.1376E+03   .3738E-02   .1492E+03   .5646E-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   .8236E+02  -.2923E-03   .8459E+02  -.2226E-03
.8619E+02  -.1640E-03   .8849E+02  -.1030E-03   .9072E+02  -.3723E-04
.9223E+02   .7921E-06   .9431E+02   .5624E-04   .9614E+02   .9263E-04
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.1047E+03	.2400E-03	.1064E+03	.2574E-03	.1082E+03	.2769E-03
.1107E+03	.2875E-03	.1128E+03	.2923E-03	.1149E+03	.2939E-03
.1176E+03	.2907E-03	.1196E+03	.2859E-03	.1217E+03	.2709E-03
.1237E+03	.2558E-03	.1259E+03	.2337E-03	.1277E+03	.2131E-03
.1295E+03	.1861E-03	.1309E+03	.1671E-03	.1336E+03	.1220E-03
.1358E+03	.7446E-04	.1377E+03	.4752E-04	.1392E+03	.1030E-04
.1409E+03	-.2851E-04	.1428E+03	-.7366E-04	.1448E+03	-.1198E-03
.1463E+03	-.1592E-03	.1481E+03	-.2139E-03	.1513E+03	-.2970E-03
.1536E+03	-.3564E-03	.1561E+03	-.4317E-03	.1587E+03	-.4752E-03
.1600E+03	-.5410E-03	.1626E+03	-.5949E-03		
290	2	25	9		
.7994E+02	.9206E-02	.8352E+02	.5476E-02	.8527E+02	.3492E-02
.8766E+02	.1270E-02	.8949E+02	-.8730E-03	.9307E+02	-.4206E-02
.9650E+02	-.6587E-02	.9904E+02	-.8492E-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	-.4841E-02
.1293E+03	-.1190E-02	.1326E+03	.1503E-02	.1376E+03	.6984E-02
.1456E+03	.1421E-01	.1534E+03	.2222E-01	.1607E+03	.2913E-01
.1664E+03	.3611E-01	.1734E+03	.4325E-01	.1780E+03	.4981E-01
.1812E+03	.5198E-01				
291	2	26	9		
.8126E+02	-.4870E-03	.8317E+02	-.3593E-03	.8651E+02	-.1517E-03
.8926E+02	-.5988E-04	.9049E+02	.7984E-04	.9439E+02	.2914E-03
.9725E+02	.4351E-03	.1013E+03	.6068E-03	.1051E+03	.6986E-03
.1074E+03	.7425E-03	.1102E+03	.7585E-03	.1145E+03	.7465E-03
.1196E+03	.6587E-03	.1240E+03	.5429E-03	.1270E+03	.4591E-03
.1308E+03	.3313E-03	.1353E+03	.1557E-03	.1416E+03	-.6387E-04
.1467E+03	-.2675E-03	.1513E+03	-.4631E-03	.1608E+03	-.8743E-03
.1689E+03	-.1210E-02	.1761E+03	-.1549E-02	.1835E+03	-.1988E-02
.1920E+03	-.2248E-02	.1998E+03	-.2607E-02		
292	2	26	9		
.8002E+02	.3633E-01	.8312E+02	.2395E-01	.8710E+02	.6387E-02
.9076E+02	-.5190E-02	.9451E+02	-.1876E-01	.9833E+02	-.3114E-01
.1014E+03	-.3952E-01	.1040E+03	-.4591E-01	.1068E+03	-.4910E-01
.1099E+03	-.5269E-01	.1134E+03	-.5030E-01	.1178E+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	.1548E+03	.3673E-01	.1621E+03	.5749E-01
.1693E+03	.7705E-01	.1785E+03	.1034E+00	.1833E+03	.1182E+00
.1914E+03	.1405E+00	.1994E+03	.1641E+00		
294	1	2	1		
.6010E+02	.7014E+00	.2000E+03	.7014E+00		
294	2	2	1		
.6042E+02	.9029E+00	.2002E+03	.9029E+00		
294	3	2	1		
.6066E+02	.1204E+01	.2001E+03	.1204E+01		
294	4	2	1		
.5994E+02	.1603E+01	.2002E+03	.1603E+01		
295	2	30	10		
.7965E+02	-.3406E-03	.8228E+02	-.5703E-03	.8467E+02	-.3188E-03
.8897E+02	-.1267E-02	.9176E+02	-.1481E-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-03
.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	.1818E+03	.4491E-02	.1872E+03	.5228E-02
.1917E+03	.5798E-02	.1958E+03	.6249E-02	.1994E+03	.6741E-02
296	2	22	8		
.8041E+02	.3794E-01	.8839E+02	.6877E-01	.9390E+02	.8896E-01
.1012E+03	.1115E+00	.1057E+03	.1178E+00	.1094E+03	.1217E+00
.1157E+03	.1162E+00	.1189E+03	.1115E+00	.1223E+03	.1012E+00
.1272E+03	.8538E-01	.1311E+03	.6640E-01	.1354E+03	.5136E-01
.1418E+03	.2213E-01	.1490E+03	-.1107E-01	.1571E+03	-.4980E-01
.1641E+03	-.9172E-01	.1734E+03	-.1357E+00	.1773E+03	-.1706E+00

.1734E+03	-.2063E+00	.1002E+03	-.2534E+00	.1960E+03	-.2953E+00
.1999E+03	-.3209E+00				
297	2	20	7		
.7995E+02	-.2151E-02	.8290E+02	-.2287E-02	.8577E+02	-.2255E-02
.9024E+02	-.2191E-02	.9661E+02	-.2143E-02	.1002E+03	-.2048E-02
.1083E+03	-.1745E-02	.1133E+03	-.1506E-02	.1267E+03	-.7570E-03
.1303E+03	-.4781E-03	.1345E+03	-.1594E-03	.1381E+03	.1355E-03
.1449E+03	.7570E-03	.1515E+03	.1363E-02	.1588E+03	.2024E-02
.1680E+03	.2892E-02	.1748E+03	.3602E-02	.1817E+03	.4311E-02
.1894E+03	.5084E-02	.2001E+03	.6191E-02		
298	2	19	7		
.8011E+02	.6508E-01	.8577E+02	.7143E-01	.9310E+02	.8016E-01
.9948E+02	.8571E-01	.1045E+03	.9286E-01	.1102E+03	.9048E-01
.1162E+03	.7698E-01	.1221E+03	.6429E-01	.1306E+03	.4266E-01
.1354E+03	.2381E-01	.1440E+03	-.6349E-02	.1513E+03	-.3175E-01
.1578E+03	-.6270E-01	.1680E+03	-.1079E+00	.1750E+03	-.1421E+00
.1832E+03	-.1841E+00	.1910E+03	-.2279E+00	.1957E+03	-.2540E+00
.1995E+03	-.2762E+00				
299	2	25	9		
.7982E+02	.5413E-03	.8428E+02	-.9552E-04	.8715E+02	-.5174E-03
.9208E+02	-.1178E-02	.9829E+02	-.1910E-02	.1038E+03	-.2348E-02
.1071E+03	-.2468E-02	.1094E+03	-.2563E-02	.1118E+03	-.2643E-02
.1144E+03	-.2587E-02	.1191E+03	-.2348E-02	.1226E+03	-.2094E-02
.1246E+03	-.1831E-02	.1285E+03	-.1705E-02	.1320E+03	-.7483E-03
.1360E+03	-.9552E-04	.1412E+03	.7323E-03	.1452E+03	.1703E-02
.1499E+03	.2834E-02	.1538E+03	.3781E-02	.1563E+03	.4418E-02
.1601E+03	.5294E-02	.1642E+03	.6297E-02	.1676E+03	.7369E-02
.1710E+03	.7960E-02				
300	2	26	9		
.7946E+02	-.2367E-01	.8432E+02	.1026E-01	.9007E+02	.4497E-01
.9717E+02	.8757E-01	.1009E+03	.1034E+00	.1041E+03	.1120E+00
.1071E+03	.1152E+00	.1090E+03	.1207E+00	.1138E+03	.1183E+00
.1172E+03	.1097E+00	.1195E+03	.9310E-01	.1236E+03	.7179E-01
.1264E+03	.4970E-01	.1295E+03	.2209E-01	.1333E+03	-.1183E-01
.1371E+03	-.4497E-01	.1412E+03	-.9600E-01	.1473E+03	-.1460E+00
.1543E+03	-.2193E+00	.1591E+03	-.2682E+00	.1657E+03	-.3432E+00
.1715E+03	-.4087E+00	.1789E+03	-.4876E+00	.1863E+03	-.5767E+00
.1930E+03	-.6477E+00	.1999E+03	-.7298E+00		
301	1	42	14		
.5000E+00	-.6786E-03	.5521E+00	-.6786E-03	.6006E+00	-.9980E-03
.6531E+00	-.1038E-02	.6989E+00	-.8383E-03	.7478E+00	-.1477E-02
.8003E+00	-.1836E-02	.8341E+00	-.2395E-02	.8616E+00	-.2794E-02
.8922E+00	-.3513E-02	.9212E+00	-.4591E-02	.9491E+00	-.6068E-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	.1088E+01	-.1665E-01
.1105E+01	-.1737E-01	.1113E+01	-.1733E-01	.1138E+01	-.1637E-01
.1158E+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	-.4072E-02	.1556E+01	-.3713E-02
.1598E+01	-.2914E-02	.1648E+01	-.2675E-02	.1713E+01	-.2275E-02
.1796E+01	-.2156E-02	.1898E+01	-.1916E-02	.2000E+01	-.1717E-02
302	1	61	21		
.5000E+00	.6178E-02	.4956E+00	.6139E-02	.5478E+00	.6059E-02
.5980E+00	.5703E-02	.6486E+00	.6023E-02	.6976E+00	.5901E-02
.7470E+00	.5980E-02	.7984E+00	.6297E-02	.8506E+00	.6733E-02
.8689E+00	.7248E-02	.8813E+00	.7406E-02	.8928E+00	.7446E-02
.9044E+00	.7287E-02	.9227E+00	.6693E-02	.9327E+00	.6099E-02
.9458E+00	.4871E-02	.9538E+00	.3881E-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	-.7168E-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	-.6535E-02	.1119E+01	-.5703E-02
.1133E+01	-.4396E-02	.1145E+01	-.3574E-02	.1153E+01	-.3184E-02

.1161E+01	-.3504E-03	.1169E+01	.4317E-03	.1177E+01	.4561E-04
.1183E+01	.2653E-02	.1188E+01	.3243E-02	.1197E+01	.3604E-02
.1207E+01	.4198E-02	.1213E+01	.4350E-02	.1222E+01	.4475E-02
.1238E+01	.4396E-02	.1270E+01	.4159E-02	.1317E+01	.4238E-02
.1348E+01	.4238E-02	.1386E+01	.3960E-02	.1424E+01	.3842E-02
.1470E+01	.3762E-02	.1535E+01	.3723E-02	.1581E+01	.3446E-02
.1637E+01	.3089E-02	.1697E+01	.2891E-02	.1755E+01	.2614E-02
.1804E+01	.2416E-02	.1849E+01	.2376E-02	.1902E+01	.2178E-02
.2000E+01	.1901E-02				
302	2	45	15		
.5000E+00	-.2020E-02	.5980E+00	-.2020E-02	.6486E+00	-.2020E-02
.6964E+00	-.2020E-02	.7466E+00	-.2020E-02	.7988E+00	-.2139E-02
.8486E+00	-.2337E-02	.8904E+00	-.1980E-02	.9004E+00	-.2020E-02
.9187E+00	-.2495E-02	.9375E+00	-.2733E-02	.9637E+00	-.3683E-02
.9888E+00	-.5069E-02	.1010E+01	-.5782E-02	.1032E+01	-.6495E-02
.1046E+01	-.7168E-02	.1059E+01	-.7287E-02	.1083E+01	-.7010E-02
.1092E+01	-.6535E-02	.1107E+01	-.6179E-02	.1114E+01	-.5505E-02
.1127E+01	-.4990E-02	.1145E+01	-.4238E-02	.1161E+01	-.3564E-02
.1176E+01	-.3208E-02	.1191E+01	-.2653E-02	.1213E+01	-.2416E-02
.1241E+01	-.2020E-02	.1266E+01	-.1465E-02	.1294E+01	-.1228E-02
.1319E+01	-.1109E-02	.1351E+01	-.1109E-02	.1401E+01	-.1149E-02
.1449E+01	-.1109E-02	.1500E+01	-.8317E-03	.1550E+01	-.9109E-03
.1600E+01	-.1030E-02	.1651E+01	-.1030E-02	.1701E+01	-.1069E-02
.1751E+01	-.1069E-02	.1801E+01	-.1069E-02	.1853E+01	-.1228E-02
.1899E+01	-.1188E-02	.1950E+01	-.1069E-02	.2000E+01	-.1228E-02
302	3	33	11		
.5000E+00	-.4043E-02	.5347E+00	-.3683E-02	.5518E+00	-.3683E-02
.6000E+00	-.3366E-02	.6490E+00	-.3129E-02	.6996E+00	-.2931E-02
.7482E+00	-.2535E-02	.7984E+00	-.2337E-02	.8498E+00	-.2139E-02
.9000E+00	-.2099E-02	.9474E+00	-.1941E-02	.1001E+01	-.1822E-02
.1032E+01	-.1584E-02	.1050E+01	-.1267E-02	.1079E+01	-.1069E-02
.1098E+01	-.9505E-03	.1150E+01	-.7525E-03	.1199E+01	-.7525E-03
.1249E+01	-.5941E-03	.1297E+01	-.5149E-03	.1348E+01	-.1584E-03
.1400E+01	-.1584E-03	.1446E+01	-.1188E-03	.1499E+01	-.3960E-04
.1551E+01	-.3960E-04	.1600E+01	-.7921E-04	.1652E+01	-.7921E-04
.1702E+01	-.7921E-04	.1802E+01	-.7921E-04	.1852E+01	-.3960E-04
.1900E+01	-.7921E-04	.1953E+01	-.7921E-04	.2000E+01	-.7921E-04
303	1	29	10		
.5000E+00	-.4167E-02	.5513E+00	-.3690E-02	.6014E+00	-.3413E-02
.6492E+00	-.3254E-02	.7001E+00	-.2817E-02	.7514E+00	-.2579E-02
.7995E+00	-.2302E-02	.8496E+00	-.2063E-02	.8982E+00	-.2222E-02
.9495E+00	-.1865E-02	.1003E+01	-.1706E-02	.1048E+01	-.1706E-02
.1099E+01	-.1270E-02	.1150E+01	-.1190E-02	.1199E+01	-.1151E-02
.1248E+01	-.1071E-02	.1296E+01	-.7540E-03	.1395E+01	-.7540E-03
.1498E+01	-.5556E-03	.1548E+01	-.5556E-03	.1599E+01	-.5159E-03
.1649E+01	-.3175E-03	.1701E+01	-.2381E-03	.1749E+01	-.7937E-04
.1802E+01	0.	.1852E+01	0.	.1901E+01	.7937E-04
.1948E+01	.7937E-04	.2000E+01	.1190E-03		
303	2	36	12		
.5000E+00	.1905E-02	.5513E+00	.2341E-02	.5994E+00	.3294E-02
.6500E+00	.4365E-02	.7017E+00	.5357E-02	.7514E+00	.6587E-02
.8007E+00	.8254E-02	.8369E+00	.9802E-02	.8576E+00	.1067E-01
.8763E+00	.1115E-01	.8938E+00	.1139E-01	.9029E+00	.1139E-01
.9185E+00	.1139E-01	.9368E+00	.1103E-01	.9582E+00	.1040E-01
.9777E+00	.9524E-02	.1000E+01	.8492E-02	.1014E+01	.7778E-02
.1026E+01	.7183E-02	.1041E+01	.6310E-02	.1054E+01	.5317E-02
.1070E+01	.4484E-02	.1088E+01	.3571E-02	.1107E+01	.2619E-02
.1132E+01	.1825E-02	.1159E+01	.1468E-02	.1195E+01	.9921E-03
.1219E+01	.9524E-03	.1298E+01	.9524E-03	.1395E+01	.9524E-03
.1496E+01	.9524E-03	.1597E+01	.9524E-03	.1698E+01	.9921E-03
.1798E+01	.9921E-03	.1897E+01	.9921E-03	.2000E+01	.9921E-03
303	3	40	14		
.5000E+00	.6270E-02	.5517E+00	.7063E-02	.6802E+00	.8175E-02
.6508E+00	.9563E-02	.6989E+00	.1111E-01	.7514E+00	.1266E-01
.8019E+00	.1456E-01	.8290E+00	.1563E-01	.8508E+00	.1543E-01
.8715E+00	.1571E-01	.8886E+00	.1579E-01	.9014E+00	.1698E-01

.9196E+00	.1679E-01	.9308E+00	.1541E-01	.9431E+00	.1363E-01
.9543E+00	.1508E-01	.9730E+00	.1373E-01	.9547E+00	.1254E-01
.1009E+01	.1123E-01	.1020E+01	.1024E-01	.1053E+01	.8889E-02
.1078E+01	.7619E-02	.1102E+01	.6746E-02	.1128E+01	.5675E-02
.1155E+01	.4921E-02	.1173E+01	.4444E-02	.1203E+01	.4048E-02
.1237E+01	.3571E-02	.1268E+01	.3373E-02	.1298E+01	.3135E-02
.1348E+01	.3135E-02	.1399E+01	.3135E-02	.1448E+01	.2976E-02
.1496E+01	.2937E-02	.1600E+01	.2937E-02	.1697E+01	.2778E-02
.1799E+01	.2698E-02	.1899E+01	.2698E-02	.1949E+01	.2579E-02
.2000E+01	.2540E-02				
304	1	38	13		
.5000E+00	.1833E-01	.5498E+00	.1817E-01	.6015E+00	.1809E-01
.6505E+00	.1797E-01	.7002E+00	.1777E-01	.7492E+00	.1757E-01
.7986E+00	.1737E-01	.8491E+00	.1701E-01	.8993E+00	.1657E-01
.9498E+00	.1566E-01	.1000E+01	.1498E-01	.1025E+01	.1442E-01
.1039E+01	.1398E-01	.1050E+01	.1363E-01	.1071E+01	.1275E-01
.1092E+01	.1135E-01	.1106E+01	.1028E-01	.1125E+01	.8566E-02
.1145E+01	.6773E-02	.1172E+01	.3925E-02	.1192E+01	.1554E-02
.1203E+01	.3586E-03	.1219E+01	-.9765E-03	.1237E+01	-.1713E-02
.1254E+01	-.2590E-02	.1275E+01	-.3386E-02	.1297E+01	-.4024E-02
.1313E+01	-.4741E-02	.1356E+01	-.5976E-02	.1381E+01	-.6614E-02
.1437E+01	-.7410E-02	.1489E+01	-.8566E-02	.1550E+01	-.9243E-02
.1604E+01	-.9801E-02	.1703E+01	-.1060E-01	.1801E+01	-.1092E-01
.1902E+01	-.1088E-01	.2000E+01	-.1098E-01		
304	2	35	12		
.5000E+00	.9402E-02	.5510E+00	.9243E-02	.5999E+00	.8805E-02
.6469E+00	.8526E-02	.6990E+00	.8207E-02	.7496E+00	.7729E-02
.7998E+00	.7131E-02	.8503E+00	.6135E-02	.9009E+00	.5418E-02
.9496E+00	.4343E-02	.9940E+00	.3187E-02	.1050E+01	.1594E-02
.1079E+01	.4382E-03	.1107E+01	-.4382E-03	.1117E+01	-.9163E-03
.1143E+01	-.2470E-02	.1162E+01	-.3506E-02	.1179E+01	-.4024E-02
.1196E+01	-.4661E-02	.1217E+01	-.4941E-02	.1248E+01	-.5060E-02
.1306E+01	-.5299E-02	.1400E+01	-.6215E-02	.1472E+01	-.6494E-02
.1503E+01	-.6972E-02	.1551E+01	-.7251E-02	.1601E+01	-.7530E-02
.1651E+01	-.7331E-02	.1703E+01	-.7610E-02	.1750E+01	-.7729E-02
.1801E+01	-.7570E-02	.1849E+01	-.7649E-02	.1898E+01	-.7570E-02
.1950E+01	-.7570E-02	.2000E+01	-.7331E-02		
304	3	42	14		
.5000E+00	-.7570E-03	.5506E+00	-.7968E-03	.6007E+00	-.9960E-03
.6330E+00	-.1195E-02	.6517E+00	-.1514E-02	.6811E+00	-.1753E-02
.7178E+00	-.2709E-02	.7488E+00	-.3865E-02	.7719E+00	-.4542E-02
.7970E+00	-.5817E-02	.8197E+00	-.7052E-02	.8348E+00	-.8327E-02
.8531E+00	-.9522E-02	.8678E+00	-.1143E-01	.8770E+00	-.1267E-01
.8861E+00	-.1359E-01	.8917E+00	-.1458E-01	.9041E+00	-.1562E-01
.9128E+00	-.1598E-01	.9279E+00	-.1625E-01	.9494E+00	-.1594E-01
.9709E+00	-.1478E-01	.1031E+01	-.1279E-01	.1050E+01	-.1223E-01
.1079E+01	-.1096E-01	.1138E+01	-.1032E-01	.1191E+01	-.9323E-02
.1250E+01	-.8566E-02	.1300E+01	-.7928E-02	.1350E+01	-.7291E-02
.1402E+01	-.6534E-02	.1469E+01	-.5976E-02	.1520E+01	-.5657E-02
.1566E+01	-.5100E-02	.1612E+01	-.4701E-02	.1693E+01	-.4183E-02
.1754E+01	-.3506E-02	.1799E+01	-.3586E-02	.1841E+01	-.3108E-02
.1898E+01	-.2709E-02	.1952E+01	-.2629E-02	.2000E+01	-.2390E-02
305	1	61	21		
.5000E+00	.2176E+00	.5512E+00	.2224E+00	.5814E+00	.2248E+00
.6085E+00	.2303E+00	.6424E+00	.2327E+00	.6726E+00	.2371E+00
.7021E+00	.2447E+00	.7368E+00	.2550E+00	.7766E+00	.2665E+00
.8025E+00	.2757E+00	.8327E+00	.2915E+00	.8550E+00	.3039E+00
.8821E+00	.3214E+00	.9032E+00	.3409E+00	.9211E+00	.3620E+00
.9411E+00	.3879E+00	.9566E+00	.4189E+00	.9717E+00	.4547E+00
.9841E+00	.4885E+00	.9940E+00	.5231E+00	.1000E+01	.5518E+00
.1006E+01	.5792E+00	.1011E+01	.6106E+00	.1016E+01	.6449E+00
.1019E+01	.6636E+00	.1022E+01	.6747E+00	.1025E+01	.6854E+00
.1032E+01	.6954E+00	.1039E+01	.7021E+00	.1046E+01	.7073E+00
.1054E+01	.7109E+00	.1063E+01	.7109E+00	.1082E+01	.7105E+00
.1094E+01	.7069E+00	.1105E+01	.7025E+00	.1119E+01	.6982E+00
.1134E+01	.6874E+00	.1150E+01	.6754E+00	.1163E+01	.6625E+00

.1178E+01	.6508E+00	.1195E+01	.6341E+00	.1217E+01	.6087E+00
.1244E+01	.5804E+00	.1272E+01	.5553E+00	.1299E+01	.5267E+00
.1338E+01	.4913E+00	.1372E+01	.4635E+00	.1411E+01	.4320E+00
.1450E+01	.3994E+00	.1488E+01	.3739E+00	.1541E+01	.3425E+00
.1585E+01	.3198E+00	.1630E+01	.3015E+00	.1676E+01	.2852E+00
.1742E+01	.2693E+00	.1793E+01	.2622E+00	.1841E+01	.2550E+00
.1884E+01	.2494E+00	.1921E+01	.2455E+00	.1963E+01	.2411E+00
.2000E+01	.2387E+00				
305	2	54	18		
.5000E+00	.1798E+00	.5432E+00	.1842E+00	.5846E+00	.1858E+00
.6165E+00	.1902E+00	.6583E+00	.1957E+00	.6997E+00	.2049E+00
.7435E+00	.2128E+00	.7861E+00	.2256E+00	.8319E+00	.2395E+00
.8626E+00	.2546E+00	.8945E+00	.2765E+00	.9164E+00	.2940E+00
.9335E+00	.3127E+00	.9534E+00	.3369E+00	.9681E+00	.3544E+00
.9813E+00	.3907E+00	.9972E+00	.4284E+00	.1010E+01	.4674E+00
.1020E+01	.5116E+00	.1029E+01	.5717E+00	.1034E+01	.6051E+00
.1038E+01	.6210E+00	.1047E+01	.6353E+00	.1056E+01	.6449E+00
.1066E+01	.6520E+00	.1076E+01	.6556E+00	.1082E+01	.6560E+00
.1098E+01	.6544E+00	.1114E+01	.6472E+00	.1130E+01	.6365E+00
.1144E+01	.6218E+00	.1159E+01	.6047E+00	.1178E+01	.5824E+00
.1195E+01	.5581E+00	.1215E+01	.5359E+00	.1244E+01	.5064E+00
.1274E+01	.4722E+00	.1308E+01	.4384E+00	.1342E+01	.4101E+00
.1375E+01	.3831E+00	.1409E+01	.3596E+00	.1445E+01	.3377E+00
.1483E+01	.3194E+00	.1526E+01	.3011E+00	.1566E+01	.2868E+00
.1629E+01	.2725E+00	.1700E+01	.2570E+00	.1767E+01	.2439E+00
.1818E+01	.2379E+00	.1849E+01	.2363E+00	.1890E+01	.2319E+00
.1931E+01	.2275E+00	.1970E+01	.2244E+00	.2000E+01	.2232E+00
305	3	63	21		
.5000E+00	.1508E+00	.5408E+00	.1532E+00	.5826E+00	.1563E+00
.6117E+00	.1575E+00	.6452E+00	.1619E+00	.6894E+00	.1691E+00
.7340E+00	.1754E+00	.7782E+00	.1842E+00	.8196E+00	.1953E+00
.8574E+00	.2077E+00	.8881E+00	.2256E+00	.9160E+00	.2466E+00
.9371E+00	.2697E+00	.9538E+00	.2900E+00	.9677E+00	.3159E+00
.9821E+00	.3421E+00	.9936E+00	.3684E+00	.1004E+01	.3942E+00
.1015E+01	.4300E+00	.1022E+01	.4563E+00	.1030E+01	.4921E+00
.1036E+01	.5183E+00	.1039E+01	.5442E+00	.1042E+01	.5613E+00
.1046E+01	.5725E+00	.1054E+01	.5828E+00	.1062E+01	.5872E+00
.1070E+01	.5908E+00	.1079E+01	.5931E+00	.1094E+01	.5896E+00
.1106E+01	.5844E+00	.1114E+01	.5792E+00	.1123E+01	.5728E+00
.1132E+01	.5633E+00	.1143E+01	.5494E+00	.1151E+01	.5374E+00
.1164E+01	.5215E+00	.1179E+01	.4945E+00	.1195E+01	.4690E+00
.1210E+01	.4523E+00	.1236E+01	.4225E+00	.1251E+01	.4062E+00
.1272E+01	.3851E+00	.1294E+01	.3648E+00	.1323E+01	.3465E+00
.1348E+01	.3302E+00	.1377E+01	.3171E+00	.1404E+01	.3079E+00
.1438E+01	.2952E+00	.1481E+01	.2848E+00	.1511E+01	.2737E+00
.1550E+01	.2653E+00	.1595E+01	.2526E+00	.1647E+01	.2431E+00
.1675E+01	.2347E+00	.1720E+01	.2291E+00	.1755E+01	.2264E+00
.1801E+01	.2216E+00	.1836E+01	.2176E+00	.1881E+01	.2104E+00
.1918E+01	.2061E+00	.1960E+01	.2041E+00	.2000E+01	.1981E+00
305	4	68	23		
.5000E+00	.1261E+00	.5452E+00	.1273E+00	.6029E+00	.1309E+00
.6714E+00	.1325E+00	.7129E+00	.1353E+00	.7718E+00	.1428E+00
.8128E+00	.1464E+00	.8511E+00	.1563E+00	.8829E+00	.1687E+00
.9108E+00	.1838E+00	.9407E+00	.2065E+00	.9582E+00	.2264E+00
.9729E+00	.2470E+00	.9881E+00	.2773E+00	.9988E+00	.3015E+00
.1009E+01	.3286E+00	.1019E+01	.3572E+00	.1027E+01	.3926E+00
.1033E+01	.4237E+00	.1037E+01	.4452E+00	.1040E+01	.4638E+00
.1043E+01	.4841E+00	.1046E+01	.5040E+00	.1048E+01	.5124E+00
.1050E+01	.5207E+00	.1055E+01	.5287E+00	.1059E+01	.5355E+00
.1066E+01	.5402E+00	.1072E+01	.5418E+00	.1080E+01	.5422E+00
.1092E+01	.5410E+00	.1104E+01	.5374E+00	.1115E+01	.5319E+00
.1124E+01	.5275E+00	.1131E+01	.5219E+00	.1138E+01	.5152E+00
.1146E+01	.5032E+00	.1153E+01	.4881E+00	.1161E+01	.4722E+00
.1167E+01	.4571E+00	.1173E+01	.4436E+00	.1181E+01	.4237E+00
.1190E+01	.4066E+00	.1194E+01	.3954E+00	.1203E+01	.3815E+00
.1212E+01	.3864E+00	.1223E+01	.3537E+00	.1237E+01	.3342E+00

.1250E+01	.2250E+00	.1264E+01	.5123E+00	.1284E+01	.3015E+00
.1306E+01	.2860E+00	.1335E+01	.2745E+00	.1369E+01	.2626E+00
.1419E+01	.2486E+00	.1460E+01	.2375E+00	.1497E+01	.2315E+00
.1551E+01	.2224E+00	.1605E+01	.2136E+00	.1656E+01	.2061E+00
.1715E+01	.2085E+00	.1765E+01	.1969E+00	.1814E+01	.1937E+00
.1856E+01	.1894E+00	.1902E+01	.1870E+00	.1939E+01	.1866E+00
.1973E+01	.1838E+00	.2000E+01	.1818E+00		
305	5	77	26		
.5000E+00	.9428E-01	.5472E+00	.9349E-01	.5934E+00	.9269E-01
.6428E+00	.9229E-01	.6918E+00	.9269E-01	.7264E+00	.9468E-01
.7758E+00	.9707E-01	.8061E+00	.9985E-01	.8339E+00	.1042E+00
.8491E+00	.1074E+00	.8686E+00	.1138E+00	.8945E+00	.1229E+00
.9128E+00	.1321E+00	.9311E+00	.1448E+00	.9438E+00	.1579E+00
.9542E+00	.1707E+00	.9646E+00	.1878E+00	.9765E+00	.2061E+00
.9885E+00	.2268E+00	.9988E+00	.2510E+00	.1009E+01	.2765E+00
.1014E+01	.2980E+00	.1021E+01	.3171E+00	.1026E+01	.3365E+00
.1030E+01	.3552E+00	.1035E+01	.3767E+00	.1040E+01	.4042E+00
.1043E+01	.4225E+00	.1044E+01	.4352E+00	.1045E+01	.4452E+00
.1047E+01	.4547E+00	.1049E+01	.4635E+00	.1052E+01	.4694E+00
.1057E+01	.4754E+00	.1063E+01	.4806E+00	.1070E+01	.4849E+00
.1081E+01	.4861E+00	.1097E+01	.4849E+00	.1109E+01	.4806E+00
.1117E+01	.4746E+00	.1125E+01	.4674E+00	.1127E+01	.4658E+00
.1135E+01	.4563E+00	.1141E+01	.4452E+00	.1145E+01	.4340E+00
.1153E+01	.4121E+00	.1160E+01	.3887E+00	.1167E+01	.3672E+00
.1173E+01	.3541E+00	.1181E+01	.3330E+00	.1188E+01	.3143E+00
.1197E+01	.2964E+00	.1204E+01	.2860E+00	.1212E+01	.2749E+00
.1222E+01	.2665E+00	.1232E+01	.2586E+00	.1248E+01	.2526E+00
.1274E+01	.2431E+00	.1295E+01	.2359E+00	.1316E+01	.2319E+00
.1346E+01	.2260E+00	.1391E+01	.2184E+00	.1422E+01	.2148E+00
.1477E+01	.2089E+00	.1512E+01	.2053E+00	.1563E+01	.2005E+00
.1611E+01	.1957E+00	.1661E+01	.1921E+00	.1701E+01	.1878E+00
.1750E+01	.1842E+00	.1798E+01	.1770E+00	.1853E+01	.1738E+00
.1894E+01	.1691E+00	.1943E+01	.1647E+00	.1958E+01	.1623E+00
.1982E+01	.1599E+00	.2000E+01	.1579E+00		
305	6	65	22		
.5000E+00	.6325E-01	.5496E+00	.6246E-01	.5998E+00	.6007E-01
.6491E+00	.5848E-01	.6993E+00	.5848E-01	.7527E+00	.5848E-01
.8029E+00	.5967E-01	.8355E+00	.6166E-01	.8690E+00	.6405E-01
.8929E+00	.6763E-01	.9096E+00	.7240E-01	.9247E+00	.7797E-01
.9383E+00	.8712E-01	.9538E+00	.9906E-01	.9665E+00	.1189E+00
.9773E+00	.1349E+00	.9892E+00	.1563E+00	.1005E+01	.1882E+00
.1012E+01	.2053E+00	.1016E+01	.2208E+00	.1023E+01	.2415E+00
.1031E+01	.2669E+00	.1037E+01	.2956E+00	.1044E+01	.3381E+00
.1047E+01	.3537E+00	.1049E+01	.3755E+00	.1052E+01	.3863E+00
.1055E+01	.3946E+00	.1061E+01	.4042E+00	.1066E+01	.4082E+00
.1074E+01	.4121E+00	.1084E+01	.4145E+00	.1098E+01	.4141E+00
.1112E+01	.4097E+00	.1123E+01	.4034E+00	.1134E+01	.3914E+00
.1141E+01	.3811E+00	.1146E+01	.3700E+00	.1154E+01	.3537E+00
.1158E+01	.3365E+00	.1164E+01	.3147E+00	.1169E+01	.2852E+00
.1175E+01	.2630E+00	.1179E+01	.2435E+00	.1187E+01	.2272E+00
.1194E+01	.2156E+00	.1205E+01	.2069E+00	.1215E+01	.1985E+00
.1237E+01	.1921E+00	.1258E+01	.1862E+00	.1294E+01	.1794E+00
.1331E+01	.1750E+00	.1379E+01	.1730E+00	.1431E+01	.1695E+00
.1481E+01	.1671E+00	.1534E+01	.1639E+00	.1599E+01	.1607E+00
.1644E+01	.1567E+00	.1699E+01	.1567E+00	.1755E+01	.1524E+00
.1802E+01	.1512E+00	.1850E+01	.1472E+00	.1900E+01	.1452E+00
.1953E+01	.1404E+00	.2000E+01	.1364E+00		
306	1	59	20		
.5000E+00	.8500E-01	.5429E+00	.9215E-01	.5756E+00	.9692E-01
.5987E+00	.9930E-01	.6298E+00	.9772E-01	.6490E+00	.9592E-01
.6801E+00	.9215E-01	.7016E+00	.8500E-01	.7176E+00	.7150E-01
.7367E+00	.5164E-01	.7495E+00	.3257E-01	.7623E+00	.1033E-01
.7734E+00	-.1112E-01	.7862E+00	-.3496E-01	.7986E+00	-.6117E-01
.8045E+00	-.6991E-01	.8237E+00	-.1160E+00	.8396E+00	-.1557E+00
.8652E+00	-.2129E+00	.8867E+00	-.2677E+00	.9003E+00	-.3351E+00
.9250E+00	-.3726E+00	.9418E+00	-.4187E+00	.9577E+00	-.4600E+00

.9729E+00	-.4902E+00	.9840E+00	-.5152E+00	.9948E+00	-.5315E+00
.1006E+01	-.5521E+00	.1016E+01	-.5664E+00	.1026E+01	-.5839E+00
.1041E+01	-.5887E+00	.1047E+01	-.5927E+00	.1062E+01	-.5982E+00
.1076E+01	-.5919E+00	.1092E+01	-.5831E+00	.1100E+01	-.5760E+00
.1121E+01	-.5553E+00	.1142E+01	-.5291E+00	.1172E+01	-.4886E+00
.1193E+01	-.4552E+00	.1216E+01	-.4234E+00	.1243E+01	-.3925E+00
.1276E+01	-.3559E+00	.1311E+01	-.3281E+00	.1349E+01	-.3059E+00
.1386E+01	-.2796E+00	.1416E+01	-.2645E+00	.1454E+01	-.2495E+00
.1496E+01	-.2336E+00	.1541E+01	-.2248E+00	.1585E+01	-.2169E+00
.1635E+01	-.2073E+00	.1650E+01	-.2042E+00	.1700E+01	-.2042E+00
.1753E+01	-.2026E+00	.1833E+01	-.2010E+00	.1899E+01	-.1994E+00
.1951E+01	-.1978E+00	.2000E+01	-.1970E+00		
306	2	54	18		
.5000E+00	.6912E-01	.5381E+00	.7627E-01	.5844E+00	.8024E-01
.6107E+00	.8103E-01	.6474E+00	.7865E-01	.6773E+00	.7706E-01
.6961E+00	.7388E-01	.7335E+00	.5402E-01	.7631E+00	.2463E-01
.7798E+00	.4767E-02	.7978E+00	-.1986E-01	.8253E+00	-.5799E-01
.8568E+00	-.1065E+00	.8751E+00	-.1366E+00	.8971E+00	-.1724E+00
.9083E+00	-.1970E+00	.9254E+00	-.2336E+00	.9406E+00	-.2661E+00
.9565E+00	-.3051E+00	.9705E+00	-.3321E+00	.9817E+00	-.3535E+00
.9952E+00	-.3782E+00	.1006E+01	-.3940E+00	.1020E+01	-.4107E+00
.1034E+01	-.4216E+00	.1042E+01	-.4274E+00	.1053E+01	-.4314E+00
.1069E+01	-.4266E+00	.1085E+01	-.4179E+00	.1095E+01	-.4091E+00
.1099E+01	-.3988E+00	.1118E+01	-.3766E+00	.1127E+01	-.3646E+00
.1137E+01	-.3472E+00	.1155E+01	-.3281E+00	.1179E+01	-.3011E+00
.1202E+01	-.2828E+00	.1225E+01	-.2661E+00	.1255E+01	-.2471E+00
.1284E+01	-.2296E+00	.1307E+01	-.2177E+00	.1344E+01	-.2018E+00
.1383E+01	-.1859E+00	.1427E+01	-.1708E+00	.1470E+01	-.1573E+00
.1513E+01	-.1509E+00	.1554E+01	-.1454E+00	.1571E+01	-.1406E+00
.1639E+01	-.1366E+00	.1702E+01	-.1343E+00	.1753E+01	-.1327E+00
.1830E+01	-.1303E+00	.1907E+01	-.1311E+00	.2000E+01	-.1300E+00
306	3	45	15		
.5000E+00	.5799E-01	.5449E+00	.6435E-01	.5792E+00	.6673E-01
.6115E+00	.6753E-01	.6470E+00	.6594E-01	.6893E+00	.6276E-01
.7260E+00	.5243E-01	.7491E+00	.4131E-01	.7655E+00	.3019E-01
.7814E+00	.1668E-01	.7986E+00	.7150E-02	.8157E+00	-.9533E-02
.8377E+00	-.2781E-01	.8668E+00	-.5561E-01	.8943E+00	-.8659E-01
.9134E+00	-.1072E+00	.9394E+00	-.1358E+00	.9577E+00	-.1613E+00
.9824E+00	-.1867E+00	.1006E+01	-.2081E+00	.1017E+01	-.2177E+00
.1033E+01	-.2264E+00	.1044E+01	-.2328E+00	.1059E+01	-.2344E+00
.1077E+01	-.2312E+00	.1093E+01	-.2256E+00	.1100E+01	-.2209E+00
.1130E+01	-.1962E+00	.1146E+01	-.1772E+00	.1162E+01	-.1644E+00
.1174E+01	-.1549E+00	.1237E+01	-.1176E+00	.1256E+01	-.1112E+00
.1275E+01	-.1049E+00	.1306E+01	-.9613E-01	.1349E+01	-.8739E-01
.1397E+01	-.8103E-01	.1445E+01	-.7309E-01	.1500E+01	-.6832E-01
.1558E+01	-.6594E-01	.1610E+01	-.6197E-01	.1702E+01	-.6276E-01
.1803E+01	-.6117E-01	.1901E+01	-.5720E-01	.2000E+01	-.5799E-01
306	4	32	11		
.5000E+00	.3972E-02	.5501E+00	.3178E-02	.5983E+00	.2383E-02
.6478E+00	-.7944E-03	.6992E+00	-.3972E-02	.7423E+00	-.1192E-01
.7667E+00	-.1271E-01	.8101E+00	-.2066E-01	.8596E+00	-.3257E-01
.8907E+00	-.3893E-01	.9222E+00	-.4926E-01	.9521E+00	-.5799E-01
.9733E+00	-.6594E-01	.1005E+01	-.7468E-01	.1030E+01	-.7706E-01
.1050E+01	-.8183E-01	.1075E+01	-.7547E-01	.1099E+01	-.7229E-01
.1134E+01	-.5799E-01	.1156E+01	-.5561E-01	.1188E+01	-.4926E-01
.1213E+01	-.4528E-01	.1248E+01	-.4211E-01	.1301E+01	-.3972E-01
.1339E+01	-.3813E-01	.1400E+01	-.3734E-01	.1499E+01	-.3734E-01
.1601E+01	-.3734E-01	.1701E+01	-.3734E-01	.1805E+01	-.3734E-01
.1901E+01	-.3734E-01	.2000E+01	-.3734E-01		
307	1	47	16		
.5000E+00	.5720E-01	.5309E+00	.6514E-01	.5616E+00	.6991E-01
.5939E+00	.7150E-01	.6210E+00	.7071E-01	.6477E+00	.7071E-01
.6772E+00	.6991E-01	.7011E+00	.6514E-01	.7262E+00	.5561E-01
.7477E+00	.4211E-01	.7704E+00	.2622E-01	.7991E+00	.3972E-02
.8187E+00	-.1271E-01	.8390E+00	-.2939E-01	.8533E+00	-.4687E-01
.8820E+00	-.7463E-01	.9000E+01	-.9533E-01	.9195E+00	-.1258E+00

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.9402E+00  -.1470E+00   .9681E+00  -.1756E+00   .9916E+00  -.1954E+00
.1014E+01  -.2161E+00   .1039E+01  -.2328E+00   .1051E+01  -.2367E+00
.1058E+01  -.2375E+00   .1077E+01  -.2352E+00   .1093E+01  -.2272E+00
.1100E+01  -.2246E+00   .1130E+01  -.1978E+00   .1146E+01  -.1627E+00
.1158E+01  -.1700E+00   .1169E+01  -.1589E+00   .1238E+01  -.1206E+00
.1271E+01  -.1104E+00   .1306E+01  -.1009E+00   .1341E+01  -.9454E-01
.1373E+01  -.9136E-01   .1438E+01  -.8262E-01   .1495E+01  -.7229E-01
.1550E+01  -.7150E-01   .1591E+01  -.6673E-01   .1652E+01  -.6276E-01
.1703E+01  -.5958E-01   .1801E+01  -.5879E-01   .1853E+01  -.5799E-01
.1902E+01  -.5799E-01   .2000E+01  -.5799E-01
    307        2         33          11
.5000E+00  0.           .5998E+00  -.7944E-03   .6517E+00  -.7944E-03
.7011E+00  -.2383E-02   .7425E+00  -.5561E-02   .7736E+00  -.9533E-02
.8043E+00  -.1748E-01   .8414E+00  -.2701E-01   .8633E+00  -.3019E-01
.8872E+00  -.3972E-01   .9255E+00  -.5482E-01   .9601E+00  -.6753E-01
.9528E+00  -.7706E-01   .1026E+01  -.7865E-01   .1045E+01  -.7944E-01
.1077E+01  -.7865E-01   .1100E+01  -.7786E-01   .1137E+01  -.6832E-01
.1154E+01  -.6038E-01   .1197E+01  -.5482E-01   .1229E+01  -.4767E-01
.1259E+01  -.4528E-01   .1289E+01  -.4131E-01   .1321E+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
.6250E+00  -.1239E+00   .6509E+00  -.1239E+00   .6756E+00  -.1231E+00
.6967E+00  -.1184E+00   .7098E+00  -.1160E+00   .7286E+00  -.1096E+00
.7497E+00  -.1009E+00   .7908E+00  -.7468E-01   .8143E+00  -.5720E-01
.8346E+00  -.4211E-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   .1088E+00   .1063E+01   .1144E+00
.1089E+01   .1144E+00   .1139E+01   .1128E+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   .2860E-01   .1555E+01   .2066E-01
.1607E+01   .1271E-01   .1634E+01   .6356E-02   .1704E+01  -.7944E-03
.1777E+01  -.6356E-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
.7294E+00  -.2066E+00   .7545E+00  -.1827E+00   .7688E+00  -.1621E+00
.7832E+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
.1028E+01   .2693E+00   .1038E+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   .1228E+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
.1658E+01   .3257E-01   .1705E+01   .2622E-01   .1773E+01   .1748E-01
.1836E+01   .1271E-01   .1891E+01   .3972E-02   .1953E+01   .2383E-02
.2000E+01   .2383E-02
    308        1         21          7
.4954E-01   .1984E+00   .5840E-01   .1925E+00   .6717E-01   .1885E+00
.7435E-01   .1825E+00   .8089E-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
.1291E+00   .2778E-01   .1317E+00   .1786E-01   .1343E+00   .5952E-02
.1382E+00  0.           .1533E+00  0.           .1612E+00  0.
.1802E+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   .1474E+01   .1097E+00   .1405E+01   .1150E+00   .1325E+01
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.1217E+00   .1242E+01   .1271E+00   .1165E+01   .1320E+00   .1085E+01
.1367E+00   .9940E+00   .1408E+00   .9187E+00   .1460E+00   .8175E+00
.1502E+00   .7262E+00   .1534E+00   .6409E+00   .1578E+00   .5357E+00
.1617E+00   .4464E+00   .1664E+00   .3611E+00   .1694E+00   .2837E+00
.1718E+00   .2341E+00   .1745E+00   .1885E+00   .1772E+00   .1429E+00
.1804E+00   .9921E-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.
    338         3           29          10
.4986E-01   .6627E+00   .5927E-01   .6607E+00   .6789E-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   .5953E+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   .1454E+00   .1885E+00
.1483E+00   .1508E+00   .1509E+00   .1071E+00   .1536E+00   .7738E-01
.1564E+00   .4563E-01   .1588E+00   .2187E-01   .1606E+00   .9921E-02
.1619E+00   0.          .1703E+00   0.          .1809E+00   0.
.2003E+00   0.          .1000E+01   0.
    308         4           25          9
.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   .3095E+00   .1024E+00   .2817E+00   .1094E+00   .2579E+00
.1165E+00   .2282E+00   .1211E+00   .1905E+00   .1256E+00   .1647E+00
.1265E+00   .1647E+00   .1279E+00   .1290E+00   .1330E+00   .9524E-01
.1359E+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.
    309         1           44          15
.5000E+00   .3181E-03   .5466E+00   .3181E-03   .5980E+00   .3181E-03
.6976E+00   .3181E-03   .7988E+00   .3181E-03   .8514E+00   .3181E-03
.8805E+00   .3181E-03   .8976E+00   .3181E-03   .9112E+00   .3500E-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
.1158E+01   .1010E-02   .1171E+01   .1008E-02   .1194E+01   .1022E-02
.1225E+01   .1006E-02   .1257E+01   .9901E-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   .3380E-03   .1643E+01   .2863E-03
.1685E+01   .2565E-03   .1742E+01   .2087E-03   .1773E+01   .1789E-03
.1824E+01   .1531E-03   .1859E+01   .1431E-03   .1906E+01   .1252E-03
.1958E+01   .1173E-03   .2000E+01   .1173E-03
    310         1           55          19
.5000E+00  -.7381E-02   .5474E+00  -.7341E-02   .5997E+00  -.7361E-02
.6487E+00  -.7401E-02   .6786E+00  -.7460E-02   .7081E+00  -.7460E-02
.7368E+00  -.7560E-02   .7648E+00  -.7619E-02   .7811E+00  -.7698E-02
.8026E+00  -.7798E-02   .8278E+00  -.7917E-02   .8561E+00  -.8135E-02
.8860E+00  -.8333E-02   .9135E+00  -.8671E-02   .9350E+00  -.8909E-02
.9518E+00  -.9067E-02   .9697E+00  -.9444E-02   .9888E+00  -.9722E-02
.1008E+01  -.1002E-01   .1017E+01  -.1010E-01   .1025E+01  -.1022E-01
.1038E+01  -.1030E-01   .1050E+01  -.1038E-01   .1065E+01  -.1032E-01
.1078E+01  -.1020E-01   .1091E+01  -.1010E-01   .1103E+01  -.9821E-02
.1120E+01  -.9563E-02   .1130E+01  -.9266E-02   .1146E+01  -.8909E-02
.1161E+01  -.8611E-02   .1172E+01  -.8373E-02   .1187E+01  -.8175E-02
.1199E+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  -.5794E-02
.1868E+01  -.5754E-02   .1917E+01  -.5675E-02   .1963E+01  -.5635E-02
.2000E+01  -.5635E-02
    309         2           57          19
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.5900E+00	-.1173E-03	.5853E+00	-.1173E-03	.6570E+00	-.1219E-03
.6984E+00	-.1153E-03	.7199E+00	-.1154E-03	.7390E+00	-.1034E-03
.7618E+00	-.8151E-04	.7865E+00	-.3976E-04	.8024E+00	-.7952E-05
.8159E+00	.2783E-04	.8454E+00	.1193E-03	.8689E+00	.2167E-03
.8813E+00	.2724E-03	.9008E+00	.3698E-03	.9279E+00	.5169E-03
.9502E+00	.6600E-03	.9729E+00	.7972E-03	.9936E+00	.9284E-03
.1006E+01	.9980E-03	.1019E+01	.1078E-02	.1037E+01	.1145E-02
.1052E+01	.1173E-02	.1060E+01	.1181E-02	.1069E+01	.1183E-02
.1083E+01	.1181E-02	.1094E+01	.1165E-02	.1104E+01	.1121E-02
.1118E+01	.1054E-02	.1124E+01	.1010E-02	.1134E+01	.9284E-03
.1141E+01	.8648E-03	.1152E+01	.7495E-03	.1164E+01	.6362E-03
.1175E+01	.5487E-03	.1184E+01	.4732E-03	.1192E+01	.4076E-03
.1204E+01	.3419E-03	.1220E+01	.2565E-03	.1238E+01	.1690E-03
.1256E+01	.1093E-03	.1280E+01	.3181E-04	.1296E+01	-.2386E-04
.1324E+01	-.8748E-04	.1347E+01	-.1252E-03	.1368E+01	-.1710E-03
.1435E+01	-.2624E-03	.1460E+01	-.2823E-03	.1492E+01	-.3042E-03
.1526E+01	-.3241E-03	.1571E+01	-.3380E-03	.1627E+01	-.3559E-03
.1677E+01	-.3698E-03	.1744E+01	-.3797E-03	.1823E+01	-.3917E-03
.1900E+01	-.4036E-03	.1965E+01	-.4135E-03	.2090E+01	-.4175E-03
310	2	60	20		
.5000E+00	.3194E-02	.5363E+00	.3393E-02	.5646E+00	.3393E-02
.5925E+00	.3393E-02	.6164E+00	.3373E-02	.6427E+00	.3353E-02
.6711E+00	.3175E-02	.6986E+00	.2897E-02	.7217E+00	.2639E-02
.7392E+00	.2262E-02	.7616E+00	.1865E-02	.7735E+00	.1448E-02
.7879E+00	.1012E-02	.8010E+00	.5754E-03	.8150E+00	-.1587E-03
.8325E+00	-.9127E-03	.8501E+00	-.1786E-02	.8612E+00	-.2560E-02
.8740E+00	-.3214E-02	.8876E+00	-.4365E-02	.9019E+00	-.5159E-02
.9155E+00	-.5734E-02	.9250E+00	-.6012E-02	.9314E+00	-.6190E-02
.9386E+00	-.6250E-02	.9506E+00	-.6349E-02	.9661E+00	-.6250E-02
.9785E+00	-.6632E-02	.9896E+00	-.5714E-02	.1001E+01	-.5317E-02
.1023E+01	-.4365E-02	.1039E+01	-.3651E-02	.1056E+01	-.2817E-02
.1070E+01	-.2103E-02	.1082E+01	-.1230E-02	.1097E+01	-.4365E-03
.1112E+01	.3968E-03	.1120E+01	.9722E-03	.1128E+01	.1389E-02
.1136E+01	.1786E-02	.1144E+01	.2103E-02	.1152E+01	.2361E-02
.1164E+01	.2679E-02	.1181E+01	.3036E-02	.1203E+01	.3373E-02
.1224E+01	.3651E-02	.1250E+01	.3810E-02	.1279E+01	.3889E-02
.1309E+01	.4107E-02	.1340E+01	.4246E-02	.1365E+01	.4306E-02
.1404E+01	.4405E-02	.1461E+01	.4385E-02	.1528E+01	.4484E-02
.1604E+01	.4425E-02	.1694E+01	.4464E-02	.1800E+01	.4444E-02
.1900E+01	.4246E-02	.1963E+01	.4206E-02	.2000E+01	.4167E-02
311	1	16	6		
.5000E+00	-.1129E-02	.6010E+00	-.9307E-03	.7013E+00	-.7327E-03
.8009E+00	-.5347E-03	.9012E+00	-.4554E-03	.9996E+00	-.2376E-03
.1101E+01	-.7921E-04	.1201E+01	.5941E-04	.1301E+01	.1782E-03
.1399E+01	.3762E-03	.1501E+01	.6139E-03	.1599E+01	.8119E-03
.1702E+01	.9703E-03	.1802E+01	.1069E-02	.1898E+01	.1267E-02
.2000E+01	.1426E-02				
313	1	44	15		
.5000E+00	.2183E-01	.5984E+00	.2183E-01	.6496E+00	.2163E-01
.6996E+00	.2004E-01	.7474E+00	.1865E-01	.8000E+00	.1627E-01
.8510E+00	.1270E-01	.8996E+00	.8333E-02	.9498E+00	.2976E-02
.9996E+00	-.3770E-02	.1035E+01	-.9921E-02	.1055E+01	-.1310E-01
.1073E+01	-.1726E-01	.1096E+01	-.2163E-01	.1115E+01	-.2619E-01
.1135E+01	-.2996E-01	.1149E+01	-.3214E-01	.1160E+01	-.3373E-01
.1170E+01	-.3591E-01	.1182E+01	-.3671E-01	.1200E+01	-.3829E-01
.1219E+01	-.3829E-01	.1236E+01	-.3651E-01	.1254E+01	-.3294E-01
.1267E+01	-.3016E-01	.1280E+01	-.2698E-01	.1298E+01	-.2361E-01
.1307E+01	-.2163E-01	.1329E+01	-.1766E-01	.1352E+01	-.1349E-01
.1378E+01	-.9921E-02	.1400E+01	-.7738E-02	.1422E+01	-.4365E-02
.1467E+01	-.1984E-03	.1504E+01	.2976E-02	.1550E+01	.5556E-02
.1597E+01	.7937E-02	.1638E+01	.9325E-02	.1698E+01	.1091E-01
.1749E+01	.1091E-01	.1798E+01	.1171E-01	.1873E+01	.1290E-01
.1945E+01	.1290E-01	.2000E+01	.1270E-01		
315	1	23	8		
0.	0.	.4934E-01	0.	.9988E-01	0.
.1512E+00	-.5976E-03	.2006E+00	-.1594E-02	.2364E+00	-.2786E-02

.2702E+00	-.3984E-02	.3036E+00	-.3574E-02	.3482E+00	-.3765E-02
.3932E+00	-.1355E-01	.4389E+00	-.1813E-01	.4918E+00	-.2371E-01
.5277E+00	-.2849E-01	.5643E+00	-.3426E-01	.5977E+00	-.3845E-01
.6462E+00	-.4641E-01	.6901E+00	-.5319E-01	.7473E+00	-.6295E-01
.7899E+00	-.6952E-01	.8428E+00	-.7869E-01	.8930E+00	-.8805E-01
.9435E+00	-.9701E-01	.1000E+01	-.1070E+00		
312	1	35	12		
.1531E+00	-.1269E-02	.1742E+00	-.1142E-02	.2200E+00	-.7745E-03
.2562E+00	-.4711E-03	.2828E+00	-.1677E-03	.3051E+00	.1038E-03
.3226E+00	.3513E-03	.3345E+00	.5828E-03	.3425E+00	.8363E-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	.2104E-02	.4602E+00	.2100E-02
.4702E+00	.2028E-02	.4813E+00	.1972E-02	.4905E+00	.1960E-02
.4984E+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	-.5669E-03
.6233E+00	-.8463E-03	.6392E+00	-.1094E-02	.6571E+00	-.1437E-02
.6706E+00	-.1685E-02	.6893E+00	-.2012E-02		
314	1	32	11		
.1943E+00	-.3452E-01	.2189E+00	-.3313E-01	.2468E+00	-.3135E-01
.2763E+00	-.2817E-01	.3045E+00	-.2341E-01	.3165E+00	-.2113E-01
.3300E+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	.1508E-01	.4232E+00	.1706E-01
.4335E+00	.1766E-01	.4490E+00	.1865E-01	.4686E+00	.1786E-01
.4940E+00	.1627E-01	.5111E+00	.1310E-01	.5251E+00	.1171E-01
.5414E+00	.8333E-02	.5581E+00	.5556E-02	.5808E+00	.1190E-02
.5979E+00	-.2778E-02	.6206E+00	-.5357E-02	.6409E+00	-.7341E-02
.6752E+00	-.1032E-01	.7094E+00	-.1230E-01	.7488E+00	-.1448E-01
.7751E+00	-.1548E-01	.7970E+00	-.1567E-01		
312	2	32	11		
.1523E+00	-.1852E-02	.1730E+00	-.1685E-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	.1110E-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	.3353E-03
.6002E+00	-.1996E-03	.6241E+00	-.5030E-03	.6547E+00	-.8782E-03
.6746E+00	-.1054E-02	.6949E+00	-.1261E-02		
314	2	38	13		
.1979E+00	.9325E-02	.2239E+00	.8929E-02	.2532E+00	.7738E-02
.2783E+00	.6548E-02	.3085E+00	.5357E-02	.3372E+00	.3373E-02
.3607E+00	.1587E-02	.3802E+00	.1984E-03	.3905E+00	-.9921E-03
.3997E+00	-.2778E-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	-.1091E-01	.5318E+00	-.9127E-02
.5490E+00	-.7143E-02	.5577E+00	-.4762E-02	.5649E+00	-.2579E-02
.5697E+00	-.5952E-03	.5776E+00	.3175E-02	.5832E+00	.6944E-02
.5860E+00	.1012E-01	.5904E+00	.1389E-01	.5947E+00	.1687E-01
.6027E+00	.2044E-01	.6135E+00	.2381E-01	.6270E+00	.2679E-01
.6409E+00	.2857E-01	.6592E+00	.3135E-01	.6787E+00	.3254E-01
.6994E+00	.3333E-01	.7321E+00	.3373E-01	.7615E+00	.3373E-01
.7795E+00	.3294E-01	.8021E+00	.3234E-01		
317	1	26	9		
.5000E+00	-.1310E-01	.5999E+00	-.1310E-01	.7002E+00	-.1310E-01
.8918E+00	-.1310E-01	.8798E+00	-.1310E-01	.9196E+00	-.1306E-01
.9566E+00	-.1290E-01	.9861E+00	-.1270E-01	.1020E+01	-.1242E-01
.1060E+01	-.1206E-01	.1094E+01	-.1171E-01	.1142E+01	-.1127E-01
.1189E+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
.1759E+01	-.7421E-02	.1807E+01	-.7143E-02	.1847E+01	-.7246E-02

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.1957E+01  -.6865E-02   .2000E+01  -.6746E-02
    317          2          33          11
.5008E+00  -.4167E-01   .5358E+00  -.4222E-01   .5641E+00  -.4274E-01
.5955E+00  -.4357E-01   .6358E+00  -.4496E-01   .6664E+00  -.4619E-01
.7038E+00  -.4762E-01   .7512E+00  -.4956E-01   .8018E+00  -.5167E-01
.8428E+00  -.5365E-01   .8738E+00  -.5524E-01   .9025E+00  -.5667E-01
.9319E+00  -.5818E-01   .9701E+00  -.5960E-01   .9988E+00  -.6048E-01
.1025E+01  -.6131E-01   .1061E+01  -.6222E-01   .1096E+01  -.6294E-01
.1146E+01  -.6349E-01   .1201E+01  -.6397E-01   .1253E+01  -.6421E-01
.1303E+01  -.6444E-01   .1354E+01  -.6440E-01   .1401E+01  -.6413E-01
.1453E+01  -.6377E-01   .1553E+01  -.6254E-01   .1604E+01  -.6198E-01
.1652E+01  -.6111E-01   .1703E+01  -.6063E-01   .1752E+01  -.5968E-01
.1813E+01  -.5981E-01   .1061E+01  -.5813E-01   .2000E+01  -.5590E-01
    318          1          31          11
.3949E-01   .9382E-02   .4994E-01   .9323E-02   .5959E-01   .9183E-02
.6957E-01   .9024E-02   .7962E-01   .8845E-02   .8935E-01   .8526E-02
.9757E-01   .8227E-02   .1037E+00   .7938E-02   .1112E+00   .7649E-02
.1205E+00   .7211E-02   .1272E+00   .6773E-02   .1345E+00   .6295E-02
.1418E+00   .5697E-02   .1471E+00   .5179E-02   .1564E+00   .4243E-02
.1631E+00   .3386E-02   .1671E+00   .2829E-02   .1702E+00   .2351E-02
.1734E+00   .1932E-02   .1757E+00   .1594E-02   .1779E+00   .1275E-02
.1795E+00   .1056E-02   .1809E+00   .8765E-03   .1828E+00   .7570E-03
.1848E+00   .6175E-03   .1872E+00   .4781E-03   .1892E+00   .3187E-03
.1915E+00   .1594E-03   .1938E+00   .7968E-04   .2001E+00   0.
.1000E+01   0.
    318          2          24           8
.3925E-01   .5857E-02   .4826E-01   .5737E-02   .5584E-01   .5637E-02
.6526E-01   .5498E-02   .7323E-01   .5299E-02   .8345E-01   .5020E-02
.9031E-01   .4761E-02   .9797E-01   .4462E-02   .1039E+00   .4124E-02
.1111E+00   .3745E-02   .1186E+00   .3187E-02   .1238E+00   .2769E-02
.1288E+00   .2331E-02   .1353E+00   .1713E-02   .1395E+00   .1275E-02
.1424E+00   .9960E-03   .1448E+00   .7570E-03   .1475E+00   .5378E-03
.1508E+00   .2988E-03   .1525E+00   .1594E-03   .1552E+00   0.
.1698E+00   0.          .2001E+00   0.          .1000E+01   0.
    319          1          29          10
.8360E+02   .2600E-01   .8726E+02   .3220E-01   .9260E+02   .3860E-01
.9697E+02   .4420E-01   .1006E+03   .4800E-01   .1029E+03   .5000E-01
.1054E+03   .5100E-01   .1080E+03   .5280E-01   .1110E+03   .5160E-01
.1153E+03   .4880E-01   .1213E+03   .4220E-01   .1256E+03   .3600E-01
.1296E+03   .2900E-01   .1342E+03   .2280E-01   .1379E+03   .1440E-01
.1401E+03   .9400E-02   .1416E+03   .6200E-02   .1432E+03   .3800E-02
.1449E+03   .1000E-02   .1475E+03  -.1400E-02   .1491E+03  -.3400E-02
.1521E+03  -.7000E-02   .1533E+03  -.8800E-02   .1664E+03  -.1820E-01
.1702E+03  -.2160E-01   .1783E+03  -.2620E-01   .1866E+03  -.3140E-01
.1945E+03  -.3460E-01   .2000E+03  -.3720E-01
    319          2          24           8
.8328E+02   .2500E-01   .8685E+02   .4100E-01   .9252E+02   .5001E-01
.9530E+02   .5380E-01   .9841E+02   .5820E-01   .1010E+03   .6100E-01
.1040E+03   .6280E-01   .1080E+03   .6140E-01   .1111E+03   .5820E-01
.1143E+03   .5340E-01   .1183E+03   .4520E-01   .1223E+03   .3740E-01
.1264E+03   .2780E-01   .1291E+03   .2220E-01   .1318E+03   .1900E-01
.1354E+03   .1420E-01   .1392E+03   .1060E-01   .1464E+03   .2400E-02
.1521E+03  -.2400E-02   .1658E+03  -.1060E-01   .1749E+03  -.1820E-01
.1830E+03  -.2300E-01   .1907E+03  -.2640E-01   .1995E+03  -.2960E-01
    320          1          41          14
.8333E+02   .2311E-01   .8549E+02   .3386E-01   .8716E+02   .4263E-01
.8947E+02   .5239E-01   .9075E+02   .5697E-01   .9226E+02   .6195E-01
.9346E+02   .6653E-01   .9514E+02   .7072E-01   .9753E+02   .7430E-01
.1002E+03   .7928E-01   .1029E+03   .8008E-01   .1042E+03   .8048E-01
.1069E+03   .7968E-01   .1094E+03   .7749E-01   .1118E+03   .7490E-01
.1148E+03   .7112E-01   .1164E+03   .6614E-01   .1185E+03   .6056E-01
.1201E+03   .5717E-01   .1212E+03   .5378E-01   .1220E+03   .5061E-01
.1230E+03   .4681E-01   .1241E+03   .4402E-01   .1253E+03   .4163E-01
.1274E+03   .3566E-01   .1290E+03   .3466E-01   .1314E+03   .3207E-01
.1343E+03   .2849E-01   .1378E+03   .2410E-0    .1411E+03   .1952E-01
.1455E+03   .1614E-01   .1503E+03   .1255E-01   .1549E+03   .7371E-02
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.1586E+03	.4502E-02	.1624E+03	.1594E-02	.1676E+03	-.1594E-02
.1738E+03	-.6175E-02	.1798E+03	-.9562E-02	.1860E+03	-.1275E-01
.1933E+03	-.1633E-01	.2001E+03	-.1972E-01		
320	2	40	14		
.8349E+02	.2311E-01	.8684E+02	.3904E-01	.8860E+02	.4602E-01
.9019E+02	.5279E-01	.9163E+02	.5876E-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
.1069E+03	.7988E-01	.1090E+03	.7809E-01	.1120E+03	.7510E-01
.1150E+03	.7072E-01	.1176E+03	.6633E-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	.2709E-01	.1347E+03	.2510E-01	.1361E+03	.2251E-01
.1379E+03	.1892E-01	.1407E+03	.1534E-01	.1436E+03	.1195E-01
.1465E+03	.8964E-02	.1509E+03	.5179E-02	.1537E+03	.1992E-02
.1667E+03	-.7371E-02	.1714E+03	-.1036E-01	.1778E+03	-.1315E-01
.1825E+03	-.1693E-01	.1903E+03	-.2012E-01	.1946E+03	-.2171E-01
.2002E+03	-.2430E-01				
321	1	37	13		
.8312E+02	-.1384E-02	.8615E+02	.8333E-02	.8933E+02	.1806E-01
.9299E+02	.2778E-01	.9761E+02	.3968E-01	.9992E+02	.4405E-01
.1019E+03	.4762E-01	.1041E+03	.5099E-01	.1059E+03	.5298E-01
.1076E+03	.5456E-01	.1107E+03	.5536E-01	.1131E+03	.5476E-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	.1264E+03	.2282E-01	.1273E+03	.1865E-01
.1285E+03	.1647E-01	.1304E+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	-.7738E-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
.1998E+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
.1110E+03	-.5357E-02	.1122E+03	-.1190E-02	.1127E+03	.3571E-02
.1140E+03	.8333E-02	.1153E+03	.1250E-01	.1167E+03	.1687E-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	.7540E-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	-.2540E-01
.1651E+03	-.2837E-01	.1689E+03	-.3155E-01	.1745E+03	-.3611E-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		
.8196E+02	-.4028E-01	.8611E+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	-.3869E-01
.1900E+03	-.4444E-01	.2006E+03	-.5198E-01		
323	1	25	9		
.1160E+00	.4351E+00	.1511E+00	.4542E+00	.2001E+00	.4908E+00
.2332E+00	.5235E+00	.2579E+00	.5530E+00	.2746E+00	.5753E+00
.2894E+00	.6040E+00	.3029E+00	.6454E+00	.3252E+00	.7108E+00
.3396E+00	.7729E+00	.3551E+00	.8247E+00	.3754E+00	.8908E+00
.4069E+00	.9737E+00	.4328E+00	.1037E+01	.4548E+00	.1075E+01
.4799E+00	.1117E+01	.4974E+00	.1137E+01	.5201E+00	.1160E+01
.5405E+00	.1180E+01	.5735E+00	.1197E+01	.6002E+00	.1207E+01
.6500E+00	.1217E+01	.6943E+00	.1223E+01	.7294E+00	.1225E+01

.7585E+00	.1225E+01				
325	1	28	10		
.5028E-01	.6050E+00	.5984E-01	.6090E+00	.6988E-01	.6090E+00
.7584E-01	.6090E+00	.9004E-01	.6090E+00	.9992E-01	.6129E+00
.1057E+00	.6129E+00	.1099E+00	.6129E+00	.1154E+00	.6348E+00
.1201E+00	.6567E+00	.1245E+00	.6806E+00	.1275E+00	.7085E+00
.1303E+00	.7303E+00	.1326E+00	.7642E+00	.1351E+00	.7940E+00
.1379E+00	.8398E+00	.1397E+00	.8577E+00	.1419E+00	.8995E+00
.1438E+00	.9274E+00	.1463E+00	.9612E+00	.1488E+00	.9791E+00
.1517E+00	.1003E+01	.1602E+00	.1005E+01	.1704E+00	.1007E+01
.1802E+00	.1007E+01	.1901E+00	.1007E+01	.2000E+00	.1007E+01
.1000E+01	.1001E+01				
325	2	28	10		
.4996E-01	.4915E+00	.5992E-01	.4915E+00	.6996E-01	.4915E+00
.7492E-01	.4915E+00	.3964E-01	.5015E+00	.9968E-01	.4935E+00
.1061E+00	.4915E+00	.1100E+00	.5015E+00	.1159E+00	.5234E+00
.1198E+00	.5373E+00	.1235E+00	.5433E+00	.1261E+00	.5751E+00
.1298E+00	.6189E+00	.1331E+00	.6667E+00	.1364E+00	.7224E+00
.1397E+00	.7801E+00	.1426E+00	.8418E+00	.1450E+00	.8915E+00
.1476E+00	.5313E+00	.1496E+00	.9552E+00	.1515E+00	.9791E+00
.1536E+00	.9910E+00	.1602E+00	.9970E+00	.1698E+00	.9970E+00
.1800E+00	.9990E+00	.1903E+00	.9990E+00	.2000E+00	.1009E+01
.1000E+01	.1001E+01				
325	3	25	9		
.4996E-01	.6925E+00	.5960E-01	.6925E+00	.6980E-01	.6925E+00
.7992E-01	.6925E+00	.9012E-01	.6925E+00	.9641E-01	.6965E+00
.1002E+00	.7045E+00	.1065E+00	.7085E+00	.1118E+00	.7184E+00
.1182E+00	.7363E+00	.1237E+00	.7622E+00	.1282E+00	.7920E+00
.1317E+00	.8219E+00	.1351E+00	.8697E+00	.1394E+00	.9154E+00
.1423E+00	.9532E+00	.1452E+00	.9811E+00	.1473E+00	.9950E+00
.1512E+00	.9970E+00	.1601E+00	.9970E+00	.1693E+00	.9970E+00
.1798E+00	.1007E+01	.1899E+00	.1007E+01	.1997E+00	.1015E+01
.1000E+01	.1001E+01				
324	1	35	12		
.5000E+00	-.1734E-01	.5506E+00	-.1756E-01	.5999E+00	-.1817E-01
.6441E+00	-.1845E-01	.6628E+00	-.1885E-01	.6760E+00	-.1929E-01
.6895E+00	-.1960E-01	.7018E+00	-.1972E-01	.7237E+00	-.1996E-01
.7460E+00	-.2012E-01	.8002E+00	-.2012E-01	.8495E+00	-.2012E-01
.8997E+00	-.2012E-01	.9514E+00	-.2012E-01	.1000E+01	-.2012E-01
.1050E+01	-.2016E-01	.1098E+01	-.2012E-01	.1150E+01	-.2004E-01
.1201E+01	-.1992E-01	.1251E+01	-.1964E-01	.1302E+01	-.1921E-01
.1314E+01	-.1873E-01	.1400E+01	-.1798E-01	.1449E+01	-.1714E-01
.1500E+01	-.1619E-01	.1549E+01	-.1520E-01	.1602E+01	-.1393E-01
.1652E+01	-.1310E-01	.1703E+01	-.1246E-01	.1752E+01	-.1198E-01
.1803E+01	-.1147E-01	.1849E+01	-.1119E-01	.1902E+01	-.1087E-01
.1949E+01	-.1056E-01	.2000E+01	-.1024E-01		
324	2	40	14		
.5000E+00	-.1663E-01	.5510E+00	-.1663E-01	.6027E+00	-.1667E-01
.6509E+00	-.1675E-01	.6982E+00	-.1687E-01	.7325E+00	-.1702E-01
.7588E+00	-.1718E-01	.7902E+00	-.1746E-01	.8197E+00	-.1762E-01
.8436E+00	-.1810E-01	.8782E+00	-.1845E-01	.9061E+00	-.1913E-01
.9403E+00	-.1952E-01	.9809E+00	-.1980E-01	.1015E+01	-.2012E-01
.1050E+01	-.2012E-01	.1094E+01	-.2012E-01	.1119E+01	-.1992E-01
.1149E+01	-.1964E-01	.1186E+01	-.1913E-01	.1206E+01	-.1985E-01
.1227E+01	-.1845E-01	.1249E+01	-.1795E-01	.1285E+01	-.1734E-01
.1316E+01	-.1690E-01	.1345E+01	-.1663E-01	.1377E+01	-.1627E-01
.1422E+01	-.1579E-01	.1455E+01	-.1536E-01	.1499E+01	-.1496E-01
.1544E+01	-.1448E-01	.1600E+01	-.1397E-01	.1652E+01	-.1361E-01
.1703E+01	-.1321E-01	.1753E+01	-.1294E-01	.1803E+01	-.1254E-01
.1851E+01	-.1234E-01	.1902E+01	-.1210E-01	.1951E+01	-.1155E-01
.2000E+01	-.1139E-01				
326	1	51	17		
.5000E+00	.3770E-02	.5486E+00	.3770E-02	.5984E+00	.3770E-02
.6486E+00	.3770E-02	.7000E+00	.3770E-02	.7147E+00	.3770E-02
.7315E+00	.5159E-02	.7590E+00	.6349E-02	.7944E+00	.9127E-02
.8127E+00	.1071E-01	.8379E+00	.1389E-0[illegible]	.8498E+00	.1567E-01

.8645E+00	.1745E-01	.3789E+00	.1325E-01	.3984E+00	.1369E-01
.9171E+00	.2044E-01	.9394E+00	.2083E-01	.9522E+00	.2103E-01
.9801E+00	.2103E-01	.1001E+01	.2083E-01	.1048E+01	.2083E-01
.1097E+01	.2083E-01	.1149E+01	.2063E-01	.1197E+01	.2044E-01
.1224E+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	.1478E+01	.3849E-01	.1518E+01	.4365E-01
.1550E+01	.4782E-01	.1578E+01	.5159E-01	.1601E+01	.5556E-01
.1626E+01	.5813E-01	.1651E+01	.6190E-01	.1692E+01	.6528E-01
.1724E+01	.6905E-01	.1751E+01	.7143E-01	.1787E+01	.7461E-01
.1831E+01	.7579E-01	.1869E+01	.7778E-01	.1903E+01	.7957E-01
.1945E+01	.7996E-01	.1977E+01	.8036E-01	.2000E+01	.8036E-01
-327	1	20	7		
.1120E+02	-.1194E-01	.1191E+02	-.1230E-01	.1263E+02	-.1246E-01
.1354E+02	-.1238E-01	.1535E+02	-.1158E-01	.1675E+02	-.1062E-01
.1808E+02	-.9341E-02	.1866E+02	-.8303E-02	.2106E+02	-.5669E-02
.2249E+02	-.4391E-02	.2452E+02	-.1916E-02	.2615E+02	0.
.2816E+02	.2395E-02	.2985E+02	.3992E-02	.3184E+02	.6088E-02
.3367E+02	.8224E-02	.3582E+02	.1046E-01	.3717E+02	.1198E-01
.3904E+02	.1405E-01	.4000E+02	.1493E-01		
-327	2	23	4		
.1006E+02	-.1669E-01	.1068E+02	-.1709E-01	.1187E+02	-.1741E-01
.1307E+02	-.1701E-01	.1454E+02	-.1597E-01	.1609E+02	-.1429E-01
.1752E+02	-.1261E-01	.1828E+02	-.1126E-01	.1872E+02	-.1038E-01
.2110E+02	-.7425E-02	.2220E+02	-.5749E-02	.2339E+02	-.4152E-02
.2621E+02	0.	.2860E+02	.2874E-02	.3011E+02	.4711E-02
.3184E+02	.6786E-02	.3359E+02	.9261E-02	.3471E+02	.1078E-01
.3590E+02	.1261E-01	.3713E+02	.1445E-01	.3823E+02	.1581E-01
.3920E+02	.1717E-01	.4004E+02	.1828E-01		
-327	3	25	9		
.1004E+02	-.3106E-01	.1114E+02	-.3194E-01	.1195E+02	-.3178E-01
.1287E+02	-.3114E-01	.1406E+02	-.2970E-01	.1521E+02	-.2818E-01
.1605E+02	-.2667E-01	.1752E+02	-.2283E-01	.1879E+02	-.1948E-01
.2031E+02	-.1557E-01	.2168E+02	-.1182E-01	.2339E+02	-.7904E-02
.2452E+02	-.5110E-02	.2522E+02	-.3034E-02	.2584E+02	-.1517E-02
.2647E+02	0.	.2763E+02	.3273E-02	.2898E+02	.6467E-02
.3049E+02	.1046E-01	.3206E+02	.1493E-01	.3391E+02	.1940E-01
.3584E+02	.2443E-01	.3733E+02	.2802E-01	.3872E+02	.3210E-01
.4002E+02	.3537E-01				
-327	4	24	8		
.1002E+02	-.2371E-01	.1098E+02	-.2387E-01	.1191E+02	-.2355E-01
.1303E+02	-.2275E-01	.1404E+02	-.2220E-01	.1545E+02	-.2004E-01
.1685E+02	-.1764E-01	.1838E+02	-.1477E-01	.1927E+02	-.1293E-01
.2118E+02	-.9581E-02	.2247E+02	-.7345E-02	.2361E+02	-.5269E-02
.2474E+02	-.3034E-02	.2623E+02	0.	.2840E+02	.4152E-02
.2977E+02	.6627E-02	.3113E+02	.9182E-02	.3232E+02	.1150E-01
.3349E+02	.1365E-01	.3490E+02	.1629E-01	.3656E+02	.1956E-01
.3781E+02	.2196E-01	.3908E+02	.2451E-01	.4000E+02	.2579E-01
-328	1	16	6		
.2003E+00	-.6362E-02	.2381E+00	-.2584E-02	.2893E+00	.2187E-02
.3514E+00	.5964E-02	.4094E+00	.8549E-02	.4607E+00	.1054E-01
.5052E+00	.1292E-01	.5469E+00	.1511E-01	.5902E+00	.1531E-01
.6184E+00	.1531E-01	.6606E+00	.1511E-01	.6987E+00	.1431E-01
.7456E+00	.1292E-01	.7715E+00	.1153E-01	.7862E+00	.1074E-01
.7997E+00	.9344E-02				
-328	2	22	8		
.2011E+00	-.5567E-02	.2234E+00	-.4970E-02	.2377E+00	-.4771E-02
.2544E+00	-.5169E-02	.2762E+00	-.6759E-02	.2977E+00	-.9145E-02
.3299E+00	-.1252E-01	.3669E+00	-.1531E-01	.3998E+00	-.1750E-01
.4356E+00	-.2008E-01	.4646E+00	-.2306E-01	.4976E+00	-.2425E-01
.5378E+00	-.2604E-01	.5767E+00	-.2584E-01	.6017E+00	-.2624E-01
.6383E+00	-.2505E-01	.6781E+00	-.2485E-01	.7114E+00	-.2366E-01
.7341E+00	-.2266E-01	.7579E+00	-.2207E-01	.7830E+00	-.2008E-01
.7993E+00	-.1689E-01				
-328	3	21	4		

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.2619E+00  -.8946E-02   .2293E+00  -.9742E-02   .2504E+00  -.1113E-01
.2675E+00  -.1252E-01   .2386E+00  -.1670E-01   .3072E+00  -.1909E-01
.3307E+00  -.2247E-01   .3529E+00  -.2644E-01   .3831E+00  -.3082E-01
.4022E+00  -.3300E-01   .4273E+00  -.3598E-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   .6383E+00  -.4990E-01
.6757E+00  -.4851E-01   .7130E+00  -.4831E-01   .7440E+00  -.4632E-01
.7711E+00  -.4294E-01   .7886E+00  -.4135E-01   .7997E+00  -.3976E-01
   -329        1         20          7
.5755E+02  0.           .6566E+02  -.3984E-03   .7496E+02  -.1394E-02
.8426E+02  -.2789E-02   .9830E+02  -.2988E-02   .9905E+02  -.2789E-02
.1076E+03  -.2191E-02   .1165E+03  -.9960E-03   .1246E+03   .7968E-03
.1332E+03   .9960E-03   .1406E+03   .1594E-02   .1502E+03   .2390E-02
.1579E+03   .4382E-02   .1628E+03   .4183E-02   .1723E+03   .4183E-02
.1800E+03   .4183E-02   .1863E+03   .4781E-02   .1906E+03   .4781E-02
.1950E+03   .4980E-02   .1996E+03   .5179E-02
   -329        2         18          6
.5755E+02  0.           .6240E+02  -.7968E-03   .7734E+02  -.2590E-02
.8410E+02  -.3187E-02   .9014E+02  -.3586E-02   .9968E+02  -.3187E-02
.1097E+03  -.1394E-02   .1207E+03  -.1992E-03   .1287E+03   .1195E-02
.1362E+03   .3586E-02   .1426E+03   .5578E-02   .1506E+03   .7968E-02
.1614E+03   .9960E-02   .1700E+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  -.1992E-03   .6987E+02  -.1195E-02   .7949E+02  -.2789E-02
.8990E+02  -.4382E-02   .9976E+02  -.3984E-02   .1065E+03  -.1793E-02
.1200E+03  0.           .1247E+03   .2191E-02   .1293E+03   .4781E-02
.1378E+03   .1016E-01   .1485E+03   .1813E-01   .1577E+03   .2211E-01
.1638E+03   .2629E-01   .1742E+03   .3187E-01   .1845E+03   .3665E-01
.1918E+03   .4044E-01   .1989E+03   .4283E-01
   -329        4         16          6
.5994E+02  0.           .6987E+02  -.7968E-03   .7957E+02  -.2390E-02
.9006E+02  -.2988E-02   .9976E+02  -.2590E-02   .1095E+03  -.1793E-02
.1153E+03  -.9960E-03   .1191E+03  0.           .1286E+03   .1195E-02
.1391E+03   .1394E-02   .1582E+03   .7968E-03   .1598E+03  0.
.1700E+03  -.1394E-02   .1772E+03  -.1594E-02   .1832E+03  -.1992E-02
.1895E+03  -.3187E-02
   326         2         44         15
.5000E+00   .1567E-01   .5375E+00   .1409E-01   .5641E+00   .1349E-01
.5928E+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
.8088E+00  -.1468E-01   .8263E+00  -.1746E-01   .8434E+00  -.2044E-01
.8673E+00  -.2361E-01   .8876E+00  -.2718E-01   .9096E+00  -.2857E-01
.9378E+00  -.3056E-01   .9645E+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  -.1469E-01
.1316E+01  -.1250E-01   .1347E+01  -.1111E-01   .1379E+01  -.9921E-02
.1398E+01  -.9921E-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
.1905E+01  -.7341E-02   .2000E+01  -.6944E-02
   327         1         22          6
.1004E+02  -.3095E-02   .1183E+02  -.3333E-02   .1297E+02  -.3413E-02
.1436E+02  -.3413E-02   .1604E+02  -.3333E-02   .1737E+02  -.3016E-02
.1888E+02  -.2460E-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   .2540E-02   .3612E+02   .2857E-02   .3679E+02   .3333E-02
.3755E+02   .3492E-02   .3863E+02   .3651E-02   .3930E+02   .3810E-02
.3994E+02   .4206E-02
   327         2         27          9
.1000E+02  -.1643E-01   .1048E+02  -.1698E-01   .1122E+02  -.1754E-01
.1181E+02  -.1778E-01   .1237E+02  -.1794E-01   .1293E+02  -.1786E-01
.1384E+02  -.1766E-01   .1440E+02  -.1737E-01   .1528E+02  -.1567E-01
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.1612E+02  -.1579E-01   .1699E+02  -.1476E-01   .1771E+02  -.1369E-01
.1851E+02  -.1236E-01   .1884E+02  -.1167E-01   .2122E+02  -.8254E-02
.2205E+02  -.6825E-02   .2313E+02  -.5159E-02   .2629E+02   0.
.2878E+02   .3492E-02   .2994E+02   .5714E-02   .3127E+02   .7619E-02
.3313E+02   .1016E-01   .3478E+02   .1278E-01   .3625E+02   .1540E-01
.3779E+02   .1778E-01   .3890E+02   .1960E-01   .3994E+02   .2111E-01
    327         3          31          11
.1006E+02  -.2190E-01   .1066E+02  -.2286E-01   .1143E+02  -.2310E-01
.1253E+02  -.2309E-01   .1341E+02  -.2365E-01   .1438E+02  -.2302E-01
.1520E+02  -.2206E-01   .1612E+02  -.2079E-01   .1707E+02  -.1881E-01
.1789E+02  -.1706E-01   .1884E+02  -.1508E-01   .1960E+02  -.1317E-01
.2010E+02  -.1238E-01   .2124E+02  -.1024E-01   .2217E+02  -.8413E-02
.2267E+02  -.7302E-02   .2335E+02  -.6032E-02   .2400E+02  -.4841E-02
.2470E+02  -.3095E-02   .2635E+02   0.          .2713E+02   .1825E-02
.2809E+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           8
.1129E+02  -.1806E-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
.2098E+02  -.4762E-02   .2237E+02  -.3492E-02   .2339E+02  -.2698E-02
.2382E+02  -.2143E-02   .2635E+02   0.          .2859E+02   .2222E-02
.2999E+02   .3254E-02   .3143E+02   .4524E-02   .3261E+02   .5476E-02
.3456E+02   .7222E-02   .3677E+02   .9206E-02   .3815E+02   .1048E-01
.3942E+02   .1175E-01   .3998E+02   .1230E-01
    328         1          22           8
.1995E+00   .5567E-02   .2250E+00   .6163E-02   .2472E+00   .6561E-02
.2790E+00   .6561E-02   .3029E+00   .6561E-02   .3378E+00   .6561E-02
.3788E+00   .6163E-02   .4197E+00   .5567E-02   .4559E+00   .4970E-02
.4960E+00   .4175E-02   .5429E+00   .2584E-02   .5545E+00   .1590E-02
.5787E+00   .1392E-02   .6049E+00   0.          .6308E+00  -.5964E-03
.6558E+00  -.7952E-03   .6844E+00  -.7952E-03   .7011E+00  -.9940E-03
.7277E+00  -.7952E-03   .7512E+00  -.7952E-03   .7798E+00  -.3976E-03
.7977E+00   0.
    328         2          28          10
.1987E+00  -.1093E-01   .2210E+00  -.1213E-01   .2472E+00  -.1233E-01
.2766E+00  -.1332E-01   .2977E+00  -.1352E-01   .3188E+00  -.1352E-01
.3386E+00  -.1292E-01   .3676E+00  -.1173E-01   .3959E+00  -.1133E-01
.4241E+00  -.1034E-01   .4459E+00  -.9145E-02   .4726E+00  -.7753E-02
.4936E+00  -.6759E-02   .5135E+00  -.5368E-02   .5322E+00  -.3380E-02
.5457E+00  -.2783E-02   .5771E+00   0.          .5906E+00   .9940E-03
.6145E+00   .2584E-02   .6407E+00   .3777E-02   .6590E+00   .3777E-02
.6777E+00   .3976E-02   .6955E+00   .3976E-02   .7182E+00   .3777E-02
.7329E+00   .3579E-02   .7560E+00   .3181E-02   .7719E+00   .2386E-02
.8001E+00   .1193E-02
    328         3          27           9
.1987E+00  -.1690E-01   .2190E+00  -.1789E-01   .2464E+00  -.1869E-01
.2782E+00  -.1889E-01   .2989E+00  -.1869E-01   .3307E+00  -.1869E-01
.3649E+00  -.1789E-01   .3887E+00  -.1690E-01   .4157E+00  -.1571E-01
.4428E+00  -.1431E-01   .4746E+00  -.1133E-01   .4952E+00  -.9742E-02
.5143E+00  -.8549E-02   .5457E+00  -.4573E-02   .5835E+00   0.
.5942E+00   .3976E-03   .6125E+00   .1392E-02   .6256E+00   .2584E-02
.6471E+00   .2783E-02   .6757E+00   .3380E-02   .6987E+00   .3380E-02
.7182E+00   .2982E-02   .7393E+00   .2982E-02   .7568E+00   .2982E-02
.7675E+00   .2386E-02   .7838E+00   .1392E-02   .7981E+00   .1193E-02
    328         4          26           9
.1971E+00  -.2107E-01   .2198E+00  -.2286E-01   .2484E+00  -.2386E-01
.2802E+00  -.2545E-01   .2977E+00  -.2545E-01   .3235E+00  -.2485E-01
.3494E+00  -.2425E-01   .3812E+00  -.2306E-01   .4050E+00  -.2167E-01
.4384E+00  -.1849E-01   .4738E+00  -.1491E-01   .5036E+00  -.1233E-01
.5354E+00  -.8946E-02   .5624E+00  -.5368E-02   .5791E+00  -.2187E-02
.5855E+00   0.          .5922E+00   .9940E-03   .6117E+00   .2187E-02
.6256E+00   .3380E-02   .6590E+00   .3777E-02   .6916E+00   .4175E-02
.7126E+00   .3976E-02   .7409E+00   .3781E-02   .7583E+00   .2783E-02
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.7784E+00	.2197E-02	.7981E+00	.1799E-02		
329	1	31	11		
.3434E+02	0.	.4086E+02	-.1793E-02	.4936E+02	-.3187E-02
.5771E+02	-.3984E-02	.6518E+02	-.4582E-02	.7859E+02	-.4582E-02
.7838E+02	-.4183E-02	.8680E+02	-.3984E-02	.9332E+02	-.2590E-02
.9817E+02	-.1793E-02	.1038E+03	0.	.1079E+03	.7968E-03
.1121E+03	.1992E-02	.1165E+03	.3386E-02	.1227E+03	.4980E-02
.1280E+03	.5578E-02	.1337E+03	.6574E-02	.1397E+03	.6375E-02
.1437E+03	.5976E-02	.1486E+03	.5378E-02	.1522E+03	.4582E-02
.1553E+03	.2988E-02	.1626E+03	-.1992E-03	.1685E+03	-.4582E-02
.1727E+03	-.7968E-02	.1778E+03	-.1195E-01	.1820E+03	-.1633E-01
.1870E+03	-.2112E-01	.1908E+03	-.2490E-01	.1957E+03	-.2968E-01
.1994E+03	-.3347E-01				
329	2	38	13		
.3680E+02	0.	.4165E+02	-.1594E-02	.4849E+02	-.2390E-02
.5612E+02	-.3586E-02	.6184E+02	-.4183E-02	.6725E+02	-.4382E-02
.7536E+02	-.4382E-02	.8362E+02	-.4183E-02	.9332E+02	-.3187E-02
.1002E+03	-.1394E-02	.1089E+03	.3984E-02	.1140E+03	.8765E-02
.1167E+03	.1255E-01	.1202E+03	.1733E-01	.1246E+03	.2291E-01
.1281E+03	.2709E-01	.1324E+03	.3187E-01	.1362E+03	.3606E-01
.1393E+03	.3765E-01	.1414E+03	.3944E-01	.1440E+03	.3984E-01
.1457E+03	.4024E-01	.1496E+03	.3984E-01	.1525E+03	.3924E-01
.1568E+03	.3705E-01	.1604E+03	.3446E-01	.1634E+03	.3227E-01
.1672E+03	.2968E-01	.1700E+03	.2749E-01	.1725E+03	.2510E-01
.1777E+03	.1972E-01	.1819E+03	.1554E-01	.1862E+03	.1175E-01
.1908E+03	.6375E-02	.1932E+03	.4183E-02	.1959E+03	.5976E-03
.1980E+03	-.1195E-02	.1996E+03	-.3187E-02		
329	3	48	16		
.3847E+02	-.1992E-03	.4396E+02	-.1195E-02	.5016E+02	-.2590E-02
.5629E+02	-.3386E-02	.6296E+02	-.3785E-02	.6916E+02	-.3785E-02
.7758E+02	-.3785E-02	.8585E+02	-.3785E-02	.9300E+02	-.2390E-02
.1036E+03	.1992E-02	.1075E+03	.4183E-02	.1106E+03	.9163E-02
.1135E+03	.1574E-01	.1162E+03	.2171E-01	.1192E+03	.2729E-01
.1215E+03	.3307E-01	.1245E+03	.3825E-01	.1282E+03	.4582E-01
.1307E+03	.4980E-01	.1335E+03	.5458E-01	.1362E+03	.5797E-01
.1383E+03	.6056E-01	.1408E+03	.6335E-01	.1427E+03	.6414E-01
.1457E+03	.6494E-01	.1485E+03	.6454E-01	.1506E+03	.6255E-01
.1522E+03	.6076E-01	.1548E+03	.5857E-01	.1572E+03	.5538E-01
.1585E+03	.5279E-01	.1606E+03	.4960E-01	.1632E+03	.4462E-01
.1664E+03	.3884E-01	.1697E+03	.3167E-01	.1712E+03	.2869E-01
.1727E+03	.2490E-01	.1752E+03	.1932E-01	.1790E+03	.1016E-01
.1816E+03	.4781E-02	.1839E+03	-.1793E-02	.1860E+03	-.7371E-02
.1901E+03	-.1733E-01	.1924E+03	-.2371E-01	.1955E+03	-.3187E-01
.1975E+03	-.3785E-01	.1991E+03	-.4382E-01	.1998E+03	-.4522E-01
329	4	35	12		
.3639E+02	-.7968E-03	.4189E+02	-.1594E-02	.4769E+02	-.2988E-02
.5382E+02	-.3785E-02	.6940E+02	-.4582E-02	.7878E+02	-.3984E-02
.8903E+02	-.3187E-02	.9801E+02	-.1594E-02	.1049E+03	.9960E-03
.1087E+03	.4382E-02	.1121E+03	.9363E-02	.1154E+03	.1414E-01
.1193E+03	.2171E-01	.1238E+03	.2829E-01	.1285E+03	.3486E-01
.1328E+03	.4104E-01	.1365E+03	.4542E-01	.1405E+03	.4861E-01
.1427E+03	.4960E-01	.1455E+03	.5020E-01	.1486E+03	.5026E-01
.1522E+03	.4821E-01	.1558E+03	.4582E-01	.1606E+03	.4064E-01
.1639E+03	.3625E-01	.1671E+03	.3267E-01	.1701E+03	.2869E-01
.1727E+03	.2530E-01	.1782E+03	.1594E-01	.1810E+03	.1235E-01
.1862E+03	.3984E-02	.1897E+03	-.1594E-02	.1917E+03	-.4781E-02
.1952E+03	-.1195E-01	.1995E+03	-.1952E-01		

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AFATL/DLJM	1
AFSC/SDTA	1
ASD/ENESS	1

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