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Results and preliminary inversion of loop-loop frequency-domain electromagnetic soundings near Medicine Lake, California

by

W.L. Anderson, F.C. Frischknecht, P.V. Raab,
J.A. Bradley, and J. Turnross

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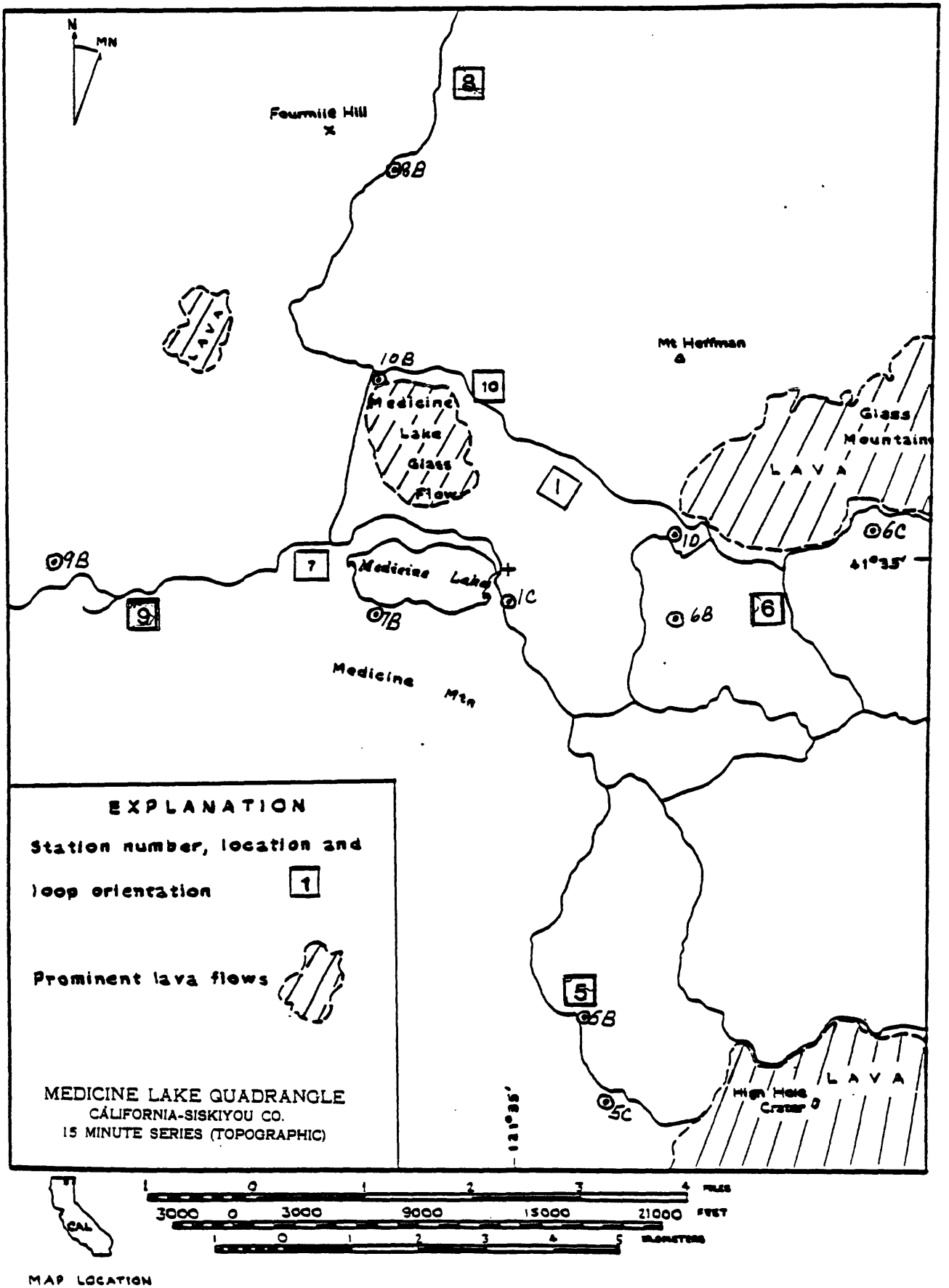
Contents

Introduction

Several loop-loop frequency domain electromagnetic (FDEM) soundings were made in the vicinity of Medicine Lake, California during July 1982 as part of the U.S. Geological Survey's geothermal research program. The objectives were (1) to evaluate the use of FDEM sounding methods in this environment, (2) to compare frequency and time domain sounding methods, and (3) to study the resistivity structure of the volcanic rocks near Medicine Lake at depths of 100-1000 m. The measurements described in this report were done in conjunction with time domain electromagnetic (TDEM) soundings made in the same area (Anderson and others, 1983). Zohdy and Bisdorf (1982) made an extensive survey of the area using the resistivity method; Fraser (1983) studied near-surface conductive features by helicopter electromagnetic surveys and Stanley (1982) made a number of magnetotelluric soundings in the area. The FDEM soundings and their computer inversion are made available in this preliminary report without discussion of their geologic significance and with only brief comparison with other geophysical results.

The FDEM soundings were made inside and outside the large TDEM transmitter square loop locations as indicated in Figure 1, which is based on the Medicine Lake topographic map. FDEM stations are identified by transmitter loop number and a suffix; "A" denotes a receiver loop located at the center of the transmitter loop; suffixes "B", "C", and "D" denote receiver locations outside the transmitter loop at the positions marked in Figure 1.

Figure 1. Location map for FDEM soundings.



Equipment and field procedures

The common transmitting loop for both the TDEM and the FDEM soundings was a single loop of #12 wire laid out in the form of a square, 457 m on a side. A linear power amplifier was used to drive 5-6 amperes through the loop at low frequencies and somewhat smaller currents at higher frequencies, where the inductive reactance of the loop became significant. The transmitter controller and current monitor and the receiver were the same as described by Cooke and others (1981), except that the transmitter and receiver were not phase-locked by a radio link. A twisted-pair line was used for re-synchronization of the transmitter and receiver clocks for all central loop measurements and for the measurements at station 8. At the other stations the transmitter and receiver were not re-synchronized during the measurements. The magnetic field sensor was a two-component, square-frame, mu-metal cored induction coil and voltage preamplifiers. At some sites the electric field was determined using electrodes placed about 30.5 meters apart. Measurements were made at ten frequencies per decade from 2000 Hz down to 2-5 Hz.

At the center of the transmitting loop the vertical component of the field was measured to obtain a frequency domain central loop sounding. Orthogonal components of the horizontal field were measured to determine the approximate tilt of the transmitter loop and a qualitative measure of the degree of lateral inhomogeneity near the transmitting loop. If the loops were horizontal and the earth were horizontally layered, then the

horizontal fields at the center would be zero. At locations outside the loop the vertical (Hz) and radial (Hr) components of the magnetic field were measured. The transfer function of the equipment was determined by making a set of measurements using a small transmitting loop placed very near the receiver so that the induction number and earth response were essentially zero.

Data processing and topographic corrections

To normalize the measurements for variations in current and changes in gain, the receiver readings were divided by the transmitter readings, taking the gains of the current transformer amplifier and the receiver amplifiers into account. Next, the adjusted data were normalized by the instrument transfer function; the results of this step can be expressed as KZ/Z_o, where K is an undetermined constant, Z is the mutual coupling between source and receiver in the presence of the earth and Z_o is the mutual coupling between source and receiver in free space (Frischknecht, 1967). The results were plotted and any obviously erroneous numbers were rechecked and corrected or rejected. For measurements made without re-synchronization of the transmitter and receiver, the drift in phase due to drift in time between the clocks is excessive above frequencies of 100-200 Hz. To interpret the data in terms of quantities which are independent of absolute phase, all of the measurements for stations outside the loop were expressed as the ratio of the radial magnetic or tangential electric field to the vertical magnetic field or as the tilt angle and ellipticity of the magnetic field using the definitions given by Smith and Ward (1974). Data processing was

done with an HP-85 desk top computer using unpublished programs developed by P. V. Raab.

Topographic relief is not negligible in the Medicine Lake area. Rigorous treatment of the influence of topography on EM soundings requires three-dimensional modeling. However, in moderate terrain and particularly in areas where the upper layer is less conductive than the lower layers, useful corrections for topographic effects can be made without resorting to three-dimensional modeling. In this study, we assumed that the surface of the earth is a plane that passes through the centers of the transmitter and receiver loops and that the intersection of this plane with the horizontal is a line normal to the line between the transmitter and receiver loop centers. We assumed that sub-surface layers are parallel to this surface.

At the lowest frequencies, induction numbers for measurements made at the center of the loop were very small so that the secondary fields were negligible. The approximate tilt and azimuth of the primary fields were determined from the low frequency measurements made at the center of the loop; in some cases the tilt was as great as 5 degrees. The tilt could also have been determined approximately by measuring the elevation at points along the loop but this would have required much more time and effort. The azimuth of the tilt was then transformed to a coordinate system in which the line between transmitter and receiver is at an azimuth of 90 degrees.

To account for the tilt of the transmitter with respect to the surface plane as defined above, the total moment of the loop is resolved into orthogonal moments with respect to vertical and to horizontal components at azimuths of 90 and 0 degrees respectively. The mutual coupling ratios are then given by the formulas

$$\frac{Z}{Z_o}\Big|_y = \left(\frac{Z}{Z_o}\right)_{II} \cos\theta - 2\left(\frac{Z}{Z_o}\right)_{IV} \sin\theta \sin\phi \qquad (1)$$

$$\frac{Z}{Z_o}\Big|_z = \left(\frac{Z}{Z_o}\right)_{I} \cos\theta + \left(\frac{Z}{Z_o}\right)_{II} \sin\theta \sin\phi; \qquad (2)$$

where $\frac{Z}{Z_o}\Big|_y$ = mutual coupling ratio between radial component of loop and radial receiving loop,

$\frac{Z}{Z_o}\Big|_z$ = mutual coupling ratio between vertical component of loop and vertical receiving loop,

$\left(\frac{Z}{Z_o}\right)_I$ = mutual coupling ratio for horizontal coplanar loops,

$\left(\frac{Z}{Z_o}\right)_{II}$ = mutual coupling ratio for perpendicular loops,

$\left(\frac{Z}{Z_o}\right)_{IV}$ = mutual coupling ratio for vertical coaxial loops,

θ = tilt of transmitting loop--positive if edge of loop nearest receiver is above reference plane, and

ϕ = azimuth of transmitting loop--90 degrees when total horizontal component of loop is directed toward the receiver.

It should be noted that Z_o (vertical coaxial loops) = -2 Z_o (horizontal coplanar loops) (Frischknecht, 1967). The mutual coupling ratios given by (1) and (2) were the field components used for data inversion.

Because the receiver coils were oriented vertically or horizontally, a potential source of error is introduced unless the reference plane is horizontal. Data can be readily corrected for this error by computing normal or parallel components with respect to the reference plane. In this study, however, we placed most reliance on inversion of the data using ellipticity, which is independent of the attitude of the receiver coil. To use tilt angle as well as ellipticity, the error due to topography, which is independent of frequency, was considered as an unknown and determined in the inversion process. This procedure eliminated the need to correct for discrepencies in the orientation of the receiver coil with respect to the reference plane.

Inversion of FDEM soundings

Computer inversions of the edited FDEM soundings were performed on a VAX-11/780 computer. The inversion programs used a nonlinear least-squares method described by Anderson (1977, 1979), but as extended and revised for use on the VAX as further described in Anderson (1982). Program NLSHZ (Anderson, 1977, 1982) was used for all FDEM data at the transmitter loop center. (Note that the vertical field at the center of a square loop is just four-times the vertical field due to a finite wire source with length equal to one side of the square loop source.) Program NLSLOOP3 in Anderson (1979, 1982) was used for all FDEM data (except STA.5B) obtained outside the transmitter loop. A rectangular loop inversion program NLSHRZREC (Anderson, unpublished program, 1983) was used for STA.5B, which was too

near the transmitter source for the dipole-dipole solution from NLSLOOP3 to be used.

Several of the following possible program options were used to process the FDEM data outside the transmitter loop:

(1) Ratio fields Ex/Hz and (or) Hr/Hz [amplitude and (or) phase];
(2) Separate fields Ex, Hr, and (or) Hz [amplitude and (or) phase]; and
(3) Tilt angle and (or) ellipticity as derived from Hr and Hz field data and described by Smith and Ward (1974).

Final results from all inversion runs are summarized numerically and graphically in Appendix 1 of this report.

Results

For all stations (except STA.7), the FDEM response measured at the center of the loop was small; measurement errors prevented reliable inversions of the data. Consequently, the inversion of these soundings is shown only for STA.7.

Results for STA.5B are included because very good fits were obtained. However, the results of the inversion do not agree well with other FDEM and TDEM results. The receiver site for STA.5B was not located accurately and an error in location may have affected the results.

For all stations outside the loop, inversions were carried out using the data expressed as tilt angle and (or) ellipticity. For all stations outside the loop (except 5C, 9B and 10B), inversions were also carried out using the ratio Hr/Hz, where Hr is given by

(1) and Hz by (2). The ratio Ex/Hz was also used for stations 6B and 9B without correcting for topography. At station 8B, where reliable absolute phase data was acquired, separate inversions were made using the amplitude and phase of the vertical and radial magnetic fields and the electric field. A detailed comparison of the results obtained at one site using various components was not made; but it did appear that good fits are most easily obtained using ellipticity.

The models presented in Appendix 1 represent the best fits that were obtained. However, equally good or better fits might be obtained for some models by fixing certain parameters as constants or by a different choice of the starting parameters. In some cases, large parameter errors show the corresponding parameters are not well resolved in the inversion; i.e., they can be changed considerably without significantly altering the fit. Statistical information obtained in the inversion is helpful in determining the parameter resolution and parameter significance in the model.

In all models, a layer with resistivity of 3-15 ohm-m is present at depths ranging from 200 to 600 meters. In most models the near-surface resistivity is high (often more than 1000 ohm-m) and an intermediate layer or transition occurs between the resistive surface layer and the conductive layer at depth. At some stations a high resistivity "basement" beneath the most conductive layer is indicated. In a general way the results agree with those obtained from inversion of resistivity data (Zohdy and Bisdorf, 1982) and TDEM data (Anderson and others,

1983), but in detail there are interpreted differences. This is not surprising; distortion of soundings due to lateral variations in resistivity is more likely to be obvious for the loop-loop FDEM method than the TDEM method. Also, the best map location at which to plot the separated-loop FDEM soundings is not the same as for the other soundings. Horizontal coplanar loop-loop soundings are most strongly influenced by the electrical section in the region between the receiver and the point half-way between the transmitter and receiver (Kauahikaua, 1982); for this study, this region is likely near the center of the configuration.

The three-component measurements at the center of the loop offer insight into lateral variations near the transmitter loop. Appendix 2 contains plots of ratios of horizontal components to the vertical components, where Hx is the component in the east (or southeast direction for 1A), and Hy is the component in the north direction. Except for Hx/Hz at station 5A, there is little variation in amplitude at low frequencies. Also, in general, the phase difference tends to be near zero at low frequencies. Both observations indicate that at low frequencies, the horizontal field is essentially all primary field, and that the deep conductive layers appear laterally homogeneous--or are beyond the depth range of central loop FDEM measurements. All of the curves in Appendix 2 show a change in Hx/Hz and Hy/Hz at high frequencies, suggesting that the near surface layers are laterally inhomogeneous, although slight misplacement of the receiving loop could account for part of the effect. In some cases, the secondary field at high frequencies aids the primary

field, and in some cases it opposes. The ratio Hx/Hz for 8A changes sign between 1250 and 2000 Hertz when the secondary field becomes larger than the primary component in the x-direction.

The largest change between low and high frequencies in the amplitude of the ratios Hx/Hz and Hy/Hz is less than 0.1 except at station 7. Station 7 is located in an area of low surface resistivity, where earlier results (Fraser, 1983) indicate large lateral resistivity changes. More difficulty was experienced in obtaining good computer fits to the data for station 7 than for some other stations, possibly because the electrical section cannot be adequately described with a one-dimensional, horizontally layered model. For all stations, three-dimensional computer or physical scale modeling would be required to better understand the significance of the horizontal field data.

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Appendix 1. Results of inversion.

The heading on each of the attached output sheets (and corresponding plots) identifies the FDEM station, orientation, number of layers fit, observed field(s), and program used (e.g., program NLSHZ, NLSLOOP3, or NLSHRZREC). The print-out sheet is a partial extract taken from the master print output file (FOR016.DAT) described in the program documentations for NLSHZ (Anderson, 1982 and 1977) and NLSLOOP3 (Anderson, 1982 and 1979). Note that NLSHRZREC is unpublished, but is similar in design to NLSLOOP3.

For program NLSHZ, the following heading parameters are defined:

X0,Y0= Center coordinates (m.) of the receiver loop.

L= Half-wire length (m.) corresponding to one side of the transmitter loop with origin (0,0) at center of [-L,L].

For program NLSLOOP3, the following heading parameters are defined:

Y0= Receiver loop distance (m.) from the transmitter loop center (0,0).

IRATIO= 0,0 if no ratio fields were used;
2,1 if ratio Hr/Hz fields used;
5,1 if ratio Ex/Hz fields used.

PARM= Rotation adjustment angles [PARM(1)=θ, PARM(2)=ϕ] as defined in eqs. (1) and (2).

For program NLSHRZREC, which is a special code used only for STA.5B near the transmitter loop, the following additional heading parameters are defined:

XO,YO= Center coordinates (m.) of the receiver loop.

AX,BY= Coordinates (m.) of one end of the transmitter loop, where (0,0) is the origin of the coordinate system taken at the center of the transmitter loop.

The remaining heading parameters (for all programs) are given next as follows:

N= Number of observed data points [Y(I),I=1,2,...,N)].

K= Number of unknown model parameters (defined by name at the end of each output list).

IP= Number of parameters held fixed via array IB below, where IP=0 is used if no parameters are held fixed (i.e., all K parameters are adjustable in the least-squares).

M= Number of independent variables [X(I,J),J=1,2,...,M]; see the discussion of X(I,J) below for specific definitions.

The rest of the output listing (for all programs) use the following general definitions (unless otherwise indicated):

IB= Parameter index array of any parameters held fixed in the least-squares (IB is omitted if IP=0).

OBS.Y(I)= Observed dependent variable as defined by X(I,2) for NLSHZ or X(I,3) for NLSLOOP3 and NLSHRZREC; see X() below for specific types used.

CAL= Calculated sounding value evaluated at the observed

frequency X(I,1).

RES= Residual defined as Y(I)-CAL.

%RES.ERR= Percent residual error defined as 100*RES/CAL.

X(I,1)= Observed independent variable of frequency (Hertz).

X(I,2)= Observed Y(I) type for NLSHZ (2.0 for phase, 1.0 for amplitude).

= Loop type configuration for NLSLOOP3 and NLSHRZREC (1.0 for horizontal coplanar loops for Hz field, 2.0 for perpendicular loops for Hr field, or 5.0 for wire element and loop for Ex field).

X(I,3)= Observed Y(I) type for NLSLOOP3 and NLSHRZREC (2.0 for phase, 1.0 for amplitude, 6.0 for tilt angle, or 7.0 for ellipticity).

RMSERR= Root-mean-square error, which is the standard error of the residual vector (RES) using N-K+IP degrees of freedom.

CORRELATION MATRIX= Parameter simple correlation coefficients derived from a symmetric covariance matrix as defined in Dennis and others (1979, p.14, eq.(6.8), and p.31 for k=3).

PARM.SOL= Parameter solution vector obtained for all K-IP adjustable parameters.

STD.ERROR= Standard error corresponding to PARM.SOL, which is a "linear" statistic based on the square-root of a scaled error variance times the diagional of the covariance matrix (Dennis and others, 1979, p.14).

REL.ERROR= Relative error corresponding to PARM.SOL defined as the ratio STD.ERROR/PARM.SOL.

% ERROR= Percent error of PARM.SOL defined as 100 times the REL.ERROR.

The least-squares FINAL SOLUTION vector is listed next, giving each defined nonlinear parameter name, where SIGMA(I) is defined as the conductivity of layer-I (in mhos/meter), RESISTIVITY is 1/SIGMA (in ohm-meters), THICK(I) is the thickness of layer-I (in meters), and DEPTH(I) is the accumulated layer thicknesses to the bottom of layer-I. In some cases, a SHIFT parameter is used in the least-squares (or fixed), which scales the amplitude response for a normalized mutual coupling (e.g., SHIFT*Z/Z0), or to add a shift correction to a tilt angle response (e.g., SHIFT+TILT).

The final interpreted layered earth model solution is plotted in block form, and shows each layer solution resistivity and depth. Summary plots have the observed Y(I) data denoted by a symbol "O", and the solid line represents a smooth curve drawn through the theoretical calculated (CAL) points at each observed frequency X(I,1).

The FDEM inversion results are displayed below in the following order:

	STA#	Program	Field(s) used	Pages
1.	1C	NLSLOOP3	Ellipticity	20-22
2.	1C	NLSLOOP3	Tilt-&-Ellipticity	23-25
3.	1C	NLSLOOP3	Ratio=Hr/Hz	26-28
4.	1D	NLSLOOP3	Ellipticity	29-31
5.	1D	NLSLOOP3	Tilt-&-Ellipticity	32-34
6.	1D	NLSLOOP3	Ratio=Hr/Hz	35-37
7.	5B	NLSHRZREC	Ellipticity	38-40
8.	5B	NLSHRZREC	Tilt-&-Ellipticity	41-43
9.	5B	NLSHRZREC	Ratio=Hr/Hz	44-46
10.	5C	NLSLOOP3	Ellipticity	47-49
11.	6B	NLSLOOP3	Ellipticity	50-52
12.	6B	NLSLOOP3	Tilt-&-Ellipticity	53-55
13.	6B	NLSLOOP3	Ratio=Hr/Hz	56-58
14.	6C	NLSLOOP3	Ellipticity	59-61
15.	6C	NLSLOOP3	Ratio=Hr/Hz	62-64
16.	7A	NLSHZ	Hz	65-67
17.	7B	NLSLOOP3	Ellipticity	68-70
18.	7B	NLSLOOP3	Tilt-&-Ellipticity	71-73
19.	7B	NLSLOOP3	Ratio=Hr/Hz	74-76
20.	8B	NLSLOOP3	Ellipticity	77-79
21.	8B	NLSLOOP3	Tilt-&-Ellipticity	80-82
22.	8B	NLSLOOP3	Ratio=Hr/Hz	83-85
23.	8B	NLSLOOP3	Ratio=Ex/Hz	86-88
24.	8B	NLSLOOP3	Hr	89-91
25.	8B	NLSLOOP3	Hz	92-94
26.	8B	NLSLOOP3	Ex	95-97
27.	9B	NLSLOOP3	Ellipticity	98-100
28.	9B	NLSLOOP3	Tilt-&-Ellipticity	101-103
29.	9B	NLSLOOP3	Ratio=Ex/Hz	104-106
30.	10B	NLSLOOP3	Ellipticity	107-109
31.	10B	NLSLOOP3	Tilt-&-Ellipticity	110-112

(NLSLOOP3): STA.1C OUTSIDE-LOOP 3-LAYERS ELLIPTICITY [NLSLOOP3.A*]

Y0= 0.18750E+04
IRATIO= 0, 0 PARM=-0.30000E+00 , 0.59000E+01
N= 29 K= 5 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.284360E+00	-0.300266E+00	0.159E-01	0.529743E+01	0.315000E+01	0.100000E+01	0.700000E+01
2	-0.311630E+00	-0.316861E+00	0.523E-02	0.165088E+01	0.400000E+01	0.100000E+01	0.700000E+01
3	-0.378500E+00	-0.328992E+00	-0.495E-01	-0.150485E+02	0.500000E+01	0.100000E+01	0.700000E+01
4	-0.363960E+00	-0.337946E+00	-0.260E-01	-0.769771E+01	0.630000E+01	0.100000E+01	0.700000E+01
5	-0.376690E+00	-0.343284E+00	-0.334E-01	-0.973134E+01	0.800000E+01	0.100000E+01	0.700000E+01
6	-0.352090E+00	-0.344681E+00	-0.741E-02	-0.214967E+01	0.100000E+02	0.100000E+01	0.700000E+01
7	-0.329960E+00	-0.342685E+00	0.127E-01	0.371330E+01	0.125000E+02	0.100000E+01	0.700000E+01
8	-0.331540E+00	-0.336680E+00	0.514E-02	0.152666E+01	0.160000E+02	0.100000E+01	0.700000E+01
9	-0.314920E+00	-0.328068E+00	0.131E-01	0.400771E+01	0.200000E+02	0.100000E+01	0.700000E+01
10	-0.307740E+00	-0.316806E+00	0.907E-02	0.286182E+01	0.250000E+02	0.100000E+01	0.700000E+01
11	-0.296850E+00	-0.302917E+00	0.607E-02	0.200284E+01	0.315000E+02	0.100000E+01	0.700000E+01
12	-0.283630E+00	-0.286913E+00	0.328E-02	0.114430E+01	0.400000E+02	0.100000E+01	0.700000E+01
13	-0.279050E+00	-0.271097E+00	-0.795E-02	-0.293350E+01	0.500000E+02	0.100000E+01	0.700000E+01
14	-0.256480E+00	-0.254289E+00	-0.219E-02	-0.861621E+00	0.630000E+02	0.100000E+01	0.700000E+01
15	-0.244500E+00	-0.236696E+00	-0.780E-02	-0.329695E+01	0.800000E+02	0.100000E+01	0.700000E+01
16	-0.227990E+00	-0.220198E+00	-0.779E-02	-0.353846E+01	0.100000E+03	0.100000E+01	0.700000E+01
17	-0.217300E+00	-0.203902E+00	-0.134E-01	-0.657066E+01	0.125000E+03	0.100000E+01	0.700000E+01
18	-0.193350E+00	-0.186763E+00	-0.659E-02	-0.352701E+01	0.160000E+03	0.100000E+01	0.700000E+01
19	-0.177550E+00	-0.172803E+00	-0.475E-02	-0.274679E+01	0.200000E+03	0.100000E+01	0.700000E+01
20	-0.156680E+00	-0.160866E+00	0.419E-02	0.260210E+01	0.250000E+03	0.100000E+01	0.700000E+01
21	-0.142850E+00	-0.150913E+00	0.806E-02	0.534257E+01	0.315000E+03	0.100000E+01	0.700000E+01
22	-0.140650E+00	-0.143263E+00	0.263E-02	0.183768E+01	0.400000E+03	0.100000E+01	0.700000E+01
23	-0.136480E+00	-0.138555E+00	0.207E-02	0.149742E+01	0.500000E+03	0.100000E+01	0.700000E+01
24	-0.133310E+00	-0.135938E+00	0.263E-02	0.193292E+01	0.630000E+03	0.100000E+01	0.700000E+01
25	-0.126110E+00	-0.135392E+00	0.928E-02	0.685549E+01	0.800000E+03	0.100000E+01	0.700000E+01
26	-0.139810E+00	-0.136538E+00	-0.327E-02	-0.239664E+01	0.100000E+04	0.100000E+01	0.700000E+01
27	-0.129900E+00	-0.138835E+00	0.893E-02	0.643567E+01	0.125000E+04	0.100000E+01	0.700000E+01
28	-0.148490E+00	-0.141841E+00	-0.665E-02	-0.468763E+01	0.160000E+04	0.100000E+01	0.700000E+01
29	-0.172260E+00	-0.143701E+00	-0.286E-01	-0.198740E+02	0.200000E+04	0.100000E+01	0.700000E+01

** RMSERR= 0.16636189E-01

CORRELATION MATRIX

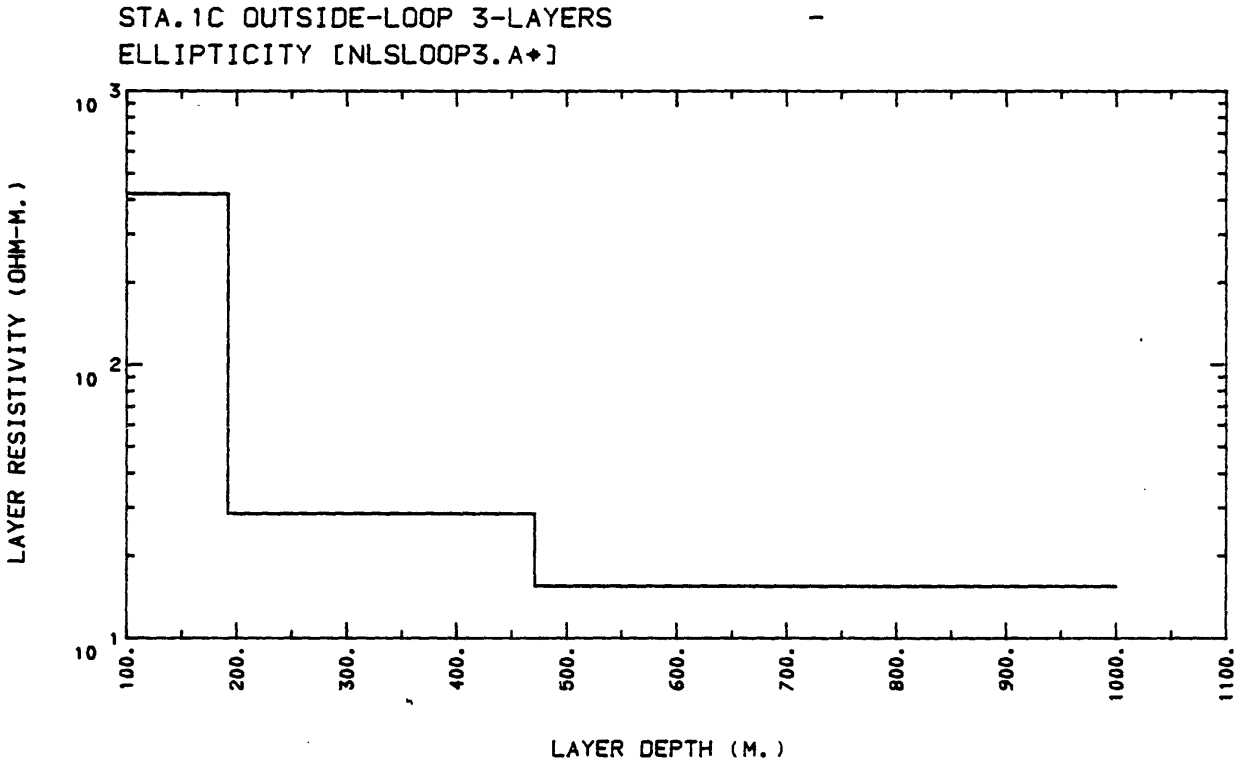
1	0.1000E+01				
2	0.6516E+00	0.1000E+01			
3	0.7852E+00	0.6778E+00	0.1000E+01		
4	-0.7514E+00	-0.1504E+00	-0.5870E+00	0.1000E+01	
5	0.4133E+00	0.6793E+00	0.6813E+00	-0.1205E+00	0.1000E+01

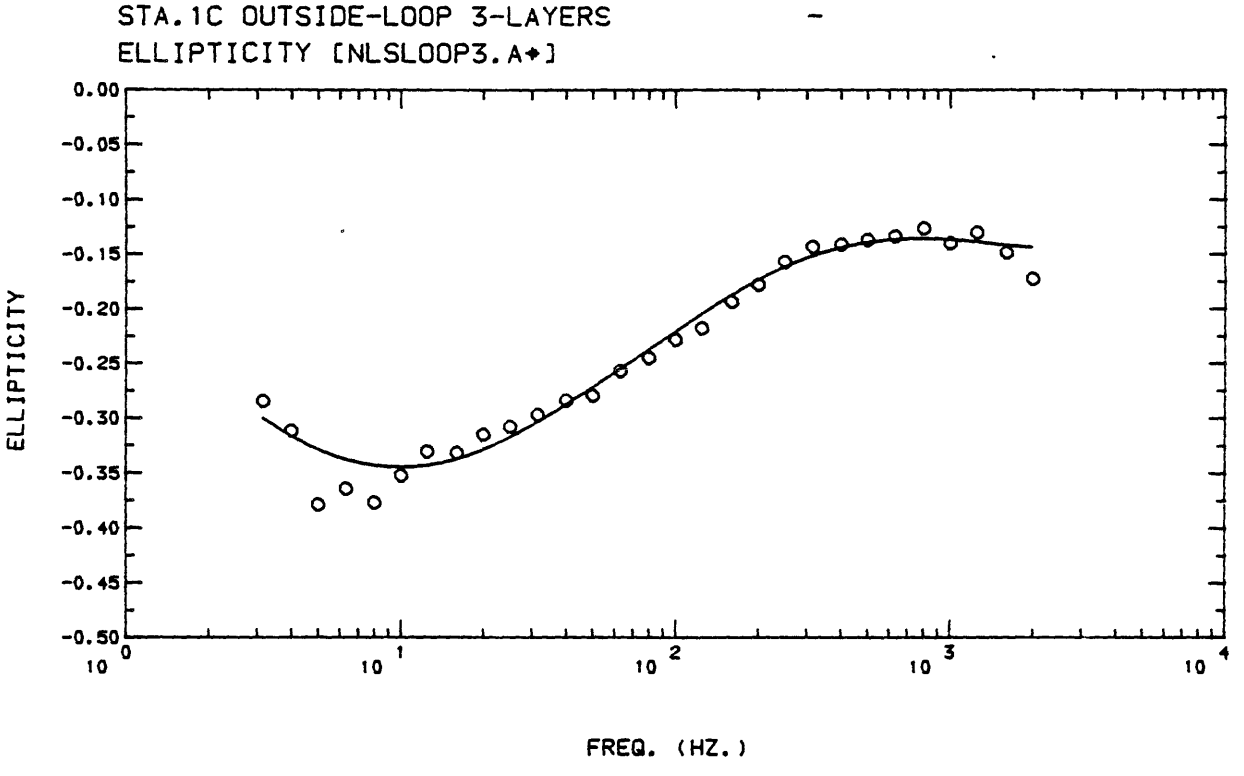
	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.2375E-02	0.6784E-02	0.2857E+01	0.2857E+03
2	0.3517E-01	0.9368E-02	0.2664E+00	0.2664E+02
3	0.6452E-01	0.2112E-01	0.3274E+00	0.3274E+02
4	0.1920E+03	0.1589E-01	0.8273E-04	0.8273E-02
5	0.2791E+03	0.5612E-01	0.2011E-03	0.2011E-01

PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH
1	SIGMA(1) =	0.23745119E-02	1	0.42113919E+03	
2	SIGMA(2) =	0.35167992E-01	2	0.28434948E+02	
3	SIGMA(3) =	0.64523198E-01	3	0.15498302E+02	

4 THICK(1) = 0.19202748E+03
5 THICK(2) = 0.27909518E+03

1 0.19202748E+03
2 0.471122bdE+03




STA.1C OUTSIDE-LOOP 3-LAYERS
ELLIPTICITY [NLSLOOP3.A↔]
ELLIPTICITY
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
-0.45
-0.50
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

{NLSLOOP3}: STA.1C OUTSIDE-LOOP 3-LAYERS TILT-&-ELLIPTICITY [NLSLOOP3.C*]

Y0= 0.18750E+04
IRATIO= 0, 0 PARM=-0.30000E+00 , 0.59000E+01
N= 58 K= 6 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 6

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.864530E+02	0.758309E+02	0.106E+02	0.140076E+02	0.315000E+01	0.100000E+01	0.600000E+01
2	-0.284360E+00	-0.301715E+00	0.174E-01	0.575207E+01	0.315000E+01	0.100000E+01	0.700000E+01
3	0.741650E+02	0.726065E+02	0.156E+01	0.214645E+01	0.400000E+01	0.100000E+01	0.600000E+01
4	-0.311630E+00	-0.320300E+00	0.867E-02	0.270696E+01	0.400000E+01	0.100000E+01	0.700000E+01
5	0.687770E+02	0.693866E+02	-0.610E+00	-0.878594E+00	0.500000E+01	0.100000E+01	0.600000E+01
6	-0.378500E+00	-0.334212E+00	-0.443E-01	-0.132513E+02	0.500000E+01	0.100000E+01	0.700000E+01
7	0.656040E+02	0.658912E+02	-0.287E+00	-0.435871E+00	0.630000E+01	0.100000E+01	0.600000E+01
8	-0.363960E+00	-0.344835E+00	-0.191E-01	-0.554607E+01	0.630000E+01	0.100000E+01	0.700000E+01
9	0.598730E+02	0.621635E+02	-0.229E+01	-0.368463E+01	0.800000E+01	0.100000E+01	0.600000E+01
10	-0.376690E+00	-0.351629E+00	-0.251E-01	-0.712704E+01	0.800000E+01	0.100000E+01	0.700000E+01
11	0.550090E+02	0.586285E+02	-0.362E+01	-0.617357E+01	0.100000E+02	0.100000E+01	0.600000E+01
12	-0.352090E+00	-0.354067E+00	0.198E-02	0.558477E+00	0.100000E+02	0.100000E+01	0.700000E+01
13	0.537130E+02	0.550919E+02	-0.138E+01	-0.250295E+01	0.125000E+02	0.100000E+01	0.600000E+01
14	-0.329960E+00	-0.352722E+00	0.228E-01	0.645338E+01	0.125000E+02	0.100000E+01	0.700000E+01
15	0.511440E+02	0.512394E+02	-0.954E-01	-0.186129E+00	0.160000E+02	0.100000E+01	0.600000E+01
16	-0.331540E+00	-0.346842E+00	0.153E-01	0.441168E+01	0.160000E+02	0.100000E+01	0.700000E+01
17	0.468260E+02	0.478696E+02	-0.104E+01	-0.218001E+01	0.200000E+02	0.100000E+01	0.600000E+01
18	-0.314920E+00	-0.337652E+00	0.227E-01	0.673226E+01	0.200000E+02	0.100000E+01	0.700000E+01
19	0.443480E+02	0.446674E+02	-0.319E+00	-0.715039E+00	0.250000E+02	0.100000E+01	0.600000E+01
20	-0.307740E+00	-0.325050E+00	0.173E-01	0.532541E+01	0.250000E+02	0.100000E+01	0.700000E+01
21	0.424450E+02	0.415853E+02	0.860E+00	0.206735E+01	0.315000E+02	0.100000E+01	0.600000E+01
22	-0.296850E+00	-0.308962E+00	0.121E-01	0.392018E+01	0.315000E+02	0.100000E+01	0.700000E+01
23	0.402090E+02	0.386970E+02	0.151E+01	0.390740E+01	0.400000E+02	0.100000E+01	0.600000E+01
24	-0.283630E+00	-0.290084E+00	0.645E-02	0.222487E+01	0.400000E+02	0.100000E+01	0.700000E+01
25	0.367790E+02	0.362865E+02	0.493E+00	0.135736E+01	0.500000E+02	0.100000E+01	0.600000E+01
26	-0.279050E+00	-0.271543E+00	-0.751E-02	-0.276447E+01	0.500000E+02	0.100000E+01	0.700000E+01
27	0.348460E+02	0.340625E+02	0.784E+00	0.230023E+01	0.630000E+02	0.100000E+01	0.600000E+01
28	-0.256480E+00	-0.252557E+00	-0.392E-02	-0.155317E+01	0.630000E+02	0.100000E+01	0.700000E+01
29	0.321910E+02	0.320071E+02	0.184E+00	0.574509E+00	0.800000E+02	0.100000E+01	0.600000E+01
30	-0.244500E+00	-0.233966E+00	-0.105E-01	-0.450258E+01	0.800000E+02	0.100000E+01	0.700000E+01
31	0.301610E+02	0.302638E+02	-0.103E+00	-0.339624E+00	0.100000E+03	0.100000E+01	0.600000E+01
32	-0.227990E+00	-0.217778E+00	-0.102E-01	-0.468906E+01	0.100000E+03	0.100000E+01	0.700000E+01
33	0.289600E+02	0.286627E+02	0.297E+00	0.103738E+01	0.125000E+03	0.100000E+01	0.600000E+01
34	-0.217300E+00	-0.202623E+00	-0.147E-01	-0.724360E+01	0.125000E+03	0.100000E+01	0.700000E+01
35	0.262220E+02	0.270453E+02	-0.823E+00	-0.304423E+01	0.160000E+03	0.100000E+01	0.600000E+01
36	-0.193350E+00	-0.186905E+00	-0.644E-02	-0.344801E+01	0.160000E+03	0.100000E+01	0.700000E+01
37	0.251820E+02	0.257235E+02	-0.542E+00	-0.210518E+01	0.200000E+03	0.100000E+01	0.600000E+01
38	-0.177550E+00	-0.173686E+00	-0.386E-02	-0.222457E+01	0.200000E+03	0.100000E+01	0.700000E+01
39	0.238760E+02	0.245314E+02	-0.655E+00	-0.267180E+01	0.250000E+03	0.100000E+01	0.600000E+01
40	-0.156680E+00	-0.161631E+00	0.495E-02	0.306332E+01	0.250000E+03	0.100000E+01	0.700000E+01
41	0.231960E+02	0.234222E+02	-0.226E+00	-0.965953E+00	0.315000E+03	0.100000E+01	0.600000E+01
42	-0.142850E+00	-0.150673E+00	0.782E-02	0.519205E+01	0.315000E+03	0.100000E+01	0.700000E+01
43	0.226510E+02	0.223876E+02	0.263E+00	0.117645E+01	0.400000E+03	0.100000E+01	0.600000E+01
44	-0.140650E+00	-0.141284E+00	0.634E-03	0.448647E+00	0.400000E+03	0.100000E+01	0.700000E+01
45	0.216640E+02	0.214981E+02	0.166E+00	0.771836E+00	0.500000E+03	0.100000E+01	0.600000E+01
46	-0.136480E+00	-0.134499E+00	-0.198E-02	-0.147281E+01	0.500000E+03	0.100000E+01	0.700000E+01
47	0.205240E+02	0.206260E+02	-0.102E+00	-0.494380E+00	0.630000E+03	0.100000E+01	0.600000E+01

FDEM Sounding Results
Medicine Lake, California

48	-0.133310E+00	-0.129599E+00	-0.371E-02	-0.286307E+01	0.630000E+03	0.100000E+01	0.700000E+01
49	0.200220E+02	0.197407E+02	0.281E+00	0.142474E+01	0.800000E+03	0.100000E+01	0.600000E+01
50	-0.126110E+00	-0.126792E+00	0.682E-03	0.537722E+00	0.800000E+03	0.100000E+01	0.700000E+01
51	0.191400E+02	0.188973E+02	0.243E+00	0.128417E+01	0.100000E+04	0.100000E+01	0.600000E+01
52	-0.139810E+00	-0.126109E+00	-0.137E-01	-0.108646E+02	0.100000E+04	0.100000E+01	0.700000E+01
53	0.183540E+02	0.180041E+02	0.350E+00	0.194351E+01	0.125000E+04	0.100000E+01	0.600000E+01
54	-0.129900E+00	-0.127070E+00	-0.283E-02	-0.222701E+01	0.125000E+04	0.100000E+01	0.700000E+01
55	0.164370E+02	0.169177E+02	-0.481E+00	-0.284152E+01	0.160000E+04	0.100000E+01	0.600000E+01
56	-0.148490E+00	-0.129478E+00	-0.190E-01	-0.146833E+02	0.160000E+04	0.100000E+01	0.700000E+01
57	0.158890E+02	0.158159E+02	0.731E-01	0.462018E+00	0.200000E+04	0.100000E+01	0.600000E+01
58	-0.172260E+00	-0.132009E+00	-0.403E-01	-0.304909E+02	0.200000E+04	0.100000E+01	0.700000E+01

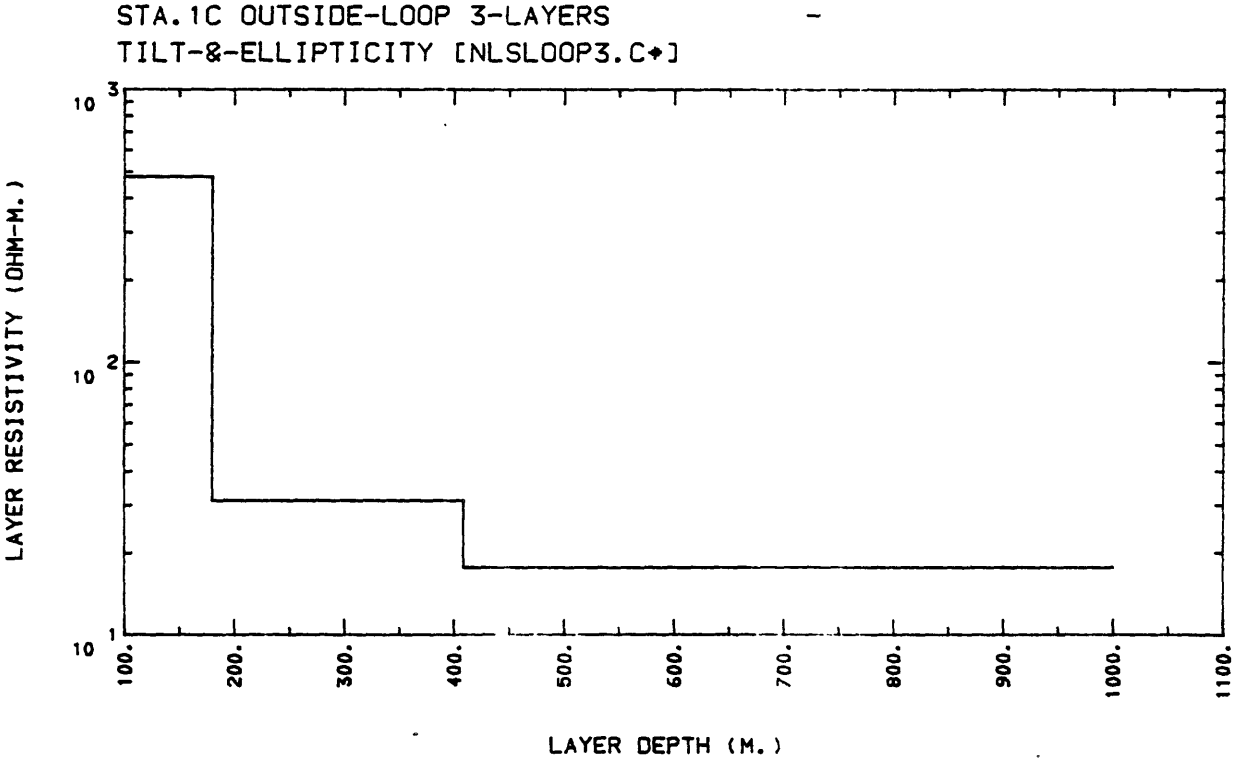
** RMSERR= 0.16439679E+01

CORRELATION MATRIX

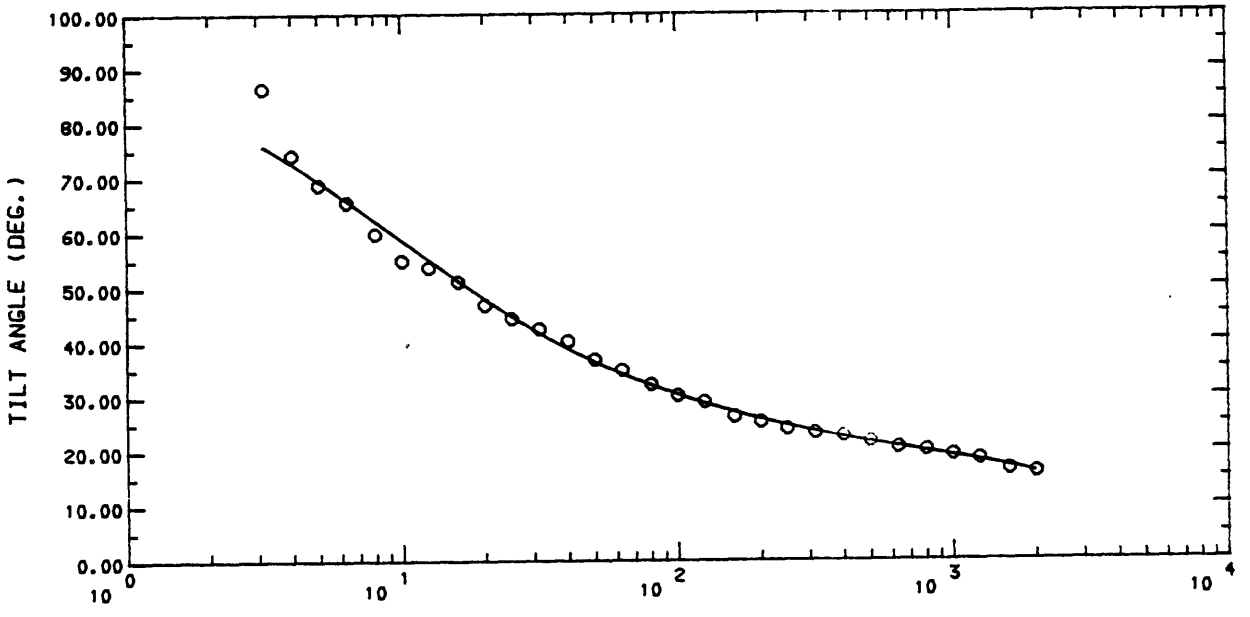
1	0.1000E+01				
2	0.5580E+00	0.1000E+01			
3	-0.1134E+00	-0.1576E+00	0.1000E+01		
4	0.7807E+00	0.7778E+00	-0.2850E+00	0.1000E+01	
5	-0.4160E-01	0.1989E+00	0.6422E+00	-0.1605E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.2084E-02	0.2936E-02	0.1409E+01	0.1409E+03
2	0.3212E-01	0.6766E-02	0.2106E+00	0.2106E+02
3	0.5661E-01	0.8867E-02	0.1566E+00	0.1566E+02
4	0.1799E+03	0.1051E-01	0.5842E-04	0.5842E-02
5	0.2286E+03	0.4188E-01	0.1832E-03	0.1832E-01

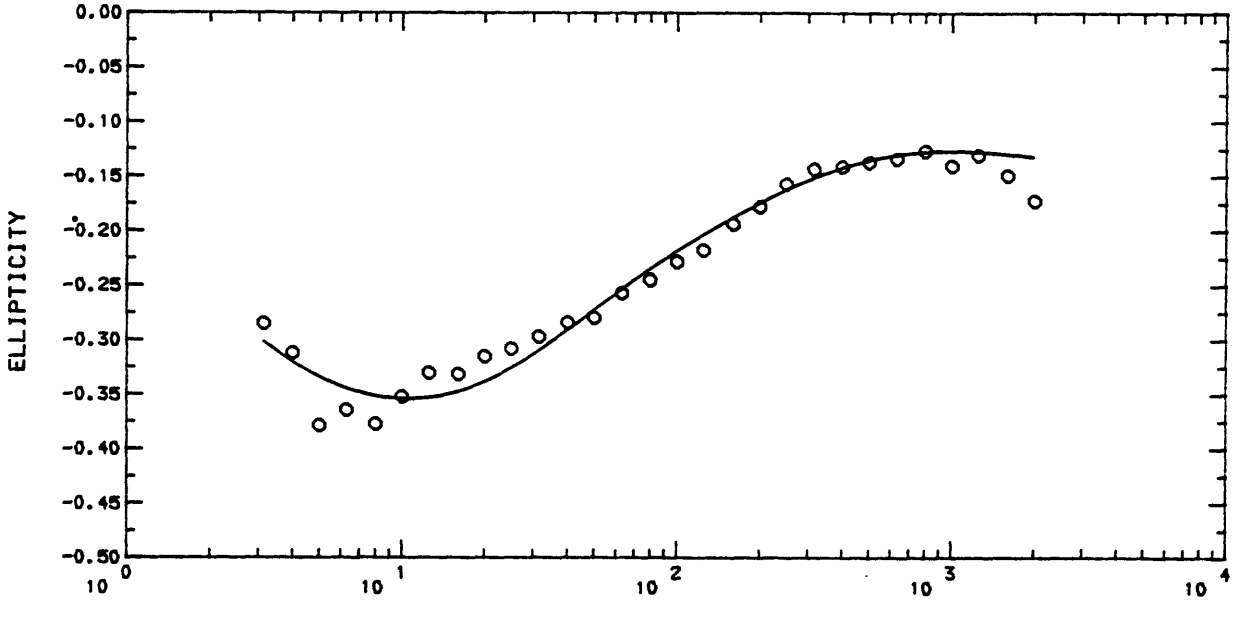
	PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1)	=	0.20840513E-02	1	0.47983466E+03		
2	SIGMA(2)	=	0.32119010E-01	2	0.31134211E+02		
3	SIGMA(3)	=	0.56612749E-01	3	0.17663866E+02		
4	THICK(1)	=	0.17989738E+03			1	0.17989738E+03
5	THICK(2)	=	0.22862642E+03			2	0.40852380E+03
6	SHIFT	=	0.20637054E+01				



STA.1C OUTSIDE-LOOP 3-LAYERS
TILT-&-ELLIPTICITY [NLSLOOP3.C+]



STA.1C OUTSIDE-LOOP 3-LAYERS
TILT-&-ELLIPTICITY [NLSLOOP3.C+]



(NLSLOOP3): STA.1C OUTSIDE-LOOP 4-LAYERS RATIO=HR/HZ [NLSLOOP3.D*]

Y0= 0.18750E+04
IRATIO= 2, 1 PARM=-0.30000E+00 , 0.59000E+01
N= 58 K= 7 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.787140E+02	0.544983E+02	0.242E+02	0.444340E+02	0.315000E+01	0.100000E+01	0.200000E+01
2	0.291000E+00	0.332953E+00	-0.420E-01	-0.126002E+02	0.315000E+01	0.100000E+01	0.100000E+01
3	0.527450E+02	0.518178E+02	0.927E+00	0.178932E+01	0.400000E+01	0.100000E+01	0.200000E+01
4	0.419740E+00	0.381824E+00	0.379E-01	0.993020E+01	0.400000E+01	0.100000E+01	0.100000E+01
5	0.526270E+02	0.494496E+02	0.318E+01	0.642550E+01	0.500000E+01	0.100000E+01	0.200000E+01
6	0.536510E+00	0.430786E+00	0.106E+00	0.245420E+02	0.500000E+01	0.100000E+01	0.100000E+01
7	0.481200E+02	0.471612E+02	0.959E+00	0.203296E+01	0.630000E+01	0.100000E+01	0.200000E+01
8	0.573750E+00	0.484892E+00	0.889E-01	0.183254E+02	0.630000E+01	0.100000E+01	0.100000E+01
9	0.453190E+02	0.449834E+02	0.336E+00	0.746151E+00	0.800000E+01	0.100000E+01	0.200000E+01
10	0.675890E+00	0.544586E+00	0.131E+00	0.241108E+02	0.800000E+01	0.100000E+01	0.100000E+01
11	0.405470E+02	0.431194E+02	-0.257E+01	-0.596575E+01	0.100000E+02	0.100000E+01	0.200000E+01
12	0.760770E+00	0.604040E+00	0.157E+00	0.259470E+02	0.100000E+02	0.100000E+01	0.100000E+01
13	0.378180E+02	0.414082E+02	-0.359E+01	-0.867018E+01	0.125000E+02	0.100000E+01	0.200000E+01
14	0.782320E+00	0.667366E+00	0.115E+00	0.172250E+02	0.125000E+02	0.100000E+01	0.100000E+01
15	0.373230E+02	0.396661E+02	-0.234E+01	-0.590699E+01	0.160000E+02	0.100000E+01	0.200000E+01
16	0.841670E+00	0.742343E+00	0.993E-01	0.133803E+02	0.160000E+02	0.100000E+01	0.100000E+01
17	0.350150E+02	0.381953E+02	-0.318E+01	-0.832646E+01	0.200000E+02	0.100000E+01	0.200000E+01
18	0.949080E+00	0.814937E+00	0.134E+00	0.164606E+02	0.200000E+02	0.100000E+01	0.100000E+01
19	0.342170E+02	0.367861E+02	-0.257E+01	-0.698390E+01	0.250000E+02	0.100000E+01	0.200000E+01
20	0.101900E+01	0.892362E+00	0.127E+00	0.141914E+02	0.250000E+02	0.100000E+01	0.100000E+01
21	0.331710E+02	0.353527E+02	-0.218E+01	-0.617126E+01	0.315000E+02	0.100000E+01	0.200000E+01
22	0.107760E+01	0.977670E+00	0.999E-01	0.102212E+02	0.315000E+02	0.100000E+01	0.100000E+01
23	0.320310E+02	0.338643E+02	-0.183E+01	-0.541371E+01	0.400000E+02	0.100000E+01	0.200000E+01
24	0.115330E+01	0.107095E+01	0.823E-01	0.768942E+01	0.400000E+02	0.100000E+01	0.100000E+01
25	0.322530E+02	0.324544E+02	-0.201E+00	-0.620425E+00	0.500000E+02	0.100000E+01	0.200000E+01
26	0.128020E+01	0.116194E+01	0.118E+00	0.101778E+02	0.500000E+02	0.100000E+01	0.100000E+01
27	0.303480E+02	0.309851E+02	-0.637E+00	-0.205606E+01	0.630000E+02	0.100000E+01	0.200000E+01
28	0.136910E+01	0.125887E+01	0.110E+00	0.875602E+01	0.630000E+02	0.100000E+01	0.100000E+01
29	0.299760E+02	0.294960E+02	0.480E+00	0.162725E+01	0.800000E+02	0.100000E+01	0.200000E+01
30	0.149820E+01	0.136077E+01	0.137E+00	0.100991E+02	0.800000E+02	0.100000E+01	0.100000E+01
31	0.289690E+02	0.281743E+02	0.795E+00	0.282051E+01	0.100000E+03	0.100000E+01	0.200000E+01
32	0.161600E+01	0.145677E+01	0.159E+00	0.109304E+02	0.100000E+03	0.100000E+01	0.100000E+01
33	0.282950E+02	0.269481E+02	0.135E+01	0.499806E+01	0.125000E+03	0.100000E+01	0.200000E+01
34	0.169410E+01	0.155332E+01	0.141E+00	0.906340E+01	0.125000E+03	0.100000E+01	0.100000E+01
35	0.268730E+02	0.257164E+02	0.116E+01	0.449741E+01	0.160000E+03	0.100000E+01	0.200000E+01
36	0.189840E+01	0.166061E+01	0.238E+00	0.143191E+02	0.160000E+03	0.100000E+01	0.100000E+01
37	0.254600E+02	0.247219E+02	0.738E+00	0.298541E+01	0.200000E+03	0.100000E+01	0.200000E+01
38	0.199670E+01	0.175764E+01	0.239E+00	0.136010E+02	0.200000E+03	0.100000E+01	0.100000E+01
39	0.234600E+02	0.238569E+02	-0.397E+00	-0.166379E+01	0.250000E+03	0.100000E+01	0.200000E+01
40	0.213480E+01	0.185394E+01	0.281E+00	0.151492E+02	0.250000E+03	0.100000E+01	0.100000E+01
41	0.219400E+02	0.231315E+02	-0.119E+01	-0.515117E+01	0.315000E+03	0.100000E+01	0.200000E+01
42	0.221800E+01	0.195194E+01	0.266E+00	0.136308E+02	0.315000E+03	0.100000E+01	0.100000E+01
43	0.219850E+02	0.226231E+02	-0.638E+00	-0.282053E+01	0.400000E+03	0.100000E+01	0.200000E+01
44	0.227470E+01	0.205101E+01	0.224E+00	0.109061E+02	0.400000E+03	0.100000E+01	0.100000E+01
45	0.220660E+02	0.224294E+02	-0.363E+00	-0.162039E+01	0.500000E+03	0.100000E+01	0.200000E+01
46	0.238440E+01	0.214146E+01	0.243E+00	0.113447E+02	0.500000E+03	0.100000E+01	0.100000E+01
47	0.224580E+02	0.225882E+02	-0.130E+00	-0.576497E+00	0.630000E+03	0.100000E+01	0.200000E+01
48	0.251940E+01	0.223416E+01	0.285E+00	0.127673E+02	0.630000E+03	0.100000E+01	0.100000E+01
49	0.217200E+02	0.232102E+02	-0.149E+01	-0.642045E+01	0.800000E+03	0.100000E+01	0.200000E+01

50	0.259610E+01	0.233101E+01	0.265E+00	0.113725E+02	0.800000E+03	0.100000E+01	0.100000E+01
51	0.247190E+02	0.242824E+02	0.437E+00	0.179792E+01	0.100000E+04	0.100000E+01	0.200000E+01
52	0.267580E+01	0.242567E+01	0.250E+00	0.103120E+02	0.100000E+04	0.100000E+01	0.100000E+01
53	0.238500E+02	0.258953E+02	-0.205E+01	-0.789845E+01	0.125000E+04	0.100000E+01	0.200000E+01
54	0.280920E+01	0.252905E+01	0.280E+00	0.110774E+02	0.125000E+04	0.100000E+01	0.100000E+01
55	0.292260E+02	0.283777E+02	0.848E+00	0.299935E+01	0.160000E+04	0.100000E+01	0.200000E+01
56	0.303060E+01	0.266265E+01	0.368E+00	0.138191E+02	0.160000E+04	0.100000E+01	0.100000E+01
57	0.339870E+02	0.312599E+02	0.273E+01	0.872410E+01	0.200000E+04	0.100000E+01	0.200000E+01
58	0.300910E+01	0.281084E+01	0.198E+00	0.705339E+01	0.200000E+04	0.100000E+01	0.100000E+01

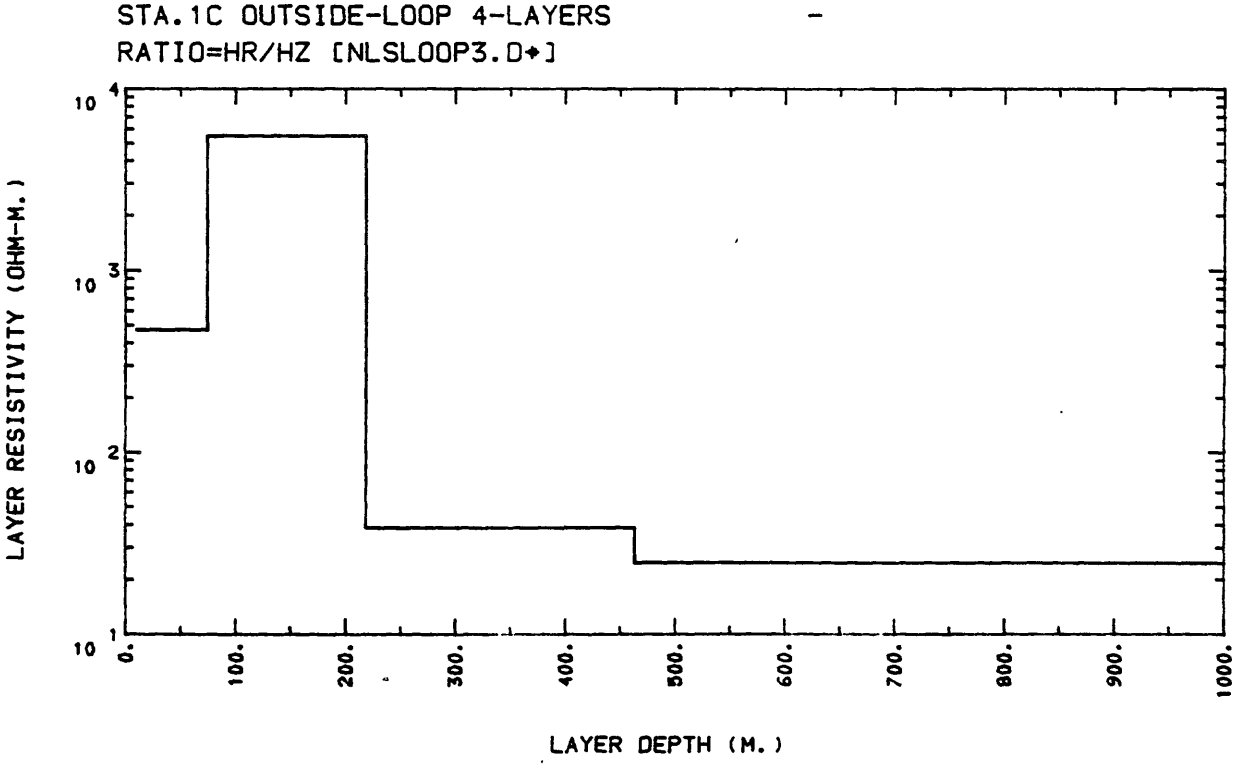
** RMSERR= 0.36277232E+01

CORRELATION MATRIX

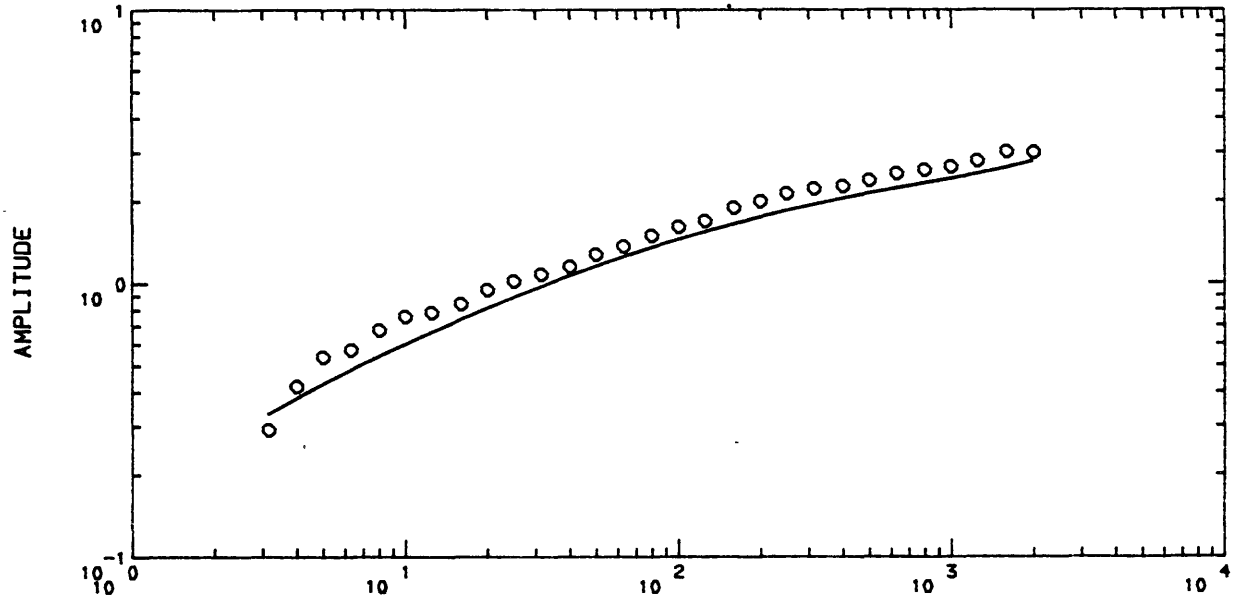
1	0.1000E+01						
2	-0.1814E+00	0.1000E+01					
3	0.1545E+00	-0.1509E-01	0.1000E+01				
4	0.9960E-01	-0.1161E+00	0.4205E+00	0.1000E+01			
5	-0.9594E+00	0.7037E-01	0.6823E-02	-0.1328E-01	0.1000E+01		
6	0.8162E+00	-0.8959E-01	-0.1030E+00	-0.1384E+00	-0.9036E+00	0.1000E+01	
7	0.5035E-01	-0.3168E+00	0.1807E+00	0.3385E+00	-0.6610E-01	0.2637E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.2122E-02	0.8360E-02	0.3949E+01	0.3949E+03
2	0.1823E-03	0.4988E-02	0.2736E+02	0.2736E+04
3	0.2613E-01	0.1076E-01	0.4117E+00	0.4117E+02
4	0.4058E-01	0.1040E-01	0.2564E+00	0.2564E+02
5	0.7435E+02	0.7883E-01	0.1060E-02	0.1060E+00
6	0.1443E+03	0.6034E-01	0.4183E-03	0.4183E-01
7	0.2447E+03	0.9479E-01	0.3874E-03	0.3874E-01

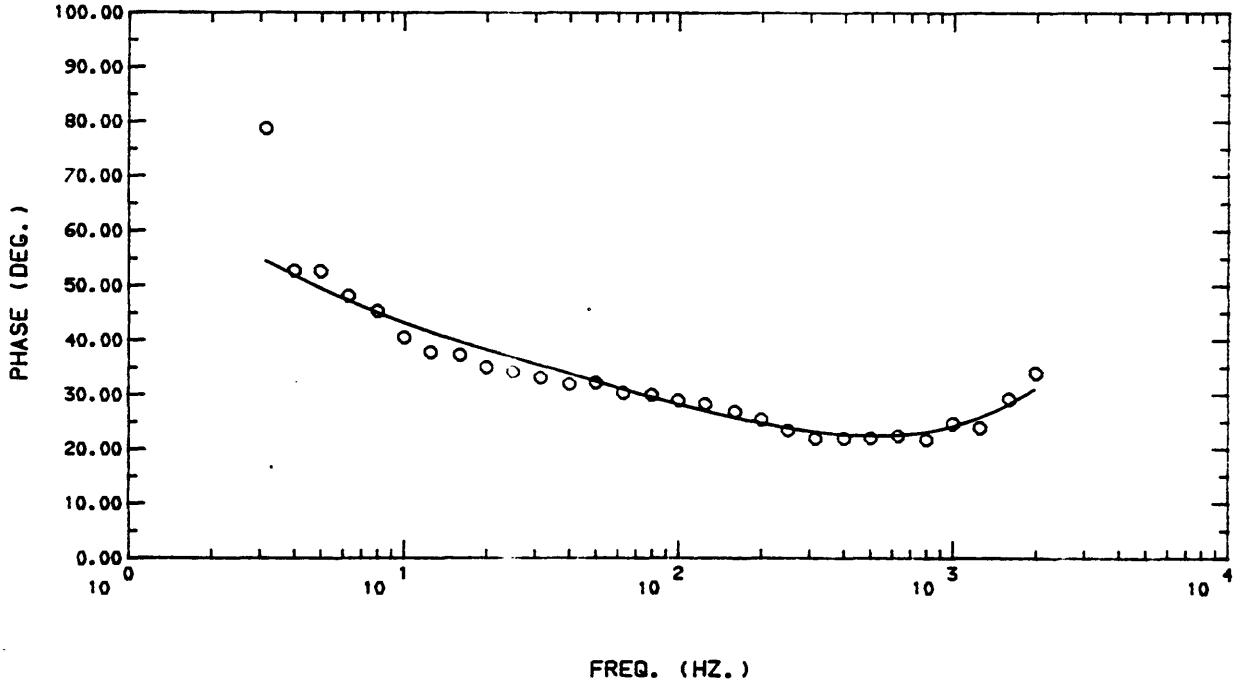
PARAMETER NAME	FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1 SIGMA(1) =	0.21219135E-02	1	0.47127274E+03		
2 SIGMA(2) =	0.18227391E-03	2	0.54862485E+04		
3 SIGMA(3) =	0.26132179E-01	3	0.38266994E+02		
4 SIGMA(4) =	0.40575802E-01	4	0.24645231E+02		
5 THICK(1) =	0.74354912E+02			1	0.74354912E+02
6 THICK(2) =	0.14426245E+03			2	0.21861737E+03
7 THICK(3) =	0.24469360E+03			3	0.46331097E+03



STA.1C OUTSIDE-LOOP 4-LAYERS -
RATIO=HR/HZ [NLSLOOP3.D*]



STA.1C OUTSIDE-LOOP 4-LAYERS -
RATIO=HR/HZ [NLSLOOP3.D*]



{NLSLOOP3}: STA.1D OUTSIDE-LOOP 4-LAYERS ELLIPTICITY [NLSLOOP3.B*]

Y0= 0.18440E+04
IRATIO= 0, 0 PARM=-0.14000E+01 , 0.81800E+02
N= 30 K= 7 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.345850E+00	-0.278311E+00	-0.675E-01	-0.242673E+02	0.250000E+01	0.100000E+01	0.700000E+01
2	-0.263060E+00	-0.299940E+00	0.369E-01	0.122959E+02	0.315000E+01	0.100000E+01	0.700000E+01
3	-0.351550E+00	-0.319095E+00	-0.325E-01	-0.101710E+02	0.400000E+01	0.100000E+01	0.700000E+01
4	-0.373550E+00	-0.333521E+00	-0.400E-01	-0.120018E+02	0.500000E+01	0.100000E+01	0.700000E+01
5	-0.360640E+00	-0.344563E+00	-0.361E-01	-0.104704E+02	0.630000E+01	0.100000E+01	0.700000E+01
6	-0.367150E+00	-0.351541E+00	-0.156E-01	-0.444016E+01	0.800000E+01	0.100000E+01	0.700000E+01
7	-0.358190E+00	-0.353827E+00	-0.436E-02	-0.123299E+01	0.100000E+02	0.100000E+01	0.700000E+01
8	-0.362760E+00	-0.351963E+00	-0.108E-01	-0.306759E+01	0.125000E+02	0.100000E+01	0.700000E+01
9	-0.333880E+00	-0.345122E+00	0.112E-01	0.325745E+01	0.160000E+02	0.100000E+01	0.700000E+01
10	-0.324860E+00	-0.334841E+00	0.998E-02	0.298084E+01	0.200000E+02	0.100000E+01	0.700000E+01
11	-0.306180E+00	-0.321190E+00	0.150E-01	0.467311E+01	0.250000E+02	0.100000E+01	0.700000E+01
12	-0.304450E+00	-0.304437E+00	-0.130E-04	-0.425836E-02	0.315000E+02	0.100000E+01	0.700000E+01
13	-0.290740E+00	-0.285799E+00	-0.494E-02	-0.172878E+01	0.400000E+02	0.100000E+01	0.700000E+01
14	-0.282220E+00	-0.268720E+00	-0.135E-01	-0.502400E+01	0.500000E+02	0.100000E+01	0.700000E+01
15	-0.264440E+00	-0.252739E+00	-0.117E-01	-0.462957E+01	0.630000E+02	0.100000E+01	0.700000E+01
16	-0.248410E+00	-0.238856E+00	-0.955E-02	-0.400002E+01	0.800000E+02	0.100000E+01	0.700000E+01
17	-0.234190E+00	-0.228357E+00	-0.583E-02	-0.255419E+01	0.100000E+03	0.100000E+01	0.700000E+01
18	-0.227720E+00	-0.219946E+00	-0.777E-02	-0.353450E+01	0.125000E+03	0.100000E+01	0.700000E+01
19	-0.215590E+00	-0.212826E+00	-0.276E-02	-0.129864E+01	0.160000E+03	0.100000E+01	0.700000E+01
20	-0.212590E+00	-0.208331E+00	-0.426E-02	-0.204432E+01	0.200000E+03	0.100000E+01	0.700000E+01
21	-0.208950E+00	-0.205433E+00	-0.352E-02	-0.171175E+01	0.250000E+03	0.100000E+01	0.700000E+01
22	-0.209260E+00	-0.203808E+00	-0.545E-02	-0.267530E+01	0.315000E+03	0.100000E+01	0.700000E+01
23	-0.207760E+00	-0.203784E+00	-0.398E-02	-0.195094E+01	0.400000E+03	0.100000E+01	0.700000E+01
24	-0.210260E+00	-0.205542E+00	-0.472E-02	-0.229543E+01	0.500000E+03	0.100000E+01	0.700000E+01
25	-0.210210E+00	-0.208518E+00	-0.169E-02	-0.811288E+00	0.630000E+03	0.100000E+01	0.700000E+01
26	-0.213020E+00	-0.211362E+00	-0.166E-02	-0.784667E+00	0.800000E+03	0.100000E+01	0.700000E+01
27	-0.212110E+00	-0.212191E+00	0.810E-04	0.381955E-01	0.100000E+04	0.100000E+01	0.700000E+01
28	-0.208760E+00	-0.208790E+00	0.298E-04	0.142810E-01	0.125000E+04	0.100000E+01	0.700000E+01
29	-0.205830E+00	-0.196492E+00	-0.934E-02	-0.475219E+01	0.160000E+04	0.100000E+01	0.700000E+01
30	-0.200830E+00	-0.175941E+00	-0.249E-01	-0.141461E+02	0.200000E+04	0.100000E+01	0.700000E+01

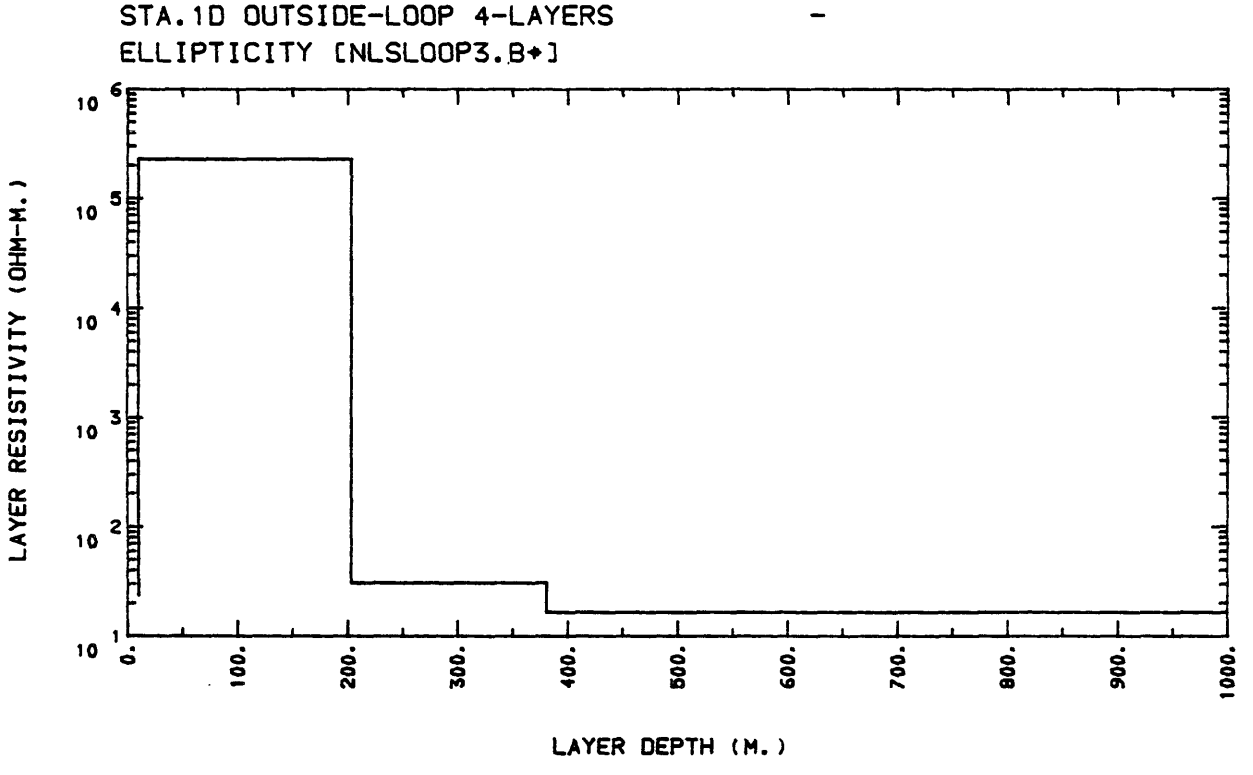
** RMSERR= 0.22895690E-01

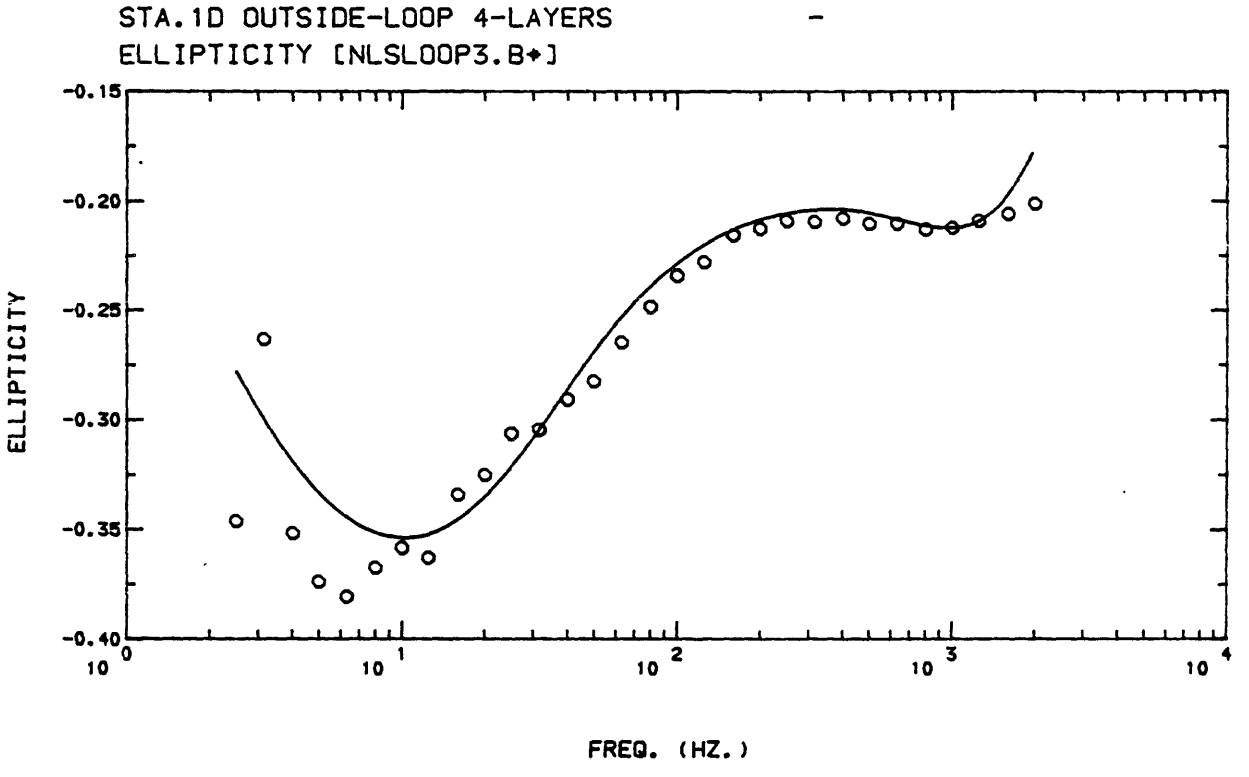
CORRELATION MATRIX

1	0.1000E+01						
2	-0.5351E+00	0.1000E+01					
3	0.2165E+00	-0.7528E+00	0.1000E+01				
4	0.6068E+00	-0.6230E+00	0.4245E+00	0.1000E+01			
5	-0.9696E+00	0.6406E+00	-0.2733E+00	-0.6363E+00	0.1000E+01		
6	-0.1321E-01	-0.6546E+00	0.8830E+00	0.2012E+00	-0.7738E-01	0.1000E+01	
7	0.8936E-01	-0.5030E+00	0.6347E+00	0.4831E+00	-0.1866E+00	0.5376E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.4189E-01	0.4270E-01	0.1019E+01	0.1019E+03
2	0.4384E-05	0.1995E+00	0.4551E+05	0.4551E+07
3	0.3257E-01	0.2364E-01	0.7257E+00	0.7257E+02
4	0.6054E-01	0.1494E-01	0.2467E+00	0.2467E+02
5	0.1007E+02	0.2720E-01	0.2700E-02	0.2700E+00
6	0.1933E+03	0.2381E-01	0.1232E-03	0.1232E-01
7	0.1776E+03	0.5263E-01	0.2964E-03	0.2964E-01

PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.41866978E-01	1	0.23873768E+02		
2	SIGMA(2) =	0.43837222E-05	2	0.22811664E+06		
3	SIGMA(3) =	0.32574598E-01	3	0.30698767E+02		
4	SIGMA(4) =	0.60541824E-01	4	0.16517508E+02		
5	THICK(1) =	0.10073292E+02			1	0.10073292E+02
6	THICK(2) =	0.19325757E+03			2	0.20333086E+03
7	THICK(3) =	0.17757004E+03			3	0.38090091E+03




STA.1D OUTSIDE-LOOP 4-LAYERS
ELLIPTICITY [NLSLOOP3.B*]
ELLIPTICITY
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

(NLSLOOP3): STA.1D OUTSIDE-LOOP 4-LAYERS TILT-&-ELLIPTICITY [NLSLOOP3.Z*]

YO= 0.18440E+04
IRATIO= 0, 0 PARM=-0.14000E+01 , 0.81800E+02
N= 60 K= 8 IP= 3 M= 3

PARAMETERS HELD FIXED: IB= 1 5 8

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.816920E+02	0.829505E+02	-0.126E+01	-0.151722E+01	0.250000E+01	0.100000E+01	0.600000E+01
2	-0.345850E+00	-0.274710E+00	-0.711E-01	-0.258962E+02	0.250000E+01	0.100000E+01	0.700000E+01
3	0.839080E+02	0.801764E+02	0.373E+01	0.465423E+01	0.315000E+01	0.100000E+01	0.600000E+01
4	-0.263060E+00	-0.296515E+00	0.335E-01	0.112827E+02	0.315000E+01	0.100000E+01	0.700000E+01
5	0.781400E+02	0.770174E+02	0.112E+01	0.145762E+01	0.400000E+01	0.100000E+01	0.600000E+01
6	-0.351550E+00	-0.315976E+00	-0.356E-01	-0.112583E+02	0.400000E+01	0.100000E+01	0.700000E+01
7	0.745730E+02	0.738430E+02	0.730E+00	0.988599E+00	0.500000E+01	0.100000E+01	0.600000E+01
8	-0.373550E+00	-0.330807E+00	-0.427E-01	-0.129209E+02	0.500000E+01	0.100000E+01	0.700000E+01
9	0.708590E+02	0.703763E+02	0.483E+00	0.685868E+00	0.630000E+01	0.100000E+01	0.600000E+01
10	-0.380640E+00	-0.342381E+00	-0.383E-01	-0.111744E+02	0.630000E+01	0.100000E+01	0.700000E+01
11	0.657330E+02	0.666598E+02	-0.927E+00	-0.139035E+01	0.800000E+01	0.100000E+01	0.600000E+01
12	-0.367150E+00	-0.350039E+00	-0.171E-01	-0.488822E+01	0.800000E+01	0.100000E+01	0.700000E+01
13	0.613660E+02	0.631243E+02	-0.176E+01	-0.278552E+01	0.100000E+02	0.100000E+01	0.600000E+01
14	-0.358190E+00	-0.353100E+00	-0.509E-02	-0.144156E+01	0.100000E+02	0.100000E+01	0.700000E+01
15	0.584320E+02	0.595856E+02	-0.115E+01	-0.193599E+01	0.125000E+02	0.100000E+01	0.600000E+01
16	-0.362760E+00	-0.352169E+00	-0.106E-01	-0.300749E+01	0.125000E+02	0.100000E+01	0.700000E+01
17	0.544430E+02	0.557409E+02	-0.130E+01	-0.232852E+01	0.160000E+02	0.100000E+01	0.600000E+01
18	-0.333880E+00	-0.346551E+00	0.127E-01	0.365642E+01	0.160000E+02	0.100000E+01	0.700000E+01
19	0.527000E+02	0.523973E+02	0.303E+00	0.577746E+00	0.200000E+02	0.100000E+01	0.600000E+01
20	-0.324860E+00	-0.337572E+00	0.127E-01	0.376585E+01	0.200000E+02	0.100000E+01	0.700000E+01
21	0.489620E+02	0.492434E+02	-0.281E+00	-0.571468E+00	0.250000E+02	0.100000E+01	0.600000E+01
22	-0.306180E+00	-0.325381E+00	0.192E-01	0.590096E+01	0.250000E+02	0.100000E+01	0.700000E+01
23	0.466580E+02	0.462320E+02	0.426E+00	0.921528E+00	0.315000E+02	0.100000E+01	0.600000E+01
24	-0.304450E+00	-0.310208E+00	0.576E-02	0.185625E+01	0.315000E+02	0.100000E+01	0.700000E+01
25	0.439990E+02	0.434285E+02	0.570E+00	0.131361E+01	0.400000E+02	0.100000E+01	0.600000E+01
26	-0.290740E+00	-0.293137E+00	0.240E-02	0.817797E+00	0.400000E+02	0.100000E+01	0.700000E+01
27	0.413290E+02	0.410897E+02	0.239E+00	0.582384E+00	0.500000E+02	0.100000E+01	0.600000E+01
28	-0.282220E+00	-0.277266E+00	-0.495E-02	-0.178659E+01	0.500000E+02	0.100000E+01	0.700000E+01
29	0.393100E+02	0.389095E+02	0.400E+00	0.102929E+01	0.630000E+02	0.100000E+01	0.600000E+01
30	-0.264440E+00	-0.262116E+00	-0.232E-02	-0.886682E+00	0.630000E+02	0.100000E+01	0.700000E+01
31	0.370930E+02	0.368402E+02	0.253E+00	0.686322E+00	0.800000E+02	0.100000E+01	0.600000E+01
32	-0.248410E+00	-0.248525E+00	0.115E-03	0.461740E-01	0.800000E+02	0.100000E+01	0.700000E+01
33	0.350220E+02	0.350270E+02	-0.503E-02	-0.143540E-01	0.100000E+03	0.100000E+01	0.600000E+01
34	-0.234190E+00	-0.237759E+00	0.357E-02	0.150107E+01	0.100000E+03	0.100000E+01	0.700000E+01
35	0.333830E+02	0.332909E+02	0.921E-01	0.276555E+00	0.125000E+03	0.100000E+01	0.600000E+01
36	-0.227720E+00	-0.228578E+00	0.858E-03	0.375167E+00	0.125000E+03	0.100000E+01	0.700000E+01
37	0.315780E+02	0.314504E+02	0.128E+00	0.405730E+00	0.160000E+03	0.100000E+01	0.600000E+01
38	-0.215590E+00	-0.220077E+00	0.449E-02	0.203875E+01	0.160000E+03	0.100000E+01	0.700000E+01
39	0.299440E+02	0.298426E+02	0.101E+00	0.339726E+00	0.200000E+03	0.100000E+01	0.600000E+01
40	-0.212590E+00	-0.213911E+00	0.132E-02	0.617686E+00	0.200000E+03	0.100000E+01	0.700000E+01
41	0.284040E+02	0.282695E+02	0.134E+00	0.475759E+00	0.250000E+03	0.100000E+01	0.600000E+01
42	-0.208950E+00	-0.209124E+00	0.174E-03	0.829839E-01	0.250000E+03	0.100000E+01	0.700000E+01
43	0.267980E+02	0.266601E+02	0.138E+00	0.517214E+00	0.315000E+03	0.100000E+01	0.600000E+01
44	-0.209260E+00	-0.205444E+00	-0.382E-02	-0.185727E+01	0.315000E+03	0.100000E+01	0.700000E+01
45	0.252000E+02	0.250279E+02	0.172E+00	0.687556E+00	0.400000E+03	0.100000E+01	0.600000E+01
46	-0.207760E+00	-0.203396E+00	-0.436E-02	-0.214538E+01	0.400000E+03	0.100000E+01	0.700000E+01
47	0.236050E+02	0.234631E+02	0.142E+00	0.604620E+00	0.500000E+03	0.100000E+01	0.600000E+01

FDEM Sounding Results
Medicine Lake, California

48	-0.210260E+00	-0.203483E+00	-0.678E-02	-0.333068E+01	0.500000E+03	0.100000E+01	0.700000E+01
49	0.216110E+02	0.217233E+02	0.877E-01	0.403599E+00	0.630000E+03	0.100000E+01	0.600000E+01
50	-0.210210E+00	-0.205043E+00	-0.517E-02	-0.251972E+01	0.630000E+03	0.100000E+01	0.700000E+01
51	0.199930E+02	0.197473E+02	0.246E+00	0.124407E+01	0.800000E+03	0.100000E+01	0.600000E+01
52	-0.213020E+00	-0.206781E+00	-0.624E-02	-0.301721E+01	0.800000E+03	0.100000E+01	0.700000E+01
53	0.182300E+02	0.176915E+02	0.538E+00	0.304369E+01	0.100000E+04	0.100000E+01	0.600000E+01
54	-0.212110E+00	-0.206852E+00	-0.526E-02	-0.254207E+01	0.100000E+04	0.100000E+01	0.700000E+01
55	0.165310E+02	0.154514E+02	0.108E+01	0.698691E+01	0.125000E+04	0.100000E+01	0.600000E+01
56	-0.208760E+00	-0.203107E+00	-0.565E-02	-0.278310E+01	0.125000E+04	0.100000E+01	0.700000E+01
57	0.150110E+02	0.128891E+02	0.212E+01	0.164627E+02	0.160000E+04	0.100000E+01	0.600000E+01
58	-0.205830E+00	-0.191018E+00	-0.148E-01	-0.775414E+01	0.160000E+04	0.100000E+01	0.700000E+01
59	0.139960E+02	0.107538E+02	0.324E+01	0.301496E+02	0.200000E+04	0.100000E+01	0.600000E+01
60	-0.200830E+00	-0.171360E+00	-0.295E-01	-0.171975E+02	0.200000E+04	0.100000E+01	0.700000E+01

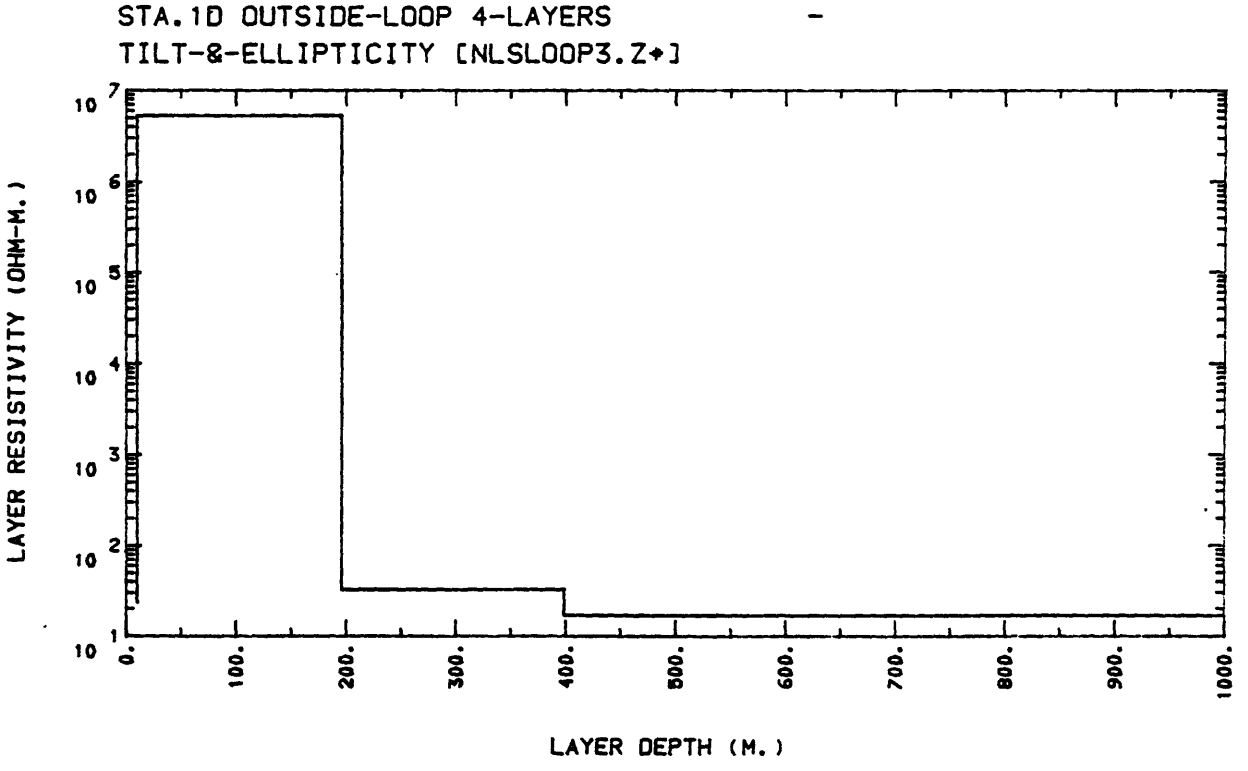
** RMSERR= 0.87525046E+00

CORRELATION MATRIX

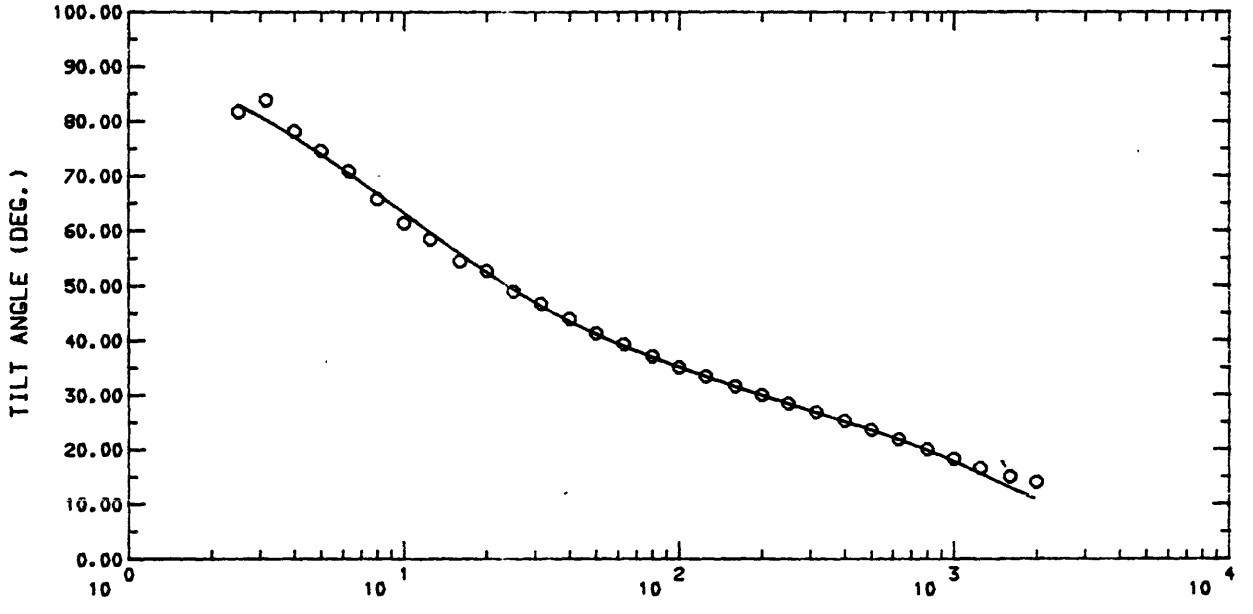
2	0.1000E+01				
3	-0.6357E+00	0.1000E+01			
4	-0.1314E+00	-0.5912E-01	0.1000E+01		
6	-0.6750E+00	0.8366E+00	-0.1161E+00	0.1000E+01	
7	-0.2693E+00	0.2886E+00	0.6703E+00	0.3599E-01	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
2	0.1893E-06	0.1414E-03	0.7470E+03	0.7470E+05
3	0.3087E-01	0.2286E-02	0.7404E-01	0.7404E+01
4	0.5970E-01	0.2332E-02	0.3906E-01	0.3906E+01
6	0.1860E+03	0.8256E-02	0.4439E-04	0.4439E-02
7	0.2027E+03	0.3322E-01	0.1639E-03	0.1639E-01

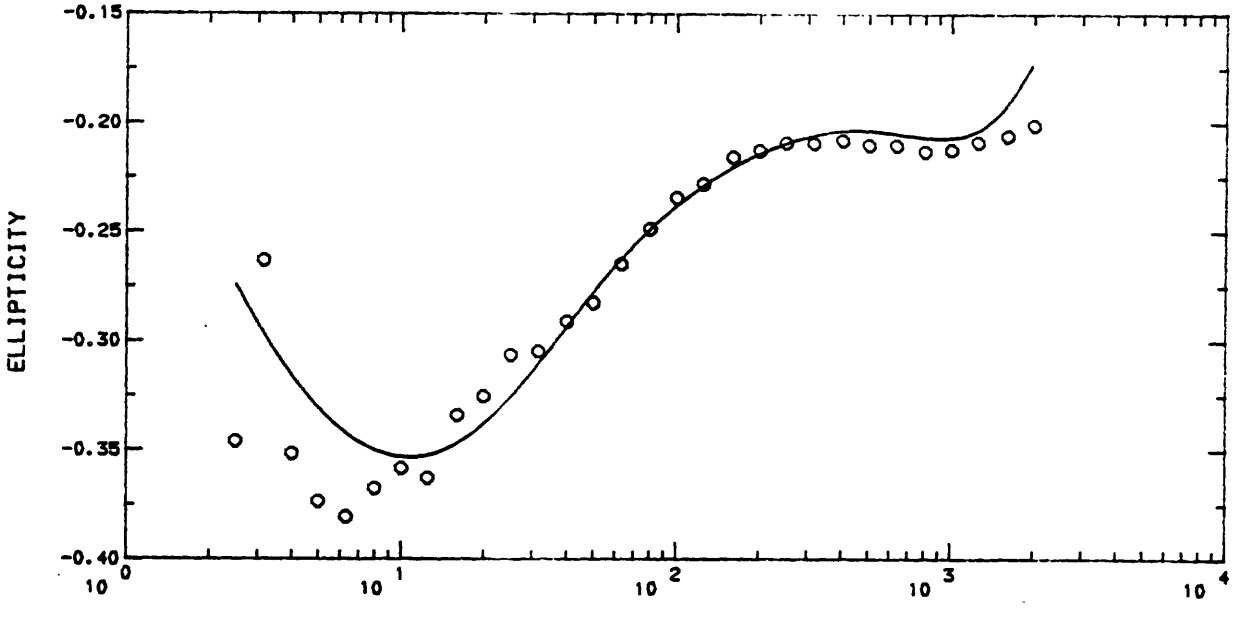
PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.41985039E-01	1	0.23818008E+02		
2	SIGMA(2) =	0.18932491E-06	2	0.52819250E+07		
3	SIGMA(3) =	0.30872418E-01	3	0.32391373E+02		
4	SIGMA(4) =	0.59695363E-01	4	0.16751720E+02		
5	THICK(1) =	0.10064431E+02			1	0.10064431E+02
6	THICK(2) =	0.18600168E+03			2	0.19606612E+03
7	THICK(3) =	0.20268385E+03			3	0.39874997E+03
8	SHIFT =	0.83807144E+01				



STA.1D OUTSIDE-LOOP 4-LAYERS
TILT-&-ELLIPTICITY [NLSLOOP3.Z+]



STA.1D OUTSIDE-LOOP 4-LAYERS
TILT-&-ELLIPTICITY [NLSLOOP3.Z+]



{NLSLOOP3}: STA.1D OUTSIDE-LOOP 5-LAYERS RATIO=HR/HZ [NLSLOOP3.E*]

Y0= 0.18440E+04
IRATIO= 2, 1 PARM=-0.14000E+01 , 0.81800E+02
N= 60 K= 9 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.700010E+02	0.597423E+02	0.103E+02	0.171716E+02	0.250000E+01	0.100000E+01	0.200000E+01
2	0.374940E+00	0.229930E+00	0.145E+00	0.630670E+02	0.250000E+01	0.100000E+01	0.100000E+01
3	0.695250E+02	0.585064E+02	0.110E+02	0.188332E+02	0.315000E+01	0.100000E+01	0.200000E+01
4	0.283780E+00	0.274575E+00	0.920E-02	0.335241E+01	0.315000E+01	0.100000E+01	0.100000E+01
5	0.633690E+02	0.565827E+02	0.679E+01	0.119936E+02	0.400000E+01	0.100000E+01	0.200000E+01
6	0.408390E+00	0.326463E+00	0.819E-01	0.250955E+02	0.400000E+01	0.100000E+01	0.100000E+01
7	0.594300E+02	0.544037E+02	0.503E+01	0.923896E+01	0.500000E+01	0.100000E+01	0.200000E+01
8	0.461970E+00	0.379638E+00	0.823E-01	0.216869E+02	0.500000E+01	0.100000E+01	0.100000E+01
9	0.551660E+02	0.519230E+02	0.324E+01	0.624579E+01	0.630000E+01	0.100000E+01	0.200000E+01
10	0.510680E+00	0.438859E+00	0.718E-01	0.163653E+02	0.630000E+01	0.100000E+01	0.100000E+01
11	0.485580E+02	0.492795E+02	-0.722E+00	-0.146414E+01	0.800000E+01	0.100000E+01	0.200000E+01
12	0.573590E+00	0.504020E+00	0.696E-01	0.138031E+02	0.800000E+01	0.100000E+01	0.100000E+01
13	0.443320E+02	0.468262E+02	-0.249E+01	-0.532641E+01	0.100000E+02	0.100000E+01	0.200000E+01
14	0.640860E+00	0.568274E+00	0.726E-01	0.127731E+02	0.100000E+02	0.100000E+01	0.100000E+01
15	0.431230E+02	0.444475E+02	-0.132E+01	-0.297990E+01	0.125000E+02	0.100000E+01	0.200000E+01
16	0.696430E+00	0.635861E+00	0.606E-01	0.952552E+01	0.125000E+02	0.100000E+01	0.100000E+01
17	0.384600E+02	0.419080E+02	-0.345E+01	-0.822753E+01	0.160000E+02	0.100000E+01	0.200000E+01
18	0.767370E+00	0.714698E+00	0.527E-01	0.736975E+01	0.160000E+02	0.100000E+01	0.100000E+01
19	0.369960E+02	0.396595E+02	-0.266E+01	-0.671604E+01	0.200000E+02	0.100000E+01	0.200000E+01
20	0.803910E+00	0.789612E+00	0.143E-01	0.181078E+01	0.200000E+02	0.100000E+01	0.100000E+01
21	0.343030E+02	0.374110E+02	-0.311E+01	-0.830775E+01	0.250000E+02	0.100000E+01	0.200000E+01
22	0.891620E+00	0.867376E+00	0.242E-01	0.279506E+01	0.250000E+02	0.100000E+01	0.100000E+01
23	0.339100E+02	0.350476E+02	-0.114E+01	-0.324573E+01	0.315000E+02	0.100000E+01	0.200000E+01
24	0.953040E+00	0.949130E+00	0.391E-02	0.411969E+00	0.315000E+02	0.100000E+01	0.100000E+01
25	0.324380E+02	0.326112E+02	-0.173E+00	-0.531183E+00	0.400000E+02	0.100000E+01	0.200000E+01
26	0.102990E+01	0.103133E+01	-0.143E-02	-0.138705E+00	0.400000E+02	0.100000E+01	0.100000E+01
27	0.317310E+02	0.305132E+02	0.122E+01	0.399109E+01	0.500000E+02	0.100000E+01	0.200000E+01
28	0.111550E+01	0.110228E+01	0.132E-01	0.119962E+01	0.500000E+02	0.100000E+01	0.100000E+01
29	0.301160E+02	0.288142E+02	0.130E+01	0.451798E+01	0.630000E+02	0.100000E+01	0.200000E+01
30	0.118910E+01	0.116838E+01	0.207E-01	0.177382E+01	0.630000E+02	0.100000E+01	0.100000E+01
31	0.288250E+02	0.278273E+02	0.998E+00	0.358518E+01	0.800000E+02	0.100000E+01	0.200000E+01
32	0.127860E+01	0.123313E+01	0.455E-01	0.368769E+01	0.800000E+02	0.100000E+01	0.100000E+01
33	0.277990E+02	0.276092E+02	0.190E+00	0.687509E+00	0.100000E+03	0.100000E+01	0.200000E+01
34	0.137150E+01	0.129840E+01	0.731E-01	0.563027E+01	0.100000E+03	0.100000E+01	0.100000E+01
35	0.275980E+02	0.278219E+02	-0.224E+00	-0.804822E+00	0.125000E+03	0.100000E+01	0.200000E+01
36	0.145060E+01	0.137508E+01	0.755E-01	0.549177E+01	0.125000E+03	0.100000E+01	0.100000E+01
37	0.268760E+02	0.281805E+02	-0.130E+01	-0.462916E+01	0.160000E+03	0.100000E+01	0.200000E+01
38	0.154870E+01	0.147557E+01	0.731E-01	0.495596E+01	0.160000E+03	0.100000E+01	0.100000E+01
39	0.272380E+02	0.284138E+02	-0.118E+01	-0.413818E+01	0.200000E+03	0.100000E+01	0.200000E+01
40	0.164070E+01	0.157714E+01	0.636E-01	0.402990E+01	0.200000E+03	0.100000E+01	0.100000E+01
41	0.275730E+02	0.285917E+02	-0.102E+01	-0.356300E+01	0.250000E+03	0.100000E+01	0.200000E+01
42	0.173580E+01	0.168312E+01	0.527E-01	0.313015E+01	0.250000E+03	0.100000E+01	0.100000E+01
43	0.285380E+02	0.289381E+02	-0.400E+00	-0.138261E+01	0.315000E+03	0.100000E+01	0.200000E+01
44	0.183920E+01	0.179388E+01	0.453E-01	0.252609E+01	0.315000E+03	0.100000E+01	0.100000E+01
45	0.294060E+02	0.297239E+02	-0.318E+00	-0.106942E+01	0.400000E+03	0.100000E+01	0.200000E+01
46	0.195330E+01	0.191208E+01	0.412E-01	0.215553E+01	0.400000E+03	0.100000E+01	0.100000E+01
47	0.309450E+02	0.309627E+02	-0.177E-01	-0.570123E-01	0.500000E+03	0.100000E+01	0.200000E+01
48	0.207080E+01	0.203357E+01	0.372E-01	0.183064E+01	0.500000E+03	0.100000E+01	0.100000E+01
49	0.325210E+02	0.327369E+02	-0.216E+00	-0.659652E+00	0.630000E+03	0.100000E+01	0.200000E+01

50	0.222000E+01	0.218080E+01	0.392E-01	0.179772E+01	0.630000E+03	0.100000E+01	0.100000E+01
51	0.347800E+02	0.349842E+02	-0.204E+00	-0.583716E+00	0.800000E+03	0.100000E+01	0.200000E+01
52	0.237920E+01	0.236822E+01	0.110E-01	0.463746E+00	0.800000E+03	0.100000E+01	0.100000E+01
53	0.367780E+02	0.373005E+02	-0.523E+00	-0.140086E+01	0.100000E+04	0.100000E+01	0.200000E+01
54	0.255870E+01	0.258963E+01	-0.309E-01	-0.119433E+01	0.100000E+04	0.100000E+01	0.100000E+01
55	0.386670E+02	0.395894E+02	-0.922E+00	-0.232995E+01	0.125000E+04	0.100000E+01	0.200000E+01
56	0.276110E+01	0.287141E+01	-0.110E+00	-0.384173E+01	0.125000E+04	0.100000E+01	0.100000E+01
57	0.406680E+02	0.416859E+02	-0.102E+01	-0.244180E+01	0.160000E+04	0.100000E+01	0.200000E+01
58	0.296260E+01	0.327331E+01	-0.311E+00	-0.949210E+01	0.160000E+04	0.100000E+01	0.100000E+01
59	0.417240E+02	0.427705E+02	-0.105E+01	-0.244668E+01	0.200000E+04	0.100000E+01	0.200000E+01
60	0.312800E+01	0.372733E+01	-0.599E+00	-0.160792E+02	0.200000E+04	0.100000E+01	0.100000E+01

** RMSERR= 0.26549752E+01

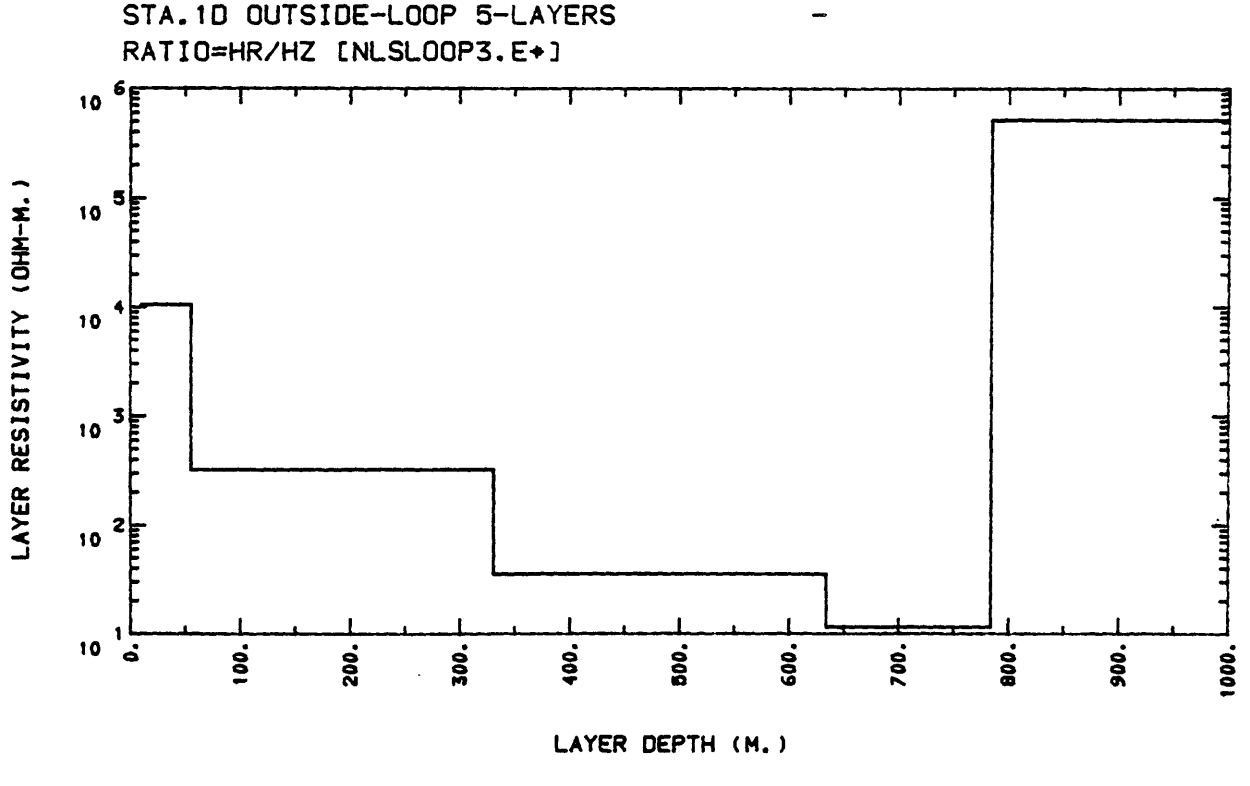
CORRELATION MATRIX

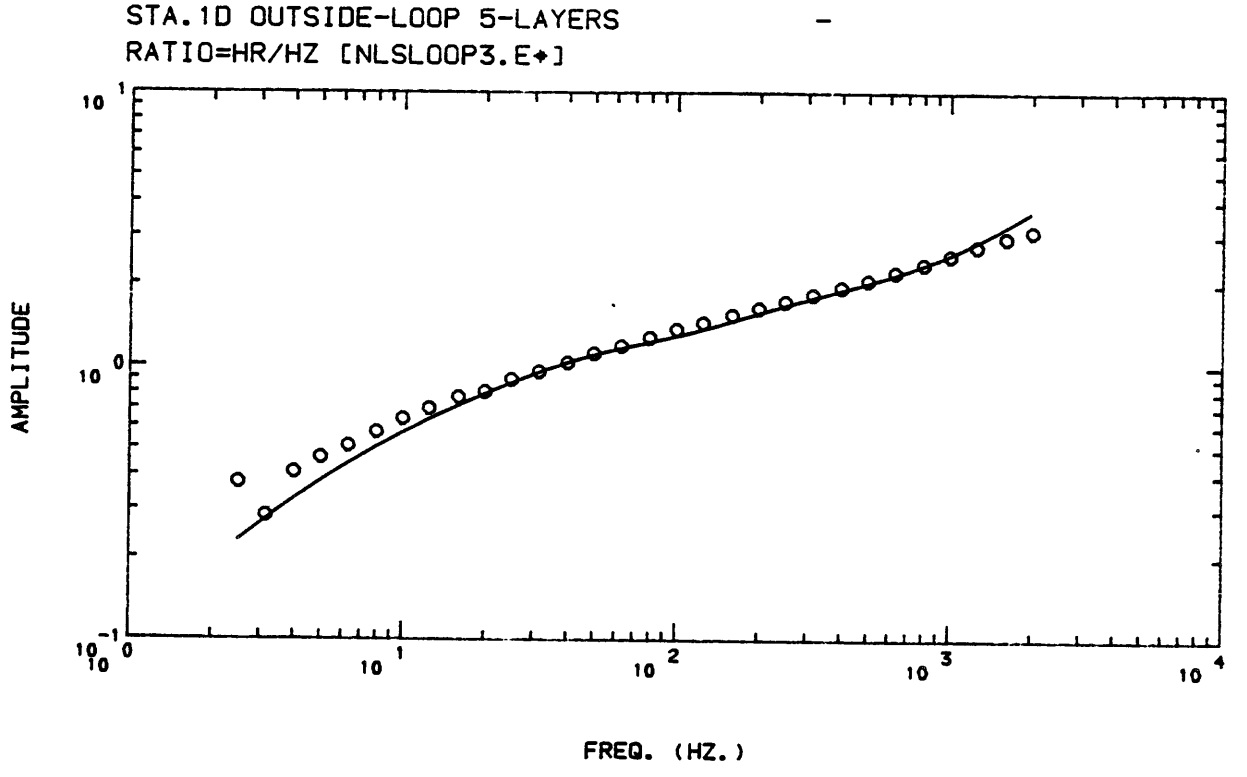
1	0.1000E+01							
2	0.6217E+00	0.1000E+01						
3	0.2207E+00	0.6093E+00	0.1000E+01					
4	0.5324E-01	0.4896E+00	0.9857E-01	0.1000E+01				
5	-0.3495E+00	-0.1138E+00	-0.2059E+00	0.1273E+00	0.1000E+01			
6	0.9453E+00	0.7813E+00	0.2971E+00	0.2892E+00	-0.2774E+00	0.1000E+01		
7	-0.9481E+00	-0.6547E+00	-0.1898E+00	-0.1251E+00	0.3110E+00	-0.8822E+00	0.1000E+01	
8	0.5167E-01	0.4470E+00	0.2229E+00	0.9024E+00	-0.2898E-01	0.2848E+00	-0.6590E-01	0.1000E+01
9	-0.3693E-01	-0.4924E+00	-0.1199E+00	-0.9948E+00	-0.1891E+00	-0.2841E+00	0.9459E-01	-0.9090E+00

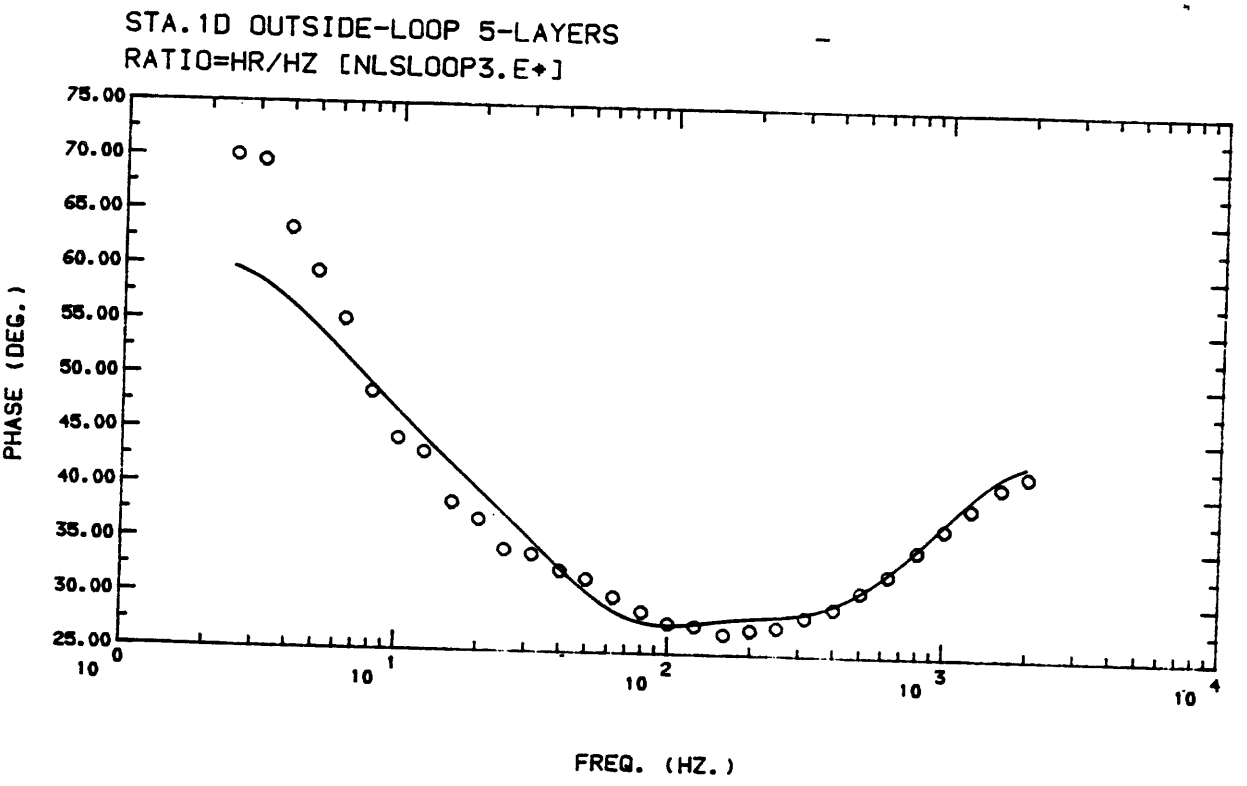
0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.9520E-04	0.2602E-01	0.2733E+03	0.2733E+05
2	0.3097E-02	0.1843E-02	0.5953E+00	0.5953E+02
3	0.2821E-01	0.4123E-02	0.1461E+00	0.1461E+02
4	0.8692E-01	0.6956E-01	0.8002E+00	0.8002E+02
5	0.1932E-05	0.4101E+00	0.2122E+06	0.2122E+08
6	0.5526E+02	0.1114E+00	0.2017E-02	0.2017E+00
7	0.2755E+03	0.5595E-01	0.2031E-03	0.2031E-01
8	0.3032E+03	0.1191E+00	0.3929E-03	0.3929E-01
9	0.1501E+03	0.3946E+00	0.2629E-02	0.2629E+00

PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH
1	SIGMA(1) =	0.95197298E-04	1	0.10504500E+05	
2	SIGMA(2) =	0.30965800E-02	2	0.32293692E+03	
3	SIGMA(3) =	0.28214891E-01	3	0.35442280E+02	
4	SIGMA(4) =	0.86920284E-01	4	0.11504794E+02	
5	SIGMA(5) =	0.19319905E-05	5	0.51760091E+06	
6	THICK(1) =	0.55256096E+02			1 0.55256096E+02
7	THICK(2) =	0.27547098E+03			2 0.33072708E+03
8	THICK(3) =	0.30319806E+03			3 0.63392517E+03
9	THICK(4) =	0.15006169E+03			4 0.78398688E+03




STA.1D OUTSIDE-LOOP 5-LAYERS
RATIO=HR/HZ [NLSLOOP3.E◆]
AMPLITUDE
FREQ. (HZ.)


STA.1D OUTSIDE-LOOP 5-LAYERS
RATIO=HR/HZ [NLSLOOP3.E◆]
PHASE (DEG.)
FREQ. (HZ.)

<NLSHRZREC>: STA.58 NEAR-LOOP 3-LAYERS ELLIPTICITY [NLSHRZREC.B*]

XO = 149.0000
YO = 305.6000
AX = 228.6000
BY = 228.6000
IRATIO = 0,0
PARM = 5.400000
N= 28 K= 5 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 2

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.123120E-01	-0.372429E-02	-0.859E-02	-0.230586E+03	0.400000E+01	0.100000E+01	0.700000E+01
2	-0.485250E-02	-0.458889E-02	-0.264E-03	-0.574463E+01	0.500000E+01	0.100000E+01	0.700000E+01
3	-0.981490E-02	-0.568087E-02	-0.413E-02	-0.727712E+02	0.630000E+01	0.100000E+01	0.700000E+01
4	-0.741360E-02	-0.705973E-02	-0.354E-03	-0.501255E+01	0.800000E+01	0.100000E+01	0.700000E+01
5	-0.840050E-02	-0.861831E-02	0.218E-03	0.252734E+01	0.100000E+02	0.100000E+01	0.700000E+01
6	-0.112570E-01	-0.104814E-01	-0.776E-03	-0.739945E+01	0.125000E+02	0.100000E+01	0.700000E+01
7	-0.119550E-01	-0.129525E-01	0.997E-03	0.770099E+01	0.160000E+02	0.100000E+01	0.700000E+01
8	-0.140360E-01	-0.156098E-01	0.157E-02	0.100820E+02	0.200000E+02	0.100000E+01	0.700000E+01
9	-0.165650E-01	-0.187225E-01	0.216E-02	0.115235E+02	0.250000E+02	0.100000E+01	0.700000E+01
10	-0.208080E-01	-0.224848E-01	0.168E-02	0.745730E+01	0.315000E+02	0.100000E+01	0.700000E+01
11	-0.262990E-01	-0.270176E-01	0.719E-03	0.265974E+01	0.400000E+02	0.100000E+01	0.700000E+01
12	-0.310880E-01	-0.319135E-01	0.825E-03	0.258663E+01	0.500000E+02	0.100000E+01	0.700000E+01
13	-0.355020E-01	-0.377428E-01	0.224E-02	0.593703E+01	0.630000E+02	0.100000E+01	0.700000E+01
14	-0.438110E-01	-0.446934E-01	0.882E-03	0.197439E+01	0.800000E+02	0.100000E+01	0.700000E+01
15	-0.514860E-01	-0.521709E-01	0.685E-03	0.131278E+01	0.100000E+03	0.100000E+01	0.700000E+01
16	-0.634500E-01	-0.607707E-01	-0.268E-02	-0.440894E+01	0.125000E+03	0.100000E+01	0.700000E+01
17	-0.740720E-01	-0.718555E-01	-0.222E-02	-0.308464E+01	0.160000E+03	0.100000E+01	0.700000E+01
18	-0.875730E-01	-0.835963E-01	-0.398E-02	-0.475698E+01	0.200000E+03	0.100000E+01	0.700000E+01
19	-0.989640E-01	-0.973146E-01	-0.165E-02	-0.169489E+01	0.250000E+03	0.100000E+01	0.700000E+01
20	-0.113310E+00	-0.113999E+00	0.689E-03	0.604755E+00	0.315000E+03	0.100000E+01	0.700000E+01
21	-0.133770E+00	-0.134312E+00	0.542E-03	0.403648E+00	0.400000E+03	0.100000E+01	0.700000E+01
22	-0.159780E+00	-0.156382E+00	-0.340E-02	-0.217274E+01	0.500000E+03	0.100000E+01	0.700000E+01
23	-0.182680E+00	-0.182432E+00	-0.248E-03	-0.135884E+00	0.630000E+03	0.100000E+01	0.700000E+01
24	-0.210100E+00	-0.212353E+00	0.225E-02	0.106075E+01	0.800000E+03	0.100000E+01	0.700000E+01
25	-0.238390E+00	-0.242095E+00	0.370E-02	0.153029E+01	0.100000E+04	0.100000E+01	0.700000E+01
26	-0.266980E+00	-0.272103E+00	0.512E-02	0.188277E+01	0.125000E+04	0.100000E+01	0.700000E+01
27	-0.300800E+00	-0.303500E+00	0.270E-02	0.889544E+00	0.160000E+04	0.100000E+01	0.700000E+01
28	-0.338090E+00	-0.328518E+00	-0.957E-02	-0.291356E+01	0.200000E+04	0.100000E+01	0.700000E+01

** RMSERR= 0.35180349E-02

CORRELATION MATRIX

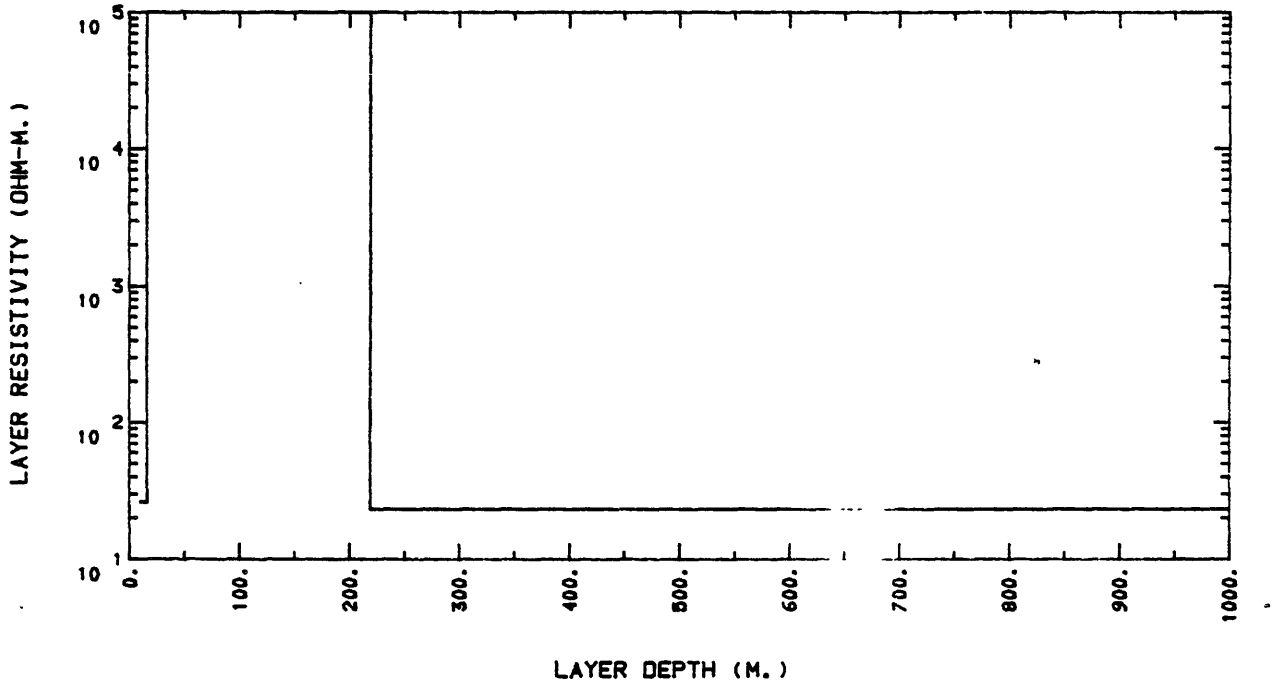
1	0.1000E+01			
3	-0.5226E+00	0.1000E+01		
4	-0.9999E+00	0.5266E+00	0.1000E+01	
5	0.7306E+00	0.8304E-01	-0.7271E+00	0.1000E+01

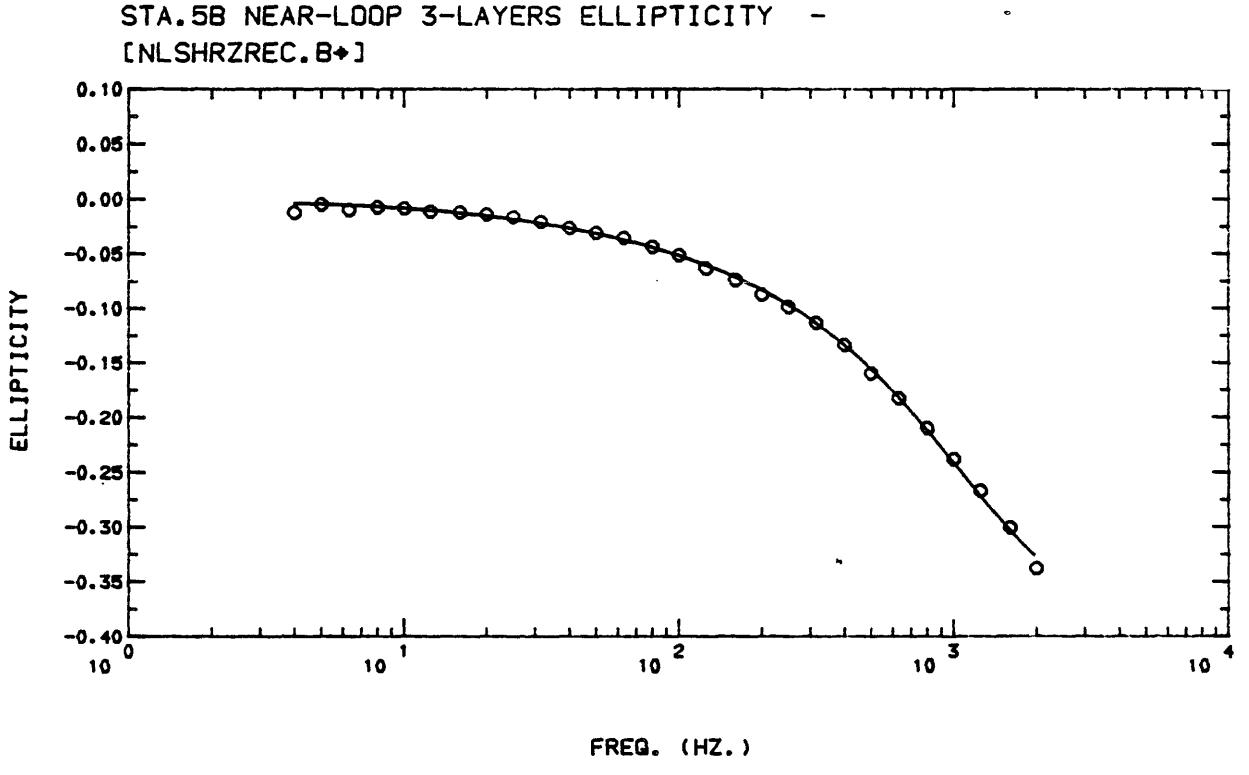
	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.3796E-01	0.1925E-01	0.5071E+00	0.5071E+02
3	0.4299E-01	0.2653E-02	0.6172E-01	0.6172E+01
4	0.1602E+02	0.9770E-01	0.6099E-02	0.6099E+00
5	0.2030E+03	0.1804E-01	0.8889E-04	0.8889E-02

PARAMETER NAME FINAL SOLUTION RESISTIVITY LAYER DEPTH

1	SIGMA(1) =	0.37955511E-01	1	0.26346636E+02		
2	SIGMA(2) =	0.99999997E-05	2	0.10000000E+06		
3	SIGMA(3) =	0.42989437E-01	3	0.23261528E+02		
4	THICK(1) =	0.16019932E+02			1	0.16019932E+02
5	THICK(2) =	0.20295128E+03			2	0.21897121E+03

STA.5B NEAR-LOOP 3-LAYERS ELLIPTICITY -
[NLSHRZREC.B♦]




STA.5B NEAR-LOOP 3-LAYERS ELLIPTICITY -
[NLSHRZREC.B♦]
ELLIPTICITY
0.10
0.05
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

<NLSHRZREC>: STA.5B NEAR-LOOP 3-LAYERS TILT-&-ELLIPTICITY [NLSHRZREC.C*]

XO = 149.0000
YO = 305.6000
AX = 228.6000
BY = 228.6000
IRATIO = 0,0
PARM = 5.400000
N= 56 K= 6 IP= 2 M= 3

PARAMETERS HELD FIXED: IB= 2 6

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.790420E+02	0.793179E+02	-0.276E+00	-0.347862E+00	0.400000E+01	0.100000E+01	0.600000E+01
2	-0.123120E-01	-0.362782E-02	-0.868E-02	-0.239378E+03	0.400000E+01	0.100000E+01	0.700000E+01
3	0.789440E+02	0.793103E+02	-0.366E+00	-0.461879E+00	0.500000E+01	0.100000E+01	0.600000E+01
4	-0.485250E-02	-0.448617E-02	-0.366E-03	-0.816588E+01	0.500000E+01	0.100000E+01	0.700000E+01
5	0.789580E+02	0.792992E+02	-0.341E+00	-0.430310E+00	0.630000E+01	0.100000E+01	0.600000E+01
6	-0.981490E-02	-0.557727E-02	-0.424E-02	-0.759805E+02	0.630000E+01	0.100000E+01	0.700000E+01
7	0.790010E+02	0.792831E+02	-0.282E+00	-0.355800E+00	0.800000E+01	0.100000E+01	0.600000E+01
8	-0.741360E-02	-0.696496E-02	-0.449E-03	-0.644131E+01	0.800000E+01	0.100000E+01	0.700000E+01
9	0.788900E+02	0.792620E+02	-0.372E+00	-0.469370E+00	0.100000E+02	0.100000E+01	0.600000E+01
10	-0.840050E-02	-0.854549E-02	0.145E-03	0.169671E+01	0.100000E+02	0.100000E+01	0.700000E+01
11	0.790610E+02	0.792334E+02	-0.172E+00	-0.217577E+00	0.125000E+02	0.100000E+01	0.600000E+01
12	-0.112570E-01	-0.104495E-01	-0.808E-03	-0.772790E+01	0.125000E+02	0.100000E+01	0.700000E+01
13	0.790110E+02	0.791899E+02	-0.179E+00	-0.225915E+00	0.160000E+02	0.100000E+01	0.600000E+01
14	-0.119550E-01	-0.129953E-01	0.104E-02	0.800494E+01	0.160000E+02	0.100000E+01	0.700000E+01
15	0.789250E+02	0.791367E+02	-0.212E+00	-0.267570E+00	0.200000E+02	0.100000E+01	0.600000E+01
16	-0.140360E-01	-0.157540E-01	0.172E-02	0.109050E+02	0.200000E+02	0.100000E+01	0.700000E+01
17	0.788830E+02	0.790668E+02	-0.184E+00	-0.232423E+00	0.250000E+02	0.100000E+01	0.600000E+01
18	-0.165650E-01	-0.190062E-01	0.244E-02	0.128443E+02	0.250000E+02	0.100000E+01	0.700000E+01
19	0.786350E+02	0.789722E+02	-0.337E+00	-0.427039E+00	0.315000E+02	0.100000E+01	0.600000E+01
20	-0.208080E-01	-0.229558E-01	0.215E-02	0.935631E+01	0.315000E+02	0.100000E+01	0.700000E+01
21	0.785920E+02	0.788456E+02	-0.254E+00	-0.321643E+00	0.400000E+02	0.100000E+01	0.600000E+01
22	-0.262990E-01	-0.277252E-01	0.143E-02	0.514403E+01	0.400000E+02	0.100000E+01	0.700000E+01
23	0.784030E+02	0.786955E+02	-0.292E+00	-0.371632E+00	0.500000E+02	0.100000E+01	0.600000E+01
24	-0.310880E-01	-0.328686E-01	0.178E-02	0.541735E+01	0.500000E+02	0.100000E+01	0.700000E+01
25	0.782890E+02	0.785021E+02	-0.213E+00	-0.271405E+00	0.630000E+02	0.100000E+01	0.600000E+01
26	-0.355020E-01	-0.389543E-01	0.345E-02	0.886240E+01	0.630000E+02	0.100000E+01	0.700000E+01
27	0.780960E+02	0.782559E+02	-0.160E+00	-0.204345E+00	0.800000E+02	0.100000E+01	0.600000E+01
28	-0.438110E-01	-0.461206E-01	0.231E-02	0.500764E+01	0.800000E+02	0.100000E+01	0.700000E+01
29	0.779500E+02	0.779785E+02	-0.285E-01	-0.366116E-01	0.100000E+03	0.100000E+01	0.600000E+01
30	-0.514860E-01	-0.536945E-01	0.221E-02	0.411311E+01	0.100000E+03	0.100000E+01	0.700000E+01
31	0.777830E+02	0.776509E+02	0.132E+00	0.170124E+00	0.125000E+03	0.100000E+01	0.600000E+01
32	-0.634500E-01	-0.621919E-01	-0.126E-02	-0.202296E+01	0.125000E+03	0.100000E+01	0.700000E+01
33	0.773370E+02	0.772247E+02	0.112E+00	0.145446E+00	0.160000E+03	0.100000E+01	0.600000E+01
34	-0.740720E-01	-0.728141E-01	-0.126E-02	-0.172757E+01	0.160000E+03	0.100000E+01	0.700000E+01
35	0.769640E+02	0.767764E+02	0.188E+00	0.244375E+00	0.200000E+03	0.100000E+01	0.600000E+01
36	-0.875730E-01	-0.836949E-01	-0.388E-02	-0.463359E+01	0.200000E+03	0.100000E+01	0.700000E+01
37	0.764000E+02	0.762519E+02	0.148E+00	0.194217E+00	0.250000E+03	0.100000E+01	0.600000E+01
38	-0.989640E-01	-0.974922E-01	-0.147E-02	-0.150969E+01	0.250000E+03	0.100000E+01	0.700000E+01
39	0.757540E+02	0.756319E+02	0.122E+00	0.161491E+00	0.315000E+03	0.100000E+01	0.600000E+01
40	-0.113310E+00	-0.112411E+00	-0.899E-03	-0.799886E+00	0.315000E+03	0.100000E+01	0.700000E+01
41	0.749160E+02	0.748808E+02	0.352E-01	0.469598E-01	0.400000E+03	0.100000E+01	0.600000E+01
42	-0.133770E+00	-0.130204E+00	-0.357E-02	-0.273901E+01	0.400000E+03	0.100000E+01	0.700000E+01
43	0.741310E+02	0.740489E+02	0.821E-01	0.110842E+00	0.500000E+03	0.100000E+01	0.600000E+01

44	-0.159780E+00	-0.149343E+00	-0.104E-01	-0.698834E+01	0.500000E+03	0.100000E+01	0.700000E+01
45	0.729150E+02	0.730110E+02	-0.960E-01	-0.132333E+00	0.630000E+03	0.100000E+01	0.600000E+01
46	-0.182680E+00	-0.171983E+00	-0.107E-01	-0.621985E+01	0.630000E+03	0.100000E+01	0.700000E+01
47	0.714070E+02	0.716906E+02	-0.284E+00	-0.395610E+00	0.800000E+03	0.100000E+01	0.600000E+01
48	-0.210100E+00	-0.198418E+00	-0.117E-01	-0.588768E+01	0.800000E+03	0.100000E+01	0.700000E+01
49	0.698680E+02	0.701624E+02	-0.294E+00	-0.419635E+00	0.100000E+04	0.100000E+01	0.600000E+01
50	-0.238390E+00	-0.225530E+00	-0.129E-01	-0.570208E+01	0.100000E+04	0.100000E+01	0.700000E+01
51	0.680360E+02	0.682877E+02	-0.252E+00	-0.368545E+00	0.125000E+04	0.100000E+01	0.600000E+01
52	-0.266980E+00	-0.254145E+00	-0.128E-01	-0.505038E+01	0.125000E+04	0.100000E+01	0.700000E+01
53	0.658630E+02	0.657582E+02	0.105E+00	0.159426E+00	0.160000E+04	0.100000E+01	0.600000E+01
54	-0.300800E+00	-0.285985E+00	-0.148E-01	-0.518047E+01	0.160000E+04	0.100000E+01	0.700000E+01
55	0.636070E+02	0.630542E+02	0.553E+00	0.876778E+00	0.200000E+04	0.100000E+01	0.600000E+01
56	-0.338090E+00	-0.313242E+00	-0.248E-01	-0.793257E+01	0.200000E+04	0.100000E+01	0.700000E+01

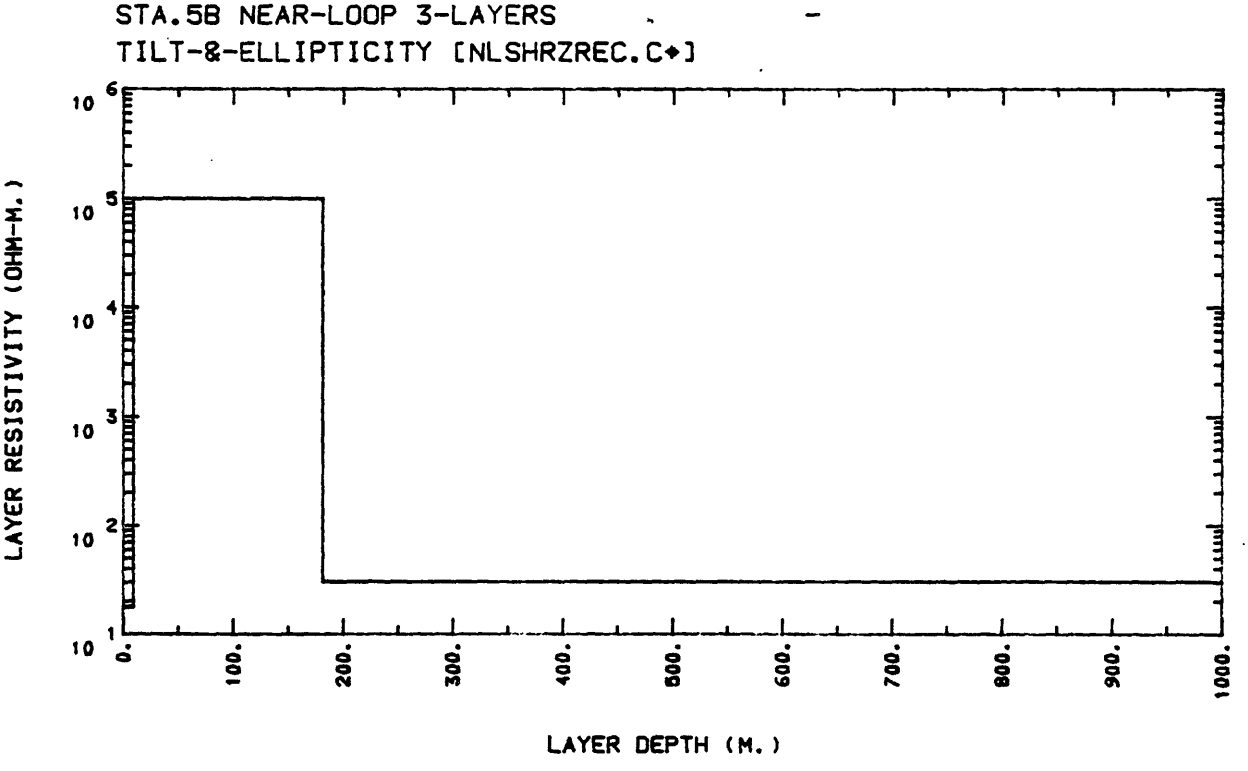
** RMSERR= 0.18020536E+00

CORRELATION MATRIX

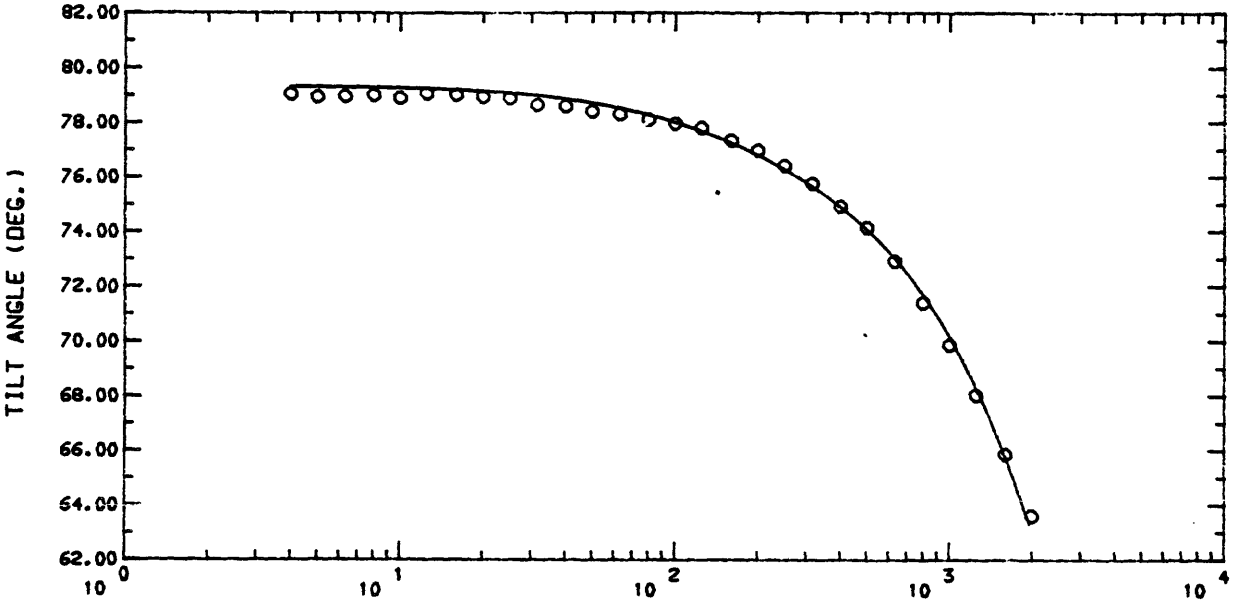
1	0.1000E+01			
3	0.1474E+00	0.1000E+01		
4	-0.9999E+00	-0.1385E+00	0.1000E+01	
5	0.8299E+00	0.6033E+00	-0.8234E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.5640E-01	0.2838E-01	0.5032E+00	0.5032E+02
3	0.3301E-01	0.1949E-02	0.5905E-01	0.5905E+01
4	0.9272E+01	0.6835E-01	0.7372E-02	0.7372E+00
5	0.1720E+03	0.1740E-01	0.1011E-03	0.1011E-01

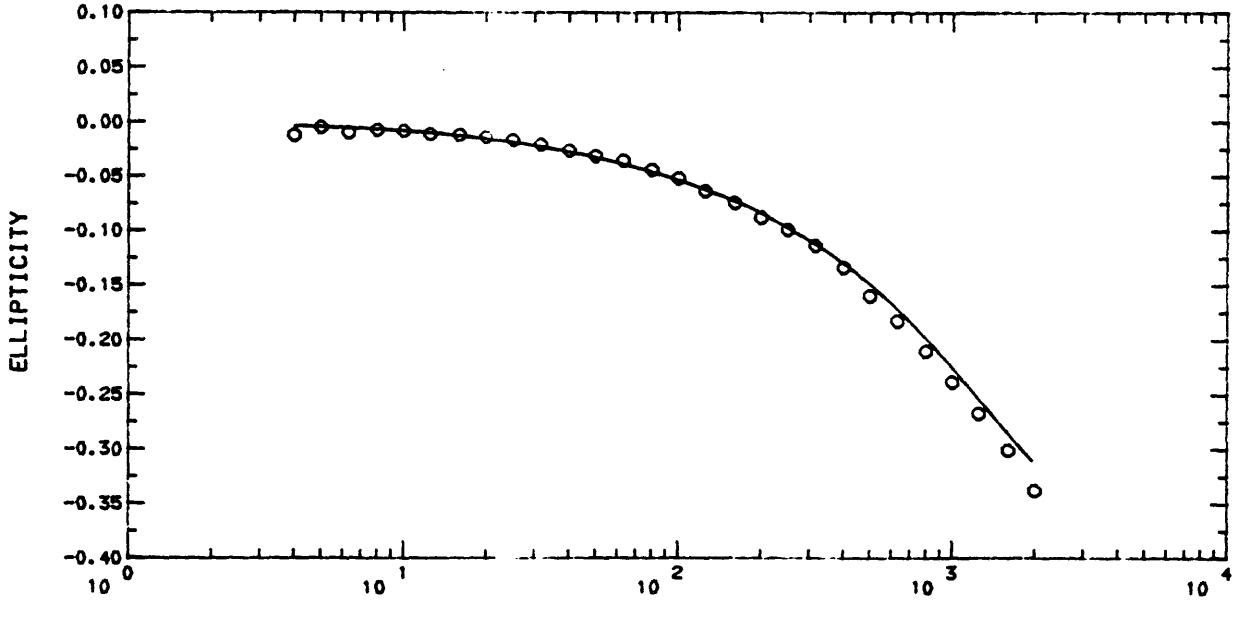
	PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1)	=	0.56395639E-01	1	0.17731867E+02		
2	SIGMA(2)	=	0.99999988E-05	2	0.10000001E+06		
3	SIGMA(3)	=	0.33005208E-01	3	0.30298248E+02		
4	THICK(1)	=	0.92715740E+01			1	0.92715740E+01
5	THICK(2)	=	0.17204120E+03			2	0.18131277E+03
6	SHIFT	=	-0.52643204E+01				



STA.5B NEAR-LOOP 3-LAYERS
TILT-&-ELLIPTICITY [NLSHRZREC.C+]



STA.5B NEAR-LOOP 3-LAYERS
TILT-&-ELLIPTICITY [NLSHRZREC.C+]



<NLSHRZREC>: STA.58 NEAR-LOOP 3-LAYERS RATIO=HR/HZ [NLSHRZREC.A*]

X0 = 149.0000
Y0 = 305.6000
AX = 228.6000
BY = 228.6000
IRATIO = 2,1
PARM = 5.400000
N= 56 K= 6 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.377000E+01	0.122039E+01	0.255E+01	0.208917E+03	0.400000E+01	0.100000E+01	0.200000E+01
2	0.194020E+00	0.189619E+00	0.440E-02	0.232086E+01	0.400000E+01	0.100000E+01	0.100000E+01
3	0.148000E+01	0.149273E+01	-0.127E-01	-0.852943E+00	0.500000E+01	0.100000E+01	0.200000E+01
4	0.195450E+00	0.189269E+00	0.558E-02	0.293962E+01	0.500000E+01	0.100000E+01	0.100000E+01
5	0.299000E+01	0.183491E+01	0.116E+01	0.629505E+02	0.630000E+01	0.100000E+01	0.200000E+01
6	0.195400E+00	0.190169E+00	0.523E-02	0.275080E+01	0.630000E+01	0.100000E+01	0.100000E+01
7	0.227000E+01	0.225791E+01	0.121E-01	0.535375E+00	0.800000E+01	0.100000E+01	0.200000E+01
8	0.194500E+00	0.190642E+00	0.386E-02	0.202353E+01	0.800000E+01	0.100000E+01	0.100000E+01
9	0.254000E+01	0.272980E+01	-0.190E+00	-0.695288E+01	0.100000E+02	0.100000E+01	0.200000E+01
10	0.196550E+00	0.191208E+00	0.534E-02	0.279359E+01	0.100000E+02	0.100000E+01	0.100000E+01
11	0.346000E+01	0.328545E+01	0.175E+00	0.531296E+01	0.125000E+02	0.100000E+01	0.200000E+01
12	0.193600E+00	0.191938E+00	0.166E-02	0.866077E+00	0.125000E+02	0.100000E+01	0.100000E+01
13	0.366000E+01	0.400400E+01	-0.344E+00	-0.859136E+01	0.160000E+02	0.100000E+01	0.200000E+01
14	0.194550E+00	0.193039E+00	0.151E-02	0.782965E+00	0.160000E+02	0.100000E+01	0.100000E+01
15	0.426000E+01	0.476352E+01	-0.504E+00	-0.105703E+02	0.200000E+02	0.100000E+01	0.200000E+01
16	0.196250E+00	0.194288E+00	0.196E-02	0.100968E+01	0.200000E+02	0.100000E+01	0.100000E+01
17	0.500000E+01	0.562649E+01	-0.626E+00	-0.111346E+02	0.250000E+02	0.100000E+01	0.200000E+01
18	0.197190E+00	0.195924E+00	0.127E-02	0.646132E+00	0.250000E+02	0.100000E+01	0.100000E+01
19	0.615000E+01	0.665032E+01	-0.500E+00	-0.752328E+01	0.315000E+02	0.100000E+01	0.200000E+01
20	0.202060E+00	0.197989E+00	0.407E-02	0.205607E+01	0.315000E+02	0.100000E+01	0.100000E+01
21	0.773000E+01	0.784464E+01	-0.115E+00	-0.146142E+01	0.400000E+02	0.100000E+01	0.200000E+01
22	0.203490E+00	0.200698E+00	0.279E-02	0.139118E+01	0.400000E+02	0.100000E+01	0.100000E+01
23	0.898000E+01	0.910047E+01	-0.120E+00	-0.132378E+01	0.500000E+02	0.100000E+01	0.200000E+01
24	0.207550E+00	0.203793E+00	0.376E-02	0.184337E+01	0.500000E+02	0.100000E+01	0.100000E+01
25	0.101400E+02	0.105562E+02	-0.416E+00	-0.394270E+01	0.630000E+02	0.100000E+01	0.200000E+01
26	0.210310E+00	0.207669E+00	0.264E-02	0.127185E+01	0.630000E+02	0.100000E+01	0.100000E+01
27	0.122700E+02	0.122337E+02	0.363E-01	0.296703E+00	0.800000E+02	0.100000E+01	0.200000E+01
28	0.215290E+00	0.212560E+00	0.273E-02	0.128413E+01	0.800000E+02	0.100000E+01	0.100000E+01
29	0.141900E+02	0.139799E+02	0.210E+00	0.150272E+01	0.100000E+03	0.100000E+01	0.200000E+01
30	0.219570E+00	0.218073E+00	0.150E-02	0.686543E+00	0.100000E+03	0.100000E+01	0.100000E+01
31	0.171200E+02	0.159186E+02	0.120E+01	0.754698E+01	0.125000E+03	0.100000E+01	0.200000E+01
32	0.225610E+00	0.224691E+00	0.919E-03	0.408999E+00	0.125000E+03	0.100000E+01	0.100000E+01
33	0.192000E+02	0.183048E+02	0.895E+00	0.489045E+01	0.160000E+03	0.100000E+01	0.200000E+01
34	0.236540E+00	0.233645E+00	0.289E-02	0.123890E+01	0.160000E+03	0.100000E+01	0.100000E+01
35	0.218800E+02	0.206883E+02	0.119E+01	0.576050E+01	0.200000E+03	0.100000E+01	0.200000E+01
36	0.247490E+00	0.243643E+00	0.385E-02	0.157902E+01	0.200000E+03	0.100000E+01	0.100000E+01
37	0.236200E+02	0.232786E+02	0.341E+00	0.146639E+01	0.250000E+03	0.100000E+01	0.200000E+01
38	0.261300E+00	0.256002E+00	0.530E-02	0.206953E+01	0.250000E+03	0.100000E+01	0.100000E+01
39	0.257000E+02	0.261346E+02	-0.435E+00	-0.166288E+01	0.315000E+03	0.100000E+01	0.200000E+01
40	0.277920E+00	0.272071E+00	0.585E-02	0.214984E+01	0.315000E+03	0.100000E+01	0.100000E+01
41	0.284600E+02	0.291768E+02	-0.717E+00	-0.245679E+01	0.400000E+03	0.100000E+01	0.200000E+01
42	0.300700E+00	0.293225E+00	0.748E-02	0.254932E+01	0.400000E+03	0.100000E+01	0.100000E+01
43	0.319400E+02	0.319644E+02	-0.244E-01	-0.762417E-01	0.500000E+03	0.100000E+01	0.200000E+01
44	0.325770E+00	0.318268E+00	0.750E-02	0.235726E+01	0.500000E+03	0.100000E+01	0.100000E+01
45	0.339400E+02	0.346169E+02	-0.677E+00	-0.195528E+01	0.630000E+03	0.100000E+01	0.200000E+01

46	0.357000E+00	0.350745E+00	0.625E-02	0.178322E+01	0.630000E+03	0.100000E+01	0.100000E+01
47	0.360300E+02	0.360097E+02	-0.330E+00	-0.238328E+01	0.800000E+03	0.100000E+01	0.200000E+01
48	0.395620E+00	0.392360E+00	0.326E-02	0.830989E+00	0.800000E+03	0.100000E+01	0.100000E+01
49	0.380300E+02	0.384883E+02	-0.458E+00	-0.119066E+01	0.100000E+04	0.100000E+01	0.200000E+01
50	0.435620E+00	0.439192E+00	-0.357E-02	-0.813201E+00	0.100000E+04	0.100000E+01	0.100000E+01
51	0.396500E+02	0.394441E+02	0.206E+00	0.522039E+00	0.125000E+04	0.100000E+01	0.200000E+01
52	0.480920E+00	0.493720E+00	-0.128E-01	-0.259249E+01	0.125000E+04	0.100000E+01	0.100000E+01
53	0.415500E+02	0.397830E+02	0.177E+01	0.444164E+01	0.160000E+04	0.100000E+01	0.200000E+01
54	0.534870E+00	0.562286E+00	-0.274E-01	-0.487587E+01	0.160000E+04	0.100000E+01	0.100000E+01
55	0.437900E+02	0.395233E+02	0.427E+01	0.107954E+02	0.200000E+04	0.100000E+01	0.200000E+01
56	0.592180E+00	0.630558E+00	-0.384E-01	-0.608629E+01	0.200000E+04	0.100000E+01	0.100000E+01

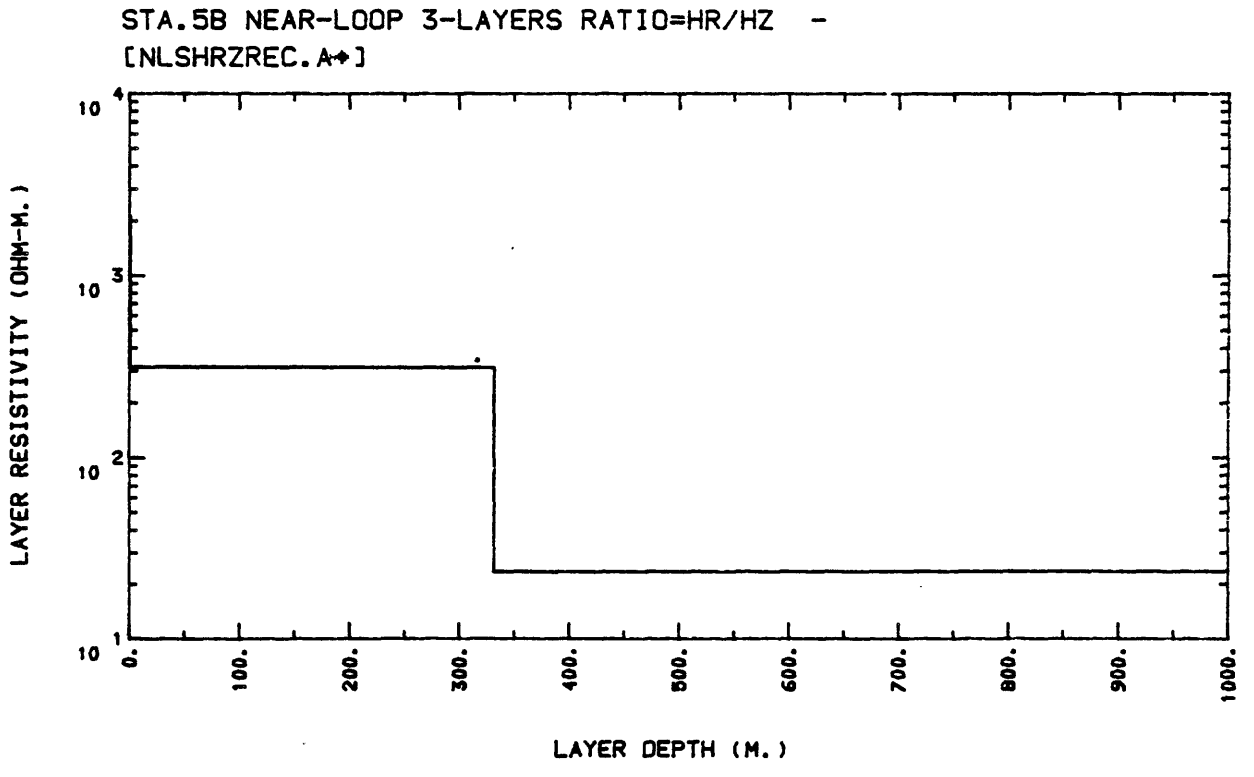
** RMSERR= 0.85395139E+00

CORRELATION MATRIX

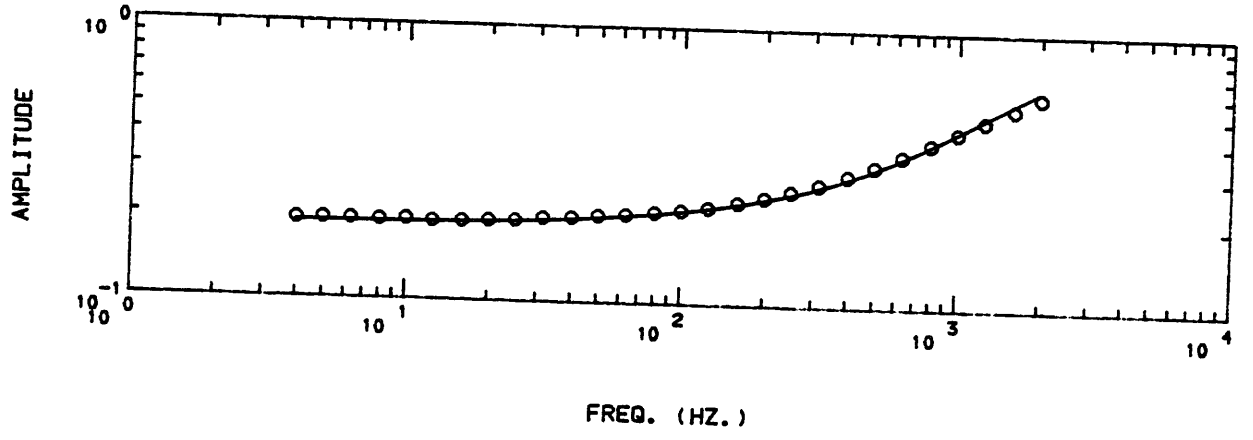
1	0.1000E+01					
2	-0.1498E-01	0.1000E+01				
3	0.6910E-01	0.4957E+00	0.1000E+01			
4	0.1851E+00	0.8151E+00	0.3978E+00	0.1000E+01		
5	0.5715E-01	0.4895E+00	0.8261E+00	0.3708E+00	0.1000E+01	
6	-0.1267E-01	-0.5922E-01	-0.3343E-01	-0.2022E-01	-0.2214E-01	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.4717E-03	0.2044E-01	0.4333E+02	0.4333E+04
2	0.3184E-02	0.4707E-03	0.1478E+00	0.1478E+02
3	0.4250E-01	0.7524E-02	0.1770E+00	0.1770E+02
4	0.1000E+01	0.2906E+01	0.2905E+01	0.2905E+03
5	0.3308E+03	0.2124E-01	0.6421E-04	0.6421E-02
6	0.2000E+01	0.6415E-03	0.3207E-03	0.3207E-01

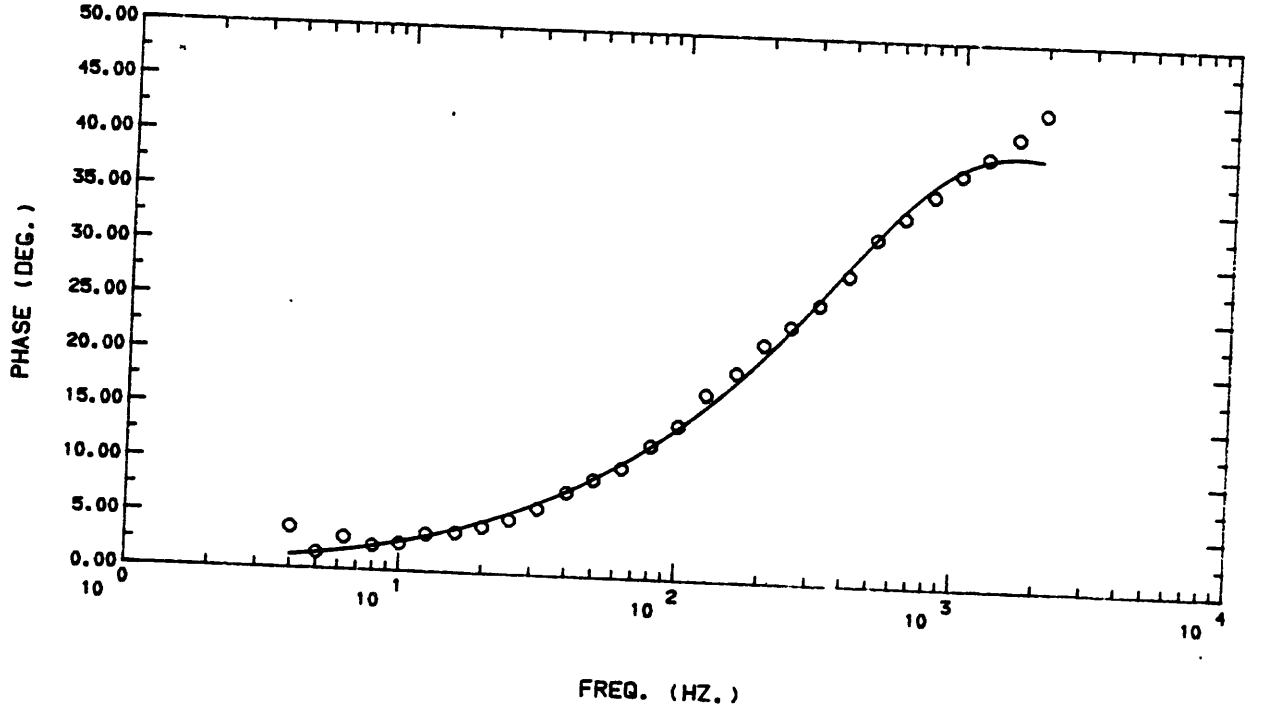
PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.47169812E-03	1	0.21200000E+04		
2	SIGMA(2) =	0.31841972E-02	2	0.31405090E+03		
3	SIGMA(3) =	0.42504285E-01	3	0.23527040E+02		
4	THICK(1) =	0.10003299E+01			1	0.10003299E+01
5	THICK(2) =	0.33077353E+03			2	0.33177386E+03
6	SHIFT =	0.20000005E+01				



STA.5B NEAR-LOOP 3-LAYERS RATIO=HR/HZ -
[NLSHRZREC.A◆]



STA.5B NEAR-LOOP 3-LAYERS RATIO=HR/HZ -
[NLSHRZREC.A◆]



(NLSLOOP3): STA.5C OUTSIDE-LOOP 4-LAYERS ELLIPTICITY [NLSLOOP3.3*]

Y0= 0.15090E+04
IRATIO= 0, 0 PARM= 0.54000E+01 , 0.31050E+01
N= 29 K= 7 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.167850E+00	-0.169322E+00	0.147E-02	0.869103E+00	0.315000E+01	0.100000E+01	0.700000E+01
2	-0.173950E+00	-0.170195E+00	-0.375E-02	-0.220606E+01	0.400000E+01	0.100000E+01	0.700000E+01
3	-0.170550E+00	-0.169523E+00	-0.103E-02	-0.605970E+00	0.500000E+01	0.100000E+01	0.700000E+01
4	-0.173950E+00	-0.167678E+00	-0.627E-02	-0.374033E+01	0.630000E+01	0.100000E+01	0.700000E+01
5	-0.154750E+00	-0.165029E+00	0.103E-01	0.622869E+01	0.800000E+01	0.100000E+01	0.700000E+01
6	-0.155010E+00	-0.162366E+00	0.736E-02	0.453030E+01	0.100000E+02	0.100000E+01	0.700000E+01
7	-0.168590E+00	-0.159991E+00	-0.860E-02	-0.537457E+01	0.125000E+02	0.100000E+01	0.700000E+01
8	-0.150420E+00	-0.158215E+00	0.779E-02	0.492667E+01	0.160000E+02	0.100000E+01	0.700000E+01
9	-0.169310E+00	-0.157784E+00	-0.115E-01	-0.730500E+01	0.200000E+02	0.100000E+01	0.700000E+01
10	-0.156500E+00	-0.158708E+00	0.227E-02	0.142822E+01	0.250000E+02	0.100000E+01	0.700000E+01
11	-0.165690E+00	-0.161495E+00	-0.420E-02	-0.259768E+01	0.315000E+02	0.100000E+01	0.700000E+01
12	-0.167170E+00	-0.166283E+00	-0.887E-03	-0.533135E+00	0.400000E+02	0.100000E+01	0.700000E+01
13	-0.188980E+00	-0.172597E+00	-0.164E-01	-0.949176E+01	0.500000E+02	0.100000E+01	0.700000E+01
14	-0.159350E+00	-0.180936E+00	0.216E-01	0.119301E+02	0.630000E+02	0.100000E+01	0.700000E+01
15	-0.192290E+00	-0.191281E+00	-0.101E-02	-0.527537E+00	0.800000E+02	0.100000E+01	0.700000E+01
16	-0.201150E+00	-0.202251E+00	0.110E-02	0.544198E+00	0.100000E+03	0.100000E+01	0.700000E+01
17	-0.219450E+00	-0.214151E+00	-0.530E-02	-0.247434E+01	0.125000E+03	0.100000E+01	0.700000E+01
18	-0.228340E+00	-0.227981E+00	-0.359E-03	-0.157331E+00	0.160000E+03	0.100000E+01	0.700000E+01
19	-0.244780E+00	-0.240693E+00	-0.409E-02	-0.169804E+01	0.200000E+03	0.100000E+01	0.700000E+01
20	-0.252810E+00	-0.253179E+00	0.369E-03	0.145857E+00	0.250000E+03	0.100000E+01	0.700000E+01
21	-0.262850E+00	-0.265285E+00	0.243E-02	0.917791E+00	0.315000E+03	0.100000E+01	0.700000E+01
22	-0.275390E+00	-0.276025E+00	0.635E-03	0.229997E+00	0.400000E+03	0.100000E+01	0.700000E+01
23	-0.283150E+00	-0.283518E+00	0.368E-03	0.129787E+00	0.500000E+03	0.100000E+01	0.700000E+01
24	-0.287130E+00	-0.288029E+00	0.899E-03	0.312220E+00	0.630000E+03	0.100000E+01	0.700000E+01
25	-0.291410E+00	-0.289380E+00	-0.203E-02	-0.701360E+00	0.800000E+03	0.100000E+01	0.700000E+01
26	-0.290180E+00	-0.288745E+00	-0.144E-02	-0.497128E+00	0.100000E+04	0.100000E+01	0.700000E+01
27	-0.287060E+00	-0.287850E+00	0.790E-03	0.274325E+00	0.125000E+04	0.100000E+01	0.700000E+01
28	-0.284950E+00	-0.287569E+00	0.262E-02	0.910737E+00	0.160000E+04	0.100000E+01	0.700000E+01
29	-0.289790E+00	-0.287095E+00	-0.269E-02	-0.938628E+00	0.200000E+04	0.100000E+01	0.700000E+01

** RMSERR= 0.77380445E-02

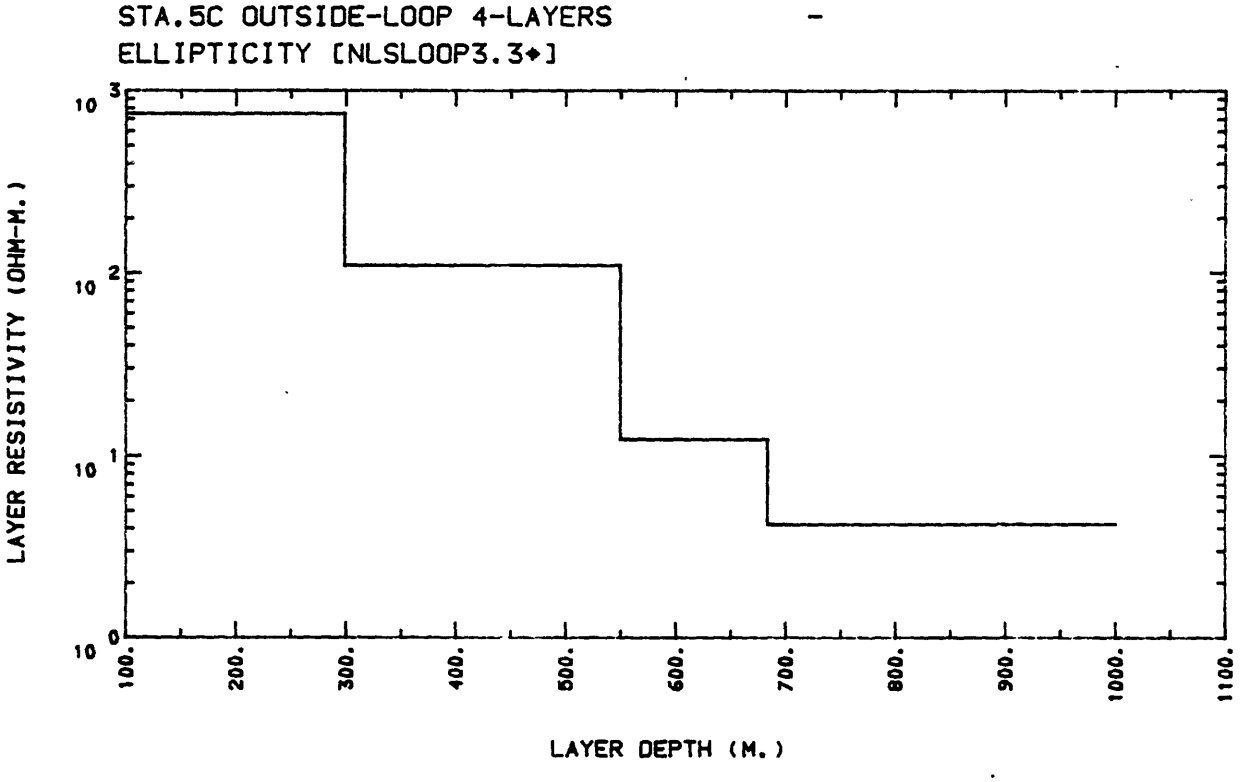
CORRELATION MATRIX

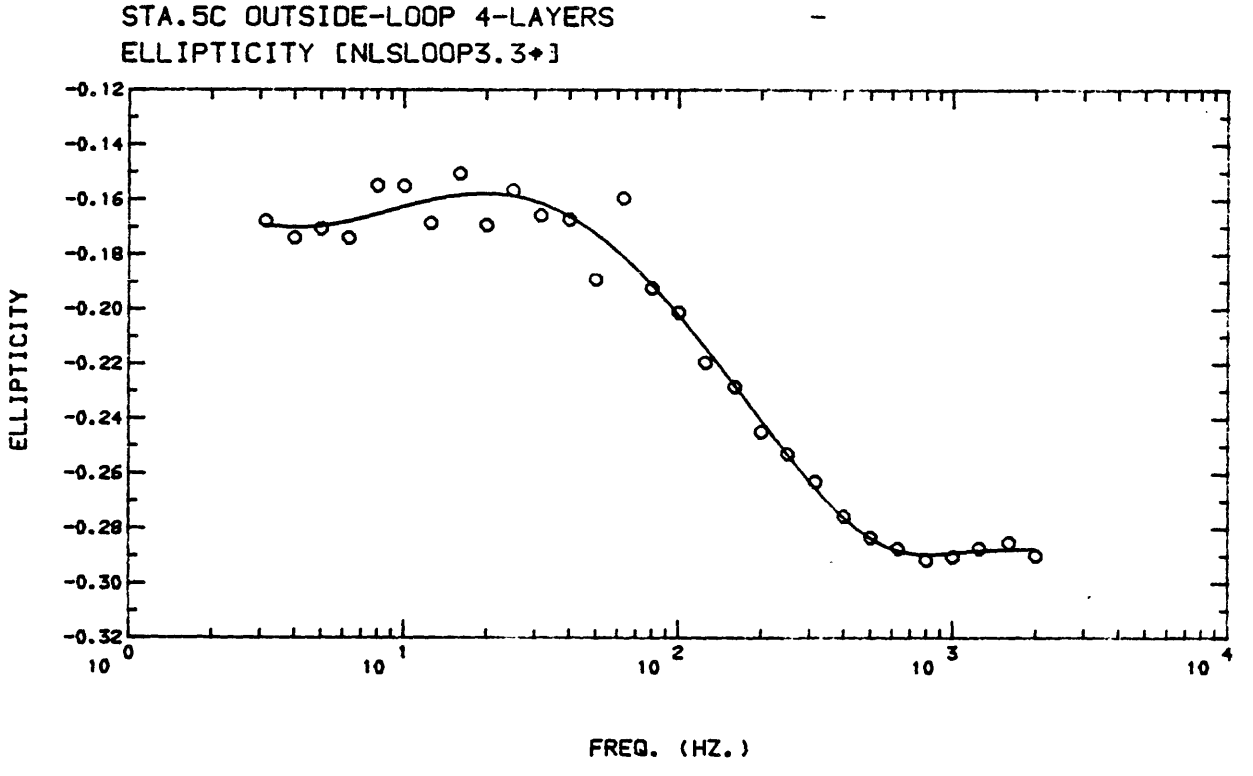
1	0.1000E+01						
2	0.8032E+00	0.1000E+01					
3	0.5492E+00	0.7121E+00	0.1000E+01				
4	0.9348E+00	0.7596E+00	0.6277E+00	0.1000E+01			
5	-0.3134E-01	0.4913E+00	0.2393E+00	-0.1120E+00	0.1000E+01		
6	-0.4041E+00	-0.1294E+00	0.4906E+00	-0.2886E+00	0.1306E+00	0.1000E+01	
7	0.1190E+00	-0.1470E+00	0.1525E+00	0.3080E+00	-0.4319E+00	-0.2683E-01	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.1338E-02	0.3021E-02	0.2257E+01	0.2257E+03
2	0.9115E-02	0.1098E-01	0.1205E+01	0.1205E+03
3	0.8161E-01	0.8042E-01	0.9854E+00	0.9854E+02
4	0.2376E+00	0.7051E-01	0.2968E+00	0.2968E+02
5	0.2988E+03	0.1525E-01	0.5103E-04	0.5103E-02
6	0.2508E+03	0.3146E-01	0.1255E-03	0.1255E-01
7	0.1339E+03	0.3094E-01	0.2312E-03	0.2312E-01

FDEM Sounding Results
Medicine Lake, California

PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.13384520E-02	1	0.74713177E+03		
2	SIGMA(2) =	0.91149295E-02	2	0.10971012E+03		
3	SIGMA(3) =	0.81611685E-01	3	0.12253147E+02		
4	SIGMA(4) =	0.23761101E+00	4	0.42085590E+01		
5	THICK(1) =	0.29876169E+03			1	0.29876169E+03
6	THICK(2) =	0.25078113E+03			2	0.54954285E+03
7	THICK(3) =	0.13385631E+03			3	0.68339917E+03




STA.5C OUTSIDE-LOOP 4-LAYERS
ELLIPTICITY [NLSLOOP3.3♦]
ELLIPTICITY
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
-0.28
-0.30
-0.32
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

(NLSLOOP3): STA.6b OUTSIDE-LOOP 4-LAYERS ELLIPTICITY [NLSLOOP3.V*]

Y0= 0.14940E+04
IRATIO= 0, 0 PARM=-0.18000E+01 , 0.10620E+03
N= 30 K= 7 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 4

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.334900E+00	-0.333893E+00	-0.101E-02	-0.301591E+00	0.250000E+01	0.100000E+01	0.700000E+01
2	-0.337120E+00	-0.346678E+00	0.956E-02	0.275706E+01	0.315000E+01	0.100000E+01	0.700000E+01
3	-0.351030E+00	-0.351870E+00	0.840E-03	0.238769E+00	0.400000E+01	0.100000E+01	0.700000E+01
4	-0.353930E+00	-0.349204E+00	-0.473E-02	-0.135337E+01	0.500000E+01	0.100000E+01	0.700000E+01
5	-0.347600E+00	-0.338953E+00	-0.865E-02	-0.255098E+01	0.630000E+01	0.100000E+01	0.700000E+01
6	-0.321300E+00	-0.320527E+00	-0.773E-03	-0.241207E+00	0.800000E+01	0.100000E+01	0.700000E+01
7	-0.298050E+00	-0.296654E+00	-0.140E-02	-0.470511E+00	0.100000E+02	0.100000E+01	0.700000E+01
8	-0.264560E+00	-0.267908E+00	0.335E-02	0.124952E+01	0.125000E+02	0.100000E+01	0.700000E+01
9	-0.231170E+00	-0.233894E+00	0.272E-02	0.116454E+01	0.160000E+02	0.100000E+01	0.700000E+01
10	-0.202380E+00	-0.205702E+00	0.332E-02	0.161492E+01	0.200000E+02	0.100000E+01	0.700000E+01
11	-0.182350E+00	-0.183674E+00	0.132E-02	0.720970E+00	0.250000E+02	0.100000E+01	0.700000E+01
12	-0.171190E+00	-0.168516E+00	-0.267E-02	-0.158664E+01	0.315000E+02	0.100000E+01	0.700000E+01
13	-0.156940E+00	-0.158842E+00	0.190E-02	0.119765E+01	0.400000E+02	0.100000E+01	0.700000E+01
14	-0.154770E+00	-0.152209E+00	-0.256E-02	-0.168286E+01	0.500000E+02	0.100000E+01	0.700000E+01
15	-0.143430E+00	-0.145835E+00	0.241E-02	0.164938E+01	0.630000E+02	0.100000E+01	0.700000E+01
16	-0.138910E+00	-0.139631E+00	0.721E-03	0.516080E+00	0.800000E+02	0.100000E+01	0.700000E+01
17	-0.137190E+00	-0.134882E+00	-0.231E-02	-0.171091E+01	0.100000E+03	0.100000E+01	0.700000E+01
18	-0.133990E+00	-0.131593E+00	-0.240E-02	-0.182125E+01	0.125000E+03	0.100000E+01	0.700000E+01
19	-0.130910E+00	-0.129539E+00	-0.137E-02	-0.105856E+01	0.160000E+03	0.100000E+01	0.700000E+01
20	-0.132020E+00	-0.128673E+00	-0.335E-02	-0.260096E+01	0.200000E+03	0.100000E+01	0.700000E+01
21	-0.129080E+00	-0.128226E+00	-0.854E-03	-0.666328E+00	0.250000E+03	0.100000E+01	0.700000E+01
22	-0.126780E+00	-0.127598E+00	0.818E-03	0.641447E+00	0.315000E+03	0.100000E+01	0.700000E+01
23	-0.123830E+00	-0.126036E+00	0.221E-02	0.175031E+01	0.400000E+03	0.100000E+01	0.700000E+01
24	-0.118740E+00	-0.123123E+00	0.438E-02	0.355947E+01	0.500000E+03	0.100000E+01	0.700000E+01
25	-0.114880E+00	-0.118305E+00	0.343E-02	0.289533E+01	0.630000E+03	0.100000E+01	0.700000E+01
26	-0.110910E+00	-0.111549E+00	0.639E-03	0.572676E+00	0.800000E+03	0.100000E+01	0.700000E+01
27	-0.107090E+00	-0.104210E+00	-0.288E-02	-0.276390E+01	0.100000E+04	0.100000E+01	0.700000E+01
28	-0.101650E+00	-0.967135E-01	-0.494E-02	-0.510427E+01	0.125000E+04	0.100000E+01	0.700000E+01
29	-0.941200E-01	-0.891915E-01	-0.493E-02	-0.552571E+01	0.160000E+04	0.100000E+01	0.700000E+01
30	-0.785810E-01	-0.837704E-01	0.519E-02	0.619483E+01	0.200000E+04	0.100000E+01	0.700000E+01

** RMSERR= 0.40487698E-02

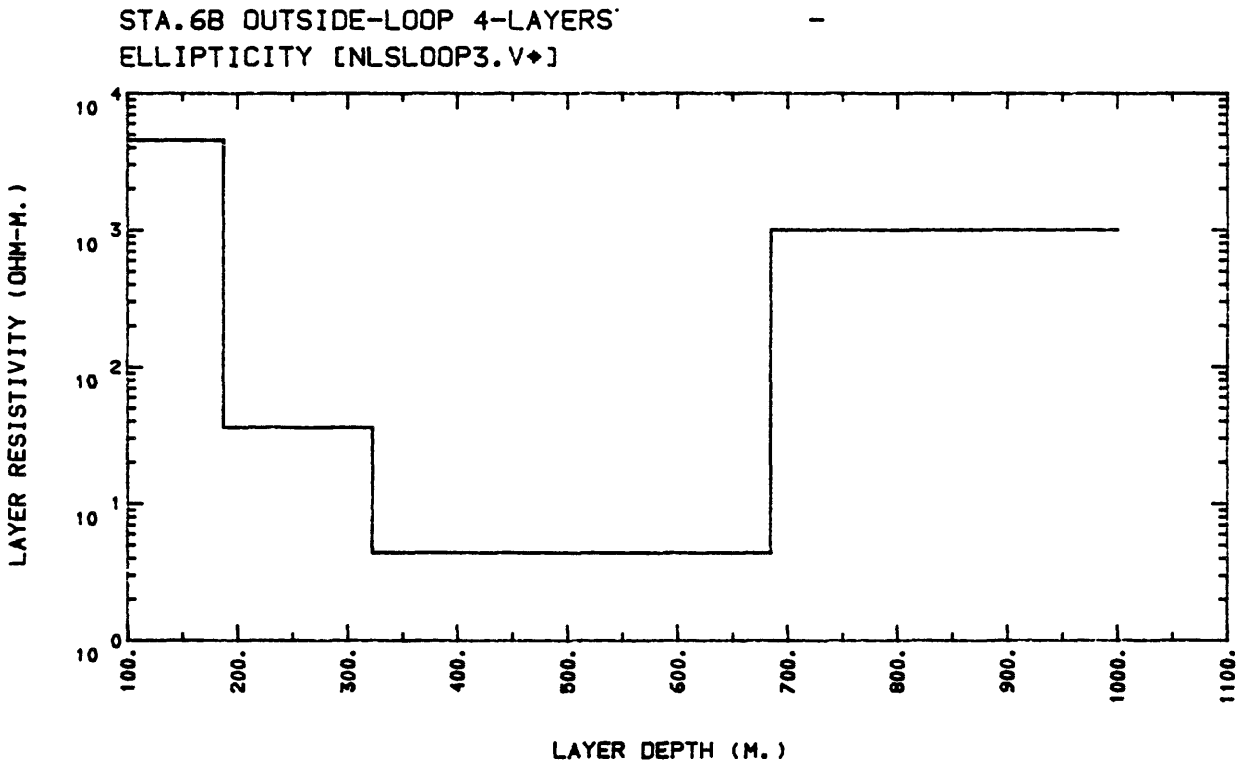
CORRELATION MATRIX

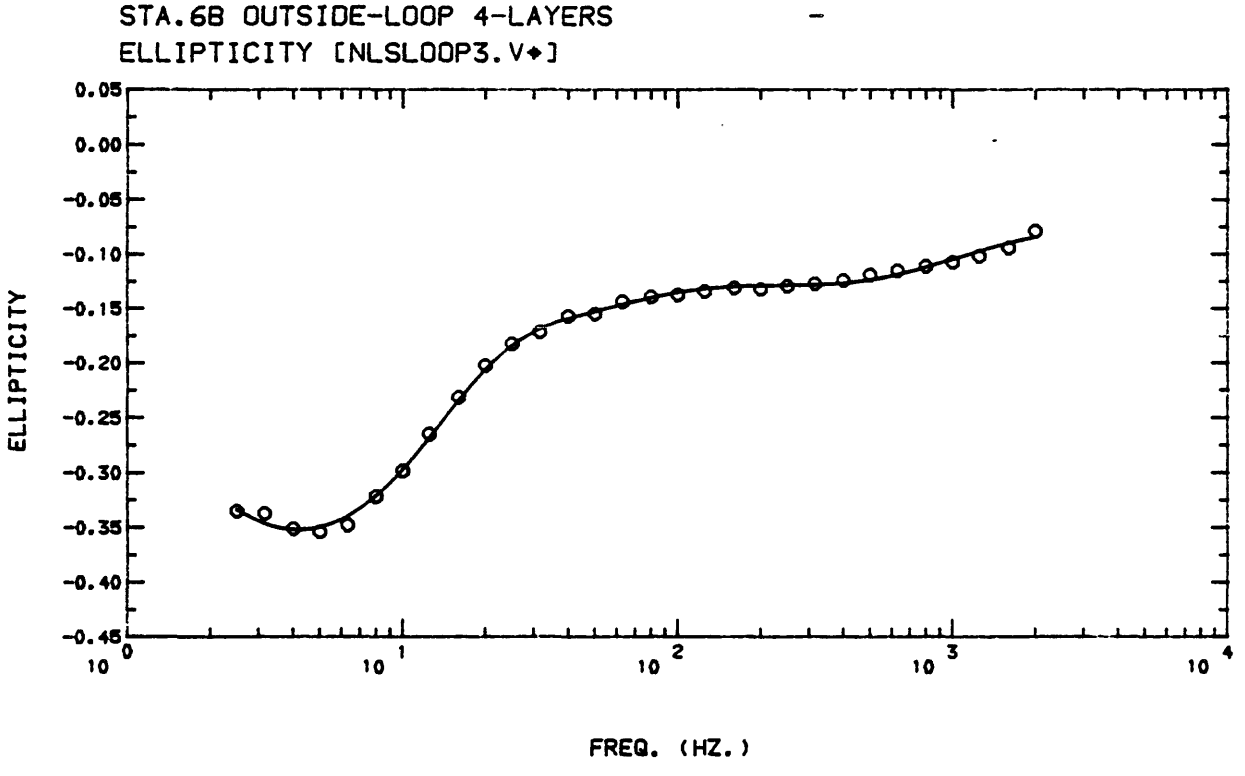
1	0.1000E+01					
2	0.7131E+00	0.1000E+01				
3	0.6186E+00	0.5384E+00	0.1000E+01			
5	-0.3881E+00	0.7759E-01	-0.3326E+00	0.1000E+01		
6	-0.4175E+00	-0.3146E+00	0.1100E+00	0.1887E+00	0.1000E+01	
7	-0.2283E+00	-0.4347E+00	-0.5442E+00	-0.4539E+00	-0.3468E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.2209E-03	0.1008E-02	0.4562E+01	0.4562E+03
2	0.2785E-01	0.3914E-02	0.1405E+00	0.1405E+02
3	0.2279E+00	0.7368E-02	0.3233E-01	0.3233E+01
5	0.1871E+03	0.7695E-02	0.4112E-04	0.4112E-02
6	0.1354E+03	0.3376E-02	0.2494E-04	0.2494E-02
7	0.3620E+03	0.1649E-01	0.4554E-04	0.4554E-02

FDEM Sounding Results
Medicine Lake, California

PARAMETER NAME	FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1 SIGMA(1) =	0.22089497E-03	1	0.45270381E+04		
2 SIGMA(2) =	0.27845628E-01	2	0.35912022E+02		
3 SIGMA(3) =	0.22787373E+00	3	0.43883953E+01		
4 SIGMA(4) =	0.10000000E-02	4	0.99999994E+03		
5 THICK(1) =	0.18714708E+03			1	0.18714708E+03
6 THICK(2) =	0.13537988E+03			2	0.32252698E+03
7 THICK(3) =	0.36202478E+03			3	0.68455176E+03




STA.6B OUTSIDE-LOOP 4-LAYERS
ELLIPTICITY [NLSLOOP3.V◆]
ELLIPTICITY
0.05
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
-0.45
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

{NLSLOOP3}: STA.68 OUTSIDE-LOOP 4-LAYERS TILT-&-ELLIPTICITY [NLSLOOP3.#*]

YO= 0.14940E+04
IRATIO= 0, 0 PARM=-0.18000E+01 , 0.10620E+03
N= 60 K= 8 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 8

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.648620E+02	0.652250E+02	-0.363E+00	-0.556522E+00	0.250000E+01	0.100000E+01	0.600000E+01
2	-0.334900E+00	-0.342232E+00	0.733E-02	0.214250E+01	0.250000E+01	0.100000E+01	0.700000E+01
3	0.616340E+02	0.612320E+02	0.402E+00	0.656577E+00	0.315000E+01	0.100000E+01	0.600000E+01
4	-0.337120E+00	-0.354471E+00	0.174E-01	0.489487E+01	0.315000E+01	0.100000E+01	0.700000E+01
5	0.574130E+02	0.569656E+02	0.447E+00	0.785425E+00	0.400000E+01	0.100000E+01	0.600000E+01
6	-0.351030E+00	-0.359126E+00	0.810E-02	0.225441E+01	0.400000E+01	0.100000E+01	0.700000E+01
7	0.528550E+02	0.529746E+02	-0.120E+00	-0.225687E+00	0.500000E+01	0.100000E+01	0.600000E+01
8	-0.353930E+00	-0.356089E+00	0.216E-02	0.606342E+00	0.500000E+01	0.100000E+01	0.700000E+01
9	0.488410E+02	0.489523E+02	-0.111E+00	-0.227375E+00	0.630000E+01	0.100000E+01	0.600000E+01
10	-0.347600E+00	-0.345417E+00	-0.218E-02	-0.631917E+00	0.630000E+01	0.100000E+01	0.700000E+01
11	0.448950E+02	0.450543E+02	-0.159E+00	-0.353476E+00	0.800000E+01	0.100000E+01	0.600000E+01
12	-0.321300E+00	-0.326549E+00	0.525E-02	0.160733E+01	0.800000E+01	0.100000E+01	0.700000E+01
13	0.414800E+02	0.417950E+02	-0.315E+00	-0.753793E+00	0.100000E+02	0.100000E+01	0.600000E+01
14	-0.298050E+00	-0.302223E+00	0.417E-02	0.138087E+01	0.100000E+02	0.100000E+01	0.700000E+01
15	0.387100E+02	0.390497E+02	-0.340E+00	-0.870021E+00	0.125000E+02	0.100000E+01	0.600000E+01
16	-0.264560E+00	-0.272833E+00	0.827E-02	0.303232E+01	0.125000E+02	0.100000E+01	0.700000E+01
17	0.369310E+02	0.367364E+02	0.195E+00	0.529780E+00	0.160000E+02	0.100000E+01	0.600000E+01
18	-0.231170E+00	-0.238103E+00	0.693E-02	0.291159E+01	0.160000E+02	0.100000E+01	0.700000E+01
19	0.352200E+02	0.352790E+02	-0.590E-01	-0.167211E+00	0.200000E+02	0.100000E+01	0.600000E+01
20	-0.202380E+00	-0.209291E+00	0.691E-02	0.330201E+01	0.200000E+02	0.100000E+01	0.700000E+01
21	0.343220E+02	0.342355E+02	0.864E-01	0.252511E+00	0.250000E+02	0.100000E+01	0.600000E+01
22	-0.182350E+00	-0.186790E+00	0.444E-02	0.237704E+01	0.250000E+02	0.100000E+01	0.700000E+01
23	0.333070E+02	0.333050E+02	0.196E-02	0.588726E-02	0.315000E+02	0.100000E+01	0.600000E+01
24	-0.171190E+00	-0.170967E+00	-0.223E-03	-0.130231E+00	0.315000E+02	0.100000E+01	0.700000E+01
25	0.325280E+02	0.322868E+02	0.241E+00	0.747172E+00	0.400000E+02	0.100000E+01	0.600000E+01
26	-0.156940E+00	-0.160052E+00	0.311E-02	0.194432E+01	0.400000E+02	0.100000E+01	0.700000E+01
27	0.315320E+02	0.312599E+02	0.272E+00	0.870507E+00	0.500000E+02	0.100000E+01	0.600000E+01
28	-0.154770E+00	-0.151756E+00	-0.301E-02	-0.198586E+01	0.500000E+02	0.100000E+01	0.700000E+01
29	0.304330E+02	0.302034E+02	0.230E+00	0.760259E+00	0.630000E+02	0.100000E+01	0.600000E+01
30	-0.143430E+00	-0.143614E+00	0.184E-03	0.128245E+00	0.630000E+02	0.100000E+01	0.700000E+01
31	0.296420E+02	0.291939E+02	0.448E+00	0.153475E+01	0.800000E+02	0.100000E+01	0.600000E+01
32	-0.138910E+00	-0.136004E+00	-0.291E-02	-0.213649E+01	0.800000E+02	0.100000E+01	0.700000E+01
33	0.287080E+02	0.283301E+02	0.378E+00	0.133387E+01	0.100000E+03	0.100000E+01	0.600000E+01
34	-0.137190E+00	-0.130500E+00	-0.669E-02	-0.512665E+01	0.100000E+03	0.100000E+01	0.700000E+01
35	0.276710E+02	0.275070E+02	0.164E+00	0.596217E+00	0.125000E+03	0.100000E+01	0.600000E+01
36	-0.133990E+00	-0.126946E+00	-0.704E-02	-0.554858E+01	0.125000E+03	0.100000E+01	0.700000E+01
37	0.265590E+02	0.266031E+02	-0.441E-01	-0.165712E+00	0.160000E+03	0.100000E+01	0.600000E+01
38	-0.130910E+00	-0.125232E+00	-0.568E-02	-0.453415E+01	0.160000E+03	0.100000E+01	0.700000E+01
39	0.253930E+02	0.257628E+02	-0.370E+00	-0.143557E+01	0.200000E+03	0.100000E+01	0.600000E+01
40	-0.132020E+00	-0.125483E+00	-0.654E-02	-0.520930E+01	0.200000E+03	0.100000E+01	0.700000E+01
41	0.247270E+02	0.248761E+02	-0.149E+00	-0.599551E+00	0.250000E+03	0.100000E+01	0.600000E+01
42	-0.129080E+00	-0.127241E+00	-0.184E-02	-0.144504E+01	0.250000E+03	0.100000E+01	0.700000E+01
43	0.236400E+02	0.238807E+02	-0.241E+00	-0.100793E+01	0.315000E+03	0.100000E+01	0.600000E+01
44	-0.126780E+00	-0.130332E+00	0.355E-02	0.272533E+01	0.315000E+03	0.100000E+01	0.700000E+01
45	0.224530E+02	0.227381E+02	-0.285E+00	-0.125391E+01	0.400000E+03	0.100000E+01	0.600000E+01
46	-0.123830E+00	-0.134298E+00	0.105E-01	0.779448E+01	0.400000E+03	0.100000E+01	0.700000E+01
47	0.212690E+02	0.215481E+02	-0.279E+00	-0.129529E+01	0.500000E+03	0.100000E+01	0.600000E+01

48	-0.118740E+00	-0.137895E+00	0.192E-01	0.138912E+02	0.500000E+03	0.100000E+01	0.700000E+01
49	0.201350E+02	0.201927E+02	-0.577E-01	-0.285894E+00	0.500000E+03	0.100000E+01	0.600000E+01
50	-0.114880E+00	-0.140442E+00	0.256E-01	0.182010E+02	0.630000E+03	0.100000E+01	0.700000E+01
51	0.188560E+02	0.186963E+02	0.160E+00	0.854028E+00	0.800000E+03	0.100000E+01	0.600000E+01
52	-0.110910E+00	-0.140616E+00	0.297E-01	0.211259E+02	0.800000E+03	0.100000E+01	0.700000E+01
53	0.177610E+02	0.172835E+02	0.478E+00	0.276303E+01	0.100000E+04	0.100000E+01	0.600000E+01
54	-0.107090E+00	-0.137737E+00	0.306E-01	0.222504E+02	0.100000E+04	0.100000E+01	0.700000E+01
55	0.165450E+02	0.159422E+02	0.603E+00	0.378106E+01	0.125000E+04	0.100000E+01	0.600000E+01
56	-0.101650E+00	-0.131886E+00	0.302E-01	0.229256E+02	0.125000E+04	0.100000E+01	0.700000E+01
57	0.148610E+02	0.146348E+02	0.226E+00	0.154570E+01	0.160000E+04	0.100000E+01	0.600000E+01
58	-0.941200E-01	-0.122911E+00	0.298E-01	0.234244E+02	0.160000E+04	0.100000E+01	0.700000E+01
59	0.127350E+02	0.136492E+02	-0.914E+00	-0.669778E+01	0.200000E+04	0.100000E+01	0.600000E+01
60	-0.785810E-01	-0.113988E+00	0.354E-01	0.310620E+02	0.200000E+04	0.100000E+01	0.700000E+01

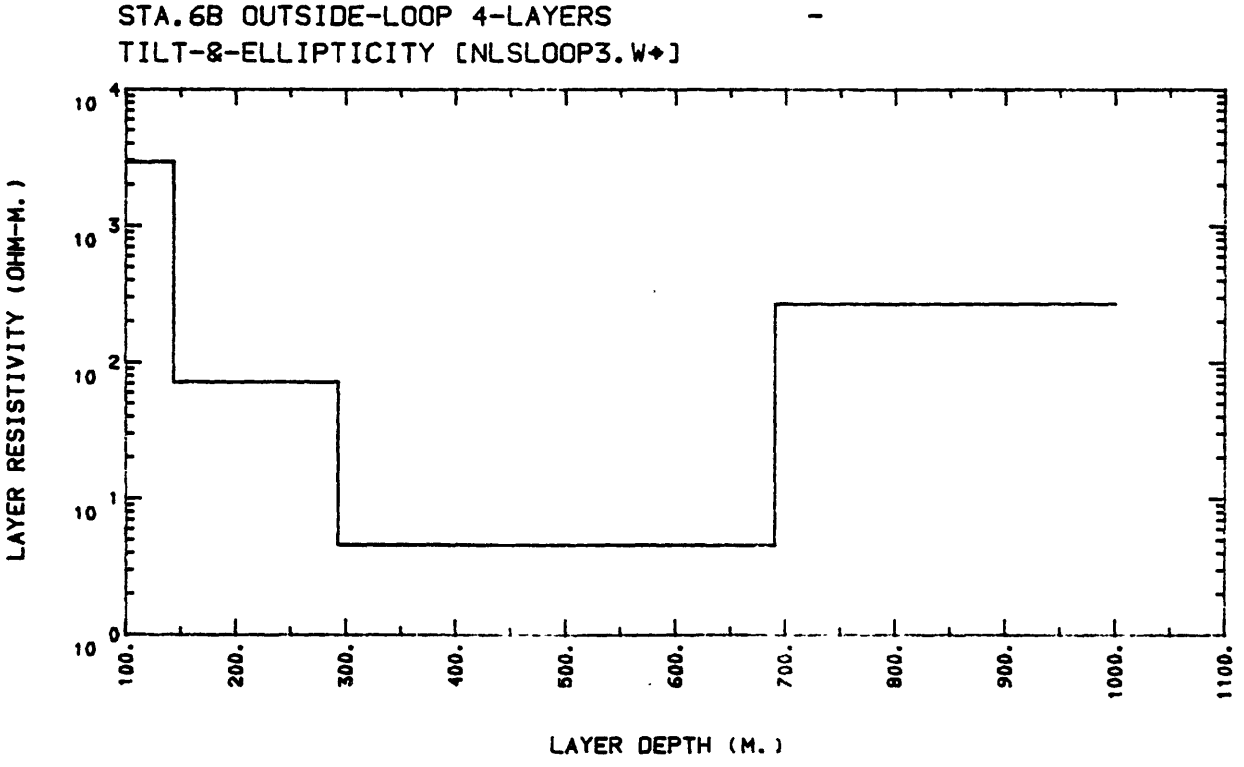
** RMSERR= 0.24788266E+00

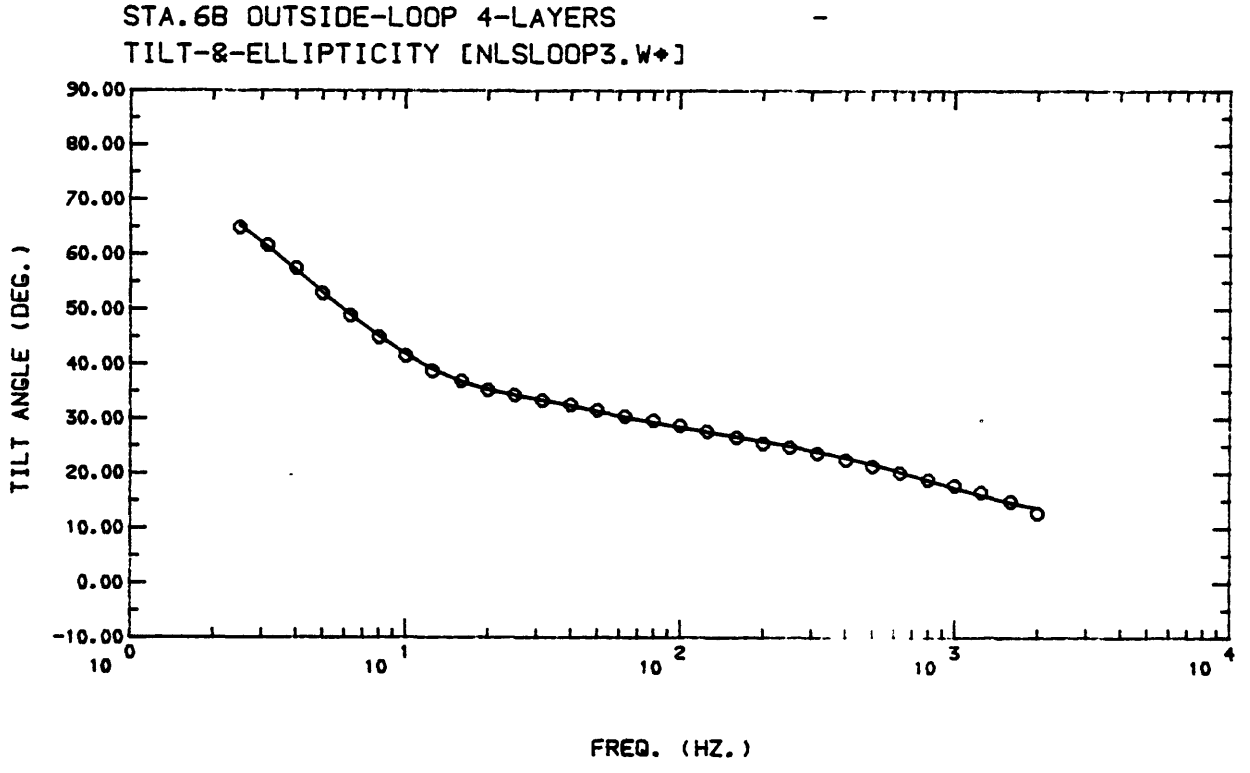
CORRELATION MATRIX

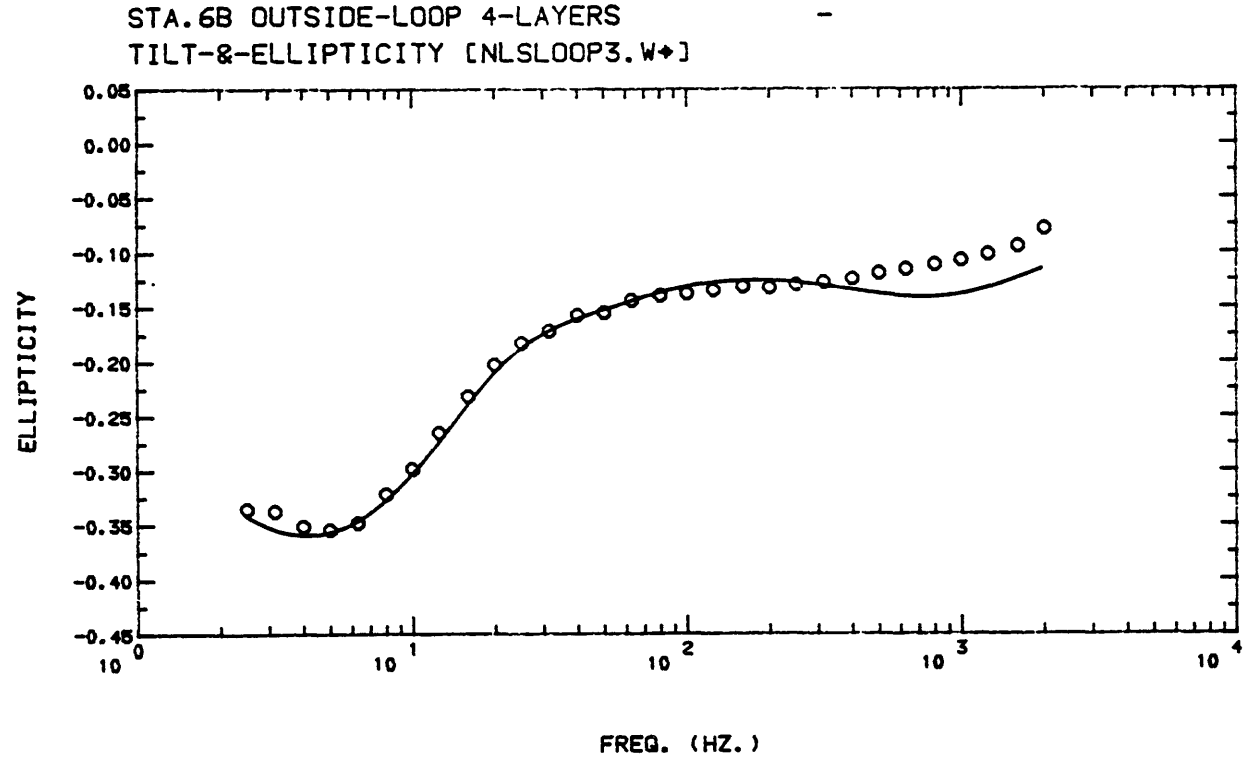
1	0.1000E+01						
2	-0.5488E-01	0.1000E+01					
3	-0.2026E+00	0.2328E+00	0.1000E+01				
4	-0.4077E-01	-0.4561E-01	0.2274E-01	0.1000E+01			
5	0.2647E+00	0.8463E+00	0.1142E+00	-0.3851E-01	0.1000E+01		
6	-0.4971E+00	-0.3365E+00	0.5303E+00	0.3875E-02	-0.6194E+00	0.1000E+01	
7	0.2436E+00	-0.1269E+00	-0.6449E+00	-0.6489E+00	-0.2722E-01	-0.3722E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.3439E-03	0.6855E-03	0.1994E+01	0.1994E+03
2	0.1399E-01	0.2346E-02	0.1677E+00	0.1677E+02
3	0.2192E+00	0.5796E-02	0.2644E-01	0.2644E+01
4	0.3699E-02	0.1006E+00	0.2720E+02	0.2720E+04
5	0.1437E+03	0.2766E-02	0.1925E-04	0.1925E-02
6	0.1495E+03	0.3479E-02	0.2327E-04	0.2327E-02
7	0.3973E+03	0.2378E-01	0.5985E-04	0.5985E-02

PARAMETER	NAME		FINAL SOLUTION		RESISTIVITY	LAYER	DEPTH
1	SIGMA(1)	=	0.34386819E-03	1	0.29080911E+04		
2	SIGMA(2)	=	0.13994774E-01	2	0.71455246E+02		
3	SIGMA(3)	=	0.21919309E+00	3	0.45621877E+01		
4	SIGMA(4)	=	0.36988843E-02	4	0.27035181E+03		
5	THICK(1)	=	0.14367516E+03			1	0.14367516E+03
6	THICK(2)	=	0.14952769E+03			2	0.29320285E+03
7	THICK(3)	=	0.39730255E+03			3	0.69050543E+03
8	SHIFT	=	-0.30020294E+01				




STA.6B OUTSIDE-LOOP 4-LAYERS
TILT-&-ELLIPTICITY [NLSLOOP3.W♦]
TILT ANGLE (DEG.)
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
-10.00
10^0
10^1
10^2
10^3
10^4
FREQ. (HZ.)


STA.6B OUTSIDE-LOOP 4-LAYERS
TILT-&-ELLIPTICITY [NLSLOOP3.W♦]
ELLIPTICITY
0.05
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
-0.45
10^0
10^1
10^2
10^3
10^4
FREQ. (HZ.)

(NLSLOOP3): STA.6B OUTSIDE-LOOP 4-LAYERS RATIO=HR/HZ [NLSLOOP3.T*]

Y0= 0.14940E+04
IRATIO= 2, 1 PARM=-0.18000E+01 , 0.10620E+03
N= 60 K= 7 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 4

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.444500E+02	0.465517E+02	-0.210E+01	-0.451476E+01	0.250000E+01	0.100000E+01	0.200000E+01
2	0.569510E+00	0.599304E+00	-0.298E-01	-0.497147E+01	0.250000E+01	0.100000E+01	0.100000E+01
3	0.423000E+02	0.443248E+02	-0.202E+01	-0.456802E+01	0.315000E+01	0.100000E+01	0.200000E+01
4	0.626240E+00	0.674213E+00	-0.480E-01	-0.711537E+01	0.315000E+01	0.100000E+01	0.100000E+01
5	0.414200E+02	0.420758E+02	-0.656E+00	-0.155869E+01	0.400000E+01	0.100000E+01	0.200000E+01
6	0.711550E+00	0.757111E+00	-0.456E-01	-0.601775E+01	0.400000E+01	0.100000E+01	0.100000E+01
7	0.400500E+02	0.399653E+02	0.847E-01	0.211986E+00	0.500000E+01	0.100000E+01	0.200000E+01
8	0.807590E+00	0.840200E+00	-0.326E-01	-0.388125E+01	0.500000E+01	0.100000E+01	0.100000E+01
9	0.385900E+02	0.376806E+02	0.909E+00	0.241335E+01	0.630000E+01	0.100000E+01	0.200000E+01
10	0.900100E+00	0.932105E+00	-0.320E-01	-0.343361E+01	0.630000E+01	0.100000E+01	0.100000E+01
11	0.356200E+02	0.350931E+02	0.527E+00	0.150144E+01	0.800000E+01	0.100000E+01	0.200000E+01
12	0.100300E+01	0.103198E+01	-0.290E-01	-0.280821E+01	0.800000E+01	0.100000E+01	0.100000E+01
13	0.333900E+02	0.324059E+02	0.984E+00	0.303667E+01	0.100000E+02	0.100000E+01	0.200000E+01
14	0.110840E+01	0.112594E+01	-0.175E-01	-0.155774E+01	0.100000E+02	0.100000E+01	0.100000E+01
15	0.302400E+02	0.295315E+02	0.708E+00	0.239905E+01	0.125000E+02	0.100000E+01	0.200000E+01
16	0.121130E+01	0.121418E+01	-0.288E-02	-0.237499E+00	0.125000E+02	0.100000E+01	0.100000E+01
17	0.269500E+02	0.264722E+02	0.478E+00	0.180500E+01	0.160000E+02	0.100000E+01	0.200000E+01
18	0.129070E+01	0.129794E+01	-0.724E-02	-0.557546E+00	0.160000E+02	0.100000E+01	0.100000E+01
19	0.241300E+02	0.242202E+02	-0.902E-01	-0.372387E+00	0.200000E+02	0.100000E+01	0.200000E+01
20	0.137550E+01	0.136089E+01	0.146E-01	0.107383E+01	0.200000E+02	0.100000E+01	0.100000E+01
21	0.220500E+02	0.226309E+02	-0.581E+00	-0.256693E+01	0.250000E+02	0.100000E+01	0.200000E+01
22	0.142600E+01	0.141922E+01	0.678E-02	0.477915E+00	0.250000E+02	0.100000E+01	0.100000E+01
23	0.210200E+02	0.215022E+02	-0.482E+00	-0.224260E+01	0.315000E+02	0.100000E+01	0.200000E+01
24	0.148200E+01	0.148328E+01	-0.128E-02	-0.864766E-01	0.315000E+02	0.100000E+01	0.100000E+01
25	0.195400E+02	0.205531E+02	-0.101E+01	-0.492897E+01	0.400000E+02	0.100000E+01	0.200000E+01
26	0.153010E+01	0.155570E+01	-0.256E-01	-0.164537E+01	0.400000E+02	0.100000E+01	0.100000E+01
27	0.195800E+02	0.197142E+02	-0.134E+00	-0.680483E+00	0.500000E+02	0.100000E+01	0.200000E+01
28	0.158730E+01	0.162551E+01	-0.382E-01	-0.235036E+01	0.500000E+02	0.100000E+01	0.100000E+01
29	0.185400E+02	0.189398E+02	-0.400E+00	-0.211070E+01	0.630000E+02	0.100000E+01	0.200000E+01
30	0.165950E+01	0.169628E+01	-0.368E-01	-0.216808E+01	0.630000E+02	0.100000E+01	0.100000E+01
31	0.182400E+02	0.183490E+02	-0.109E+00	-0.594199E+00	0.800000E+02	0.100000E+01	0.200000E+01
32	0.171240E+01	0.176764E+01	-0.552E-01	-0.312522E+01	0.800000E+02	0.100000E+01	0.100000E+01
33	0.183600E+02	0.180283E+02	0.332E+00	0.184000E+01	0.100000E+03	0.100000E+01	0.200000E+01
34	0.177610E+01	0.183469E+01	-0.586E-01	-0.319338E+01	0.100000E+03	0.100000E+01	0.100000E+01
35	0.183500E+02	0.179208E+02	0.429E+00	0.239484E+01	0.125000E+03	0.100000E+01	0.200000E+01
36	0.185230E+01	0.190416E+01	-0.519E-01	-0.272367E+01	0.125000E+03	0.100000E+01	0.100000E+01
37	0.184200E+02	0.180280E+02	0.392E+00	0.217416E+01	0.160000E+03	0.100000E+01	0.200000E+01
38	0.193950E+01	0.198577E+01	-0.463E-01	-0.232992E+01	0.160000E+03	0.100000E+01	0.100000E+01
39	0.191300E+02	0.183096E+02	0.820E+00	0.448061E+01	0.200000E+03	0.100000E+01	0.200000E+01
40	0.203360E+01	0.206590E+01	-0.323E-01	-0.156340E+01	0.200000E+03	0.100000E+01	0.100000E+01
41	0.190600E+02	0.187347E+02	0.325E+00	0.173652E+01	0.250000E+03	0.100000E+01	0.200000E+01
42	0.209450E+01	0.215446E+01	-0.600E-01	-0.278288E+01	0.250000E+03	0.100000E+01	0.100000E+01
43	0.193300E+02	0.192692E+02	0.608E-01	0.315294E+00	0.315000E+03	0.100000E+01	0.200000E+01
44	0.219780E+01	0.225769E+01	-0.599E-01	-0.265292E+01	0.315000E+03	0.100000E+01	0.100000E+01
45	0.196100E+02	0.198388E+02	-0.229E+00	-0.115316E+01	0.400000E+03	0.100000E+01	0.200000E+01
46	0.232100E+01	0.237926E+01	-0.583E-01	-0.244874E+01	0.400000E+03	0.100000E+01	0.100000E+01
47	0.196100E+02	0.202921E+02	-0.682E+00	-0.336144E+01	0.500000E+03	0.100000E+01	0.200000E+01

48	0.245990E+01	0.250749E+01	-0.476E-01	-0.189778E+01	0.500000E+03	0.100000E+01	0.100000E+01
49	0.198100E+02	0.205928E+02	-0.783E+00	-0.380136E+01	0.630000E+03	0.100000E+01	0.200000E+01
50	0.260500E+01	0.265413E+01	-0.491E-01	-0.185103E+01	0.630000E+03	0.100000E+01	0.100000E+01
51	0.201600E+02	0.206679E+02	-0.508E+00	-0.245764E+01	0.800000E+03	0.100000E+01	0.200000E+01
52	0.278710E+01	0.281601E+01	-0.289E-01	-0.102663E+01	0.800000E+03	0.100000E+01	0.100000E+01
53	0.204500E+02	0.205406E+02	-0.906E-01	-0.440944E+00	0.100000E+04	0.100000E+01	0.200000E+01
54	0.296250E+01	0.297031E+01	-0.781E-02	-0.262883E+00	0.100000E+04	0.100000E+01	0.100000E+01
55	0.206200E+02	0.203120E+02	0.308E+00	0.151650E+01	0.125000E+04	0.100000E+01	0.200000E+01
56	0.318620E+01	0.312095E+01	0.652E-01	0.209068E+01	0.125000E+04	0.100000E+01	0.100000E+01
57	0.209600E+02	0.201090E+02	0.851E+00	0.423199E+01	0.160000E+04	0.100000E+01	0.200000E+01
58	0.355280E+01	0.327741E+01	0.275E+00	0.840267E+01	0.160000E+04	0.100000E+01	0.100000E+01
59	0.201900E+02	0.201391E+02	0.509E-01	0.252806E+00	0.200000E+04	0.100000E+01	0.200000E+01
60	0.418000E+01	0.340797E+01	0.772E+00	0.226536E+02	0.200000E+04	0.100000E+01	0.100000E+01

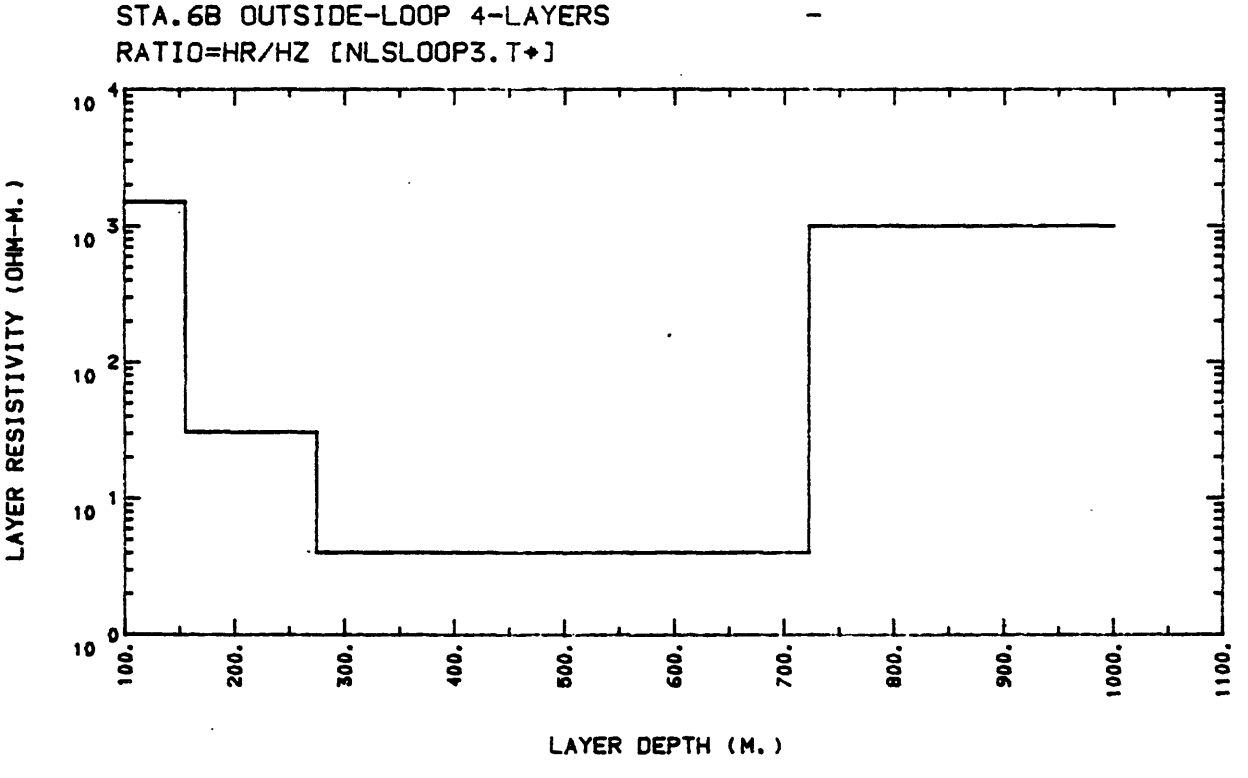
** RMSERR= 0.57279426E+00

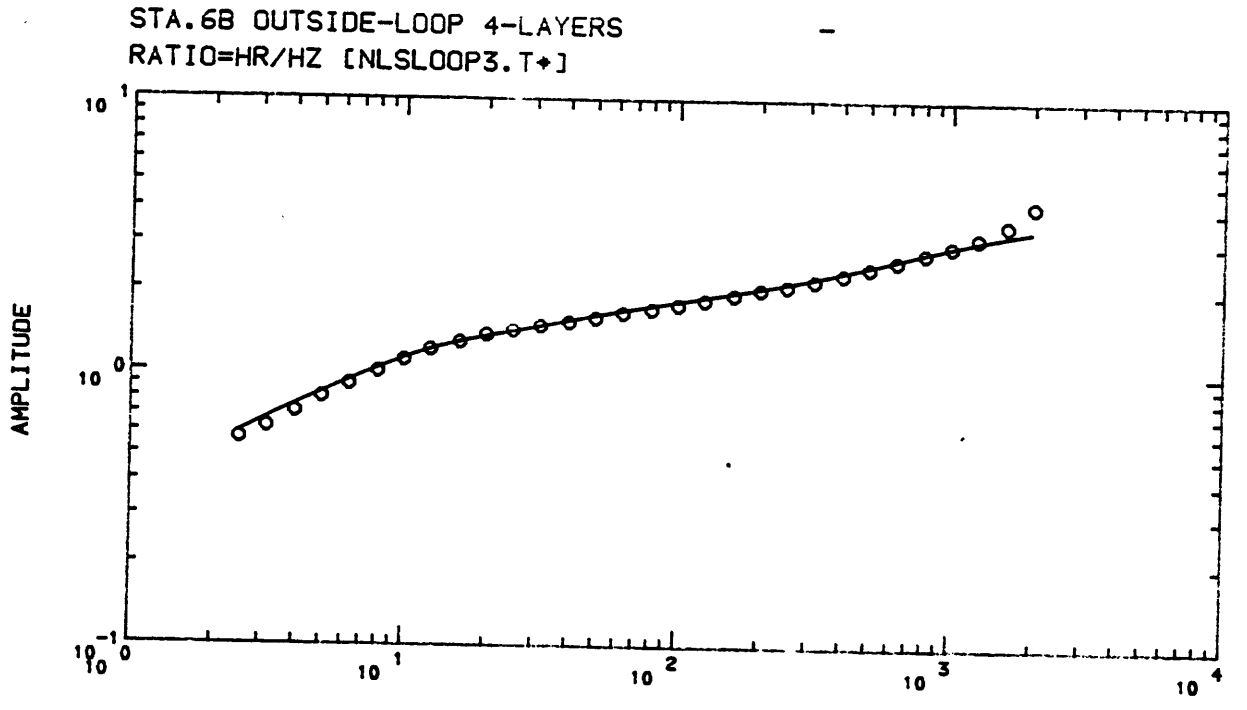
CORRELATION MATRIX

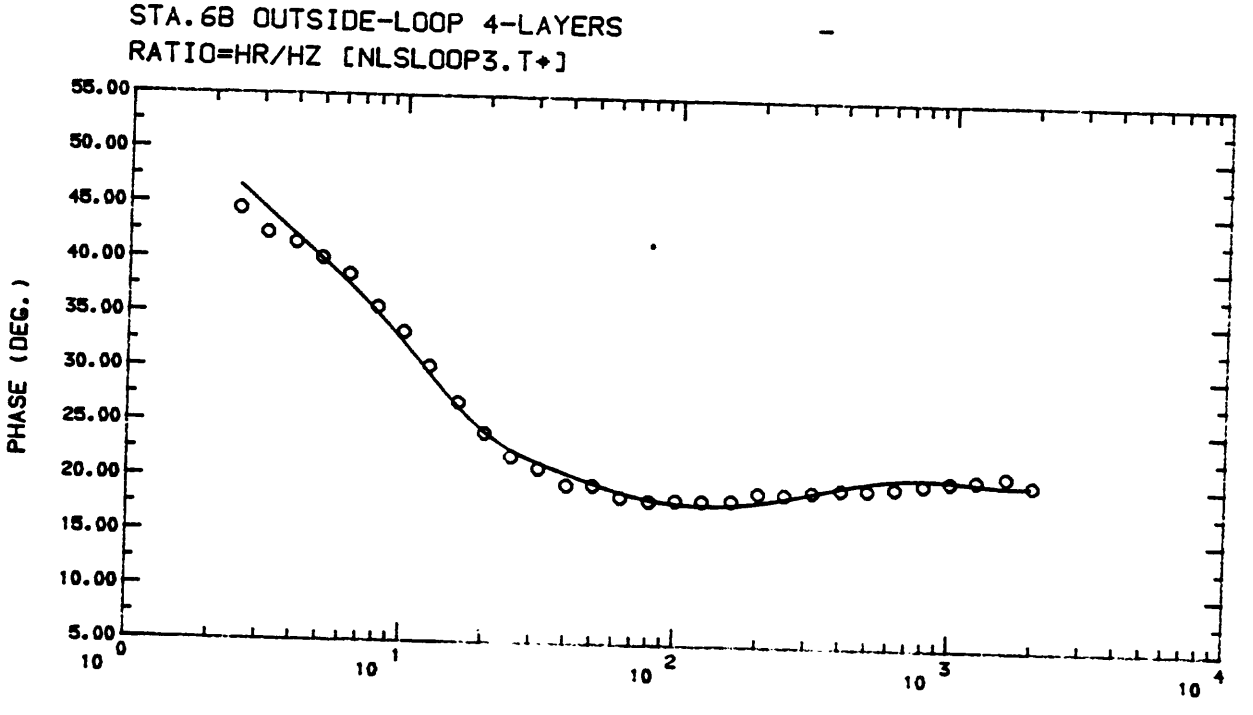
1	0.1000E+01					
2	0.7495E+00	0.1000E+01				
3	0.2159E+00	0.4712E+00	0.1000E+01			
5	0.5273E+00	0.4533E+00	-0.2676E+00	0.1000E+01		
6	-0.5323E+00	-0.4873E+00	-0.2007E+00	0.1850E-01	0.1000E+01	
7	-0.4415E-01	-0.2421E+00	-0.5797E+00	-0.8325E-01	-0.2288E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.6680E-03	0.7398E-03	0.1107E+01	0.1107E+03
2	0.3265E-01	0.5304E-02	0.1624E+00	0.1624E+02
3	0.2493E+00	0.7961E-02	0.3194E-01	0.3194E+01
5	0.1553E+03	0.4615E-02	0.2971E-04	0.2971E-02
6	0.1193E+03	0.3853E-02	0.3229E-04	0.3229E-02
7	0.4478E+03	0.1676E-01	0.3742E-04	0.3742E-02

PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.66804269E-03	1	0.14969103E+04		
2	SIGMA(2) =	0.32654881E-01	2	0.30623293E+02		
3	SIGMA(3) =	0.24929404E+00	3	0.40113273E+01		
4	SIGMA(4) =	0.10000000E-02	4	0.99999994E+03		
5	THICK(1) =	0.15534097E+03			1	0.15534097E+03
6	THICK(2) =	0.11932275E+03			2	0.27466373E+03
7	THICK(3) =	0.44782217E+03			3	0.72248590E+03




STA.6B OUTSIDE-LOOP 4-LAYERS
RATIO=HR/HZ [NLSLOOP3.T*]
AMPLITUDE
10 1
10 0
10 -1
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)


STA.6B OUTSIDE-LOOP 4-LAYERS
RATIO=HR/HZ [NLSLOOP3.T*]
PHASE (DEG.)
55.00
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

{NLSLOOP3}: STA.6C OUTSIDE-LOOP 4-LAYERS ELLIPTICITY [NLSLOOP3.2*]

Y0= 0.19660E+04
IRATIO= 0, 0 PARM=-0.70000E+00 , 0.34300E+02
N= 27 K= 7 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 4

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.475850E+00	-0.459700E+00	-0.161E-01	-0.351305E+01	0.500000E+01	0.100000E+01	0.700000E+01
2	-0.565730E+00	-0.444850E+00	-0.121E+00	-0.271733E+02	0.630000E+01	0.100000E+01	0.700000E+01
3	-0.394520E+00	-0.418843E+00	0.243E-01	0.580724E+01	0.800000E+01	0.100000E+01	0.700000E+01
4	-0.360900E+00	-0.382538E+00	0.216E-01	0.565649E+01	0.100000E+02	0.100000E+01	0.700000E+01
5	-0.310490E+00	-0.333173E+00	0.227E-01	0.680831E+01	0.125000E+02	0.100000E+01	0.700000E+01
6	-0.255140E+00	-0.266495E+00	0.114E-01	0.426103E+01	0.160000E+02	0.100000E+01	0.700000E+01
7	-0.212780E+00	-0.206570E+00	-0.621E-02	-0.300648E+01	0.200000E+02	0.100000E+01	0.700000E+01
8	-0.186340E+00	-0.162182E+00	-0.242E-01	-0.148954E+02	0.250000E+02	0.100000E+01	0.700000E+01
9	-0.156900E+00	-0.138781E+00	-0.181E-01	-0.130560E+02	0.315000E+02	0.100000E+01	0.700000E+01
10	-0.133060E+00	-0.130509E+00	-0.255E-02	-0.195449E+01	0.400000E+02	0.100000E+01	0.700000E+01
11	-0.119770E+00	-0.127647E+00	0.788E-02	0.617100E+01	0.500000E+02	0.100000E+01	0.700000E+01
12	-0.117720E+00	-0.124645E+00	0.692E-02	0.555553E+01	0.630000E+02	0.100000E+01	0.700000E+01
13	-0.115100E+00	-0.120374E+00	0.527E-02	0.438123E+01	0.800000E+02	0.100000E+01	0.700000E+01
14	-0.110350E+00	-0.115908E+00	0.556E-02	0.479508E+01	0.100000E+03	0.100000E+01	0.700000E+01
15	-0.112320E+00	-0.111982E+00	-0.338E-03	-0.302131E+00	0.125000E+03	0.100000E+01	0.700000E+01
16	-0.110890E+00	-0.109032E+00	-0.186E-02	-0.170392E+01	0.160000E+03	0.100000E+01	0.700000E+01
17	-0.111990E+00	-0.107708E+00	-0.428E-02	-0.397552E+01	0.200000E+03	0.100000E+01	0.700000E+01
18	-0.109550E+00	-0.107395E+00	-0.216E-02	-0.200679E+01	0.250000E+03	0.100000E+01	0.700000E+01
19	-0.109280E+00	-0.107768E+00	-0.151E-02	-0.140265E+01	0.315000E+03	0.100000E+01	0.700000E+01
20	-0.108720E+00	-0.108596E+00	-0.124E-03	-0.114075E+00	0.400000E+03	0.100000E+01	0.700000E+01
21	-0.109710E+00	-0.109582E+00	-0.128E-03	-0.116359E+00	0.500000E+03	0.100000E+01	0.700000E+01
22	-0.109090E+00	-0.110679E+00	0.159E-02	0.143550E+01	0.630000E+03	0.100000E+01	0.700000E+01
23	-0.110980E+00	-0.111666E+00	0.686E-03	0.614502E+00	0.800000E+03	0.100000E+01	0.700000E+01
24	-0.110970E+00	-0.112143E+00	0.117E-02	0.104635E+01	0.100000E+04	0.100000E+01	0.700000E+01
25	-0.110950E+00	-0.112066E+00	0.112E-02	0.995486E+00	0.125000E+04	0.100000E+01	0.700000E+01
26	-0.112010E+00	-0.111618E+00	-0.392E-03	-0.350767E+00	0.160000E+04	0.100000E+01	0.700000E+01
27	-0.114860E+00	-0.110857E+00	-0.400E-02	-0.361068E+01	0.200000E+04	0.100000E+01	0.700000E+01

** RMSERR= 0.29075056E-01

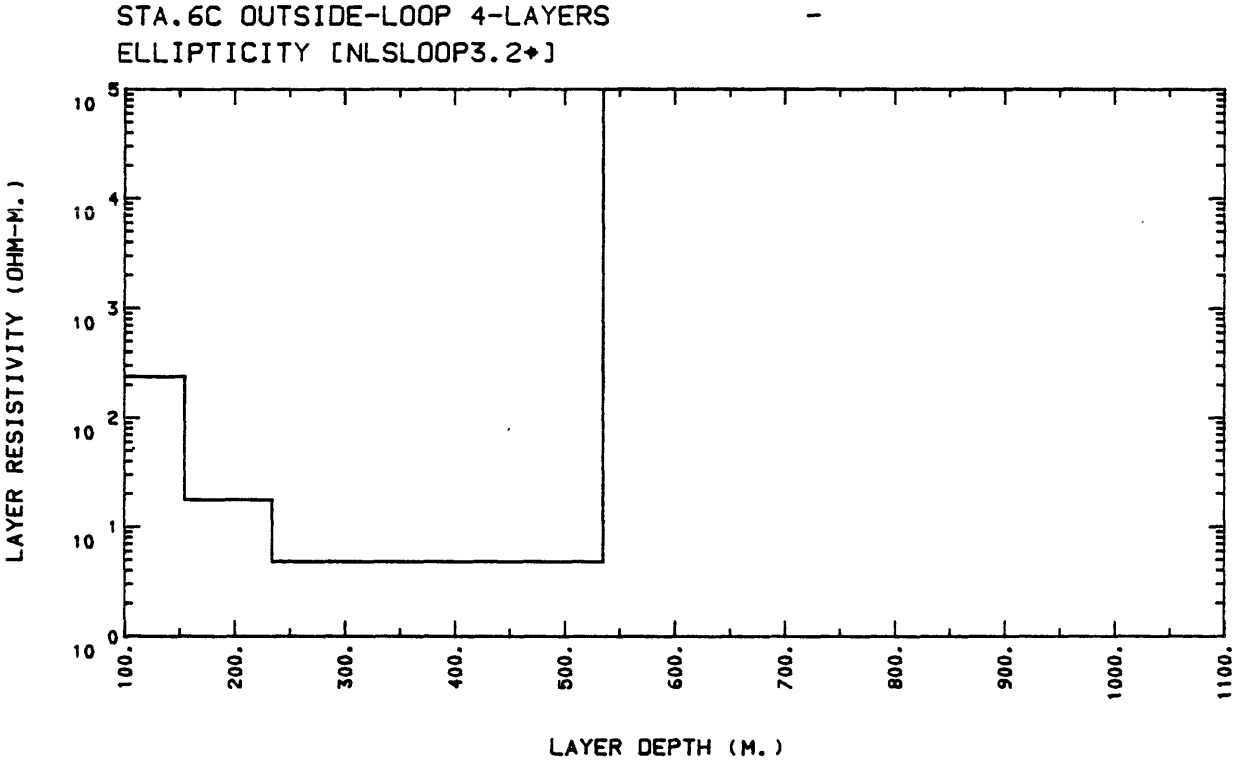
CORRELATION MATRIX

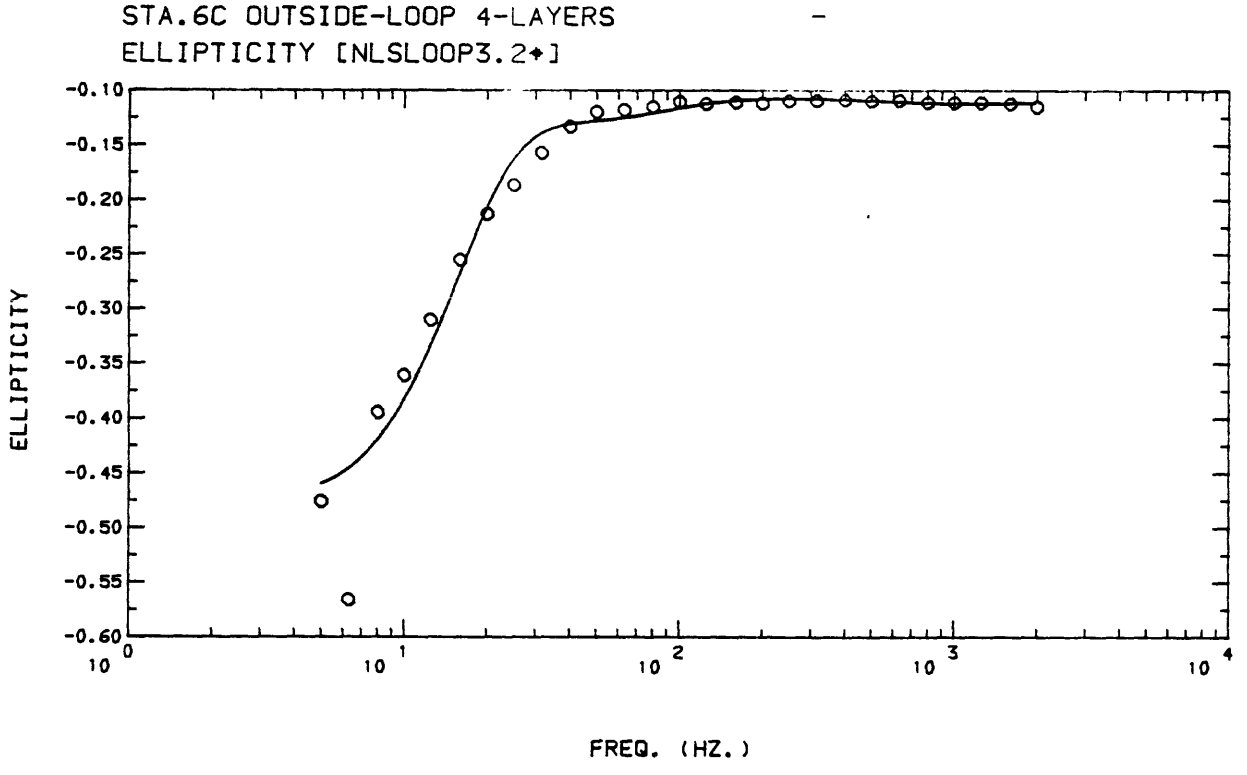
1	0.1000E+01					
2	-0.3233E+00	0.1000E+01				
3	-0.1683E+00	-0.7179E-01	0.1000E+01			
5	-0.7801E+00	0.7135E+00	-0.1009E-01	0.1000E+01		
6	-0.5674E+00	-0.6548E-01	0.6006E+00	0.1646E+00	0.1000E+01	
7	0.4900E+00	-0.1795E+00	-0.8736E+00	-0.3397E+00	-0.7156E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.4215E-02	0.1081E-01	0.2564E+01	0.2564E+03
2	0.5687E-01	0.4150E-01	0.7297E+00	0.7297E+02
3	0.2089E+00	0.2840E-01	0.1360E+00	0.1360E+02
5	0.1548E+03	0.2527E-01	0.1632E-03	0.1632E-01
6	0.7931E+02	0.3369E-01	0.4248E-03	0.4248E-01
7	0.3008E+03	0.5392E-01	0.1793E-03	0.1793E-01

PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH
1	SIGMA(1) =	0.42147315E-02	1	0.23726303E+03	

2	SIGMA(2) =	0.56870941E-01	2	0.17583672E+02		
3	SIGMA(3) =	0.20887096E+00	3	0.47876449E+01		
4	SIGMA(4) =	0.99999997E-05	4	0.10000000E+06		
5	THICK(1) =	0.15484358E+03			1	0.15484358E+03
6	THICK(2) =	0.79310699E+02			2	0.23415428E+03
7	THICK(3) =	0.30075165E+03			3	0.53490594E+03




STA.6C OUTSIDE-LOOP 4-LAYERS
ELLIPTICITY [NLSLOOP3.2♦]
ELLIPTICITY
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
-0.45
-0.50
-0.55
-0.60
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

{NLSLOOP3}: STA.6C OUTSIDE-LOOP 4-LAYERS RATIO=HR/HZ [NLSLOOP3.Y*]

Y0= 0.19660E+04
IRATIO= 2, 1 PARM=-0.70000E+00 , 0.34300E+02
N= 54 K= 7 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.527300E+02	0.473048E+02	0.543E+01	0.114686E+02	0.500000E+01	0.100000E+01	0.200000E+01
2	0.798240E+00	0.739308E+00	0.589E-01	0.797125E+01	0.500000E+01	0.100000E+01	0.100000E+01
3	0.592000E+02	0.448277E+02	0.144E+02	0.320612E+02	0.630000E+01	0.100000E+01	0.200000E+01
4	0.106830E+01	0.832129E+00	0.236E+00	0.283815E+02	0.630000E+01	0.100000E+01	0.100000E+01
5	0.430700E+02	0.422720E+02	0.798E+00	0.188771E+01	0.800000E+01	0.100000E+01	0.200000E+01
6	0.101900E+01	0.938592E+00	0.804E-01	0.856691E+01	0.800000E+01	0.100000E+01	0.100000E+01
7	0.399500E+02	0.396805E+02	0.270E+00	0.679215E+00	0.100000E+02	0.100000E+01	0.200000E+01
8	0.111070E+01	0.104931E+01	0.614E-01	0.585082E+01	0.100000E+02	0.100000E+01	0.100000E+01
9	0.353400E+02	0.366120E+02	-0.127E+01	-0.347425E+01	0.125000E+02	0.100000E+01	0.200000E+01
10	0.122800E+01	0.117031E+01	0.577E-01	0.492944E+01	0.125000E+02	0.100000E+01	0.100000E+01
11	0.299200E+02	0.323446E+02	-0.242E+01	-0.749608E+01	0.160000E+02	0.100000E+01	0.200000E+01
12	0.133010E+01	0.130804E+01	0.221E-01	0.168662E+01	0.160000E+02	0.100000E+01	0.100000E+01
13	0.254500E+02	0.276922E+02	-0.224E+01	-0.809700E+01	0.200000E+02	0.100000E+01	0.200000E+01
14	0.139310E+01	0.141781E+01	-0.247E-01	-0.174282E+01	0.200000E+02	0.100000E+01	0.100000E+01
15	0.223800E+02	0.228822E+02	-0.502E+00	-0.219480E+01	0.250000E+02	0.100000E+01	0.200000E+01
16	0.140070E+01	0.149217E+01	-0.915E-01	-0.613010E+01	0.250000E+02	0.100000E+01	0.100000E+01
17	0.191700E+02	0.187726E+02	0.397E+00	0.211696E+01	0.315000E+02	0.100000E+01	0.200000E+01
18	0.145980E+01	0.152744E+01	-0.676E-01	-0.442810E+01	0.315000E+02	0.100000E+01	0.100000E+01
19	0.164500E+02	0.160997E+02	0.350E+00	0.217579E+01	0.400000E+02	0.100000E+01	0.200000E+01
20	0.149950E+01	0.154075E+01	-0.412E-01	-0.267702E+01	0.400000E+02	0.100000E+01	0.100000E+01
21	0.149600E+02	0.148629E+02	0.971E-01	0.653558E+00	0.500000E+02	0.100000E+01	0.200000E+01
22	0.153490E+01	0.155379E+01	-0.189E-01	-0.121560E+01	0.500000E+02	0.100000E+01	0.100000E+01
23	0.147700E+02	0.143703E+02	0.400E+00	0.278135E+01	0.630000E+02	0.100000E+01	0.200000E+01
24	0.155130E+01	0.157794E+01	-0.266E-01	-0.168833E+01	0.630000E+02	0.100000E+01	0.100000E+01
25	0.146600E+02	0.142800E+02	0.380E+00	0.266076E+01	0.800000E+02	0.100000E+01	0.200000E+01
26	0.160550E+01	0.161584E+01	-0.103E-01	-0.639745E+00	0.800000E+02	0.100000E+01	0.100000E+01
27	0.141300E+02	0.143380E+02	-0.208E+00	-0.145101E+01	0.100000E+03	0.100000E+01	0.200000E+01
28	0.162440E+01	0.166105E+01	-0.366E-01	-0.220634E+01	0.100000E+03	0.100000E+01	0.100000E+01
29	0.146700E+02	0.144204E+02	0.250E+00	0.173108E+01	0.125000E+03	0.100000E+01	0.200000E+01
30	0.169190E+01	0.171279E+01	-0.209E-01	-0.121975E+01	0.125000E+03	0.100000E+01	0.100000E+01
31	0.146100E+02	0.145291E+02	0.809E-01	0.556822E+00	0.160000E+03	0.100000E+01	0.200000E+01
32	0.172200E+01	0.177414E+01	-0.521E-01	-0.293693E+01	0.160000E+03	0.100000E+01	0.100000E+01
33	0.150200E+02	0.146953E+02	0.325E+00	0.220961E+01	0.200000E+03	0.100000E+01	0.200000E+01
34	0.178280E+01	0.183200E+01	-0.492E-01	-0.268576E+01	0.200000E+03	0.100000E+01	0.100000E+01
35	0.150200E+02	0.149685E+02	0.515E-01	0.343892E+00	0.250000E+03	0.100000E+01	0.200000E+01
36	0.185490E+01	0.189306E+01	-0.382E-01	-0.201577E+01	0.250000E+03	0.100000E+01	0.100000E+01
37	0.152500E+02	0.153600E+02	-0.110E+00	-0.716273E+00	0.315000E+03	0.100000E+01	0.200000E+01
38	0.191280E+01	0.196165E+01	-0.488E-01	-0.249006E+01	0.315000E+03	0.100000E+01	0.100000E+01
39	0.155700E+02	0.158293E+02	-0.259E+00	-0.163785E+01	0.400000E+03	0.100000E+01	0.200000E+01
40	0.199740E+01	0.204002E+01	-0.426E-01	-0.208919E+01	0.400000E+03	0.100000E+01	0.100000E+01
41	0.160600E+02	0.162709E+02	-0.211E+00	-0.129622E+01	0.500000E+03	0.100000E+01	0.200000E+01
42	0.206860E+01	0.212024E+01	-0.516E-01	-0.243548E+01	0.500000E+03	0.100000E+01	0.100000E+01
43	0.164000E+02	0.166921E+02	-0.292E+00	-0.175019E+01	0.630000E+03	0.100000E+01	0.200000E+01
44	0.215500E+01	0.220912E+01	-0.541E-01	-0.244993E+01	0.630000E+03	0.100000E+01	0.100000E+01
45	0.171800E+02	0.170933E+02	0.867E-01	0.507320E+00	0.800000E+03	0.100000E+01	0.200000E+01
46	0.224970E+01	0.230494E+01	-0.552E-01	-0.239670E+01	0.800000E+03	0.100000E+01	0.100000E+01
47	0.177000E+02	0.174822E+02	0.218E+00	0.124601E+01	0.100000E+04	0.100000E+01	0.200000E+01
48	0.234750E+01	0.239497E+01	-0.475E-01	-0.198199E+01	0.100000E+04	0.100000E+01	0.100000E+01
49	0.181500E+02	0.179757E+02	0.174E+00	0.969424E+00	0.125000E+04	0.100000E+01	0.200000E+01

50	0.243070E+01	0.248335E+01	-0.527E-01	-0.212013E+01	0.125000E+04	0.100000E+01	0.100000E+01
51	0.188200E+02	0.187907E+02	0.293E-01	0.156125E+00	0.160000E+04	0.100000E+01	0.200000E+01
52	0.251930E+01	0.257876E+01	-0.595E-01	-0.230586E+01	0.160000E+04	0.100000E+01	0.100000E+01
53	0.196900E+02	0.199047E+02	-0.215E+00	-0.107845E+01	0.200000E+04	0.100000E+01	0.200000E+01
54	0.258550E+01	0.266497E+01	-0.795E-01	-0.298215E+01	0.200000E+04	0.100000E+01	0.100000E+01

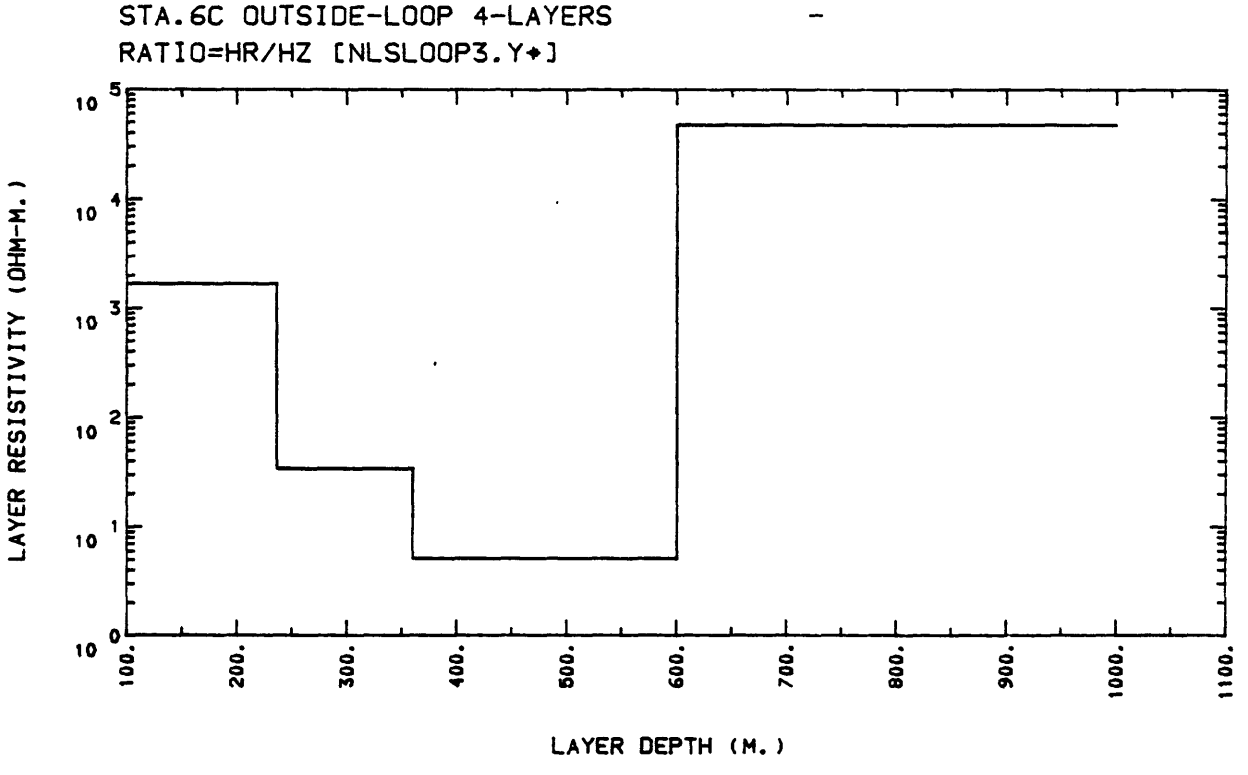
** RMSERR= 0.23098457E+01

CORRELATION MATRIX

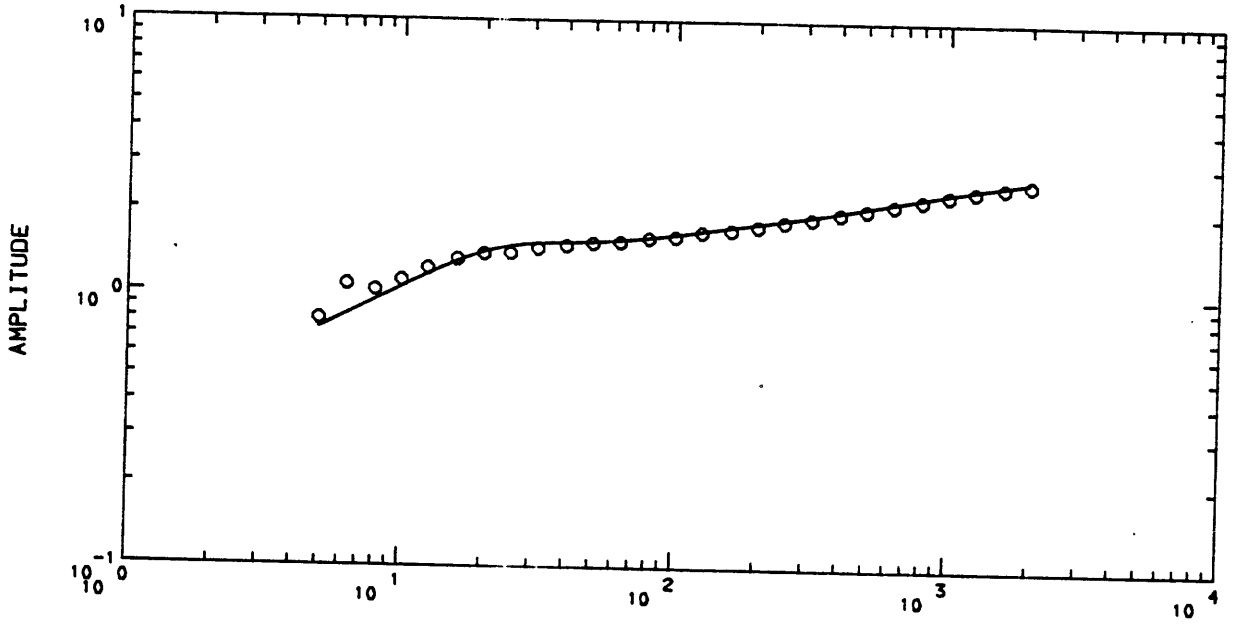
1	0.1000E+01						
2	0.6911E+00	0.1000E+01					
3	0.3679E+00	0.6565E+00	0.1000E+01				
4	-0.4075E+00	-0.5330E+00	-0.4485E+00	0.1000E+01			
5	0.2319E+00	0.6758E+00	0.3088E+00	-0.3769E+00	0.1000E+01		
6	-0.5694E+00	-0.2064E+00	0.2482E+00	0.5938E-03	0.1146E+00	0.1000E+01	
7	-0.2907E+00	-0.6975E+00	-0.9309E+00	0.4832E+00	-0.5502E+00	-0.3654E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.5966E-03	0.1424E-02	0.2386E+01	0.2386E+03
2	0.2941E-01	0.2383E-01	0.8103E+00	0.8103E+02
3	0.1955E+00	0.3368E-01	0.1723E+00	0.1723E+02
4	0.2109E-04	0.1980E-01	0.9385E+03	0.9385E+05
5	0.2364E+03	0.1977E-01	0.8363E-04	0.8363E-02
6	0.1236E+03	0.1592E-01	0.1289E-03	0.1289E-01
7	0.2405E+03	0.4978E-01	0.2070E-03	0.2070E-01

PARAMETER	NAME		FINAL SOLUTION		RESISTIVITY	LAYER	DEPTH
1	SIGMA(1)	=	0.59660885E-03	1	0.16761400E+04		
2	SIGMA(2)	=	0.29405201E-01	2	0.34007591E+02		
3	SIGMA(3)	=	0.19546326E+00	3	0.51160512E+01		
4	SIGMA(4)	=	0.21094296E-04	4	0.47406180E+05		
5	THICK(1)	=	0.23641014E+03			1	0.23641014E+03
6	THICK(2)	=	0.12357566E+03			2	0.35998581E+03
7	THICK(3)	=	0.24045410E+03			3	0.60043994E+03

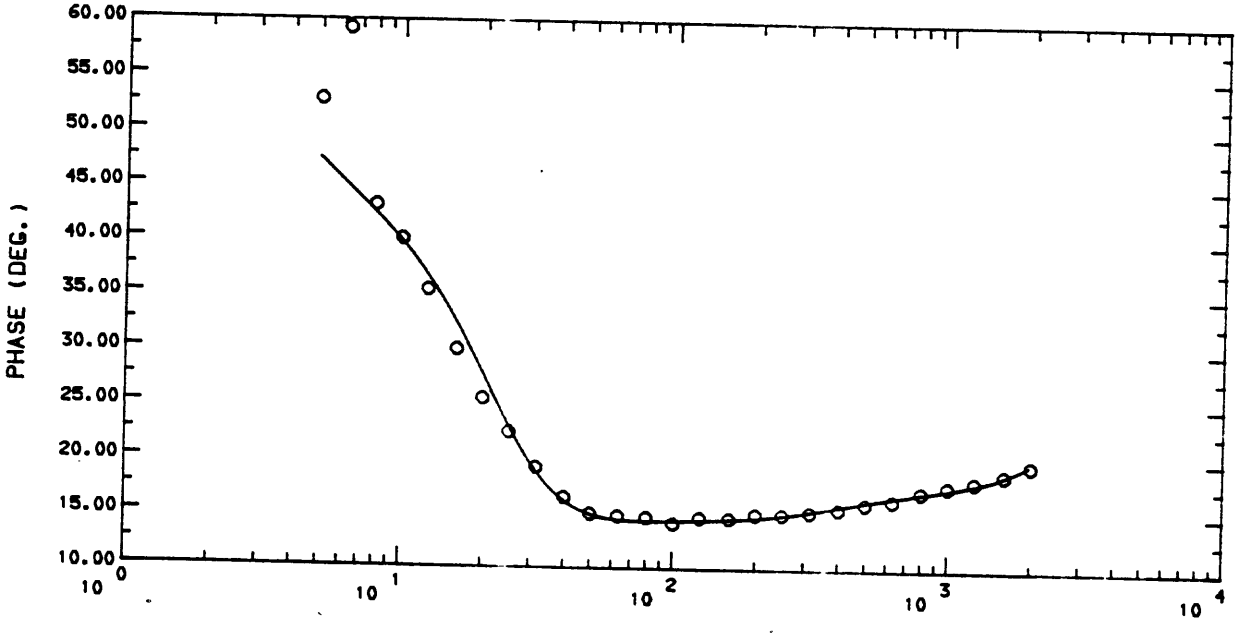


STA.6C OUTSIDE-LOOP 4-LAYERS
RATIO=HR/HZ [NLSLOOP3.Y+]



FREQ. (HZ.)

STA.6C OUTSIDE-LOOP 4-LAYERS
RATIO=HR/HZ [NLSLOOP3.Y+]



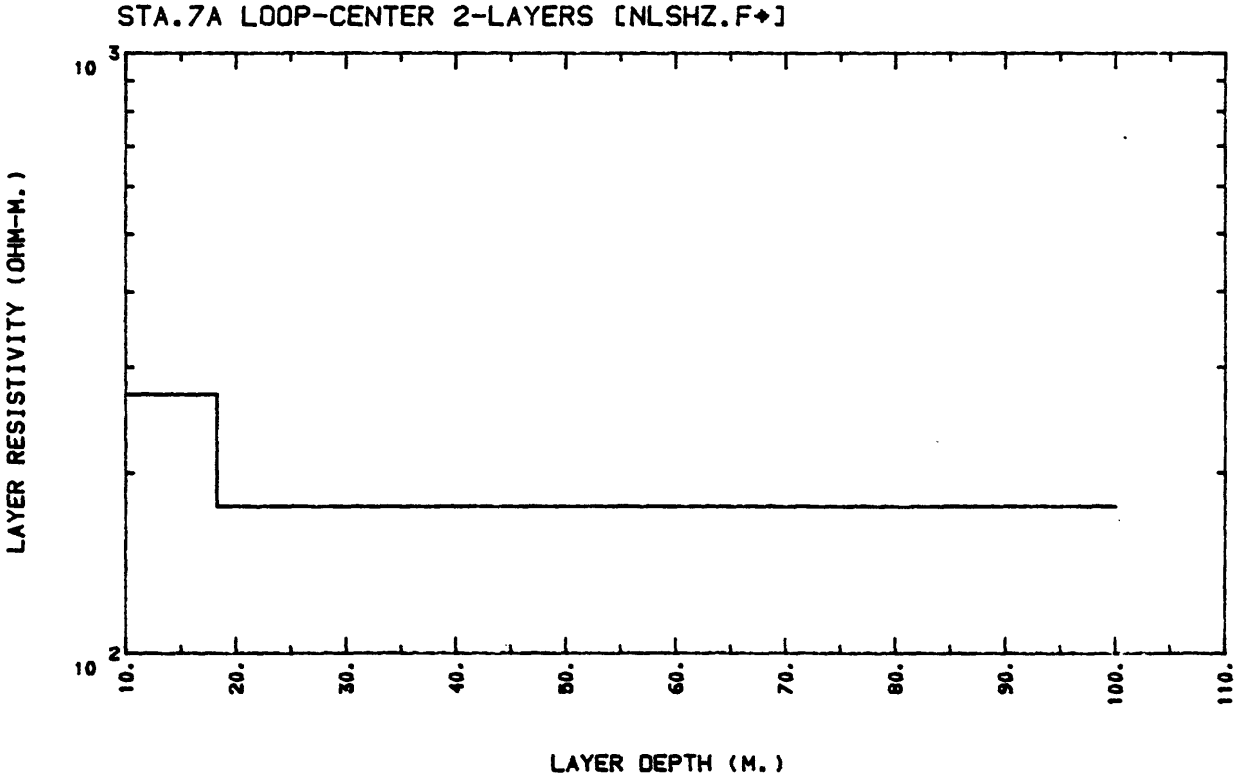
FREQ. (HZ.)

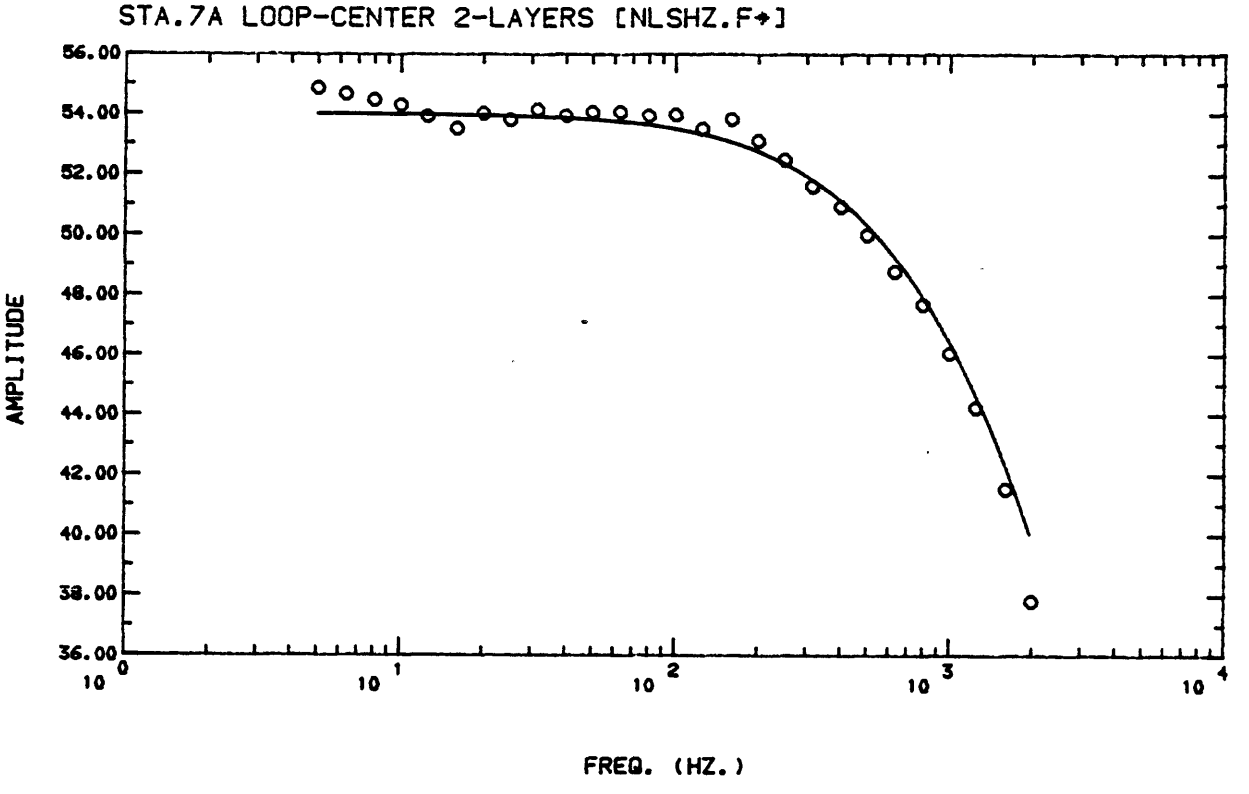
(NLSHZ): STA.7A LOOP-CENTER 2-LAYERS [NLSHZ.F*]

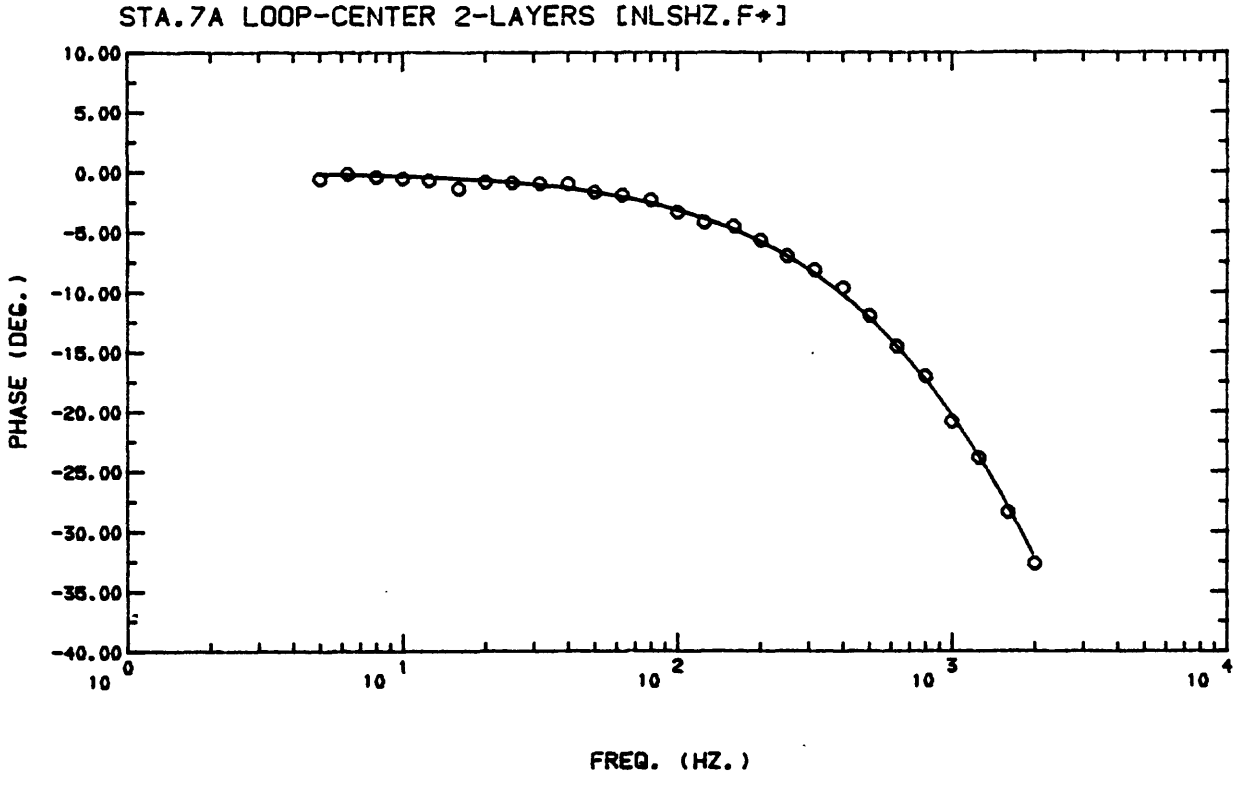
X0= 0.00000E+00 Y0= 0.22860E+03 L= 0.22860E+03
N= 54 K= 4 IP= 0 M= 2

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)
1	-0.590000E+00	-0.191456E+00	-0.399E+00	-0.208164E+03	0.500000E+01	0.200000E+01
2	0.548660E+02	0.539988E+02	0.867E+00	0.160602E+01	0.500000E+01	0.100000E+01
3	-0.150000E+00	-0.236708E+00	0.867E-01	0.366309E+02	0.630000E+01	0.200000E+01
4	0.546660E+02	0.539953E+02	0.671E+00	0.124213E+01	0.630000E+01	0.100000E+01
5	-0.420000E+00	-0.301204E+00	-0.119E+00	-0.394404E+02	0.800000E+01	0.200000E+01
6	0.544790E+02	0.539907E+02	0.488E+00	0.904437E+00	0.800000E+01	0.100000E+01
7	-0.560000E+00	-0.372727E+00	-0.187E+00	-0.502440E+02	0.100000E+02	0.200000E+01
8	0.542930E+02	0.539845E+02	0.309E+00	0.571500E+00	0.100000E+02	0.100000E+01
9	-0.710000E+00	-0.461489E+00	-0.249E+00	-0.538497E+02	0.125000E+02	0.200000E+01
10	0.539320E+02	0.539761E+02	-0.441E-01	-0.816283E-01	0.125000E+02	0.100000E+01
11	-0.140000E+01	-0.584248E+00	-0.816E+00	-0.139624E+03	0.160000E+02	0.200000E+01
12	0.535320E+02	0.539632E+02	-0.431E+00	-0.799032E+00	0.160000E+02	0.100000E+01
13	-0.820000E+00	-0.724209E+00	-0.958E-01	-0.132270E+02	0.200000E+02	0.200000E+01
14	0.540250E+02	0.539470E+02	0.780E-01	0.144620E+00	0.200000E+02	0.100000E+01
15	-0.890000E+00	-0.893355E+00	0.336E-02	0.375560E+00	0.250000E+02	0.200000E+01
16	0.538020E+02	0.539250E+02	-0.123E+00	-0.228125E+00	0.250000E+02	0.100000E+01
17	-0.950000E+00	-0.111058E+01	0.161E+00	0.144588E+02	0.315000E+02	0.200000E+01
18	0.541450E+02	0.538941E+02	0.251E+00	0.465451E+00	0.315000E+02	0.100000E+01
19	-0.980000E+00	-0.138707E+01	0.407E+00	0.293475E+02	0.400000E+02	0.200000E+01
20	0.539340E+02	0.538504E+02	0.836E-01	0.155229E+00	0.400000E+02	0.100000E+01
21	-0.167000E+01	-0.170459E+01	0.346E-01	0.202938E+01	0.500000E+02	0.200000E+01
22	0.540590E+02	0.537948E+02	0.264E+00	0.491051E+00	0.500000E+02	0.100000E+01
23	-0.191000E+01	-0.210565E+01	0.196E+00	0.929161E+01	0.630000E+02	0.200000E+01
24	0.540570E+02	0.537177E+02	0.339E+00	0.631689E+00	0.630000E+02	0.100000E+01
25	-0.231000E+01	-0.261367E+01	0.304E+00	0.116187E+02	0.800000E+02	0.200000E+01
26	0.539310E+02	0.536099E+02	0.321E+00	0.599011E+00	0.800000E+02	0.100000E+01
27	-0.333000E+01	-0.319001E+01	-0.140E+00	-0.438838E+01	0.100000E+03	0.200000E+01
28	0.539710E+02	0.534755E+02	0.495E+00	0.926540E+00	0.100000E+03	0.100000E+01
29	-0.415000E+01	-0.388307E+01	-0.267E+00	-0.687414E+01	0.125000E+03	0.200000E+01
30	0.534970E+02	0.532989E+02	0.198E+00	0.371665E+00	0.125000E+03	0.100000E+01
31	-0.448000E+01	-0.480990E+01	0.330E+00	0.685870E+01	0.160000E+03	0.200000E+01
32	0.538220E+02	0.530398E+02	0.782E+00	0.147474E+01	0.160000E+03	0.100000E+01
33	-0.566000E+01	-0.581716E+01	0.157E+00	0.270165E+01	0.200000E+03	0.200000E+01
34	0.531010E+02	0.527323E+02	0.369E+00	0.699290E+00	0.200000E+03	0.100000E+01
35	-0.696000E+01	-0.701123E+01	0.512E-01	0.730637E+00	0.250000E+03	0.200000E+01
36	0.524800E+02	0.523368E+02	0.143E+00	0.273547E+00	0.250000E+03	0.100000E+01
37	-0.812000E+01	-0.847340E+01	0.353E+00	0.417068E+01	0.315000E+03	0.200000E+01
38	0.516160E+02	0.518124E+02	-0.196E+00	-0.379140E+00	0.315000E+03	0.100000E+01
39	-0.964000E+01	-0.102598E+02	0.620E+00	0.604107E+01	0.400000E+03	0.200000E+01
40	0.509410E+02	0.511193E+02	-0.178E+00	-0.348872E+00	0.400000E+03	0.100000E+01
41	-0.119500E+02	-0.122131E+02	0.263E+00	0.215406E+01	0.500000E+03	0.200000E+01
42	0.499950E+02	0.503043E+02	-0.309E+00	-0.614834E+00	0.500000E+03	0.100000E+01
43	-0.145300E+02	-0.145593E+02	0.293E-01	0.201081E+00	0.630000E+03	0.200000E+01
44	0.487920E+02	0.492570E+02	-0.465E+00	-0.943975E+00	0.630000E+03	0.100000E+01
45	-0.170300E+02	-0.173650E+02	0.335E+00	0.192938E+01	0.800000E+03	0.200000E+01
46	0.476920E+02	0.479216E+02	-0.230E+00	-0.479122E+00	0.800000E+03	0.100000E+01
47	-0.208400E+02	-0.203654E+02	-0.475E+00	-0.233063E+01	0.100000E+04	0.200000E+01
48	0.460530E+02	0.464097E+02	-0.357E+00	-0.768656E+00	0.100000E+04	0.100000E+01
49	-0.238700E+02	-0.237572E+02	-0.113E+00	-0.474959E+00	0.125000E+04	0.200000E+01
50	0.442310E+02	0.446145E+02	-0.384E+00	-0.859610E+00	0.125000E+04	0.100000E+01

```
  51 -0.283900E+02 -0.279875E+02 -0.402E+00 -0.143807E+01  0.160000E+04  0.200000E+01
  52  0.415220E+02  0.422735E+02 -0.752E+00 -0.177782E+01  0.160000E+04  0.100000E+01
  53 -0.326600E+02 -0.322536E+02 -0.406E+00 -0.126017E+01  0.200000E+04  0.200000E+01
  54  0.378350E+02  0.398250E+02 -0.199E+01 -0.499675E+01  0.200000E+04  0.100000E+01
** RMSERR=  0.47219440E+00

CORRELATION MATRIX
 1  0.1000E+01
 2  0.8501E+00  0.1000E+01
 3  0.9987E+00  0.8747E+00  0.1000E+01
 4 -0.1568E+00  0.5316E-01 -0.1404E+00  0.1000E+01

  **PARM.SOL.    STD.ERROR    REL.ERROR     % ERROR **
 1  0.3701E-02  0.4933E+01  0.1333E+04  0.1333E+06
 2  0.5685E-02  0.1162E+00  0.2044E+02  0.2044E+04
 3  0.1829E+02  0.1120E+02  0.6124E+00  0.6124E+02
 4  0.5405E+02  0.5185E-02  0.9593E-04  0.9593E-02

PARAMETER NAME       FINAL SOLUTION        RESISTIVITY   LAYER DEPTH
   1   SIGMA( 1) =  0.37010270E-02   1  0.27019528E+03
   2   SIGMA( 2) =  0.56848722E-02   2  0.17590546E+03
   3   THICK( 1) =  0.18288874E+02                        1  0.18288874E+02
   4   SHIFT     =  0.54048523E+02
```




STA.7A LOOP-CENTER 2-LAYERS [NLSHZ.F+]
AMPLITUDE
56.00
54.00
52.00
50.00
48.00
46.00
44.00
42.00
40.00
38.00
36.00
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)


STA.7A LOOP-CENTER 2-LAYERS [NLSHZ.F+]
PHASE (DEG.)
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
-30.00
-35.00
-40.00
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

{NLSLOOP3}: STA.7B OUTSIDE-LOOP 4-LAYERS ELLIPTICITY [NLSLOOP3.K*]

Y0= 0.11280E+04
IRATIO= 0, 0 PARM=-0.42000E+01 , 0.17170E+03
N= 30 K= 7 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 4

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.230990E+00	-0.233343E+00	0.235E-02	0.100843E+01	0.250000E+01	0.100000E+01	0.700000E+01
2	-0.256500E+00	-0.260376E+00	0.388E-02	0.148879E+01	0.315000E+01	0.100000E+01	0.700000E+01
3	-0.294540E+00	-0.284597E+00	-0.994E-02	-0.349378E+01	0.400000E+01	0.100000E+01	0.700000E+01
4	-0.316070E+00	-0.302615E+00	-0.135E-01	-0.444628E+01	0.500000E+01	0.100000E+01	0.700000E+01
5	-0.327900E+00	-0.315923E+00	-0.120E-01	-0.379106E+01	0.630000E+01	0.100000E+01	0.700000E+01
6	-0.331020E+00	-0.323801E+00	-0.722E-02	-0.222944E+01	0.800000E+01	0.100000E+01	0.700000E+01
7	-0.327290E+00	-0.325942E+00	-0.135E-02	-0.413420E+00	0.100000E+02	0.100000E+01	0.700000E+01
8	-0.317100E+00	-0.323392E+00	0.629E-02	0.194558E+01	0.125000E+02	0.100000E+01	0.700000E+01
9	-0.307910E+00	-0.315618E+00	0.771E-02	0.244211E+01	0.160000E+02	0.100000E+01	0.700000E+01
10	-0.290830E+00	-0.304750E+00	0.139E-01	0.456771E+01	0.200000E+02	0.100000E+01	0.700000E+01
11	-0.281090E+00	-0.291114E+00	0.100E-01	0.344333E+01	0.250000E+02	0.100000E+01	0.700000E+01
12	-0.267980E+00	-0.275303E+00	0.732E-02	0.266008E+01	0.315000E+02	0.100000E+01	0.700000E+01
13	-0.255530E+00	-0.258603E+00	0.307E-02	0.118845E+01	0.400000E+02	0.100000E+01	0.700000E+01
14	-0.244050E+00	-0.243690E+00	-0.360E-03	-0.147544E+00	0.500000E+02	0.100000E+01	0.700000E+01
15	-0.232250E+00	-0.229482E+00	-0.277E-02	-0.120633E+01	0.630000E+02	0.100000E+01	0.700000E+01
16	-0.223700E+00	-0.216553E+00	-0.715E-02	-0.330031E+01	0.800000E+02	0.100000E+01	0.700000E+01
17	-0.214500E+00	-0.206833E+00	-0.767E-02	-0.370671E+01	0.100000E+03	0.100000E+01	0.700000E+01
18	-0.209330E+00	-0.200237E+00	-0.909E-02	-0.454086E+01	0.125000E+03	0.100000E+01	0.700000E+01
19	-0.204280E+00	-0.197090E+00	-0.719E-02	-0.364782E+01	0.160000E+03	0.100000E+01	0.700000E+01
20	-0.206510E+00	-0.198006E+00	-0.850E-02	-0.429473E+01	0.200000E+03	0.100000E+01	0.700000E+01
21	-0.209070E+00	-0.202567E+00	-0.650E-02	-0.321038E+01	0.250000E+03	0.100000E+01	0.700000E+01
22	-0.214730E+00	-0.211411E+00	-0.332E-02	-0.156980E+01	0.315000E+03	0.100000E+01	0.700000E+01
23	-0.227410E+00	-0.225025E+00	-0.238E-02	-0.105984E+01	0.400000E+03	0.100000E+01	0.700000E+01
24	-0.241930E+00	-0.241324E+00	-0.606E-03	-0.251115E+00	0.500000E+03	0.100000E+01	0.700000E+01
25	-0.256320E+00	-0.260867E+00	0.455E-02	0.174301E+01	0.630000E+03	0.100000E+01	0.700000E+01
26	-0.275560E+00	-0.282477E+00	0.692E-02	0.244858E+01	0.800000E+03	0.100000E+01	0.700000E+01
27	-0.292070E+00	-0.301517E+00	0.945E-02	0.313302E+01	0.100000E+04	0.100000E+01	0.700000E+01
28	-0.306870E+00	-0.315676E+00	0.881E-02	0.278966E+01	0.125000E+04	0.100000E+01	0.700000E+01
29	-0.319270E+00	-0.319889E+00	0.619E-03	0.193652E+00	0.160000E+04	0.100000E+01	0.700000E+01
30	-0.323370E+00	-0.307256E+00	-0.161E-01	-0.524455E+01	0.200000E+04	0.100000E+01	0.700000E+01

** RMSERR= 0.87397760E-02

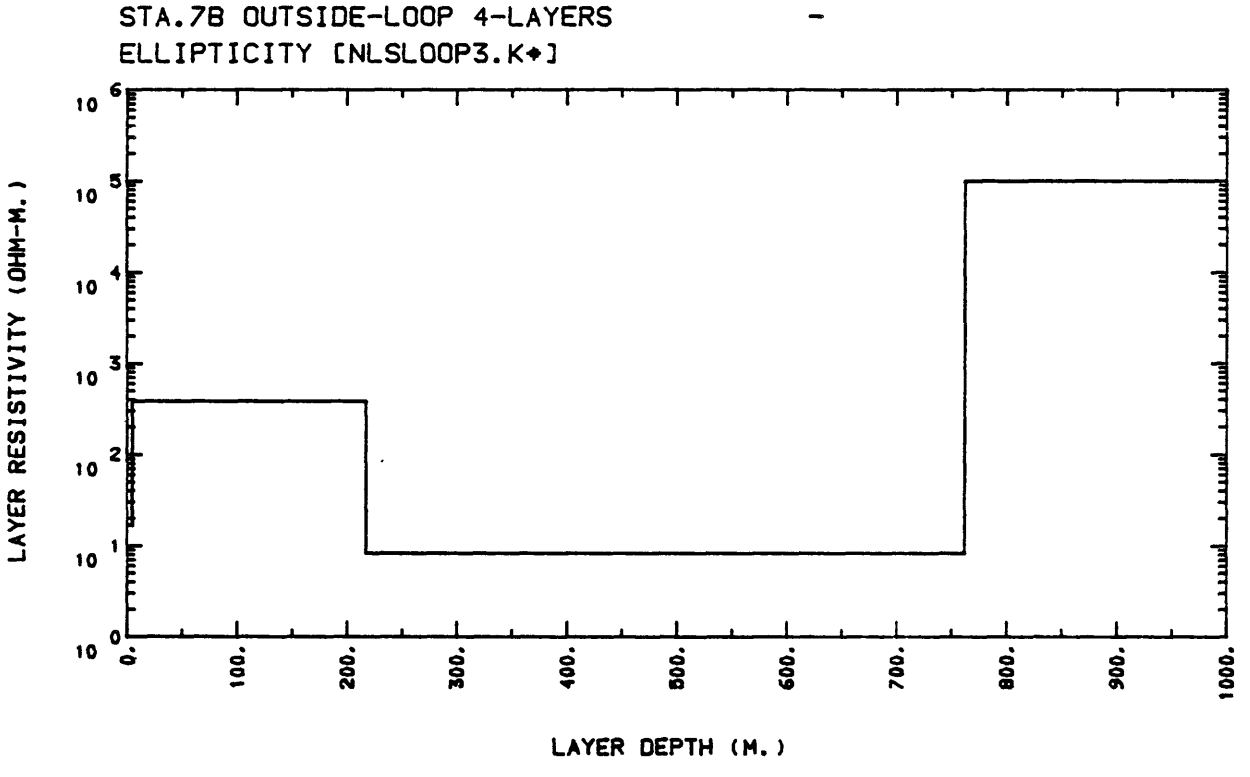
CORRELATION MATRIX

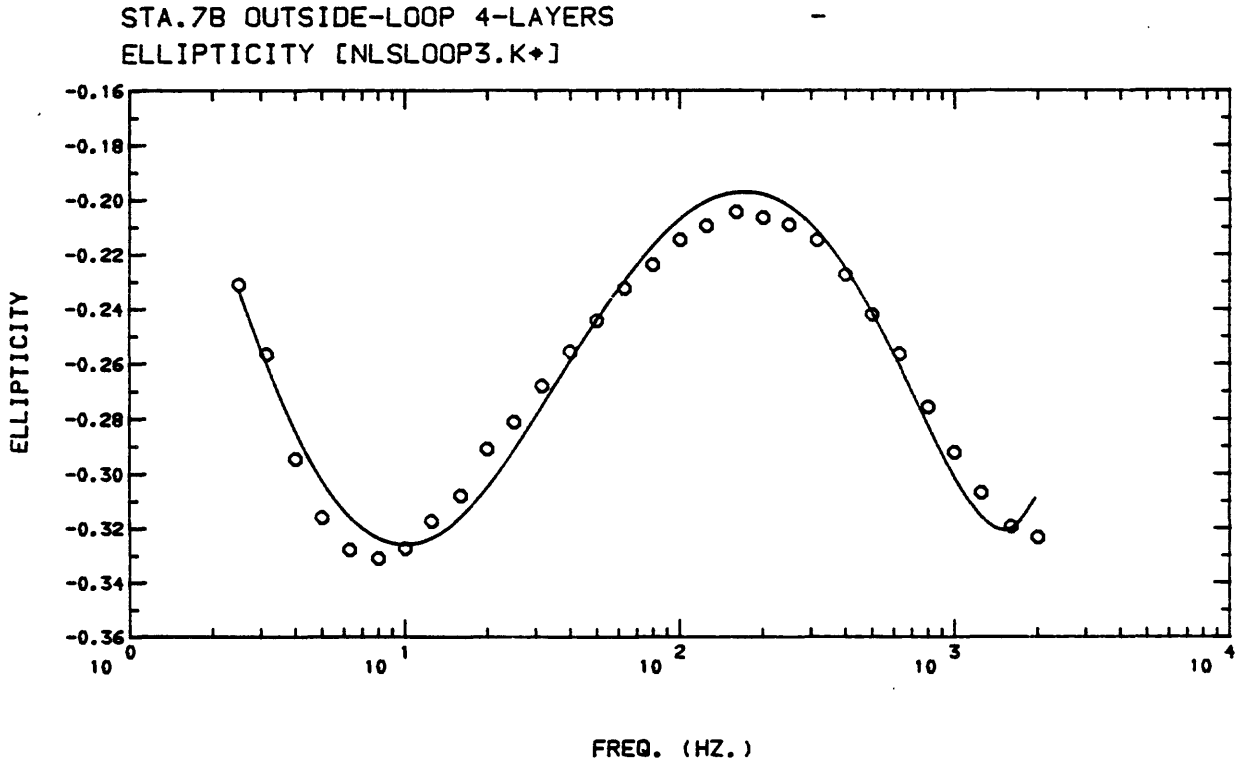
1	0.1000E+01					
2	-0.5336E+00	0.1000E+01				
3	0.1193E+00	0.1267E+00	0.1000E+01			
5	-0.7385E+00	-0.8991E-01	-0.6891E-01	0.1000E+01		
6	-0.2519E+00	0.5516E+00	-0.5938E-01	-0.3243E+00	0.1000E+01	
7	0.1583E+00	-0.2670E+00	-0.4496E-02	0.1454E+00	-0.5847E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.5978E-01	0.2694E-01	0.4507E+00	0.4507E+02
2	0.2599E-02	0.4278E-02	0.1646E+01	0.1646E+03
3	0.1209E+00	0.5040E-02	0.4168E-01	0.4168E+01
5	0.5029E+01	0.7325E-02	0.1457E-02	0.1457E+00
6	0.2122E+03	0.5397E-02	0.2543E-04	0.2543E-02
7	0.5445E+03	0.4935E-01	0.9063E-04	0.9063E-02

FDEM Sounding Results
Medicine Lake, California

PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.59779920E-01	1	0.16728025E+02		
2	SIGMA(2) =	0.25990230E-02	2	0.38475995E+03		
3	SIGMA(3) =	0.12091709E+00	3	0.82701292E+01		
4	SIGMA(4) =	0.99999988E-05	4	0.10000001E+06		
5	THICK(1) =	0.50285034E+01			1	0.50285034E+01
6	THICK(2) =	0.21223361E+03			2	0.21726212E+03
7	THICK(3) =	0.54452856E+03			3	0.76179071E+03




STA.7B OUTSIDE-LOOP 4-LAYERS
ELLIPTICITY [NLSLOOP3.K↔]
ELLIPTICITY
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
-0.28
-0.30
-0.32
-0.34
-0.36
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

(NLSLOOP3): STA.78 OUTSIDE-LOOP 4-LAYERS TILT-&-ELLIPTICITY (NLSLOOP3.L*)

YO= 0.11280E+04
IRATIO= 0, 0 PARM=-0.42000E+01 , 0.17170E+03
N= 60 K= 8 IP= 2 M= 3

PARAMETERS HELD FIXED: IB= 4 8

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.861100E+02	0.856635E+02	0.446E+00	0.521202E+00	0.250000E+01	0.100000E+01	0.600000E+01
2	-0.230990E+00	-0.235039E+00	0.405E-02	0.172257E+01	0.250000E+01	0.100000E+01	0.700000E+01
3	0.833950E+02	0.832347E+02	0.160E+00	0.192626E+00	0.315000E+01	0.100000E+01	0.600000E+01
4	-0.256500E+00	-0.261585E+00	0.509E-02	0.194398E+01	0.315000E+01	0.100000E+01	0.700000E+01
5	0.807780E+02	0.803275E+02	0.451E+00	0.560868E+00	0.400000E+01	0.100000E+01	0.600000E+01
6	-0.294540E+00	-0.285331E+00	-0.921E-02	-0.322760E+01	0.400000E+01	0.100000E+01	0.700000E+01
7	0.769560E+02	0.773199E+02	-0.364E+00	-0.470690E+00	0.500000E+01	0.100000E+01	0.600000E+01
8	-0.316070E+00	-0.303061E+00	-0.130E-01	-0.429264E+01	0.500000E+01	0.100000E+01	0.700000E+01
9	0.738600E+02	0.739965E+02	-0.137E+00	-0.184506E+00	0.630000E+01	0.100000E+01	0.600000E+01
10	-0.327900E+00	-0.316331E+00	-0.116E-01	-0.365711E+01	0.630000E+01	0.100000E+01	0.700000E+01
11	0.695210E+02	0.704360E+02	-0.915E+00	-0.129907E+01	0.800000E+01	0.100000E+01	0.600000E+01
12	-0.331020E+00	-0.324511E+00	-0.651E-02	-0.200593E+01	0.800000E+01	0.100000E+01	0.700000E+01
13	0.661690E+02	0.670766E+02	-0.908E+00	-0.135308E+01	0.100000E+02	0.100000E+01	0.600000E+01
14	-0.327290E+00	-0.327275E+00	-0.148E-04	-0.452578E-02	0.100000E+02	0.100000E+01	0.700000E+01
15	0.630330E+02	0.637521E+02	-0.719E+00	-0.112794E+01	0.125000E+02	0.100000E+01	0.600000E+01
16	-0.317100E+00	-0.325656E+00	0.856E-02	0.262735E+01	0.125000E+02	0.100000E+01	0.700000E+01
17	0.597900E+02	0.601857E+02	-0.396E+00	-0.657406E+00	0.160000E+02	0.100000E+01	0.600000E+01
18	-0.307910E+00	-0.319223E+00	0.113E-01	0.354381E+01	0.160000E+02	0.100000E+01	0.700000E+01
19	0.569010E+02	0.571173E+02	-0.216E+00	-0.378696E+00	0.200000E+02	0.100000E+01	0.600000E+01
20	-0.290830E+00	-0.309719E+00	0.189E-01	0.609874E+01	0.200000E+02	0.100000E+01	0.700000E+01
21	0.543140E+02	0.542466E+02	0.674E-01	0.124251E+00	0.250000E+02	0.100000E+01	0.600000E+01
22	-0.281090E+00	-0.297368E+00	0.163E-01	0.547409E+01	0.250000E+02	0.100000E+01	0.700000E+01
23	0.519690E+02	0.515159E+02	0.453E+00	0.879636E+00	0.315000E+02	0.100000E+01	0.600000E+01
24	-0.267980E+00	-0.282434E+00	0.145E-01	0.511771E+01	0.315000E+02	0.100000E+01	0.700000E+01
25	0.496570E+02	0.489679E+02	0.689E+00	0.140724E+01	0.400000E+02	0.100000E+01	0.600000E+01
26	-0.255530E+00	-0.265719E+00	0.102E-01	0.383440E+01	0.400000E+02	0.100000E+01	0.700000E+01
27	0.476780E+02	0.468390E+02	0.839E+00	0.179124E+01	0.500000E+02	0.100000E+01	0.600000E+01
28	-0.244050E+00	-0.249740E+00	0.569E-02	0.227843E+01	0.500000E+02	0.100000E+01	0.700000E+01
29	0.459570E+02	0.448868E+02	0.107E+01	0.238420E+01	0.630000E+02	0.100000E+01	0.600000E+01
30	-0.232250E+00	-0.233580E+00	0.133E-02	0.569482E+00	0.630000E+02	0.100000E+01	0.700000E+01
31	0.440080E+02	0.431399E+02	0.868E+00	0.201232E+01	0.800000E+02	0.100000E+01	0.600000E+01
32	-0.223700E+00	-0.218337E+00	-0.536E-02	-0.245633E+01	0.800000E+02	0.100000E+01	0.700000E+01
33	0.424730E+02	0.417241E+02	0.749E+00	0.179488E+01	0.100000E+03	0.100000E+01	0.600000E+01
34	-0.214500E+00	-0.206596E+00	-0.790E-02	-0.382570E+01	0.100000E+03	0.100000E+01	0.700000E+01
35	0.408610E+02	0.404565E+02	0.404E+00	0.999780E+00	0.125000E+03	0.100000E+01	0.600000E+01
36	-0.209330E+00	-0.198133E+00	-0.112E-01	-0.565122E+01	0.125000E+03	0.100000E+01	0.700000E+01
37	0.393860E+02	0.391521E+02	0.234E+00	0.597419E+00	0.160000E+03	0.100000E+01	0.600000E+01
38	-0.204280E+00	-0.192879E+00	-0.114E-01	-0.591094E+01	0.160000E+03	0.100000E+01	0.700000E+01
39	0.379460E+02	0.380066E+02	-0.606E-01	-0.159487E+00	0.200000E+03	0.100000E+01	0.600000E+01
40	-0.206510E+00	-0.191710E+00	-0.148E-01	-0.772009E+01	0.200000E+03	0.100000E+01	0.700000E+01
41	0.366740E+02	0.368652E+02	-0.191E+00	-0.518688E+00	0.250000E+03	0.100000E+01	0.600000E+01
42	-0.209070E+00	-0.193993E+00	-0.151E-01	-0.777186E+01	0.250000E+03	0.100000E+01	0.700000E+01
43	0.353920E+02	0.356449E+02	-0.253E+00	-0.709613E+00	0.315000E+03	0.100000E+01	0.600000E+01
44	-0.214730E+00	-0.200318E+00	-0.144E-01	-0.719466E+01	0.315000E+03	0.100000E+01	0.700000E+01
45	0.339290E+02	0.342669E+02	-0.338E+00	-0.986067E+00	0.400000E+03	0.100000E+01	0.600000E+01
46	-0.227410E+00	-0.211277E+00	-0.161E-01	-0.763571E+01	0.400000E+03	0.100000E+01	0.700000E+01
47	0.323030E+02	0.327851E+02	-0.482E+00	-0.147052E+01	0.500000E+03	0.100000E+01	0.600000E+01

48	-0.241930E+00	-0.225237E+00	-0.167E-01	-0.741137E+01	0.500000E+03	0.100000E+01	0.700000E+01
49	0.303930E+02	0.309757E+02	-0.583E+00	-0.188100E+01	0.630000E+03	0.100000E+01	0.600000E+01
50	-0.256320E+00	-0.242767E+00	-0.136E-01	-0.558260E+01	0.630000E+03	0.100000E+01	0.700000E+01
51	0.280390E+02	0.287051E+02	-0.666E+00	-0.232055E+01	0.800000E+03	0.100000E+01	0.600000E+01
52	-0.275560E+00	-0.263183E+00	-0.124E-01	-0.470273E+01	0.800000E+03	0.100000E+01	0.700000E+01
53	0.253260E+02	0.261051E+02	-0.779E+00	-0.298433E+01	0.100000E+04	0.100000E+01	0.600000E+01
54	-0.292070E+00	-0.282537E+00	-0.953E-02	-0.337393E+01	0.100000E+04	0.100000E+01	0.700000E+01
55	0.222790E+02	0.229415E+02	-0.663E+00	-0.288793E+01	0.125000E+04	0.100000E+01	0.600000E+01
56	-0.306870E+00	-0.298931E+00	-0.794E-02	-0.265571E+01	0.125000E+04	0.100000E+01	0.700000E+01
57	0.188280E+02	0.187960E+02	0.320E-01	0.170338E+00	0.160000E+04	0.100000E+01	0.600000E+01
58	-0.319270E+00	-0.308539E+00	-0.107E-01	-0.347789E+01	0.160000E+04	0.100000E+01	0.700000E+01
59	0.158330E+02	0.146144E+02	0.122E+01	0.833836E+01	0.200000E+04	0.100000E+01	0.600000E+01
60	-0.323370E+00	-0.304023E+00	-0.193E-01	-0.636379E+01	0.200000E+04	0.100000E+01	0.700000E+01

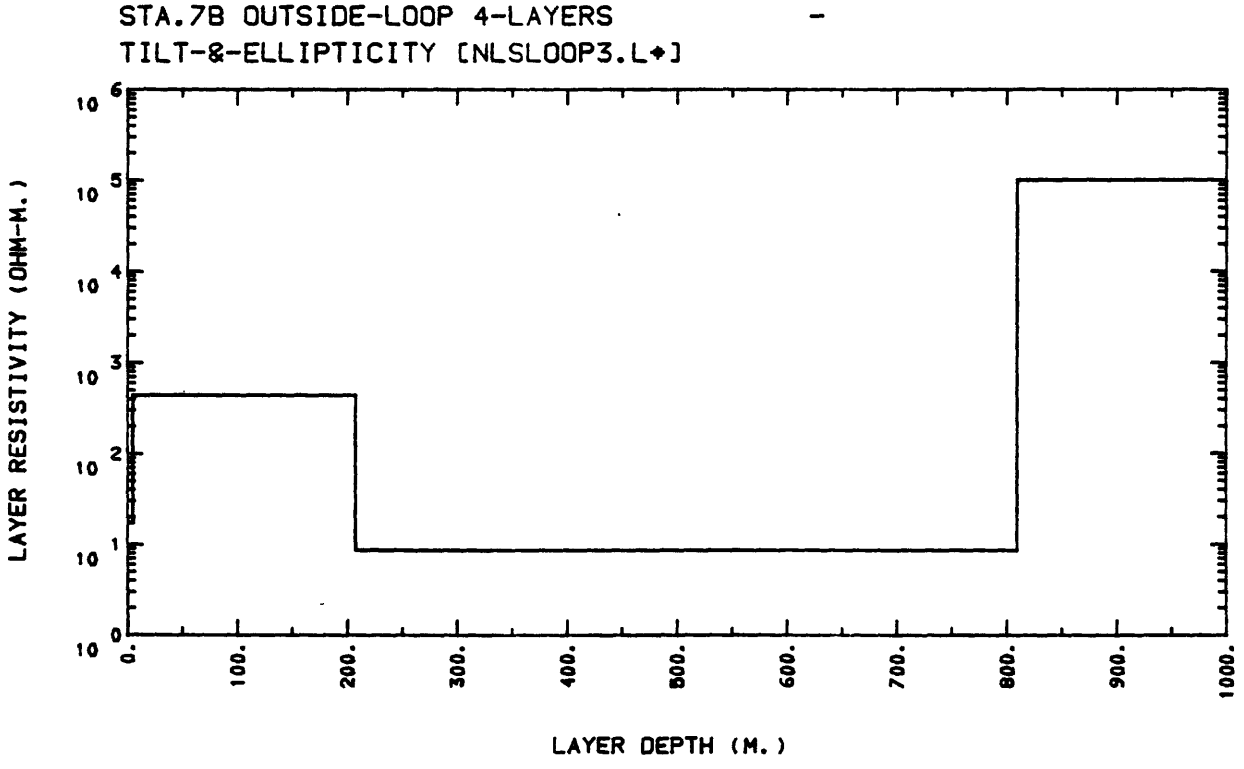
** RMSERR= 0.44715899E+00

CORRELATION MATRIX

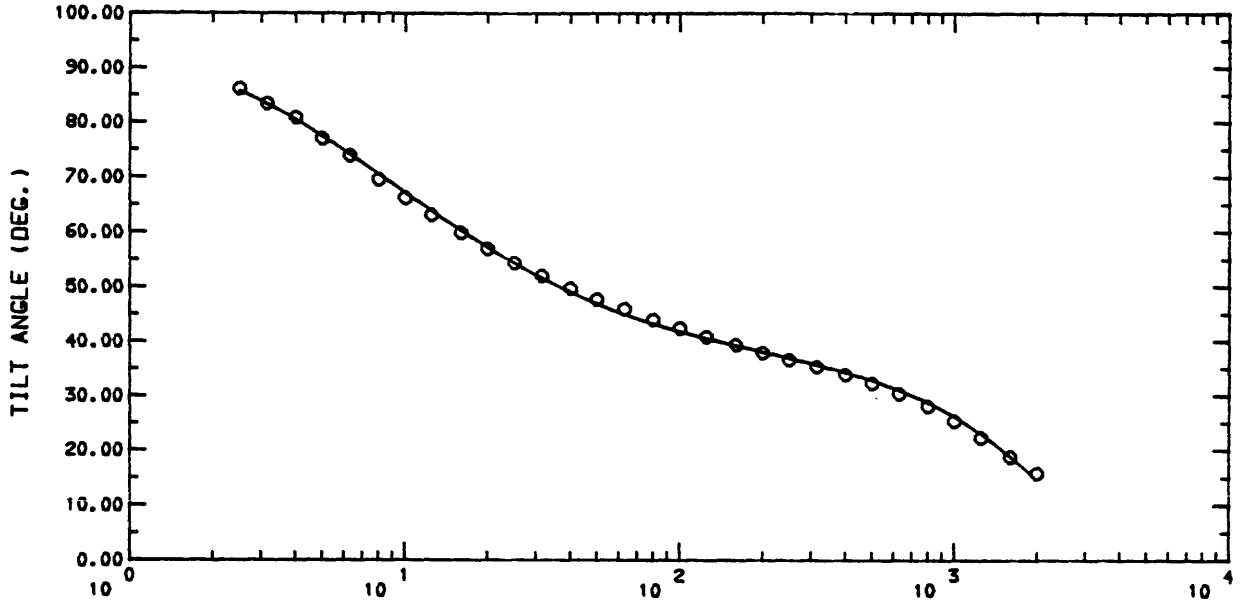
1	0.1000E+01					
2	-0.7302E+00	0.1000E+01				
3	-0.2023E-01	0.1117E+00	0.1000E+01			
5	-0.5261E+00	0.5647E+00	-0.5392E-01	0.1000E+01		
6	0.1098E+00	0.1275E+00	0.6326E+00	-0.8775E-01	0.1000E+01	
7	0.1358E-01	-0.5504E-01	-0.4597E+00	0.9057E-02	-0.2771E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.5846E-01	0.3295E-02	0.5637E-01	0.5637E+01
2	0.2276E-02	0.7792E-03	0.3424E+00	0.3424E+02
3	0.1163E+00	0.3291E-02	0.2829E-01	0.2829E+01
5	0.5004E+01	0.4511E-04	0.9015E-05	0.9015E-03
6	0.2022E+03	0.1804E-02	0.8922E-05	0.8922E-03
7	0.6020E+03	0.5037E-01	0.8368E-04	0.8368E-02

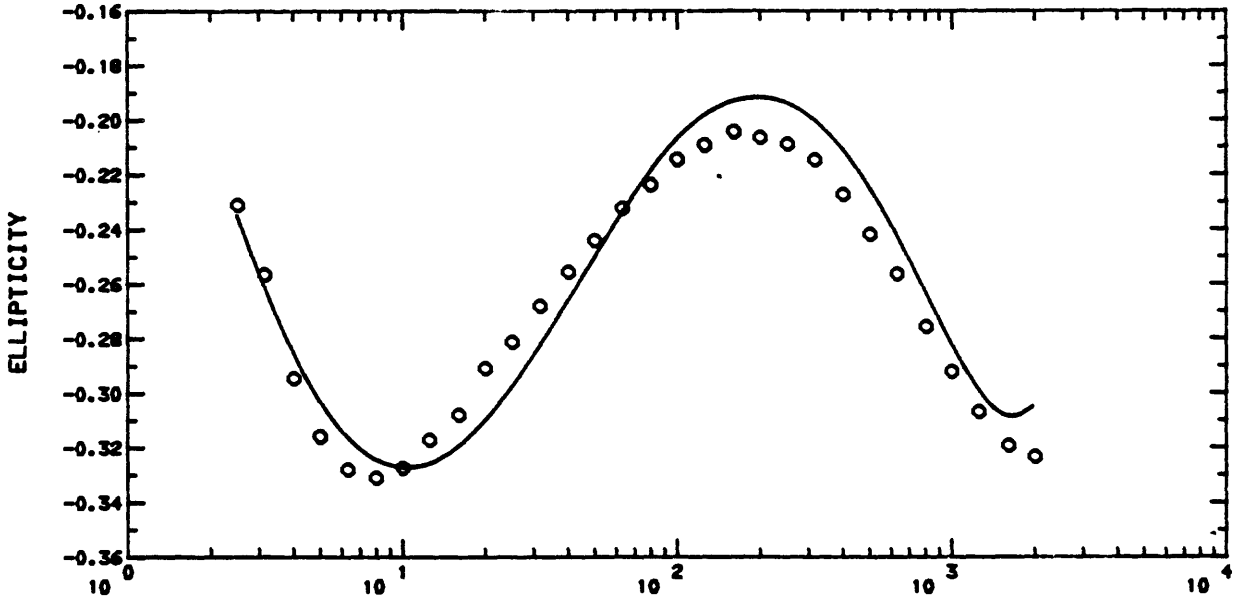
PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.58461249E-01	1	0.17105349E+02		
2	SIGMA(2) =	0.22757447E-02	2	0.43941660E+03		
3	SIGMA(3) =	0.11633665E+00	3	0.85957432E+01		
4	SIGMA(4) =	0.99999988E-05	4	0.10000001E+06		
5	THICK(1) =	0.50038347E+01			1	0.50038347E+01
6	THICK(2) =	0.20222359E+03			2	0.20722742E+03
7	THICK(3) =	0.60198633E+03			3	0.80921375E+03
8	SHIFT =	0.44845657E+01				



STA.7B OUTSIDE-LOOP 4-LAYERS -
TILT-&-ELLIPTICITY [NLSLOOP3.L*]



STA.7B OUTSIDE-LOOP 4-LAYERS -
TILT-&-ELLIPTICITY [NLSLOOP3.L*]



(NLSLOOP3): STA.7B OUTSIDE-LOOP 4-LAYERS RATIO=HR/HZ [NLSLOOP3.I*]

Y0= 0.11280E+04
IRATIO= 2, 1 PARM=-0.42000E+01 , 0.17170E+03
N= 60 K= 7 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 4

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.744980E+02	0.644685E+02	0.100E+02	0.155572E+02	0.250000E+01	0.100000E+01	0.200000E+01
2	0.240750E+00	0.194896E+00	0.459E-01	0.235276E+02	0.250000E+01	0.100000E+01	0.100000E+01
3	0.674040E+02	0.620754E+02	0.533E+01	0.858408E+01	0.315000E+01	0.100000E+01	0.200000E+01
4	0.281300E+00	0.233816E+00	0.475E-01	0.203083E+02	0.315000E+01	0.100000E+01	0.100000E+01
5	0.638730E+02	0.591383E+02	0.473E+01	0.800613E+01	0.400000E+01	0.100000E+01	0.200000E+01
6	0.335940E+00	0.278784E+00	0.572E-01	0.205020E+02	0.400000E+01	0.100000E+01	0.100000E+01
7	0.579470E+02	0.561198E+02	0.183E+01	0.325589E+01	0.500000E+01	0.100000E+01	0.200000E+01
8	0.390850E+00	0.324595E+00	0.663E-01	0.204117E+02	0.500000E+01	0.100000E+01	0.100000E+01
9	0.539910E+02	0.528537E+02	0.114E+01	0.215186E+01	0.630000E+01	0.100000E+01	0.200000E+01
10	0.435390E+00	0.375273E+00	0.601E-01	0.160195E+02	0.630000E+01	0.100000E+01	0.100000E+01
11	0.486000E+02	0.494558E+02	-0.856E+00	-0.173047E+01	0.800000E+01	0.100000E+01	0.200000E+01
12	0.495290E+00	0.430504E+00	0.648E-01	0.150489E+02	0.800000E+01	0.100000E+01	0.100000E+01
13	0.447640E+02	0.463425E+02	-0.158E+01	-0.340610E+01	0.100000E+02	0.100000E+01	0.200000E+01
14	0.544080E+00	0.484269E+00	0.598E-01	0.123507E+02	0.100000E+02	0.100000E+01	0.100000E+01
15	0.410980E+02	0.433250E+02	-0.223E+01	-0.514022E+01	0.125000E+02	0.100000E+01	0.200000E+01
16	0.591870E+00	0.539828E+00	0.520E-01	0.964041E+01	0.125000E+02	0.100000E+01	0.100000E+01
17	0.380350E+02	0.401032E+02	-0.207E+01	-0.515726E+01	0.160000E+02	0.100000E+01	0.200000E+01
18	0.648310E+00	0.603009E+00	0.453E-01	0.751257E+01	0.160000E+02	0.100000E+01	0.100000E+01
19	0.347790E+02	0.372767E+02	-0.250E+01	-0.670048E+01	0.200000E+02	0.100000E+01	0.200000E+01
20	0.701290E+00	0.661082E+00	0.402E-01	0.608219E+01	0.200000E+02	0.100000E+01	0.100000E+01
21	0.327880E+02	0.345147E+02	-0.173E+01	-0.500275E+01	0.250000E+02	0.100000E+01	0.200000E+01
22	0.755980E+00	0.719000E+00	0.370E-01	0.514332E+01	0.250000E+02	0.100000E+01	0.100000E+01
23	0.307500E+02	0.317377E+02	-0.988E+00	-0.311221E+01	0.315000E+02	0.100000E+01	0.200000E+01
24	0.809210E+00	0.777051E+00	0.322E-01	0.413865E+01	0.315000E+02	0.100000E+01	0.100000E+01
25	0.289890E+02	0.290544E+02	-0.654E-01	-0.225007E+00	0.400000E+02	0.100000E+01	0.200000E+01
26	0.866780E+00	0.832552E+00	0.342E-01	0.411120E+01	0.400000E+02	0.100000E+01	0.100000E+01
27	0.275330E+02	0.268956E+02	0.637E+00	0.236979E+01	0.500000E+02	0.100000E+01	0.200000E+01
28	0.920310E+00	0.878650E+00	0.417E-01	0.474138E+01	0.500000E+02	0.100000E+01	0.100000E+01
29	0.261630E+02	0.252244E+02	0.939E+00	0.372110E+01	0.630000E+02	0.100000E+01	0.200000E+01
30	0.970440E+00	0.921188E+00	0.493E-01	0.534660E+01	0.630000E+02	0.100000E+01	0.100000E+01
31	0.252320E+02	0.242171E+02	0.101E+01	0.419096E+01	0.800000E+02	0.100000E+01	0.200000E+01
32	0.103180E+01	0.963341E+00	0.685E-01	0.710638E+01	0.800000E+02	0.100000E+01	0.100000E+01
33	0.242970E+02	0.238560E+02	0.441E+00	0.184860E+01	0.100000E+03	0.100000E+01	0.200000E+01
34	0.108390E+01	0.100554E+01	0.784E-01	0.779231E+01	0.100000E+03	0.100000E+01	0.100000E+01
35	0.238670E+02	0.238476E+02	0.194E+01	0.814765E-01	0.125000E+03	0.100000E+01	0.200000E+01
36	0.114190E+01	0.105307E+01	0.888E-01	0.843566E+01	0.125000E+03	0.100000E+01	0.100000E+01
37	0.234930E+02	0.240361E+02	-0.543E+00	-0.225943E+01	0.160000E+03	0.100000E+01	0.200000E+01
38	0.119850E+01	0.111134E+01	0.872E-01	0.784296E+01	0.160000E+03	0.100000E+01	0.100000E+01
39	0.239810E+02	0.243468E+02	-0.366E+00	-0.150230E+01	0.200000E+03	0.100000E+01	0.200000E+01
40	0.125570E+01	0.116668E+01	0.890E-01	0.763054E+01	0.200000E+03	0.100000E+01	0.100000E+01
41	0.245320E+02	0.249018E+02	-0.370E+00	-0.148501E+01	0.250000E+03	0.100000E+01	0.200000E+01
42	0.130850E+01	0.122270E+01	0.858E-01	0.701751E+01	0.250000E+03	0.100000E+01	0.100000E+01
43	0.254910E+02	0.259049E+02	-0.414E+00	-0.159791E+01	0.315000E+03	0.100000E+01	0.200000E+01
44	0.136300E+01	0.128207E+01	0.809E-01	0.631269E+01	0.315000E+03	0.100000E+01	0.100000E+01
45	0.273760E+02	0.275343E+02	-0.158E+00	-0.574921E+00	0.400000E+03	0.100000E+01	0.200000E+01
46	0.142460E+01	0.134847E+01	0.761E-01	0.564539E+01	0.400000E+03	0.100000E+01	0.100000E+01
47	0.296360E+02	0.296405E+02	-0.449E-02	-0.151414E-01	0.500000E+03	0.100000E+01	0.200000E+01

48	0.149430E+01	0.141994E+01	0.744E-01	0.523720E+01	0.500000E+03	0.100000E+01	0.100000E+01
49	0.321550E+02	0.324001E+02	-0.245E+00	-0.758508E+00	0.830000E+03	0.100000E+01	0.200000E+01
50	0.157980E+01	0.150913E+01	0.707E-01	0.468261E+01	0.830000E+03	0.100000E+01	0.100000E+01
51	0.357060E+02	0.358303E+02	-0.124E+00	-0.346791E+00	0.800000E+03	0.100000E+01	0.200000E+01
52	0.168560E+01	0.162442E+01	0.612E-01	0.376616E+01	0.800000E+03	0.100000E+01	0.100000E+01
53	0.395500E+02	0.395208E+02	0.292E-01	0.738890E-01	0.100000E+04	0.100000E+01	0.200000E+01
54	0.181530E+01	0.176167E+01	0.536E-01	0.304422E+01	0.100000E+04	0.100000E+01	0.100000E+01
55	0.440000E+02	0.436261E+02	0.374E+00	0.856980E+00	0.125000E+04	0.100000E+01	0.200000E+01
56	0.196900E+01	0.193902E+01	0.300E-01	0.154608E+01	0.125000E+04	0.100000E+01	0.100000E+01
57	0.493300E+02	0.485346E+02	0.795E+00	0.163845E+01	0.160000E+04	0.100000E+01	0.200000E+01
58	0.215350E+01	0.220421E+01	-0.507E-01	-0.230044E+01	0.160000E+04	0.100000E+01	0.100000E+01
59	0.539900E+02	0.530474E+02	0.943E+00	0.177692E+01	0.200000E+04	0.100000E+01	0.200000E+01
60	0.233470E+01	0.254104E+01	-0.206E+00	-0.812035E+01	0.200000E+04	0.100000E+01	0.100000E+01

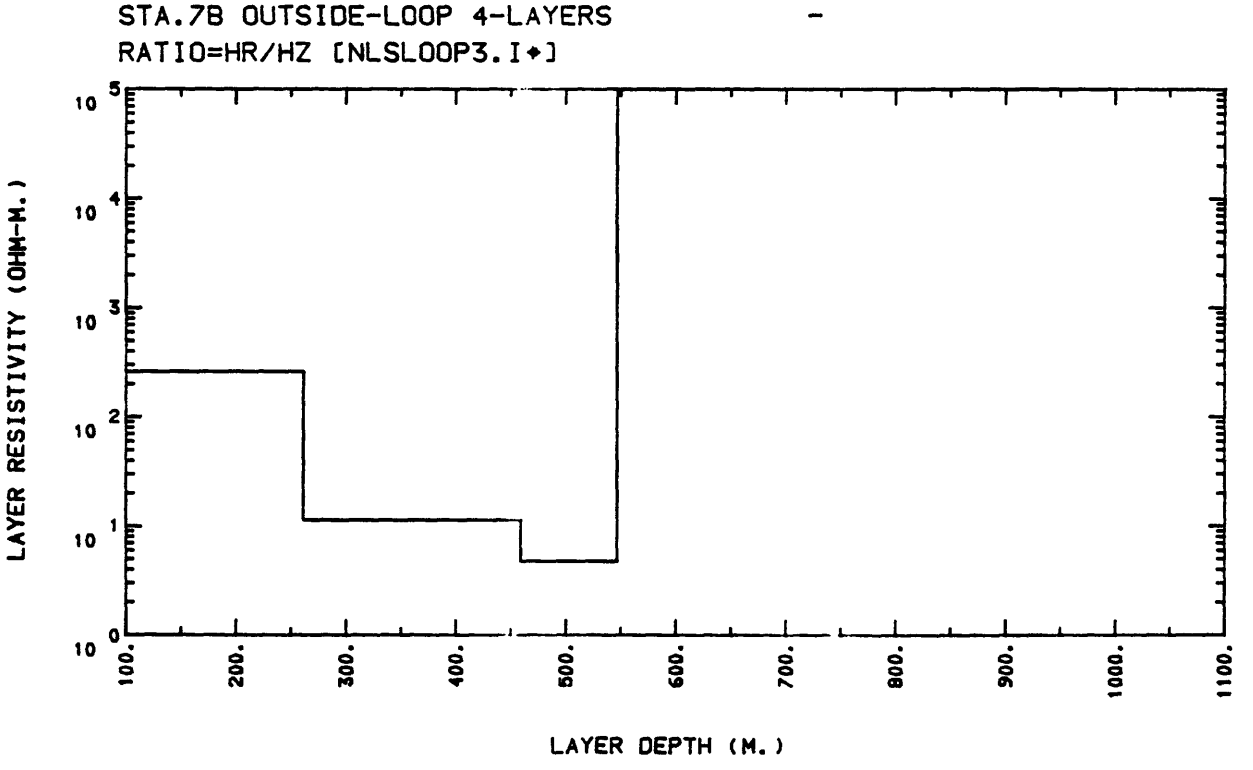
** RMSERR= 0.18452197E+01

CORRELATION MATRIX

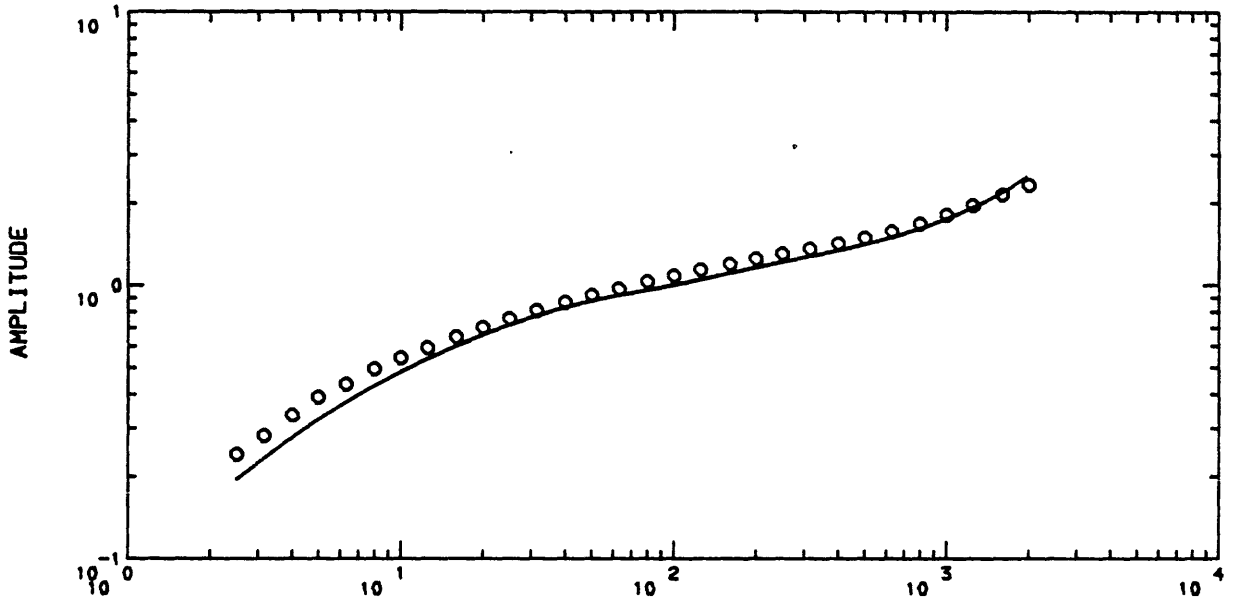
1	0.1000E+01					
2	0.3527E+00	0.1000E+01				
3	-0.1843E+00	0.7849E-01	0.1000E+01			
5	-0.8404E+00	0.5836E-01	0.1935E+00	0.1000E+01		
6	-0.1458E+00	0.5081E+00	-0.1386E+00	0.3830E+00	0.1000E+01	
7	-0.6467E-01	-0.3052E+00	0.8431E+00	-0.1059E+00	-0.5844E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.3876E-02	0.2056E-02	0.5304E+00	0.5304E+02
2	0.8879E-01	0.1400E-01	0.1577E+00	0.1577E+02
3	0.2110E+00	0.6837E-01	0.3240E+00	0.3240E+02
5	0.2611E+03	0.1307E-01	0.5006E-04	0.5006E-02
6	0.1976E+03	0.4632E-01	0.2344E-03	0.2344E-01
7	0.8775E+02	0.5768E-01	0.6573E-03	0.6573E-01

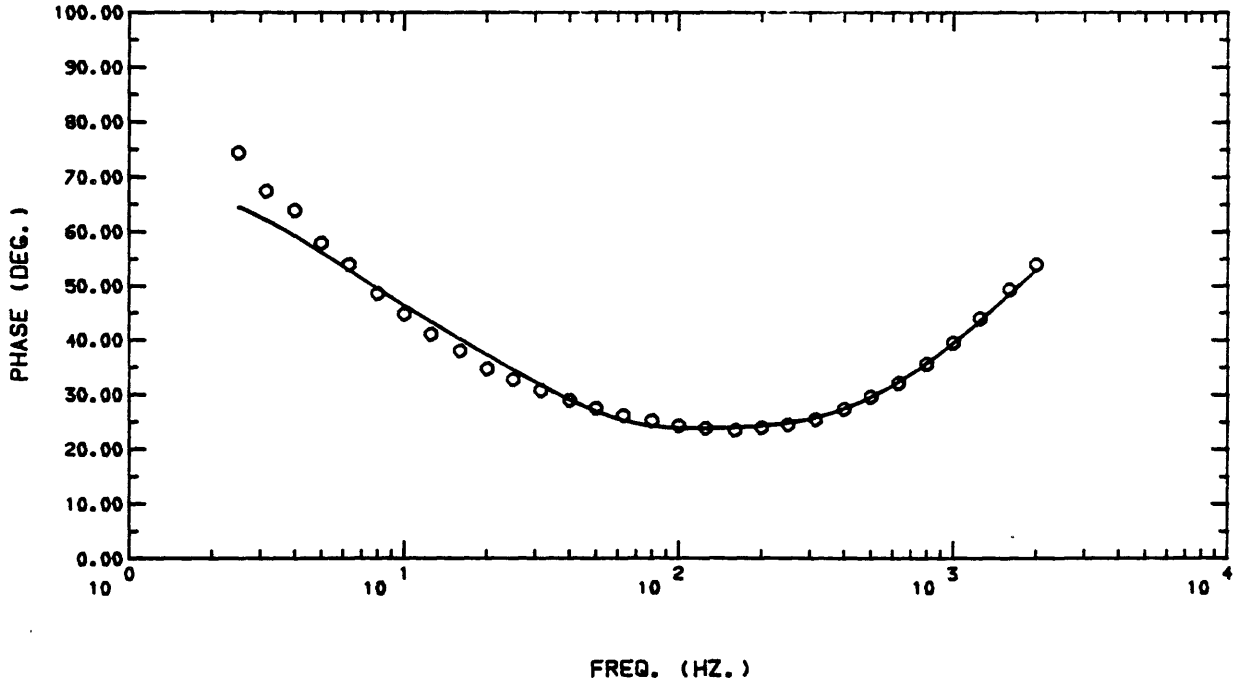
	PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1)	=	0.38762589E-02	1	0.25798071E+03		
2	SIGMA(2)	=	0.88789634E-01	2	0.11262576E+02		
3	SIGMA(3)	=	0.21100850E+00	3	0.47391453E+01		
4	SIGMA(4)	=	0.99999997E-05	4	0.10000000E+06		
5	THICK(1)	=	0.26113611E+03			1	0.26113611E+03
6	THICK(2)	=	0.19764299E+03			2	0.45877911E+03
7	THICK(3)	=	0.87752037E+02			3	0.54653113E+03



STA.7B OUTSIDE-LOOP 4-LAYERS -
RATIO=HR/HZ [NLSLOOP3.I◆]



STA.7B OUTSIDE-LOOP 4-LAYERS -
RATIO=HR/HZ [NLSLOOP3.I◆]



(NLSLOOP3): STA.8B OUTSIDE-LOOP 4-LAYERS ELLIPTICITY [NLSLOOP3.R*]

Y0= 0.16760E+04
IRATIO= 0, 0 PARM= 0.21000E+01 , 0.10950E+03
N= 28 K= 7 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.205100E+00	-0.208700E+00	0.360E-02	0.172517E+01	0.400000E+01	0.100000E+01	0.700000E+01
2	-0.216530E+00	-0.210567E+00	-0.596E-02	-0.283168E+01	0.500000E+01	0.100000E+01	0.700000E+01
3	-0.208310E+00	-0.210165E+00	0.185E-02	0.882514E+00	0.630000E+01	0.100000E+01	0.700000E+01
4	-0.212670E+00	-0.207597E+00	-0.507E-02	-0.244368E+01	0.800000E+01	0.100000E+01	0.700000E+01
5	-0.201340E+00	-0.203638E+00	0.230E-02	0.112837E+01	0.100000E+02	0.100000E+01	0.700000E+01
6	-0.195160E+00	-0.198665E+00	0.350E-02	0.176415E+01	0.125000E+02	0.100000E+01	0.700000E+01
7	-0.188530E+00	-0.192644E+00	0.411E-02	0.213534E+01	0.160000E+02	0.100000E+01	0.700000E+01
8	-0.190400E+00	-0.187339E+00	-0.306E-02	-0.163371E+01	0.200000E+02	0.100000E+01	0.700000E+01
9	-0.181400E+00	-0.182686E+00	0.129E-02	0.704199E+00	0.250000E+02	0.100000E+01	0.700000E+01
10	-0.181210E+00	-0.178982E+00	-0.223E-02	-0.124470E+01	0.315000E+02	0.100000E+01	0.700000E+01
11	-0.178570E+00	-0.176664E+00	-0.191E-02	-0.107870E+01	0.400000E+02	0.100000E+01	0.700000E+01
12	-0.177460E+00	-0.176031E+00	-0.143E-02	-0.811767E+00	0.500000E+02	0.100000E+01	0.700000E+01
13	-0.178090E+00	-0.176939E+00	-0.115E-02	-0.650589E+00	0.630000E+02	0.100000E+01	0.700000E+01
14	-0.177170E+00	-0.179432E+00	0.226E-02	0.126059E+01	0.800000E+02	0.100000E+01	0.700000E+01
15	-0.182170E+00	-0.182981E+00	0.811E-03	0.443181E+00	0.100000E+03	0.100000E+01	0.700000E+01
16	-0.186770E+00	-0.187448E+00	0.678E-03	0.361924E+00	0.125000E+03	0.100000E+01	0.700000E+01
17	-0.192270E+00	-0.193157E+00	0.887E-03	0.459177E+00	0.160000E+03	0.100000E+01	0.700000E+01
18	-0.200590E+00	-0.198799E+00	-0.179E-02	-0.900736E+00	0.200000E+03	0.100000E+01	0.700000E+01
19	-0.203630E+00	-0.204840E+00	0.121E-02	0.590526E+00	0.250000E+03	0.100000E+01	0.700000E+01
20	-0.211620E+00	-0.211577E+00	-0.430E-04	-0.203117E-01	0.315000E+03	0.100000E+01	0.700000E+01
21	-0.220100E+00	-0.219129E+00	-0.971E-03	-0.443325E+00	0.400000E+03	0.100000E+01	0.700000E+01
22	-0.228430E+00	-0.226535E+00	-0.189E-02	-0.836301E+00	0.500000E+03	0.100000E+01	0.700000E+01
23	-0.233150E+00	-0.233827E+00	0.677E-03	0.289697E+00	0.630000E+03	0.100000E+01	0.700000E+01
24	-0.238170E+00	-0.239439E+00	0.127E-02	0.529895E+00	0.800000E+03	0.100000E+01	0.700000E+01
25	-0.239660E+00	-0.241026E+00	0.137E-02	0.566844E+00	0.100000E+04	0.100000E+01	0.700000E+01
26	-0.237450E+00	-0.237452E+00	0.209E-05	0.878561E-03	0.125000E+04	0.100000E+01	0.700000E+01
27	-0.229170E+00	-0.226826E+00	-0.234E-02	-0.103326E+01	0.160000E+04	0.100000E+01	0.700000E+01
28	-0.211370E+00	-0.212713E+00	0.134E-02	0.631519E+00	0.200000E+04	0.100000E+01	0.700000E+01

** RMSERR= 0.27827499E-02

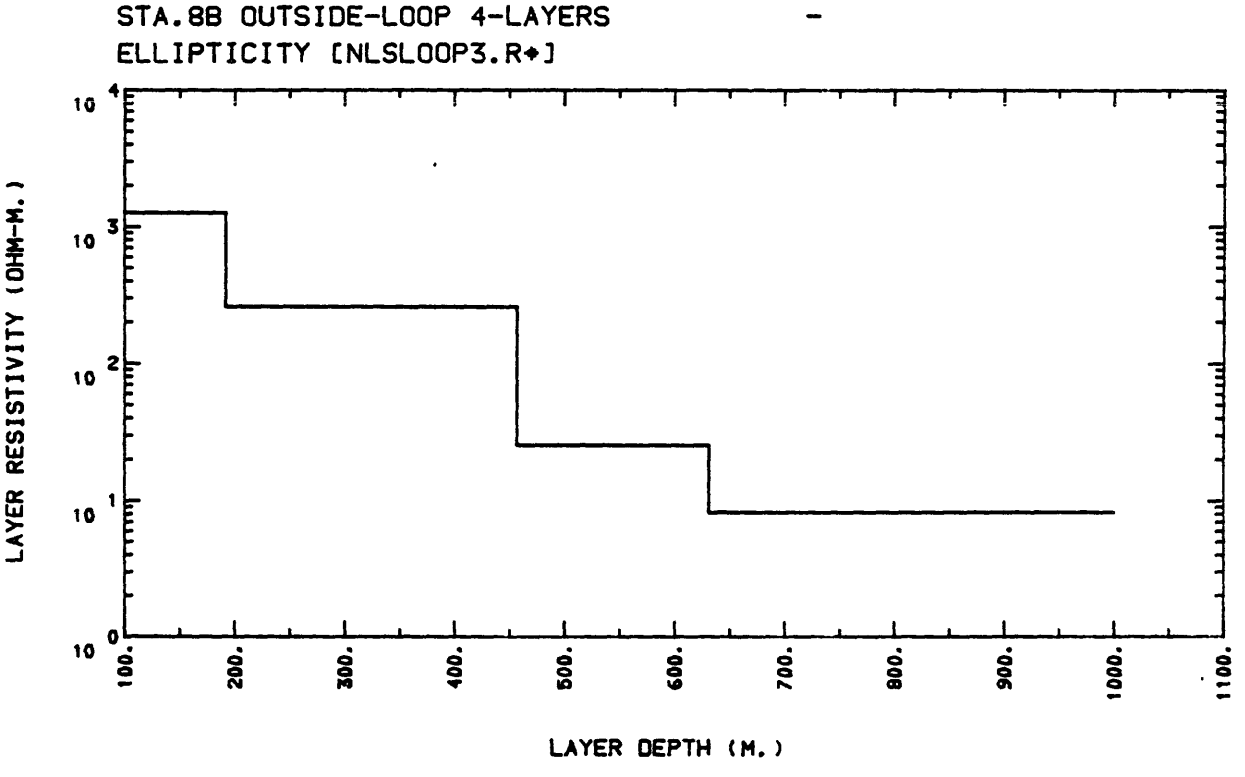
CORRELATION MATRIX

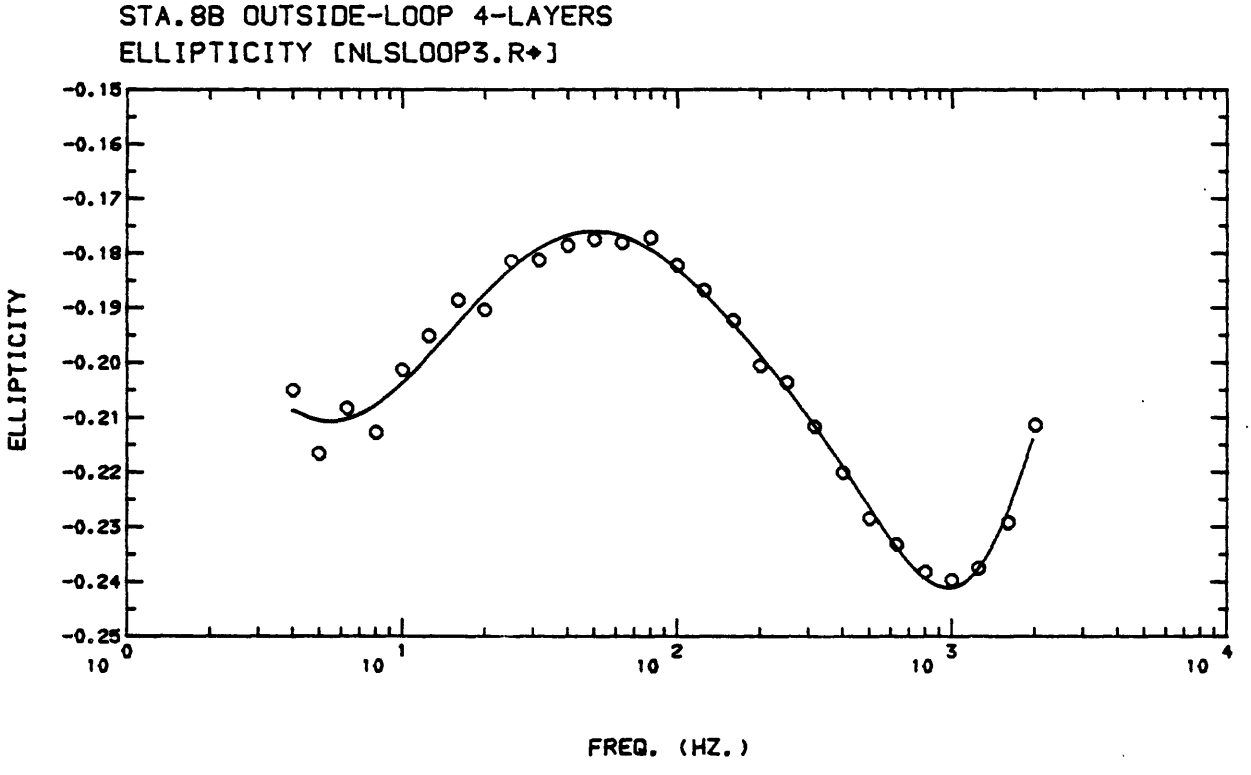
1	0.1000E+01						
2	0.2607E+00	0.1000E+01					
3	0.1986E+00	0.4867E+00	0.1000E+01				
4	0.7862E+00	-0.1157E+00	0.2417E+00	0.1000E+01			
5	-0.1623E+00	0.8345E+00	0.2164E+00	-0.5634E+00	0.1000E+01		
6	-0.6774E+00	-0.3879E+00	0.3134E+00	-0.3058E+00	-0.2521E+00	0.1000E+01	
7	0.3276E+00	-0.3873E+00	0.1765E+00	0.6741E+00	-0.5713E+00	0.3201E-01	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.7932E-03	0.1041E-02	0.1312E+01	0.1312E+03
2	0.3862E-02	0.1557E-02	0.4032E+00	0.4032E+02
3	0.3928E-01	0.7339E-02	0.1868E+00	0.1868E+02
4	0.1215E+00	0.9789E-02	0.8058E-01	0.8058E+01
5	0.1920E+03	0.1261E-01	0.6567E-04	0.6567E-02
6	0.2649E+03	0.8282E-02	0.3127E-04	0.3127E-02
7	0.1745E+03	0.8489E-02	0.4866E-04	0.4866E-02

PARAMETER NAME	FINAL SOLUTION	RESISTIVITY	LAYER DEPTH

1	SIGMA(1) =	0.79324841E-03	1	0.12606392E+04		
2	SIGMA(2) =	0.38615549E-02	2	0.25896304E+03		
3	SIGMA(3) =	0.39264773E-01	3	0.25455154E+02		
4	SIGMA(4) =	0.12148512E+00	4	0.82314606E+01		
5	THICK(1) =	0.19197067E+03			1	0.19197067E+03
6	THICK(2) =	0.26487161E+03			2	0.45684229E+03
7	THICK(3) =	0.17446693E+03			3	0.63130920E+03




STA.8B OUTSIDE-LOOP 4-LAYERS
ELLIPTICITY [NLSLOOP3.R↔]
ELLIPTICITY
-0.15
-0.16
-0.17
-0.18
-0.19
-0.20
-0.21
-0.22
-0.23
-0.24
-0.25
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

(NLSLOOP3): STA.8B OUTSIDE-LOOP 4-LAYERS TILT-&-ELLIPTICITY [NLSLOOP3.S*]

YO= 0.16760E+04
IRATIO= 0, 0 PARM= 0.21000E+01 , 0.10950E+03
N= 56 K= 8 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 8

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.757570E+02	0.756755E+02	0.815E-01	0.107733E+00	0.400000E+01	0.100000E+01	0.600000E+01
2	-0.205100E+00	-0.207288E+00	0.219E-02	0.105536E+01	0.400000E+01	0.100000E+01	0.700000E+01
3	0.734520E+02	0.736812E+02	-0.229E+00	-0.311052E+00	0.500000E+01	0.100000E+01	0.600000E+01
4	-0.216530E+00	-0.209377E+00	-0.715E-02	-0.341609E+01	0.500000E+01	0.100000E+01	0.700000E+01
5	0.715840E+02	0.716343E+02	-0.503E-01	-0.701760E-01	0.630000E+01	0.100000E+01	0.600000E+01
6	-0.208310E+00	-0.209256E+00	0.946E-03	0.452135E+00	0.630000E+01	0.100000E+01	0.700000E+01
7	0.692760E+02	0.695742E+02	-0.298E+00	-0.428567E+00	0.800000E+01	0.100000E+01	0.600000E+01
8	-0.212670E+00	-0.207009E+00	-0.566E-02	-0.273473E+01	0.800000E+01	0.100000E+01	0.700000E+01
9	0.677810E+02	0.677296E+02	0.514E-01	0.758663E-01	0.100000E+02	0.100000E+01	0.600000E+01
10	-0.201340E+00	-0.203380E+00	0.204E-02	0.100288E+01	0.100000E+02	0.100000E+01	0.700000E+01
11	0.660080E+02	0.659798E+02	0.282E-01	0.427030E-01	0.125000E+02	0.100000E+01	0.600000E+01
12	-0.195160E+00	-0.198772E+00	0.361E-02	0.181710E+01	0.125000E+02	0.100000E+01	0.700000E+01
13	0.647120E+02	0.641661E+02	0.546E+00	0.850770E+00	0.160000E+02	0.100000E+01	0.600000E+01
14	-0.188530E+00	-0.193192E+00	0.466E-02	0.241330E+01	0.160000E+02	0.100000E+01	0.700000E+01
15	0.630860E+02	0.626346E+02	0.451E+00	0.720652E+00	0.200000E+02	0.100000E+01	0.600000E+01
16	-0.190400E+00	-0.188319E+00	-0.208E-02	-0.110494E+01	0.200000E+02	0.100000E+01	0.700000E+01
17	0.610830E+02	0.611938E+02	-0.111E+00	-0.181092E+00	0.250000E+02	0.100000E+01	0.600000E+01
18	-0.181400E+00	-0.184127E+00	0.273E-02	0.148098E+01	0.250000E+02	0.100000E+01	0.700000E+01
19	0.598410E+02	0.597766E+02	0.644E-01	0.107651E+00	0.315000E+02	0.100000E+01	0.600000E+01
20	-0.181210E+00	-0.180937E+00	-0.273E-03	-0.150694E+00	0.315000E+02	0.100000E+01	0.700000E+01
21	0.583370E+02	0.583624E+02	-0.254E-01	-0.435704E-01	0.400000E+02	0.100000E+01	0.600000E+01
22	-0.178570E+00	-0.179189E+00	0.619E-03	0.345392E+00	0.400000E+02	0.100000E+01	0.700000E+01
23	0.567190E+02	0.570586E+02	-0.340E+00	-0.595190E+00	0.500000E+02	0.100000E+01	0.600000E+01
24	-0.177460E+00	-0.179111E+00	0.165E-02	0.921958E+00	0.500000E+02	0.100000E+01	0.700000E+01
25	0.556410E+02	0.556972E+02	-0.562E-01	-0.100913E+00	0.630000E+02	0.100000E+01	0.600000E+01
26	-0.178090E+00	-0.180604E+00	0.251E-02	0.139193E+01	0.630000E+02	0.100000E+01	0.700000E+01
27	0.539250E+02	0.542491E+02	-0.324E+00	-0.597444E+00	0.800000E+02	0.100000E+01	0.600000E+01
28	-0.177170E+00	-0.183669E+00	0.650E-02	0.353846E+01	0.800000E+02	0.100000E+01	0.700000E+01
29	0.529140E+02	0.528385E+02	0.755E-01	0.142896E+00	0.100000E+03	0.100000E+01	0.600000E+01
30	-0.182170E+00	-0.187662E+00	0.549E-02	0.292639E+01	0.100000E+03	0.100000E+01	0.700000E+01
31	0.513040E+02	0.513592E+02	-0.552E-01	-0.107387E+00	0.125000E+03	0.100000E+01	0.600000E+01
32	-0.186770E+00	-0.192415E+00	0.565E-02	0.293377E+01	0.125000E+03	0.100000E+01	0.700000E+01
33	0.497140E+02	0.496393E+02	0.747E-01	0.150454E+00	0.160000E+03	0.100000E+01	0.600000E+01
34	-0.192270E+00	-0.198163E+00	0.589E-02	0.297387E+01	0.160000E+03	0.100000E+01	0.700000E+01
35	0.482080E+02	0.480160E+02	0.192E+00	0.399941E+00	0.200000E+03	0.100000E+01	0.600000E+01
36	-0.200590E+00	-0.203527E+00	0.294E-02	0.144329E+01	0.200000E+03	0.100000E+01	0.700000E+01
37	0.464030E+02	0.463380E+02	0.650E-01	0.140378E+00	0.250000E+03	0.100000E+01	0.600000E+01
38	-0.203630E+00	-0.208993E+00	0.536E-02	0.256632E+01	0.250000E+03	0.100000E+01	0.700000E+01
39	0.445530E+02	0.445484E+02	0.463E-02	0.103955E-01	0.315000E+03	0.100000E+01	0.600000E+01
40	-0.211620E+00	-0.214912E+00	0.329E-02	0.153198E+01	0.315000E+03	0.100000E+01	0.700000E+01
41	0.427430E+02	0.426277E+02	0.115E+00	0.270542E+00	0.400000E+03	0.100000E+01	0.600000E+01
42	-0.220100E+00	-0.221606E+00	0.151E-02	0.679591E+00	0.400000E+03	0.100000E+01	0.700000E+01
43	0.406340E+02	0.407323E+02	-0.983E-01	-0.241325E+00	0.500000E+03	0.100000E+01	0.600000E+01
44	-0.228430E+00	-0.228479E+00	0.492E-04	0.215157E-01	0.500000E+03	0.100000E+01	0.700000E+01
45	0.385150E+02	0.386124E+02	-0.974E-01	-0.252272E+00	0.630000E+03	0.100000E+01	0.600000E+01
46	-0.233150E+00	-0.235797E+00	0.265E-02	0.112269E+01	0.630000E+03	0.100000E+01	0.700000E+01
47	0.361790E+02	0.362047E+02	-0.257E-01	-0.711105E-01	0.800000E+03	0.100000E+01	0.600000E+01

48	-0.236170E+00	-0.242291E+00	0.412E-02	0.170073E+01	0.800000E+03	0.100000E+01	0.700000E+01
49	0.337480E+02	0.337543E+02	-0.634E-02	-0.187826E-01	0.100000E+04	0.100000E+01	0.600000E+01
50	-0.239660E+00	-0.245536E+00	0.588E-02	0.239312E+01	0.100000E+04	0.100000E+01	0.700000E+01
51	0.312720E+02	0.311788E+02	0.932E-01	0.298874E+00	0.125000E+04	0.100000E+01	0.600000E+01
52	-0.237450E+00	-0.244141E+00	0.669E-02	0.274078E+01	0.125000E+04	0.100000E+01	0.700000E+01
53	0.285100E+02	0.283581E+02	0.152E+00	0.535708E+00	0.160000E+04	0.100000E+01	0.600000E+01
54	-0.229170E+00	-0.235768E+00	0.660E-02	0.279846E+01	0.160000E+04	0.100000E+01	0.700000E+01
55	0.258310E+02	0.260329E+02	-0.202E+00	-0.775573E+00	0.200000E+04	0.100000E+01	0.600000E+01
56	-0.211370E+00	-0.222521E+00	0.112E-01	0.501107E+01	0.200000E+04	0.100000E+01	0.700000E+01

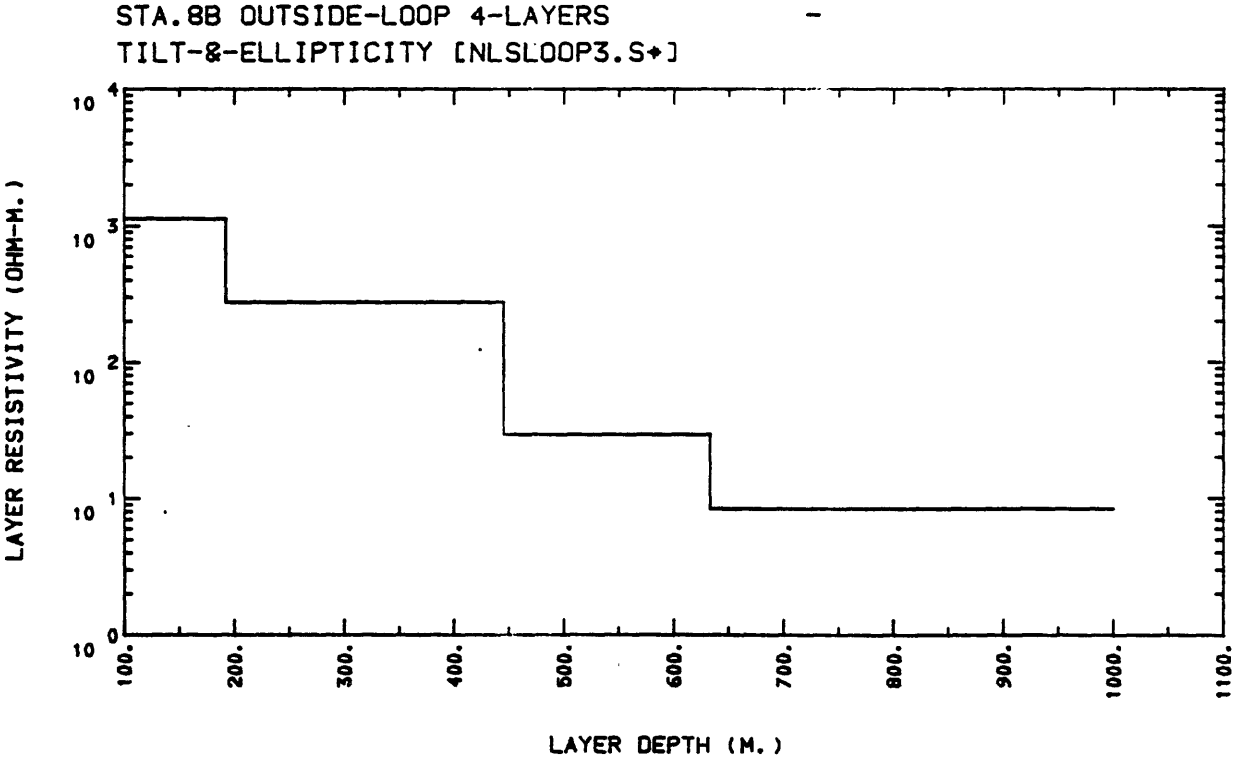
** RMSERR= 0.14695168E+00

CORRELATION MATRIX

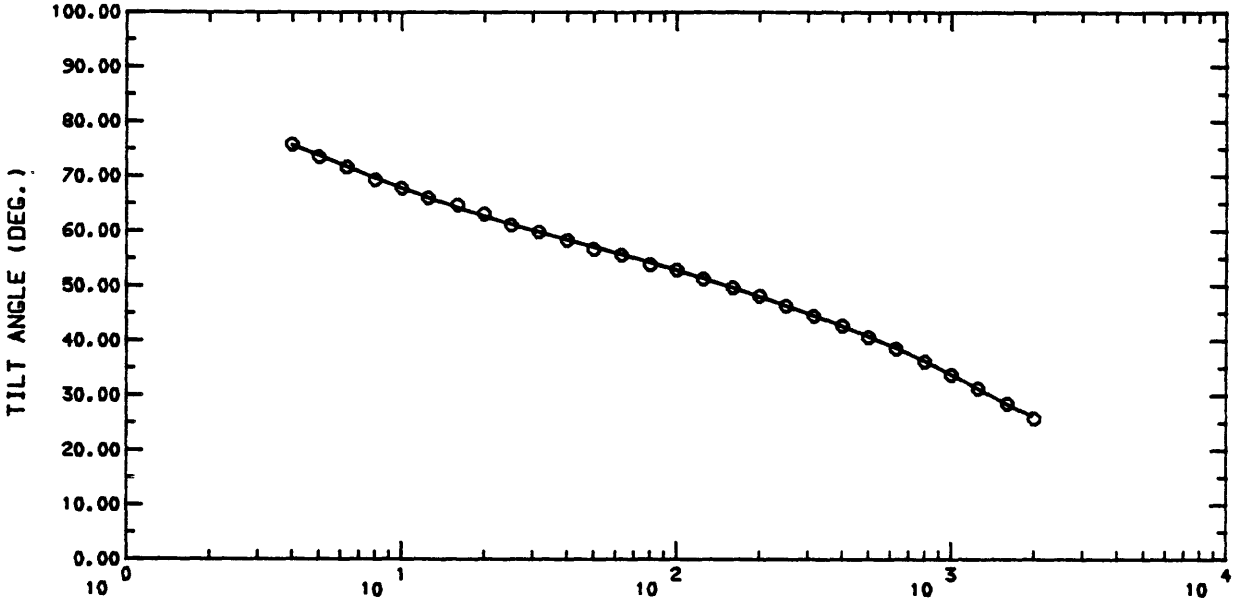
1	0.1000E+01						
2	-0.1620E+00	0.1000E+01					
3	-0.6279E+00	0.1787E+00	0.1000E+01				
4	-0.1764E+00	-0.8152E-01	0.3376E+00	0.1000E+01			
5	0.8747E+00	0.2921E+00	-0.5820E+00	-0.2569E+00	0.1000E+01		
6	-0.9120E+00	0.2839E-01	0.8281E+00	0.2850E+00	-0.9032E+00	0.1000E+01	
7	-0.3726E-01	-0.3988E+00	0.2931E+00	0.7095E+00	-0.2698E+00	0.1754E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.8884E-03	0.5922E-03	0.6666E+00	0.6666E+02
2	0.3628E-02	0.5660E-03	0.1560E+00	0.1560E+02
3	0.3414E-01	0.4025E-02	0.1179E+00	0.1179E+02
4	0.1201E+00	0.3409E-02	0.2839E-01	0.2839E+01
5	0.1921E+03	0.5566E-02	0.2897E-04	0.2897E-02
6	0.2530E+03	0.7656E-02	0.3026E-04	0.3026E-02
7	0.1878E+03	0.5374E-02	0.2861E-04	0.2861E-02

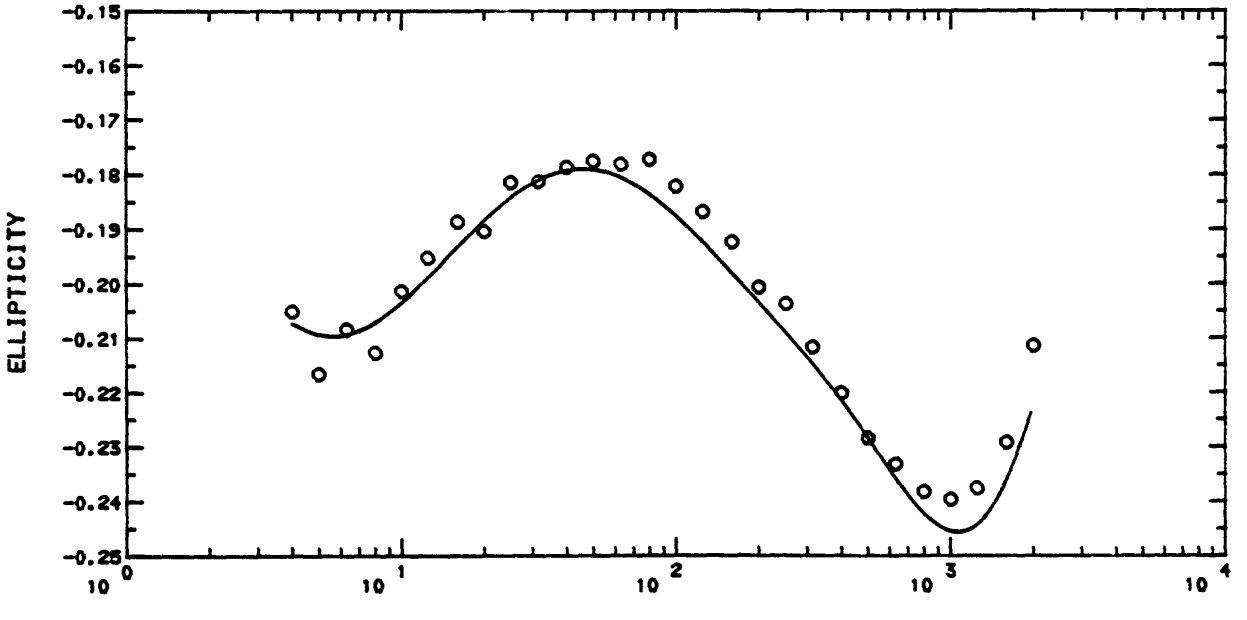
PARAMETER	NAME		FINAL SOLUTION		RESISTIVITY	LAYER	DEPTH
1	SIGMA(1)	=	0.88835327E-03	1	0.11256783E+04		
2	SIGMA(2)	=	0.36276956E-02	2	0.27565707E+03		
3	SIGMA(3)	=	0.34136984E-01	3	0.29293741E+02		
4	SIGMA(4)	=	0.12007225E+00	4	0.83283186E+01		
5	THICK(1)	=	0.19212595E+03			1	0.19212595E+03
6	THICK(2)	=	0.25301212E+03			2	0.44513806E+03
7	THICK(3)	=	0.18781819E+03			3	0.63295624E+03
8	SHIFT	=	-0.16036377E+01				



STA.8B OUTSIDE-LOOP 4-LAYERS -
TILT-&-ELLIPTICITY [NLSLOOP3.S♦]



STA.8B OUTSIDE-LOOP 4-LAYERS -
TILT-&-ELLIPTICITY [NLSLOOP3.S♦]



{NLSLOOP3}: STA.8B OUTSIDE-LOOP 4-LAYERS RATIO=HR/HZ [NLSLOOP3.M*]

Y0= 0.16760E+04
IRATIO= 2, 1 PARM= 0.21000E+01 , 0.10950E+03
N= 56 K= 7 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.419200E+02	0.428901E+02	-0.970E+00	-0.226193E+01	0.400000E+01	0.100000E+01	0.200000E+01
2	0.325890E+00	0.336522E+00	-0.106E-01	-0.315928E+01	0.400000E+01	0.100000E+01	0.100000E+01
3	0.397600E+02	0.395815E+02	0.178E+00	0.450894E+00	0.500000E+01	0.100000E+01	0.200000E+01
4	0.366900E+00	0.367280E+00	-0.380E-03	-0.103523E+00	0.500000E+01	0.100000E+01	0.100000E+01
5	0.360000E+02	0.364537E+02	-0.454E+00	-0.124468E+01	0.630000E+01	0.100000E+01	0.200000E+01
6	0.391810E+00	0.399368E+00	-0.756E-02	-0.189254E+01	0.630000E+01	0.100000E+01	0.100000E+01
7	0.339400E+02	0.335320E+02	0.408E+00	0.121687E+01	0.800000E+01	0.100000E+01	0.200000E+01
8	0.432630E+00	0.432435E+00	0.195E-03	0.449824E-01	0.800000E+01	0.100000E+01	0.100000E+01
9	0.309400E+02	0.310801E+02	-0.140E+00	-0.450821E+00	0.100000E+02	0.100000E+01	0.200000E+01
10	0.453870E+00	0.462933E+00	-0.906E-02	-0.195770E+01	0.100000E+02	0.100000E+01	0.100000E+01
11	0.286400E+02	0.288974E+02	-0.257E+00	-0.890622E+00	0.125000E+02	0.100000E+01	0.200000E+01
12	0.484160E+00	0.492835E+00	-0.868E-02	-0.176031E+01	0.125000E+02	0.100000E+01	0.100000E+01
13	0.268400E+02	0.268064E+02	0.336E-01	0.125336E+00	0.160000E+02	0.100000E+01	0.200000E+01
14	0.506670E+00	0.525117E+00	-0.184E-01	-0.351285E+01	0.160000E+02	0.100000E+01	0.100000E+01
15	0.260800E+02	0.252178E+02	0.862E+00	0.341900E+01	0.200000E+02	0.100000E+01	0.200000E+01
16	0.539660E+00	0.553609E+00	-0.139E-01	-0.251962E+01	0.200000E+02	0.100000E+01	0.100000E+01
17	0.239000E+02	0.239216E+02	-0.216E-01	-0.903219E-01	0.250000E+02	0.100000E+01	0.200000E+01
18	0.578520E+00	0.581659E+00	-0.314E-02	-0.539646E+00	0.250000E+02	0.100000E+01	0.100000E+01
19	0.233300E+02	0.228840E+02	0.446E+00	0.194900E+01	0.315000E+02	0.100000E+01	0.200000E+01
20	0.605310E+00	0.610625E+00	-0.532E-02	-0.870469E+00	0.315000E+02	0.100000E+01	0.100000E+01
21	0.224300E+02	0.221247E+02	0.305E+00	0.138013E+01	0.400000E+02	0.100000E+01	0.200000E+01
22	0.638190E+00	0.641014E+00	-0.282E-02	-0.440600E+00	0.400000E+02	0.100000E+01	0.100000E+01
23	0.217700E+02	0.216817E+02	0.883E-01	0.407144E+00	0.500000E+02	0.100000E+01	0.200000E+01
24	0.675390E+00	0.670372E+00	0.502E-02	0.748566E+00	0.500000E+02	0.100000E+01	0.100000E+01
25	0.215400E+02	0.214642E+02	0.758E-01	0.353190E+00	0.630000E+02	0.100000E+01	0.200000E+01
26	0.701290E+00	0.702402E+00	-0.111E-02	-0.158312E+00	0.630000E+02	0.100000E+01	0.100000E+01
27	0.210200E+02	0.214571E+02	-0.437E+00	-0.203714E+01	0.800000E+02	0.100000E+01	0.200000E+01
28	0.743620E+00	0.737915E+00	0.570E-02	0.773092E+00	0.800000E+02	0.100000E+01	0.100000E+01
29	0.213900E+02	0.216100E+02	-0.220E+00	-0.101790E+01	0.100000E+03	0.100000E+01	0.200000E+01
30	0.770270E+00	0.773852E+00	-0.358E-02	-0.462826E+00	0.100000E+03	0.100000E+01	0.100000E+01
31	0.216300E+02	0.218764E+02	-0.246E+00	-0.112612E+01	0.125000E+03	0.100000E+01	0.200000E+01
32	0.813470E+00	0.812880E+00	0.590E-03	0.725773E-01	0.125000E+03	0.100000E+01	0.100000E+01
33	0.220400E+02	0.222635E+02	-0.224E+00	-0.100409E+01	0.160000E+03	0.100000E+01	0.200000E+01
34	0.857860E+00	0.859932E+00	-0.207E-02	-0.240891E+00	0.160000E+03	0.100000E+01	0.100000E+01
35	0.228100E+02	0.226783E+02	0.132E+00	0.580937E+00	0.200000E+03	0.100000E+01	0.200000E+01
36	0.901720E+00	0.906027E+00	-0.431E-02	-0.475382E+00	0.200000E+03	0.100000E+01	0.100000E+01
37	0.230400E+02	0.231612E+02	-0.121E+00	-0.523218E+00	0.250000E+03	0.100000E+01	0.200000E+01
38	0.955920E+00	0.955459E+00	0.461E-03	0.482971E-01	0.250000E+03	0.100000E+01	0.100000E+01
39	0.239000E+02	0.237691E+02	0.131E+00	0.550592E+00	0.315000E+03	0.100000E+01	0.200000E+01
40	0.101440E+01	0.101042E+01	0.398E-02	0.393544E+00	0.315000E+03	0.100000E+01	0.100000E+01
41	0.248900E+02	0.245685E+02	0.321E+00	0.130845E+01	0.400000E+03	0.100000E+01	0.200000E+01
42	0.107420E+01	0.107226E+01	0.194E-02	0.180682E+00	0.400000E+03	0.100000E+01	0.100000E+01
43	0.260000E+02	0.255106E+02	0.489E+00	0.191842E+01	0.500000E+03	0.100000E+01	0.200000E+01
44	0.114750E+01	0.113664E+01	0.109E-01	0.955233E+00	0.500000E+03	0.100000E+01	0.100000E+01
45	0.268400E+02	0.266798E+02	0.160E+00	0.600318E+00	0.630000E+03	0.100000E+01	0.200000E+01
46	0.122640E+01	0.121374E+01	0.127E-01	0.104270E+01	0.630000E+03	0.100000E+01	0.100000E+01
47	0.279200E+02	0.280028E+02	-0.828E-01	-0.295807E+00	0.800000E+03	0.100000E+01	0.200000E+01
48	0.131980E+01	0.130974E+01	0.101E-01	0.768051E+00	0.800000E+03	0.100000E+01	0.100000E+01
49	0.288300E+02	0.291678E+02	-0.338E+00	-0.115803E+01	0.100000E+04	0.100000E+01	0.200000E+01

50	0.142670E+01	0.142024E+01	0.646E-02	0.454563E+00	0.100000E+04	0.100000E+01	0.100000E+01
51	0.295600E+02	0.299968E+02	-0.437E+00	-0.145607E+01	0.125000E+04	0.100000E+01	0.200000E+01
52	0.154940E+01	0.155649E+01	-0.709E-02	-0.455320E+00	0.125000E+04	0.100000E+01	0.100000E+01
53	0.299700E+02	0.300894E+02	-0.119E+00	-0.396950E+00	0.160000E+04	0.100000E+01	0.200000E+01
54	0.170920E+01	0.174128E+01	-0.321E-01	-0.184225E+01	0.160000E+04	0.100000E+01	0.100000E+01
55	0.294300E+02	0.289946E+02	0.435E+00	0.150175E+01	0.200000E+04	0.100000E+01	0.200000E+01
56	0.190300E+01	0.193329E+01	-0.303E-01	-0.156700E+01	0.200000E+04	0.100000E+01	0.100000E+01

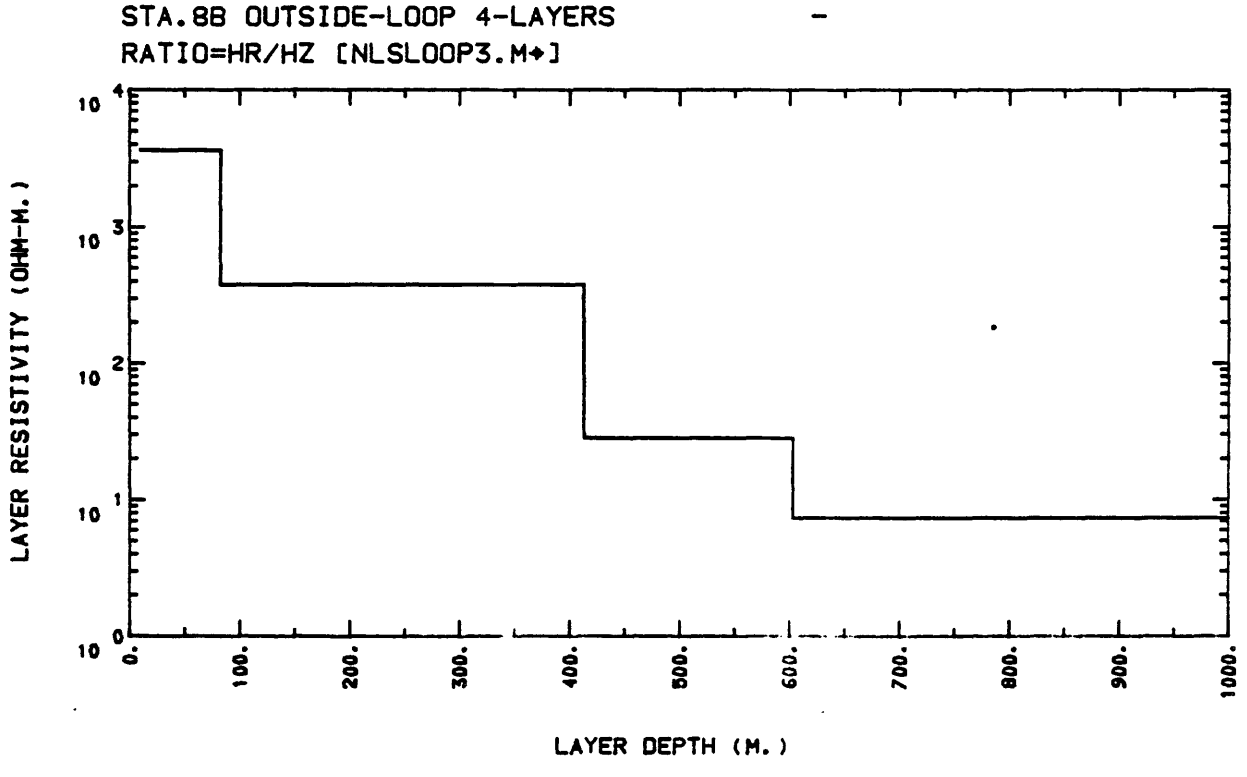
** RMSERR= 0.27733326E+00

CORRELATION MATRIX

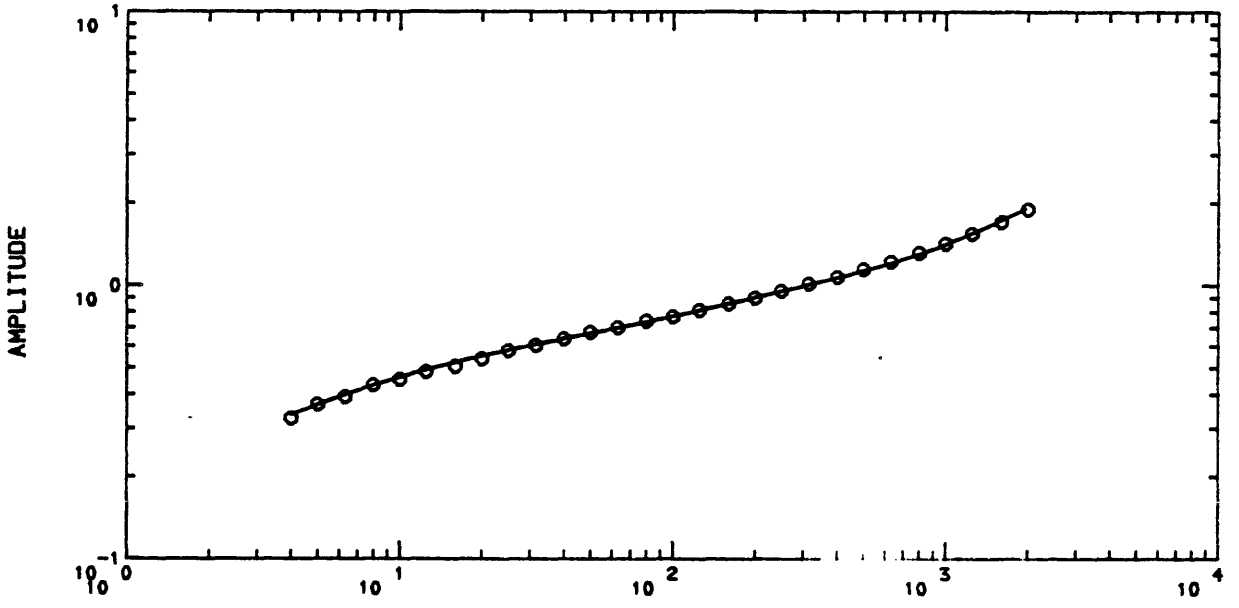
1	0.1000E+01						
2	0.1428E+00	0.1000E+01					
3	-0.3025E-01	0.6744E+00	0.1000E+01				
4	0.4015E+00	0.3221E+00	0.4469E+00	0.1000E+01			
5	-0.2662E-01	0.3285E+00	0.5125E+00	0.2370E+00	0.1000E+01		
6	-0.3565E+00	0.9172E-01	0.6770E+00	0.1513E+00	0.5871E+00	0.1000E+01	
7	0.1617E+00	-0.2246E+00	0.3885E-01	0.5775E+00	0.2945E-02	0.4890E-02	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.2759E-03	0.2663E-03	0.9652E+00	0.9652E+02
2	0.2651E-02	0.5703E-03	0.2151E+00	0.2151E+02
3	0.3556E-01	0.4610E-02	0.1296E+00	0.1296E+02
4.	0.1363E+00	0.2524E-02	0.1852E-01	0.1852E+01
5	0.8276E+02	0.6343E-02	0.7665E-04	0.7665E-02
6	0.3302E+03	0.3620E-02	0.1096E-04	0.1096E-02
7	0.1899E+03	0.4055E-02	0.2135E-04	0.2135E-02

PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.27590874E-03	1	0.36243870E+04		
2	SIGMA(2) =	0.26510081E-02	2	0.37721500E+03		
3	SIGMA(3) =	0.35558350E-01	3	0.28122789E+02		
4	SIGMA(4) =	0.13628212E+00	4	0.73377199E+01		
5	THICK(1) =	0.82758484E+02			1	0.82758484E+02
6	THICK(2) =	0.33022308E+03			2	0.41298157E+03
7	THICK(3) =	0.18992805E+03			3	0.60290961E+03

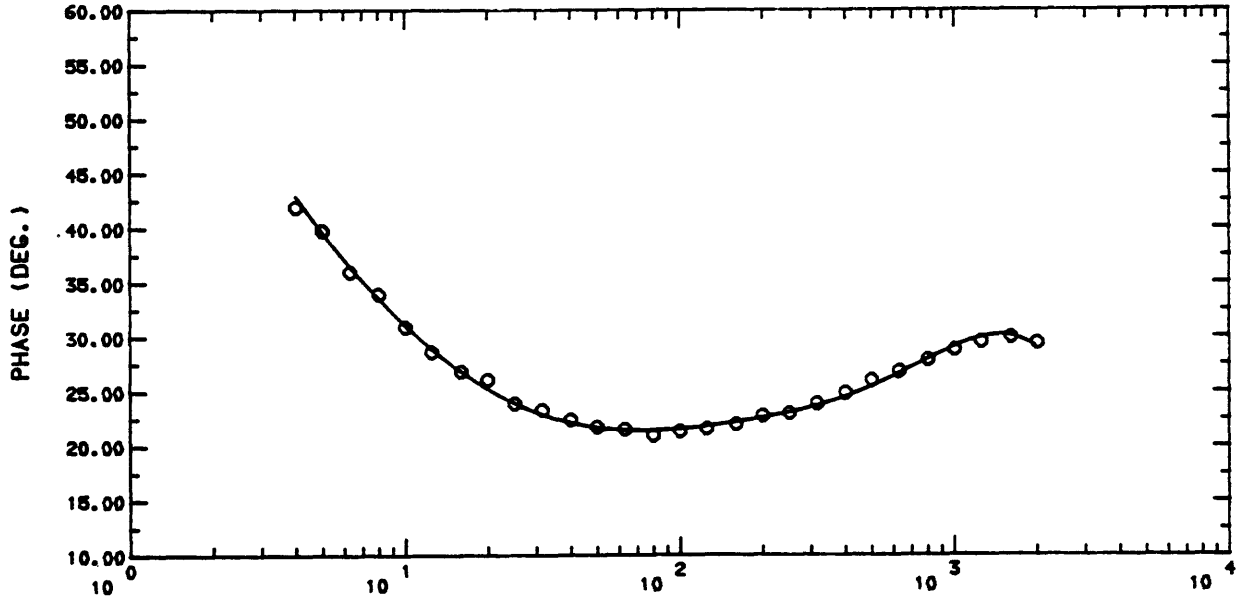


STA.8B OUTSIDE-LOOP 4-LAYERS -
RATIO=HR/HZ [NLSLOOP3.M◆]



FREQ. (HZ.)

STA.8B OUTSIDE-LOOP 4-LAYERS -
RATIO=HR/HZ [NLSLOOP3.M◆]



FREQ. (HZ.)

(NLSLOOP3): STA.88 OUTSIDE-LOOP 4-LAYERS RATIO=EX/HZ [NLSLOOP3.N*]

YO= 0.16760E+04
IRATIO= 5, 1 PARM= 0.00000E+00 , 0.00000E+00
N= 56 K= 8 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 4

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.869700E+01	-0.749290E+01	-0.120E+01	-0.160699E+02	0.400000E+01	0.100000E+01	0.200000E+01
2	0.634300E-02	0.575819E-02	0.585E-03	0.101562E+02	0.400000E+01	0.100000E+01	0.100000E+01
3	-0.847800E+01	-0.734364E+01	-0.113E+01	-0.154468E+02	0.500000E+01	0.100000E+01	0.200000E+01
4	0.507380E-02	0.564390E-02	-0.570E-03	-0.101012E+02	0.500000E+01	0.100000E+01	0.100000E+01
5	-0.695200E+01	-0.715402E+01	0.202E+00	0.282388E+01	0.630000E+01	0.100000E+01	0.200000E+01
6	0.533250E-02	0.553410E-02	-0.202E-03	-0.364281E+01	0.630000E+01	0.100000E+01	0.100000E+01
7	-0.586000E+01	-0.693807E+01	0.108E+01	0.155384E+02	0.800000E+01	0.100000E+01	0.200000E+01
8	0.617500E-02	0.543026E-02	0.745E-03	0.137146E+02	0.800000E+01	0.100000E+01	0.100000E+01
9	-0.523400E+01	-0.673926E+01	0.151E+01	0.223357E+02	0.100000E+02	0.100000E+01	0.200000E+01
10	0.525800E-02	0.534174E-02	-0.837E-04	-0.156775E+01	0.100000E+02	0.100000E+01	0.100000E+01
11	-0.625500E+01	-0.656741E+01	0.312E+00	0.475696E+01	0.125000E+02	0.100000E+01	0.200000E+01
12	0.505770E-02	0.526064E-02	-0.203E-03	-0.385771E+01	0.125000E+02	0.100000E+01	0.100000E+01
13	-0.670000E+01	-0.642632E+01	-0.274E+00	-0.425881E+01	0.160000E+02	0.100000E+01	0.200000E+01
14	0.496600E-02	0.517824E-02	-0.212E-03	-0.409860E+01	0.160000E+02	0.100000E+01	0.100000E+01
15	-0.630000E+01	-0.635938E+01	0.594E-01	0.933747E+00	0.200000E+02	0.100000E+01	0.200000E+01
16	0.494710E-02	0.510897E-02	-0.162E-03	-0.316829E+01	0.200000E+02	0.100000E+01	0.100000E+01
17	-0.708000E+01	-0.636401E+01	-0.716E+00	-0.112506E+02	0.250000E+02	0.100000E+01	0.200000E+01
18	0.476200E-02	0.504320E-02	-0.281E-03	-0.557587E+01	0.250000E+02	0.100000E+01	0.100000E+01
19	-0.692000E+01	-0.645602E+01	-0.464E+00	-0.718678E+01	0.315000E+02	0.100000E+01	0.200000E+01
20	0.477560E-02	0.497701E-02	-0.201E-03	-0.404687E+01	0.315000E+02	0.100000E+01	0.100000E+01
21	-0.712000E+01	-0.665388E+01	-0.466E+00	-0.700516E+01	0.400000E+02	0.100000E+01	0.200000E+01
22	0.475480E-02	0.490869E-02	-0.154E-03	-0.313501E+01	0.400000E+02	0.100000E+01	0.100000E+01
23	-0.671000E+01	-0.693899E+01	0.229E+00	0.330005E+01	0.500000E+02	0.100000E+01	0.200000E+01
24	0.472680E-02	0.484278E-02	-0.116E-03	-0.239481E+01	0.500000E+02	0.100000E+01	0.100000E+01
25	-0.753000E+01	-0.733558E+01	-0.194E+00	-0.265037E+01	0.630000E+02	0.100000E+01	0.200000E+01
26	0.461110E-02	0.477012E-02	-0.159E-03	-0.333357E+01	0.630000E+02	0.100000E+01	0.100000E+01
27	-0.810000E+01	-0.784406E+01	-0.256E+00	-0.326289E+01	0.800000E+02	0.100000E+01	0.200000E+01
28	0.465460E-02	0.468775E-02	-0.332E-04	-0.707171E+00	0.800000E+02	0.100000E+01	0.100000E+01
29	-0.882000E+01	-0.838805E+01	-0.432E+00	-0.514959E+01	0.100000E+03	0.100000E+01	0.200000E+01
30	0.537910E-02	0.460214E-02	0.777E-03	0.168826E+02	0.100000E+03	0.100000E+01	0.100000E+01
31	-0.849000E+01	-0.896509E+01	0.475E+00	0.529938E+01	0.125000E+03	0.100000E+01	0.200000E+01
32	0.452930E-02	0.450707E-02	0.222E-04	0.493261E+00	0.125000E+03	0.100000E+01	0.100000E+01
33	-0.924000E+01	-0.958934E+01	0.349E+00	0.364303E+01	0.160000E+03	0.100000E+01	0.200000E+01
34	0.432020E-02	0.439142E-02	-0.712E-04	-0.162178E+01	0.160000E+03	0.100000E+01	0.100000E+01
35	-0.942000E+01	-0.100931E+02	0.673E+00	0.666873E+01	0.200000E+03	0.100000E+01	0.200000E+01
36	0.429370E-02	0.428016E-02	0.135E-04	0.316257E+00	0.200000E+03	0.100000E+01	0.100000E+01
37	-0.101600E+02	-0.105130E+02	0.353E+00	0.335737E+01	0.250000E+03	0.100000E+01	0.200000E+01
38	0.416800E-02	0.416702E-02	0.977E-06	0.234450E-01	0.250000E+03	0.100000E+01	0.100000E+01
39	-0.108200E+02	-0.108729E+02	0.529E-01	0.486193E+00	0.315000E+03	0.100000E+01	0.200000E+01
40	0.405110E-02	0.405317E-02	-0.207E-05	-0.510333E-01	0.315000E+03	0.100000E+01	0.100000E+01
41	-0.117700E+02	-0.112339E+02	-0.536E+00	-0.477254E+01	0.400000E+03	0.100000E+01	0.200000E+01
42	0.396480E-02	0.394318E-02	0.216E-04	0.548329E+00	0.400000E+03	0.100000E+01	0.100000E+01
43	-0.126800E+02	-0.116597E+02	-0.102E+01	-0.875087E+01	0.500000E+03	0.100000E+01	0.200000E+01
44	0.387840E-02	0.384775E-02	0.306E-04	0.796479E+00	0.500000E+03	0.100000E+01	0.100000E+01
45	-0.110700E+02	-0.122922E+02	0.122E+01	0.994289E+01	0.630000E+03	0.100000E+01	0.200000E+01
46	0.376370E-02	0.375224E-02	0.115E-04	0.305440E+00	0.630000E+03	0.100000E+01	0.100000E+01
47	-0.140400E+02	-0.132188E+02	-0.821E+00	-0.621251E+01	0.800000E+03	0.100000E+01	0.200000E+01

48	0.364950E-02	0.364917E-02	0.331E-06	0.906013E-02	0.800000E+03	0.100000E+01	0.100000E+01
49	-0.151600E+02	-0.143380E+02	-0.822E+00	-0.573273E+01	0.100000E+04	0.100000E+01	0.200000E+01
50	0.359150E-02	0.354046E-02	0.510E-04	0.144149E+01	0.100000E+04	0.100000E+01	0.100000E+01
51	-0.154700E+02	-0.156418E+02	0.172E+00	0.109829E+01	0.125000E+04	0.100000E+01	0.200000E+01
52	0.346420E-02	0.341262E-02	0.516E-04	0.151137E+01	0.125000E+04	0.100000E+01	0.100000E+01
53	-0.163300E+02	-0.171535E+02	0.824E+00	0.480104E+01	0.160000E+04	0.100000E+01	0.200000E+01
54	0.338560E-02	0.324357E-02	0.142E-03	0.437869E+01	0.160000E+04	0.100000E+01	0.100000E+01
55	-0.181500E+02	-0.183937E+02	0.244E+00	0.132511E+01	0.200000E+04	0.100000E+01	0.200000E+01
56	0.339280E-02	0.306468E-02	0.328E-03	0.107064E+02	0.200000E+04	0.100000E+01	0.100000E+01

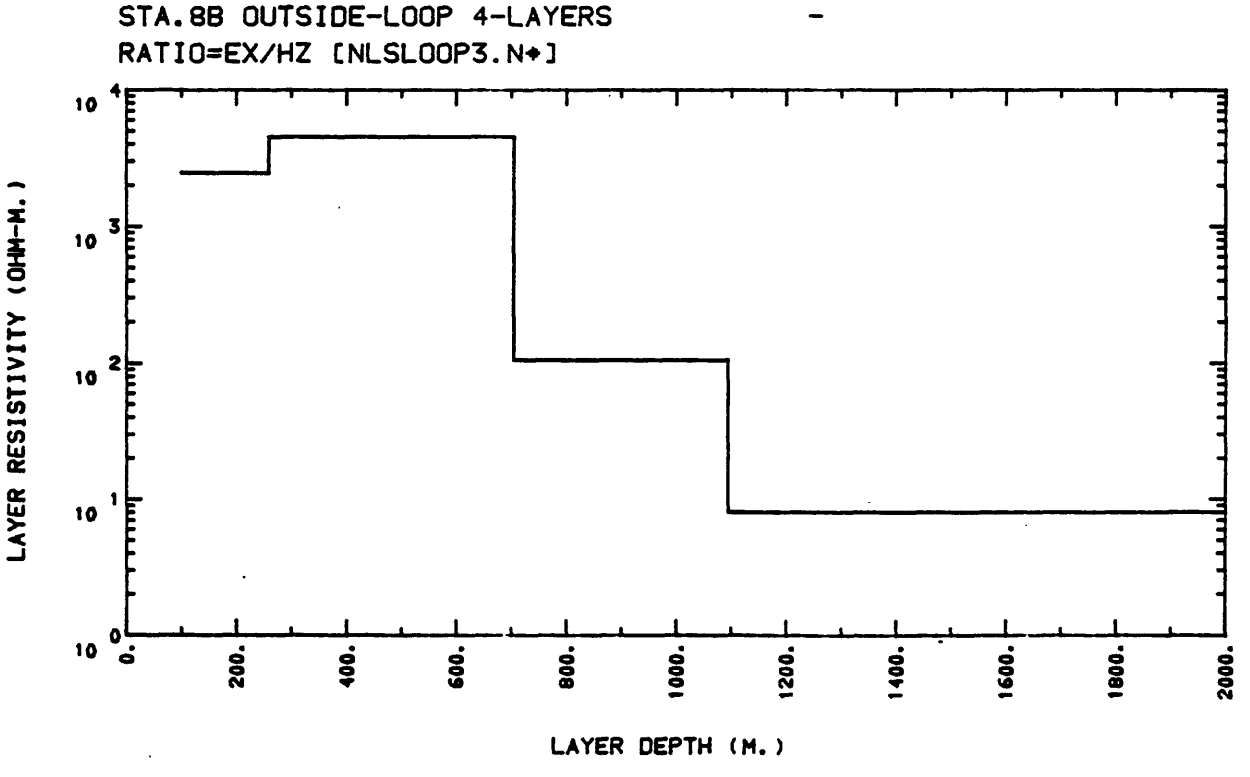
** RMSERR= 0.52560228E+00

CORRELATION MATRIX

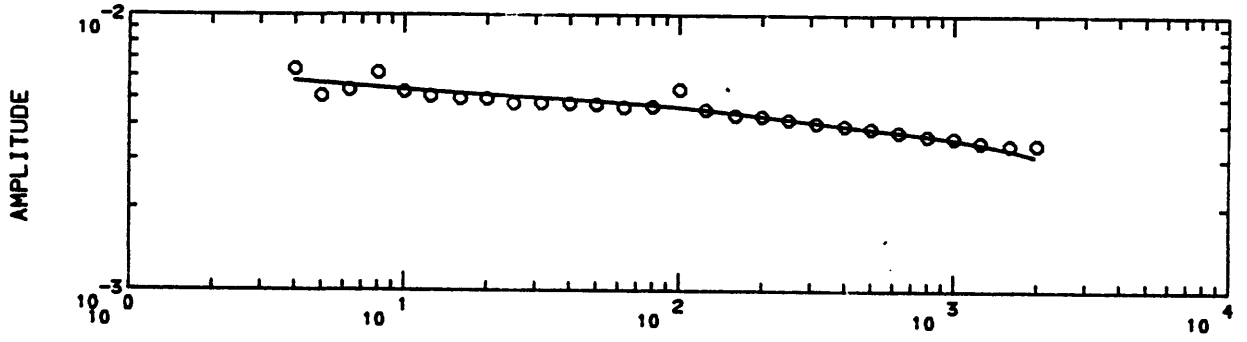
1	0.1000E+01						
2	-0.1344E+00	0.1000E+01					
3	-0.5116E-01	-0.7171E+00	0.1000E+01				
5	-0.3723E+00	0.9577E+00	-0.6139E+00	0.1000E+01			
6	0.3507E+00	-0.9621E+00	0.6412E+00	-0.9988E+00	0.1000E+01		
7	0.1099E+00	0.7826E+00	-0.7919E+00	0.6454E+00	-0.6585E+00	0.1000E+01	
8	-0.5921E-02	0.6333E-02	-0.1005E-02	0.9664E-02	-0.9887E-02	-0.3387E-02	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.4054E-03	0.8668E-03	0.2138E+01	0.2138E+03
2	0.2209E-03	0.1154E-01	0.5225E+02	0.5225E+04
3	0.9520E-02	0.7672E-02	0.8058E+00	0.8058E+02
5	0.2586E+03	0.4001E+00	0.1547E-02	0.1547E+00
6	0.4458E+03	0.3840E+00	0.8614E-03	0.8614E-01
7	0.3896E+03	0.3114E-01	0.7992E-04	0.7992E-02
8	0.7454E-02	0.2216E-03	0.2973E-01	0.2973E+01

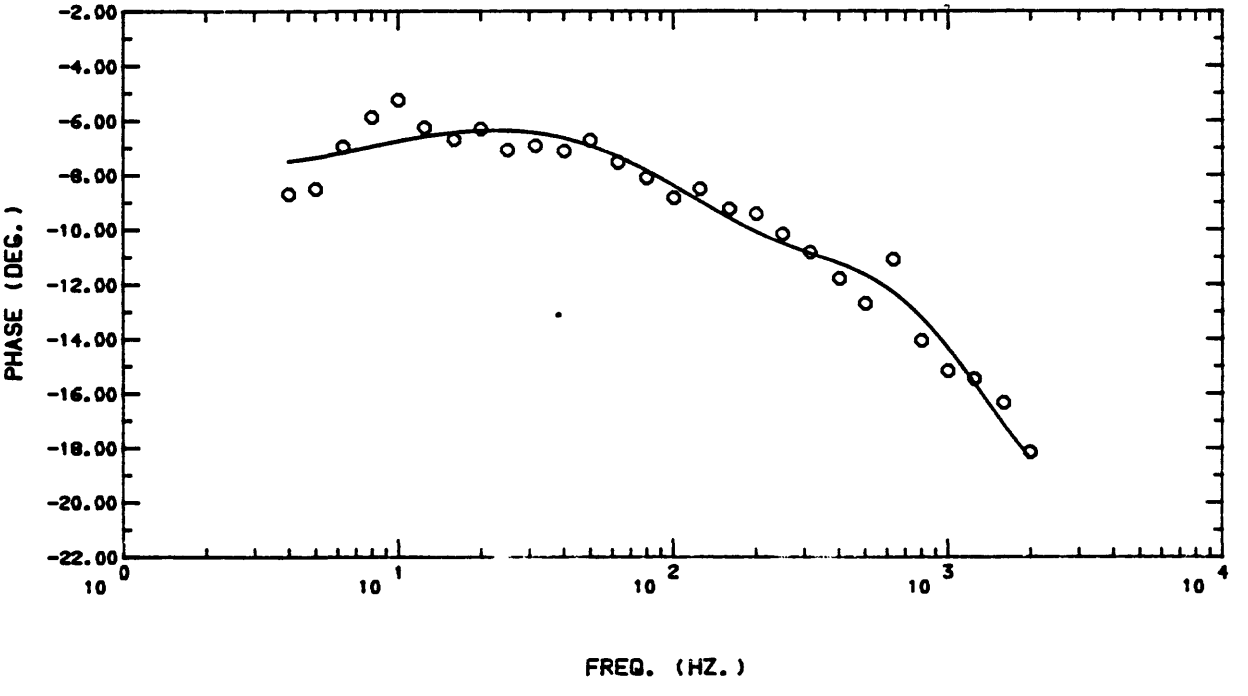
PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.40540725E-03	1	0.24666555E+04		
2	SIGMA(2) =	0.22091449E-03	2	0.45266382E+04		
3	SIGMA(3) =	0.95204953E-02	3	0.10503655E+03		
4	SIGMA(4) =	0.12500000E+00	4	0.80000000E+01		
5	THICK(1) =	0.25866895E+03			1	0.25866895E+03
6	THICK(2) =	0.44584384E+03			2	0.70451282E+03
7	THICK(3) =	0.38959088E+03			3	0.10941038E+04
8	SHIFT =	0.74544246E-02				



STA.8B OUTSIDE-LOOP 4-LAYERS
RATIO=EX/HZ [NLSLOOP3.N◆]



STA.8B OUTSIDE-LOOP 4-LAYERS
RATIO=EX/HZ [NLSLOOP3.N◆]



{NLSLOOP3}: STA.8B OUTSIDE-LOOP 4-LAYERS FIELD=HR [NLSLOOP3.P*]

Y0= 0.16760E+04
IRATIO= 0, 0 PARM= 0.21000E+01 , 0.10950E+03
N= 56 K= 8 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.480590E+02	0.486233E+02	-0.564E+00	-0.116064E+01	0.400000E+01	0.200000E+01	0.200000E+01
2	0.389250E-01	0.394077E-01	-0.483E-03	-0.122500E+01	0.400000E+01	0.200000E+01	0.100000E+01
3	0.440940E+02	0.439178E+02	0.176E+00	0.401162E+00	0.500000E+01	0.200000E+01	0.200000E+01
4	0.438770E-01	0.429422E-01	0.935E-03	0.217699E+01	0.500000E+01	0.200000E+01	0.100000E+01
5	0.397880E+02	0.395732E+02	0.215E+00	0.542680E+00	0.630000E+01	0.200000E+01	0.200000E+01
6	0.477740E-01	0.465710E-01	0.120E-02	0.258319E+01	0.630000E+01	0.200000E+01	0.100000E+01
7	0.363900E+02	0.356397E+02	0.750E+00	0.210519E+01	0.800000E+01	0.200000E+01	0.200000E+01
8	0.522310E-01	0.502556E-01	0.198E-02	0.393069E+01	0.800000E+01	0.200000E+01	0.100000E+01
9	0.322310E+02	0.324280E+02	-0.197E+00	-0.607460E+00	0.100000E+02	0.200000E+01	0.200000E+01
10	0.547230E-01	0.535954E-01	0.113E-02	0.210399E+01	0.100000E+02	0.200000E+01	0.100000E+01
11	0.291610E+02	0.296440E+02	-0.483E+00	-0.162940E+01	0.125000E+02	0.200000E+01	0.200000E+01
12	0.583890E-01	0.568351E-01	0.155E-02	0.273412E+01	0.125000E+02	0.200000E+01	0.100000E+01
13	0.266450E+02	0.270439E+02	-0.399E+00	-0.147514E+01	0.160000E+02	0.200000E+01	0.200000E+01
14	0.608350E-01	0.603182E-01	0.517E-03	0.856812E+00	0.160000E+02	0.200000E+01	0.100000E+01
15	0.256510E+02	0.250862E+02	0.565E+00	0.225137E+01	0.200000E+02	0.200000E+01	0.200000E+01
16	0.642350E-01	0.633951E-01	0.840E-03	0.132488E+01	0.200000E+02	0.200000E+01	0.100000E+01
17	0.230410E+02	0.234687E+02	-0.428E+00	-0.182262E+01	0.250000E+02	0.200000E+01	0.200000E+01
18	0.680410E-01	0.664345E-01	0.161E-02	0.241815E+01	0.250000E+02	0.200000E+01	0.100000E+01
19	0.223110E+02	0.221128E+02	0.198E+00	0.896445E+00	0.315000E+02	0.200000E+01	0.200000E+01
20	0.712090E-01	0.695802E-01	0.163E-02	0.234095E+01	0.315000E+02	0.200000E+01	0.100000E+01
21	0.211030E+02	0.210157E+02	0.873E-01	0.415638E+00	0.400000E+02	0.200000E+01	0.200000E+01
22	0.745660E-01	0.728833E-01	0.168E-02	0.230871E+01	0.400000E+02	0.200000E+01	0.100000E+01
23	0.201630E+02	0.202286E+02	-0.656E-01	-0.324319E+00	0.500000E+02	0.200000E+01	0.200000E+01
24	0.787170E-01	0.760611E-01	0.266E-02	0.349184E+01	0.500000E+02	0.200000E+01	0.100000E+01
25	0.197430E+02	0.196104E+02	0.133E+00	0.676264E+00	0.630000E+02	0.200000E+01	0.200000E+01
26	0.816730E-01	0.794988E-01	0.217E-02	0.273492E+01	0.630000E+02	0.200000E+01	0.100000E+01
27	0.188630E+02	0.191287E+02	-0.266E+00	-0.138900E+01	0.800000E+02	0.200000E+01	0.200000E+01
28	0.849430E-01	0.832563E-01	0.169E-02	0.202589E+01	0.800000E+02	0.200000E+01	0.100000E+01
29	0.190500E+02	0.187761E+02	0.274E+00	0.145891E+01	0.100000E+03	0.200000E+01	0.200000E+01
30	0.894060E-01	0.869926E-01	0.241E-02	0.277429E+01	0.100000E+03	0.200000E+01	0.100000E+01
31	0.183230E+02	0.184703E+02	-0.147E+00	-0.797562E+00	0.125000E+03	0.200000E+01	0.200000E+01
32	0.917430E-01	0.909700E-01	0.773E-03	0.849745E+00	0.125000E+03	0.200000E+01	0.100000E+01
33	0.181470E+02	0.181388E+02	0.818E-02	0.450895E-01	0.160000E+03	0.200000E+01	0.200000E+01
34	0.977100E-01	0.956675E-01	0.204E-02	0.213498E+01	0.160000E+03	0.200000E+01	0.100000E+01
35	0.178930E+02	0.178070E+02	0.860E-01	0.482862E+00	0.200000E+03	0.200000E+01	0.200000E+01
36	0.101740E+00	0.100184E+00	0.156E-02	0.155294E+01	0.200000E+03	0.200000E+01	0.100000E+01
37	0.173040E+02	0.174114E+02	-0.107E+00	-0.616614E+00	0.250000E+03	0.200000E+01	0.200000E+01
38	0.106480E+00	0.104952E+00	0.153E-02	0.145555E+01	0.250000E+03	0.200000E+01	0.100000E+01
39	0.169000E+02	0.168979E+02	0.212E-02	0.125291E-01	0.315000E+03	0.200000E+01	0.200000E+01
40	0.111620E+00	0.110143E+00	0.148E-02	0.134100E+01	0.315000E+03	0.200000E+01	0.100000E+01
41	0.162840E+02	0.162106E+02	0.734E-01	0.452510E+00	0.400000E+03	0.200000E+01	0.200000E+01
42	0.116170E+00	0.115732E+00	0.438E-03	0.378678E+00	0.400000E+03	0.200000E+01	0.100000E+01
43	0.155370E+02	0.153797E+02	0.157E+00	0.102256E+01	0.500000E+03	0.200000E+01	0.200000E+01
44	0.121640E+00	0.121060E+00	0.580E-03	0.478858E+00	0.500000E+03	0.200000E+01	0.100000E+01
45	0.140100E+02	0.142991E+02	-0.289E+00	-0.202157E+01	0.630000E+03	0.200000E+01	0.200000E+01
46	0.126260E+00	0.126494E+00	-0.234E-03	-0.185289E+00	0.630000E+03	0.200000E+01	0.100000E+01
47	0.131900E+02	0.129670E+02	0.223E+00	0.171955E+01	0.800000E+03	0.200000E+01	0.200000E+01
48	0.129150E+00	0.131723E+00	-0.257E-02	-0.195314E+01	0.800000E+03	0.200000E+01	0.100000E+01
49	0.115300E+02	0.116048E+02	-0.748E-01	-0.644483E+00	0.100000E+04	0.200000E+01	0.200000E+01

50	0.132870E+00	0.135971E+00	-0.310E-02	-0.228048E+01	0.100000E+04	0.200000E+01	0.100000E+01
51	0.102500E+02	0.102466E+02	0.344E-02	0.335713E-01	0.125000E+04	0.200000E+01	0.200000E+01
52	0.135200E+00	0.139447E+00	-0.425E-02	-0.304569E+01	0.125000E+04	0.200000E+01	0.100000E+01
53	0.888000E+01	0.888817E+01	-0.817E-02	-0.919107E-01	0.160000E+04	0.200000E+01	0.200000E+01
54	0.135560E+00	0.142412E+00	-0.685E-02	-0.481125E+01	0.160000E+04	0.200000E+01	0.100000E+01
55	0.791000E+01	0.787415E+01	0.358E-01	0.455245E+00	0.200000E+04	0.200000E+01	0.200000E+01
56	0.133680E+00	0.144468E+00	-0.108E-01	-0.746731E+01	0.200000E+04	0.200000E+01	0.100000E+01

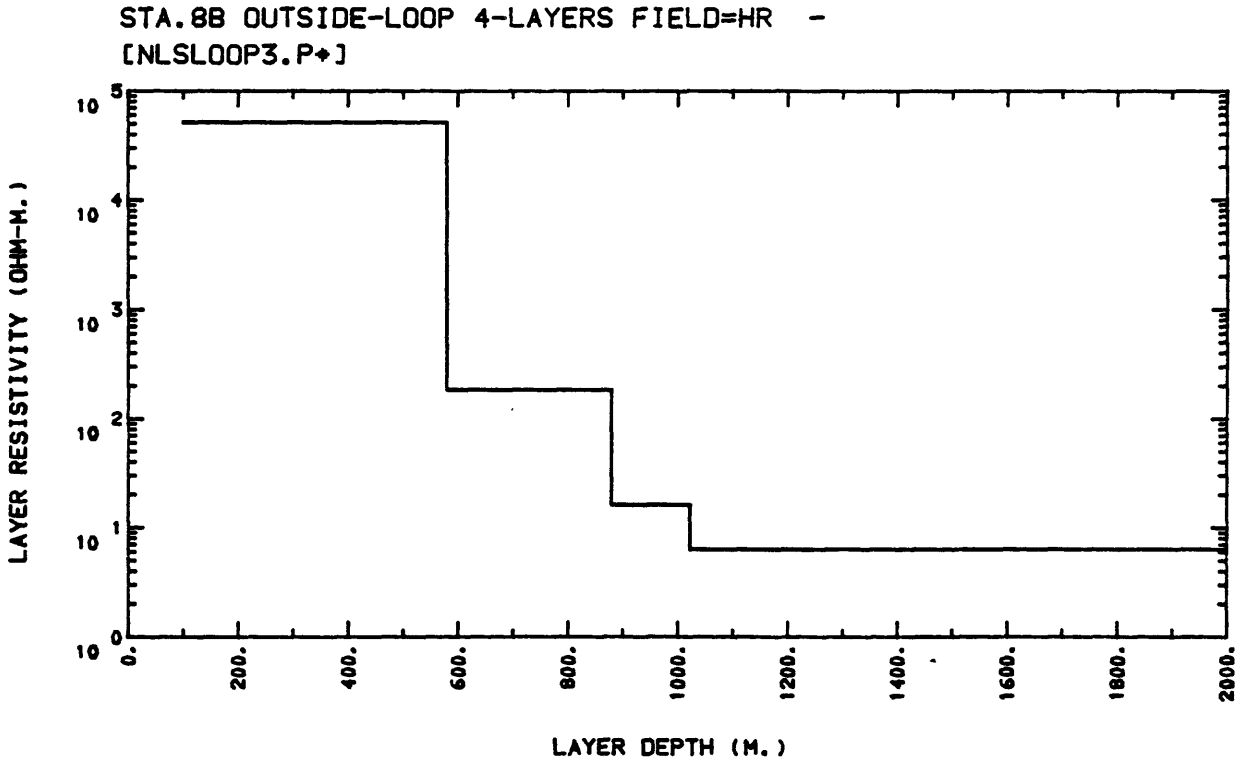
** RMSERR= 0.21973039E+00

CORRELATION MATRIX

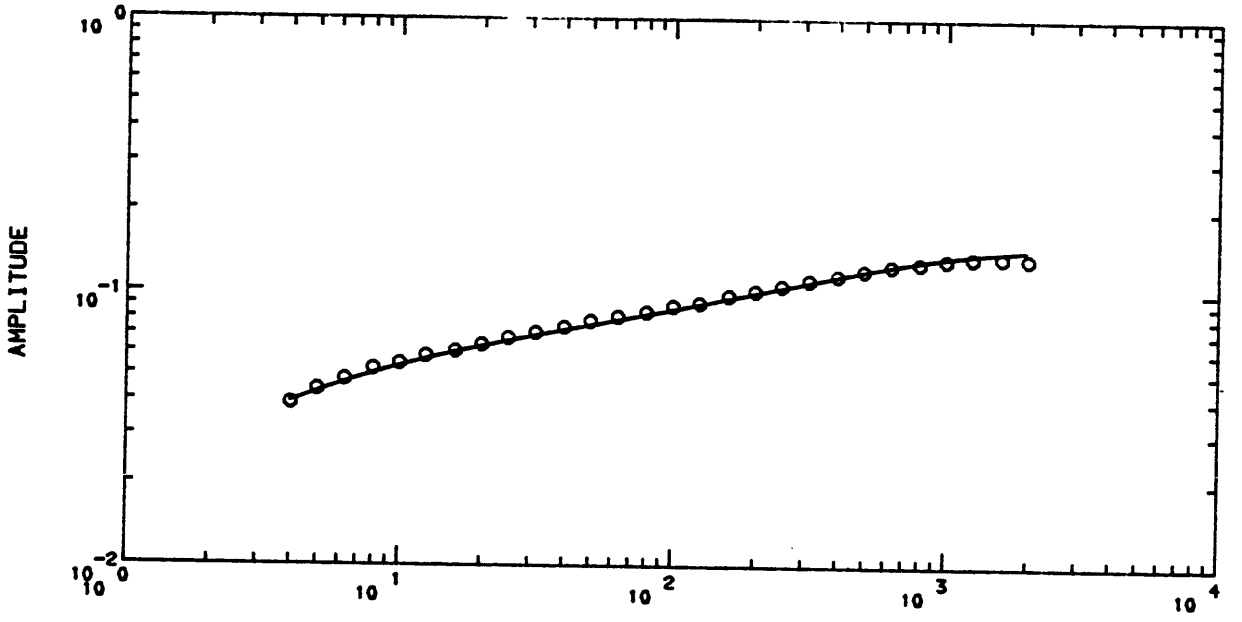
1	0.1000E+01							
2	0.1429E+00	0.1000E+01						
3	0.1023E+00	0.7963E+00	0.1000E+01					
4	-0.5191E+00	0.4053E+00	0.3664E+00	0.1000E+01				
5	0.1070E+00	0.9895E+00	0.7664E+00	0.4398E+00	0.1000E+01			
6	-0.1662E-01	-0.5652E+00	-0.8962E-02	-0.2938E+00	-0.6158E+00	0.1000E+01		
7	-0.3420E+00	-0.7110E+00	-0.4382E+00	0.1722E+00	-0.6920E+00	0.4034E+00	0.1000E+01	
8	0.4394E-01	0.5227E+00	0.4027E+00	0.2496E+00	0.5344E+00	-0.3320E+00	-0.3598E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.1946E-04	0.3073E-04	0.1579E+01	0.1579E+03
2	0.5433E-02	0.2500E-02	0.4601E+00	0.4601E+02
3	0.6170E-01	0.9830E-02	0.1593E+00	0.1593E+02
4	0.1575E+00	0.2752E-02	0.1747E-01	0.1747E+01
5	0.5798E+03	0.1547E-01	0.2667E-04	0.2667E-02
6	0.2994E+03	0.4270E-02	0.1426E-04	0.1426E-02
7	0.1431E+03	0.7780E-02	0.5435E-04	0.5435E-02
8	0.2233E+00	0.7533E-04	0.3373E-03	0.3373E-01

PARAMETER	NAME		FINAL SOLUTION		RESISTIVITY	LAYER	DEPTH
1	SIGMA(1)	=	0.19464425E-04	1	0.51375777E+05		
2	SIGMA(2)	=	0.54327953E-02	2	0.18406731E+03		
3	SIGMA(3)	=	0.61697524E-01	3	0.16208105E+02		
4	SIGMA(4)	=	0.15752570E+00	4	0.63481703E+01		
5	THICK(1)	=	0.57984991E+03			1	0.57984991E+03
6	THICK(2)	=	0.29944879E+03			2	0.87929871E+03
7	THICK(3)	=	0.14312723E+03			3	0.10224260E+04
8	SHIFT	=	0.22334442E+00				

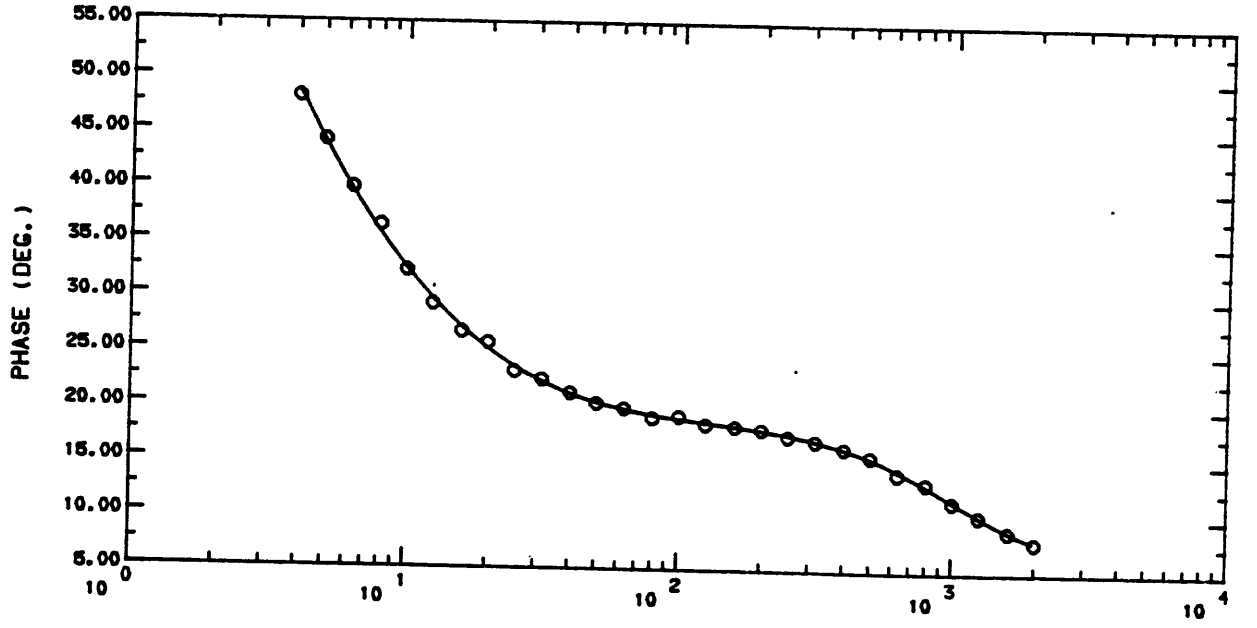


STA.8B OUTSIDE-LOOP 4-LAYERS FIELD=HR -
[NLSLOOP3.P◆]



FREQ. (HZ.)

STA.8B OUTSIDE-LOOP 4-LAYERS FIELD=HR -
[NLSLOOP3.P◆]



FREQ. (HZ.)

{NLSLOOP3}: STA.8B OUTSIDE-LOOP 4-LAYERS FIELD=HZ [NLSLOOP3.O*]

Y0= 0.16760E+04
IRATIO= 0, 0 PARM= 0.21000E+01 , 0.10950E+03
N= 56 K= 8 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.614000E+01	0.372614E+01	0.241E+01	0.647818E+02	0.400000E+01	0.100000E+01	0.200000E+01
2	0.119440E+00	0.113354E+00	0.609E-02	0.536860E+01	0.400000E+01	0.100000E+01	0.100000E+01
3	0.433000E+01	0.317356E+01	0.116E+01	0.364399E+02	0.500000E+01	0.100000E+01	0.200000E+01
4	0.119590E+00	0.114623E+00	0.497E-02	0.433316E+01	0.500000E+01	0.100000E+01	0.100000E+01
5	0.379000E+01	0.256347E+01	0.123E+01	0.478463E+02	0.630000E+01	0.100000E+01	0.200000E+01
6	0.121930E+00	0.115667E+00	0.626E-02	0.541453E+01	0.630000E+01	0.100000E+01	0.100000E+01
7	0.245000E+01	0.188723E+01	0.563E+00	0.298196E+02	0.800000E+01	0.100000E+01	0.200000E+01
8	0.120730E+00	0.116429E+00	0.430E-02	0.369374E+01	0.800000E+01	0.100000E+01	0.100000E+01
9	0.129000E+01	0.125978E+01	0.302E-01	0.239911E+01	0.100000E+02	0.100000E+01	0.200000E+01
10	0.120570E+00	0.116848E+00	0.372E-02	0.318518E+01	0.100000E+02	0.100000E+01	0.100000E+01
11	0.520000E+00	0.671367E+00	-0.151E+00	-0.225461E+02	0.125000E+02	0.100000E+01	0.200000E+01
12	0.120600E+00	0.117009E+00	0.359E-02	0.306865E+01	0.125000E+02	0.100000E+01	0.100000E+01
13	-0.200000E+00	0.723140E-01	-0.272E+00	-0.376572E+03	0.160000E+02	0.100000E+01	0.200000E+01
14	0.120070E+00	0.116933E+00	0.314E-02	0.268260E+01	0.160000E+02	0.100000E+01	0.100000E+01
15	-0.430000E+00	-0.402301E+00	-0.277E-01	-0.688508E+01	0.200000E+02	0.100000E+01	0.200000E+01
16	0.119030E+00	0.116688E+00	0.234E-02	0.200680E+01	0.200000E+02	0.100000E+01	0.100000E+01
17	-0.860000E+00	-0.818144E+00	-0.419E-01	-0.511596E+01	0.250000E+02	0.100000E+01	0.200000E+01
18	0.117610E+00	0.116328E+00	0.128E-02	0.110224E+01	0.250000E+02	0.100000E+01	0.100000E+01
19	-0.102000E+01	-0.119765E+01	0.178E+00	0.148334E+02	0.315000E+02	0.100000E+01	0.200000E+01
20	0.117640E+00	0.115881E+00	0.176E-02	0.151751E+01	0.315000E+02	0.100000E+01	0.100000E+01
21	-0.133000E+01	-0.154995E+01	0.220E+00	0.141907E+02	0.400000E+02	0.100000E+01	0.200000E+01
22	0.116840E+00	0.115381E+00	0.146E-02	0.126478E+01	0.400000E+02	0.100000E+01	0.100000E+01
23	-0.161000E+01	-0.186071E+01	0.251E+00	0.134741E+02	0.500000E+02	0.100000E+01	0.200000E+01
24	0.116550E+00	0.114902E+00	0.165E-02	0.143398E+01	0.500000E+02	0.100000E+01	0.100000E+01
25	-0.180000E+01	-0.218607E+01	0.386E+00	0.176606E+02	0.630000E+02	0.100000E+01	0.200000E+01
26	0.116460E+00	0.114412E+00	0.205E-02	0.178982E+01	0.630000E+02	0.100000E+01	0.100000E+01
27	-0.216000E+01	-0.255113E+01	0.391E+00	0.153315E+02	0.800000E+02	0.100000E+01	0.200000E+01
28	0.114230E+00	0.113918E+00	0.312E-03	0.273816E+00	0.800000E+02	0.100000E+01	0.100000E+01
29	-0.234000E+01	-0.294433E+01	0.604E+00	0.205253E+02	0.100000E+03	0.100000E+01	0.200000E+01
30	0.116070E+00	0.113465E+00	0.261E-02	0.229614E+01	0.100000E+03	0.100000E+01	0.100000E+01
31	-0.331000E+01	-0.341307E+01	0.103E+00	0.301979E+01	0.125000E+03	0.100000E+01	0.200000E+01
32	0.112780E+00	0.113014E+00	-0.234E-03	-0.207120E+00	0.125000E+03	0.100000E+01	0.100000E+01
33	-0.389000E+01	-0.405621E+01	0.166E+00	0.409777E+01	0.160000E+03	0.100000E+01	0.200000E+01
34	0.113900E+00	0.112498E+00	0.140E-02	0.124596E+01	0.160000E+03	0.100000E+01	0.100000E+01
35	-0.492000E+01	-0.478802E+01	-0.132E+00	-0.275639E+01	0.200000E+03	0.100000E+01	0.200000E+01
36	0.112830E+00	0.111989E+00	0.841E-03	0.751402E+00	0.200000E+03	0.100000E+01	0.100000E+01
37	-0.574000E+01	-0.570353E+01	-0.365E-01	-0.639486E+00	0.250000E+03	0.100000E+01	0.200000E+01
38	0.111390E+00	0.111388E+00	0.197E-05	0.176586E-02	0.250000E+03	0.100000E+01	0.100000E+01
39	-0.700000E+01	-0.689227E+01	-0.108E+00	-0.156308E+01	0.315000E+03	0.100000E+01	0.200000E+01
40	0.110040E+00	0.110592E+00	-0.552E-03	-0.499526E+00	0.315000E+03	0.100000E+01	0.100000E+01
41	-0.861000E+01	-0.842748E+01	-0.183E+00	-0.216582E+01	0.400000E+03	0.100000E+01	0.200000E+01
42	0.108150E+00	0.109449E+00	-0.130E-02	-0.118709E+01	0.400000E+03	0.100000E+01	0.100000E+01
43	-0.104600E+02	-0.101730E+02	-0.287E+00	-0.282165E+01	0.500000E+03	0.100000E+01	0.200000E+01
44	0.106000E+00	0.107909E+00	-0.191E-02	-0.176876E+01	0.500000E+03	0.100000E+01	0.100000E+01
45	-0.128300E+02	-0.122861E+02	-0.544E+00	-0.442653E+01	0.630000E+03	0.100000E+01	0.200000E+01
46	0.102950E+00	0.105607E+00	-0.266E-02	-0.251627E+01	0.630000E+03	0.100000E+01	0.100000E+01
47	-0.147300E+02	-0.147039E+02	-0.261E-01	-0.177583E+00	0.800000E+03	0.100000E+01	0.200000E+01
48	0.978600E-01	0.102247E+00	-0.439E-02	-0.429088E+01	0.800000E+03	0.100000E+01	0.100000E+01
49	-0.173000E+02	-0.169975E+02	-0.302E+00	-0.177948E+01	0.100000E+04	0.100000E+01	0.200000E+01

50	0.931270E-01	0.981255E-01	-0.500E-02	-0.509404E+01	0.100000E+04	0.100000E+01	0.100000E+01
51	-0.193100E+02	-0.190887E+02	-0.221E+00	-0.115947E+01	0.125000E+04	0.100000E+01	0.200000E+01
52	0.872610E-01	0.932100E-01	-0.595E-02	-0.638241E+01	0.125000E+04	0.100000E+01	0.100000E+01
53	-0.210900E+02	-0.209202E+02	-0.170E+00	-0.811499E+00	0.160000E+04	0.100000E+01	0.200000E+01
54	0.793080E-01	0.873639E-01	-0.806E-02	-0.922105E+01	0.160000E+04	0.100000E+01	0.100000E+01
55	-0.215200E+02	-0.220950E+02	0.575E+00	0.260253E+01	0.200000E+04	0.100000E+01	0.200000E+01
56	0.702470E-01	0.823015E-01	-0.121E-01	-0.146467E+02	0.200000E+04	0.100000E+01	0.100000E+01

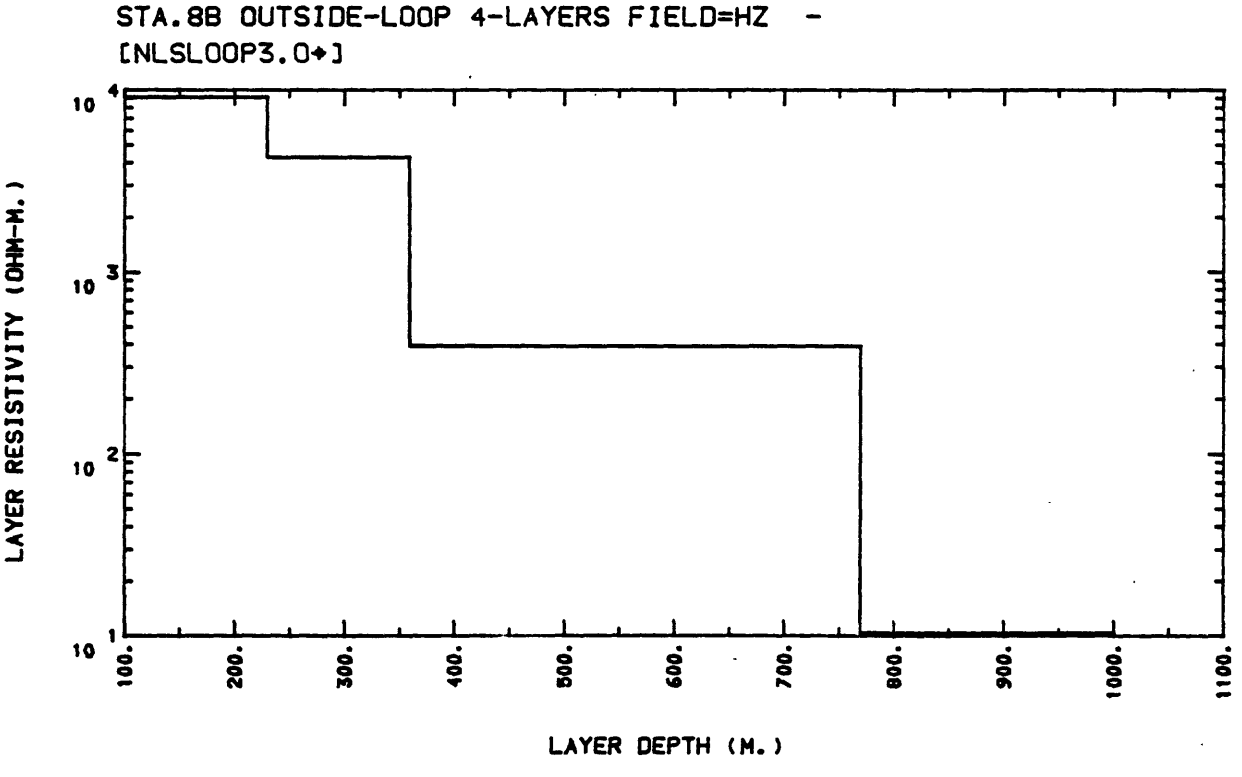
** RMSERR= 0.47602752E+00

CORRELATION MATRIX

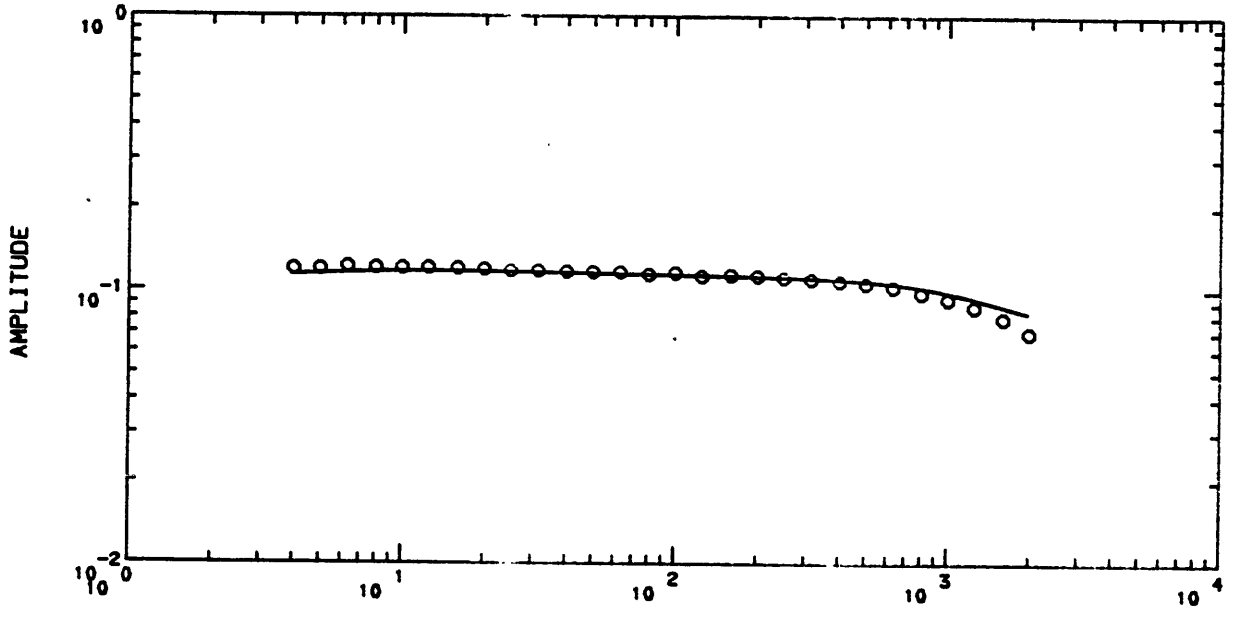
1	0.1000E+01							
2	-0.3289E-01	0.1000E+01						
3	-0.2134E+00	0.3949E+00	0.1000E+01					
4	0.2593E+00	0.1322E+00	0.9370E-01	0.1000E+01				
5	0.2391E+00	0.8560E-01	-0.8483E+00	0.2148E-01	0.1000E+01			
6	-0.2416E+00	0.1831E-01	0.8963E+00	-0.3662E-02	-0.9944E+00	0.1000E+01		
7	0.2206E+00	-0.4563E+00	-0.9723E+00	0.1494E-01	0.8384E+00	-0.8901E+00	0.1000E+01	
8	0.6814E-02	-0.1706E-01	-0.2724E-01	-0.4551E-02	0.2425E-01	-0.2604E-01	0.2986E-01	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.1099E-03	0.2016E-04	0.1834E+00	0.1834E+02
2	0.2347E-03	0.4248E-02	0.1810E+02	0.1810E+04
3	0.2568E-02	0.2731E-02	0.1063E+01	0.1063E+03
4	0.9620E-01	0.3075E-02	0.3196E-01	0.3196E+01
5	0.2297E+03	0.5135E+00	0.2236E-02	0.2236E+00
6	0.1294E+03	0.7779E+00	0.6011E-02	0.6011E+00
7	0.4102E+03	0.9689E-01	0.2362E-03	0.2362E-01
8	0.9416E-01	0.2075E-03	0.2204E-02	0.2204E+00

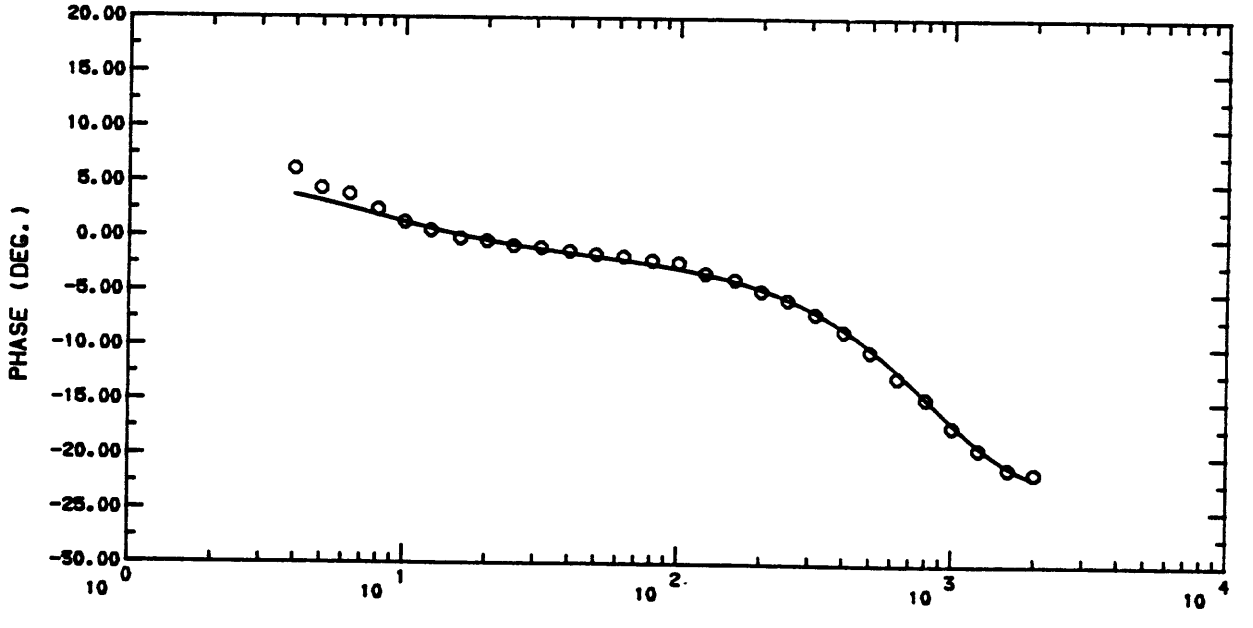
PARAMETER	NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1)	=	0.10992751E-03	1	0.90969043E+04		
2	SIGMA(2)	=	0.23470751E-03	2	0.42606221E+04		
3	SIGMA(3)	=	0.25679576E-02	3	0.38941452E+03		
4	SIGMA(4)	=	0.96204661E-01	4	0.10394506E+02		
5	THICK(1)	=	0.22965240E+03			1	0.22965240E+03
6	THICK(2)	=	0.12942262E+03			2	0.35907504E+03
7	THICK(3)	=	0.41024667E+03			3	0.76932172E+03
8	SHIFT	=	0.94159931E-01				



STA.8B OUTSIDE-LOOP 4-LAYERS FIELD=HZ -
[NLSLOOP3.0↔]



STA.8B OUTSIDE-LOOP 4-LAYERS FIELD=HZ -
[NLSLOOP3.0↔]



(NLSLOOP3): STA.88 OUTSIDE-LOOP 3-LAYERS FIELD=EX [NLSLOOP3.Q*]

Y0= 0.16760E+04
IRATIO= 0, 0 PARM= 0.00000E+00 , 0.00000E+00
N= 56 K= 6 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.255700E+01	-0.273158E+01	0.175E+00	0.639105E+01	0.400000E+01	0.500000E+01	0.200000E+01
2	0.757600E-03	0.645332E-03	0.112E-03	0.173969E+02	0.400000E+01	0.500000E+01	0.100000E+01
3	-0.414800E+01	-0.314735E+01	-0.100E+01	-0.317935E+02	0.500000E+01	0.500000E+01	0.200000E+01
4	0.606780E-03	0.641600E-03	-0.348E-04	-0.542700E+01	0.500000E+01	0.500000E+01	0.100000E+01
5	-0.316200E+01	-0.361978E+01	0.458E+00	0.126466E+02	0.630000E+01	0.500000E+01	0.200000E+01
6	0.650190E-03	0.636985E-03	0.132E-04	0.207302E+01	0.630000E+01	0.500000E+01	0.100000E+01
7	-0.341000E+01	-0.414590E+01	0.736E+00	0.177500E+02	0.800000E+01	0.500000E+01	0.200000E+01
8	0.745510E-03	0.631335E-03	0.114E-03	0.180846E+02	0.800000E+01	0.500000E+01	0.100000E+01
9	-0.394400E+01	-0.467230E+01	0.728E+00	0.155877E+02	0.100000E+02	0.500000E+01	0.200000E+01
10	0.633960E-03	0.625196E-03	0.876E-05	0.140181E+01	0.100000E+02	0.500000E+01	0.100000E+01
11	-0.573500E+01	-0.522420E+01	-0.511E+00	-0.977762E+01	0.125000E+02	0.500000E+01	0.200000E+01
12	0.609950E-03	0.618190E-03	-0.824E-05	-0.133289E+01	0.125000E+02	0.500000E+01	0.100000E+01
13	-0.690000E+01	-0.585749E+01	-0.104E+01	-0.177980E+02	0.160000E+02	0.500000E+01	0.200000E+01
14	0.596270E-03	0.609427E-03	-0.132E-04	-0.215885E+01	0.160000E+02	0.500000E+01	0.100000E+01
15	-0.672500E+01	-0.644432E+01	-0.281E+00	-0.435541E+01	0.200000E+02	0.500000E+01	0.200000E+01
16	0.588850E-03	0.600624E-03	-0.118E-04	-0.196035E+01	0.200000E+02	0.500000E+01	0.100000E+01
17	-0.794200E+01	-0.704077E+01	-0.901E+00	-0.128002E+02	0.250000E+02	0.500000E+01	0.200000E+01
18	0.560080E-03	0.591056E-03	-0.310E-04	-0.524079E+01	0.250000E+02	0.500000E+01	0.100000E+01
19	-0.794000E+01	-0.766427E+01	-0.276E+00	-0.359760E+01	0.315000E+02	0.500000E+01	0.200000E+01
20	0.561810E-03	0.580439E-03	-0.186E-04	-0.320949E+01	0.315000E+02	0.500000E+01	0.100000E+01
21	-0.845000E+01	-0.831637E+01	-0.134E+00	-0.160677E+01	0.400000E+02	0.500000E+01	0.200000E+01
22	0.555550E-03	0.568853E-03	-0.133E-04	-0.233862E+01	0.400000E+02	0.500000E+01	0.100000E+01
23	-0.832000E+01	-0.893948E+01	0.619E+00	0.692976E+01	0.500000E+02	0.500000E+01	0.200000E+01
24	0.550900E-03	0.557614E-03	-0.671E-05	-0.120399E+01	0.500000E+02	0.500000E+01	0.100000E+01
25	-0.933000E+01	-0.961263E+01	0.283E+00	0.294019E+01	0.630000E+02	0.500000E+01	0.200000E+01
26	0.537020E-03	0.545690E-03	-0.867E-05	-0.158874E+01	0.630000E+02	0.500000E+01	0.100000E+01
27	-0.102600E+02	-0.103620E+02	0.102E+00	0.984040E+00	0.800000E+02	0.500000E+01	0.200000E+01
28	0.531700E-03	0.533177E-03	-0.148E-05	-0.276957E+00	0.800000E+02	0.500000E+01	0.100000E+01
29	-0.111600E+02	-0.111409E+02	-0.191E-01	-0.171854E+00	0.100000E+03	0.500000E+01	0.200000E+01
30	0.624350E-03	0.521373E-03	0.103E-03	0.197510E+02	0.100000E+03	0.500000E+01	0.100000E+01
31	-0.118000E+02	-0.120315E+02	0.232E+00	0.192423E+01	0.125000E+03	0.500000E+01	0.200000E+01
32	0.510820E-03	0.509443E-03	0.138E-05	0.270230E+00	0.125000E+03	0.500000E+01	0.100000E+01
33	-0.131300E+02	-0.131960E+02	0.660E-01	0.500137E+00	0.160000E+03	0.500000E+01	0.200000E+01
34	0.492070E-03	0.495975E-03	-0.391E-05	-0.787357E+00	0.160000E+03	0.500000E+01	0.100000E+01
35	-0.143400E+02	-0.144578E+02	0.118E+00	0.814535E+00	0.200000E+03	0.500000E+01	0.200000E+01
36	0.484460E-03	0.483346E-03	0.111E-05	0.230581E+00	0.200000E+03	0.500000E+01	0.100000E+01
37	-0.159000E+02	-0.159629E+02	0.629E-01	0.393869E+00	0.250000E+03	0.500000E+01	0.200000E+01
38	0.464280E-03	0.469980E-03	-0.570E-05	-0.121279E+01	0.250000E+03	0.500000E+01	0.100000E+01
39	-0.178200E+02	-0.178181E+02	-0.186E-02	-0.104155E-01	0.315000E+03	0.500000E+01	0.200000E+01
40	0.445780E-03	0.454950E-03	-0.917E-05	-0.201554E+01	0.315000E+03	0.500000E+01	0.100000E+01
41	-0.203800E+02	-0.200816E+02	-0.298E+00	-0.148613E+01	0.400000E+03	0.500000E+01	0.200000E+01
42	0.428800E-03	0.437623E-03	-0.982E-05	-0.201622E+01	0.400000E+03	0.500000E+01	0.100000E+01
43	-0.231400E+02	-0.225155E+02	-0.624E+00	-0.277349E+01	0.500000E+03	0.500000E+01	0.200000E+01
44	0.411120E-03	0.419313E-03	-0.819E-05	-0.195391E+01	0.500000E+03	0.500000E+01	0.100000E+01
45	-0.239000E+02	-0.253278E+02	0.143E+01	0.563742E+01	0.630000E+03	0.500000E+01	0.200000E+01
46	0.387460E-03	0.397810E-03	-0.103E-04	-0.260169E+01	0.630000E+03	0.500000E+01	0.100000E+01
47	-0.287700E+02	-0.284615E+02	-0.308E+00	-0.108391E+01	0.800000E+03	0.500000E+01	0.200000E+01
48	0.357140E-03	0.372776E-03	-0.156E-04	-0.419456E+01	0.800000E+03	0.500000E+01	0.100000E+01
49	-0.324600E+02	-0.314780E+02	-0.982E+00	-0.311965E+01	0.100000E+04	0.500000E+01	0.200000E+01

50	0.334470E-03	0.347184E-03	-0.127E-04	-0.366191E+01	0.100000E+04	0.500000E+01	0.100000E+01
51	-0.347800E+02	-0.344534E+02	-0.327E+00	-0.947666E+00	0.125000E+04	0.500000E+01	0.200000E+01
52	0.302290E-03	0.320316E-03	-0.180E-04	-0.562762E+01	0.125000E+04	0.500000E+01	0.100000E+01
53	-0.374200E+02	-0.375956E+02	0.176E+00	0.467081E+00	0.160000E+04	0.500000E+01	0.200000E+01
54	0.268510E-03	0.290581E-03	-0.221E-04	-0.759549E+01	0.160000E+04	0.500000E+01	0.100000E+01
55	-0.396700E+02	-0.403281E+02	0.658E+00	0.163190E+01	0.200000E+04	0.500000E+01	0.200000E+01
56	0.238340E-03	0.265034E-03	-0.267E-04	-0.100718E+02	0.200000E+04	0.500000E+01	0.100000E+01

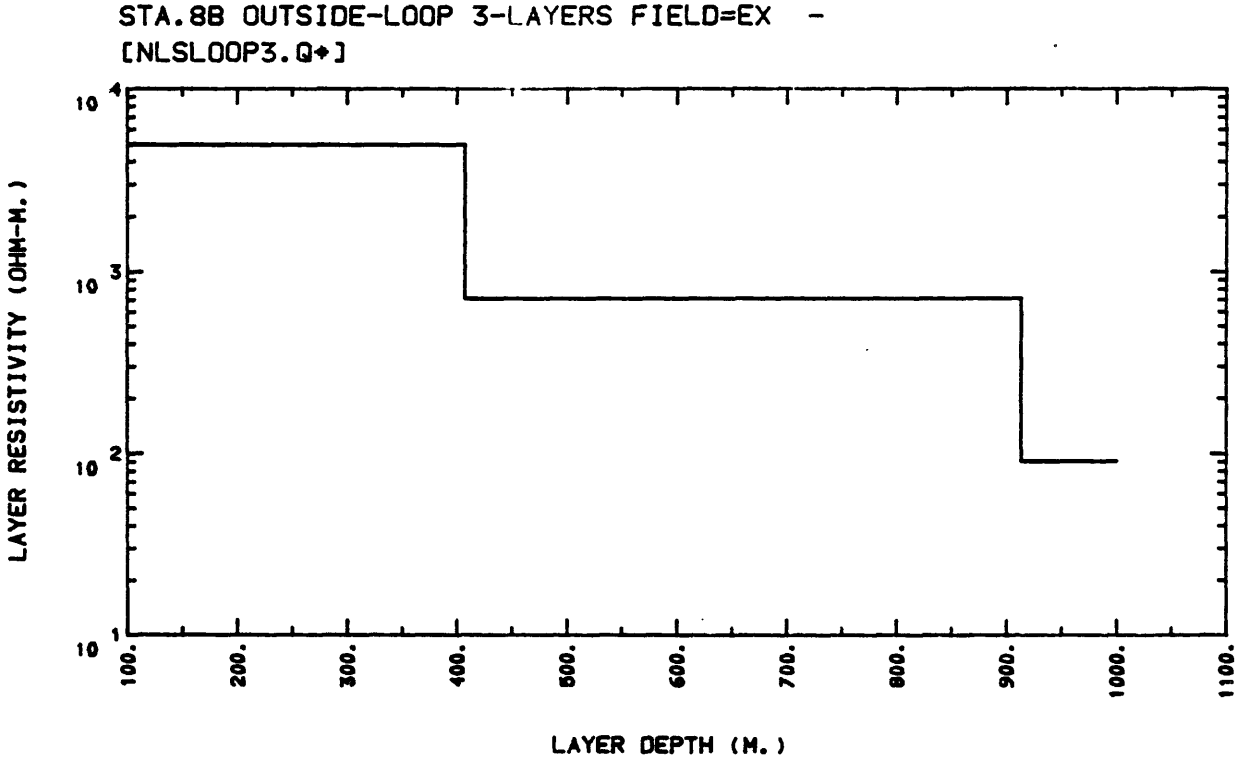
** RMSERR= 0.43229568E+00

CORRELATION MATRIX

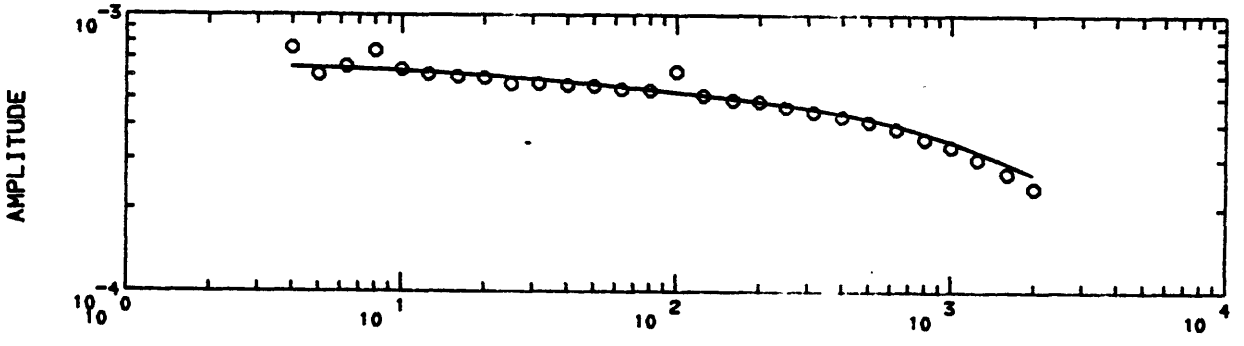
1	0.1000E+01					
2	0.9864E+00	0.1000E+01				
3	-0.7884E+00	-0.7344E+00	0.1000E+01			
4	0.9955E+00	0.9944E+00	-0.7743E+00	0.1000E+01		
5	-0.9691E+00	-0.9484E+00	0.8535E+00	-0.9644E+00	0.1000E+01	
6	-0.2716E-02	-0.2472E-02	0.3396E-02	-0.2734E-02	0.2652E-02	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.2021E-03	0.1949E-02	0.9641E+01	0.9641E+03
2	0.1406E-02	0.7041E-02	0.5008E+01	0.5008E+03
3	0.1109E-01	0.7137E-02	0.6435E+00	0.6435E+02
4	0.4072E+03	0.1100E+00	0.2702E-03	0.2702E-01
5	0.5059E+03	0.6426E-01	0.1270E-03	0.1270E-01
6	0.6606E-03	0.1644E-03	0.2489E+00	0.2489E+02

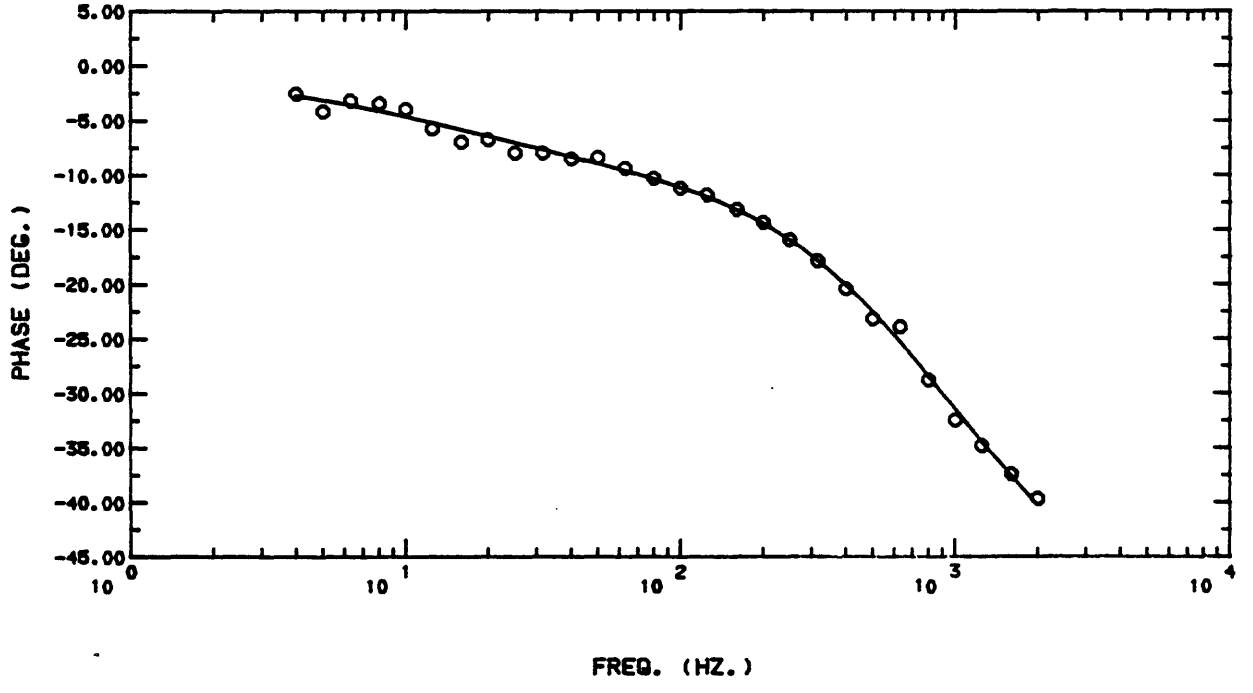
PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.20214006E-03	1	0.49470649E+04		
2	SIGMA(2) =	0.14060633E-02	2	0.71120551E+03		
3	SIGMA(3) =	0.11090386E-01	3	0.90168190E+02		
4	THICK(1) =	0.40723090E+03			1	0.40723090E+03
5	THICK(2) =	0.50587082E+03			2	0.91310175E+03
6	SHIFT =	0.66059444E-03				



STA.8B OUTSIDE-LOOP 3-LAYERS FIELD=EX -
[NLSLOOP3.Q◆]



STA.8B OUTSIDE-LOOP 3-LAYERS FIELD=EX -
[NLSLOOP3.Q◆]



(NLSLOOP3): STA.9B OUTSIDE-LOOP 4-LAYERS ELLIPTICITY [NLSLOOP3.5*]

Y0= 0.15240E+04
IRATIO= 0, 0 PARM= 0.25000E+01 , 0.58960E+02
N= 30 K= 7 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.292710E+00	-0.287489E+00	-0.522E-02	-0.181620E+01	0.250000E+01	0.100000E+01	0.700000E+01
2	-0.286410E+00	-0.284928E+00	-0.148E-02	-0.520072E+00	0.315000E+01	0.100000E+01	0.700000E+01
3	-0.269890E+00	-0.276655E+00	0.676E-02	0.244520E+01	0.400000E+01	0.100000E+01	0.700000E+01
4	-0.268900E+00	-0.264094E+00	-0.481E-02	-0.181990E+01	0.500000E+01	0.100000E+01	0.700000E+01
5	-0.240390E+00	-0.246847E+00	0.646E-02	0.261561E+01	0.630000E+01	0.100000E+01	0.700000E+01
6	-0.225040E+00	-0.225786E+00	0.746E-03	0.330492E+00	0.800000E+01	0.100000E+01	0.700000E+01
7	-0.206400E+00	-0.205019E+00	-0.138E-02	-0.673674E+00	0.100000E+02	0.100000E+01	0.700000E+01
8	-0.190570E+00	-0.185432E+00	-0.514E-02	-0.277085E+01	0.125000E+02	0.100000E+01	0.700000E+01
9	-0.166540E+00	-0.167523E+00	0.983E-03	0.586493E+00	0.160000E+02	0.100000E+01	0.700000E+01
10	-0.155880E+00	-0.155772E+00	-0.108E-03	-0.692770E-01	0.200000E+02	0.100000E+01	0.700000E+01
11	-0.144400E+00	-0.147969E+00	0.357E-02	0.241216E+01	0.250000E+02	0.100000E+01	0.700000E+01
12	-0.143370E+00	-0.143032E+00	-0.338E-03	-0.236000E+00	0.315000E+02	0.100000E+01	0.700000E+01
13	-0.139330E+00	-0.140268E+00	0.938E-03	0.668930E+00	0.400000E+02	0.100000E+01	0.700000E+01
14	-0.138330E+00	-0.139325E+00	0.995E-03	0.714154E+00	0.500000E+02	0.100000E+01	0.700000E+01
15	-0.142780E+00	-0.139892E+00	-0.289E-02	-0.206474E+01	0.630000E+02	0.100000E+01	0.700000E+01
16	-0.145550E+00	-0.142165E+00	-0.339E-02	-0.238117E+01	0.800000E+02	0.100000E+01	0.700000E+01
17	-0.144760E+00	-0.145804E+00	0.104E-02	0.715952E+00	0.100000E+03	0.100000E+01	0.700000E+01
18	-0.153570E+00	-0.150645E+00	-0.292E-02	-0.194157E+01	0.125000E+03	0.100000E+01	0.700000E+01
19	-0.153000E+00	-0.156763E+00	0.376E-02	0.240053E+01	0.160000E+03	0.100000E+01	0.700000E+01
20	-0.163190E+00	-0.162154E+00	-0.104E-02	-0.639113E+00	0.200000E+03	0.100000E+01	0.700000E+01
21	-0.164740E+00	-0.166520E+00	0.178E-02	0.106865E+01	0.250000E+03	0.100000E+01	0.700000E+01
22	-0.168460E+00	-0.169222E+00	0.762E-03	0.450104E+00	0.315000E+03	0.100000E+01	0.700000E+01
23	-0.168960E+00	-0.169812E+00	0.852E-03	0.501795E+00	0.400000E+03	0.100000E+01	0.700000E+01
24	-0.170450E+00	-0.168868E+00	-0.158E-02	-0.936798E+00	0.500000E+03	0.100000E+01	0.700000E+01
25	-0.168460E+00	-0.167579E+00	-0.881E-03	-0.525723E+00	0.630000E+03	0.100000E+01	0.700000E+01
26	-0.167600E+00	-0.167426E+00	-0.174E-03	-0.103669E+00	0.800000E+03	0.100000E+01	0.700000E+01
27	-0.174760E+00	-0.169303E+00	-0.546E-02	-0.322351E+01	0.100000E+04	0.100000E+01	0.700000E+01
28	-0.167320E+00	-0.173238E+00	0.592E-02	0.341620E+01	0.125000E+04	0.100000E+01	0.700000E+01
29	-0.174480E+00	-0.179013E+00	0.453E-02	0.253221E+01	0.160000E+04	0.100000E+01	0.700000E+01
30	-0.190020E+00	-0.183712E+00	-0.631E-02	-0.343349E+01	0.200000E+04	0.100000E+01	0.700000E+01

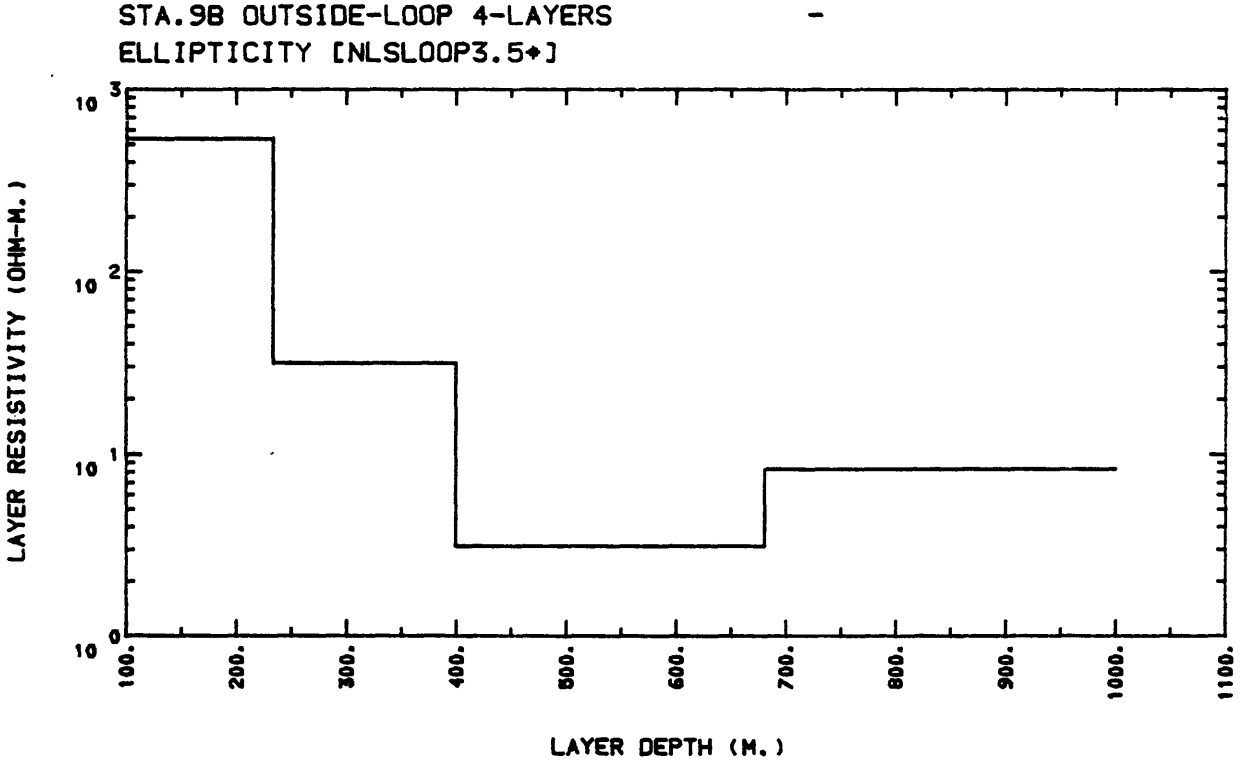
** RMSERR= 0.39682467E-02

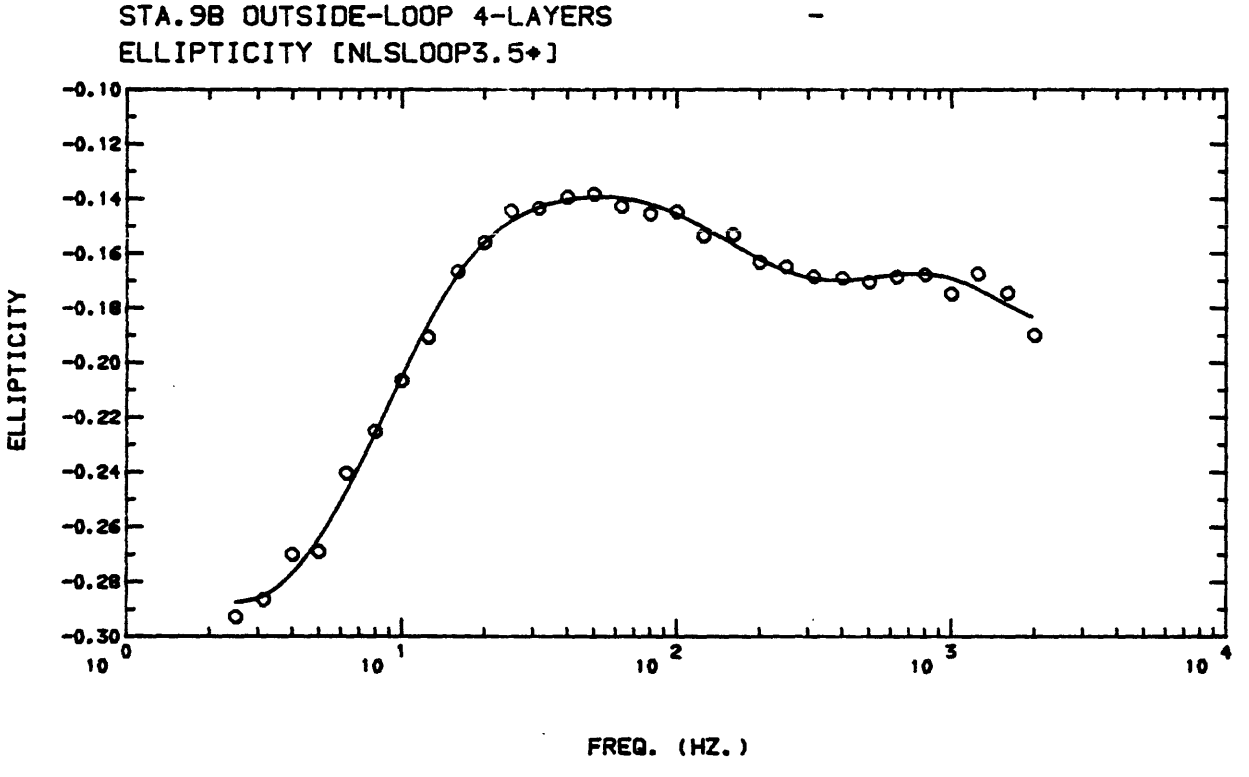
CORRELATION MATRIX

1	0.1000E+01						
2	0.8663E+00	0.1000E+01					
3	0.8277E+00	0.7979E+00	0.1000E+01				
4	0.8499E+00	0.7529E+00	0.8522E+00	0.1000E+01			
5	-0.8776E+00	-0.5699E+00	-0.6979E+00	-0.7661E+00	0.1000E+01		
6	-0.9025E+00	-0.8246E+00	-0.6214E+00	-0.7321E+00	0.7392E+00	0.1000E+01	
7	-0.5706E+00	-0.5857E+00	-0.8365E+00	-0.8460E+00	0.4562E+00	0.3746E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.1865E-02	0.3096E-02	0.1660E+01	0.1660E+03
2	0.3183E-01	0.7075E-02	0.2223E+00	0.2223E+02
3	0.3199E+00	0.1882E-01	0.5882E-01	0.5882E+01
4	0.1206E+00	0.5663E-01	0.4694E+00	0.4694E+02
5	0.2337E+03	0.7400E-02	0.3167E-04	0.3167E-02
6	0.1660E+03	0.8401E-02	0.5061E-04	0.5061E-02
7	0.2808E+03	0.4416E-01	0.1573E-03	0.1573E-01

PARAMETER	NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1)	=	0.18646601E-02	1	0.53629077E+03		
2	SIGMA(2)	=	0.31933064E-01	2	0.31413879E+02		
3	SIGMA(3)	=	0.31988472E+00	3	0.31261263E+01		
4	SIGMA(4)	=	0.12064813E+00	4	0.82885656E+01		
5	THICK(1)	=	0.23367323E+03			1	0.23367323E+03
6	THICK(2)	=	0.16598915E+03			2	0.39966238E+03
7	THICK(3)	=	0.28075534E+03			3	0.68041772E+03




STA.9B OUTSIDE-LOOP 4-LAYERS
ELLIPTICITY [NLSLOOP3.5♦]
ELLIPTICITY
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
-0.28
-0.30
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

(NLSLOOP3): STA.9B OUTSIDE-LOOP 4-LAYERS TILT-&-ELLIPTICITY (NLSLOOP3.55*)

YO= 0.15240E+04
IRATIO= 0, 0 PARM= 0.25000E+01 , 0.58960E+02
N= 60 K= 8 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 8

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.686750E+02	0.680410E+02	0.634E+00	0.931738E+00	0.250000E+01	0.100000E+01	0.600000E+01
2	-0.292710E+00	-0.305718E+00	0.130E-01	0.425478E+01	0.250000E+01	0.100000E+01	0.700000E+01
3	0.644430E+02	0.645986E+02	-0.156E+00	-0.240874E+00	0.315000E+01	0.100000E+01	0.600000E+01
4	-0.286410E+00	-0.301646E+00	0.152E-01	0.505094E+01	0.315000E+01	0.100000E+01	0.700000E+01
5	0.610100E+02	0.612070E+02	-0.197E+00	-0.321937E+00	0.400000E+01	0.100000E+01	0.600000E+01
6	-0.269890E+00	-0.290859E+00	0.210E-01	0.720943E+01	0.400000E+01	0.100000E+01	0.700000E+01
7	0.579650E+02	0.582829E+02	-0.318E+00	-0.545511E+00	0.500000E+01	0.100000E+01	0.600000E+01
8	-0.268900E+00	-0.275452E+00	0.655E-02	0.237864E+01	0.500000E+01	0.100000E+01	0.700000E+01
9	0.555700E+02	0.555930E+02	-0.230E-01	-0.413014E-01	0.630000E+01	0.100000E+01	0.600000E+01
10	-0.240390E+00	-0.255031E+00	0.146E-01	0.574074E+01	0.630000E+01	0.100000E+01	0.700000E+01
11	0.533360E+02	0.532609E+02	0.751E-01	0.140918E+00	0.800000E+01	0.100000E+01	0.600000E+01
12	-0.225040E+00	-0.230812E+00	0.577E-02	0.250077E+01	0.800000E+01	0.100000E+01	0.700000E+01
13	0.516280E+02	0.515429E+02	0.851E-01	0.165102E+00	0.100000E+02	0.100000E+01	0.600000E+01
14	-0.206400E+00	-0.207716E+00	0.132E-02	0.633755E+00	0.100000E+02	0.100000E+01	0.700000E+01
15	0.503730E+02	0.502399E+02	0.133E+00	0.264850E+00	0.125000E+02	0.100000E+01	0.600000E+01
16	-0.190570E+00	-0.186984E+00	-0.359E-02	-0.191788E+01	0.125000E+02	0.100000E+01	0.700000E+01
17	0.490610E+02	0.491341E+02	-0.731E-01	-0.148802E+00	0.160000E+02	0.100000E+01	0.600000E+01
18	-0.166540E+00	-0.169576E+00	0.304E-02	0.179009E+01	0.160000E+02	0.100000E+01	0.700000E+01
19	0.482230E+02	0.482477E+02	-0.247E-01	-0.511313E-01	0.200000E+02	0.100000E+01	0.600000E+01
20	-0.155880E+00	-0.159501E+00	0.362E-02	0.227048E+01	0.200000E+02	0.100000E+01	0.700000E+01
21	0.471000E+02	0.473283E+02	-0.228E+00	-0.482404E+00	0.250000E+02	0.100000E+01	0.600000E+01
22	-0.144400E+00	-0.153492E+00	0.909E-02	0.592359E+01	0.250000E+02	0.100000E+01	0.700000E+01
23	0.462910E+02	0.463023E+02	-0.113E-01	-0.243288E-01	0.315000E+02	0.100000E+01	0.600000E+01
24	-0.143370E+00	-0.149481E+00	0.611E-02	0.408787E+01	0.315000E+02	0.100000E+01	0.700000E+01
25	0.452590E+02	0.452058E+02	0.532E-01	0.117607E+00	0.400000E+02	0.100000E+01	0.600000E+01
26	-0.139330E+00	-0.146329E+00	0.700E-02	0.478288E+01	0.400000E+02	0.100000E+01	0.700000E+01
27	0.444210E+02	0.441960E+02	0.225E+00	0.509205E+00	0.500000E+02	0.100000E+01	0.600000E+01
28	-0.138330E+00	-0.144270E+00	0.594E-02	0.411722E+01	0.500000E+02	0.100000E+01	0.700000E+01
29	0.434050E+02	0.431678E+02	0.237E+00	0.549585E+00	0.630000E+02	0.100000E+01	0.600000E+01
30	-0.142780E+00	-0.143620E+00	0.840E-03	0.585058E+00	0.630000E+02	0.100000E+01	0.700000E+01
31	0.420450E+02	0.420840E+02	-0.390E-01	-0.926934E-01	0.800000E+02	0.100000E+01	0.600000E+01
32	-0.145550E+00	-0.144876E+00	-0.674E-03	-0.464932E+00	0.800000E+02	0.100000E+01	0.700000E+01
33	0.409480E+02	0.410076E+02	-0.596E-01	-0.145322E+00	0.100000E+03	0.100000E+01	0.600000E+01
34	-0.144760E+00	-0.147614E+00	0.285E-02	0.193359E+01	0.100000E+03	0.100000E+01	0.700000E+01
35	0.396910E+02	0.398360E+02	-0.145E+00	-0.364022E+00	0.125000E+03	0.100000E+01	0.600000E+01
36	-0.153570E+00	-0.151314E+00	-0.226E-02	-0.149112E+01	0.125000E+03	0.100000E+01	0.700000E+01
37	0.382220E+02	0.384068E+02	-0.185E+00	-0.481064E+00	0.160000E+03	0.100000E+01	0.600000E+01
38	-0.153000E+00	-0.155644E+00	0.264E-02	0.169892E+01	0.160000E+03	0.100000E+01	0.700000E+01
39	0.367300E+02	0.369900E+02	-0.260E+00	-0.702786E+00	0.200000E+03	0.100000E+01	0.600000E+01
40	-0.163190E+00	-0.158795E+00	-0.440E-02	-0.276772E+01	0.200000E+03	0.100000E+01	0.700000E+01
41	0.353390E+02	0.354801E+02	-0.141E+00	-0.397704E+00	0.250000E+03	0.100000E+01	0.600000E+01
42	-0.164740E+00	-0.160196E+00	-0.454E-02	-0.283625E+01	0.250000E+03	0.100000E+01	0.700000E+01
43	0.340140E+02	0.338771E+02	0.137E+00	0.404113E+00	0.315000E+03	0.100000E+01	0.600000E+01
44	-0.168460E+00	-0.158943E+00	-0.952E-02	-0.598736E+01	0.315000E+03	0.100000E+01	0.700000E+01
45	0.324740E+02	0.322754E+02	0.199E+00	0.615344E+00	0.400000E+03	0.100000E+01	0.600000E+01
46	-0.168960E+00	-0.154515E+00	-0.144E-01	-0.934846E+01	0.400000E+03	0.100000E+01	0.700000E+01
47	0.310630E+02	0.309176E+02	0.145E+00	0.470174E+00	0.500000E+03	0.100000E+01	0.600000E+01

48	-0.170450E+00	-0.148218E+00	-0.222E-01	-0.149992E+02	0.500000E+03	0.100000E+01	0.700000E+01
49	0.296360E+02	0.297035E+02	-0.675E-01	-0.227269E+00	0.630000E+03	0.100000E+01	0.600000E+01
50	-0.168460E+00	-0.141026E+00	-0.274E-01	-0.194532E+02	0.630000E+03	0.100000E+01	0.700000E+01
51	0.284400E+02	0.286401E+02	-0.200E+00	-0.698519E+00	0.800000E+03	0.100000E+01	0.600000E+01
52	-0.167600E+00	-0.134693E+00	-0.329E-01	-0.244312E+02	0.800000E+03	0.100000E+01	0.700000E+01
53	0.271180E+02	0.277689E+02	-0.651E+00	-0.234396E+01	0.100000E+04	0.100000E+01	0.600000E+01
54	-0.174760E+00	-0.130981E+00	-0.438E-01	-0.334238E+02	0.100000E+04	0.100000E+01	0.700000E+01
55	0.266830E+02	0.269430E+02	-0.260E+00	-0.965064E+00	0.125000E+04	0.100000E+01	0.600000E+01
56	-0.167320E+00	-0.129977E+00	-0.373E-01	-0.287301E+02	0.125000E+04	0.100000E+01	0.700000E+01
57	0.261820E+02	0.259984E+02	0.184E+00	0.706040E+00	0.160000E+04	0.100000E+01	0.600000E+01
58	-0.174480E+00	-0.131995E+00	-0.425E-01	-0.321873E+02	0.160000E+04	0.100000E+01	0.700000E+01
59	0.258410E+02	0.250462E+02	0.795E+00	0.317353E+01	0.200000E+04	0.100000E+01	0.600000E+01
60	-0.190020E+00	-0.136194E+00	-0.538E-01	-0.395220E+02	0.200000E+04	0.100000E+01	0.700000E+01

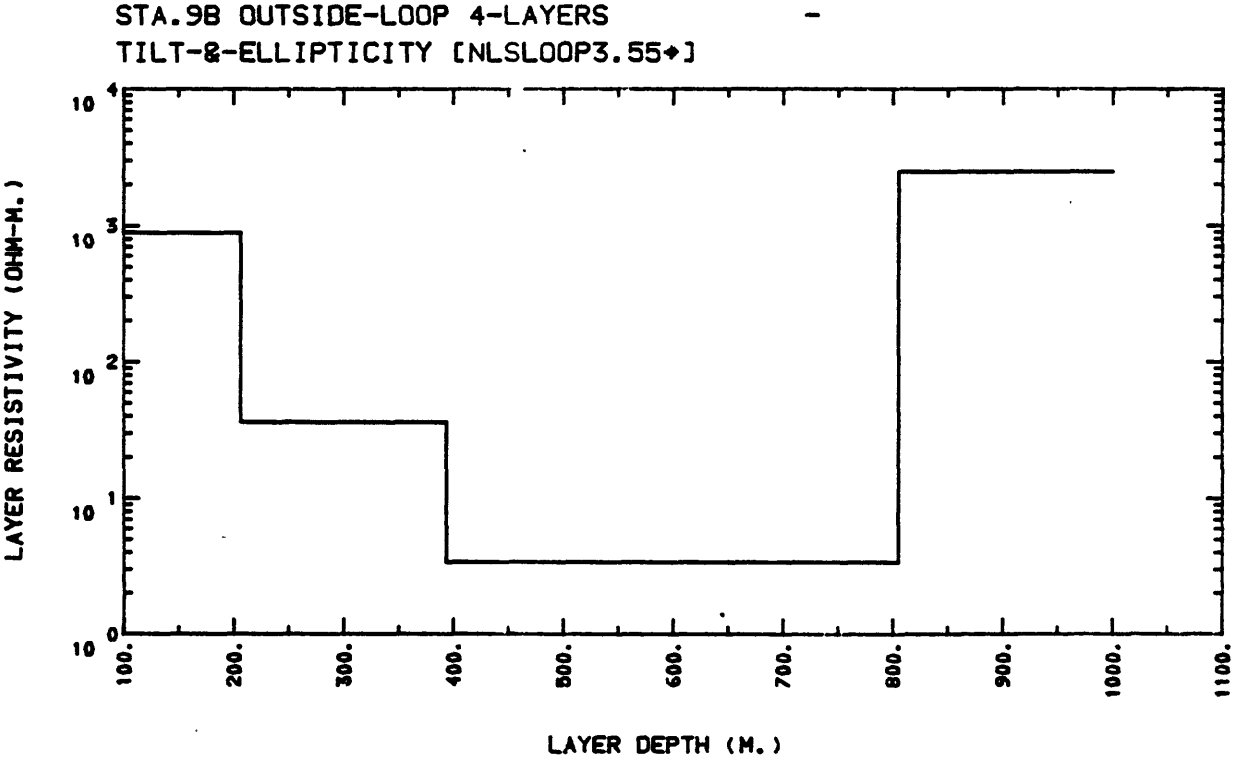
** RMSERR= 0.20399570E+00

CORRELATION MATRIX

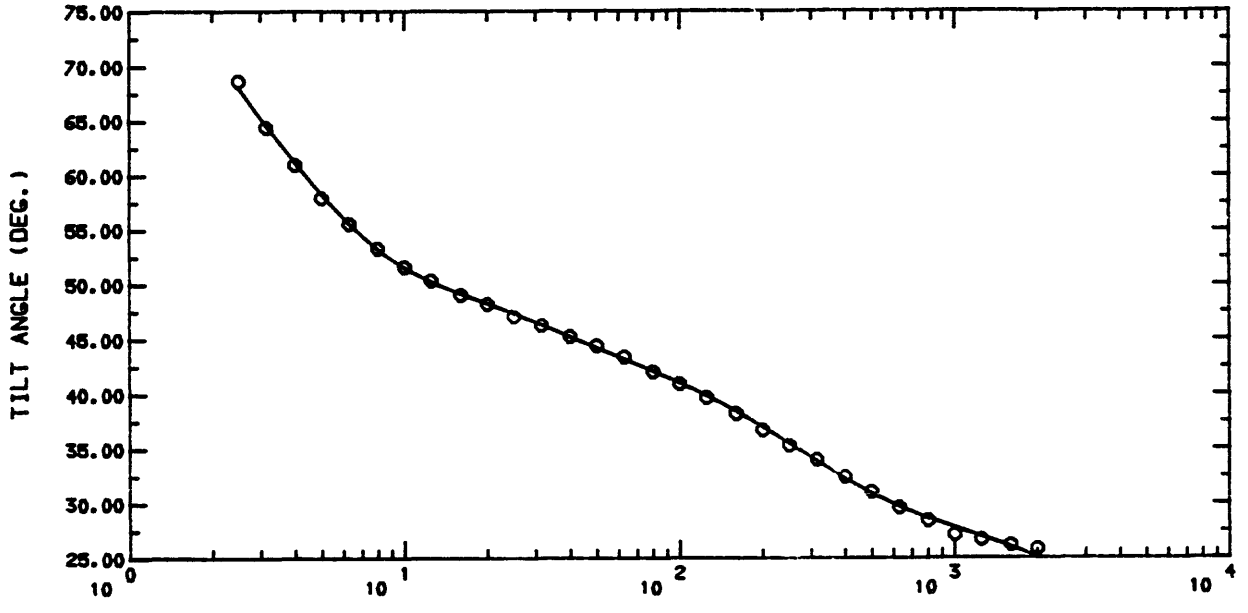
1	0.1000E+01						
2	0.4533E+00	0.1000E+01					
3	0.1158E+00	0.2151E+00	0.1000E+01				
4	-0.2827E+00	-0.2843E+00	-0.3778E+00	0.1000E+01			
5	0.7769E+00	0.8229E+00	0.1651E+00	-0.2955E+00	0.1000E+01		
6	-0.5777E+00	-0.3583E+00	0.4660E+00	0.1886E+00	-0.6165E+00	0.1000E+01	
7	-0.2425E+00	-0.2985E+00	-0.6887E+00	0.8842E+00	-0.2790E+00	-0.5605E-01	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.1129E-02	0.7363E-03	0.6520E+00	0.6520E+02
2	0.2764E-01	0.2841E-02	0.1028E+00	0.1028E+02
3	0.2947E+00	0.9880E-02	0.3353E-01	0.3353E+01
4	0.4023E-03	0.1011E+01	0.2512E+04	0.2512E+06
5	0.2063E+03	0.3477E-02	0.1686E-04	0.1686E-02
6	0.1875E+03	0.4642E-02	0.2475E-04	0.2475E-02
7	0.4114E+03	0.5075E-01	0.1234E-03	0.1234E-01

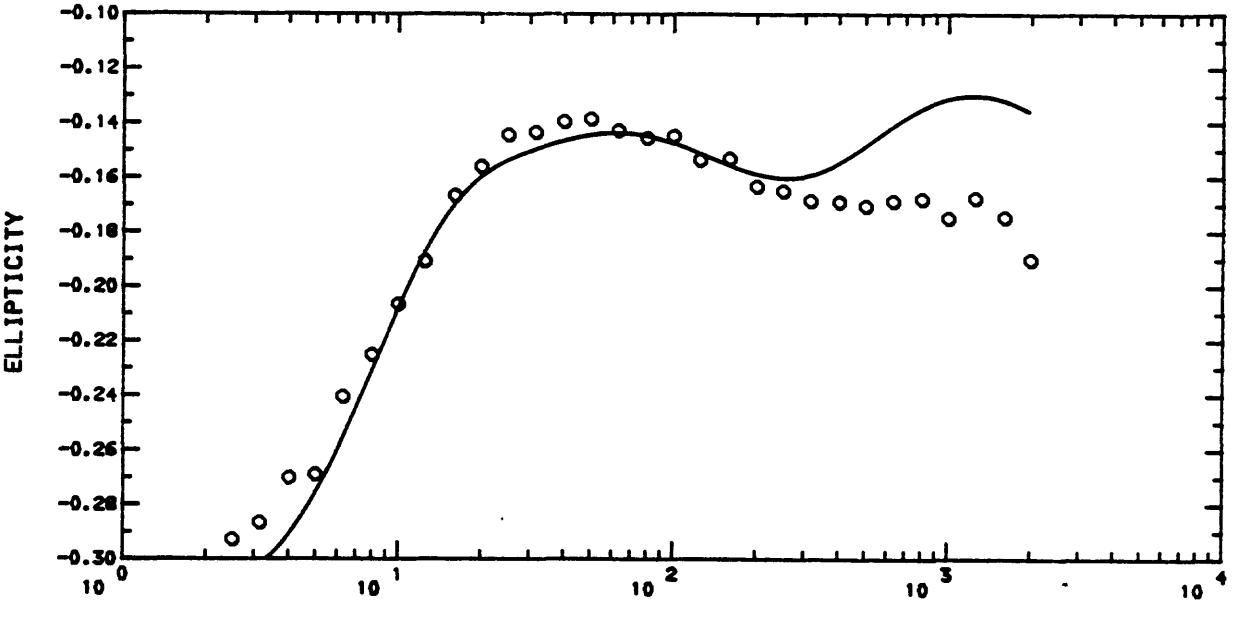
PARAMETER	NAME		FINAL SOLUTION		RESISTIVITY	LAYER	DEPTH
1	SIGMA(1)	=	0.11292831E-02	1	0.88551752E+03		
2	SIGMA(2)	=	0.27642604E-01	2	0.36176041E+02		
3	SIGMA(3)	=	0.29466537E+00	3	0.33936801E+01		
4	SIGMA(4)	=	0.40234308E-03	4	0.24854409E+04		
5	THICK(1)	=	0.20630768E+03			1	0.20630768E+03
6	THICK(2)	=	0.18752460E+03			2	0.39383228E+03
7	THICK(3)	=	0.41136780E+03			3	0.80520007E+03
8	SHIFT	=	-0.38934937E+01				



STA.9B OUTSIDE-LOOP 4-LAYERS -
TILT-&-ELLIPTICITY [NLSLOOP3.55♦]



STA.9B OUTSIDE-LOOP 4-LAYERS -
TILT-&-ELLIPTICITY [NLSLOOP3.55♦]



(NLSLOOP3): STA.98 OUTSIDE-LOOP 3-LAYERS RATIO=EX/HZ [NLSLOOP3.4*]

Y0= 0.15240E+04
IRATIO= 5, 1 PARM= 0.00000E+00 , 0.00000E+00
N= 54 K= 6 IP= 0 M= 3

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.104100E+02	-0.117673E+02	0.136E+01	0.115347E+02	0.500000E+01	0.100000E+01	0.200000E+01
2	0.151940E-02	0.153894E-02	-0.195E-04	-0.126998E+01	0.500000E+01	0.100000E+01	0.100000E+01
3	-0.124800E+02	-0.109055E+02	-0.157E+01	-0.144372E+02	0.630000E+01	0.100000E+01	0.200000E+01
4	0.149090E-02	0.149426E-02	-0.336E-05	-0.224991E+00	0.630000E+01	0.100000E+01	0.100000E+01
5	-0.991000E+01	-0.100467E+02	0.137E+00	0.136058E+01	0.800000E+01	0.100000E+01	0.200000E+01
6	0.143230E-02	0.145541E-02	-0.231E-04	-0.158811E+01	0.800000E+01	0.100000E+01	0.100000E+01
7	-0.899800E+01	-0.932218E+01	0.324E+00	0.347750E+01	0.100000E+02	0.100000E+01	0.200000E+01
8	0.141890E-02	0.142479E-02	-0.589E-05	-0.413047E+00	0.100000E+02	0.100000E+01	0.100000E+01
9	-0.778200E+01	-0.870332E+01	0.921E+00	0.105858E+02	0.125000E+02	0.100000E+01	0.200000E+01
10	0.138570E-02	0.139835E-02	-0.126E-04	-0.904616E+00	0.125000E+02	0.100000E+01	0.100000E+01
11	-0.866500E+01	-0.815935E+01	-0.506E+00	-0.619715E+01	0.160000E+02	0.100000E+01	0.200000E+01
12	0.136330E-02	0.137268E-02	-0.938E-05	-0.683515E+00	0.160000E+02	0.100000E+01	0.100000E+01
13	-0.845200E+01	-0.779928E+01	-0.653E+00	-0.836900E+01	0.200000E+02	0.100000E+01	0.200000E+01
14	0.139370E-02	0.135162E-02	0.421E-04	0.311319E+01	0.200000E+02	0.100000E+01	0.100000E+01
15	-0.744200E+01	-0.756102E+01	0.119E+00	0.157414E+01	0.250000E+02	0.100000E+01	0.200000E+01
16	0.129230E-02	0.133176E-02	-0.395E-04	-0.296315E+01	0.250000E+02	0.100000E+01	0.100000E+01
17	-0.791600E+01	-0.743677E+01	-0.479E+00	-0.644399E+01	0.315000E+02	0.100000E+01	0.200000E+01
18	0.129990E-02	0.131177E-02	-0.119E-04	-0.904572E+00	0.315000E+02	0.100000E+01	0.100000E+01
19	-0.790000E+01	-0.742990E+01	-0.470E+00	-0.632710E+01	0.400000E+02	0.100000E+01	0.200000E+01
20	0.127650E-02	0.129101E-02	-0.145E-04	-0.112359E+01	0.400000E+02	0.100000E+01	0.100000E+01
21	-0.678500E+01	-0.752296E+01	0.738E+00	0.980946E+01	0.500000E+02	0.100000E+01	0.200000E+01
22	0.127050E-02	0.127090E-02	-0.400E-06	-0.314923E-01	0.500000E+02	0.100000E+01	0.100000E+01
23	-0.794300E+01	-0.770025E+01	-0.243E+00	-0.315255E+01	0.630000E+02	0.100000E+01	0.200000E+01
24	0.122740E-02	0.124874E-02	-0.213E-04	-0.170854E+01	0.630000E+02	0.100000E+01	0.100000E+01
25	-0.837000E+01	-0.793573E+01	-0.434E+00	-0.547230E+01	0.800000E+02	0.100000E+01	0.200000E+01
26	0.121410E-02	0.122383E-02	-0.973E-05	-0.794658E+00	0.800000E+02	0.100000E+01	0.100000E+01
27	-0.792800E+01	-0.815697E+01	0.229E+00	0.280706E+01	0.100000E+03	0.100000E+01	0.200000E+01
28	0.119510E-02	0.119841E-02	-0.331E-05	-0.276464E+00	0.100000E+03	0.100000E+01	0.100000E+01
29	-0.784500E+01	-0.832091E+01	0.476E+00	0.571950E+01	0.125000E+03	0.100000E+01	0.200000E+01
30	0.116660E-02	0.117109E-02	-0.449E-05	-0.383534E+00	0.125000E+03	0.100000E+01	0.100000E+01
31	-0.826200E+01	-0.836157E+01	0.996E-01	0.119077E+01	0.160000E+03	0.100000E+01	0.200000E+01
32	0.113030E-02	0.113955E-02	-0.925E-05	-0.811310E+00	0.160000E+03	0.100000E+01	0.100000E+01
33	-0.801900E+01	-0.822198E+01	0.203E+00	0.246873E+01	0.200000E+03	0.100000E+01	0.200000E+01
34	0.112420E-02	0.111141E-02	0.128E-04	0.115077E+01	0.200000E+03	0.100000E+01	0.100000E+01
35	-0.795500E+01	-0.791624E+01	-0.388E-01	-0.489598E+00	0.250000E+03	0.100000E+01	0.200000E+01
36	0.111000E-02	0.108547E-02	0.245E-04	0.225938E+01	0.250000E+03	0.100000E+01	0.100000E+01
37	-0.773000E+01	-0.749474E+01	-0.235E+00	-0.313902E+01	0.315000E+03	0.100000E+01	0.200000E+01
38	0.109370E-02	0.106242E-02	0.313E-04	0.294467E+01	0.315000E+03	0.100000E+01	0.100000E+01
39	-0.761600E+01	-0.707524E+01	-0.541E+00	-0.764306E+01	0.400000E+03	0.100000E+01	0.200000E+01
40	0.106990E-02	0.104277E-02	0.271E-04	0.260148E+01	0.400000E+03	0.100000E+01	0.100000E+01
41	-0.767800E+01	-0.679658E+01	-0.881E+00	-0.129686E+02	0.500000E+03	0.100000E+01	0.200000E+01
42	0.105090E-02	0.102683E-02	0.241E-04	0.234379E+01	0.500000E+03	0.100000E+01	0.100000E+01
43	-0.499100E+01	-0.664625E+01	0.166E+01	0.249050E+02	0.630000E+03	0.100000E+01	0.200000E+01
44	0.103190E-02	0.101058E-02	0.213E-04	0.210990E+01	0.630000E+03	0.100000E+01	0.100000E+01
45	-0.760800E+01	-0.658079E+01	-0.103E+01	-0.156092E+02	0.800000E+03	0.100000E+01	0.200000E+01
46	0.101080E-02	0.992078E-03	0.187E-04	0.188712E+01	0.800000E+03	0.100000E+01	0.100000E+01
47	-0.595400E+01	-0.649919E+01	0.545E+00	0.838860E+01	0.100000E+04	0.100000E+01	0.200000E+01
48	0.100490E-02	0.972287E-03	0.326E-04	0.335429E+01	0.100000E+04	0.100000E+01	0.100000E+01
49	-0.678900E+01	-0.626943E+01	-0.520E+00	-0.828742E+01	0.125000E+04	0.100000E+01	0.200000E+01

50	0.947440E-03	0.949947E-03	-0.251E-05	-0.263934E+00	0.125000E+04	0.100000E+01	0.100000E+01
51	-0.607800E+01	-0.565447E+01	-0.424E+00	-0.749026E+01	0.160000E+04	0.100000E+01	0.200000E+01
52	0.889630E-03	0.923437E-03	-0.338E-04	-0.366102E+01	0.160000E+04	0.100000E+01	0.100000E+01
53	-0.423900E+01	-0.459582E+01	0.357E+00	0.776408E+01	0.200000E+04	0.100000E+01	0.200000E+01
54	0.828400E-03	0.900550E-03	-0.721E-04	-0.801172E+01	0.200000E+04	0.100000E+01	0.100000E+01

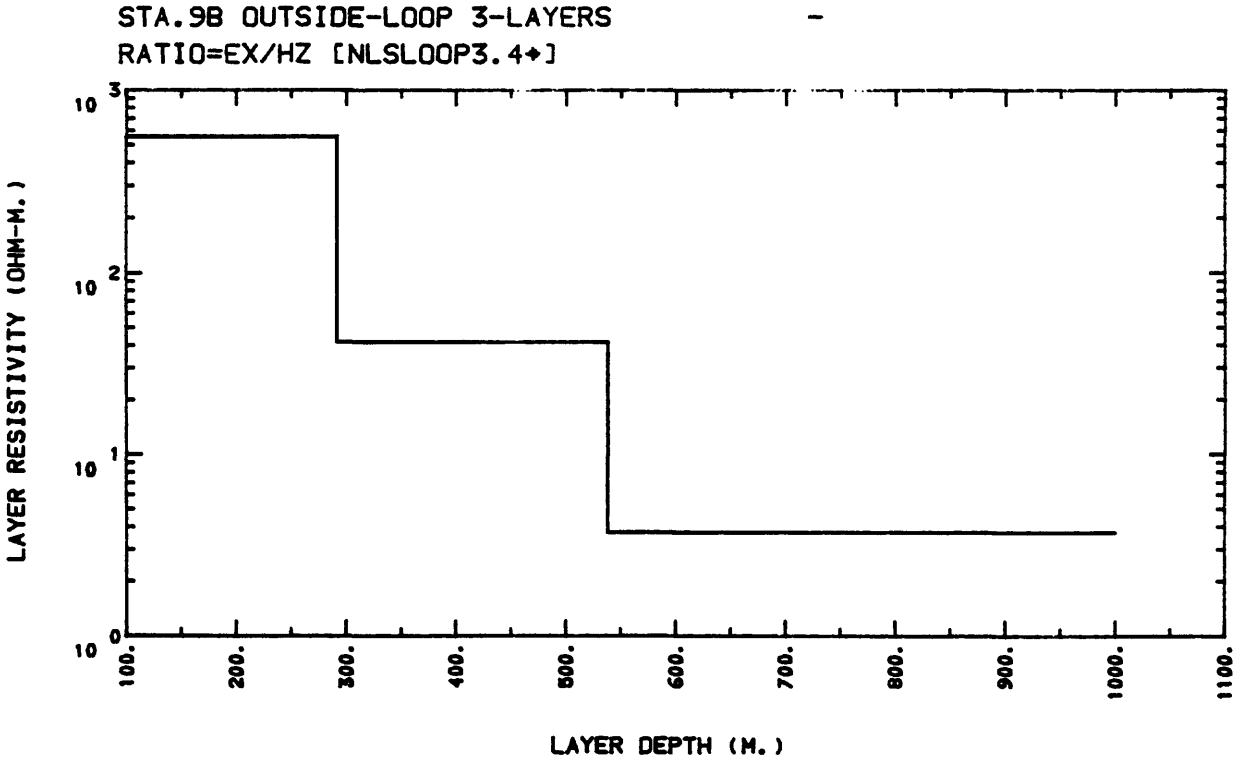
** RMSERR= 0.52752590E+00

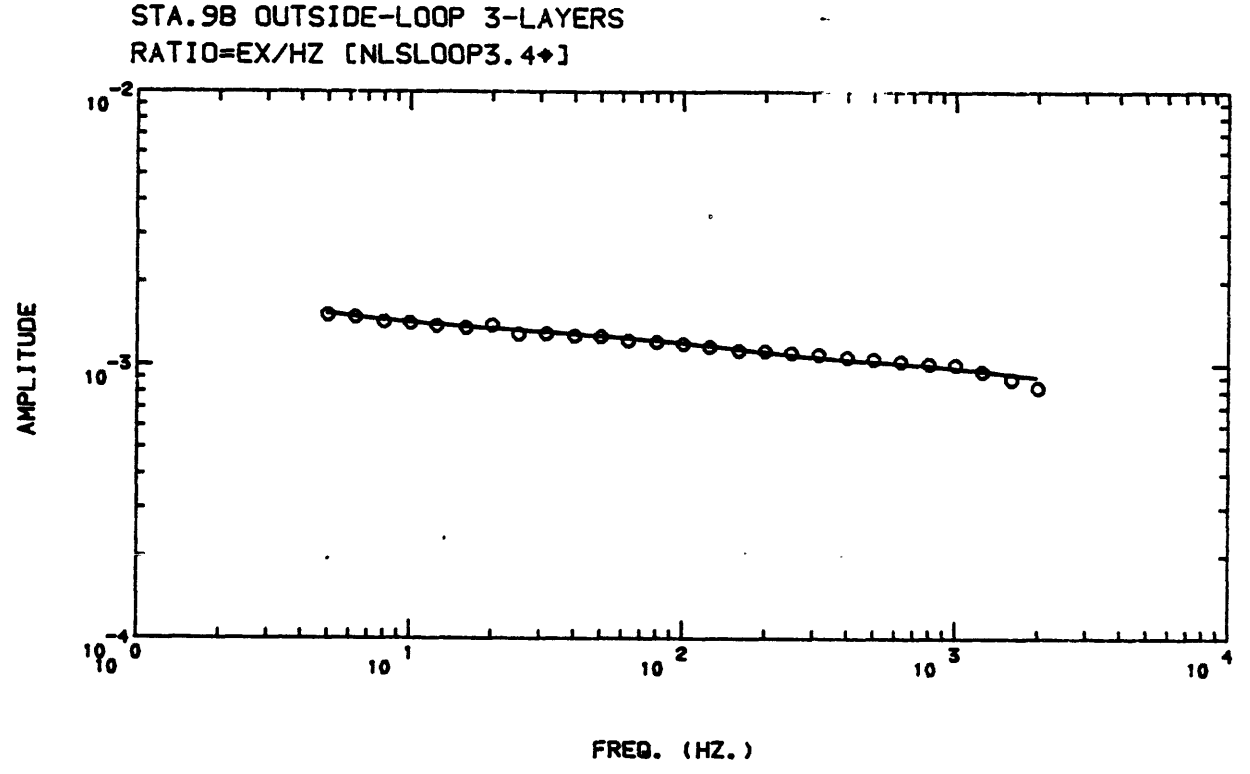
CORRELATION MATRIX

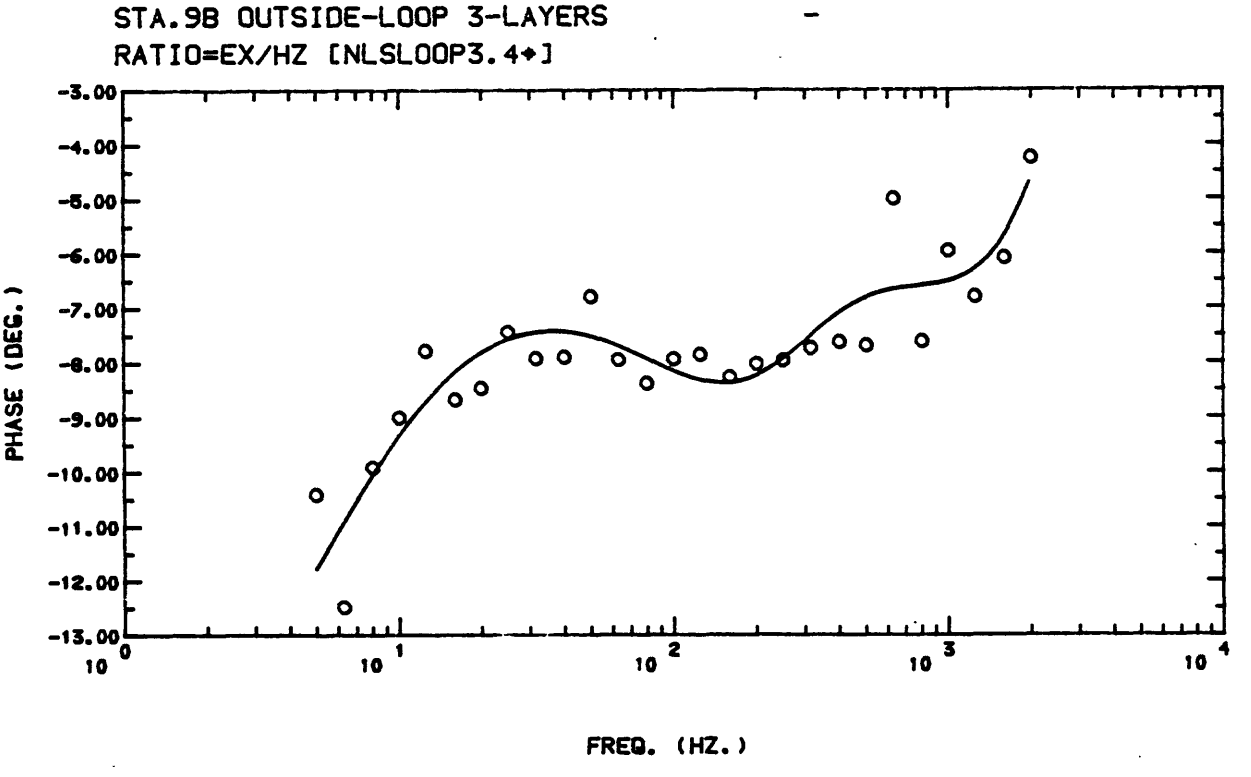
1	0.1000E+01					
2	0.5833E+00	0.1000E+01				
3	0.1455E+00	0.3558E+00	0.1000E+01			
4	0.4295E+00	0.7945E+00	0.1905E+00	0.1000E+01		
5	0.4942E+00	0.4689E+00	-0.2080E+00	0.4919E+00	0.1000E+01	
6	0.3230E-02	0.2491E-02	0.1652E-02	-0.2450E-03	0.2034E-02	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.1804E-02	0.3646E-03	0.2021E+00	0.2021E+02
2	0.2401E-01	0.2746E-02	0.1144E+00	0.1144E+02
3	0.2694E+00	0.4642E-02	0.1723E-01	0.1723E+01
4	0.2918E+03	0.8910E-02	0.3054E-04	0.3054E-02
5	0.2466E+03	0.1162E-01	0.4714E-04	0.4714E-02
6	0.2813E-02	0.2831E-03	0.1007E+00	0.1007E+02

PARAMETER	NAME		FINAL SOLUTION		RESISTIVITY	LAYER	DEPTH
1	SIGMA(1)	=	0.18040522E-02	1	0.55430768E+03		
2	SIGMA(2)	=	0.24009636E-01	2	0.41649944E+02		
3	SIGMA(3)	=	0.26941934E+00	3	0.37116859E+01		
4	THICK(1)	=	0.29175165E+03			1	0.29175165E+03
5	THICK(2)	=	0.24662296E+03			2	0.53837463E+03
6	SHIFT	=	0.28126426E-02				




STA.9B OUTSIDE-LOOP 3-LAYERS
RATIO=EX/HZ [NLSLOOP3.4♦]
AMPLITUDE
FREQ. (HZ.)


STA.9B OUTSIDE-LOOP 3-LAYERS
RATIO=EX/HZ [NLSLOOP3.4♦]
PHASE (DEG.)
FREQ. (HZ.)

(NLSLOOP3): STA.108 OUTSIDE-LOOP 4-LAYERS ELLIPTICITY [NLSLOOP3.6*]

Y0= 0.16310E+04
IRATIO= 0, 0 PARM= 0.40000E+01 , 0.17000E+03
N= 30 K= 7 IP= 1 M= 3

PARAMETERS HELD FIXED: IB= 4

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	-0.209170E+00	-0.219615E+00	0.104E-01	0.475593E+01	0.250000E+01	0.100000E+01	0.700000E+01
2	-0.249560E+00	-0.254516E+00	0.496E-02	0.194706E+01	0.315000E+01	0.100000E+01	0.700000E+01
3	-0.273360E+00	-0.289095E+00	0.157E-01	0.544283E+01	0.400000E+01	0.100000E+01	0.700000E+01
4	-0.323370E+00	-0.317553E+00	-0.582E-02	-0.183169E+01	0.500000E+01	0.100000E+01	0.700000E+01
5	-0.346850E+00	-0.340913E+00	-0.594E-02	-0.174163E+01	0.630000E+01	0.100000E+01	0.700000E+01
6	-0.372300E+00	-0.357038E+00	-0.153E-01	-0.427461E+01	0.800000E+01	0.100000E+01	0.700000E+01
7	-0.381650E+00	-0.364299E+00	-0.174E-01	-0.476275E+01	0.100000E+02	0.100000E+01	0.700000E+01
8	-0.387100E+00	-0.364218E+00	-0.229E-01	-0.628258E+01	0.125000E+02	0.100000E+01	0.700000E+01
9	-0.373410E+00	-0.356063E+00	-0.173E-01	-0.487198E+01	0.160000E+02	0.100000E+01	0.700000E+01
10	-0.343260E+00	-0.341709E+00	-0.155E-02	-0.453826E+00	0.200000E+02	0.100000E+01	0.700000E+01
11	-0.305430E+00	-0.320919E+00	0.155E-01	0.482647E+01	0.250000E+02	0.100000E+01	0.700000E+01
12	-0.278690E+00	-0.293132E+00	0.144E-01	0.492665E+01	0.315000E+02	0.100000E+01	0.700000E+01
13	-0.244850E+00	-0.259542E+00	0.147E-01	0.566066E+01	0.400000E+02	0.100000E+01	0.700000E+01
14	-0.221390E+00	-0.227335E+00	0.595E-02	0.261510E+01	0.500000E+02	0.100000E+01	0.700000E+01
15	-0.209510E+00	-0.198426E+00	-0.111E-01	-0.558621E+01	0.630000E+02	0.100000E+01	0.700000E+01
16	-0.183320E+00	-0.177864E+00	-0.546E-02	-0.306762E+01	0.800000E+02	0.100000E+01	0.700000E+01
17	-0.172360E+00	-0.167637E+00	-0.472E-02	-0.281716E+01	0.100000E+03	0.100000E+01	0.700000E+01
18	-0.164490E+00	-0.163121E+00	-0.137E-02	-0.839226E+00	0.125000E+03	0.100000E+01	0.700000E+01
19	-0.158950E+00	-0.160617E+00	0.167E-02	0.103775E+01	0.160000E+03	0.100000E+01	0.700000E+01
20	-0.158460E+00	-0.158570E+00	0.110E-03	0.690697E-01	0.200000E+03	0.100000E+01	0.700000E+01
21	-0.154160E+00	-0.156640E+00	0.248E-02	0.158310E+01	0.250000E+03	0.100000E+01	0.700000E+01
22	-0.154420E+00	-0.155495E+00	0.108E-02	0.691521E+00	0.315000E+03	0.100000E+01	0.700000E+01
23	-0.157510E+00	-0.155702E+00	-0.181E-02	-0.116149E+01	0.400000E+03	0.100000E+01	0.700000E+01
24	-0.157370E+00	-0.157001E+00	-0.369E-03	-0.235276E+00	0.500000E+03	0.100000E+01	0.700000E+01
25	-0.158980E+00	-0.159009E+00	0.290E-04	0.182084E-01	0.630000E+03	0.100000E+01	0.700000E+01
26	-0.162060E+00	-0.161427E+00	-0.633E-03	-0.392286E+00	0.800000E+03	0.100000E+01	0.700000E+01
27	-0.163720E+00	-0.163878E+00	0.158E-03	0.963478E-01	0.100000E+04	0.100000E+01	0.700000E+01
28	-0.165490E+00	-0.166652E+00	0.116E-02	0.696991E+00	0.125000E+04	0.100000E+01	0.700000E+01
29	-0.170500E+00	-0.170406E+00	-0.941E-04	-0.552303E-01	0.160000E+04	0.100000E+01	0.700000E+01
30	-0.175670E+00	-0.174711E+00	-0.959E-03	-0.549126E+00	0.200000E+04	0.100000E+01	0.700000E+01

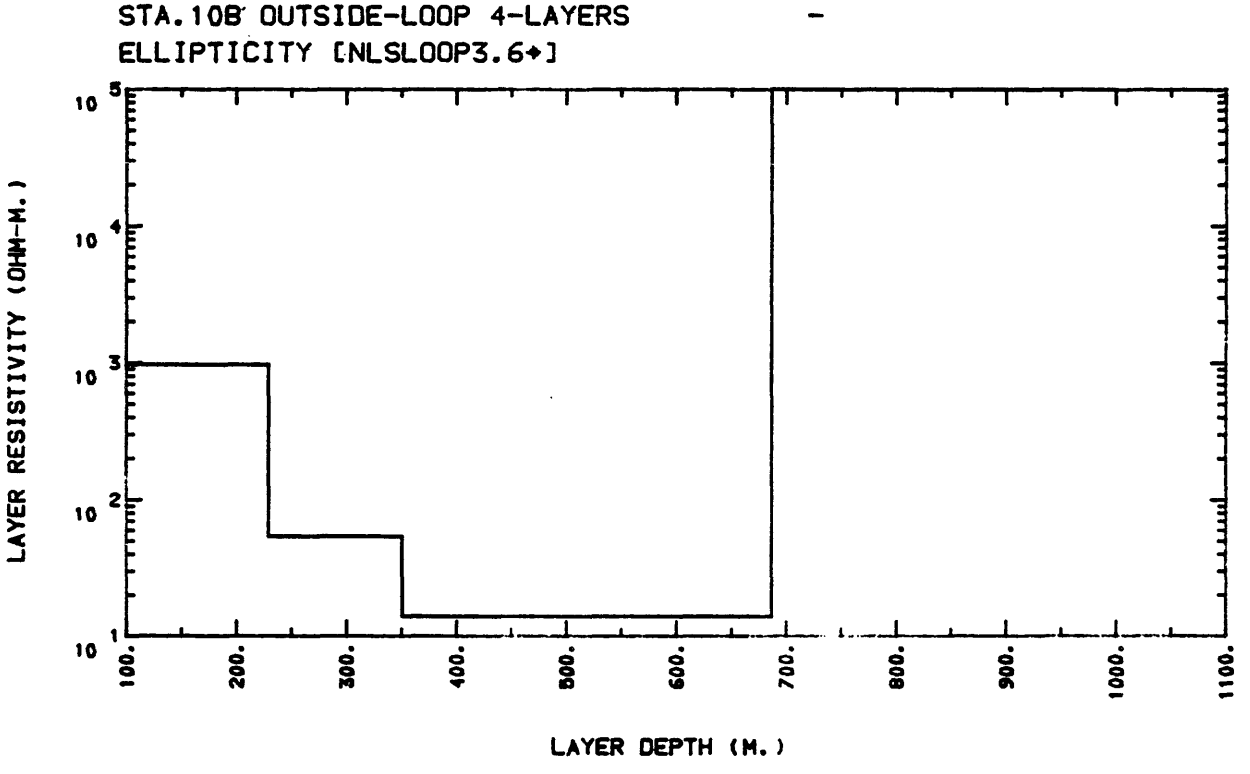
** RMSERR= 0.10614282E-01

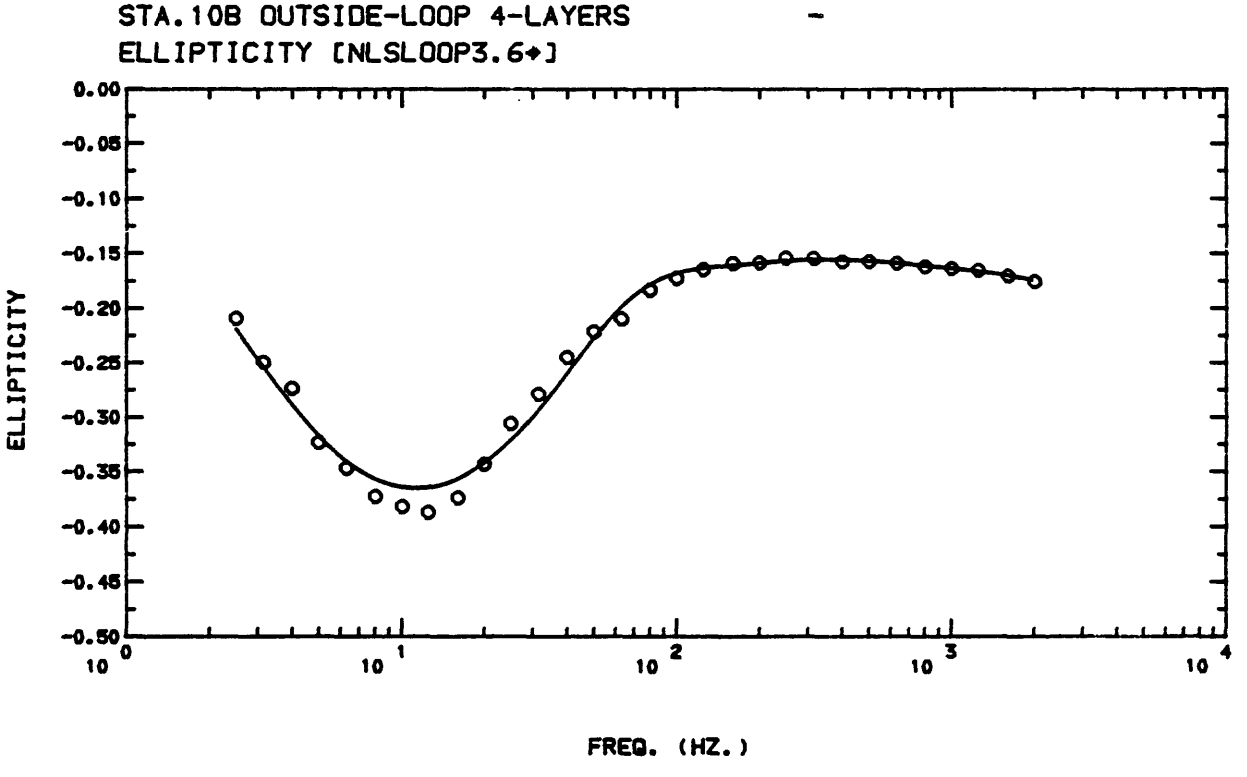
CORRELATION MATRIX

1	0.1000E+01					
2	0.4861E+00	0.1000E+01				
3	0.1691E+00	0.5897E+00	0.1000E+01			
5	0.2074E+00	0.8942E+00	0.4957E+00	0.1000E+01		
6	-0.1366E+00	0.2979E+00	0.7988E+00	0.2069E+00	0.1000E+01	
7	-0.1417E+00	-0.6554E+00	-0.9598E+00	-0.5978E+00	-0.7753E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.1036E-02	0.1247E-02	0.1204E+01	0.1204E+03
2	0.1852E-01	0.1635E-01	0.8828E+00	0.8828E+02
3	0.7174E-01	0.1190E-01	0.1659E+00	0.1659E+02
5	0.2292E+03	0.1490E-01	0.6502E-04	0.6502E-02
6	0.1214E+03	0.1681E-01	0.1385E-03	0.1385E-01
7	0.3359E+03	0.4846E-01	0.1443E-03	0.1443E-01

PARAMETER	NAME		FINAL SOLUTION		RESISTIVITY	LAYER	DEPTH
1	SIGMA(1)	=	0.10359527E-02	1	0.96523504E+03		
2	SIGMA(2)	=	0.18524131E-01	2	0.53983639E+02		
3	SIGMA(3)	=	0.71744785E-01	3	0.13938295E+02		
4	SIGMA(4)	=	0.99999997E-05	4	0.10000000E+06		
5	THICK(1)	=	0.22921696E+03			1	0.22921696E+03
6	THICK(2)	=	0.12142629E+03			2	0.35064325E+03
7	THICK(3)	=	0.33589648E+03			3	0.68653973E+03




STA.10B OUTSIDE-LOOP 4-LAYERS
ELLIPTICITY [NLSLOOP3.6♦]
ELLIPTICITY
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
-0.45
-0.50
10 0
10 1
10 2
10 3
10 4
FREQ. (HZ.)

(NLSLOOP3): STA.108 OUTSIDE-LOOP 4-LAYERS TILT-=ELLIPTICITY [NLSLOOP3.66*]

Y0= 0.16310E+04
IRATIO= 0, 0 PARM= 0.40000E+01 , 0.17000E+03
N= 60 K= 8 IP= 2 M= 3

PARAMETERS HELD FIXED: IB= 4 8

I	OBS.Y(I)	CAL	RES	%RES.ERR	X(I,1)	X(I,2)	X(I,3)
1	0.841700E+02	0.841221E+02	0.479E-01	0.569107E-01	0.250000E+01	0.100000E+01	0.600000E+01
2	-0.209170E+00	-0.217220E+00	0.805E-02	0.370575E+01	0.250000E+01	0.100000E+01	0.700000E+01
3	0.830770E+02	0.820927E+02	0.984E+00	0.119905E+01	0.315000E+01	0.100000E+01	0.600000E+01
4	-0.249560E+00	-0.252512E+00	0.295E-02	0.116923E+01	0.315000E+01	0.100000E+01	0.700000E+01
5	0.802800E+02	0.793930E+02	0.887E+00	0.111718E+01	0.400000E+01	0.100000E+01	0.600000E+01
6	-0.273360E+00	-0.287799E+00	0.144E-01	0.501701E+01	0.400000E+01	0.100000E+01	0.700000E+01
7	0.776290E+02	0.763206E+02	0.131E+01	0.171429E+01	0.500000E+01	0.100000E+01	0.600000E+01
8	-0.323370E+00	-0.317138E+00	-0.623E-02	-0.196500E+01	0.500000E+01	0.100000E+01	0.700000E+01
9	0.742360E+02	0.726504E+02	0.159E+01	0.218244E+01	0.630000E+01	0.100000E+01	0.600000E+01
10	-0.346850E+00	-0.341519E+00	-0.533E-02	-0.156091E+01	0.630000E+01	0.100000E+01	0.700000E+01
11	0.693100E+02	0.684789E+02	0.831E+00	0.121363E+01	0.800000E+01	0.100000E+01	0.600000E+01
12	-0.372300E+00	-0.358643E+00	-0.137E-01	-0.380797E+01	0.800000E+01	0.100000E+01	0.700000E+01
13	0.641160E+02	0.643945E+02	-0.279E+00	-0.432507E+00	0.100000E+02	0.100000E+01	0.600000E+01
14	-0.381650E+00	-0.366656E+00	-0.150E-01	-0.408949E+01	0.100000E+02	0.100000E+01	0.700000E+01
15	0.588850E+02	0.602713E+02	-0.139E+01	-0.230004E+01	0.125000E+02	0.100000E+01	0.600000E+01
16	-0.387100E+00	-0.367127E+00	-0.200E-01	-0.544024E+01	0.125000E+02	0.100000E+01	0.700000E+01
17	0.547030E+02	0.558002E+02	-0.110E+01	-0.196632E+01	0.160000E+02	0.100000E+01	0.600000E+01
18	-0.373410E+00	-0.359328E+00	-0.141E-01	-0.391887E+01	0.160000E+02	0.100000E+01	0.700000E+01
19	0.514150E+02	0.519456E+02	-0.531E+00	-0.102146E+01	0.200000E+02	0.100000E+01	0.600000E+01
20	-0.343260E+00	-0.345088E+00	0.183E-02	0.529621E+00	0.200000E+02	0.100000E+01	0.700000E+01
21	0.476210E+02	0.483733E+02	-0.752E+00	-0.155529E+01	0.250000E+02	0.100000E+01	0.600000E+01
22	-0.305430E+00	-0.324203E+00	0.188E-01	0.579063E+01	0.250000E+02	0.100000E+01	0.700000E+01
23	0.451780E+02	0.451090E+02	0.690E-01	0.153073E+00	0.315000E+02	0.100000E+01	0.600000E+01
24	-0.278690E+00	-0.296016E+00	0.173E-01	0.585293E+01	0.315000E+02	0.100000E+01	0.700000E+01
25	0.428360E+02	0.423742E+02	0.462E+00	0.108980E+01	0.400000E+02	0.100000E+01	0.600000E+01
26	-0.244850E+00	-0.261602E+00	0.168E-01	0.640363E+01	0.400000E+02	0.100000E+01	0.700000E+01
27	0.412270E+02	0.405295E+02	0.697E+00	0.172093E+01	0.500000E+02	0.100000E+01	0.600000E+01
28	-0.221390E+00	-0.228195E+00	0.681E-02	0.298220E+01	0.500000E+02	0.100000E+01	0.700000E+01
29	0.398310E+02	0.393175E+02	0.514E+00	0.130613E+01	0.630000E+02	0.100000E+01	0.600000E+01
30	-0.209510E+00	-0.197772E+00	-0.117E-01	-0.593517E+01	0.630000E+02	0.100000E+01	0.700000E+01
31	0.388690E+02	0.385519E+02	0.317E+00	0.822419E+00	0.800000E+02	0.100000E+01	0.600000E+01
32	-0.183320E+00	-0.175886E+00	-0.743E-02	-0.422667E+01	0.800000E+02	0.100000E+01	0.700000E+01
33	0.378740E+02	0.379365E+02	-0.625E-01	-0.164709E+00	0.100000E+03	0.100000E+01	0.600000E+01
34	-0.172360E+00	-0.165264E+00	-0.710E-02	-0.429359E+01	0.100000E+03	0.100000E+01	0.700000E+01
35	0.367370E+02	0.371699E+02	-0.433E+00	-0.116466E+01	0.125000E+03	0.100000E+01	0.600000E+01
36	-0.164490E+00	-0.161517E+00	-0.297E-02	-0.184098E+01	0.125000E+03	0.100000E+01	0.700000E+01
37	0.357040E+02	0.360667E+02	-0.363E+00	-0.100565E+01	0.160000E+03	0.100000E+01	0.600000E+01
38	-0.158950E+00	-0.161010E+00	0.206E-02	0.127940E+01	0.160000E+03	0.100000E+01	0.700000E+01
39	0.347680E+02	0.349052E+02	-0.137E+00	-0.393030E+00	0.200000E+03	0.100000E+01	0.600000E+01
40	-0.158460E+00	-0.161102E+00	0.264E-02	0.163996E+01	0.200000E+03	0.100000E+01	0.700000E+01
41	0.335520E+02	0.336820E+02	-0.130E+00	-0.386022E+00	0.250000E+03	0.100000E+01	0.600000E+01
42	-0.154160E+00	-0.160880E+00	0.672E-02	0.417699E+01	0.250000E+03	0.100000E+01	0.700000E+01
43	0.324460E+02	0.324090E+02	0.370E-01	0.114044E+00	0.315000E+03	0.100000E+01	0.600000E+01
44	-0.154420E+00	-0.160681E+00	0.626E-02	0.389624E+01	0.315000E+03	0.100000E+01	0.700000E+01
45	0.312210E+02	0.310905E+02	0.130E+00	0.419696E+00	0.400000E+03	0.100000E+01	0.600000E+01
46	-0.157510E+00	-0.161104E+00	0.359E-02	0.223100E+01	0.400000E+03	0.100000E+01	0.700000E+01
47	0.299420E+02	0.298374E+02	0.105E+00	0.350403E+00	0.500000E+03	0.100000E+01	0.600000E+01

48	-0.157370E+00	-0.162140E+00	0.477E-02	0.294170E+01	0.500000E+03	0.100000E+01	0.700000E+01
49	0.286230E+02	0.285102E+02	0.113E+00	0.39559oE+00	0.630000E+03	0.100000E+01	0.600000E+01
50	-0.158980E+00	-0.163571E+00	0.459E-02	0.280644E+01	0.630000E+03	0.100000E+01	0.700000E+01
51	0.271470E+02	0.271187E+02	0.283E-01	0.104262E+00	0.800000E+03	0.100000E+01	0.600000E+01
52	-0.162060E+00	-0.165227E+00	0.317E-02	0.191648E+01	0.800000E+03	0.100000E+01	0.700000E+01
53	0.258260E+02	0.258169E+02	0.915E-02	0.354402E-01	0.100000E+04	0.100000E+01	0.600000E+01
54	-0.163720E+00	-0.167077E+00	0.336E-02	0.200905E+01	0.100000E+04	0.100000E+01	0.700000E+01
55	0.244850E+02	0.245134E+02	-0.284E-01	-0.115997E+00	0.125000E+04	0.100000E+01	0.600000E+01
56	-0.165490E+00	-0.169614E+00	0.412E-02	0.243151E+01	0.125000E+04	0.100000E+01	0.700000E+01
57	0.230580E+02	0.230417E+02	0.163E-01	0.706179E-01	0.160000E+04	0.100000E+01	0.600000E+01
58	-0.170500E+00	-0.173716E+00	0.322E-02	0.185138E+01	0.160000E+04	0.100000E+01	0.700000E+01
59	0.215380E+02	0.215349E+02	-0.969E-01	-0.447786E+00	0.200000E+04	0.100000E+01	0.600000E+01
60	-0.175670E+00	-0.178797E+00	0.313E-02	0.174887E+01	0.200000E+04	0.100000E+01	0.700000E+01

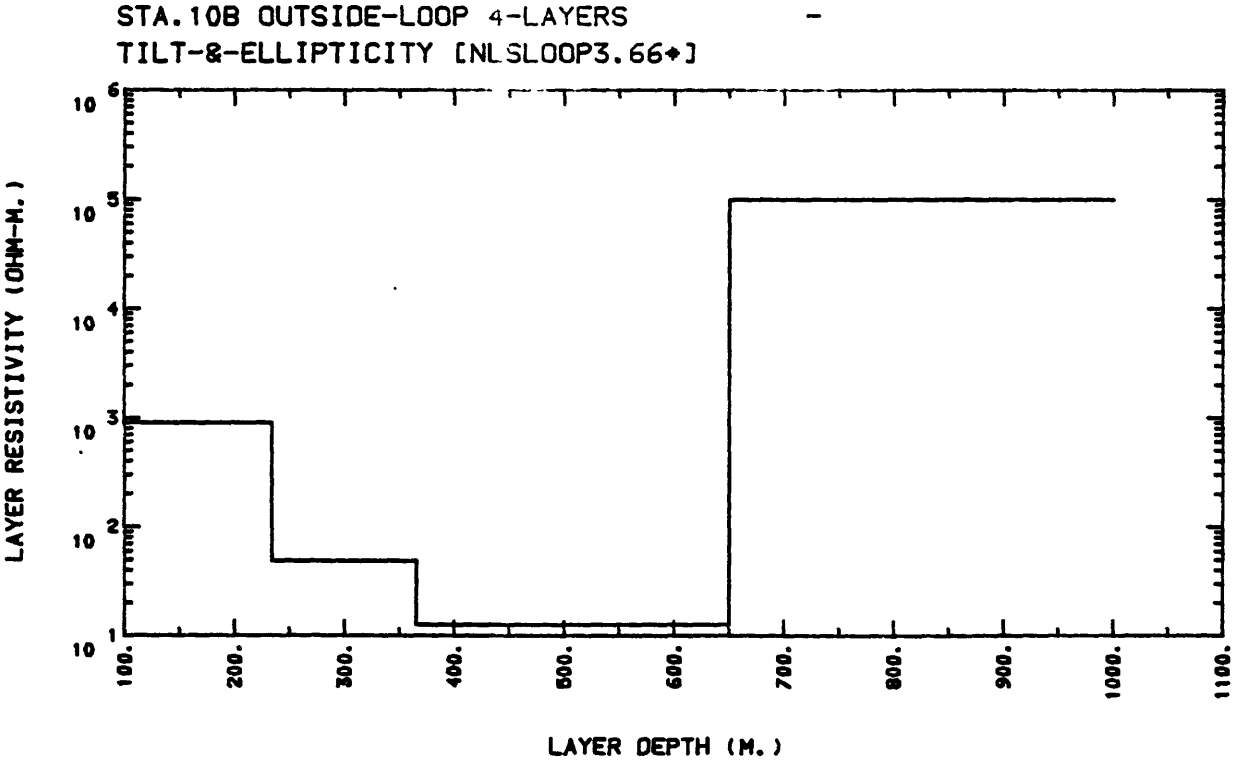
** RMSERR= 0.47548497E+00

CORRELATION MATRIX

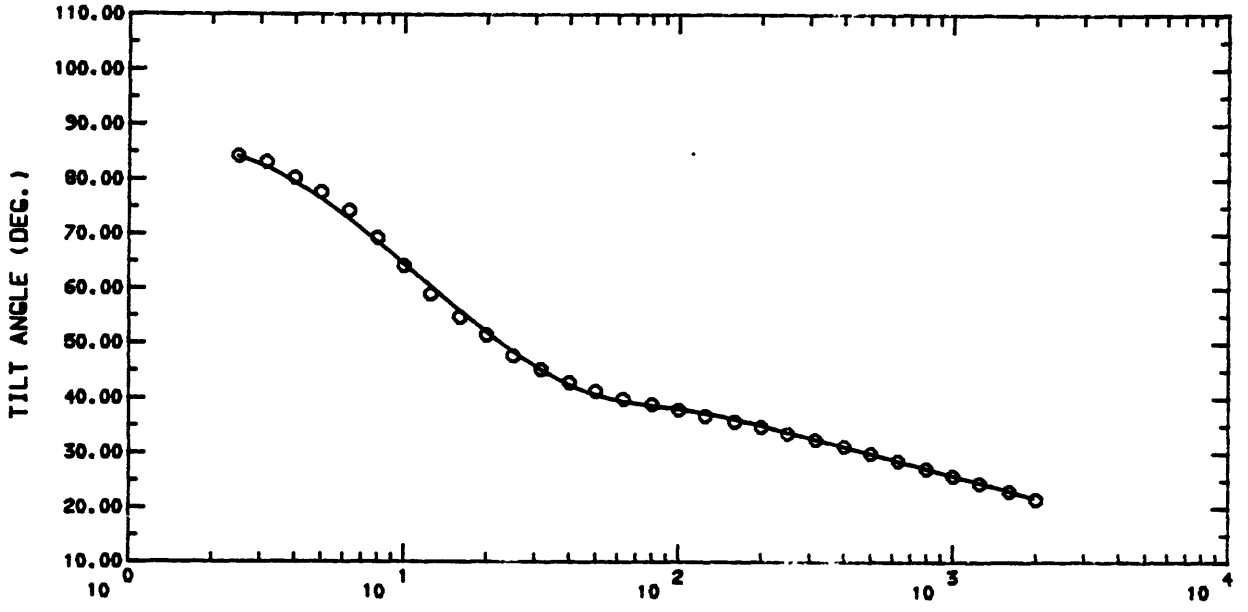
1	0.1000E+01					
2	0.2140E+00	0.1000E+01				
3	-0.2195E+00	0.3915E+00	0.1000E+01			
5	0.5675E+00	0.8828E+00	0.1912E+00	0.1000E+01		
6	-0.5601E+00	0.2890E+00	0.7736E+00	-0.8811E-01	0.1000E+01	
7	0.1949E+00	-0.4874E+00	-0.9670E+00	-0.2759E+00	-0.7517E+00	0.1000E+01

	**PARM.SOL.	STD.ERROR	REL.ERROR	% ERROR **
1	0.1115E-02	0.6775E-03	0.6077E+00	0.6077E+02
2	0.2051E-01	0.7156E-02	0.3489E+00	0.3489E+02
3	0.7921E-01	0.7321E-02	0.9243E-01	0.9243E+01
5	0.2340E+03	0.6112E-02	0.2612E-04	0.2612E-02
6	0.1316E+03	0.1092E-01	0.8302E-04	0.8302E-02
7	0.2847E+03	0.2284E-01	0.8024E-04	0.8024E-02

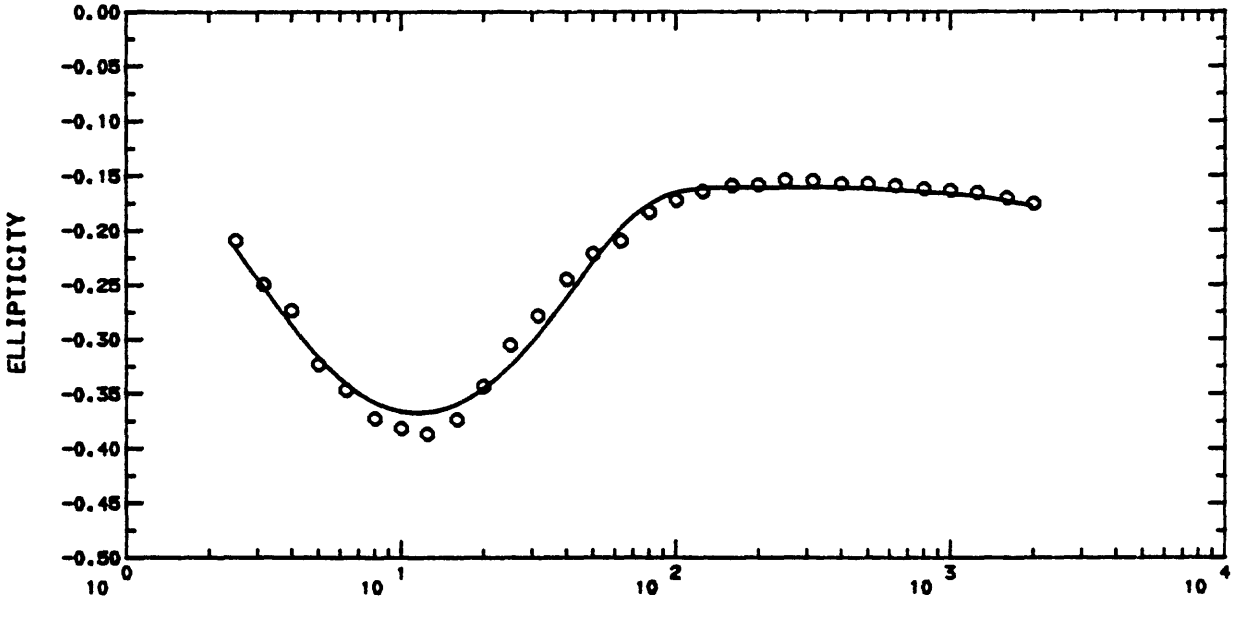
PARAMETER NAME		FINAL SOLUTION		RESISTIVITY	LAYER DEPTH	
1	SIGMA(1) =	0.11149433E-02	1	0.89690662E+03		
2	SIGMA(2) =	0.20511920E-01	2	0.48752140E+02		
3	SIGMA(3) =	0.79210840E-01	3	0.12624535E+02		
4	SIGMA(4) =	0.99999988E-05	4	0.10000001E+06		
5	THICK(1) =	0.23399721E+03			1	0.23399721E+03
6	THICK(2) =	0.13159741E+03			2	0.36559464E+03
7	THICK(3) =	0.28470398E+03			3	0.65029865E+03
8	SHIFT =	-0.24150314E+01				



STA.10B OUTSIDE-LOOP 4-LAYERS -
TILT-&-ELLIPTICITY [NLSLOOP3.66+]

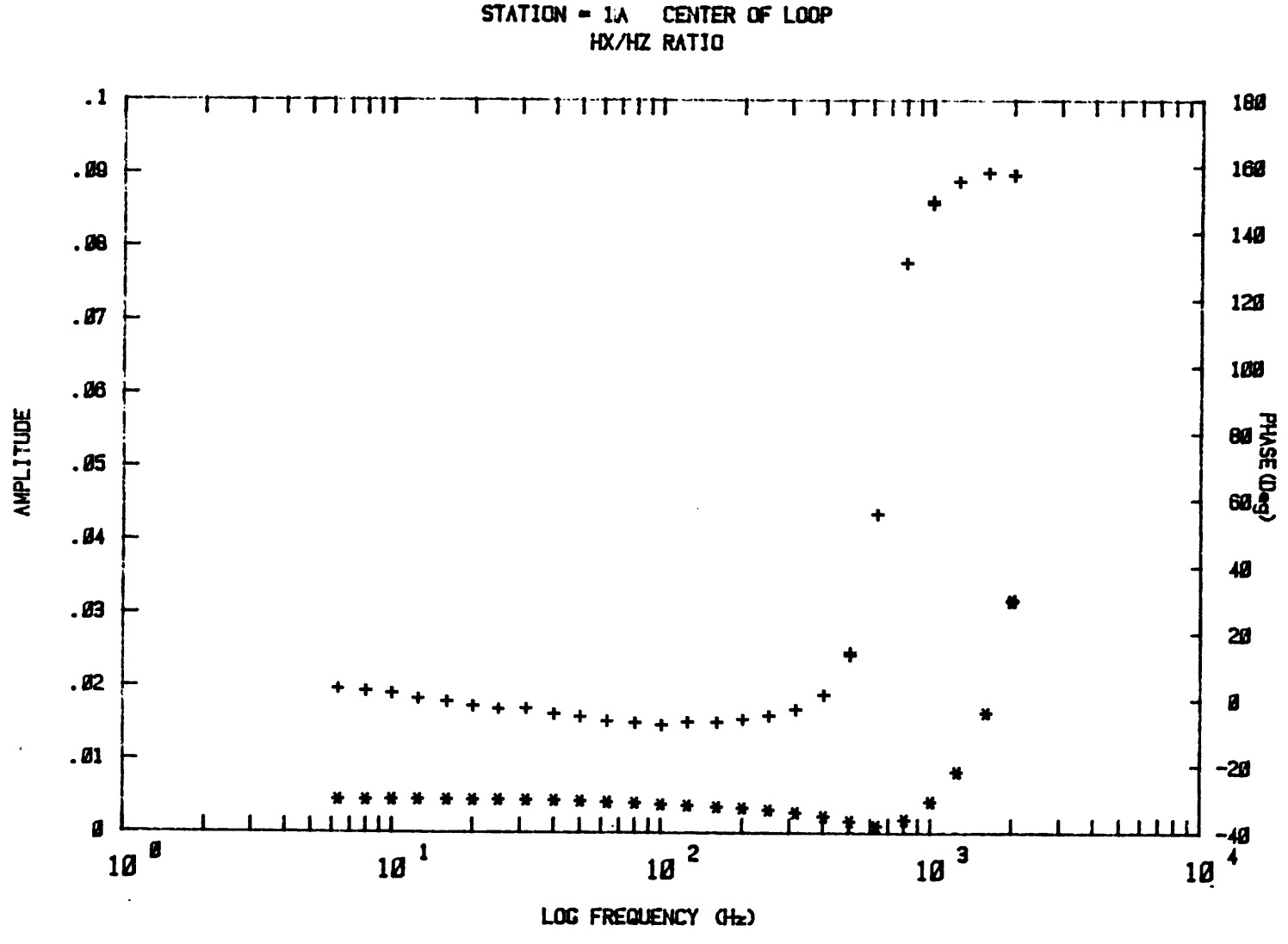


STA.10B OUTSIDE-LOOP 4-LAYERS -
TILT-&-ELLIPTICITY [NLSLOOP3.66+]

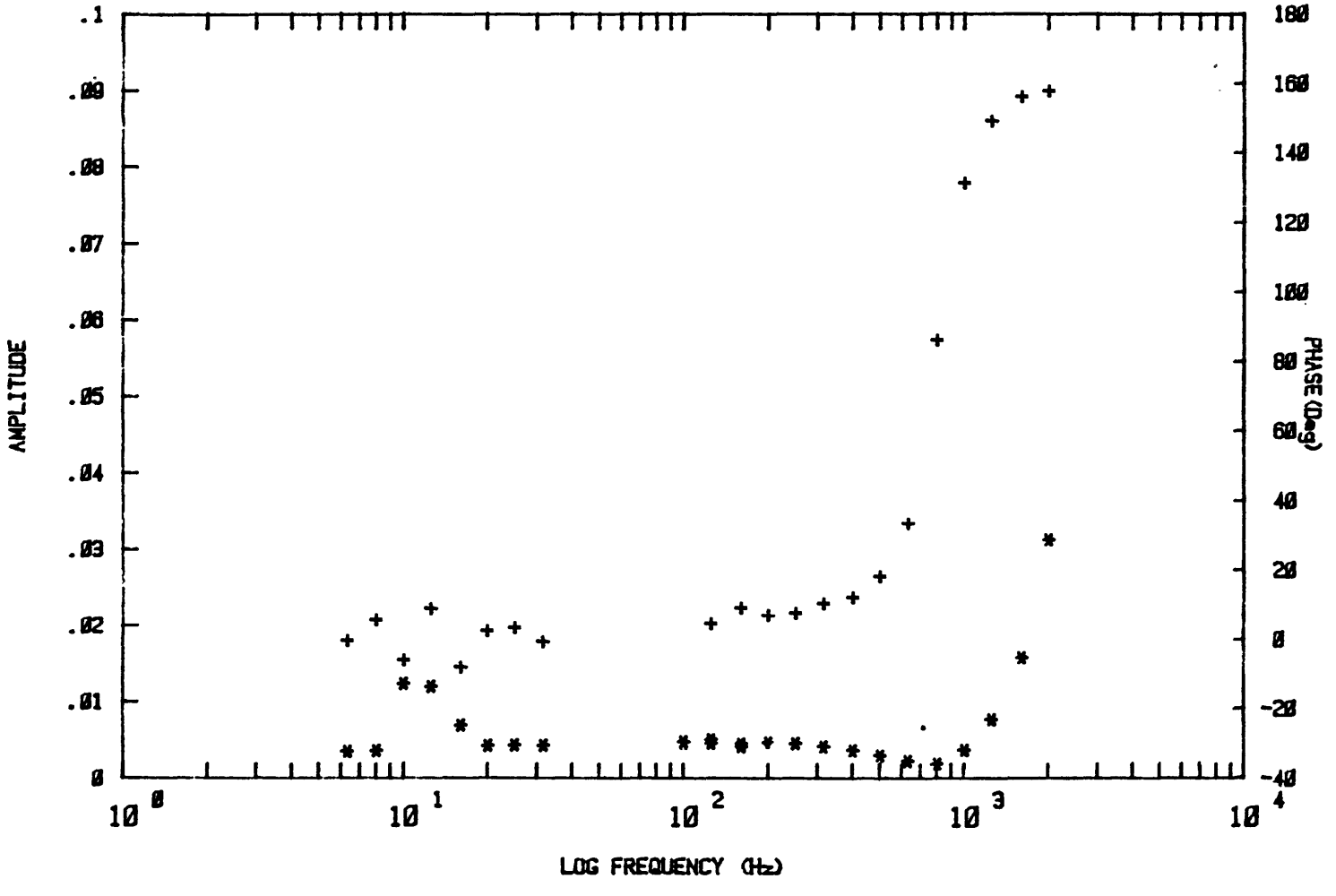


Appendix 2

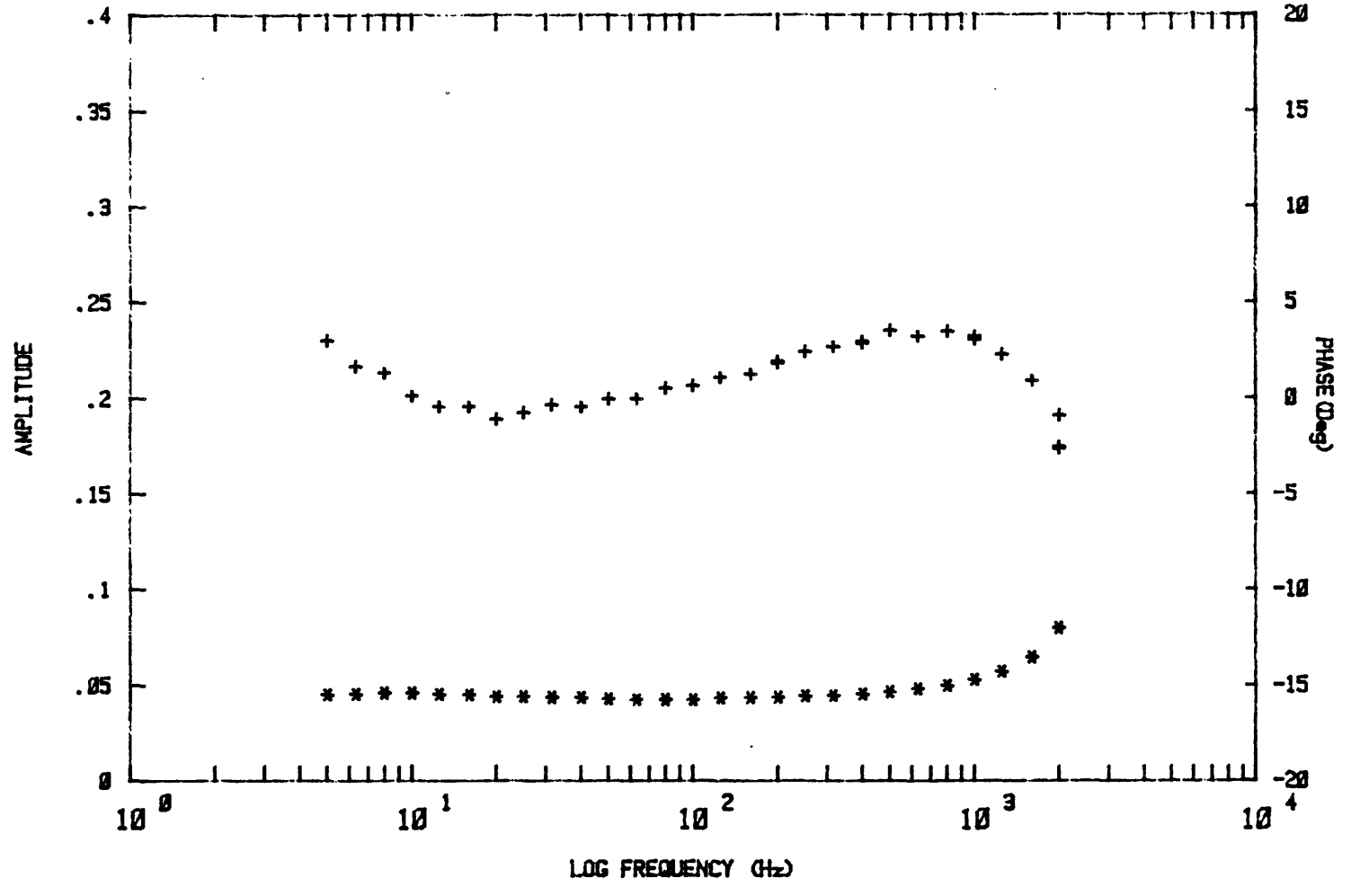
To facilitate examination of the data at the loop center, two consecutive plots for each station have the same amplitude scale. Amplitude ratios are denoted by "*" and phase differences by "+" in all plots. Results are presented in ascending station order.

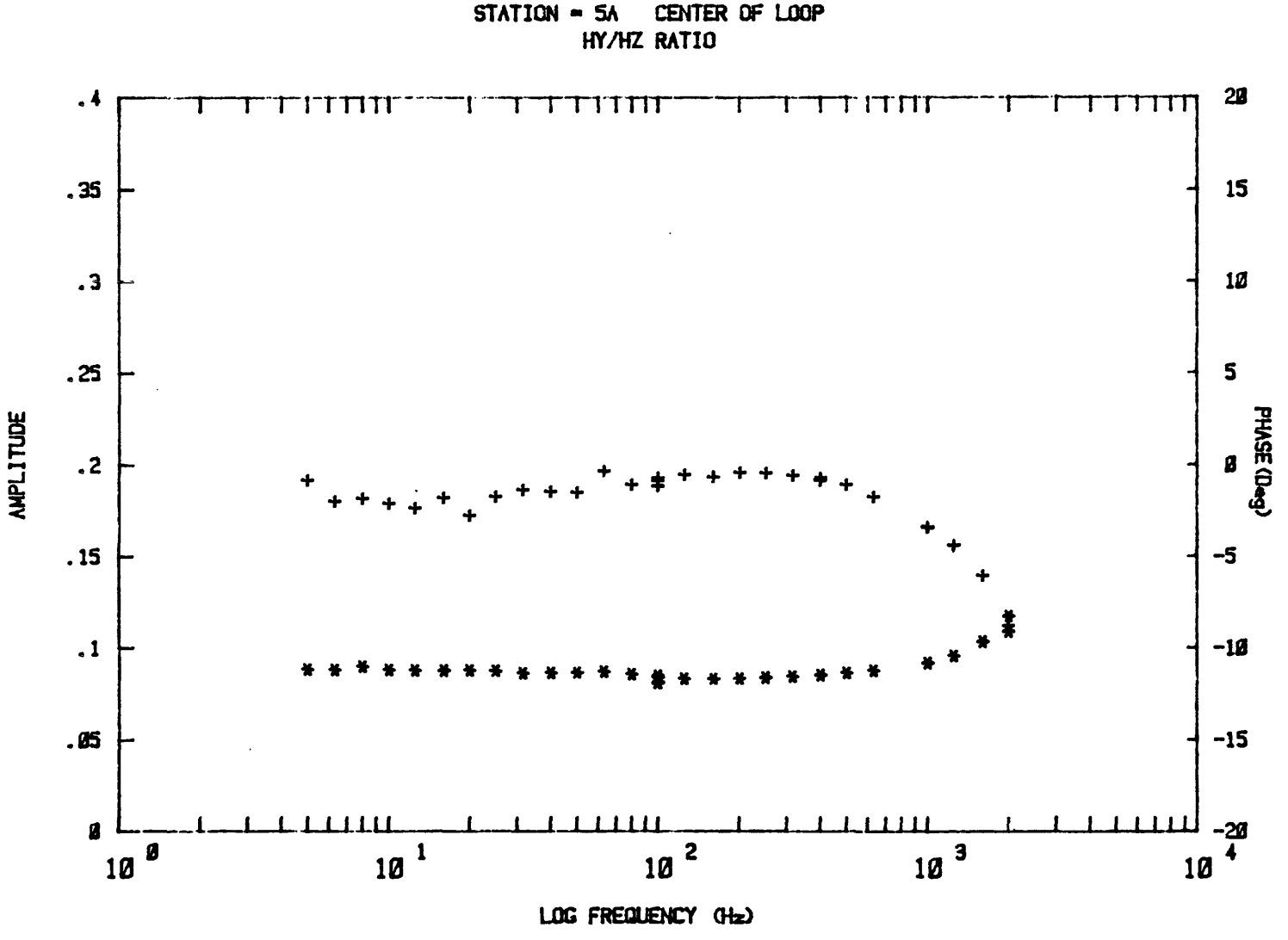


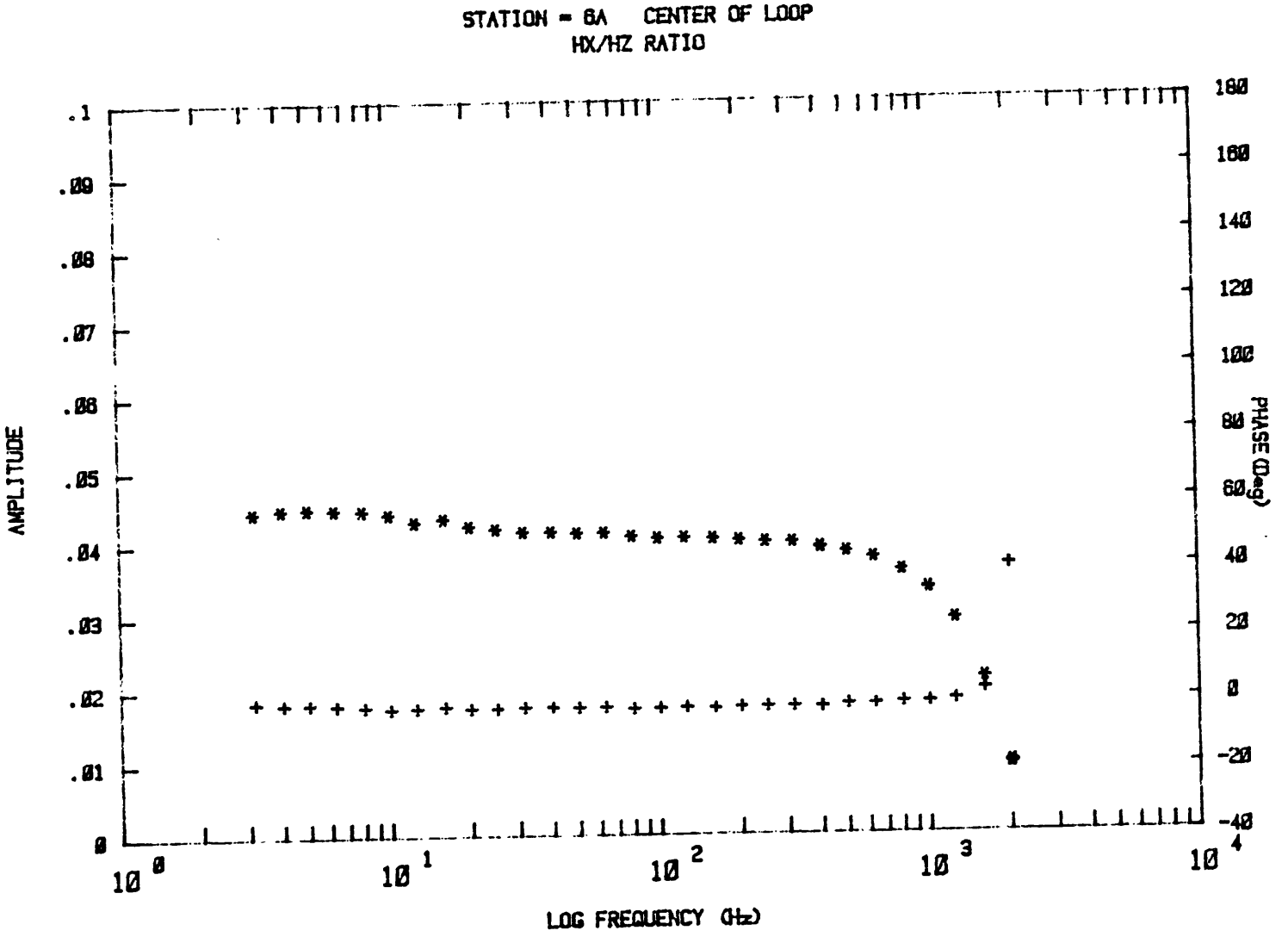
STATION = 1A CENTER OF LOOP
HY/HZ RATIO

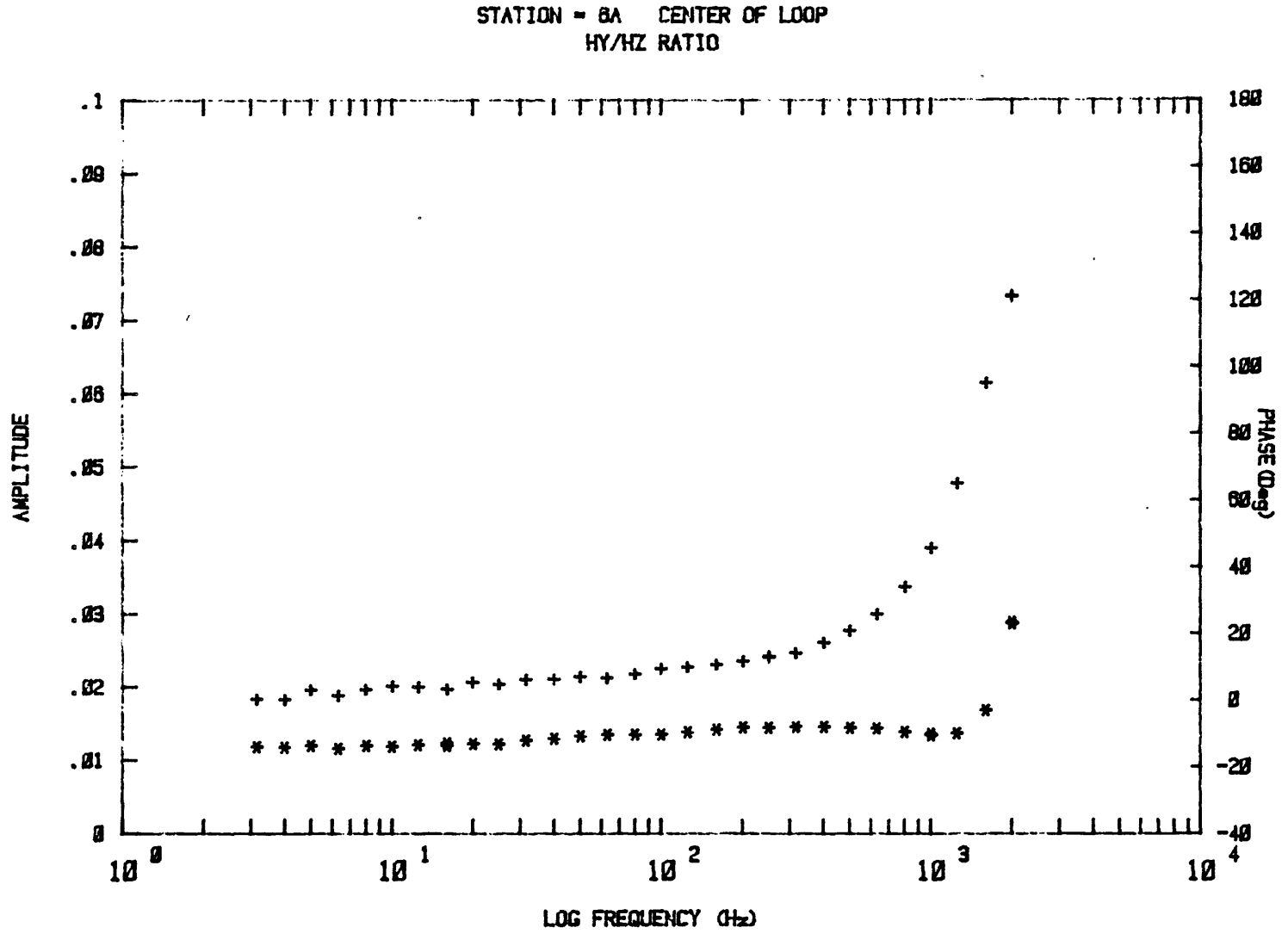


STATION = 5A CENTER OF LOOP
HX/HZ RATIO

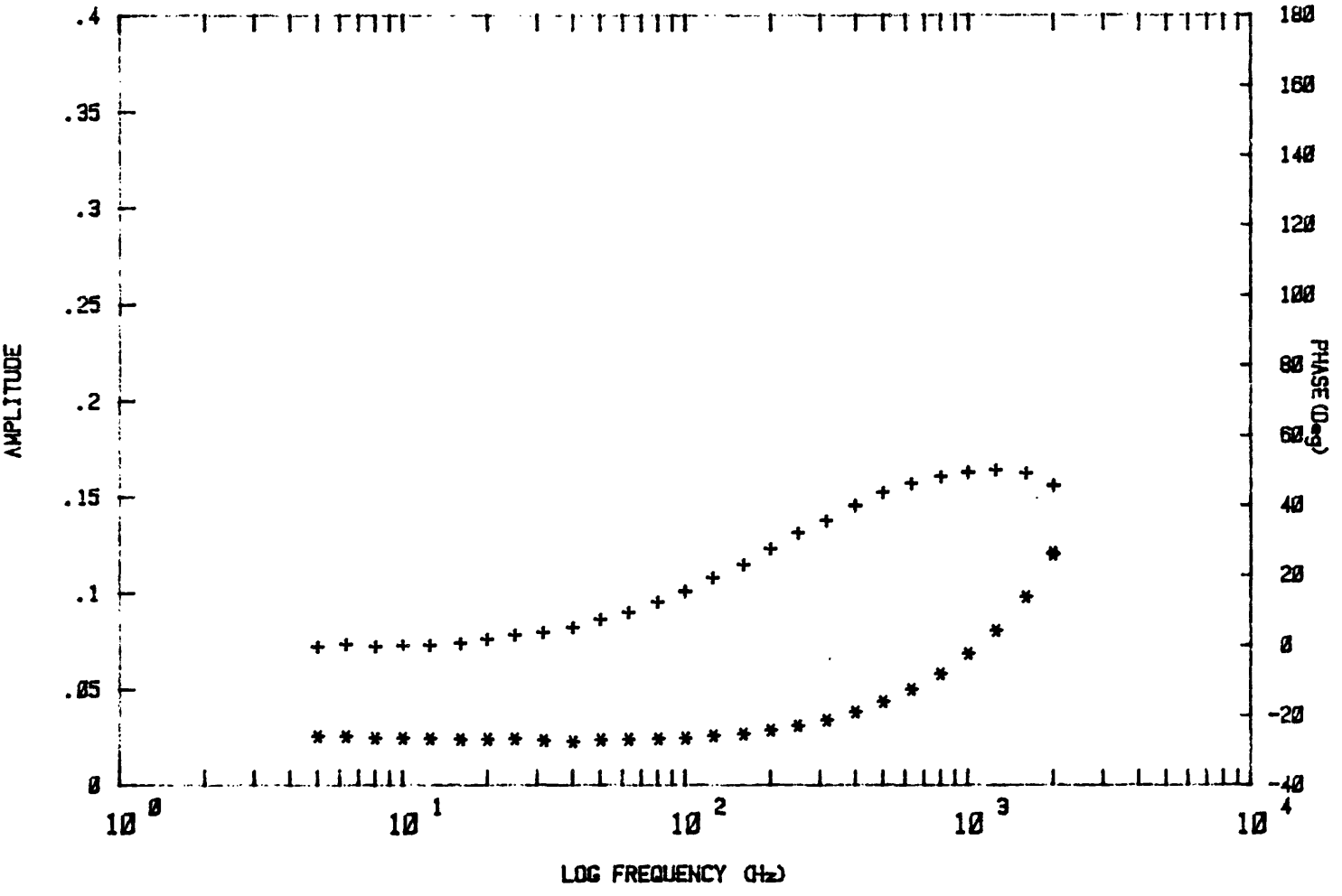



STATION = 5A CENTER OF LOOP
HY/HZ RATIO
AMPLITUDE
PHASE (Deg)
.4
.35
.3
.25
.2
.15
.1
.05
0
20
15
10
5
0
-5
-10
-15
-20
10 0
10 1
10 2
10 3
10 4
LOG FREQUENCY (Hz)

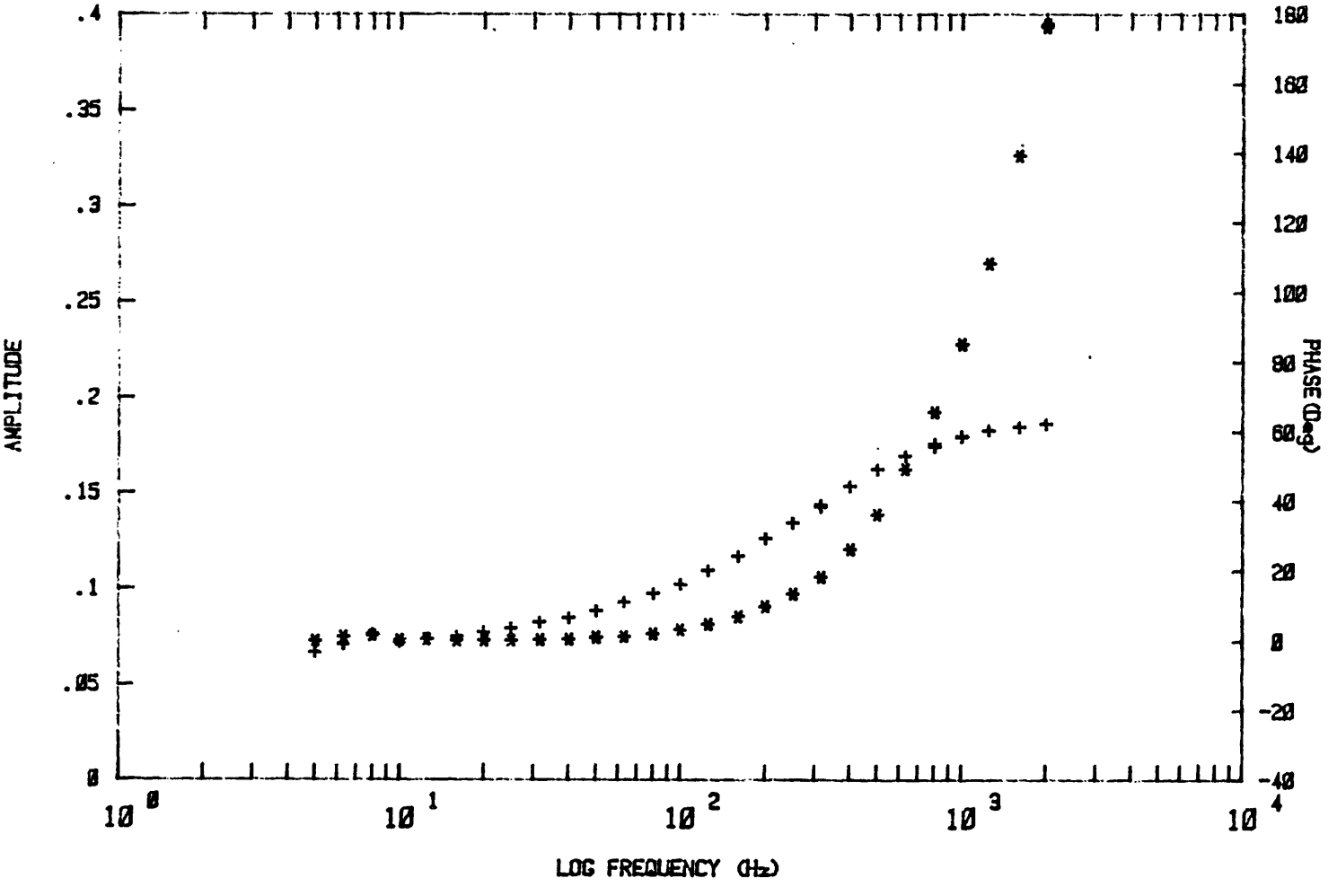

STATION = 6A CENTER OF LOOP
HX/HZ RATIO
AMPLITUDE
PHASE (Deg)
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
180
160
140
120
100
80
60
40
20
0
-20
-40
10 0
10 1
10 2
10 3
10 4
LOG FREQUENCY (Hz)


STATION = 8A CENTER OF LOOP
HY/HZ RATIO
AMPLITUDE
PHASE (Deg)
LOG FREQUENCY (Hz)
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
180
160
140
120
100
80
60
40
20
0
-20
-40
10 0
10 1
10 2
10 3
10 4

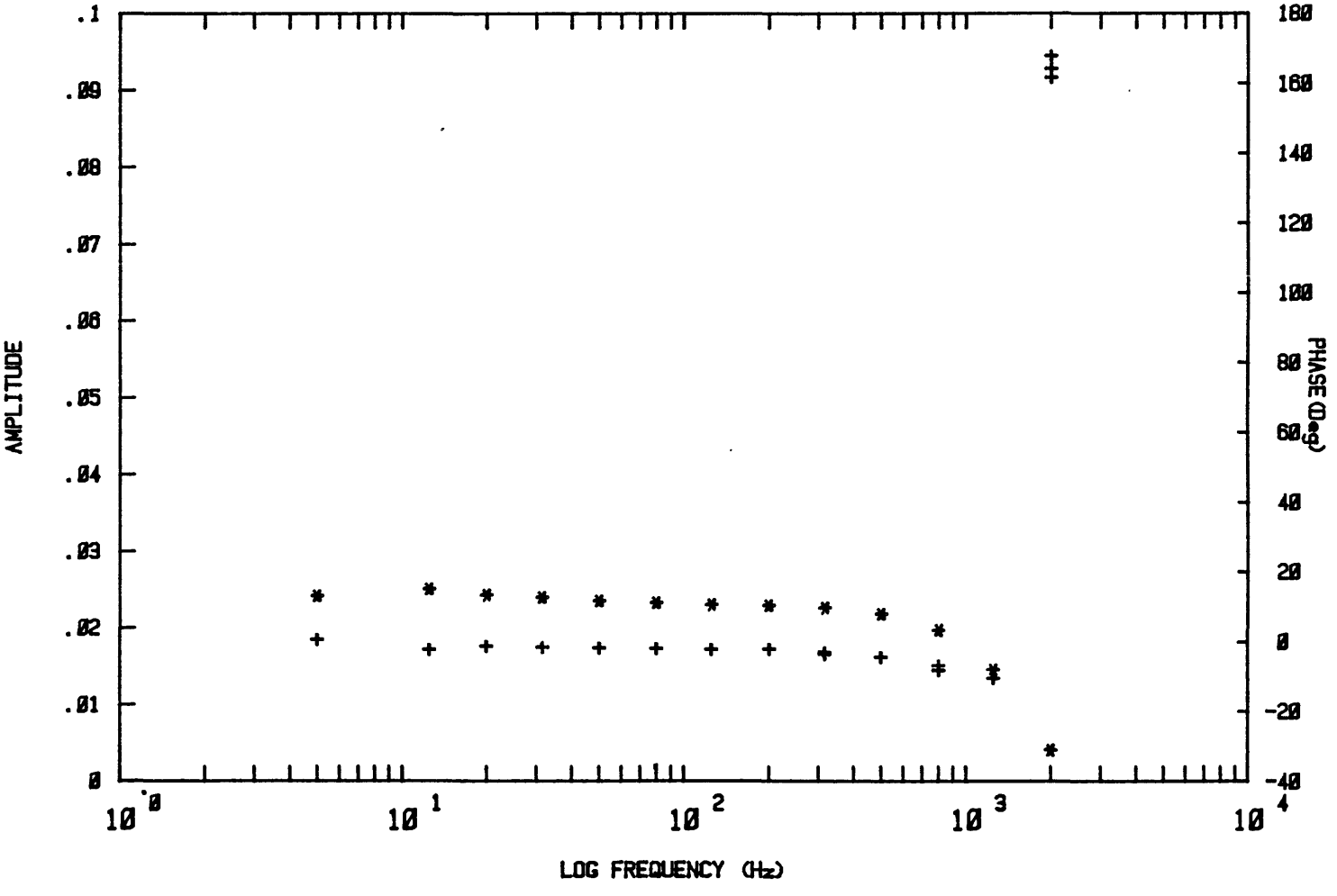
STATION = 7A CENTER OF LOOP
HX/HZ RATIO



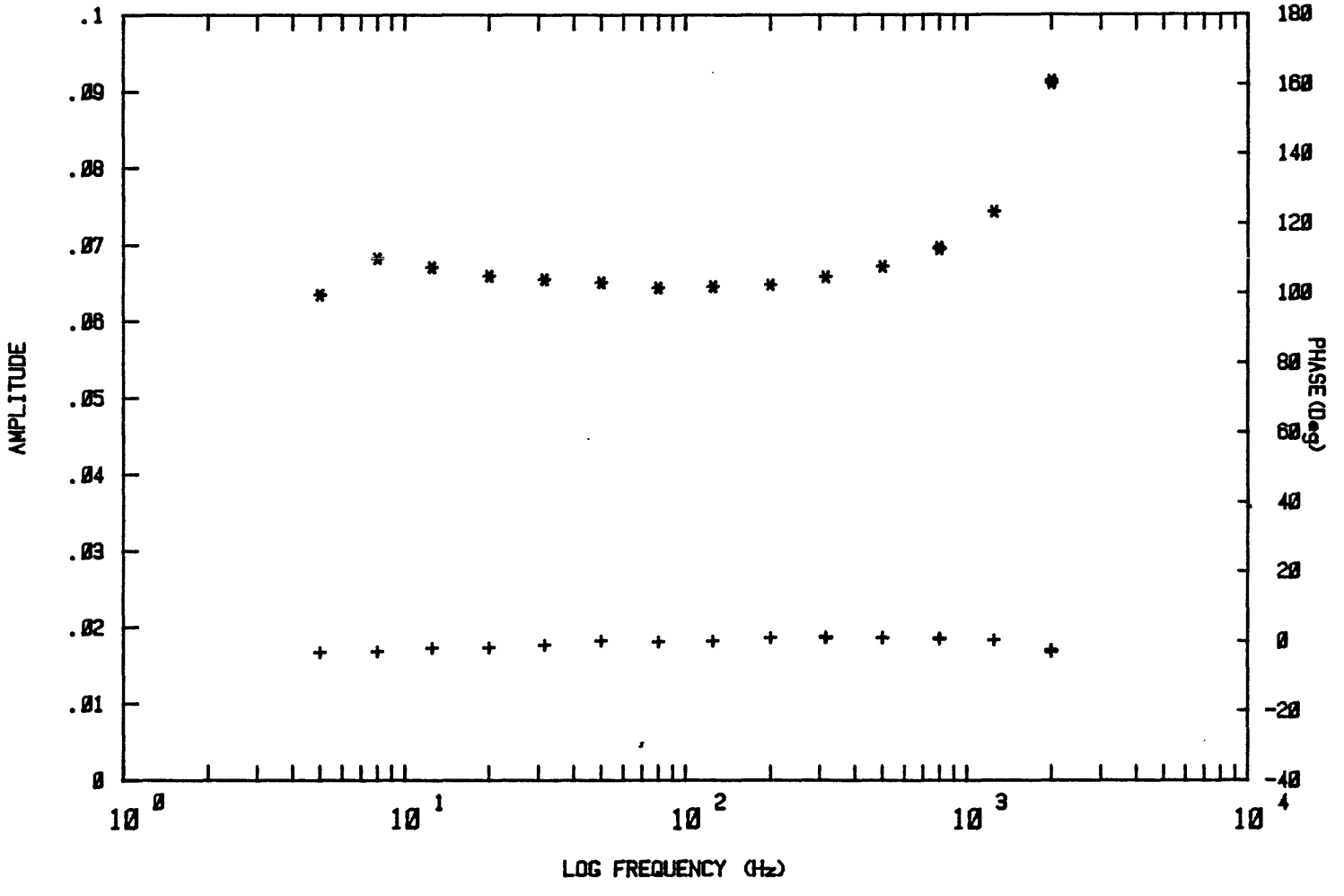
STATION = 7A CENTER OF LOOP
HY/HZ RATIO

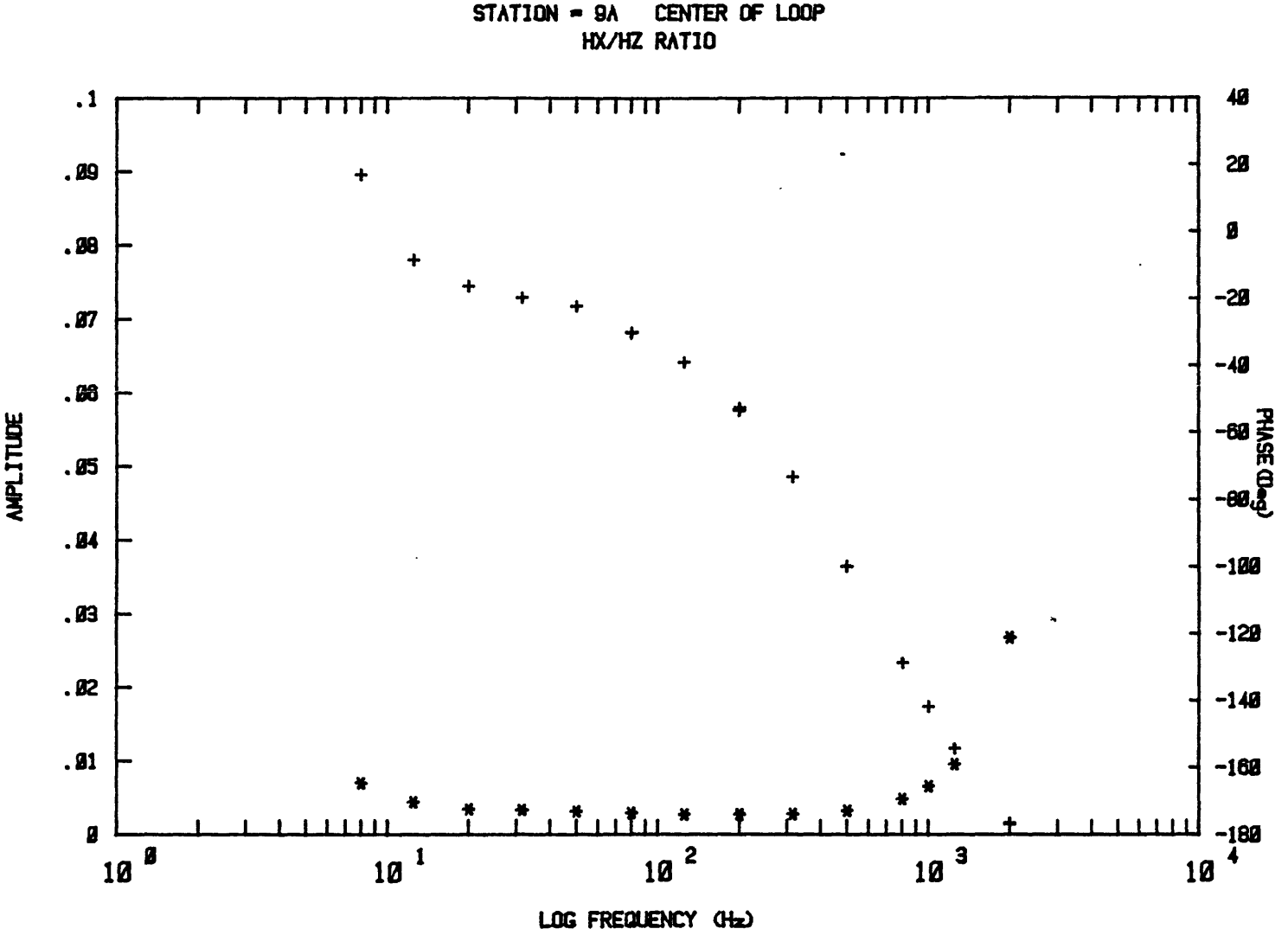


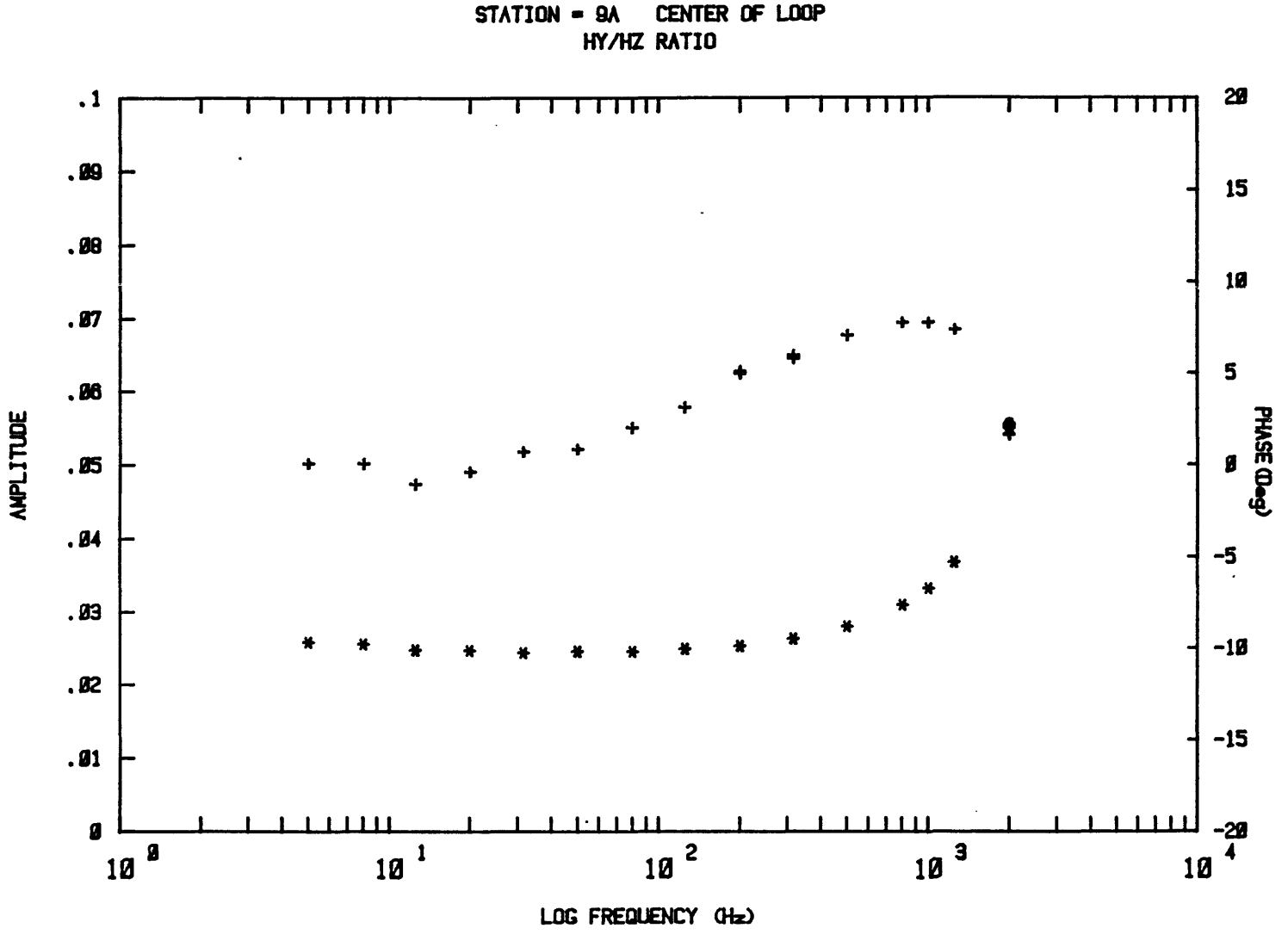
STATION = 8A CENTER OF LOOP
HX/HZ RATIO

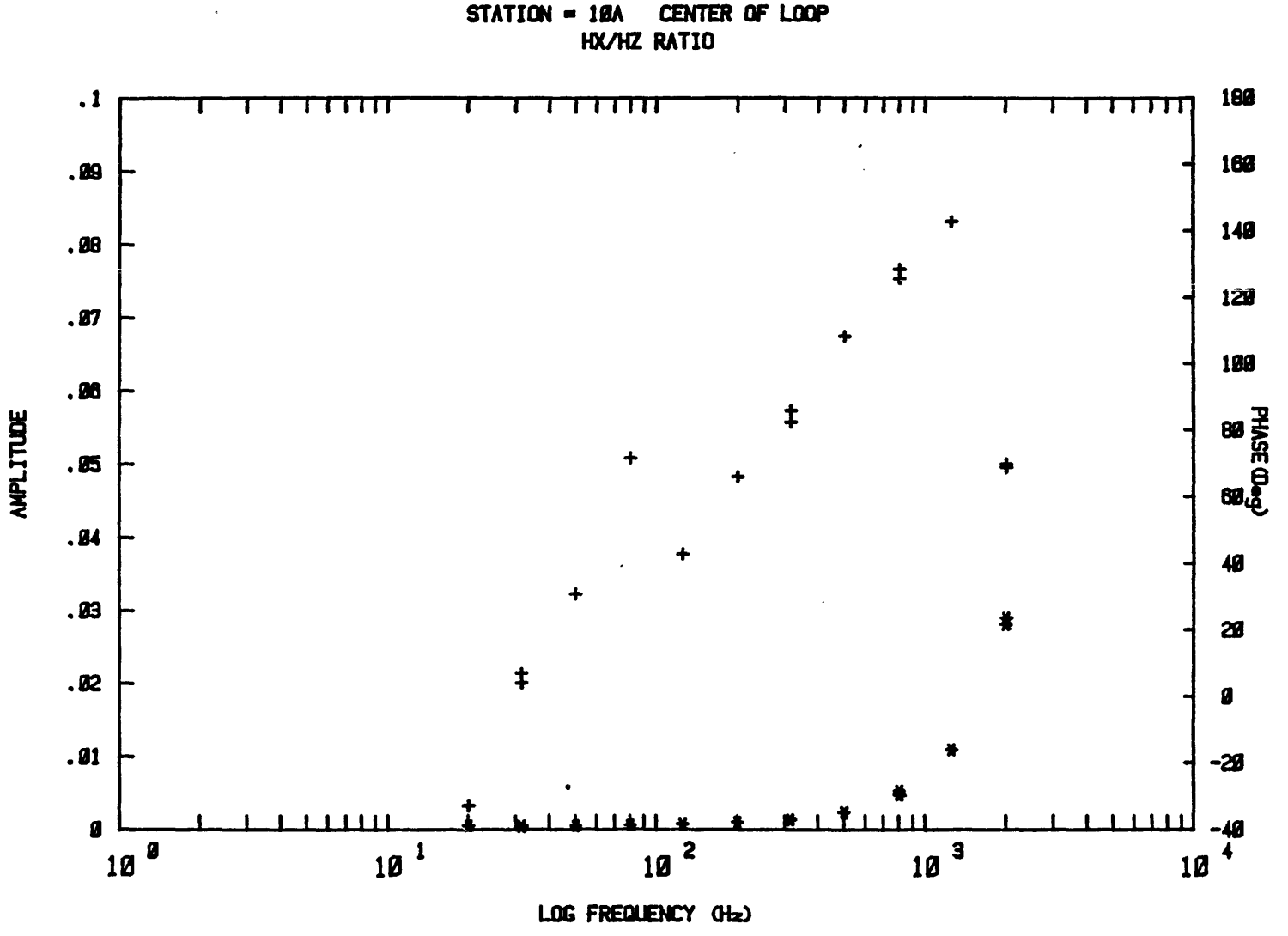


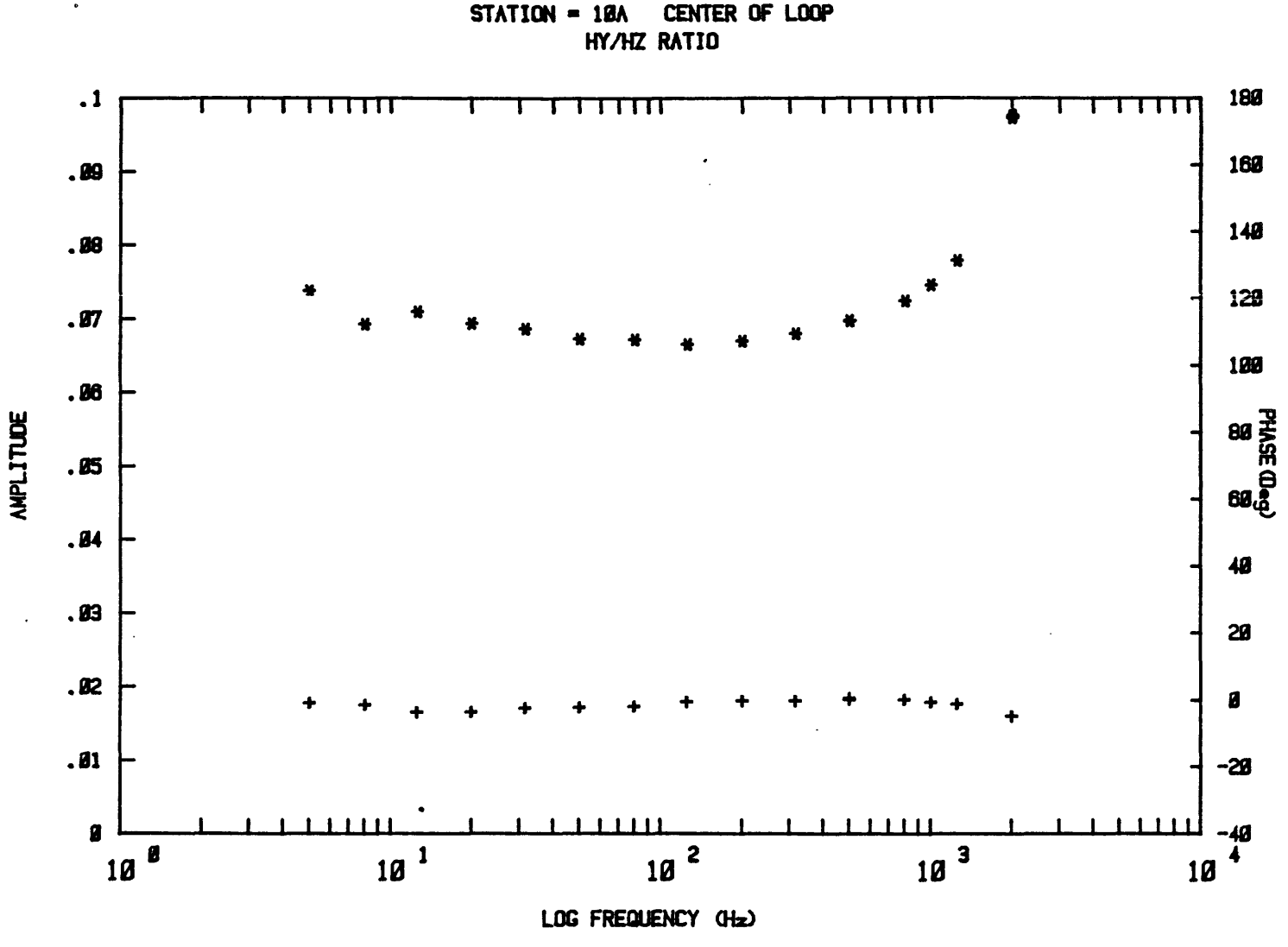
STATION = 8A CENTER OF LOOP
HY/HZ RATIO




STATION = 9A CENTER OF LOOP
HX/HZ RATIO
AMPLITUDE
PHASE (Deg)
LOG FREQUENCY (Hz)
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
10 0
10 1
10 2
10 3
10 4


STATION = 9A CENTER OF LOOP
HY/HZ RATIO
AMPLITUDE
PHASE (Deg)
LOG FREQUENCY (Hz)
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
20
15
10
5
0
-5
-10
-15
-20
10 0
10 1
10 2
10 3
10 4


STATION = 10A CENTER OF LOOP
HX/HZ RATIO
AMPLITUDE
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
PHASE (Deg)
180
160
140
120
100
80
60
40
20
0
-20
-40
10 0
10 1
10 2
10 3
10 4
LOG FREQUENCY (Hz)


STATION = 10A CENTER OF LOOP
HY/HZ RATIO
AMPLITUDE
PHASE (Deg)
LOG FREQUENCY (Hz)
.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0
180
160
140
120
100
80
60
40
20
0
-20
-40
10 0
10 1
10 2
10 3
10 4