GEORGIA INSTITUTE OF TECHNOLOGY
OFFICE OF CONTRACT ADMINISTRATION
SPONSORED PROJECT INITIATION

Date: 5/23/80

Project Title: A Magnetotelluric Survey in the Southern Appalachians

Project No: G-35-668

Project Director: Dr. Jean-Claude Mareschal

Sponsor: National Science Foundation

Agreement Period: From ~~4/1/80~~ 7/31/83 Until ~~9/30/81~~ ~~1-31-83~~ 7/31/83 (Grant Period)

Type Agreement: Grant No. EAR-7925395, dated March 14, 1980

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1,111 GIT (G-35-348)
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Reports Required: Progress Report; Final Project Report

Sponsor Contact Person (s):

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Washington, D.C. 20550
202/357-9626

Defense Priority Rating: N/A

Assigned to: Geophysical Sciences (School/~~Laboratory~~)

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GEORGIA INSTITUTE OF TECHNOLOGY — OFFICE OF CONTRACT ADMINISTRATION

SPONSORED PROJECT TERMINATION/CLOSEOUT SHEET

Date March 27,1984

Project No. G-35-668

School/~~Lab~~ Geo Sci

Includes Subproject No.(s)

Project Director(s) Dr. Jean-Claude Mareschal GTRI / ~~GIT~~

Sponsor National Science Foundation

Title A Magnetotelluric Survey in the Southern Appalachians

Effective Completion Date: 7/31/83 (Performance) 10/31/83 (Reports)

Grant/Contract Closeout Actions Remaining:

- [ ] None
- [x] Final ~~Invoice or Final Fiscal~~ Report FCTR
- [ ] Closing Documents
- [x] Final Report of Inventions if positive
- [ ] Govt. Property Inventory & Related Certificate
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APPENDIX VI

G-35-668

NATIONAL SCIENCE FOUNDATION Washington, D.C. 20550	FINAL PROJECT REPORT NSF FORM 98A	
PLEASE READ INSTRUCTIONS ON REVERSE BEFORE COMPLETING		
PART I—PROJECT IDENTIFICATION INFORMATION		
1. Institution and Address School of Geophysical Sciences Georgia Institute of Technology Atlanta, GA 30332	2. NSF Program Earth Science: Experimental & Theoretical	3. NSF Award Number EAR 7925395
	4. Award Period From 4/1/80 To 7/31/82	5. Cumulative Award Amount $48,871
6. Project Title Magnetotelluric Survey in the Southern Appalachians		

PART II—SUMMARY OF COMPLETED PROJECT *(FOR PUBLIC USE)*

Magnetotelluric (MT) and geomagnetic depth soundings (GDS) were conducted at 21 sites located between Spring City (TN) and Savannah (GA). The GDS data show no noticeable coast effect, which is unexpected in a tectonically inactive region. The induction arrows point away from the coast toward the west and the northwest. This suggests that the coast effect is balanced by the presence of a lower crustal conductor to the west or to the north of the survey region. Two interpretations are possible about the location of this conductor. Either the conductor is located to the west of the traverse, or it is located near the northwestern end of the profile, beneath the Blue Ridge. The data indicate that this conductor would not extend further north beneath the Valley and Ridge and Cumberland Plateau. The latter interpretation is preferred because it agrees with the results of surveys conducted in the northern and central Appalachians which also suggested the presence of conductivity anomalies in the lower crust. Additional data collection, however, will be required to confirm whether this interpretation is correct. Whenever the MT data were good enough to permit the determination of impedance tensors, the maximum apparent resistivity for periods of 10 to 100 s is of the order of 3,000 Ωm. Whether the resistivity decreases at mid crustal depth cannot be ascertained without further processing of the data.

PART III—TECHNICAL INFORMATION *(FOR PROGRAM MANAGEMENT USES)*

1. ITEM *(Check appropriate blocks)*	NONE	ATTACHED	PREVIOUSLY FURNISHED	TO BE FURNISHED SEPARATELY TO PROGRAM	
				Check (√)	Approx. Date
a. Abstracts of Theses		X			
b. Publication Citations	X				
c. Data on Scientific Collaborators	X				
d. Information on Inventions	X				
e. Technical Description of Project and Results		X			
f. Other *(specify)*					

2. Principal Investigator/Project Director Name *(Typed)*	3. Principal Investigator/Project Director Signature	4. Date
J.-C. Mareschal		

NSF Form 98A (5-78) Supersedes All Previous Editions

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INTRODUCTION

The crustal structure of the southern Appalachians has been the focus of many recent geological and geophysical investigations initiated by the seismic reflection studies conducted by COCORP (Cook et al., 1979). There is evidence that electrical conductivity anomalies are related to the past tectonic activity (Law and Riddihough, 1971; Camfield and Gough, 1977; Drury and Nibblett, 1980). In eastern North-America, a lower crustal electrical conductivity anomaly has been suggested beneath the Canadian northern Appalachians (Bailey et al., 1974) and beneath the central Appalachians, in Virginia (Edwards and Greenhouse, 1975). Greenhouse and Bailey (1981) review the available data, delineate this anomaly beneath the northeastern U. S. and suggest a few hypotheses on the nature of this conductor.

The main purpose of the reported investigation was to gather data on the electrical conductivity of the lower crust in the Southern Appalachians. Such information would provide additional constraints on the models of crustal evolution. The detection of a conductor beneath the crystalline Appalachians is important to confirm the results of the previous geomagnetic surveys in the northern and central sections of the Appalachians. The extent of this conductor would also give additional clues as to its nature.

For these reasons, geomagnetic variations and magnetotelluric data were collected. Deep crustal conductors will be detected by the geomagnetic variation studies; under ideal conditions, the conductivity structure of the crust can be determined from the magnetotelluric soundings.

The study has detected a conductor, possibly related to the anomalies reported by previous workers. The data suggest that the conductor does not extend further north than the Valley and Ridge. Additional data needs to be collected to confirm and to better locate this conductor.

INSTRUMENTS - FIELD OPERATIONS

Three sets of portable instruments were used to collect magnetic and telluric data. Each set consisted of electric and magnetic sensors, analog amplifiers, an analog to digital converter, a multiplexer and a digital cassette recorder. The telluric sensors, used to measure the electric field in two orthogonal directions, consisted of 0.5 m long copper electrodes driven into the ground; the interelectrode distance was of the order of 1000 feet. The magnetic sensors, vector fluxgate magnetometers EDA-FM100, measured the E-W, N-S and vertical components of the magnetic field. The gain on the analog amplifiers ranged from 1 to 200 for the electric channels and from 0.5 to 10 for the magnetic channels. The sampling interval could be selected between 5 different rates varying between 1 and 32 samples per minute (SPM). The magnetic data could also be recorded without telluric data when the setting up of the telluric lines proved unfeasible.

The data for a station were usually recorded for 12 hours at a rate of 32 SPM and for 2 to 3 weeks at a rate of 1 SPM. During that period, the instruments were left unattended but were periodically checked. The major problem encountered was that the telluric lines would often be found cut. This did not affect the measurements too seriously, because the data collected at 32 SPM are more important for the magnetotelluric (MT) interpretation than the very long period data. The magnetic data at 1 SPM, which were used for the geomagnetic depth soundings (GDS), were not affected by the telluric lines problems.

The data were recorded at 21 different sites located between Savannah (GA) and Spring City (TN) during two field seasons, fall and winter 1981-1982. A map with the location of the recording sites is presented in Figure 1. Appendix 1 contains the summary of all the relevant information concerning the data collection including the station location, the recording time, gains, sampling rates, and number of channels (3 channels = magnetic only, 5 channels = magnetic + telluric).

Serious instrumental problems were met during the second field campaign and have affected the data collected at the southernmost station (Savannah) and at the two northernmost stations (Spring City and Sweetwater). For all the other sites, occasional problems arose, but they were not too serious and at least part of the data collected was always usable for processing and interpretation.

DATA PROCESSING

The cassettes recorded in the field were transcribed onto computer tapes for further processing. This processing included demultiplexing of the data, and plot of magnetograms for selection of the events to be analyzed. Fourier analysis of sections of 2048 samples were performed and complex vector transfer functions and impedance tensors were determined for each section. The transfer functions and impedance tensors for the different records were then stacked following the analysis of Bailey _et al_. (1974).

The transfer function was determined following the method of Everett and Hyndman (1967). It consists in determining, for each frequency, between the X, Y, and Z component of the magnetic field a relationship of the form

$$Z = AX + BY + \delta$$

The components of the transfer function A, B are obtained by minimizing the power of the residual δ. The calculations yield:

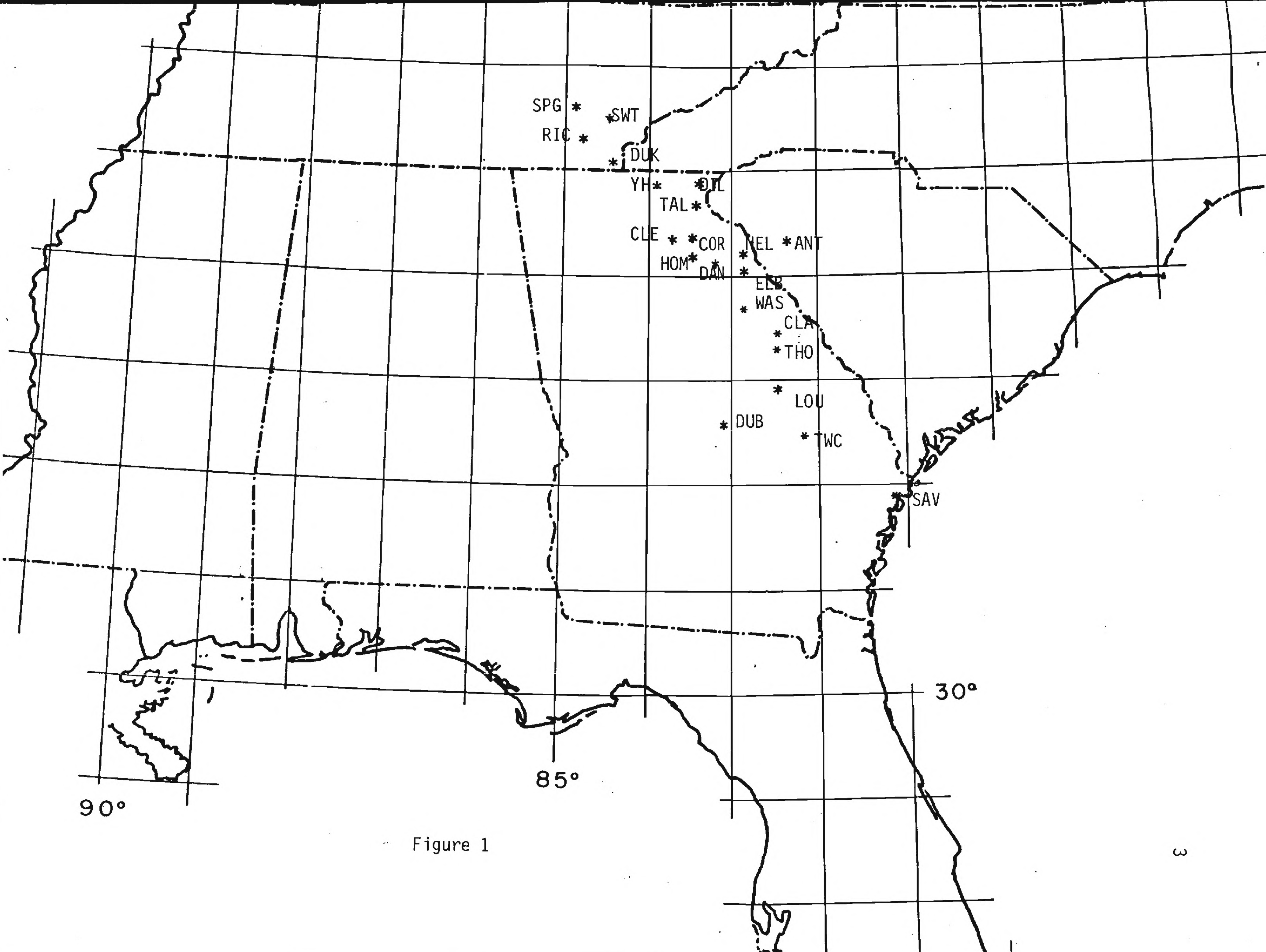

SPG
SWT
RIC
DUK
YH
DIL
TAL
CLE
COR
NEL
ANT
HOM
DAN
ELB
WAS
CLA
THO
LOU
DUB
TWC
SAV
30°
85°
90°

Figure 1

$$A = \frac{\langle Z,X^*\rangle \langle Y,Y^*\rangle - \langle Z,Y^*\rangle \langle Y,X^*\rangle}{\langle X,X^*\rangle \langle Y,Y^*\rangle - \langle Y,X^*\rangle \langle Y,X^*\rangle^*}$$

$$B = \frac{\langle Z,Y^*\rangle \langle X,X^*\rangle - \langle Z,X^*\rangle \langle Y,X^*\rangle^*}{\langle X,X^*\rangle \langle Y,Y^*\rangle - \langle Y,X^*\rangle \langle Y,X^*\rangle^*}$$

where the brackets indicate cross power spectra and the * stands for complex conjugate.

In a 2-D structure, the induction arrows will be perpendicular to the strike of the structure. The direction perpendicular to the strike is also given by the angle BZH

$$BZH = 0.5 \tan^{-1} \frac{2 \, \mathrm{Re} \langle A;B^*\rangle}{|A|^2 + |B|^2}$$

The ellipticity indicator BO is determined for each frequency by the relationship

$$BO = -\frac{A \sin(BZH) + B \cos(BZH)}{A \cos(BZH) + B \sin(BZH)}$$

It is the ratio of the difference of the components of the transfer function across strike to the sum of the components along strike. For a 2-D structure the ellipticity will be 0 (Word et al., 1971). The tipper (i.e. the magnitude of the complex transfer function) and the tipper angle (i.e., the direction in which the horizontal magnetic field has the highest coherency with the vertical component) were also computed. The tipper t and tipper angle φ are computed as

$$t^2 = M_r^2 + M_I^2$$

$$M_r^2 = A_r^2 + B_r^2$$

$$M_I^2 = A_I^2 + B_I^2$$

and

$$\varphi = \frac{(A_r^2 + B_r^2) \tan^{-1}(B_r/A_r) + (A^2 + B^2) \tan^{-1}(B/A)}{t^2}$$

where M_r and M_I are the magnitude of the real and imaginary induction vectors. The magnetotelluric interpretation consisted in determining the magnitude and phase of the impedance tensor in a principal coordinate system as well as the skewness (which is an indicator of the two-dimensionality of the structure studied).

For horizontally varying conductivity structures the electric field $\overline{E}$ and magnetic field $\overline{H}$ are related by a tensor relationship.

$$\bar{E} = \bar{\bar{Z}} \cdot \bar{H}$$

where $\bar{\bar{Z}}$ is the impedance tensor (e.g., Vozoff, 1972; Hermance, 1973).

Provided that the data contain electromagnetic field variations with different polarizations, the tensor components can be determined by expressions of the type (Vozoff, 1972).

$$Z_{xx} = \frac{\langle E_x,H_x{*}\rangle \langle H_y,H_y{*}\rangle - \langle E_x,H_y{*}\rangle \langle H_y,H_x{*}\rangle}{\langle H_x,H_x{*}\rangle \langle H_y,H_y{*}\rangle - \langle H_x,H_y{*}\rangle \langle H_y,H_x{*}\rangle}$$

By rotating the coordinate system one can determine the principal directions in which Z_{yx} and Z_{xy} are minimized and maximized and in which Z_{xx} and Z_{yy} vanish if the structure is two-dimensional.

The apparent resistivity ρ_{xy} is related to the impedance tensor by:

$$\rho_{xy} = \frac{1}{j\mu_o w} (Z_{xy})^2$$

The skewness

$$\frac{Z_{xx} + Z_{yy}}{Z_{xy} - Z_{yx}}$$

is an indicator of the two-dimensionality of the structure studied; if the skew vanishes the structure is two-dimensional (Word et al., 1971).

For the GDS interpretation, only the data recorded at the rate of 1 SPM were used. Data recorded at 32 SPM often show erratic variations of the transfer functions and were used only for the magnetotelluric.

PRESENTATION OF THE RESULTS - DISCUSSION OF THE QUALITY OF THE DATA

The main results of the GDS are summarized on 3 maps showing the real and imaginary transfer functions for periods of 64 min, 14 min and 6 min (Figures 2a, 2b, 2c).

The summary of all the results of the data processing and interpretation for all the sites are printed and plotted in Appendix 2. For each frequency where data were analyzed, the real and imaginary transfer functions (magnitude and angle) are printed, with the tipper and tipper angle, BZE, BZM and BO. The number of events analyzed (SUM) and retained after test for coherency (SUMI) are also printed. The plots display how the functions determined vary with period at each station.

The summary of the results of the magnetotelluric processing is printed and plotted in Appendix 3. For each period where the data satisfied the coherency tests, the principal values of the apparent resistivity (magnitude and phase), the principal directions and the skewness are printed. The plots show the tensor elements vs. period, with estimated errors on the computed tensor elements.

The 1 SPM magnetic variations data appear fairly reliable for GDS studies. The cutoff coherency was varied between 0.8 and 0.95. Although more events were rejected with the higher coherency, the trends did not change significantly. In the summary, a low cutoff was used for event selection in order to include a larger number of events.

No erratic behavior of the transfer functions can be observed on either the spatial or frequency variations.

The trends in the spatial variation of the induction arrows are evident. Only the results from TAL appear erratic at short periods. The results from the station DUB, although not erratic, do not fit too well with the general trend of spatial variations of induction arrows.

The magnetotelluric data at 32 SPM does not appear as good as the GDS data and the results presented for most stations do not appear adequate for a quantitative interpretation. In general, very little coherent data was obtained. The cutoff coherency had to be reduced to 0.8 and, in some instances, to 0.65 to avoid rejecting all the data. When they were estimated, the errors were large, particularly for the minimum value of the apparent resistivity tensor. The skewness is often close to 1. The change in the apparent resistivity with period is often smaller than the estimated error, and the apparent trends are therefore not very reliable.

The major reason for this poor quality of the data is that the instruments were designed for GDS measurements and that MT data collection would be accessory. Likewise, the sites were not selected primarily to make magnetotelluric measurements but mostly for the GDS. The primary requirement was to find a remote area where the instruments could be left unattended for several weeks. These areas were not appropriate for laying down long electric lines, and in most situations the telluric lines were too short to obtain reliable noise-free telluric data.

The magnetotelluric data from a few stations (TWC, ANT, CLA, COR and possibly DIL) appears to be definitely more coherent, and it is hoped that additional processing will permit interpretation of these data.

CONCLUSIONS - RECOMMENDATIONS

The preliminary interpretation of the data collected during the first field campaign (Musser, 1982; Mareschal et al., 1983) was not significantly altered by the additional data.

The main points that were made in this preliminary report are:

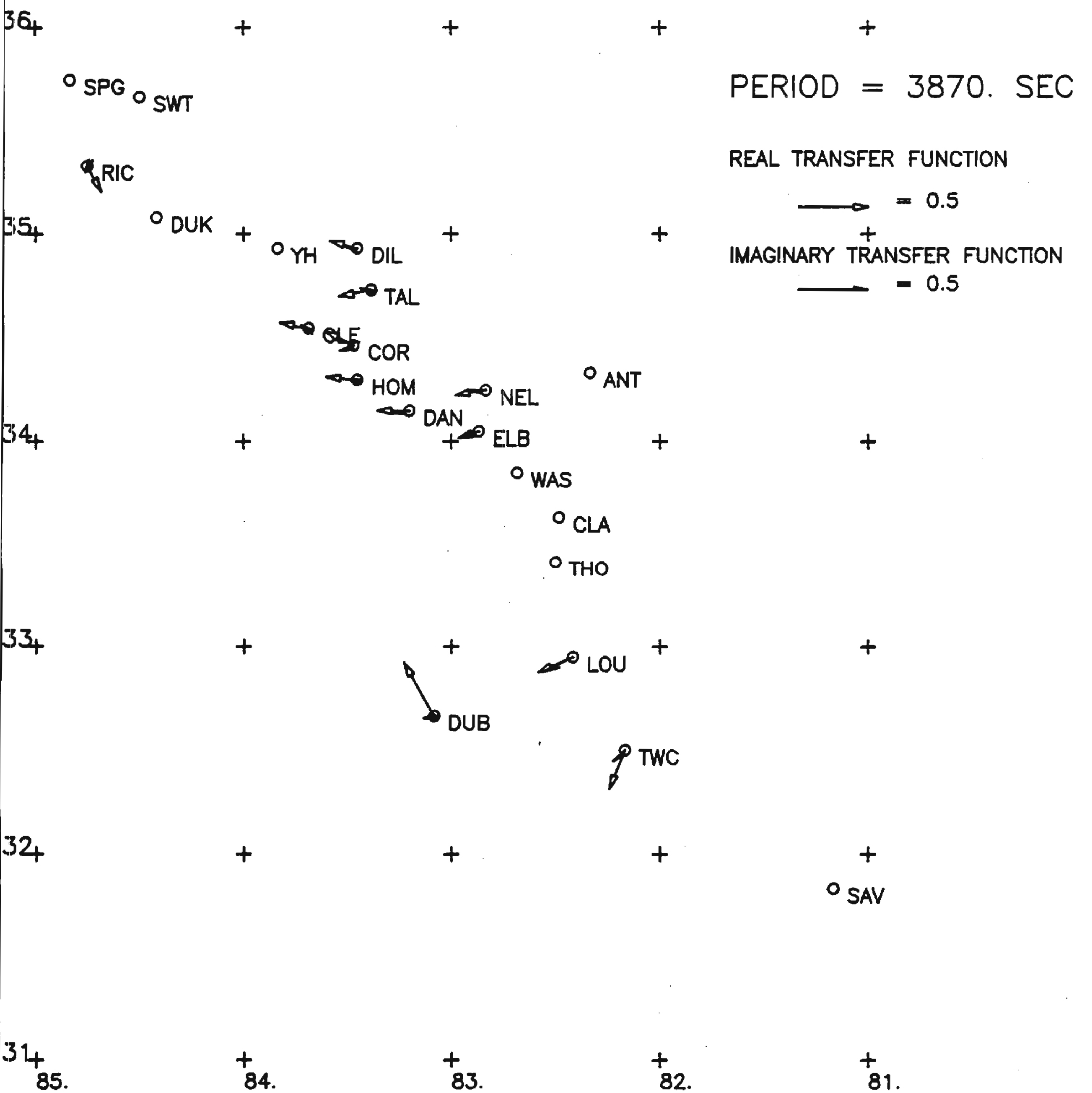
1) There is no observable coast effect. This is surprising in a tectonically inactive area (e.g., Parkinson and Jones, 1979). But other workers (Edwards and Greenhouse, 1975; Bailey et al., 1974) have also noticed the absence of a coast effect along the eastern edge of the North American continent.

2) On the basis of the maps shown on Figure 2, there are two possible interpretations of the GDS. The induction arrows could point toward a conductor located to the west of the profile. Another interpretation is that the conductivity structure indicated by the GDS is parallel to the geologic trends and oriented SW to NE. The departure from the two-dimensionality would be caused by channeling effects.

3) If the conductivity structure is two-dimensional and parallel to the geologic trends, then the induction arrows indicate the presence of a deep conductor northwest of the Piedmont.

The data from the stations located in Tennessee help in determining the extent of the proposed conductor. There is a reversal of the direction of the induction arrow at the northernmost station in Riceville, Tennessee. This indicates that this station is northwest of the suggested conductor which is therefore located beneath the Blue Ridge. This hypothesis, however, needs to be confirmed by additional data from further north.

The geomagnetic soundings conducted in the southern Appalachians have revealed an interesting and intriguing anomaly. This confirms the interpretation of previous surveys in the central and northern Appalachians. The confirmation and delineation of the anomaly will require additional field work. It is essential to collect data on a second transverse west of the present profile. This should determine whether the anomaly observed is caused by a conductor located to the west of the present profile or if the anomaly is due to a conductivity structure parallel to the Appalachians. It is also critical to obtain data from northern Tennessee; this data would confirm (or infirm) the proposed northern extent of the conductivity anomaly.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= 0.5
IMAGINARY TRANSFER FUNCTION
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36
35
34
33
32
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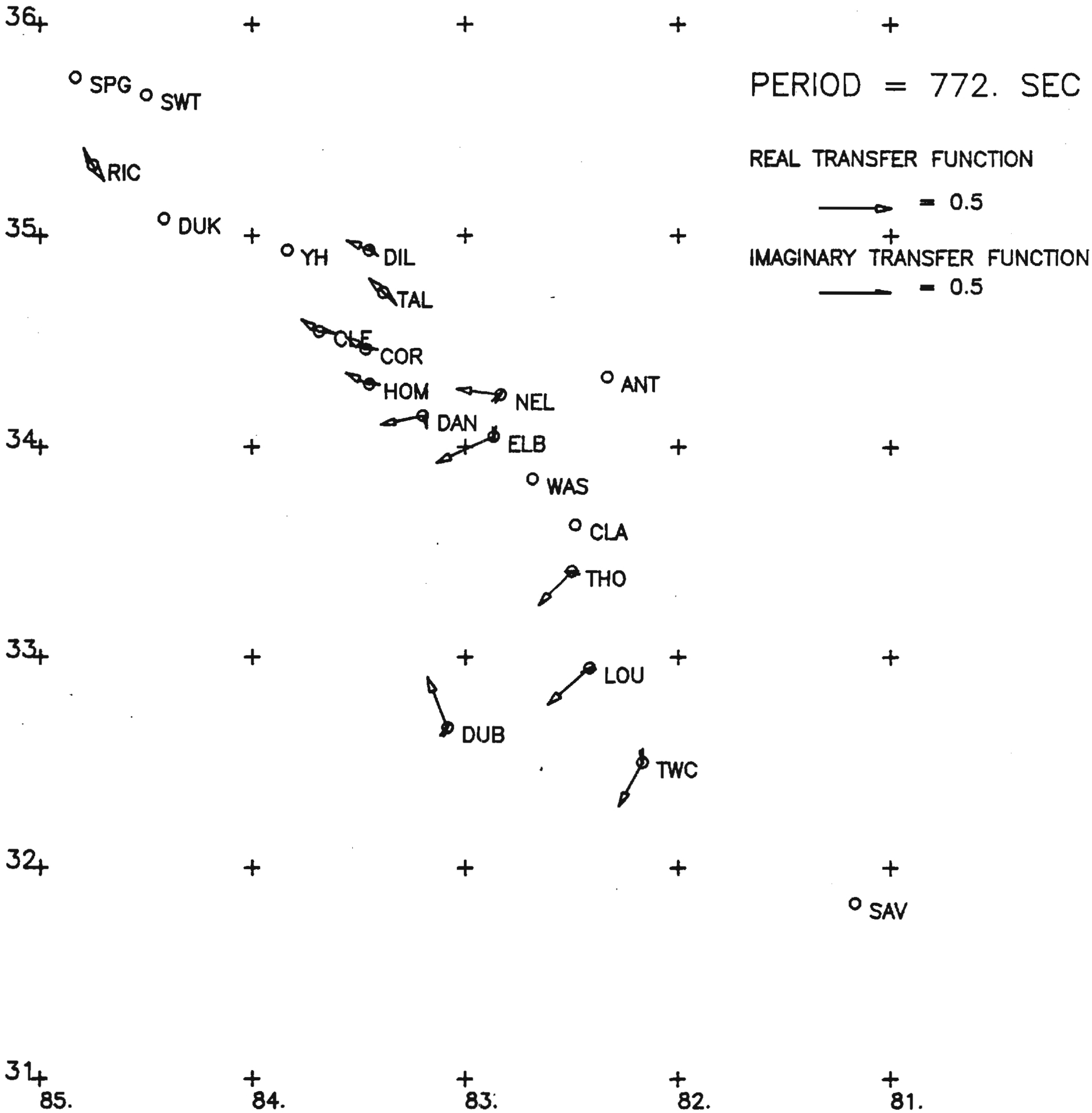
85.
84.
83.
82.
81.
SPG
SWT
RIC
DUK
YH
DIL
TAL
COR
HOM
NEL
ANT
DAN
ELB
WAS
CLA
THO
LOU
DUB
TWC
SAV

Figure 2a.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IMAGINARY TRANSFER FUNCTION
= 0.5
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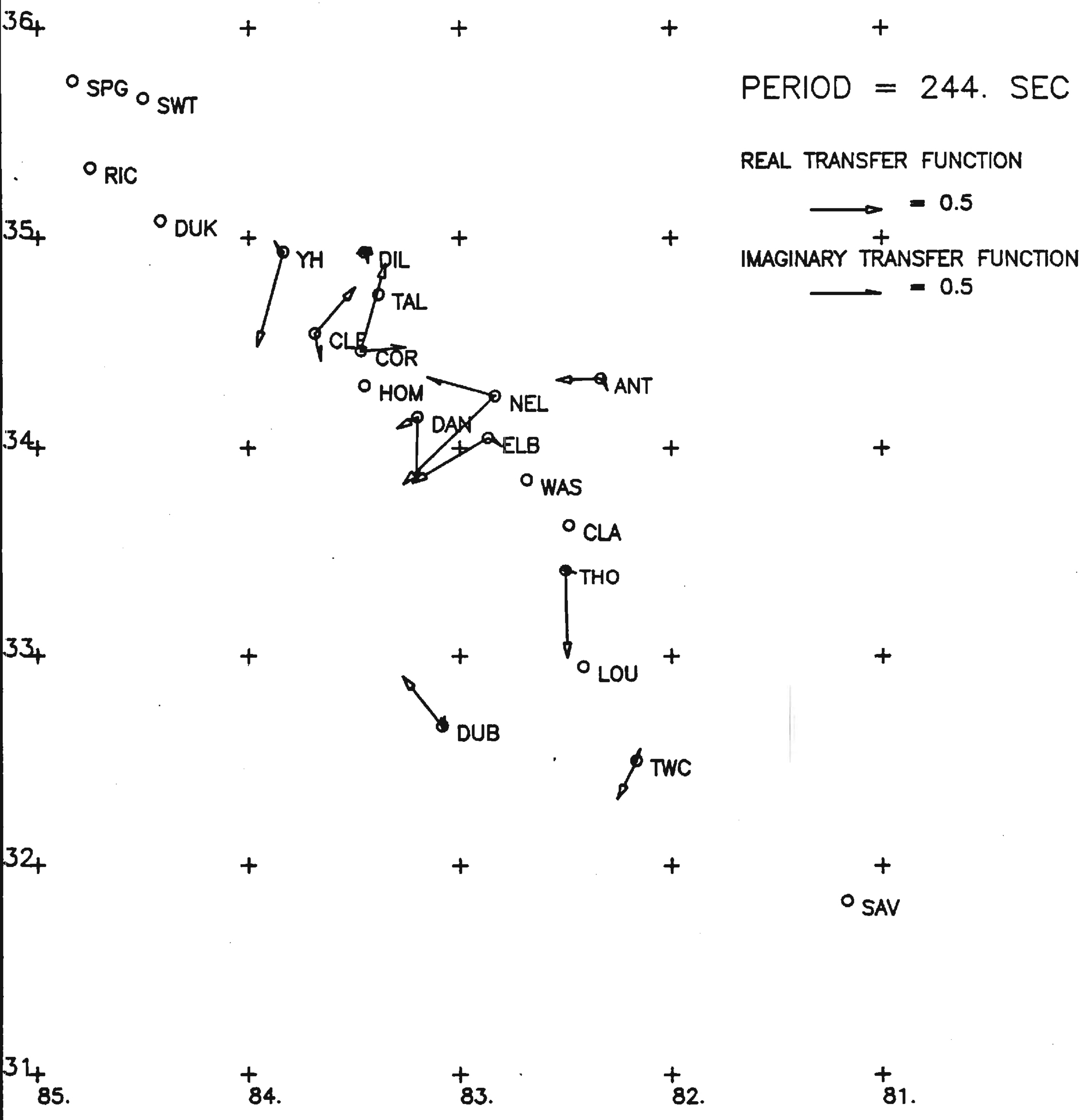
Figure 2b.



36
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82.
81.
PERIOD = 244. SEC
REAL TRANSFER FUNCTION
= 0.5
IMAGINARY TRANSFER FUNCTION
= 0.5
SPG
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TAL
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COR
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NEL
DAN
ELB
WAS
CLA
THO
LOU
DUB
TWC
SAV

Figure 2c.

Appendix 1. Information on Location and Time of Operation of the Stations.

Station No. -30   Savannah (GA)
(31.50N, 81.10W)

NS = 750 ft, EW = 750 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	03/25/82	17:45
2	5	32	60	5	04/16/82	16:50

Station No. -20   Twin City (GA)
(32.30N, 82.10W)

NS = 930 ft, EW = 930 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	02/07/82	12:35
2	5	1	20	1	02/14/82	12:32
3	5	32	200	10	02/27/82	17:54

Station No. -10   Dublin (GA)
(32.40N, 83.05W)

NS = 750 ft, EW = 750 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	03/01/82	18:21
2	5	1	20	1	03/13/82	16:08
3	5	32	200	10	03/22/82	17:08

Station No. 10 Louisville (GA)
(32.57N, 82.25W)

NS = 750 ft, EW = 725 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	01/27/81	16:45
2	5	32	200	10	02/06/81	11:56
3	5	1	20	1	02/08/81	13:00
4	5	32	200	10	02/21/81	15:09

Observation: Tellurics from Tapes 1 and 2 were not properly connected.

Station No. 20 Thomson (GA)
(33.25N, 82.30W)

NS = 750 ft, EW = 500 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	12/13/80	10:45
2	5	32	200	10	12/30/80	17:21
3	5	1	20	1	12/31/80	14:34

Station No. 30 Clarks Hill (GA)
(33.38N, 82.29W)

NS = 1000 ft, EW = 600 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	12/13/80	14:20
2	5	1	20	1	12/17/80	17:04
3	5	32	200	10	12/30/80	15:50
4	5	1	20	1	12/31/80	13:20

Station No. 40 Washington (GA)

(33.51N, 82.41W)

NS = 800 ft, EW = 800 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	60	1	11/25/80	18:46
2	5	1	20	1	11/29/80	13:50
3	5	32	200	10	12/06/80	17:10
4	5	1	20	1	12/07/80	10:30
5	5	1	20	1	12/13/80	15:46

Station No. 45 Antreville (SC)
(34.20N, 82.20W)

NS = 1100 ft, EW = 1100 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	12/21/81	14:37
2	5	32	200	10	12/28/81	14:53
3	5	1	20	1	12/29/81	12:15

Station No. 50 South Elberton (GA)
(34.03N, 82.52W)

NS = 750 ft, EW = 600 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	11/15/80	18:20
2	5	1	20	1	11/23/80	12:50
3	5	1	20	1	11/29/80	11:59
4	5	32	200	10	12/06/80	15:50
5	5	1	20	1	12/07/80	8:56

Station No. 55 North Elberton (GA)
(34.15N, 82.50W)

NS = 1000 ft, EW = 1000 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	12/03/81	15:25
2	5	1	20	1	12/21/81	16:15
3	5	32	200	10	12/28/81	11:35
4	5	1	20	1	12/29/81	11:07
5	5	1	20	1	01/23/81	11:30

Station No. 60 Danielsville (GA)
(34.09N, 83.12W)

NS = 625 ft, EW = 575 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	32	200	10	11/04/80	16:22
2	5	1	20	1	11/06/80	13:25
3	5	1	20	1	11/15/80	14:10
4	5	1	20	1	11/23/80	11:15
5	5	1	20	1	11/29/80	10:55

Station No. 70 Homer (GA)
(34.18N, 83.27W)

NS = 660 ft, EW = 978 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	32	60	2.5	10/09/80	21:18
2	5	1	20	1	10/10/80	14:00
3	5	1	20	1	10/17/80	16:30
4	5	1	20	1	10/23/80	13:30
5	5	1	20	1	11/09/80	11:50

Station No. 80 Cornelia (GA)
(34.28N, 83.28W)

NS = 810 ft, EW = 660 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	32	200	10	10/08/80	20:57
2	5	1	20	1	10/09/80	13:52
3	5	1	20	1	10/17/80	14:10

Station No. 90 Cleveland (GA)
(34.33N, 83.41W)

NS = 540 ft, EW = 600 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	32	200	10	10/07/80	18:00
2	5	1	60	1	10/08/80	12:24
3	5	1	60	1	10/17/80	12:08
4	5	1	60	1	10/25/80	11:40
5	5	32	200	5	11/01/80	14:40

Station No. 100 Young Harris (GA)
(34.56N, 83.50W)

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	3	1		1	03/06/81	17:45
2	3	32		10	03/21/81	15:38
3	3	1		1	03/22/81	10:37

Station No. 110 Talullah Falls (GA)
(34.44N, 83.23W)

NS = 700 ft, EW = 600 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	32	60	5	10/25/80	18:20
2	5	1	20	1	10/26/80	9:05
3	5	1	20	1	11/01/80	16:05
4	5	1	20	1	11/09/80	12:15

Station No. 120 Dillard (GA)
(34.56N, 83.27W)

NS = 750 ft, EW = 750 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	02/28/81	17:21
2	5	32	200	10	03/21/81	13:44
3	5	1	20	1	03/22/81	12:15

Station No. 130 Ducktown (TN)
(35.05N, 84.25W)

NS = 750 ft, EW = 750 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	03/07/82	14:59
2	5	1	20	1	03/16/82	11:53
3	5	1	20	1	03/29/82	15:50
4	5	32	200	10	04/02/82	17:46

Station No. 140 Riceville (TN)
(35.20N, 84.45W)

NS = 1200 ft, EW = 1200 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	04/10/82	17:12
2	5	1	20	1	04/18/82	14:12
3	5	1	20	1	04/28/82	20:12
4	5	32	200	10	05/08/82	14:25

Station No. 150 Sweetwater (TN)
(35.40N, 84.30W)

NS = 1230 ft, EW = 1190 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	04/25/82	15:26
2	5	1	20	1	05/08/82	17:42
3	5	1	20	1	05/22/82	14:58
4	5	32	200	10	05/29/82	16:21

Station No. 160 Spring City (TN)
(35.45N, 84.50W)

NS = 1180 ft, EW = 1200 ft

Tape	Ch	SPM	E gain	H gain	Day Start	Time
1	5	1	20	1	05/30/82	17:43
2	5	1	20	1	06/06/82	15:52
3	5	32	200	10	06/12/82	17:13

SUMMARY OF THE INDUCTION VECTORS FOR ALL STATIONS

THE TRANSFER FUNCTIONS WERE COMPUTED FOR SELECTED RECORDS FROM ALL THE STATIONS WHERE THE DATA WERE COLLECTED. ONLY THE TRANSFER FUNCTIONS THAT SATISFIED COHERENCY TESTS WERE RETAINED. THE TRANSFER FUNCTIONS WERE COMPUTED WITH SEVERAL DIFFERENT CUTOFF COHERENCY. IT WAS OBSERVED THAT, AS LONG AS THE COHERENCY IS GREATER THAN 0.8, THE INDUCTION VECTORS ARE NOT VERY SENSITIVE TO THE CUTOFF COHERENCY ALTHOUGH MORE EVENTS ARE RETAINED FOR THE LOWER CUTOFF. THE RESULTS PRESENTED BELOW ARE ALL FOR A 0.8 CUTOFF AND, IN MOST CASES ARE AVERAGES OF SEVERAL EVENTS.

THE CONVENTION (IN THE NORTHERN HEMISPHERE) IS TO CHANGE THE SIGN OF THE INDUCTION ARROWS SO THAT THEY WILL POINT TOWARD THE CURRENT CONCENTRATIONS. THIS CHANGE OF SIGN HAS NOT BEEN PERFORMED.

SUMMARY INFORMATION STATION -30 SAVANNAH

H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BD	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-27.8	22.1	21.7	62.7	22.2	.1	7.0	5.0	3.042E-01	3.616E-02
10	4.87E+03	-10.3	28.6	24.9	60.6	29.4	.2	7.0	3.0	2.468E-01	9.334E-02
11	3.87E+03	60.2	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
12	3.07E+03	34.5	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
13	2.44E+03	21.2	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
14	1.94E+03	32.0	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
15	1.54E+03	53.2	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
16	1.22E+03	22.0	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
17	9.71E+02	19.1	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
18	7.72E+02	41.4	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
19	6.13E+02	-56.8	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
20	4.87E+02	-38.1	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
21	3.87E+02	54.7	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.468E-01	9.334E-02
22	3.07E+02	-79.7	999.0	999.0	999.0	999.0	999.0	6.0	0.0	2.468E-01	9.334E-02
23	2.44E+02	36.0	999.0	999.0	999.0	999.0	999.0	6.0	0.0	2.468E-01	9.334E-02
24	1.94E+02	-88.9	999.0	999.0	999.0	999.0	999.0	5.0	0.0	2.468E-01	9.334E-02
25	1.54E+02	-28.3	999.0	999.0	999.0	999.0	999.0	4.0	0.0	2.468E-01	9.334E-02
26	1.22E+02	-79.6	999.0	999.0	999.0	999.0	999.0	5.0	0.0	2.468E-01	9.334E-02

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	7.000E+00	5.000E+00	9	0.	0.	0.
10	3.687E+00	7.000E+00	3.000E+00	11	3.587E+00	7.000E+00	0.	12	3.487E+00	7.000E+00	0.
13	3.387E+00	7.000E+00	0.	14	3.287E+00	7.000E+00	0.	15	3.187E+00	7.000E+00	0.
16	3.087E+00	7.000E+00	0.	17	2.987E+00	7.000E+00	0.	18	2.887E+00	7.000E+00	0.
19	2.787E+00	7.000E+00	0.	20	2.687E+00	7.000E+00	0.	21	2.587E+00	7.000E+00	0.
22	2.487E+00	6.000E+00	0.	23	2.387E+00	6.000E+00	0.	24	2.287E+00	5.000E+00	0.
25	2.187E+00	4.000E+00	0.	26	2.087E+00	5.000E+00	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION -20 TWIN CITY
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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-39.4	15.7	15.1	39.0	15.8	.1	11.0	2.0	6.053E-01	1.101E-01
10	4.87E+03	-12.7	33.7	23.1	69.0	35.8	.4	11.0	2.0	3.577E-01	2.216E-01
11	3.87E+03	86.4	24.9	21.7	47.2	25.2	.2	5.0	3.0	2.960E-01	1.165E-01
12	3.07E+03	-36.9	22.0	20.7	79.0	23.6	.2	9.0	1.0	3.346E-01	7.682E-02
13	2.44E+03	-24.1	999.0	999.0	999.0	999.0	999.0	11.0	0.0	3.346E-01	7.682E-02
14	1.94E+03	-61.4	29.8	28.3	50.4	29.9	.1	4.0	4.0	3.473E-01	9.738E-02
15	1.54E+03	-40.4	31.6	30.8	47.7	31.7	.1	6.0	5.0	4.078E-01	9.596E-02
16	1.22E+03	-43.9	25.6	24.5	57.1	25.8	.1	5.0	3.0	3.699E-01	7.465E-02
17	9.71E+02	-52.4	25.6	25.6	26.6	25.6	.0	5.0	4.0	3.457E-01	5.942E-02
18	7.72E+02	-51.8	28.5	28.5	-14.1	28.5	.0	5.0	4.0	3.524E-01	6.262E-03
19	6.13E+02	-44.4	27.3	27.5	-168.0	25.2	.0	6.0	4.0	3.455E-01	3.759E-02
20	4.87E+02	-43.9	23.5	23.7	-161.0	18.3	.0	6.0	3.0	3.352E-01	5.822E-02
21	3.87E+02	-31.5	24.5	24.8	-160.4	15.7	.0	5.0	4.0	3.250E-01	7.386E-02
22	3.07E+02	-34.0	25.4	25.7	-158.1	15.5	.0	6.0	4.0	3.106E-01	7.492E-02
23	2.44E+02	-36.6	25.7	26.3	-161.3	10.4	.0	6.0	3.0	2.972E-01	9.064E-02
24	1.94E+02	-42.9	24.3	24.3	-156.1	7.7	.0	4.0	1.0	2.725E-01	8.673E-02
25	1.54E+02	-44.6	27.4	27.7	-155.3	9.8	.0	4.0	1.0	2.605E-01	8.577E-02
26	1.22E+02	-37.5	999.0	999.0	999.0	999.0	999.0	4.0	0.0	2.605E-01	8.577E-02

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	1.100E+01	2.000E+00	9	0.	0.	0.
10	3.687E+00	1.100E+01	2.000E+00	11	3.587E+00	5.000E+00	3.000E+00	12	3.487E+00	9.000E+00	1.000E+00
13	3.387E+00	1.100E+01	0.	14	3.287E+00	4.000E+00	4.000E+00	15	3.187E+00	6.000E+00	5.000E+00
16	3.087E+00	5.000E+00	3.000E+00	17	2.987E+00	5.000E+00	4.000E+00	18	2.887E+00	5.000E+00	4.000E+00
19	2.787E+00	6.000E+00	4.000E+00	20	2.687E+00	6.000E+00	3.000E+00	21	2.587E+00	5.000E+00	4.000E+00
22	2.487E+00	6.000E+00	4.000E+00	23	2.387E+00	6.000E+00	3.000E+00	24	2.287E+00	4.000E+00	1.000E+00
25	2.187E+00	4.000E+00	1.000E+00	26	2.087E+00	4.000E+00	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION -10 DUBLIN
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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BD	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	47.9	45.6	45.2	70.5	45.7	.1	11.0	4.0	9.990E-01	1.420E-01
10	4.87E+03	72.7	71.7	69.6	79.8	71.7	.1	11.0	2.0	5.869E-01	3.015E-01
11	3.87E+03	83.7	-29.6	150.9	77.7	148.7	.2	11.0	2.0	4.353E-01	7.654E-02
12	3.07E+03	71.8	-38.2	142.8	-87.6	135.3	.1	11.0	2.0	4.949E-01	9.098E-02
13	2.44E+03	69.6	-47.3	138.4	81.7	128.9	.3	11.0	4.0	3.670E-01	1.644E-01
14	1.94E+03	40.4	-38.6	143.7	72.2	136.0	.3	11.0	4.0	3.378E-01	1.177E-01
15	1.54E+03	66.7	-42.5	140.0	72.2	133.1	.3	11.0	4.0	3.275E-01	1.106E-01
16	1.22E+03	27.0	-46.8	134.0	68.3	131.7	.2	11.0	4.0	3.512E-01	6.743E-02
17	9.71E+02	28.3	-42.3	140.0	89.5	136.2	.2	11.0	4.0	3.248E-01	9.239E-02
18	7.72E+02	17.9	-21.2	158.7	-156.3	157.1	.0	11.0	3.0	3.845E-01	2.696E-02
19	6.13E+02	11.1	-8.6	171.2	-130.2	166.9	.1	10.0	3.0	3.513E-01	3.066E-02
20	4.87E+02	8.3	-19.9	160.3	134.3	160.1	.0	9.0	3.0	3.524E-01	3.220E-02
21	3.87E+02	3.6	-44.7	135.9	113.3	135.3	.1	10.0	4.0	4.968E-01	8.136E-02
22	3.07E+02	7.3	-45.8	134.3	-85.1	133.6	.0	9.0	4.0	4.835E-01	2.678E-02
23	2.44E+02	-2.1	-38.2	141.7	-8.7	140.8	.0	9.0	4.0	4.523E-01	3.532E-02
24	1.94E+02	-.2	-44.0	137.0	114.5	135.9	.1	8.0	4.0	4.840E-01	1.058E-01
25	1.54E+02	-1.2	-47.4	147.5	97.6	130.3	.4	8.0	4.0	3.370E-01	2.444E-01
26	1.22E+02	-1.8	-.3	-178.2	-30.3	-166.3	.1	10.0	3.0	3.201E-01	9.458E-02

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1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	1.100E+01	4.000E+00	9	0.	0.	0.
10	3.687E+00	1.100E+01	2.000E+00	11	3.587E+00	1.100E+01	2.000E+00	12	3.487E+00	1.100E+01	2.000E+00
13	3.387E+00	1.100E+01	4.000E+00	14	3.287E+00	1.100E+01	4.000E+00	15	3.187E+00	1.100E+01	4.000E+00
16	3.087E+00	1.100E+01	4.000E+00	17	2.987E+00	1.100E+01	4.000E+00	18	2.887E+00	1.100E+01	3.000E+00
19	2.787E+00	1.000E+01	3.000E+00	20	2.687E+00	9.000E+00	3.000E+00	21	2.587E+00	1.000E+01	4.000E+00
22	2.487E+00	9.000E+00	4.000E+00	23	2.387E+00	9.000E+00	4.000E+00	24	2.287E+00	8.000E+00	4.000E+00
25	2.187E+00	8.000E+00	4.000E+00	26	2.087E+00	1.000E+01	3.000E+00	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 010 LOUISVILLE
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H-HZ COHERENCY = .60 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-11.0	-4.1	-4.0	106.8	-3.7	.1	5.0	2.0	5.701E-01	3.317E-02
10	4.87E+03	-9.7	72.8	65.5	79.0	72.8	.1	5.0	1.0	3.512E-01	3.801E-01
11	3.87E+03	-27.7	65.0	66.2	63.3	65.0	.0	3.0	1.0	2.669E-01	2.204E-01
12	3.07E+03	-17.0	68.9	66.5	74.4	68.9	.1	4.0	1.0	2.933E-01	1.948E-01
13	2.44E+03	-12.7	34.6	29.7	77.2	36.7	.3	5.0	2.0	3.314E-01	1.371E-01
14	1.94E+03	-31.9	56.9	52.4	81.0	57.3	.2	4.0	2.0	3.260E-01	1.484E-01
15	1.54E+03	-19.9	56.1	52.3	50.8	57.1	.2	4.0	2.0	3.340E-01	1.254E-01
16	1.22E+03	-19.1	51.8	49.9	90.4	52.4	.2	4.0	2.0	3.367E-01	8.718E-02
17	9.71E+02	-21.4	51.4	49.5	71.1	51.6	.1	4.0	2.0	3.575E-01	1.153E-01
18	7.72E+02	-17.7	46.6	48.3	62.5	48.7	.0	4.0	1.0	3.936E-01	6.730E-02
19	6.13E+02	-18.2	51.8	51.7	134.8	52.0	.1	3.0	1.0	4.070E-01	2.095E-02
20	4.87E+02	-21.0	999.0	999.0	999.0	999.0	999.0	2.0	0.0	4.070E-01	2.095E-02

2 8 20 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	5.000E+00	2.000E+00	9	0.	0.	0.
10	3.687E+00	5.000E+00	1.000E+00	11	3.587E+00	3.000E+00	1.000E+00	12	3.487E+00	4.000E+00	1.000E+00
13	3.387E+00	5.000E+00	2.000E+00	14	3.287E+00	4.000E+00	2.000E+00	15	3.187E+00	4.000E+00	2.000E+00
16	3.087E+00	4.000E+00	2.000E+00	17	2.987E+00	4.000E+00	2.000E+00	18	2.887E+00	4.000E+00	1.000E+00
19	2.787E+00	3.000E+00	1.000E+00	20	2.687E+00	2.000E+00	0.	21	0.	0.	0.
22	0.	0.	0.	23	0.	0.	0.	24	0.	0.	0.
25	0.	0.	0.	26	0.	0.	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 020 THOMSON
****

H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	67.0	-3.5	-3.7	2.1	-3.5	.0	6.0	4.0	5.052E-01	9.466E-02
10	4.87E+03	79.6	999.0	999.0	999.0	999.0	999.0	6.0	0.0	5.052E-01	9.466E-02
11	3.87E+03	-88.7	999.0	999.0	999.0	999.0	999.0	6.0	0.0	5.052E-01	9.466E-02
12	3.07E+03	-79.9	999.0	999.0	999.0	999.0	999.0	6.0	0.0	5.052E-01	9.466E-02
13	2.44E+03	-82.9	999.0	999.0	999.0	999.0	999.0	6.0	0.0	5.052E-01	9.466E-02
14	1.94E+03	-53.0	53.9	52.6	118.2	56.1	.2	6.0	1.0	3.260E-01	7.704E-02
15	1.54E+03	-63.7	49.4	49.4	42.4	49.4	.0	6.0	1.0	3.446E-01	1.232E-02
16	1.22E+03	-83.6	58.3	57.5	131.9	61.2	.2	6.0	1.0	3.600E-01	8.321E-02
17	9.71E+02	-62.1	47.6	47.7	36.8	47.6	.0	6.0	1.0	3.716E-01	2.438E-02
18	7.72E+02	-18.1	42.9	42.4	84.4	43.1	.1	6.0	1.0	3.467E-01	4.493E-02
19	6.13E+02	-25.7	72.1	68.7	108.9	73.2	.2	4.0	1.0	4.104E-01	1.445E-01
20	4.87E+02	-19.6	20.4	22.8	-48.7	14.8	.3	5.0	2.0	3.992E-01	1.416E-01
21	3.87E+02	-31.7	13.1	13.2	119.0	14.0	.1	3.0	2.0	4.245E-01	3.833E-02
22	3.07E+02	20.6	-9.5	-1.6	-46.7	-11.5	.3	3.0	2.0	4.675E-01	2.482E-01
23	2.44E+02	25.7	-1.6	-1.3	-73.0	-2.5	.1	3.0	1.0	6.266E-01	8.068E-02
24	1.94E+02	22.0	63.7	60.8	-63.9	49.2	.3	3.0	2.0	6.410E-01	2.057E-01
25	1.54E+02	6.0	60.8	61.3	30.8	60.7	.1	3.0	2.0	5.427E-01	7.751E-02
26	1.22E+02	-58.2	74.9	69.0	102.2	75.6	.2	3.0	2.0	4.557E-01	2.273E-01

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	6.000E+00	4.000E+00	9	0.	0.	0.
10	3.687E+00	6.000E+00	0.	11	3.587E+00	6.000E+00	0.	12	3.487E+00	6.000E+00	0.
13	3.387E+00	6.000E+00	0.	14	3.287E+00	6.000E+00	1.000E+00	15	3.187E+00	6.000E+00	1.000E+00
16	3.087E+00	6.000E+00	1.000E+00	17	2.987E+00	6.000E+00	1.000E+00	18	2.887E+00	6.000E+00	1.000E+00
19	2.787E+00	4.000E+00	1.000E+00	20	2.687E+00	5.000E+00	2.000E+00	21	2.587E+00	3.000E+00	2.000E+00
22	2.487E+00	3.000E+00	2.000E+00	23	2.387E+00	3.000E+00	1.000E+00	24	2.287E+00	3.000E+00	2.000E+00
25	2.187E+00	3.000E+00	2.000E+00	26	2.087E+00	3.000E+00	2.000E+00	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 030 CLARK HILL
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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-.5	-7.8	-6.0	74.7	-6.1	.1	9.0	8.0	4.611E-01	6.975E-02
10	4.87E+03	-12.6	21.1	7.8	68.5	26.6	.5	9.0	6.0	2.860E-01	1.915E-01
11	3.87E+03	-8.1	999.0	999.0	999.0	999.0	999.0	9.0	0.0	2.860E-01	1.915E-01
12	3.07E+03	12.2	999.0	999.0	999.0	999.0	999.0	9.0	0.0	2.860E-01	1.915E-01
13	2.44E+03	15.2	32.3	21.8	53.2	32.8	.3	9.0	6.0	2.552E-01	1.876E-01
14	1.94E+03	16.6	74.7	74.1	78.6	74.7	.0	8.0	1.0	2.645E-01	1.068E-01
15	1.54E+03	17.6	999.0	999.0	999.0	999.0	999.0	9.0	0.0	2.645E-01	1.068E-01
16	1.22E+03	20.4	999.0	999.0	999.0	999.0	999.0	7.0	0.0	2.645E-01	1.068E-01
17	9.71E+02	18.3	999.0	999.0	999.0	999.0	999.0	9.0	0.0	2.645E-01	1.068E-01
18	7.72E+02	9.0	999.0	999.0	999.0	999.0	999.0	8.0	0.0	2.645E-01	1.068E-01
19	6.13E+02	999.0	999.0	999.0	999.0	999.0	999.0	3.0	0.0	2.645E-01	1.068E-01
20	4.87E+02	999.0	999.0	999.0	999.0	999.0	999.0	1.0	0.0	2.645E-01	1.068E-01

2 8 20 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	9.000E+00	8.000E+00	9	0.	0.	0.
10	3.687E+00	9.000E+00	6.000E+00	11	3.587E+00	9.000E+00	0.	12	3.487E+00	9.000E+00	0.
13	3.387E+00	9.000E+00	6.000E+00	14	3.287E+00	8.000E+00	1.000E+00	15	3.187E+00	9.000E+00	0.
16	3.087E+00	7.000E+00	0.	17	2.987E+00	9.000E+00	0.	18	2.887E+00	8.000E+00	0.
19	2.787E+00	3.000E+00	0.	20	2.687E+00	1.000E+00	0.	21	0.	0.	0.
22	0.	0.	0.	23	0.	0.	0.	24	0.	0.	0.
25	0.	0.	0.	26	0.	0.	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 040 WASHINGTON
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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BD	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	23.6	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
10	4.87E+03	2.5	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
11	3.87E+03	-13.3	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
12	3.07E+03	-2.7	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
13	2.44E+03	.5	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
14	1.94E+03	-9.2	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
15	1.54E+03	-11.8	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
16	1.22E+03	-3.8	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
17	9.71E+02	2.0	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
18	7.72E+02	.5	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
19	6.13E+02	-2.1	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
20	4.87E+02	14.5	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
21	3.87E+02	18.6	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
22	3.07E+02	16.2	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
23	2.44E+02	30.1	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
24	1.94E+02	31.6	999.0	999.0	999.0	999.0	999.0	2.0	0.0	0.	0.
25	1.54E+02	26.6	43.0	-137.1	70.1	-136.2	.0	2.0	1.0	1.347E+00	9.009E-02
26	1.22E+02	20.8	26.4	-155.6	79.4	-139.5	.2	2.0	1.0	1.499E+00	4.064E-01

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	2.000E+00	0.	9	0.	0.	0.
10	3.687E+00	2.000E+00	0.	11	3.587E+00	2.000E+00	0.	12	3.487E+00	2.000E+00	0.
13	3.387E+00	2.000E+00	0.	14	3.287E+00	2.000E+00	0.	15	3.187E+00	2.000E+00	0.
16	3.087E+00	2.000E+00	0.	17	2.987E+00	2.000E+00	0.	18	2.887E+00	2.000E+00	0.
19	2.787E+00	2.000E+00	0.	20	2.687E+00	2.000E+00	0.	21	2.587E+00	2.000E+00	0.
22	2.487E+00	2.000E+00	0.	23	2.387E+00	2.000E+00	0.	24	2.287E+00	2.000E+00	0.
25	2.187E+00	2.000E+00	1.000E+00	26	2.087E+00	2.000E+00	1.000E+00	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 045 ANTREVILLE
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H-HZ COHERENCY = .60 PHASOR COHERENCY = .60

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	999.0	-3.1	-4.3	44.6	-2.4	.2	0.0	1.0	4.214E-01	8.676E-02
16	1.22E+03	999.0	-67.0	94.4	-164.5	67.2	.3	0.0	1.0	3.997E-01	1.369E-01
20	4.87E+02	999.0	66.7	86.7	4.5	66.6	.0	0.0	1.0	3.394E-01	5.116E-03
22	3.07E+02	999.0	86.9	87.6	-110.4	77.4	.1	0.0	1.0	3.544E-01	8.344E-02
23	2.44E+02	999.0	78.0	76.1	-31.4	65.8	.3	0.0	1.0	3.148E-01	1.025E-01

2 8 23 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	0.	1.000E+00	9	0.	0.	0.
10	0.	0.	0.	11	0.	0.	0.	12	0.	0.	0.
13	0.	0.	0.	14	0.	0.	0.	15	0.	0.	0.
16	3.087E+00	0.	1.000E+00	17	0.	0.	0.	18	0.	0.	0.
19	0.	0.	0.	20	2.687E+00	0.	1.000E+00	21	0.	0.	0.
22	2.487E+00	0.	1.000E+00	23	2.387E+00	0.	1.000E+00	24	0.	0.	0.
25	0.	0.	0.	26	0.	0.	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 50 S. ELBERTON

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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	54.6	-27.9	-27.7	-45.7	-27.9	.0	9.0	2.0	8.905E-01	9.642E-02
10	4.87E+03	-85.0	-14.4	-16.5	58.6	-8.0	.3	9.0	2.0	6.156E-01	2.204E-01
11	3.87E+03	-12.9	71.3	70.6	72.3	71.3	.0	9.0	1.0	1.475E-01	1.278E-01
12	3.07E+03	-20.3	999.0	999.0	999.0	999.0	999.0	9.0	0.0	1.475E-01	1.278E-01
13	2.44E+03	-17.2	52.6	35.3	84.6	54.5	.4	9.0	3.0	2.818E-01	2.256E-01
14	1.94E+03	-8.0	75.5	71.9	89.9	75.6	.1	8.0	6.0	3.000E-01	1.534E-01
15	1.54E+03	-8.5	60.1	57.5	109.2	61.9	.2	9.0	4.0	3.124E-01	9.556E-02
16	1.22E+03	-11.5	60.0	59.6	91.7	60.1	.1	9.0	3.0	3.230E-01	4.113E-02
17	9.71E+02	-5.4	71.0	70.9	75.5	71.0	.0	9.0	5.0	4.193E-01	5.715E-02
18	7.72E+02	-3.0	65.3	65.3	-5.5	65.1	.1	9.0	4.0	4.364E-01	2.653E-02
19	6.13E+02	-2.1	70.7	70.6	-77.8	69.8	.0	9.0	5.0	4.968E-01	3.589E-02
20	4.87E+02	-9.0	73.4	73.1	-89.0	70.9	.0	9.0	6.0	4.640E-01	5.473E-02
21	3.87E+02	-6.0	68.8	68.0	-63.9	64.6	.1	9.0	4.0	5.620E-01	9.116E-02
22	3.07E+02	-6.6	69.5	68.7	-40.0	64.3	.2	8.0	4.0	5.701E-01	1.177E-01
23	2.44E+02	-12.8	60.0	59.1	-58.0	54.6	.2	6.0	4.0	6.168E-01	1.209E-01
24	1.94E+02	-12.0	58.2	56.0	-68.9	46.4	.2	5.0	3.0	5.357E-01	1.543E-01
25	1.54E+02	-16.0	59.3	57.0	-62.4	46.9	.3	3.0	2.0	7.151E-01	2.173E-01
26	1.22E+02	-4.5	68.3	67.5	-71.0	63.3	.1	4.0	2.0	7.747E-01	1.356E-01

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	9.000E+00	2.000E+00	9	0.	0.	0.
10	3.687E+00	9.000E+00	2.000E+00	11	3.587E+00	9.000E+00	1.000E+00	12	3.487E+00	9.000E+00	0.
13	3.387E+00	9.000E+00	3.000E+00	14	3.287E+00	8.000E+00	6.000E+00	15	3.187E+00	9.000E+00	4.000E+00
16	3.087E+00	9.000E+00	3.000E+00	17	2.987E+00	9.000E+00	5.000E+00	18	2.887E+00	9.000E+00	4.000E+00
19	2.787E+00	9.000E+00	5.000E+00	20	2.687E+00	9.000E+00	6.000E+00	21	2.587E+00	9.000E+00	4.000E+00
22	2.487E+00	8.000E+00	4.000E+00	23	2.387E+00	6.000E+00	4.000E+00	24	2.287E+00	5.000E+00	3.000E+00
25	2.187E+00	3.000E+00	2.000E+00	26	2.087E+00	4.000E+00	2.000E+00	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 55 N. ELBERTON

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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-5.7	23.4	22.6	83.2	24.5	.2	6.0	4.0	3.871E-01	6.944E-02
10	4.87E+03	8.7	59.8	48.8	79.6	60.2	.3	6.0	2.0	2.484E-01	1.907E-01
11	3.87E+03	4.3	83.5	80.8	90.6	83.6	.1	6.0	3.0	2.169E-01	1.358E-01
12	3.07E+03	-9.0	999.0	999.0	999.0	999.0	999.0	6.0	0.0	2.169E-01	1.358E-01
13	2.44E+03	-2.7	79.3	83.9	68.7	79.3	.1	6.0	3.0	2.939E-01	1.940E-01
14	1.94E+03	-29.1	-85.9	95.6	84.3	94.1	.1	5.0	3.0	3.081E-01	1.232E-01
15	1.54E+03	-53.2	86.3	86.9	76.5	86.3	.0	6.0	3.0	3.216E-01	7.570E-02
16	1.22E+03	-32.6	-83.8	96.1	103.6	96.2	.0	6.0	3.0	3.308E-01	4.064E-02
17	9.71E+02	75.6	88.4	88.9	63.6	88.3	.1	7.0	4.0	3.185E-01	4.569E-02
18	7.72E+02	54.6	-82.7	97.4	-146.7	96.3	.1	5.0	4.0	3.068E-01	1.998E-02
19	6.13E+02	30.5	72.5	72.6	-170.8	71.4	.1	7.0	3.0	4.167E-01	2.967E-02
20	4.87E+02	-13.3	70.7	70.6	143.3	70.8	.0	6.0	3.0	4.180E-01	2.114E-02
21	3.87E+02	-51.6	65.1	64.5	116.8	65.6	.1	5.0	3.0	4.131E-01	6.072E-02
22	3.07E+02	9.6	63.7	59.7	103.1	65.1	.2	4.0	2.0	5.369E-01	2.043E-01
23	2.44E+02	-66.6	54.2	45.8	106.0	59.7	.4	3.0	1.0	9.316E-01	5.095E-01
24	1.94E+02	-67.9	87.3	85.9	90.4	87.3	.0	4.0	2.0	3.567E-01	2.355E-01
25	1.54E+02	-60.6	74.3	63.5	80.3	74.3	.1	4.0	2.0	1.360E-01	1.816E-01
26	1.22E+02	-55.3	73.7	73.3	101.0	73.8	.1	4.0	2.0	2.838E-01	3.743E-02

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	6.000E+00	4.000E+00	9	0.	0.	0.
10	3.687E+00	6.000E+00	2.000E+00	11	3.587E+00	6.000E+00	3.000E+00	12	3.487E+00	6.000E+00	0.
13	3.387E+00	6.000E+00	3.000E+00	14	3.287E+00	5.000E+00	3.000E+00	15	3.187E+00	6.000E+00	3.000E+00
16	3.087E+00	6.000E+00	3.000E+00	17	2.987E+00	7.000E+00	4.000E+00	18	2.887E+00	5.000E+00	4.000E+00
19	2.787E+00	7.000E+00	3.000E+00	20	2.687E+00	6.000E+00	3.000E+00	21	2.587E+00	5.000E+00	3.000E+00
22	2.487E+00	4.000E+00	2.000E+00	23	2.387E+00	3.000E+00	1.000E+00	24	2.287E+00	4.000E+00	2.000E+00
25	2.187E+00	4.000E+00	2.000E+00	26	2.087E+00	4.000E+00	2.000E+00	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 60 DANIELSVILLE
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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-61.8	-22.6	-22.2	93.7	-20.5	.1	10.0	5.0	9.414E-01	1.167E-01
10	4.87E+03	-68.9	-29.8	-24.4	72.1	6.3	.7	10.0	4.0	5.533E-01	3.774E-01
11	3.87E+03	29.8	88.1	89.7	82.6	88.1	.1	10.0	2.0	2.337E-01	1.280E-01
12	3.07E+03	18.2	999.0	999.0	999.0	999.0	999.0	10.0	0.0	2.337E-01	1.280E-01
13	2.44E+03	4.0	6.1	2.4	70.9	12.2	.4	10.0	2.0	3.881E-01	1.588E-01
14	1.94E+03	7.6	-68.5	94.8	60.4	90.8	.2	10.0	4.0	2.835E-01	1.021E-01
15	1.54E+03	78.0	72.5	81.4	38.5	70.8	.3	10.0	1.0	3.022E-01	1.729E-01
16	1.22E+03	18.2	-87.0	93.3	12.1	90.4	.2	8.0	3.0	2.978E-01	5.721E-02
17	9.71E+02	60.8	83.6	82.9	-14.8	74.8	.3	9.0	3.0	2.860E-01	8.599E-02
18	7.72E+02	36.3	77.8	77.0	-18.9	67.5	.3	9.0	2.0	2.914E-01	9.701E-02
19	6.13E+02	54.8	82.8	80.4	-19.2	63.1	.4	7.0	2.0	2.768E-01	1.268E-01
20	4.87E+02	56.9	77.5	73.5	-41.2	57.1	.4	5.0	1.0	2.610E-01	1.065E-01
21	3.87E+02	33.2	75.6	65.4	-39.1	32.6	.6	5.0	1.0	2.274E-01	1.538E-01
22	3.07E+02	32.2	37.0	78.3	7.6	40.4	.7	4.0	1.0	2.678E-01	2.882E-01
23	2.44E+02	33.7	3.8	60.5	.8	6.9	.3	2.0	1.0	1.604E-01	4.755E-01
24	1.94E+02	37.5	999.0	999.0	999.0	999.0	999.0	2.0	0.0	1.604E-01	4.755E-01
25	1.54E+02	34.1	999.0	999.0	999.0	999.0	999.0	1.0	0.0	1.604E-01	4.755E-01
26	1.22E+02	19.5	999.0	999.0	999.0	999.0	999.0	1.0	0.0	1.604E-01	4.755E-01

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	1.000E+01	5.000E+00	9	0.	0.	0.
10	3.687E+00	1.000E+01	4.000E+00	11	3.587E+00	1.000E+01	2.000E+00	12	3.487E+00	1.000E+01	0.
13	3.387E+00	1.000E+01	2.000E+00	14	3.287E+00	1.000E+01	4.000E+00	15	3.187E+00	1.000E+01	1.000E+00
16	3.087E+00	8.000E+00	3.000E+00	17	2.987E+00	9.000E+00	3.000E+00	18	2.887E+00	9.000E+00	2.000E+00
19	2.787E+00	7.000E+00	2.000E+00	20	2.687E+00	5.000E+00	1.000E+00	21	2.587E+00	5.000E+00	1.000E+00
22	2.487E+00	4.000E+00	1.000E+00	23	2.387E+00	2.000E+00	1.000E+00	24	2.287E+00	2.000E+00	0.
25	2.187E+00	1.000E+00	0.	26	2.087E+00	1.000E+00	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 70 HOMER
****

H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	EZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-78.7	29.5	28.8	102.8	31.9	.2	10.0	5.0	4.896E-01	1.025E-01
10	4.87E+03	-82.1	74.8	65.2	89.2	74.9	.2	9.0	3.0	2.932E-01	2.425E-01
11	3.87E+03	-72.7	-84.9	95.3	93.8	95.2	.0	6.0	4.0	2.246E-01	7.126E-02
12	3.07E+03	-82.5	-76.3	101.6	142.3	104.5	.2	8.0	3.0	2.368E-01	6.552E-02
13	2.44E+03	-82.4	-85.4	94.7	93.2	94.6	.0	9.0	4.0	2.580E-01	5.765E-02
14	1.94E+03	-75.8	-76.7	103.2	153.4	103.5	.1	6.0	4.0	2.615E-01	2.049E-02
15	1.54E+03	-76.8	-82.9	98.1	-118.9	90.5	.1	8.0	5.0	2.649E-01	5.034E-02
16	1.22E+03	-70.1	-76.0	106.3	-108.0	89.0	.2	5.0	3.0	2.668E-01	7.910E-02
17	9.71E+02	-64.8	-70.1	111.4	-84.4	92.0	.1	5.0	3.0	2.138E-01	7.093E-02
18	7.72E+02	-77.9	-67.9	115.6	-85.2	80.3	.1	6.0	2.0	1.778E-01	8.212E-02
19	6.13E+02	-66.1	-66.7	121.0	-82.3	52.3	.2	5.0	2.0	1.482E-01	1.059E-01
20	4.87E+02	-69.0	-55.4	142.7	-90.0	52.6	.5	5.0	1.0	1.368E-01	1.088E-01
21	3.87E+02	-64.2	-76.1	131.2	-99.2	9.0	.5	4.0	1.0	1.222E-01	1.298E-01
22	3.07E+02	-66.8	999.0	999.0	999.0	999.0	999.0	3.0	0.0	1.222E-01	1.298E-01
23	2.44E+02	-65.9	999.0	999.0	999.0	999.0	999.0	4.0	0.0	1.222E-01	1.298E-01
24	1.94E+02	-16.1	999.0	999.0	999.0	999.0	999.0	2.0	0.0	1.222E-01	1.298E-01
25	1.54E+02	-18.1	999.0	999.0	999.0	999.0	999.0	2.0	0.0	1.222E-01	1.298E-01
26	1.22E+02	-4.9	999.0	999.0	999.0	999.0	999.0	2.0	0.0	1.222E-01	1.298E-01

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	1.000E+01	5.000E+00	9	0.	0.	0.
10	3.687E+00	9.000E+00	3.000E+00	11	3.587E+00	6.000E+00	4.000E+00	12	3.487E+00	8.000E+00	3.000E+00
13	3.387E+00	9.000E+00	4.000E+00	14	3.287E+00	6.000E+00	4.000E+00	15	3.187E+00	8.000E+00	5.000E+00
16	3.087E+00	5.000E+00	3.000E+00	17	2.987E+00	5.000E+00	3.000E+00	18	2.887E+00	6.000E+00	2.000E+00
19	2.787E+00	5.000E+00	2.000E+00	20	2.687E+00	5.000E+00	1.000E+00	21	2.587E+00	4.000E+00	1.000E+00
22	2.487E+00	3.000E+00	0.	23	2.387E+00	4.000E+00	0.	24	2.287E+00	2.000E+00	0.
25	2.187E+00	2.000E+00	0.	26	2.087E+00	2.000E+00	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 80 CORNELIA
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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BD	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-74.0	14.2	14.3	111.9	15.8	.1	9.0	2.0	9.519E-01	1.181E-01
10	4.87E+03	-50.0	46.6	35.7	95.5	52.0	.5	9.0	3.0	5.900E-01	3.616E-01
11	3.87E+03	-30.9	-70.0	116.9	69.5	107.6	.3	9.0	2.0	2.301E-01	1.132E-01
12	3.07E+03	-32.5	-53.9	126.0	-163.8	123.6	.1	9.0	1.0	2.526E-01	2.291E-02
13	2.44E+03	-35.9	66.9	65.9	124.8	68.2	.2	9.0	3.0	3.288E-01	6.599E-02
14	1.94E+03	-33.0	-80.8	100.3	-152.9	85.6	.2	9.0	3.0	2.660E-01	6.601E-02
15	1.54E+03	-32.7	-75.3	106.7	-117.4	92.0	.2	9.0	3.0	2.614E-01	6.940E-02
16	1.22E+03	-27.0	-59.0	125.0	-85.0	94.2	.2	8.0	2.0	2.305E-01	9.554E-02
17	9.71E+02	-27.1	-72.0	122.6	-104.0	42.8	.4	9.0	2.0	1.693E-01	1.248E-01
18	7.72E+02	-26.5	-66.4	121.6	-88.2	61.9	.2	7.0	1.0	1.564E-01	9.865E-02
19	6.13E+02	-27.2	-11.7	163.9	-106.2	30.9	1.0	6.0	1.0	2.049E-01	2.018E-01
20	4.87E+02	-27.7	43.5	-170.8	-111.2	-138.2	.6	6.0	1.0	2.845E-01	3.124E-01
21	3.87E+02	-21.9	30.3	-160.3	-99.7	-144.0	.5	6.0	1.0	4.589E-01	2.783E-01
22	3.07E+02	-39.9	41.1	-156.2	-103.2	-136.4	.5	4.0	1.0	5.199E-01	4.013E-01
23	2.44E+02	-33.3	21.2	-164.3	-94.6	-150.7	.4	4.0	1.0	6.404E-01	3.155E-01
24	1.94E+02	-31.2	11.9	-170.1	-86.8	-154.5	.5	3.0	1.0	5.988E-01	2.878E-01
25	1.54E+02	-22.7	3.5	-176.6	-87.3	-166.8	.4	2.0	1.0	5.943E-01	2.085E-01
26	1.22E+02	-18.1	4.8	-175.0	-5.1	-171.5	.0	2.0	1.0	5.683E-01	8.249E-02

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	9.000E+00	2.000E+00	9	0.	0.	0.
10	3.687E+00	9.000E+00	3.000E+00	11	3.587E+00	9.000E+00	2.000E+00	12	3.487E+00	9.000E+00	1.000E+00
13	3.387E+00	9.000E+00	3.000E+00	14	3.287E+00	9.000E+00	3.000E+00	15	3.187E+00	9.000E+00	3.000E+00
16	3.087E+00	8.000E+00	2.000E+00	17	2.987E+00	9.000E+00	2.000E+00	18	2.887E+00	7.000E+00	1.000E+00
19	2.787E+00	6.000E+00	1.000E+00	20	2.687E+00	6.000E+00	1.000E+00	21	2.587E+00	6.000E+00	1.000E+00
22	2.487E+00	4.000E+00	1.000E+00	23	2.387E+00	4.000E+00	1.000E+00	24	2.287E+00	3.000E+00	1.000E+00
25	2.187E+00	2.000E+00	1.000E+00	26	2.087E+00	2.000E+00	1.000E+00	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 90 CLEVELAND

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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-10.9	13.2	13.1	100.2	16.9	.2	11.0	2.0	4.610E-01	9.917E-02
10	4.87E+03	-1.9	58.5	16.5	95.8	56.8	.8	11.0	2.0	2.739E-01	2.782E-01
11	3.87E+03	-38.6	-77.7	101.3	115.1	102.3	.1	10.0	5.0	2.107E-01	5.783E-02
12	3.07E+03	-53.0	-67.4	110.9	177.2	115.5	.2	11.0	3.0	2.252E-01	6.157E-02
13	2.44E+03	-37.4	58.9	59.2	176.1	60.9	.1	11.0	5.0	2.023E-01	2.484E-02
14	1.94E+03	-8.1	-70.9	111.8	-137.2	83.7	.3	9.0	6.0	2.434E-01	8.693E-02
15	1.54E+03	-26.5	86.9	88.8	-108.6	66.0	.1	11.0	6.0	2.101E-01	7.590E-02
16	1.22E+03	-31.8	-67.6	120.3	-92.0	64.3	.2	9.0	3.0	2.098E-01	1.255E-01
17	9.71E+02	-13.4	-66.9	121.1	-79.6	42.5	.2	11.0	2.0	1.670E-01	1.341E-01
18	7.72E+02	-44.5	-65.6	124.8	-81.1	40.3	.2	7.0	2.0	1.450E-01	1.210E-01
19	6.13E+02	60.5	13.9	-162.3	-16.1	-143.0	.2	7.0	1.0	4.301E-01	1.677E-01
20	4.87E+02	52.6	21.0	-153.4	-29.3	-132.9	.3	7.0	1.0	4.400E-01	1.960E-01
21	3.87E+02	35.2	41.0	-134.6	-12.7	-117.7	.3	7.0	2.0	4.036E-01	1.618E-01
22	3.07E+02	-35.8	42.9	-132.7	-16.0	-115.4	.4	6.0	2.0	4.252E-01	1.775E-01
23	2.44E+02	69.2	35.1	-138.9	-12.8	-117.1	.3	6.0	2.0	4.344E-01	1.985E-01
24	1.94E+02	17.0	24.0	-151.2	-2.2	-125.0	.2	6.0	2.0	5.292E-01	2.442E-01
25	1.54E+02	45.2	14.8	-160.5	5.2	-104.8	.1	4.0	2.0	5.556E-01	3.951E-01
26	1.22E+02	15.4	78.9	-101.5	-68.1	-101.0	.1	3.0	1.0	6.220E-01	8.161E-02
	2	8	26	40							

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	1.100E+01	2.000E+00	9	0.	0.	0.
10	3.687E+00	1.100E+01	2.000E+00	11	3.587E+00	1.000E+01	5.000E+00	12	3.487E+00	1.100E+01	3.000E+00
13	3.387E+00	1.100E+01	5.000E+00	14	3.287E+00	9.000E+00	6.000E+00	15	3.187E+00	1.100E+01	6.000E+00
16	3.087E+00	9.000E+00	3.000E+00	17	2.987E+00	1.100E+01	2.000E+00	18	2.887E+00	7.000E+00	2.000E+00
19	2.787E+00	7.000E+00	1.000E+00	20	2.687E+00	7.000E+00	1.000E+00	21	2.587E+00	7.000E+00	2.000E+00
22	2.487E+00	6.000E+00	2.000E+00	23	2.387E+00	6.000E+00	2.000E+00	24	2.287E+00	6.000E+00	2.000E+00
25	2.187E+00	4.000E+00	2.000E+00	26	2.087E+00	3.000E+00	1.000E+00	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 100 YOUNG HARRIS
****

H-HZ COHERENCY = .60 PHASOR COHERENCY = .60

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BD	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	999.0	14.1	14.2	109.4	16.0	.1	0.0	1.0	4.978E-01	6.816E-02
10	4.87E+03	999.0	17.5	14.0	90.7	27.9	.5	0.0	3.0	4.552E-01	2.146E-01
13	2.44E+03	999.0	80.4	80.3	86.8	80.4	.0	0.0	1.0	2.733E-01	3.586E-02
16	1.22E+03	999.0	-66.1	97.3	-116.9	71.8	.2	0.0	1.0	2.367E-01	8.714E-02
17	9.71E+02	999.0	-86.5	92.0	-63.9	81.0	.1	0.0	1.0	2.318E-01	6.391E-02
23	2.44E+02	999.0	14.8	15.4	141.0	18.0	.1	0.0	1.0	6.902E-01	9.998E-02
24	1.94E+02	999.0	17.6	17.5	-145.7	16.7	.0	0.0	1.0	7.073E-01	5.007E-02
25	1.54E+02	999.0	7.1	7.1	-179.3	4.9	.0	0.0	1.0	8.223E-01	9.090E-02
26	1.22E+02	999.0	7.1	7.0	-162.9	5.0	.0	0.0	1.0	8.785E-01	9.665E-02

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	0.	1.000E+00	9	0.	0.	0.
10	3.687E+00	0.	3.000E+00	11	0.	0.	0.	12	0.	0.	0.
13	3.387E+00	0.	1.000E+00	14	0.	0.	0.	15	0.	0.	0.
16	3.087E+00	0.	1.000E+00	17	2.987E+00	0.	1.000E+00	18	0.	0.	0.
19	0.	0.	0.	20	0.	0.	0.	21	0.	0.	0.
22	0.	0.	0.	23	2.387E+00	0.	1.000E+00	24	2.287E+00	0.	1.000E+00
25	2.187E+00	0.	1.000E+00	26	2.087E+00	0.	1.000E+00	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 110 TALULLAH FALLS
****

H-HZ COHERENCY = .60   PHASOR COHERENCY = .60

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	999.0	17.9	17.6	68.3	18.0	.1	0.0	1.0	1.756E+00	1.585E-01
10	4.87E+03	999.0	30.4	26.4	111.2	52.5	.7	0.0	2.0	5.345E-01	3.563E-01
11	3.87E+03	999.0	80.7	78.3	101.7	80.9	.1	0.0	2.0	2.256E-01	7.981E-02
14	1.94E+03	999.0	78.3	79.7	-165.9	64.5	.2	0.0	3.0	2.705E-01	6.947E-02
15	1.54E+03	999.0	70.3	70.7	46.2	70.2	.1	0.0	2.0	3.018E-01	4.191E-02
16	1.22E+03	999.0	-84.2	96.0	-85.4	77.7	.0	0.0	3.0	2.288E-01	7.651E-02
18	7.72E+02	999.0	-46.2	135.0	-47.5	49.7	.0	0.0	3.0	1.356E-01	1.271E-01
19	6.13E+02	999.0	-73.8	117.6	-101.2	47.3	.3	0.0	2.0	1.773E-01	1.220E-01
20	4.87E+02	999.0	-52.7	140.5	-99.9	66.4	.5	0.0	2.0	1.521E-01	1.015E-01

2 8 20 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	0.	1.000E+00	9	0.	0.	0.
10	3.687E+00	0.	2.000E+00	11	3.587E+00	0.	2.000E+00	12	0.	0.	0.
13	0.	0.	0.	14	3.287E+00	0.	3.000E+00	15	3.187E+00	0.	2.000E+00
16	3.087E+00	0.	3.000E+00	17	0.	0.	0.	18	2.887E+00	0.	3.000E+00
19	2.787E+00	0.	2.000E+00	20	2.687E+00	0.	2.000E+00	21	0.	0.	0.
22	0.	0.	0.	23	0.	0.	0.	24	0.	0.	0.
25	0.	0.	0.	26	0.	0.	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 120 DILLARD

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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-44.8	22.1	21.8	80.1	22.4	.1	11.0	6.0	7.907E-01	8.257E-02
10	4.87E+03	-15.4	54.3	54.3	53.6	54.3	.0	11.0	2.0	5.217E-01	8.972E-02
11	3.87E+03	-12.7	-75.6	105.5	100.5	104.4	.0	11.0	3.0	1.977E-01	1.006E-01
12	3.07E+03	-6.7	-69.8	108.5	146.1	110.8	.1	11.0	1.0	2.102E-01	5.325E-02
13	2.44E+03	-10.2	46.9	46.6	102.4	47.2	.1	11.0	4.0	5.655E-01	6.043E-02
14	1.94E+03	-12.9	-78.3	102.7	62.6	101.4	.1	10.0	5.0	2.468E-01	4.527E-02
15	1.54E+03	-6.9	-43.9	136.3	-120.9	130.7	.1	11.0	1.0	1.999E-01	2.999E-02
16	1.22E+03	-7.4	-72.6	106.3	-40.3	100.2	.1	11.0	4.0	2.303E-01	4.769E-02
17	9.71E+02	-8.9	-64.8	113.8	-53.5	94.9	.1	11.0	4.0	1.973E-01	7.047E-02
18	7.72E+02	-6.4	-64.3	114.1	-56.7	83.7	.1	11.0	3.0	1.689E-01	7.852E-02
19	6.13E+02	-6.7	-62.4	109.7	-40.1	67.8	.2	10.0	2.0	1.405E-01	8.762E-02
20	4.87E+02	-7.3	-63.7	111.1	-58.1	28.6	.1	9.0	2.0	9.679E-02	9.443E-02
21	3.87E+02	-9.4	-49.4	128.9	-48.7	1.0	.0	8.0	1.0	5.712E-02	9.160E-02
22	3.07E+02	-9.1	-39.5	123.1	-35.2	-2.4	.2	8.0	1.0	4.823E-02	9.430E-02
23	2.44E+02	-2.9	-25.7	79.5	-20.6	5.1	.6	7.0	1.0	4.845E-02	8.231E-02
24	1.94E+02	-1.9	999.0	999.0	999.0	999.0	999.0	6.0	0.0	4.845E-02	8.231E-02
25	1.54E+02	4.9	-63.6	-74.4	163.6	-10.4	.5	5.0	1.0	6.112E-01	3.704E-01
26	1.22E+02	19.0	999.0	999.0	999.0	999.0	999.0	6.0	0.0	6.112E-01	3.704E-01

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	1.100E+01	6.000E+00	9	0.	0.	0.
10	3.687E+00	1.100E+01	2.000E+00	11	3.587E+00	1.100E+01	3.000E+00	12	3.487E+00	1.100E+01	1.000E+00
13	3.387E+00	1.100E+01	4.000E+00	14	3.287E+00	1.000E+01	5.000E+00	15	3.187E+00	1.100E+01	1.000E+00
16	3.087E+00	1.100E+01	4.000E+00	17	2.987E+00	1.100E+01	4.000E+00	18	2.887E+00	1.100E+01	3.000E+00
19	2.787E+00	1.000E+01	2.000E+00	20	2.687E+00	9.000E+00	2.000E+00	21	2.587E+00	8.000E+00	1.000E+00
22	2.487E+00	8.000E+00	1.000E+00	23	2.387E+00	7.000E+00	1.000E+00	24	2.287E+00	6.000E+00	0.
25	2.187E+00	5.000E+00	1.000E+00	26	2.087E+00	6.000E+00	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

SUMMARY INFORMATION STATION 130 DUCKTOWN
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H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BD	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	22.8	10.2	10.2	116.0	10.4	.0	11.0	1.0	1.058E+00	4.271E-02
10	4.87E+03	-33.6	999.0	999.0	999.0	999.0	999.0	7.0	0.0	1.058E+00	4.271E-02
11	3.87E+03	-17.9	999.0	999.0	999.0	999.0	999.0	5.0	0.0	1.058E+00	4.271E-02
12	3.07E+03	-57.0	999.0	999.0	999.0	999.0	999.0	4.0	0.0	1.058E+00	4.271E-02
13	2.44E+03	-39.5	999.0	999.0	999.0	999.0	999.0	4.0	0.0	1.058E+00	4.271E-02
14	1.94E+03	-81.4	60.1	64.9	56.9	60.1	.1	3.0	1.0	8.902E-02	1.101E-01
15	1.54E+03	-68.4	999.0	999.0	999.0	999.0	999.0	3.0	0.0	8.902E-02	1.101E-01
16	1.22E+03	-81.3	999.0	999.0	999.0	999.0	999.0	3.0	0.0	8.902E-02	1.101E-01
17	9.71E+02	-81.4	999.0	999.0	999.0	999.0	999.0	3.0	0.0	8.902E-02	1.101E-01
18	7.72E+02	-79.2	999.0	999.0	999.0	999.0	999.0	2.0	0.0	8.902E-02	1.101E-01
19	6.13E+02	-75.8	999.0	999.0	999.0	999.0	999.0	2.0	0.0	8.902E-02	1.101E-01
20	4.87E+02	56.0	999.0	999.0	999.0	999.0	999.0	3.0	0.0	8.902E-02	1.101E-01
21	3.87E+02	28.3	999.0	999.0	999.0	999.0	999.0	3.0	0.0	8.902E-02	1.101E-01
22	3.07E+02	-86.0	999.0	999.0	999.0	999.0	999.0	2.0	0.0	8.902E-02	1.101E-01
23	2.44E+02	-86.0	999.0	999.0	999.0	999.0	999.0	2.0	0.0	8.902E-02	1.101E-01
24	1.94E+02	54.8	999.0	999.0	999.0	999.0	999.0	2.0	0.0	8.902E-02	1.101E-01
25	1.54E+02	-28.9	999.0	999.0	999.0	999.0	999.0	3.0	0.0	8.902E-02	1.101E-01

2 8 25 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	1.100E+01	1.000E+00	9	0.	0.	0.
10	3.687E+00	7.000E+00	0.	11	3.587E+00	5.000E+00	0.	12	3.487E+00	4.000E+00	0.
13	3.387E+00	4.000E+00	0.	14	3.287E+00	3.000E+00	1.000E+00	15	3.187E+00	3.000E+00	0.
16	3.087E+00	3.000E+00	0.	17	2.987E+00	3.000E+00	0.	18	2.887E+00	2.000E+00	0.
19	2.787E+00	2.000E+00	0.	20	2.687E+00	3.000E+00	0.	21	2.587E+00	3.000E+00	0.
22	2.487E+00	2.000E+00	0.	23	2.387E+00	2.000E+00	0.	24	2.287E+00	2.000E+00	0.
25	2.187E+00	3.000E+00	0.	26	0.	0.	0.	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								

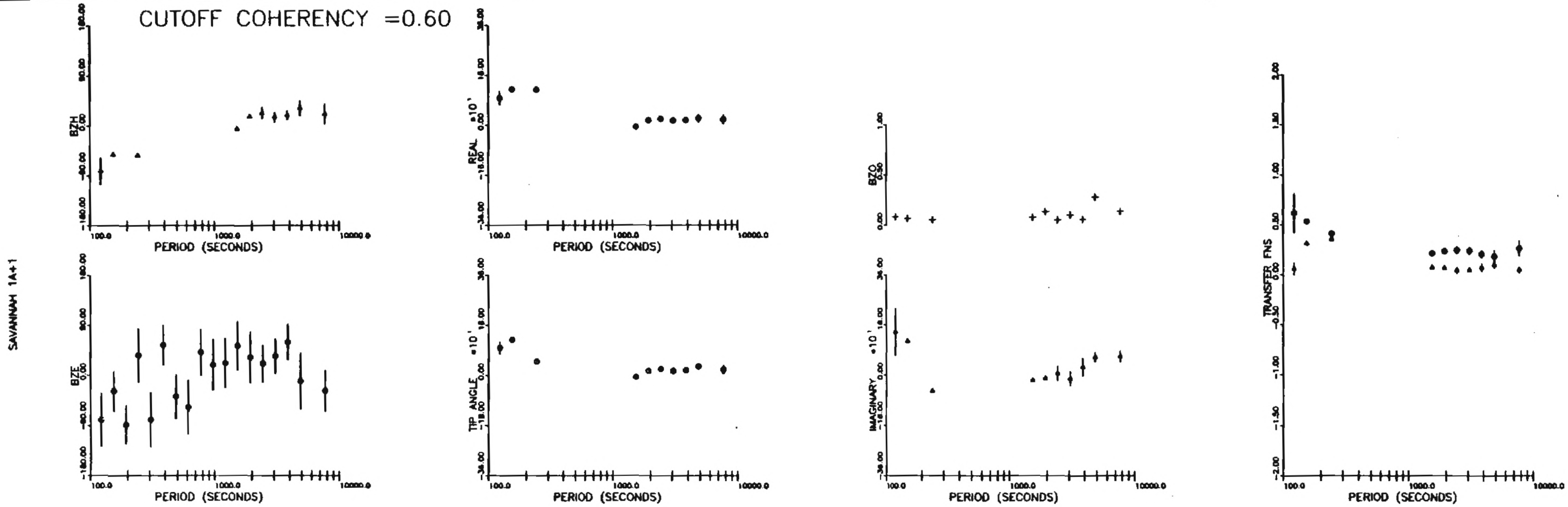
SUMMARY INFORMATION STATION 140 RICEVILLE
****

H-HZ COHERENCY = .80 PHASOR COHERENCY = .80

	PERIOD	BZE	BZH	REAL	IMAG	TIPER	BO	SUM	SUM1	MREAL	MIMAG
8	7.72E+03	-40.9	23.2	23.2	-10.3	23.2	.0	11.0	2.0	5.250E-01	1.433E-02
10	4.87E+03	-89.7	999.0	999.0	999.0	999.0	999.0	11.0	0.0	5.250E-01	1.433E-02
11	3.87E+03	77.6	-27.3	-28.7	17.9	-26.5	.2	9.0	6.0	2.120E-01	4.768E-02
12	3.07E+03	65.3	-18.0	-18.1	-141.6	-18.8	.1	10.0	5.0	2.399E-01	1.832E-02
13	2.44E+03	66.8	-14.8	-13.5	112.1	-8.2	.2	11.0	9.0	2.653E-01	5.607E-02
14	1.94E+03	71.5	-32.7	-30.9	126.9	-16.8	.1	10.0	9.0	2.319E-01	7.249E-02
15	1.54E+03	77.0	-18.1	-16.4	150.8	6.1	.1	11.0	9.0	2.317E-01	9.147E-02
16	1.22E+03	81.2	-26.4	-25.5	150.9	17.8	.0	10.0	7.0	1.892E-01	1.079E-01
17	9.71E+02	84.1	-25.5	-23.8	151.9	43.1	.0	10.0	6.0	1.668E-01	1.308E-01
18	7.72E+02	81.9	-31.6	-35.7	152.2	63.0	.1	11.0	6.0	1.324E-01	1.393E-01
19	6.13E+02	72.9	-37.8	-37.5	142.1	80.3	.0	11.0	5.0	1.006E-01	1.388E-01
20	4.87E+02	69.5	-33.6	-58.9	151.5	112.1	.2	11.0	3.0	6.292E-02	1.310E-01
21	3.87E+02	61.9	-28.6	-69.1	155.1	129.4	.2	11.0	2.0	3.880E-02	1.077E-01
22	3.07E+02	75.3	999.0	999.0	999.0	999.0	999.0	11.0	0.0	3.880E-02	1.077E-01
23	2.44E+02	79.8	999.0	999.0	999.0	999.0	999.0	11.0	0.0	3.880E-02	1.077E-01
24	1.94E+02	53.9	999.0	999.0	999.0	999.0	999.0	10.0	0.0	3.880E-02	1.077E-01
25	1.54E+02	-77.3	-77.7	-77.8	154.0	-76.5	.1	8.0	1.0	1.679E-01	1.293E-02
26	1.22E+02	89.3	-74.8	-73.8	37.8	-68.9	.2	6.0	1.0	1.573E-01	3.366E-02

2 8 26 40

1	0.	0.	0.	2	0.	0.	0.	3	0.	0.	0.
4	0.	0.	0.	5	0.	0.	0.	6	0.	0.	0.
7	0.	0.	0.	8	3.887E+00	1.100E+01	2.000E+00	9	0.	0.	0.
10	3.687E+00	1.100E+01	0.	11	3.587E+00	9.000E+00	6.000E+00	12	3.487E+00	1.000E+01	5.000E+00
13	3.387E+00	1.100E+01	9.000E+00	14	3.287E+00	1.000E+01	9.000E+00	15	3.187E+00	1.100E+01	9.000E+00
16	3.087E+00	1.000E+01	7.000E+00	17	2.987E+00	1.000E+01	6.000E+00	18	2.887E+00	1.100E+01	6.000E+00
19	2.787E+00	1.100E+01	5.000E+00	20	2.687E+00	1.100E+01	3.000E+00	21	2.587E+00	1.100E+01	2.000E+00
22	2.487E+00	1.100E+01	0.	23	2.387E+00	1.100E+01	0.	24	2.287E+00	1.000E+01	0.
25	2.187E+00	8.000E+00	1.000E+00	26	2.087E+00	6.000E+00	1.000E+00	27	0.	0.	0.
28	0.	0.	0.	29	0.	0.	0.	30	0.	0.	0.
31	0.	0.	0.	32	0.	0.	0.	33	0.	0.	0.
34	0.	0.	0.	35	0.	0.	0.	36	0.	0.	0.
37	0.	0.	0.	38	0.	0.	0.	39	0.	0.	0.
40	0.	0.	0.								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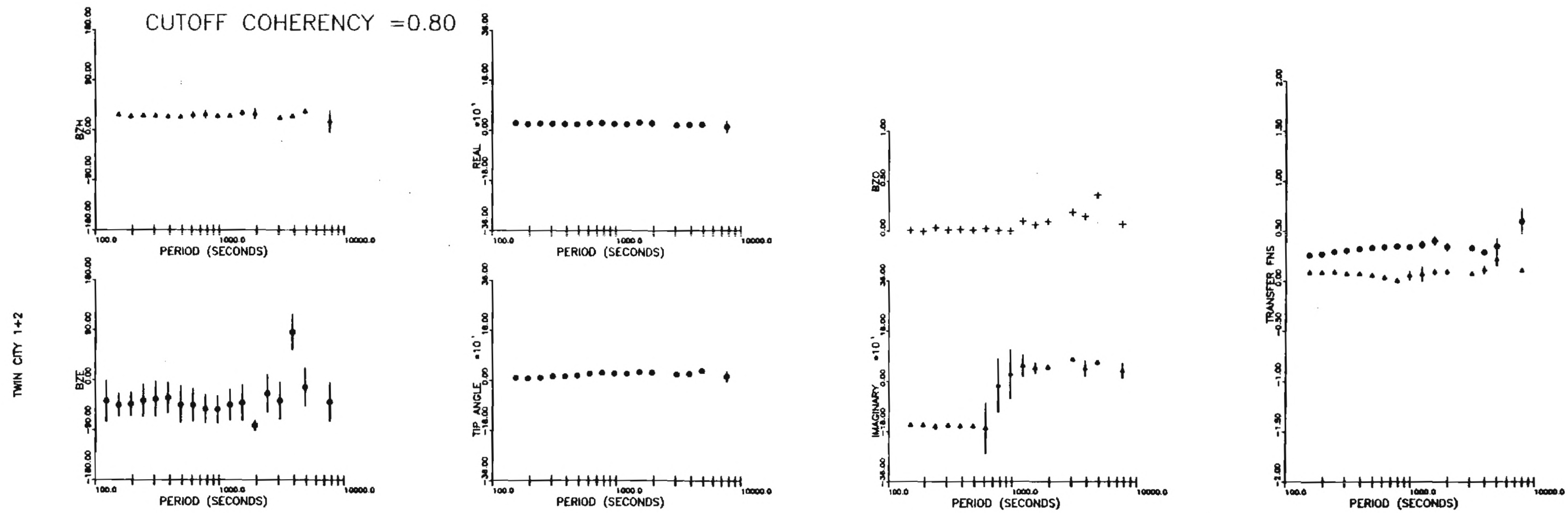
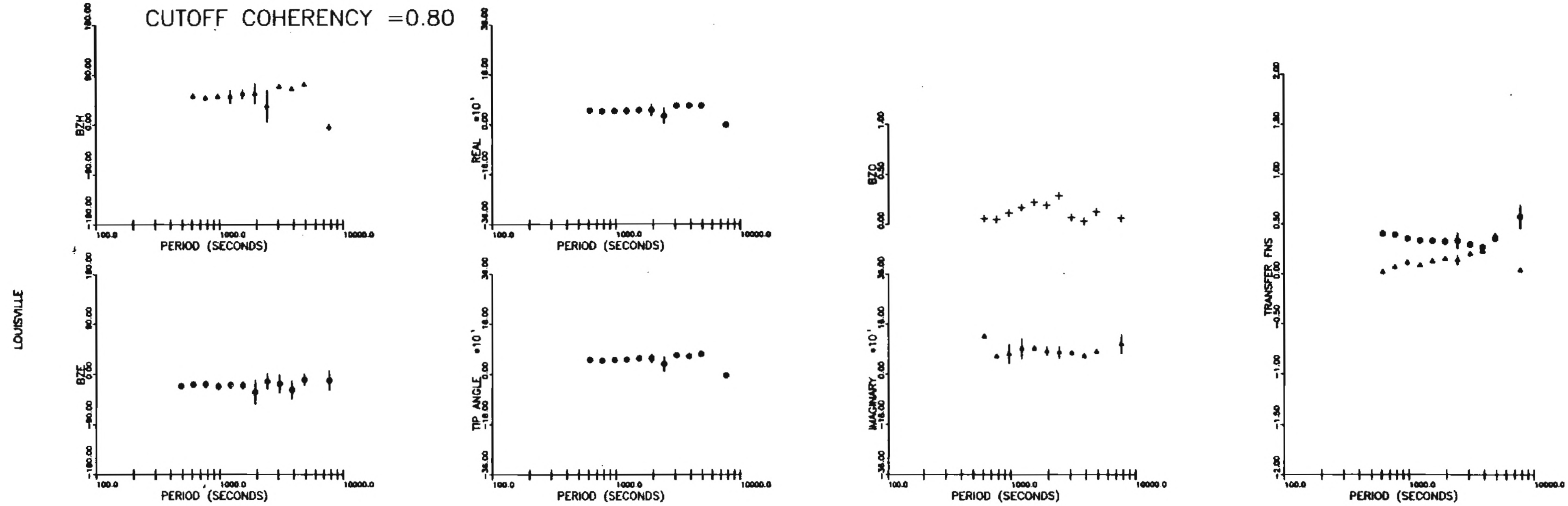
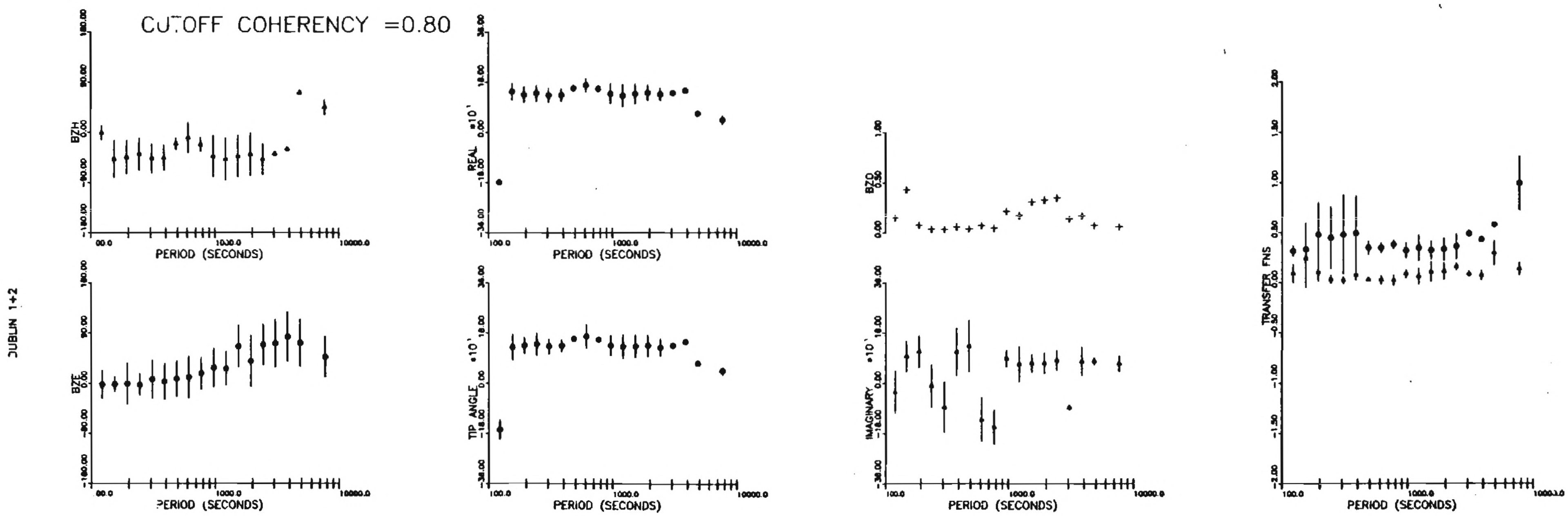
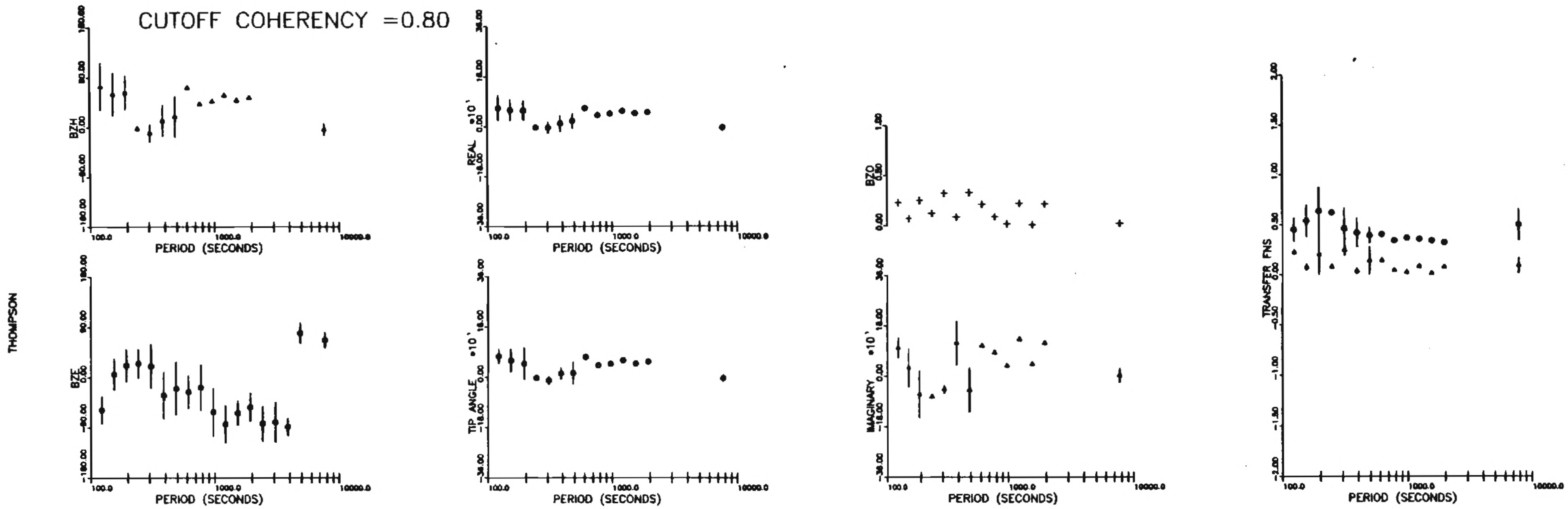
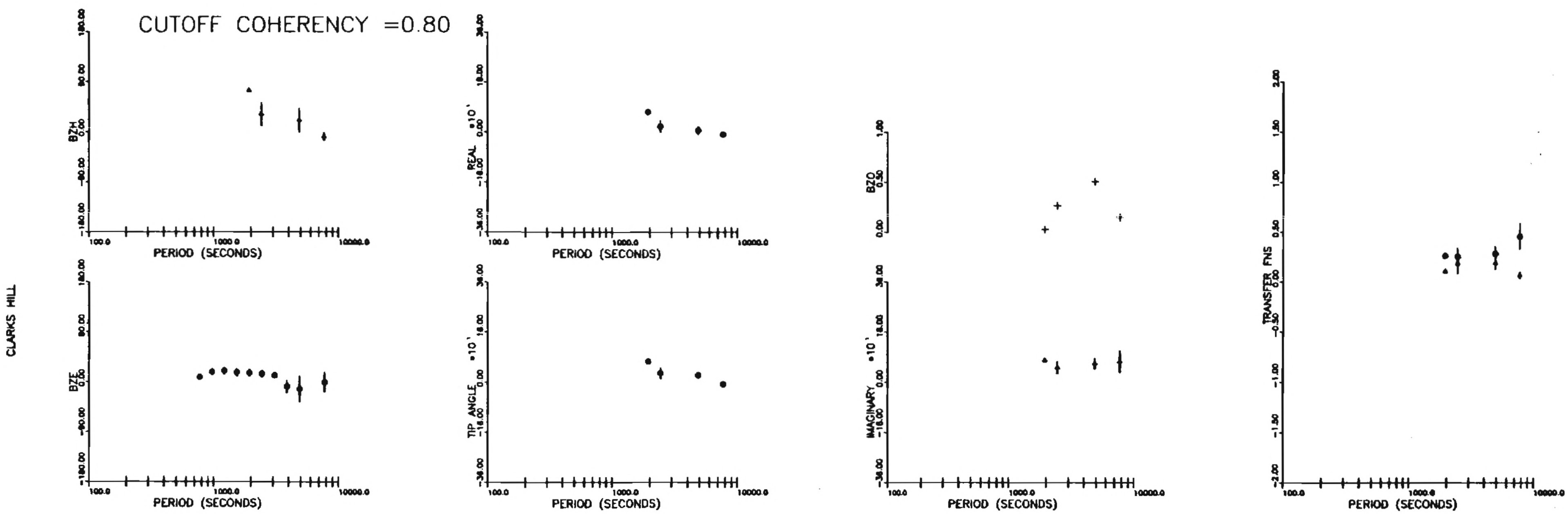
SAVANNAH 1A+1
BZH
BZE
REAL *10'
TIP ANGLE *10'
BZO
IMAGINARY *10'
TRANSFER FNS
PERIOD (SECONDS)


CUTOFF COHERENCY =0.80
TWIN CITY 1+2
BZH
BZE
REAL *10'
TIP ANGLE *10'
BZO
IMAGINARY *10'
TRANSFER FNS
PERIOD (SECONDS)

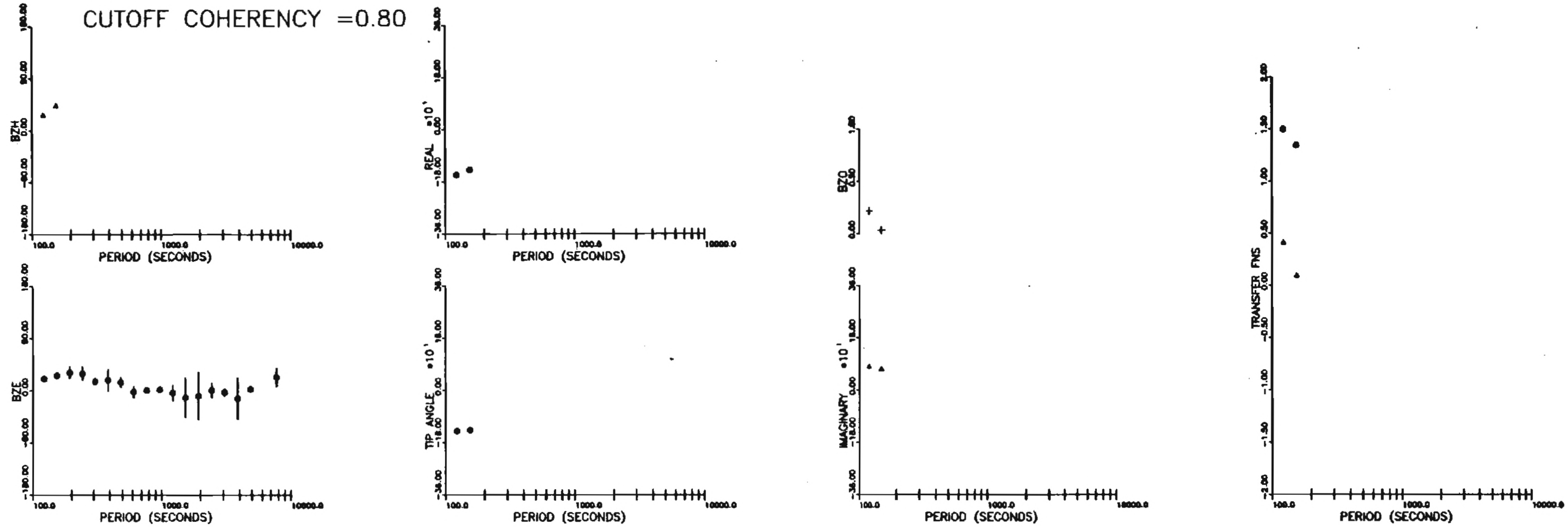

CUTOFF COHERENCY =0.80
LOUISVILLE
BZH
BZE
REAL *10'
TIP ANGLE *10'
BZO
IMAGINARY *10'
TRANSFER FNS
PERIOD (SECONDS)


CUTOFF COHERENCY =0.80
DUBLIN 1+2
BZH
BZE
REAL *10'
TIP ANGLE *10'
BZO
IMAGINARY *10'
TRANSFER FNS
PERIOD (SECONDS)

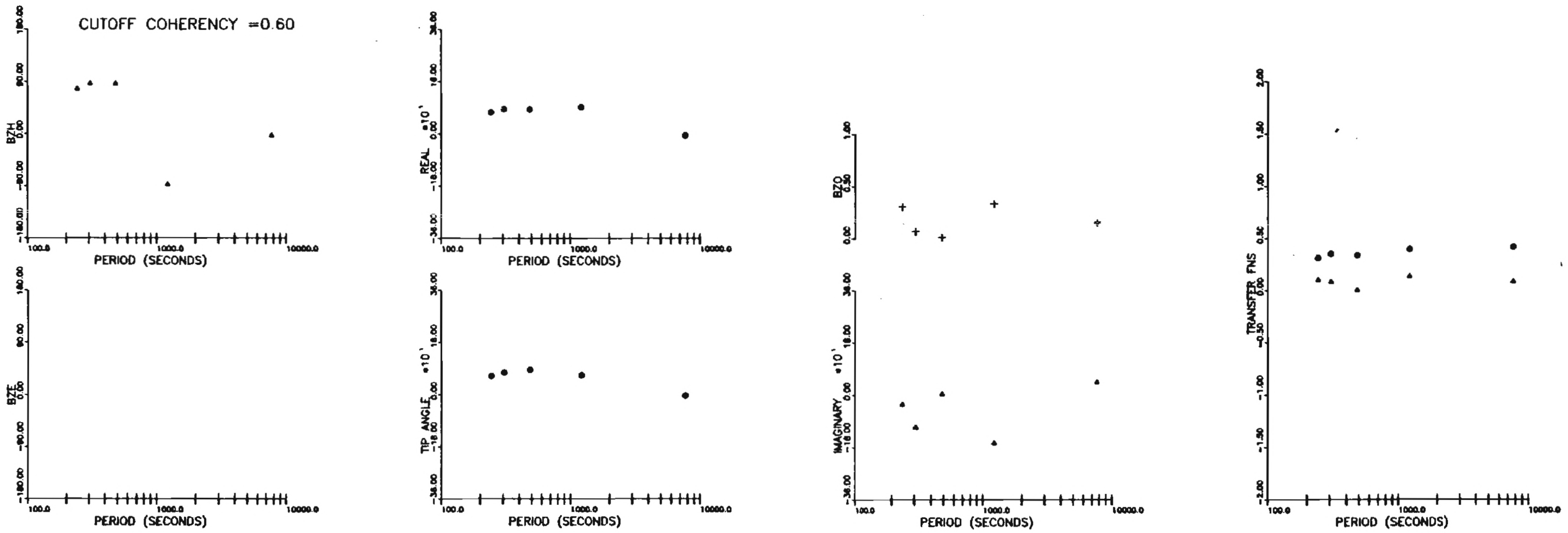

CUTOFF COHERENCY =0.80
THOMPSON
BZH
BZE
REAL *10'
TIP ANGLE *10'
BZO
IMAGINARY *10'
TRANSFER FNS
PERIOD (SECONDS)


CUTOFF COHERENCY =0.80
CLARKS HILL
BZH
BZE
REAL *10'
TIP ANGLE *10'
BZO
IMAGINARY *10'
TRANSFER FNS
PERIOD (SECONDS)

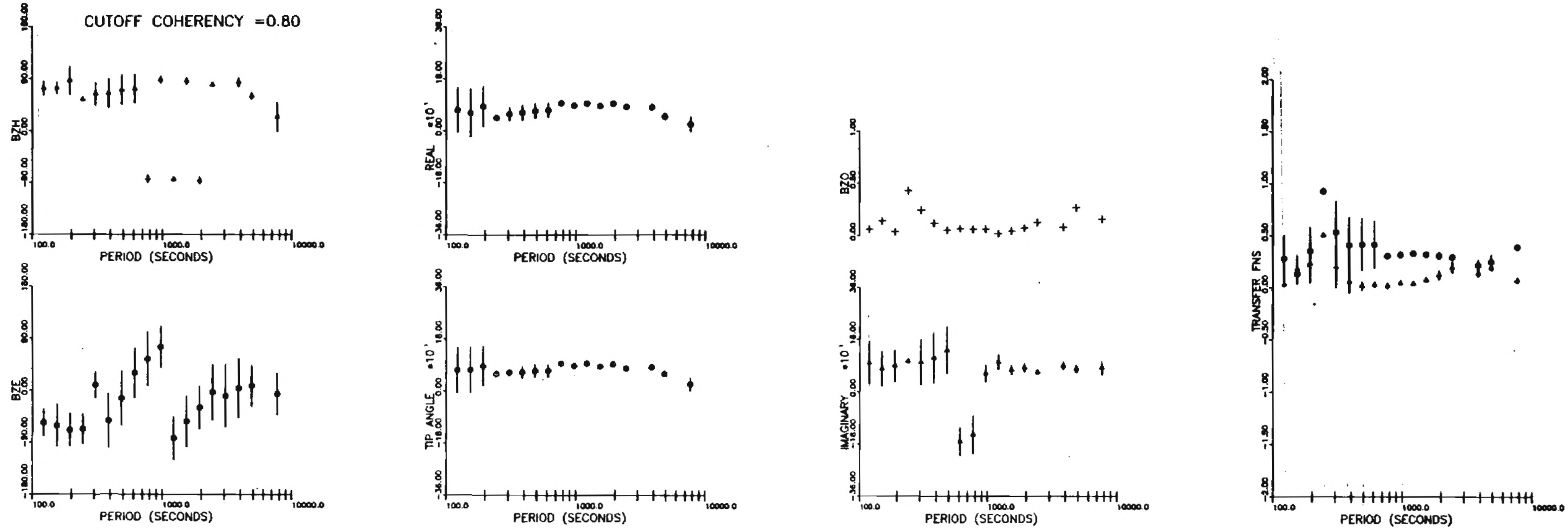
WASHINGTON



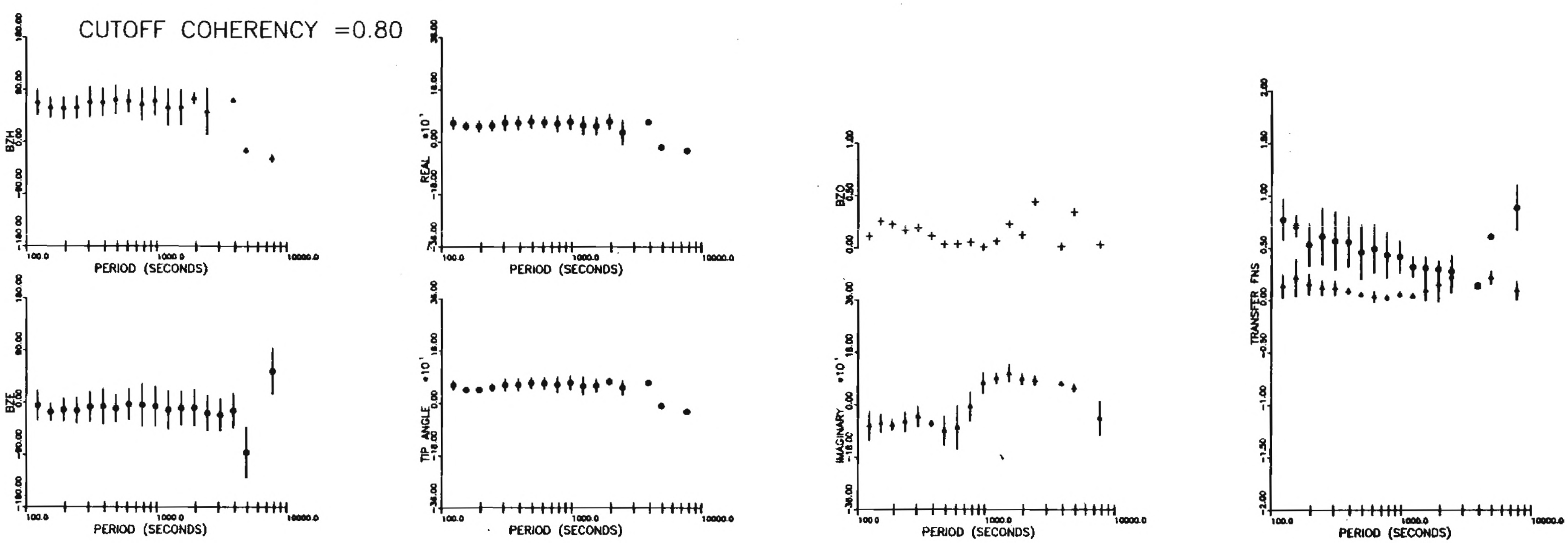
045 ANTREVILLE

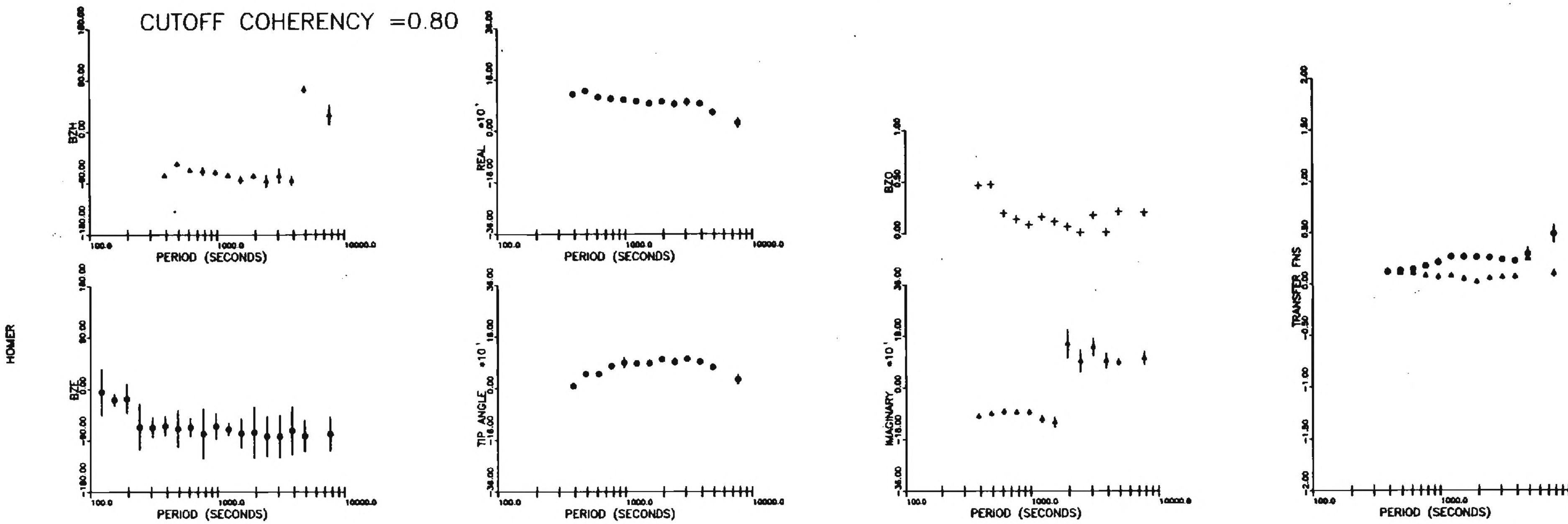


055 N. ELBERTON

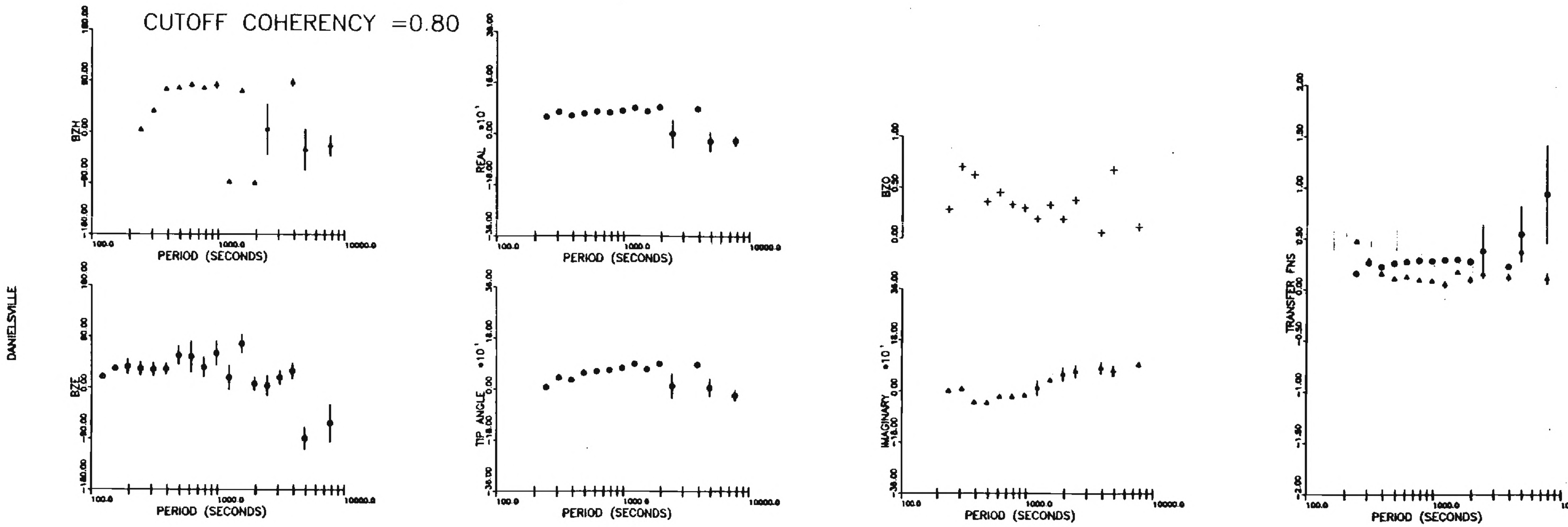


ELBERTON



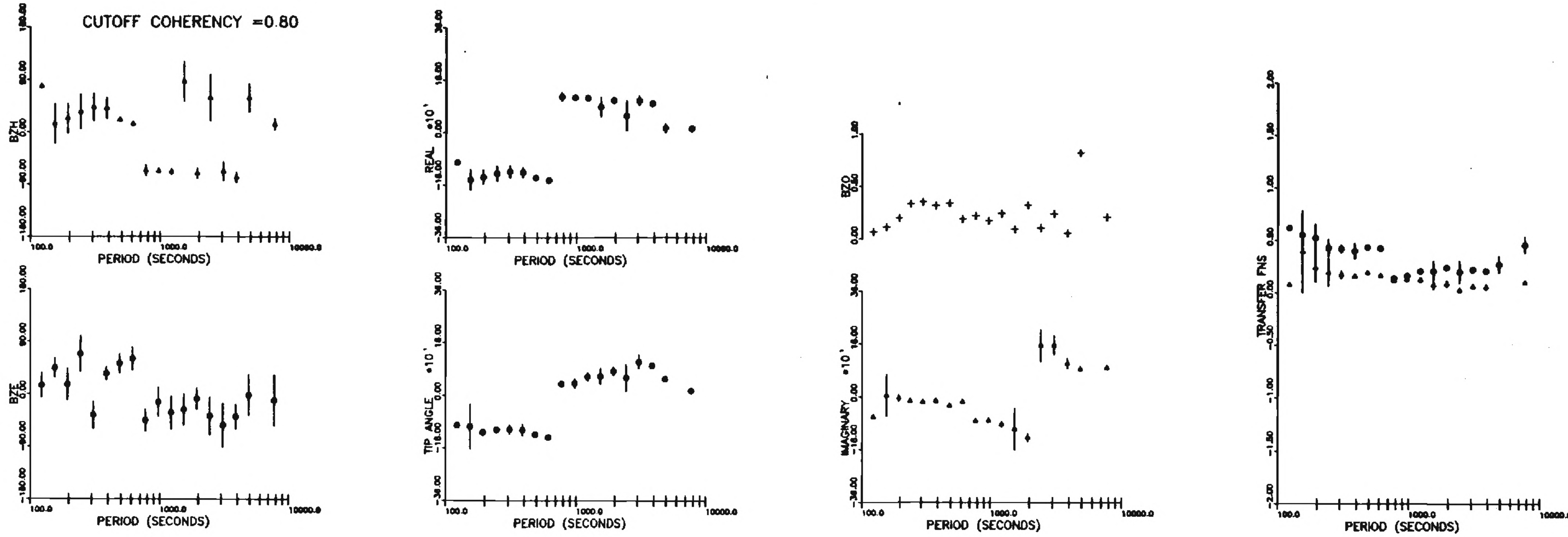


CUTOFF COHERENCY =0.80
HOMER
BZH
BZE
REAL *10'
TIP ANGLE *10'
BZQ
IMAGINARY *10'
TRANSFER FNS
100.0
1000.0
10000.0
PERIOD (SECONDS)

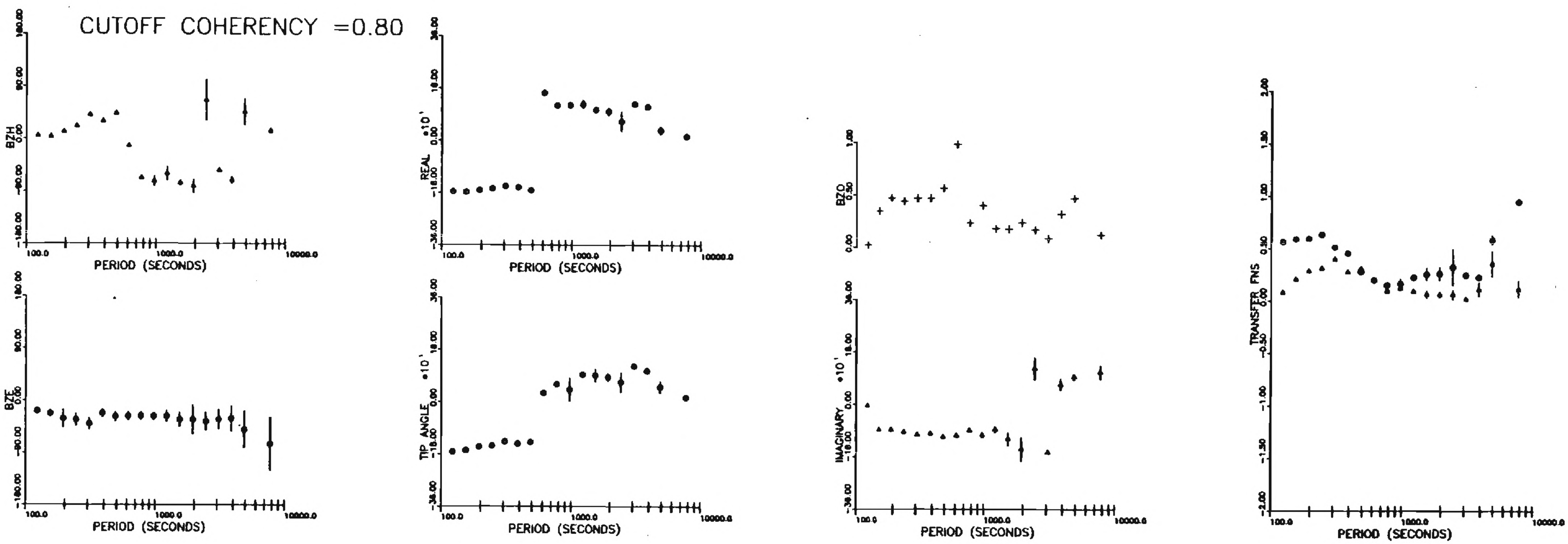


CUTOFF COHERENCY =0.80
DANIELSVILLE
BZH
BZE
REAL *10'
TIP ANGLE *10'
BZQ
IMAGINARY *10'
TRANSFER FNS
100.0
1000.0
10000.0
PERIOD (SECONDS)

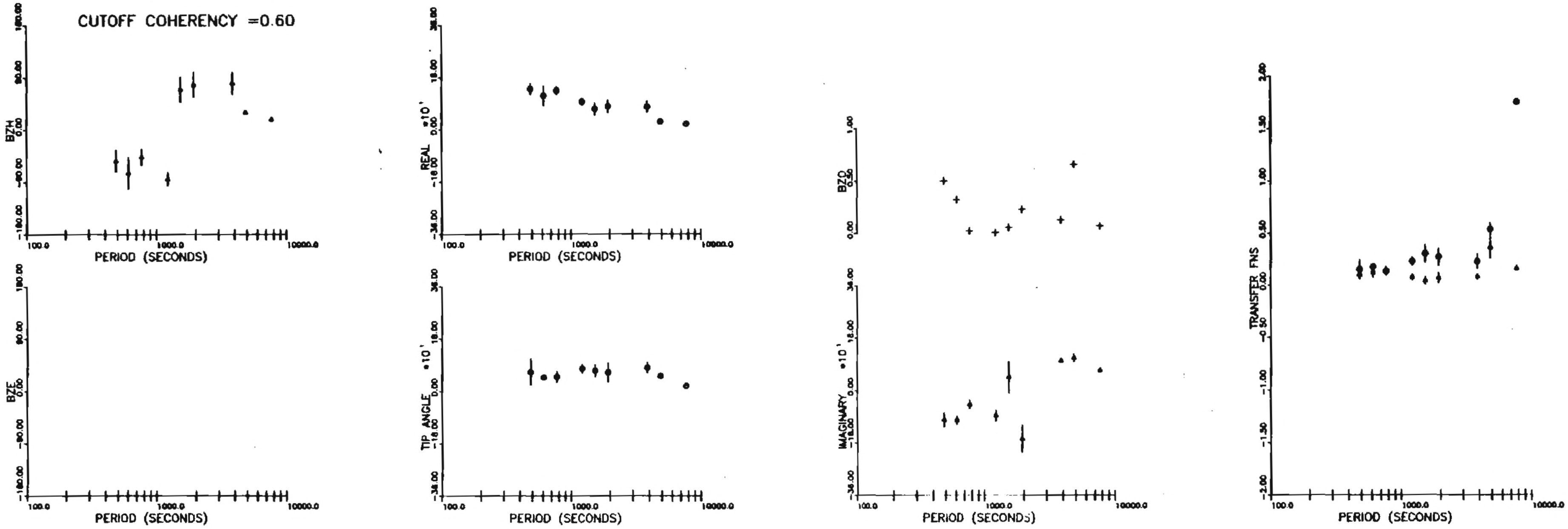
D9D CLEVELAND



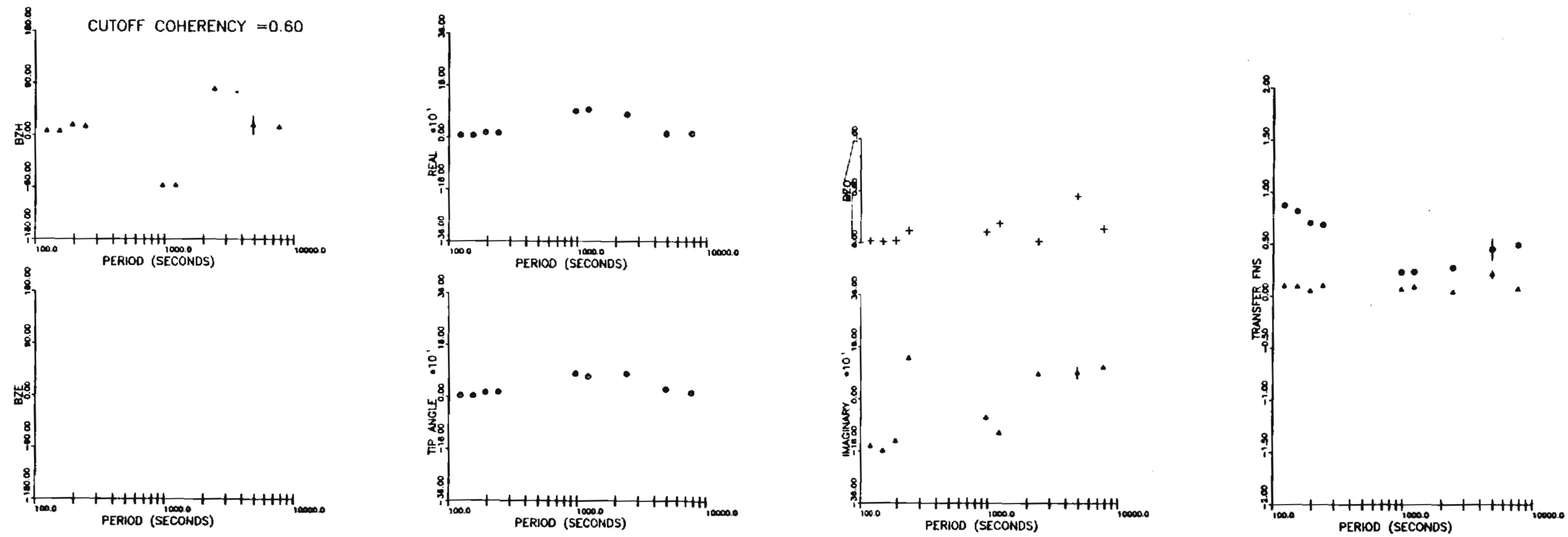
CORNELIA



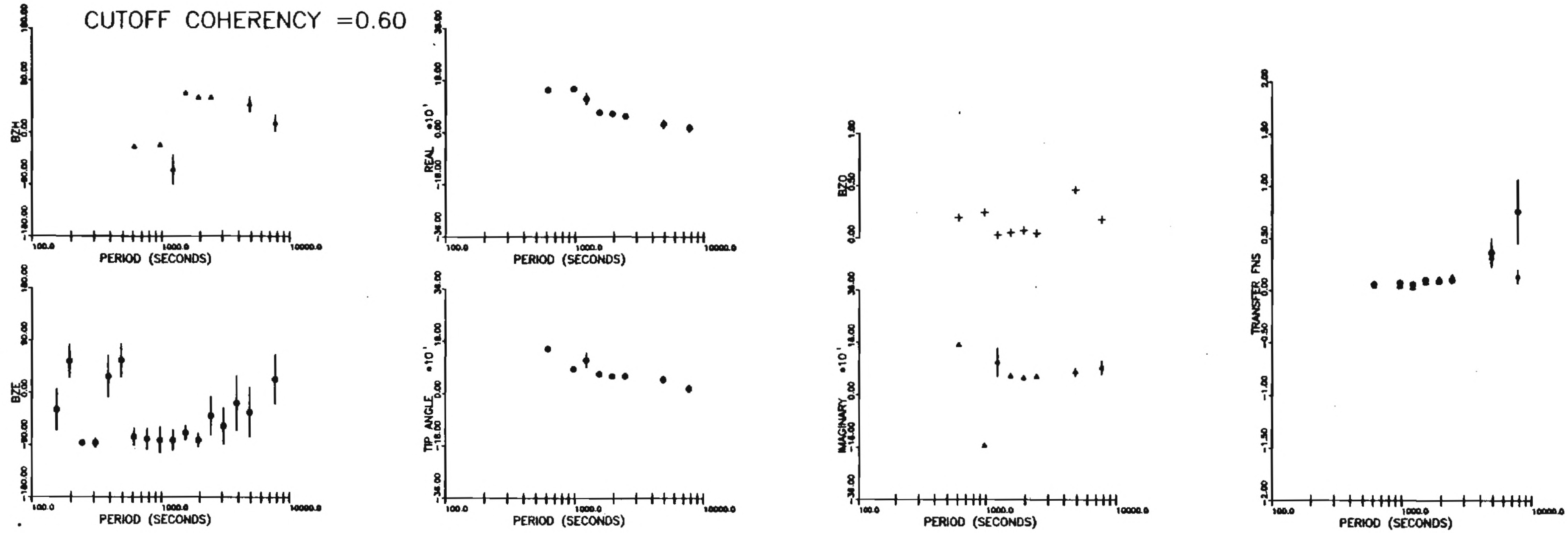
YOUNG HARRIS



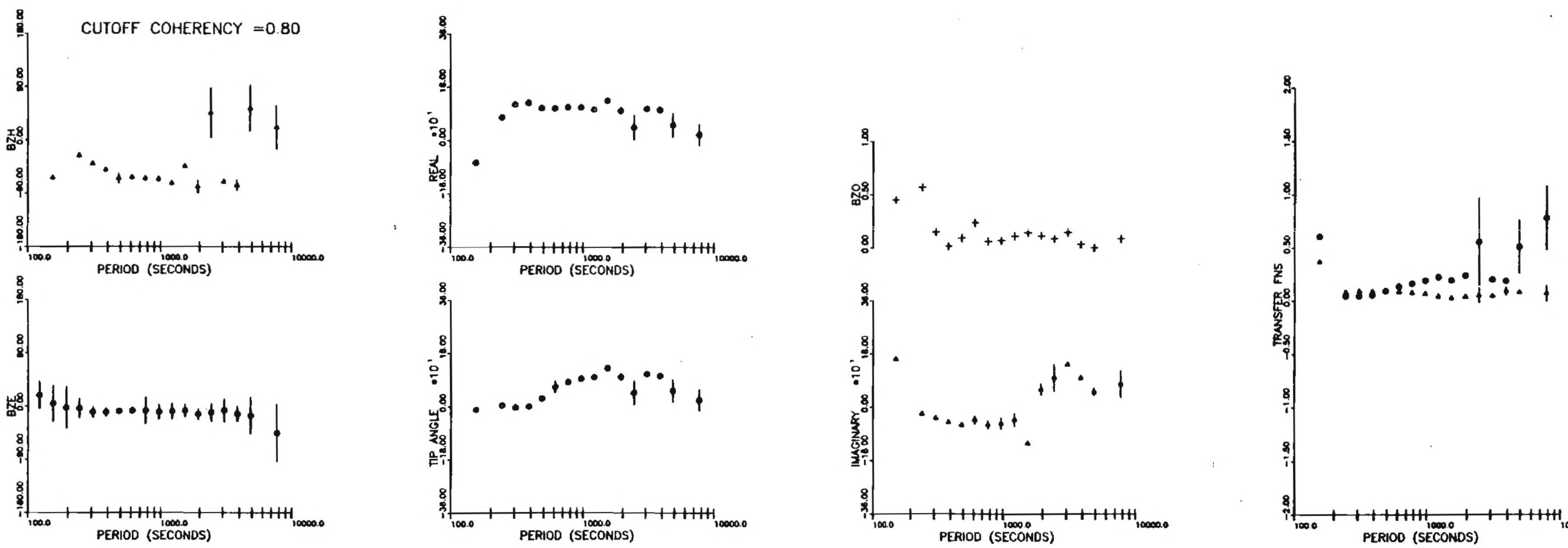
110 TALULLAH FALLS

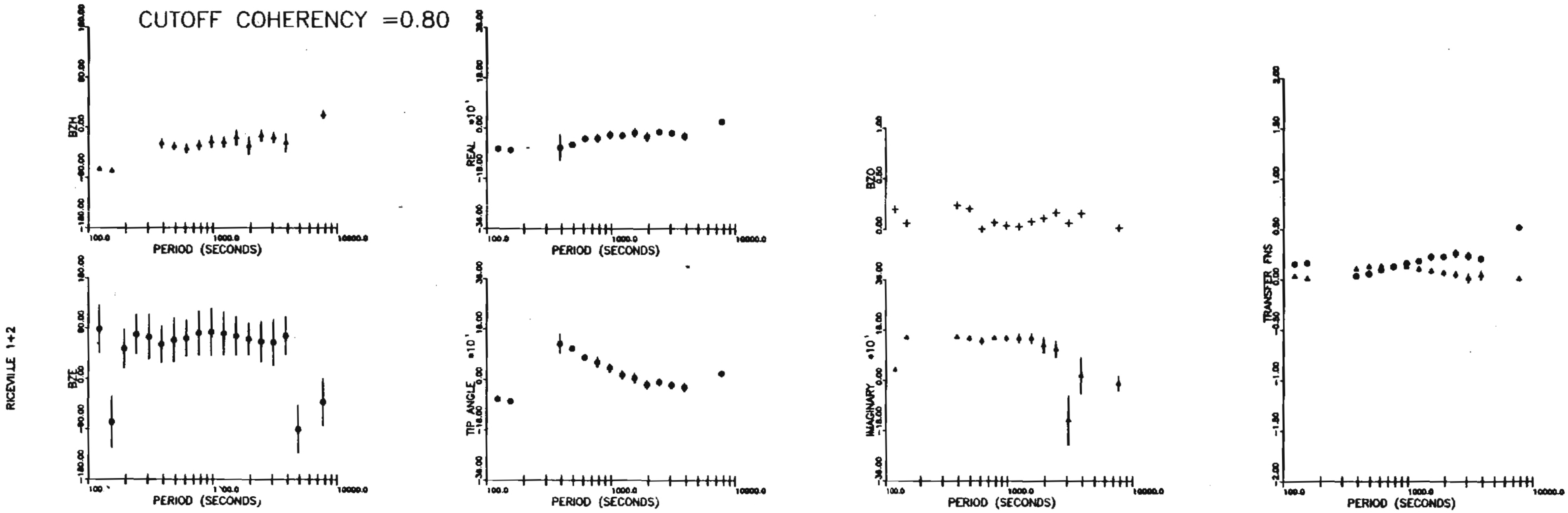


DUCKTOWN 1+2



120 DILLARD




CUTOFF COHERENCY =0.80
RICEVILLE 1+2
BZH
BZE
REAL *10'
TIP ANGLE *10'
BZO
IMAGINARY *10'
TRANSFER FNS
PERIOD (SECONDS)

MAGNETOTELLURIC IMPEDENCE TENSORS FOR ALL STATIONS WHERE AVAILABLE
****

THE IMPEDENCE TENSORS WERE DETERMINED FOR ALL STATIONS WHERE TELLURIC LINES COULD BE LAID. THE TENSORS WERE COMPUTED ONLY FOR THE DATA COLLECTED AT THE RATE OF 32 SAMPLES PER MINUTE. THE LONG PERIOD DATA (AT 1 S.P.M.) ALWAYS YIELDED TOO LARGE A SKEW AND WERE DISREGARDED FOR MAGNETO TELLURICS.

SUMMARY INFORMATION STATION -20 TWIN CITY 32SPM
****

	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	2.4114E+02	2.8853E+02	3.6568E+00	52.	94.	89.	.26	.08	7.	3.838E+02	2.130E+02	1.349E+01	2.285E+00
10	1.5215E+02	2.3393E+02	3.3819E+00	64.	103.	89.	.26	.05	8.	3.427E+02	1.664E+02	1.449E+01	1.885E+00
11	1.2086E+02	3.1949E+02	5.2265E+00	74.	106.	88.	.45	.15	3.	3.545E+02	2.851E+02	1.226E+01	2.353E+00
12	9.6000E+01	3.2764E+02	4.3702E+00	80.	112.	88.	.48	.20	2.	3.345E+02	3.217E+02	1.246E+01	4.142E-01
13	7.6256E+01	2.5532E+02	1.2659E+00	68.	113.	-88.	.14	.01	3.	2.900E+02	2.417E+02	1.234E+01	1.203E-01
14	6.0572E+01	3.0355E+02	7.9544E-01	106.	124.	-81.	.41	.49	1.	3.036E+02	3.036E+02	7.954E-01	7.954E-01
15	4.8114E+01	4.7005E+02	1.7719E+00	103.	98.	-90.	.45	.52	2.	5.638E+02	3.940E+02	3.724E+00	1.398E+00
16	3.8218E+01	6.6464E+02	2.3403E+00	109.	156.	-87.	.34	.43	2.	7.901E+02	6.018E+02	8.464E+00	1.416E+00
17	3.0356E+01	4.2587E+02	1.2068E+01	110.	142.	-88.	.65	.50	1.	4.259E+02	4.259E+02	1.207E+01	1.207E+01

SUMMARY INFORMATION STATION 10 LOUISVILLE 32SPM
****

	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	2.4114E+02	4.8980E+02	5.7123E+00	26.	29.	-85.	.07	.03	4.	6.426E+02	1.325E+02	1.055E+01	4.850E+00
10	1.5215E+02	3.8829E+02	4.0670E+00	29.	27.	-84.	.10	.14	3.	3.423E+02	4.934E+02	7.618E+00	6.132E-01
11	1.2086E+02	2.4973E+02	1.3566E-01	28.	-3.	-87.	.35	.25	1.	2.497E+02	2.497E+02	1.357E-01	1.357E-01
12	9.6000E+01	1.2111E+02	1.4880E+00	24.	10.	86.	.62	.35	2.	1.302E+02	1.238E+02	3.166E-01	6.896E+00
13	7.6256E+01	1.2351E+02	1.1466E+01	26.	12.	78.	1.00	.47	1.	1.235E+02	1.235E+02	1.147E+01	1.147E+01
14	6.0572E+01	1.0936E+02	1.4318E+01	21.	-9.	76.	1.00	.68	1.	1.094E+02	1.094E+02	1.432E+01	1.432E+01
24	6.0572E+00	6.5517E-01	6.5398E-01	77.	25.	61.	1.00	.14	3.	1.117E+00	5.191E-01	6.855E-01	4.789E-01
25	4.8114E+00	2.2513E+00	1.3782E+00	86.	27.	66.	1.00	.08	1.	2.251E+00	2.251E+00	1.378E+00	1.378E+00

SUMMARY INFORMATION STATION 20 THOMSON 32SPM

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	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	7.7165E+03	8.3468E+04	4.5093E+04	-162.	-144.	16.	1.00	.08	1.	8.349E+04	8.349E+04	4.809E+04	4.809E+04
10	4.8686E+03	8.6860E+04	1.9169E+04	-152.	-143.	22.	1.00	.14	1.	8.686E+04	8.666E+04	1.917E+04	1.917E+04
11	3.8674E+03	7.8869E+04	8.5051E+03	-145.	-140.	25.	.89	.15	1.	7.889E+04	7.889E+04	8.505E+03	8.505E+03
12	3.0720E+03	4.7342E+04	8.0404E+03	-136.	-140.	21.	1.00	.16	1.	4.734E+04	4.734E+04	8.040E+03	8.040E+03
13	2.4402E+03	2.7513E+02	2.4424E+02	-141.	-156.	2.	1.00	.41	6.	1.169E+04	1.687E+02	8.699E+03	6.480E+00

SUMMARY INFORMATION STATION 30 CLARK HILL 32SPM

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	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	2.4114E+02	2.7186E+04	1.0776E+04	-145.	-149.	10.	1.00	.02	9.	2.721E+04	1.582E+04	1.037E+04	1.061E+04
10	1.5215E+02	1.6684E+04	7.5432E+03	-145.	-148.	9.	1.00	.01	9.	1.699E+04	1.474E+04	5.541E+03	8.421E+03
11	1.2086E+02	1.4987E+04	5.6296E+03	-145.	-148.	10.	1.00	.01	9.	1.206E+04	1.389E+04	2.871E+03	6.029E+03
12	9.6000E+01	1.0967E+04	3.9049E+03	-141.	-148.	10.	1.00	.04	9.	1.403E+04	6.951E+03	2.176E+03	2.337E+03
13	7.6256E+01	1.0951E+04	3.2449E+03	-139.	-147.	11.	1.00	.06	6.	8.266E+03	7.520E+03	1.207E+03	2.174E+03
14	6.0572E+01	9.9992E+03	3.0176E+03	-135.	-147.	11.	1.00	.10	4.	9.211E+03	7.489E+03	1.267E+03	4.491E+03
15	4.8114E+01	5.9767E+03	2.4805E+03	-130.	-140.	9.	1.00	.06	7.	8.396E+03	2.768E+03	8.251E+02	2.253E+03
16	3.8218E+01	3.6394E+03	3.5865E+03	45.	61.	-87.	1.00	.09	4.	4.630E+03	3.612E+03	1.869E+03	2.630E+03
17	3.0358E+01	3.3691E+03	2.8714E+03	46.	56.	-88.	1.00	.04	6.	3.032E+03	4.024E+03	2.086E+03	3.275E+03
22	9.6001E+00	5.0097E+03	4.9558E+02	-83.	-126.	18.	1.00	.23	1.	5.010E+03	5.010E+03	4.956E+02	4.956E+02

SUMMARY INFORMATION STATION 40 WASHINGTON 32SPM

****

	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	7.7165E+03	2.6901E+04	9.8426E+03	32.	20.	-88.	1.00	.04	1.	2.690E+04	2.690E+04	9.843E+03	9.843E+03
10	4.8688E+03	1.7111E+04	6.3832E+03	31.	21.	-89.	1.00	.15	1.	1.711E+04	1.711E+04	6.383E+03	6.383E+03
11	3.8674E+03	1.1766E+04	4.8652E+03	32.	24.	-89.	1.00	.24	1.	1.177E+04	1.177E+04	4.865E+03	4.865E+03

SUMMARY INFORMATION STATION 45 ANTREVILLE 32SPM

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	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	2.4114E+02	1.7330E+03	3.9200E+02	70.	76.	-78.	.43	.09	6.	2.146E+03	1.417E+03	6.077E+02	2.142E+02
10	1.5215E+02	1.7328E+03	3.3926E+02	83.	88.	-78.	.35	.06	6.	2.060E+03	1.405E+03	6.114E+02	1.337E+02
11	1.2086E+02	2.1459E+03	3.5958E+02	93.	97.	-78.	.32	.05	6.	2.560E+03	1.708E+03	8.062E+02	8.561E+01
12	9.6000E+01	2.3667E+03	3.5199E+02	101.	103.	-78.	.30	.04	6.	3.155E+03	1.528E+03	9.304E+02	4.817E+01
13	7.6256E+01	3.2917E+03	5.6292E+02	113.	114.	-78.	.42	.02	4.	3.976E+03	2.993E+03	1.032E+03	1.667E+02
14	6.0572E+01	4.1316E+03	5.5184E+02	121.	127.	-77.	.42	.03	3.	4.966E+03	3.344E+03	9.464E+02	2.606E+02
15	4.8114E+01	5.0535E+03	7.4774E+02	125.	147.	-75.	.22	.09	3.	6.990E+03	2.829E+03	1.083E+03	5.344E+02
16	3.8218E+01	6.0530E+03	1.0046E+03	133.	156.	-75.	.06	.11	3.	1.058E+04	3.287E+03	2.092E+03	4.462E+02
17	3.0358E+01	7.5636E+03	1.5031E+03	143.	166.	-77.	.16	.17	2.	8.990E+03	6.498E+03	1.683E+03	1.359E+03

SUMMARY INFORMATION STATION 60 DANIELSVILLE 32SPM

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	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	7.7165E+03	1.9306E+05	1.1622E+04	48.	63.	79.	1.00	.25	2.	2.480E+05	2.088E+05	3.106E+04	5.657E+03
10	4.8668E+03	1.1651E+05	2.6588E+03	59.	21.	75.	.87	.17	1.	1.165E+05	1.165E+05	2.659E+03	2.659E+03
14	1.9383E+03	4.3755E+04	4.9873E+03	49.	120.	84.	.83	.35	1.	4.375E+04	4.375E+04	4.987E+03	4.987E+03
15	1.5397E+03	2.9227E+04	7.4035E+02	33.	93.	74.	.75	.38	3.	5.967E+04	1.736E+04	9.698E+03	4.888E+02
16	1.2230E+03	1.1615E+04	6.7528E+03	-176.	-163.	16.	1.00	.15	2.	2.168E+04	6.509E+03	8.817E+03	6.131E+03
17	9.7146E+02	4.1763E+03	6.1867E+02	39.	70.	90.	1.00	.32	2.	3.398E+04	2.258E+04	3.501E+03	1.965E+03

SUMMARY INFORMATION STATION 60 CORNELIA 32SPM

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	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	2.4114E+02	2.9938E+03	3.4435E+01	40.	44.	-63.	.17	.08	11.	3.626E+03	2.761E+03	6.831E+01	3.644E+01
10	1.5215E+02	2.3782E+03	3.0920E+01	41.	48.	-64.	.17	.08	11.	2.740E+03	1.926E+03	5.010E+01	2.733E+01
11	1.2086E+02	2.4184E+03	3.9308E+01	42.	51.	-65.	.18	.06	11.	2.759E+03	1.722E+03	4.665E+01	3.951E+01
12	9.6000E+01	2.4702E+03	4.[illegible]676E+01	43.	55.	-65.	.19	.07	10.	2.674E+03	1.529E+03	4.885E+01	4.796E+01
13	7.6256E+01	2.4222E+03	5.3365E+01	43.	59.	-65.	.18	.06	10.	2.720E+03	1.160E+03	6.942E+01	4.088E+01
14	6.0572E+01	2.6606E+03	6.5756E+01	45.	60.	-66.	.20	.09	7.	3.347E+03	2.796E+03	7.924E+01	7.983E+01
15	4.8114E+01	2.4416E+03	6.2767E+01	46.	63.	-66.	.24	.10	8.	3.479E+03	1.623E+03	8.752E+01	8.940E+00
16	3.8218E+01	2.2730E+03	8.4561E+01	47.	64.	-68.	.37	.18	6.	2.731E+03	2.196E+03	1.030E+02	6.710E+01
17	3.0358E+01	1.8387E+03	9.1210E+01	43.	66.	-70.	.45	.16	7.	2.182E+03	1.234E+03	1.260E+02	4.984E+01
18	2.4114E+01	1.7832E+03	1.0989E+02	50.	66.	-69.	.51	.17	5.	2.121E+03	6.980E+02	1.028E+02	7.511E+01
19	1.9155E+01	1.5663E+03	8.6994E+01	50.	72.	-69.	.54	.20	5.	2.111E+03	1.057E+03	6.725E+01	8.829E+01
20	1.5215E+01	9.7692E+02	1.1016E+02	56.	90.	-75.	1.00	.38	3.	9.794E+02	7.194E+02	4.680E+01	1.366E+02
21	1.2086E+01	8.2321E+02	1.0156E+02	66.	85.	-78.	1.00	.21	2.	8.267E+02	8.708E+02	6.446E+01	1.479E+02

SUMMARY INFORMATION STATION 90 CLEVELAND 32SPM

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	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	2.4114E+02	3.2503E+01	3.9847E+00	-151.	-136.	6.	1.00	.00	3.	2.627E+01	4.895E+01	8.495E+00	3.654E+00
10	1.5215E+02	2.1620E+01	7.7179E+00	-127.	-130.	1.	1.00	.12	3.	8.760E+00	5.836E+01	2.023E+00	1.035E+01
11	1.2086E+02	1.6462E+02	1.5061E+01	-120.	-140.	6.	1.00	.10	1.	1.646E+02	1.646E+02	1.506E+01	1.506E+01
12	9.6000E+01	8.4912E+01	3.0466E+01	-128.	-107.	-1.	1.00	.12	1.	8.491E+01	8.491E+01	3.047E+01	3.047E+01
15	4.8114E+01	6.6433E+01	2.4297E+01	-96.	-124.	1.	1.00	.27	3.	6.047E+01	8.661E+01	2.287E+01	2.518E+01
16	3.8218E+01	1.6514E+02	3.2095E+01	-96.	-122.	3.	1.00	.19	3.	1.111E+02	2.512E+02	4.941E+01	3.479E+01
17	3.0358E+01	1.1342E+02	1.7150E+01	-104.	-117.	5.	1.00	.06	4.	1.317E+02	5.297E-01	4.406E+01	1.183E-01
18	2.4114E+01	3.9408E+02	1.5876E+01	-105.	-94.	15.	.89	.04	1.	3.941E+02	3.941E+02	1.588E+01	1.588E+01
19	1.9155E+01	2.3882E+02	1.0482E+01	-104.	-118.	16.	.89	.20	1.	2.388E+02	2.388E+02	1.048E+01	1.048E+01
25	4.8114E+00	4.4650E-02	1.9161E-02	36.	19.	-34.	1.00	.32	1.	4.465E-02	4.465E-02	1.916E-02	1.916E-02
26	3.8219E+00	9.5378E-02	1.6169E-02	50.	97.	-17.	.17	.16	1.	9.538E-02	9.538E-02	1.617E-02	1.617E-02

SUMMARY INFORMATION STATION 130 DUCKTOWN 32SPM

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	PERIOD	REXHY	REYHX	PHXY	PHYX	THETA	SKEW	BO	SUM				
8	2.4114E+02	2.8475E+01	1.1017E+00	-115.	-100.	-60.	1.00	.19	1.	2.847E+01	2.847E+01	1.102E+00	1.102E+00
11	1.2086E+02	8.2320E+01	3.0636E+00	-102.	-105.	-61.	1.00	.18	1.	8.232E+01	8.232E+01	3.064E+00	3.064E+00
12	9.6000E+01	1.0617E+02	4.6358E+00	-76.	-65.	-59.	1.00	.22	1.	1.062E+02	1.062E+02	4.636E+00	4.636E+00
13	7.6256E+01	9.8913E+01	9.6484E+00	-70.	-65.	-54.	1.00	.23	2.	1.242E+02	7.805E+01	1.063E+01	9.166E+00
14	6.0572E+01	1.7125E+02	6.7235E+00	-65.	-76.	-59.	1.00	.16	2.	1.873E+02	1.662E+02	9.589E+00	4.514E+00
15	4.8114E+01	1.3145E+02	1.0832E+00	-42.	-52.	-61.	.70	.18	2.	2.064E+02	7.186E+01	8.332E+00	8.043E+00
16	3.8218E+01	1.8389E+02	6.9133E+01	-141.	-153.	57.	1.00	.08	1.	1.839E+02	1.839E+02	6.913E+01	6.913E+01
17	3.0358E+01	2.8930E+02	1.8385E+02	-150.	158.	55.	1.00	.46	1.	2.893E+02	2.893E+02	1.839E+02	1.839E+02
18	2.4114E+01	7.8193E+02	7.4619E+00	-28.	-62.	-67.	.68	.05	1.	7.819E+02	7.819E+02	7.462E+00	7.462E+00
24	6.0572E+00	5.2871E+02	9.6870E+01	-167.	-91.	80.	.41	.21	1.	5.287E+02	5.287E+02	9.687E+01	9.687E+01
25	4.8114E+00	1.0696E+02	4.7350E+01	136.	149.	0.	1.00	.63	2.	1.346E+02	1.218E+02	1.102E+02	8.455E+01
26	3.8219E+00	5.7570E+02	5.6999E+01	-82.	-7.	68.	.20	.04	4.	7.522E+03	1.878E+02	1.377E+02	7.796E+00

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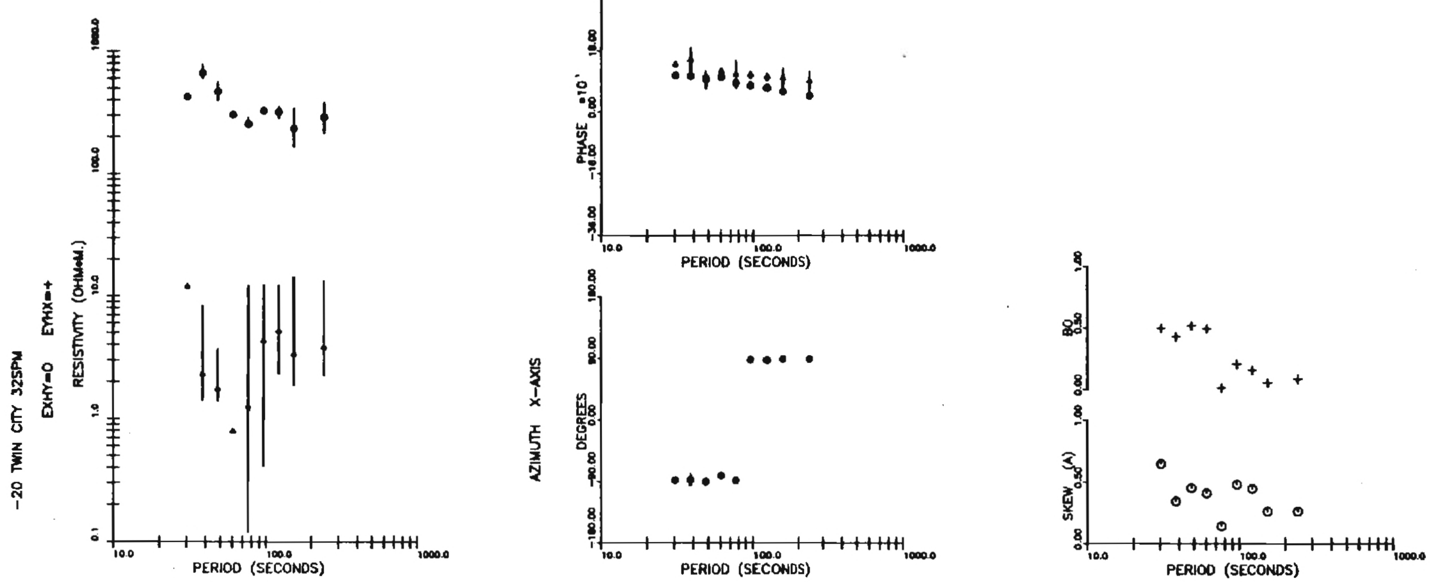

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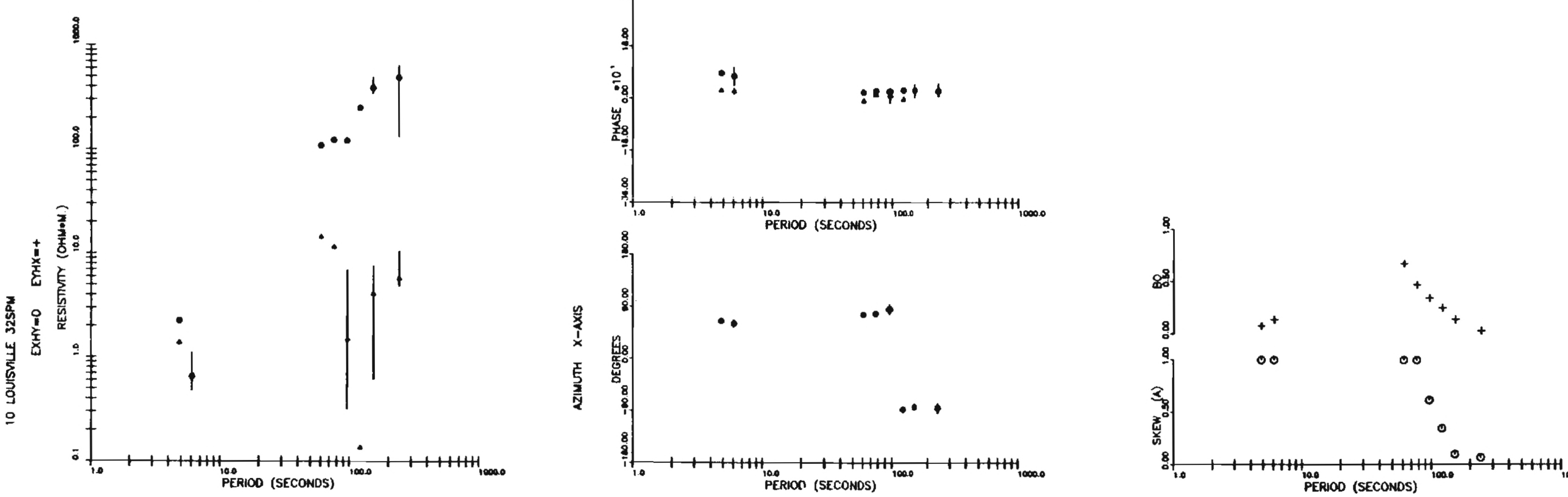

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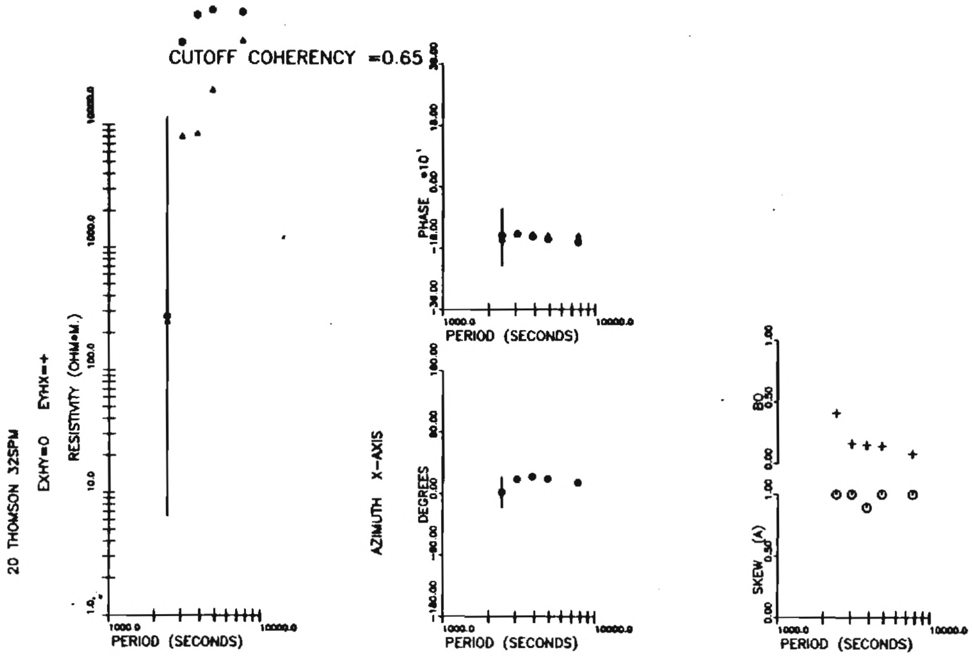

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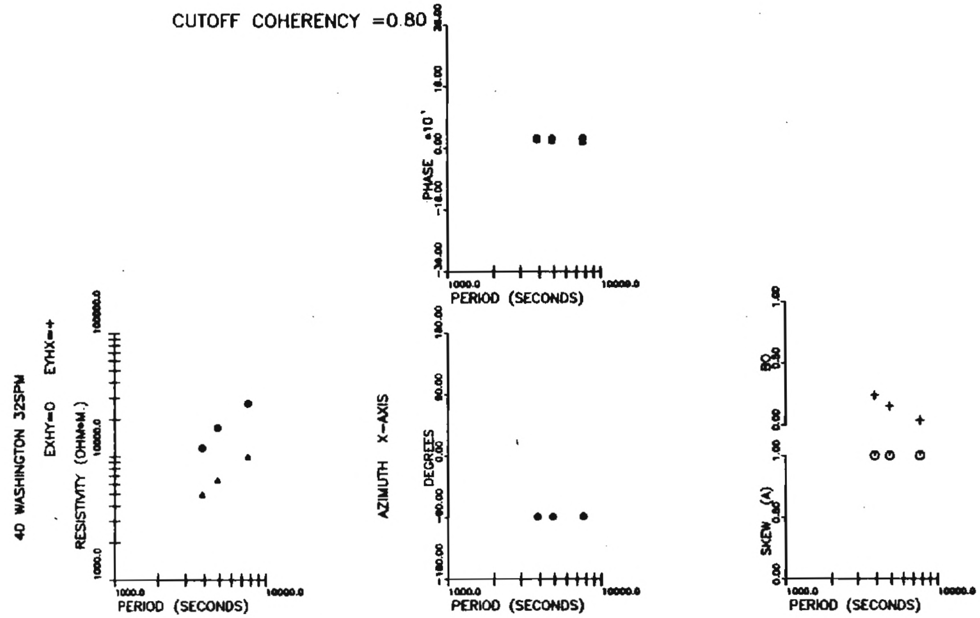

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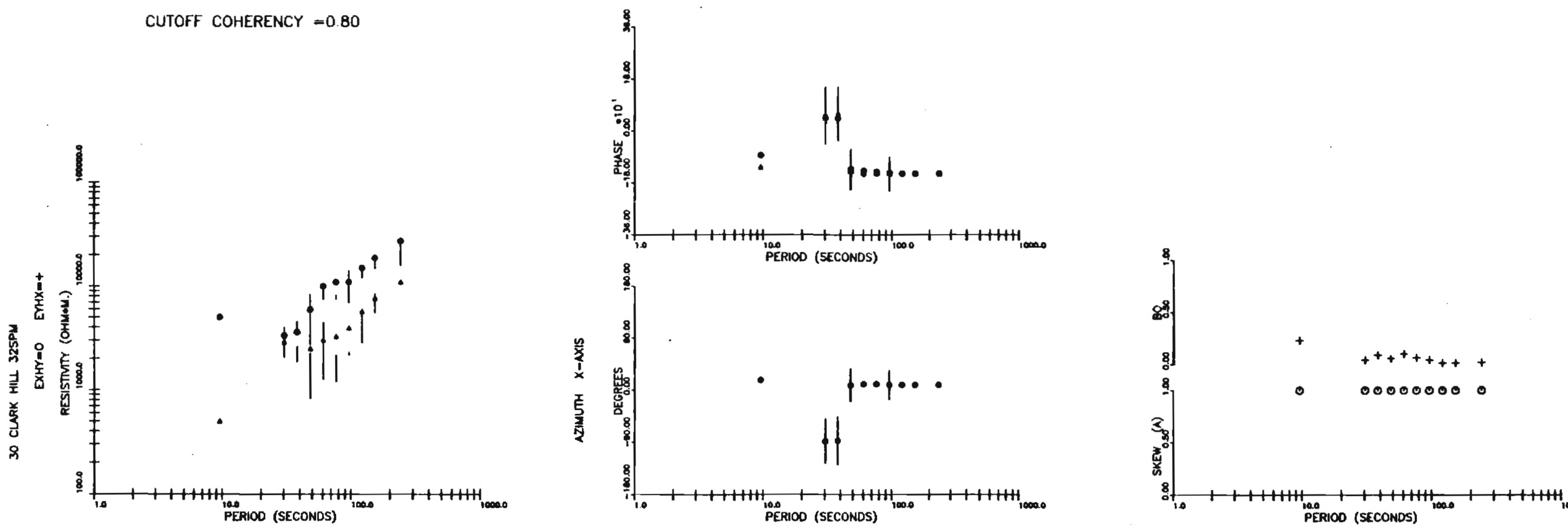

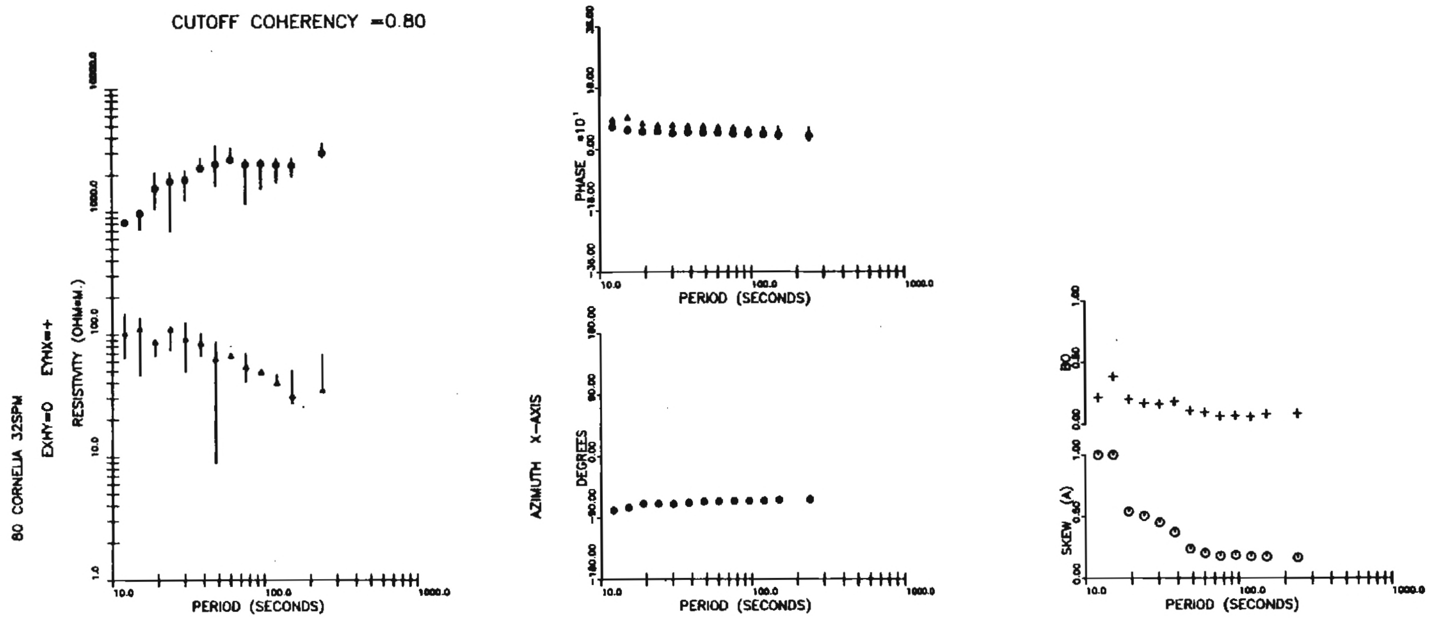
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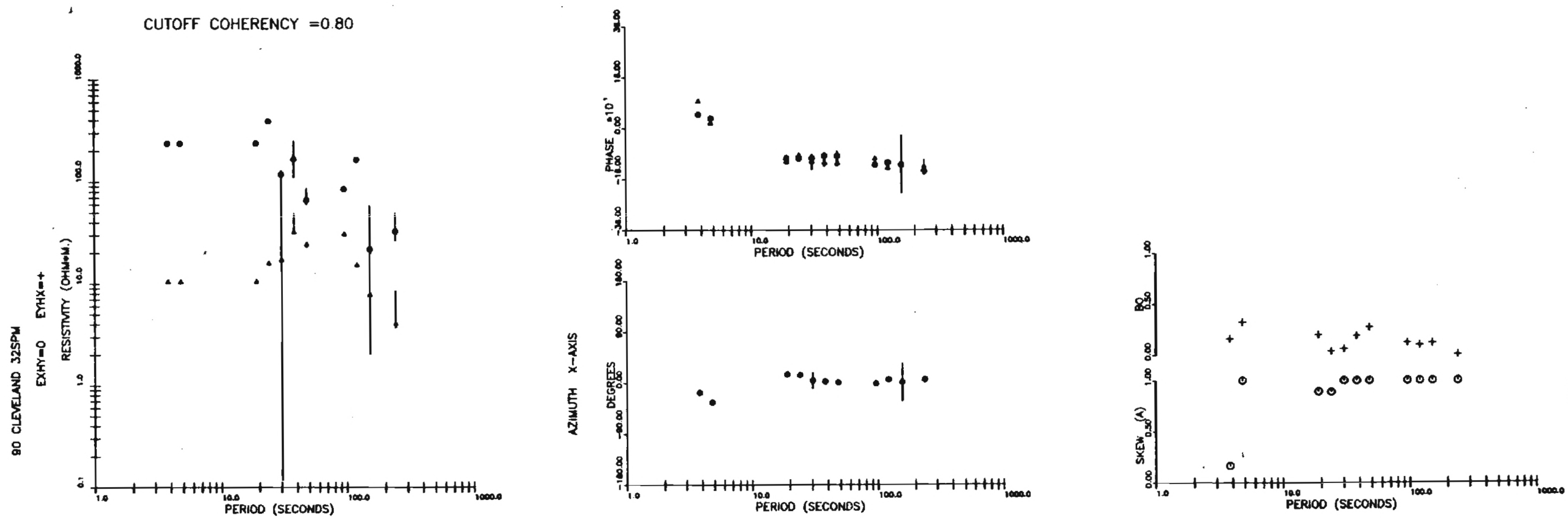
EXHY=O EYHX=+
RESISTIVITY (OHM*M.)
PERIOD (SECONDS)
PHASE *10¹
AZIMUTH X-AXIS
DEGREES
RO
SKEW (A)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EXHY=O EYHX=+
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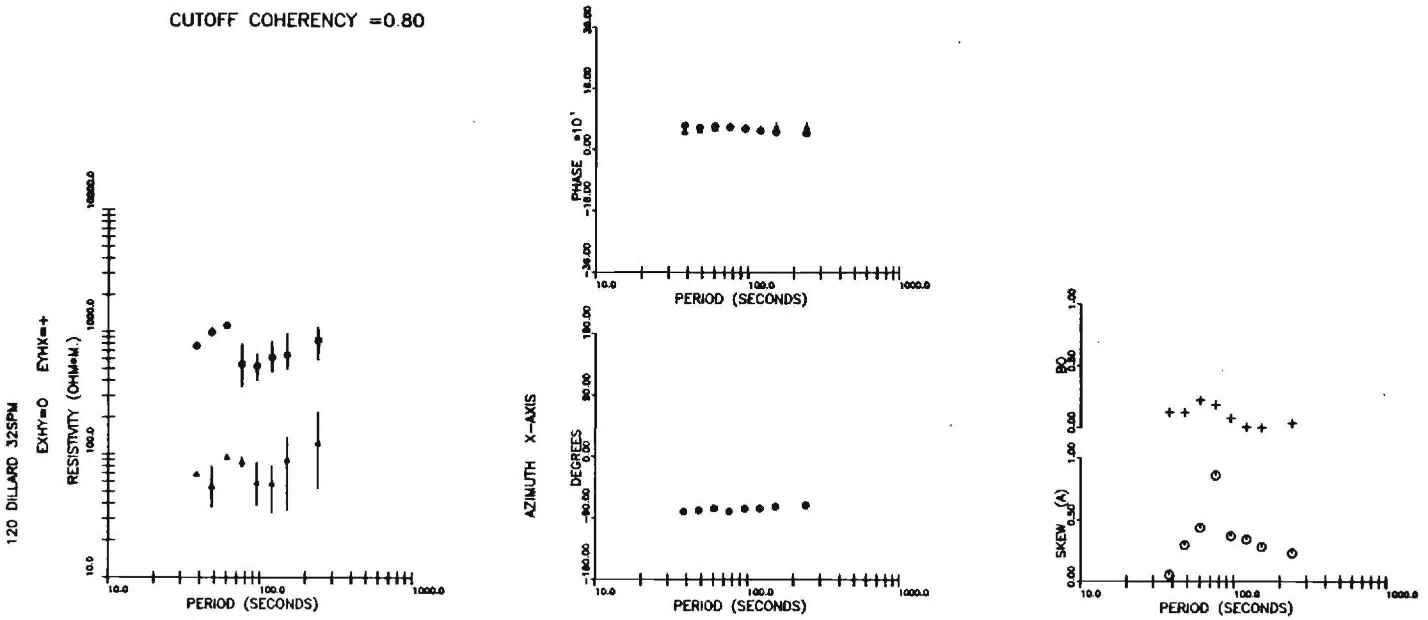
PHASE *10¹
AZIMUTH X-AXIS
DEGREES
RO
SKEW (A)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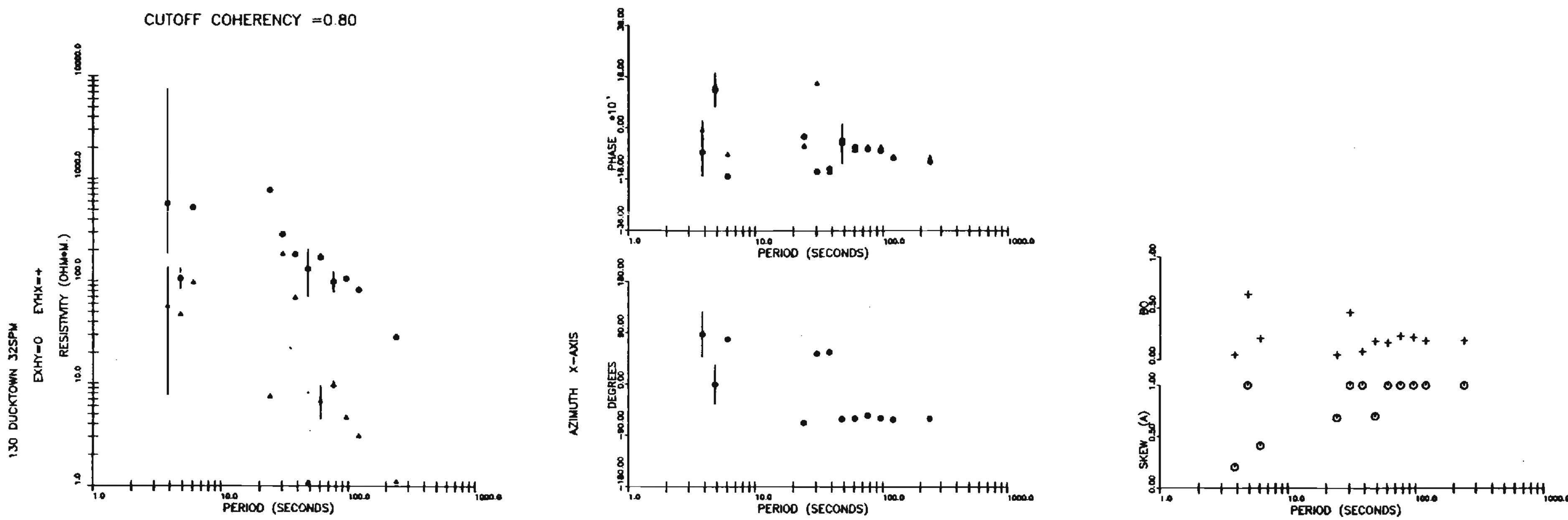
120 DILLARD 32SPM
EXHY=O EYHX=+
RESISTIVITY (OHM*M.)
PERIOD (SECONDS)
PHASE *10¹
AZIMUTH X-AXIS
DEGREES
RO
SKEW (A)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130 DUCKTOWN 32SPM
EXHY=O EYHX=+
RESISTIVITY (OHM*M.)
PERIOD (SECONDS)
PHASE *10¹
AZIMUTH X-AXIS
DEGREES
RO
SKEW (A)

Appendix 4: Theses, Publications, Communications

Bailey, R. C., Mareschal, J. C. and Musser, J. A., 1982, Geomagnetic deep soundings in the Southern Appalachians, 1982 Meeting of the Canadian Geophysical Union, Toronto.

Mareschal, J. C., Musser, J. A., and Bailey, R. C., 1982, Geomagnetic soundings in the southern Appalachians, 1982 AGU Spring Meeting, EOS, 18, 311.

Mareschal, J. C., Musser, J. A., and Bailey, R. C., 1983, Geomagnetic variation studies in the southern Appalachians: Preliminary results, Can. J. Earth Sciences, 20, 1434-1444.

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Musser, J. A., Jeng, Y., Mareschal, J. C., and Bailey, R. C., 1982, A geomagnetic variation survey in the southern Appalachians, 1982 SEG Meeting, Geophysics, 48, 471.

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Parkinson, W. D., and Jones, F. W., 1979, The geomagnetic coast effect, Review of Geophysics and Space Physics, 17, pp. 1999-2015.

Vozoff, K., 1972, The magnetotelluric method in the exploration of sedimentary basins, Geophysics, 37, pp. 98-141.

Word, D. R., Smith, H. W., and Bostick, F. X. Jr., 1971, Crustal investigations by the magnetotelluric tensor impedance method, in _The Structure and Physical Properties of the Earth Crust, Geophys. Mono. 14_, edited by J. G. Heacock, AGU, Washington, D. C.