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Informal Report

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**Toward Assessing the Geothermal Potential of the
Jemez Mountains Volcanic Complex:
A Telluric-Magnetotelluric Survey**

University of California

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Toward Assessing the Geothermal Potential of the Jemez Mountains Volcanic Complex: A Telluric-Magnetotelluric Survey

John F. Hermance*

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*Brown University, Providence, RI 02912

TOWARD ASSESSING THE GEOTHERMAL POTENTIAL OF THE JEMEZ MOUNTAINS VOLCANIC COMPLEX: A TELLURIC-MAGNETOTELLURIC SURVEY

by

John F. Hermance
Brown University

ABSTRACT

Telluric-magnetotelluric studies were performed in the Jemez Mountains of north-central New Mexico to characterize the total geothermal system of the Valles Caldera and to be integrated with an east-west regional survey supported by the United States Geological Survey. The data from the regional survey indicate that electrically the San Juan Basin to the west of the Jemez Mountains is rather homogeneous in contrast to the eastern side near Las Vegas where the presence of a broad heterogeneous structure is clearly sensed. The data from the Jemez Mountain area are strikingly similar to other Rio Grande rift data and suggest a conducting layer at a depth of approximately 15 km. The telluric data indicate that the hydrothermal system in the area is of a localized nature.

I. INTRODUCTION

The central objective of this telluric-magnetotelluric research program funded by the Los Alamos Scientific Laboratory (LASL) was to provide constraints on the characterization of the total geothermal system associated with the evolution of the Jemez Mountains in north-central New Mexico and was closely integrated with a regional survey initiated by our group and supported by the United States Geological Survey (USGS).

For those sites where reasonable data were available, conventional magnetotelluric parameters were calculated leading to standard estimates of the tensor impedance, which are included as an appendix to this report. Moreover, in many cases, two sites were operated simultaneously and telluric transfer tensors were calculated as well.

For those sites that exhibit a consistent two-dimensional quality, models of interpreted resistivity versus depth were calculated using a "continuous" inversion scheme for the resistivity determined from the electric field polarized parallel to geologic strike. In some cases, data from several sites close to each other can in fact be overlaid and lead to consistent, though somewhat generalized models of the actual resistivity as a function of depth.

A. The Regional Survey

Maps of north-central New Mexico on which normalized telluric ellipses at each site are shown represent the local polarization of the horizontal electric field when referred to a circularly polarized electric field of unit amplitude.

The telluric ellipse at a site on the Colorado Plateau near Farmington has practically a circularly polarized telluric field. Apparently, this site situated in the broad San Juan Basin is not affected by local inhomogeneities. In contrast, sites on the eastern side of the Sangre de Cristo Mountains near Las Vegas are clearly sensing the presence of a broad heterogeneous structure. Telluric ellipses at sites located in the Rio Grande rift near Santa Fe have similar qualities to those from some sites in the Jemez Mountains (JE-B, Baca-4, JE-10, JE-11). Moreover, broadband magnetotelluric data from these sites are remarkably similar.

B. The Baca Grant Survey

Through the cooperation of the Geothermal Division of Union Oil and personnel at LASL, seventeen short-period (10-100 s) telluric sites were occupied in the Baca Grant within the Valles Caldera. Maps have been plotted showing normalized telluric ellipses calculated at 20 seconds for these sites. Anomalously large telluric ellipses at two sites in Valle Grande (southeastern part of the caldera) apparently represent a local perturbation due to a resistive resurgent dome. In sharp contrast, sites in the north-western part of the caldera have anomalously low amplitudes which may be associated with locally enhanced electrical conductivities in the shallow crust as a result of local hydrothermal activity.

On the other hand, one is impressed with the similarity of the telluric field polarization at many sites. In general, the telluric field pattern allows one to discriminate between those sites representative of regional features and those sites influenced by local perturbations.

C. Deep Structure of the Jemez Mountains

Magnetotelluric data from the Jemez base site has an inflection in the magnetotelluric response between 100 and 1000 seconds strikingly similar to the data from the southern Rio Grande rift reported by Pedersen and Hermance¹ and the north-central rift reported by Hermance and Pedersen.² The Jemez data suggest the presence of a conducting layer at a depth of approximately 15 km beneath the Jemez Mountains.

Magnetotelluric data recorded at a number of satellite sites in the Jemez Mountains show a similar feature and suggest that the conducting layer, present beneath the Rio Grande rift and perhaps representing a magma accumulation, extends laterally beneath the Jemez Mountains and the Valles Caldera.

Perhaps the resurgence of volcanic activity in the Valles Caldera several million years ago was associated with the creation of this zone at that time. Since then, the thermal imprint of this event has declined in intensity at shallow levels, although molten magma, probably of a tholeiitic composition, still persists at 15 km depth. The telluric data in the Jemez Mountains do not suggest a major conducting anomaly at shallow depth such as might be associated with a major magma body or even a widespread hydrothermal system. At present, significant concentrations of crustal hydrothermal activity appear to be localized in nature and controlled more by shallow structure than by a regional convective system associated with an active magma body.

II. OVERVIEW OF THE RESEARCH PROGRAM

The central objective of the telluric-magnetotelluric research program described below was to provide constraints on the characterization of the total geothermal system associated with the evolution of the Jemez Mountains in north-central New Mexico. Clearly, the most vigorous geothermal systems are those for which the hydrothermal, the hot dry rock, and the magmatic source rock are intimately coupled to one other. Therefore, our goal was to assist in evaluating the coupling of these three geothermal regimes beneath this area.

This research was closely integrated with a parallel program of our group supported by the USGS. This involved a regional telluric-magnetotelluric traverse beginning in the Great Plains, crossing the Rio Grande rift in the vicinity of the Jemez Mountains and terminating on the Colorado Plateau. The two research programs were designed to complement each other in both a practical and a philosophical way. In a practical sense, assembling equipment, performing the field programs, reducing the data, and interpreting the data were optimized in that redundant activities and costs were minimized.

In a philosophical sense, the USGS program provided regional constraints on thermal processes in the deep crust and upper mantle, whereas the LASL program was a site-specific characterization of not only the geothermal potential of the Jemez Mountains and the Valles Caldera, but the relation of this geothermal activity to deeper processes in the crust and mantle as well.

Upon completion of the survey the sites shown in Table I had been occupied. However, good data were not retrieved from all the sites. This was due to a number of factors, such as local lightning storms destroying data quality, the inability to transfer data from tapes, and in some cases inexperience on the part of the field crew in discriminating between good and bad data sets while on-site.

However, for those sites where reasonable data were available, conventional magnetotelluric parameters were calculated leading to standard estimates of the tensor impedance^{3,4} for computer codes.⁵ Moreover, in many cases, two sites were operated simultaneously and telluric transfer tensors were calculated as well.^{6,7}

Attached as an appendix to this report are the various telluric and magnetotelluric parameters for each site. In particular, principal resistivity values as a function of period are tabulated and plotted in graph form.

For those sites that exhibit a consistent two-dimensional quality, models of true resistivity versus depth were calculated using the inversion scheme of Francis Bostick³ for the resistivity determined from the electric field polarized parallel to geologic strike. As is well-known, apparent resistivities determined from this component (as opposed to the perpendicular component) are the least affected by near-surface structural heterogeneities. Often the parallel apparent resistivity leads to reasonable estimates of the regional vertical electrical structure. In our case, data from several sites close to each other can in fact be overlaid and lead to consistent, though somewhat generalized models of the actual resistivity as a function of depth. On the other hand, a number of data sets show the contaminating effects of geologic structure local to the specific site; hence these data cannot be directly used in delineating the lateral character of deep coherent structures within a given area. Nevertheless, our study has suggested the results summarized in the following section.

TABLE I
TELLURIC-MAGNETOTELLURIC SITES OCCUPIED BY BROWN UNIVERSITY
IN NORTH-CENTRAL NEW MEXICO

<u>AREA</u>	<u>TYPE OF SITE</u>	<u>PERIOD RANGE</u>
Farmington	2 base	10-10 000 s w/short period data from indus- trial source
Jemez Mtns.	1 base 12 satellite 17 remote (Baca Grant)	10-10 000 s 10-4 000 s
Las Vegas, NM	1 base 2 satellites	10-10 000 s 10-3 000 s
Santa Fe	1 base 2 satellites 2 remote	10-10 000 s 10-4 000 s 10- 100 s

III. SCIENTIFIC RESULTS

A. The Regional Survey

Included in this report is a map (Fig. 1) of north-central New Mexico on which our telluric-magnetotelluric sites are located. At each site a normalized telluric ellipse is shown, which represents the local polarization of the horizontal electric field, when referred to a circularly polarized electric field of unit amplitude induced in a homogeneous earth having a resistivity of 20 ohm-m (Hermance and Pedersen, manuscript in preparation). For this presentation, we assume that local distortion of the telluric field is of surficial origin so that the telluric transfer matrix has only real elements. The advantage of presenting data in this way is that one circumvents the question of two-dimensionality or three-dimensionality of geologic structures at a field site. The telluric ellipses represent basic information concerning the distortion of regional telluric fields above and beyond any consideration of two or three dimensionality.

For example, site F-2, on the Colorado Plateau near Farmington has an almost circularly polarized telluric field. Apparently, this site situated in the broad San Juan Basin is not affected by local inhomogeneities. In contrast, the sites LV-Base and LV-2 on the eastern side of the Sangre de Cristo Mountains are clearly sensing the presence of a broad heterogeneous structure.

Other heterogeneous features appear on the map. For example, in the Jemez Mountains, JE-6 shows a strong east-west polarization, whereas JE-5, although nearby, has a relatively uniform polarization. Such an effect could be explained by JE-6 being located above a basement horst block, whereas JE-5 is located at the edge of the block.

Fig. 1.
Normalized telluric ellipses - North Central New Mexico.

Sites JE-2 and JE-3 were located on top of a sharp-walled mesa and apparently are disturbed by local topographic effects.

In the Baca Grant, B-1 is decidedly larger than JE-Base, while B-3 is only moderately enhanced. B-1 is apparently seeing a local perturbation due to the resurgent dome on whose flank it is located.

We feel that it is significant that the telluric ellipses at sites located in the Rio Grande rift have similar qualities to those in the Jemez Mountains. We will see that the broadband magnetotelluric data from these six sites (seven, including B-3) are remarkably similar.

B. The Baca Grant Survey

Through the cooperation of the Geothermal Division of Union Oil and personnel at LASL, seventeen short-period (10-100 s) telluric sites were occupied in the Baca Grant within the Valles Caldera. Included as part of this report is a map (Fig. 2) showing normalized telluric ellipses calculated at 20 s for these sites.

Fig. 2.

Normalized telluric ellipses - Baca Grant.

Inspection of the map reveals anomalously large telluric ellipses at sites 1 and 10, apparently representing a local perturbation due to the resurgent dome. In sharp contrast, sites 13-16 have anomalously low amplitudes. However, one must be cautioned that sites 14-16 also have low telluric field predictabilities (on the order of 0.3) whereas site 13 has predictabilities on the order of 0.75. Although we have not evaluated any possible bias in the telluric transfer tensor due to these low predictabilities, we nevertheless feel that these four sites (13-16) may indeed be associated with locally enhanced electrical conductivities in the shallow crust, perhaps a result of local hydrothermal activity. Clearly, a more detailed survey should be considered for this area.

A somewhat different impression emerges when the ellipses at sites 5, 8, 9, 11, (B-3), 12, and 17 (B-5) are compared. Here one is impressed with the similarity of the telluric field polarization of these sites.

In general, we feel the telluric field pattern allows one to discriminate between those sites representative of regional features and those sites influenced by local perturbations.

C. Deep Structure of the Jemez Mountains

Magnetotelluric data from the Jemez base site (JE-B) are presented in Fig. 3, where data are shown in which the electric field predictability for either component is greater than 0.8. In Fig. 4, we show data where both predictabilities are greater than 0.9. This appears to be a very restrictive condition.

In Fig. 5, we show data where either predictability (usually E-Max) has to be larger than 0.9 and where the skewness coefficients are less than 0.4. The circled points represent data for which the maximum electric field component has a predictability less than 0.85 (0.82 to 0.84). These data may be biased downward somewhat from their true values by noise on the magnetic component. Nevertheless, the inflection in the magnetotelluric response between 100 and 1000 s is strikingly similar to the data from the southern Rio Grande rift reported by Pedersen and Hermance¹ and the north-central rift reported by Hermance and Pedersen².

The interpretation of magnetotelluric data from those two areas indicated a zone of melt accumulation at a depth of 15 km beneath the north-central rift (Santa Fe) and at a depth of 27 km beneath the southern rift (El Paso). Since the best-resolved parameter of this layer was its section-conductance (thickness-conductivity product), a layer 750 m thick consisting of 100% melt ($T=1200^{\circ}\text{C}$; $\sigma = 2 \text{ S/m}$) is an upper limit on the melt concentration, whereas a layer 6 km thick consisting of 15% melt is a lower limit on the melt concentration.

It is instructive to consider the data from the Jemez base site in the light of these other results. In Fig. 6, we show a range of curves which might fit the principal apparent resistivity data parallel to geologic strike. Using Francis Bostick's continuous inversion scheme³, we have considered six models that fall within this range and have the responses indicated in Figs. 7 and 8. The interpreted resistivity in ohm-m as a function of depth in kilometers for each model is shown in Figs. 9-14, with a composite of all models shown in Fig. 15.

The degree to which apparent resistivity data in the period range 100-1000 s is biased downward by magnetic noise significantly affects the interpretation.

One does however obtain the impression from both the magnetotelluric data in Fig. 5 as well as the composite of the interpreted resistivities in Fig. 15, that the data do suggest the presence of a conducting layer at a depth of approximately 15 km beneath the Jemez Mountains.

Fig. 3.
Apparent resistivity versus frequency.

Fig. 4.
Apparent resistivity versus frequency.

Fig. 5.
Apparent resistivity versus frequency.

Fig. 6.
Apparent resistivity versus frequency.

Fig. 7.
Apparent resistivity versus frequency.

Fig. 8.
Apparent resistivity versus frequency.

Fig. 9.
Interpreted resistivity
profile.

Fig. 10.
Interpreted resistivity
profile.

Fig. 11.
Interpreted resistivity
profile.

Fig. 12.
Interpreted resistivity profile.

Fig. 13.
Interpreted resistivity profile.

Fig. 14.
Interpreted resistivity profile.

Fig. 15.
Interpreted resistivity profile.

In Figs. 16-17, the responses of Models 1-6 are compared with magnetotelluric data recorded at a number of satellite sites in the Jemez Mountains. At this point we feel that the similarities between these sites dominate over the differences and that the conducting layer, present beneath the Rio Grande rift and perhaps representing a magma accumulation, extends laterally beneath the Jemez Mountains and the Valles Caldera.

We might speculate that the resurgence of volcanic activity in the Valles Caldera several million years ago was associated with the creation of this zone at that time. Since then, the thermal imprint of this event has declined in intensity at shallow levels, although molten magma still persists at 15 km.

The telluric data in the Jemez Mountains do not suggest a major conducting anomaly at shallow depth such as might be associated with a major magma body or even a widespread hydrothermal system. Although present manifestations of geothermal activity in the Valles Caldera are ultimately related to volcanism, we see the present activity as a product of much more intensive activity over the last several million years. At present, significant concentrations of crustal hydrothermal activity appear to be localized in nature and controlled more by shallow structure than by a regional convective system associated with an active magma body.

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Fig. 16.
Interpreted resistivity profile.

Fig. 17.
Interpreted resistivity profile.

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APPENDIX

NORMALIZED TELLURIC ELLIPSES

I. LOCATION - BACA GRANT: VALLES CALDERA, NEW MEXICO

These data were acquired in cooperation with the Union Geothermal Division.

Section A.

Normalized telluric ellipses for a complex telluric transfer tensor driven by a unit amplitude telluric field having clockwise and counterclockwise circular polarizations.

Section B.

Normalized telluric ellipses for a real telluric transfer tensor driven by a unit amplitude circularly polarized electric field induced in a homogeneous medium having a resistivity of 20 ohm-m.

Part 1. 20 seconds

Part 2. 30 seconds

Section C.

Normalized and compensated telluric ellipses for Baca Satellite 1 (B-1) determined at 50 sec. and 65 sec.

II. LOCATION - REGIONAL DISTRIBUTION OF SITES ACROSS NORTHERN NEW MEXICO

These data were acquired through a joint research program supported by the Los Alamos Scientific Laboratory and the U. S. Geological Survey. The cooperation of the Union Geothermal Division was extended by way of allowing access to Union's leased properties in the Baca Grant, Valles Caldera.

The following data is arranged alphabetically by site:

Farmington Las Vegas
Jemez Mountains Santa Fe

and consists of two figures from each location representing the telluric ellipse referred to a unit amplitude circularly polarized electric field induced in a homogeneous medium having a resistivity of 20 ohm-m. One figure represents the transformation generated by applying only the real elements of the telluric transfer tensor, and results in a single ellipse. The other figure represents the transformation generated by applying a clockwise and counterclockwise electric field to the complex elements of the telluric transfer tensor, and results in an ellipse for both polarizations.⁷

INPUT IMPEDANCE TENSOR:

-0.0065 0.0232 0.1834 0.1257
-0.1146 -0.1237 -0.0110 -0.0472

COMPENSATED TELLURIC TRANSFER TENSOR:

0.6911 -0.1290 -0.0374 -0.0662
-0.1303 -0.0809 0.5330 0.0203

SANTE FE (BASE)
SF-B-2 (#321)
PERIOD: 1900

AXIS: 2

COMPENSATED TELLURIC ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 0.825
MINOR AXIS: 0.385
AZIMUTH: -22.665

CLOCKWISE ROTATION

MAJOR AXIS: 0.638
MINOR AXIS: 0.617
AZIMUTH: -34.212

INPUT IMPEDANCE TENSOR:

0.0468 0.0871 0.2074 0.3322
-0.2641 -0.2386 -0.0866 -0.0544

COMPENSATED TELLURIC TRANSFER TENSOR:

1.2066 0.2792 -0.2992 -0.0901
-0.3152 0.0720 1.1240 -0.0569

FARMINGTON (BASE)

FA-B-1 (#420)

PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.400
MINOR AXIS: 1.104
AZIMUTH: -37.790

CLOCKWISE ROTATION

MAJOR AXIS: 1.566
MINOR AXIS: 0.613
AZIMUTH: -40.341

INPUT IMPEDANCE TENSOR

0.0468 0.0871 0.2074 0.3322
-0.2641 -0.2386 -0.0866 -0.0544

NORMALIZED TELLURIC TRANSFER TENSOR

1.2066 0.2792 -0.2992 -0.0901
-0.3152 0.0720 1.1240 -0.0569

F-1

FARMINGTON (BASE)

FA-B-1 (#420)

PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.475
MINOR AXIS: 0.855
AZIMUTH: -41.369

INPUT IMPEDANCE TENSOR
 -0.0398 0.0263 0.2166 0.2506
 -0.1943 -0.2758 0.0232 0.0032

NORMALIZED TELLURIC TRANSFER TENSOR
 1.0446 0.0760 0.0301 -0.1476
 0.0591 -0.0446 1.0512 0.1824

F-2

FARMINGTON (BASE)
 FA-B-3 (#422)
 PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 1.093
 MINOR AXIS: 1.003
 AZIMUTH: 47.503

INPUT IMPEDANCE TENSOR:
 -0.0315 -0.0092 0.2020 0.2602
 -0.2103 -0.2568 -0.0031 0.0052

COMPENSATED TELLURIC TRANSFER TENSOR:
 1.0335 0.1302 0.0911 -0.0499
 0.0047 0.0186 1.0444 0.1041

FARMINGTON (BASE)
 FA-B-2 (#421)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 1.147
 MINOR AXIS: 1.023
 AZIMUTH: 35.937

CLOCKWISE ROTATION
 MAJOR AXIS: 1.048
 MINOR AXIS: 0.967
 AZIMUTH: 62.656

INPUT IMPEDANCE TENSOR:

-0.0398 0.0263 0.2166 0.2596
-0.1943 -0.2758 0.0232 0.0032

COMPENSATED TELLURIC TRANSFER TENSOR:

1.0446 0.0760 0.0301 -0.1476
0.0591 -0.0446 1.0512 0.1824

FARMINGTON (BASE)

FA-B-3 (#422)

PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.199
MINOR AXIS: 1.012
AZIMUTH: -5.624

CLOCKWISE ROTATION

MAJOR AXIS: 1.146
MINOR AXIS: 0.867
AZIMUTH: 71.832

INPUT IMPEDANCE TENSOR

-0.0615 -0.0085 0.1691 0.1972
-0.0598 -0.0896 0.0104 0.0167

NORMALIZED TELLURIC TRANSFER TENSOR

0.8190 0.0629 0.1564 -0.1184
0.0604 0.0141 0.3340 0.0665

JE - BASE

JENEZ MOUNTAINS (BASE)

JE-B-1 (#345)

PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.844
MINOR AXIS: 0.313
AZIMUTH: 9.664

INPUT IMPEDANCE TENSOR:
 -0.0615 -0.0085 0.1691 0.1972
 -0.0598 -0.0896 0.0104 0.0167

COMPENSATED TELLURIC TRANSFER TENSOR:
 0.8190 0.0629 0.1564 -0.1184
 0.0604 0.0141 0.3340 0.0665

JEMEZ MOUNTAINS (BASE)
 JE-B-1 (#345)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.966
 MINOR AXIS: 0.339
 AZIMUTH: 4.975

CLOCKWISE ROTATION
 MAJOR AXIS: 0.730
 MINOR AXIS: 0.291
 AZIMUTH: 15.972

INPUT IMPEDANCE TENSOR:
 -0.0796 -0.0717 0.2106 0.1489
 -0.0720 -0.1048 0.0057 0.0039

COMPENSATED TELLURIC TRANSFER TENSOR:
 0.8938 -0.1381 0.3383 -0.0176
 0.0215 -0.0040 0.3954 0.0733

JEMEZ MOUNTAINS (BASE)
 JE-B-2 (#347)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.847
 MINOR AXIS: 0.392
 AZIMUTH: 3.648

CLOCKWISE ROTATION
 MAJOR AXIS: 0.968
 MINOR AXIS: 0.278
 AZIMUTH: 19.024

INPUT IMPEDANCE TENSOR:

-0.1222 -0.0850 0.1361 0.1363
-0.0803 -0.1139 -0.0034 0.0406

COMPENSATED TELLURIC TRANSFER TENSOR:

0.6090 0.0005 0.4632 -0.0832
0.0832 0.0985 0.4341 0.0751

JEMEZ MOUNTAINS (BASE)

JE-B52-2 (#379)

PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 0.902

MINOR AXIS: 0.404

AZIMUTH: 25.449

CLOCKWISE ROTATION

MAJOR AXIS: 0.782

MINOR AXIS: 0.132

AZIMUTH: 26.758

INPUT IMPEDANCE TENSOR:

-0.0799 -0.0905 0.2361 0.1636
-0.0836 -0.1122 -0.0042 -0.0074

COMPENSATED TELLURIC TRANSFER TENSOR:

0.8936 -0.1621 0.3809 0.0238
-0.0258 -0.0072 0.4378 0.0638

JEMEZ-BACA (BASE)

JE-B51-1 (#385)

PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 0.897

MINOR AXIS: 0.439

AZIMUTH: 1.521

CLOCKWISE ROTATION

MAJOR AXIS: 1.101

MINOR AXIS: 0.352

AZIMUTH: 15.275

INPUT IMPEDANCE TENSOR
 -0.1851 -0.1848 0.3048 0.2769
 -0.0618 -0.0317 -0.0297 -0.0401

NORMALIZED TELLURIC TRANSFER TENSOR
 1.3005 -0.0623 0.8271 -0.0007
 -0.1560 -0.0233 0.2090 -0.0672

JE - 2

JEMEZ (SATELLITE)
 JE-BS2-2 (#380)
 PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 1.541
 MINOR AXIS: 0.260
 AZIMUTH: -0.744

INPUT IMPEDANCE TENSOR:
 -0.1851 -0.1848 0.3048 0.2769
 -0.0618 -0.0317 -0.0297 -0.0401

COMPENSATED TELLURIC TRANSFER TENSOR:
 1.3005 -0.0623 0.8271 -0.0007
 -0.1560 -0.0233 0.2090 -0.0672

JEMEZ (SATELLITE)
 JE-BS2-2 (#380)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 1.509
 MINOR AXIS: 0.205
 AZIMUTH: 0.677

CLOCKWISE ROTATION
 MAJOR AXIS: 1.576
 MINOR AXIS: 0.318
 AZIMUTH: -2.007

INPUT IMPEDANCE TENSOR:
 -0.2165 -0.3890 0.1975 -0.0128
 -0.1322 -0.2413 0.0020 0.0551

COMPENSATED TELLURIC TRANSFER TENSOR:
 0.4131 -0.4703 1.3539 0.3856
 0.1276 0.1187 0.8352 0.2440

JEMEZ (SATELLITE)
 JE-BS3-1 (#343)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 1.302
 MINOR AXIS: 0.099
 AZIMUTH: 47.419

CLOCKWISE ROTATION
 MAJOR AXIS: 2.148
 MINOR AXIS: 0.049
 AZIMUTH: 22.032

INPUT IMPEDANCE TENSOR
 -0.2165 -0.3890 0.1975 -0.0128
 -0.1322 -0.2413 0.0020 0.0551

NORMALIZED TELLURIC TRANSFER TENSOR
 0.4131 -0.4703 1.3539 0.3856
 0.1276 0.1187 0.8352 0.2440

JE - 3

JEMEZ (SATELLITE)
 JE-BS3-1 (#343)
 PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 1.645
 MINOR AXIS: 0.105
 AZIMUTH: 30.707

INPUT IMPEDANCE TENSOR

-0.1014 -0.1168 0.2276 0.1701
-0.1398 -0.2500 -0.0919 -0.0330

NORMALIZED TELLURIC TRANSFER TENSOR

0.8893 -0.1287 0.4879 0.0346
-0.2793 0.1315 0.8715 0.2463

JE - 5

JEMEZ (SATELLITE)
JE-B55-2 (#354)
PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.065
MINOR AXIS: 0.856
AZIMUTH: 30.796

INPUT IMPEDANCE TENSOR:

-0.1014 -0.1168 0.2276 0.1701
-0.1398 -0.2500 -0.0919 -0.0330

COMPENSATED TELLURIC TRANSFER TENSOR:

0.8893 -0.1287 0.4879 0.0346
-0.2793 0.1315 0.8715 0.2463

JEMEZ (SATELLITE)
JE-B55-2 (#354)
PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.140
MINOR AXIS: 0.917
AZIMUTH: -78.599

CLOCKWISE ROTATION

MAJOR AXIS: 1.199
MINOR AXIS: 0.587
AZIMUTH: 25.532

INPUT IMPEDANCE TENSOR
 0.1272 0.2667 0.1973 0.1302
 -0.5380 -0.8441 -0.2078 -0.2286

NORMALIZED TELLURIC TRANSFER TENSOR
 0.7323 -0.1499 -0.8806 -0.3119
 -0.9757 -0.0466 3.0904 0.6844

JE - 6

JEMEZ (SATELLITE)
 JE-BSS-1 (#358)
 PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 3.413
 MINOR AXIS: 0.411
 AZIMUTH: -71.608

INPUT IMPEDANCE TENSOR:
 0.1272 0.2667 0.1973 0.1302
 -0.5380 -0.8441 -0.2078 -0.2286

COMPENSATED TELLURIC TRANSFER TENSOR:
 0.7323 -0.1499 -0.8806 -0.3119
 -0.9757 -0.0466 3.0904 0.6844

JEMEZ (SATELLITE)
 JE-BSS-1 (#358)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 3.744
 MINOR AXIS: 0.392
 AZIMUTH: -67.688

CLOCKWISE ROTATION
 MAJOR AXIS: 3.244
 MINOR AXIS: 0.341
 AZIMUTH: -76.171

INPUT IMPEDANCE TENSOR
 -0.0504 -0.0661 0.1503 0.1386
 -0.0619 -0.0934 0.0279 0.0030

NORMALIZED TELLURIC TRANSFER TENSOR
 0.6461 -0.0263 0.2604 0.0351
 0.0691 -0.0556 0.3474 0.0704

PRED-EX: 0.918 PRED-EY: 0.876

JE-10

JEMEZ (SATELLITE)
 JE-BS10-1 (#368)
 PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 0.728
 MINOR AXIS: 0.284
 AZIMUTH: 18.456

INPUT IMPEDANCE TENSOR
 -0.0504 -0.0661 0.1503 0.1386
 -0.0619 -0.0934 0.0279 0.0030

NORMALIZED TELLURIC TRANSFER TENSOR
 0.6461 -0.0263 0.2604 0.0351
 0.0691 -0.0556 0.3474 0.0704

PRED-EX: 0.918 PRED-EY: 0.876

JE - 10

JEMEZ (SATELLITE)
 JE-BS10-1 (#368)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.664
 MINOR AXIS: 0.269
 AZIMUTH: 18.744

CLOCKWISE ROTATION
 MAJOR AXIS: 0.802
 MINOR AXIS: 0.293
 AZIMUTH: 24.572

INPUT IMPEDANCE TENSOR
 -0.0392 0.0233 0.2045 0.0944
 -0.0641 -0.0992 -0.1364 -0.0790

NORMALIZED TELLURIC TRANSFER TENSOR
 0.6683 -0.2462 0.0356 -0.1398
 -0.4816 0.1282 0.3651 0.0784

JE - 11

JEMEZ (SATELLITE)
 JE-BS11-1 (#370)
 PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 0.847
 MINOR AXIS: 0.308
 AZIMUTH: -41.188

INPUT IMPEDANCE TENSOR:
 -0.0392 0.0233 0.2045 0.0944
 -0.0641 -0.0992 -0.1364 -0.0790

COMPENSATED TELLURIC TRANSFER TENSOR:
 0.6683 -0.2462 0.0356 -0.1398
 -0.4816 0.1282 0.3651 0.0784

JEMEZ (SATELLITE)
 JE-BS11-1 (#370)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 1.090
 MINOR AXIS: 0.258
 AZIMUTH: -41.404

CLOCKWISE ROTATION
 MAJOR AXIS: 0.672
 MINOR AXIS: 0.356
 AZIMUTH: -32.210

INPUT IMPEDANCE TENSOR:

-0.0368 0.0123 0.1845 0.1142
-0.0613 -0.1002 -0.1362 -0.0762

COMPENSATED TELLURIC TRANSFER TENSOR:

0.6679 -0.1571 0.0549 -0.1098
-0.4749 0.1343 0.3612 0.0870

JEMEZ (SATELLITE)

JE-BS11-1 (#370)

PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.038

MINOR AXIS: 0.316

AZIMUTH: -43.414

CLOCKWISE ROTATION

MAJOR AXIS: 0.682

MINOR AXIS: 0.307

AZIMUTH: -32.682

INPUT IMPEDANCE TENSOR

-0.1431 -0.0942 0.3233 0.2619
-0.0971 -0.1754 0.0093 0.0478

NORMALIZED TELLURIC TRANSFER TENSOR

1.3084 -0.1372 0.5305 -0.1093
0.1277 0.0860 0.6094 0.1750

B-1

JEMEZ-BACA (SATELLITE)

JE-BS1-1 (#386)

PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.460

MINOR AXIS: 0.500

AZIMUTH: 15.710

INPUT IMPEDANCE TENSOR:
 -0.1431 -0.0942 0.3233 0.2619
 -0.0971 -0.1754 0.0093 0.0478

COMPENSATED TELLURIC TRANSFER TENSOR:
 1.3084 -0.1372 0.5305 -0.1093
 0.1277 0.0860 0.6094 0.1750

JEMEZ-BACA (SATELLITE)
 JB-BS1-1 (#386)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.480
 MINOR AXIS: 0.679
 AZIMUTH: 6.908

CLOCKWISE ROTATION
 MAJOR AXIS: 1.472
 MINOR AXIS: 0.289
 AZIMUTH: 21.597

INPUT IMPEDANCE TENSOR
 0.1021 0.0741 0.2315 0.2468
 -0.0581 -0.0602 0.0184 0.0176

NORMALIZED TELLURIC TRANSFER TENSOR
 1.0696 0.0341 -0.3940 0.0624
 0.0805 -0.0019 0.2644 0.0047

B-3

JEMEZ-BACA (SATELLITE)
 JB-BS3-1 (#410)
 PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 1.140
 MINOR AXIS: 0.276
 AZIMUTH: -0.845

INPUT IMPEDANCE TENSOR:

0.1021 0.0741 0.2315 0.2469
-0.0581 -0.0602 0.0184 0.0176

COMPENSATED TELLURIC TRANSFER TENSOR:

1.0696 0.0341 -0.3940 0.0624
0.0605 -0.0019 0.2614 0.0047

JEMEZ-BACA (SATELLITE)

JB-B62-1 (#410)

PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.070

MINOR AXIS: 0.273

AZIMUTH: -0.970

CLOCKWISE ROTATION

MAJOR AXIS: 1.210

MINOR AXIS: 0.279

AZIMUTH: -0.723

INPUT IMPEDANCE TENSOR

0.0096 0.0467 0.2339 0.1700
-0.0697 -0.1255 0.1086 0.0434

NORMALIZED TELLURIC TRANSFER TENSOR

0.9031 -0.1430 -0.1259 -0.0831
0.3398 -0.1457 0.4365 0.1246

B-4

JEMEZ-BACA (SATELLITE)

JB-B64-1 (#417)

PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.966

MINOR AXIS: 0.452

AZIMUTH: 21.896

INPUT IMPEDANCE TENSOR:
 0.0096 0.0467 0.2339 0.1700
 -0.0697 -0.1255 0.1086 0.0434

COMPENSATED TELLURIC TRANSFER TENSOR:
 0.9031 -0.1430 -0.1259 -0.0831
 0.3398 -0.1457 0.4365 0.1246

JEMEZ-PACA (SATELLITE)
 JB-BS4-1 (#417)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 1.032
 MINOR AXIS: 0.334
 AZIMUTH: 8.171

CLOCKWISE ROTATION
 MAJOR AXIS: 1.004
 MINOR AXIS: 0.467
 AZIMUTH: 40.704

INPUT IMPEDANCE TENSOR
 0.5591 1.0882 0.5712 0.3043
 -0.4575 -1.5981 0.4905 -0.2790

NORMALIZED TELLURIC TRANSFER TENSOR
 1.9575 -0.5968 -3.6834 -1.1832
 0.4730 -1.7207 4.5963 2.5505

LV-B

LAS VEGAS (BASE)
 LU-B-2 (#309)
 PERIOD: 1000

AXIS: 3

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 5.958
 MINOR AXIS: 1.802
 AZIMUTH: -48.518

INPUT IMPEDANCE TENSOR:
 0.5591 1.0882 0.5712 0.7043
 -0.4575 -1.5981 0.4905 -0.2790

COMPENSATED TELLURIC TRANSFER TENSOR:
 1.9575 -0.5968 -3.6834 -1.1832
 0.4720 -1.7207 4.5963 2.5505

LAS VEGAS (BASE)
 LU-E-2 (#709)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 6.395
 MINOR AXIS: 0.022
 AZIMUTH: -33.752

CLOCKWISE ROTATION
 MAJOR AXIS: 7.452
 MINOR AXIS: 1.902
 AZIMUTH: -69.293

INPUT IMPEDANCE TENSOR	NORMALIZED TELLURIC TRANSFER TENSOR
0.5557 0.4635 0.9990 0.6995	3.7978 -0.6697 -2.2791 0.2061
-0.8420 -0.9479 -0.3311 -0.0757	-0.9096 0.5711 4.0022 0.2368

LV-2

LAS VEGAS (SATELLITE)
 LU-B32-1 (#311)
 PERIOD: 1000

AXIS: 3

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 5.557
 MINOR AXIS: 2.362
 AZIMUTH: -41.855

INPUT IMPEDANCE TENSOR:
 0.5557 0.4635 0.9990 0.6995
 -0.8420 -0.9479 -0.3311 -0.0757

COMPENSATED TELLURIC TRANSFER TENSOR:
 3.7978 -0.6697 -2.2791 0.2061
 -0.9096 0.5711 4.0022 0.2388

LAS VEGAS (SATELLITE)
 LV-BS2-1 (#311)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 6.286

MINOR AXIS: 2.075

AZIMUTH: -45.516

CLOCKWISE ROTATION

MAJOR AXIS: 4.923

MINOR AXIS: 2.570

AZIMUTH: -34.366

INPUT IMPEDANCE TENSOR
 0.0087 0.0239 0.2111 0.1470
 -0.0801 -0.1094 0.0049 -0.0394

NORMALIZED TELLURIC TRANSFER TENSOR
 0.8007 -0.1434 -0.0728 -0.0339
 -0.0772 -0.0989 0.4238 0.0657

SF-BASE

SANTE FE (BASE)
 SF-BS2-4 (#350)
 PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 0.815

MINOR AXIS: 0.409

AZIMUTH: -10.948

INPUT IMPEDANCE TENSOR:
 -0.0065 0.0232 0.1834 0.1237
 -0.1146 -0.1237 -0.0110 -0.0472

COMPENSATED TELLURIC TRANSFER TENSOR:
 0.6911 -0.1290 -0.0374 -0.0662
 -0.1303 -0.0809 0.5330 0.0203

SANTE FE (BASE)
 SF-B-2 (#321)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.825
 MINOR AXIS: 0.385
 AZIMUTH: -22.665

CLOCKWISE ROTATION
 MAJOR AXIS: 0.638
 MINOR AXIS: 0.617
 AZIMUTH: -34.212

INPUT IMPEDANCE TENSOR:
 0.0087 0.0239 0.2111 0.1470
 -0.0801 -0.1094 0.0049 -0.0394

COMPENSATED TELLURIC TRANSFER TENSOR:
 0.8007 -0.1434 -0.0728 -0.0339
 -0.0772 -0.0989 0.4238 0.0657

SANTE FE (BASE)
 SF-B-2-4 (#350)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.893
 MINOR AXIS: 0.269
 AZIMUTH: -15.766

CLOCKWISE ROTATION
 MAJOR AXIS: 0.772
 MINOR AXIS: 0.521
 AZIMUTH: 4.987

INPUT IMPEDANCE TENSOR

0.0104 0.0320 0.1848 0.1444
-0.1034 -0.1197 -0.0129 -0.0247

NORMALIZED TELLURIC TRANSFER TENSOR

0.7360 -0.0902 -0.0949 -0.0483
-0.0839 -0.0265 0.4988 0.0364

SF-1

SANTE FE (SATELLITE)
SF-B31-3 (#327)
PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.766
MINOR AXIS: 0.469
AZIMUTH: -10.251

INPUT IMPEDANCE TENSOR:

0.0104 0.0320 0.1848 0.1444
-0.1034 -0.1197 -0.0129 -0.0247

COMPENSATED TELLURIC TRANSFER TENSOR:

0.7360 -0.0902 -0.0949 -0.0483
-0.0839 -0.0265 0.4988 0.0364

SANTE FE (SATELLITE)
SF-B31-3 (#327)
PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 0.848
MINOR AXIS: 0.411
AZIMUTH: -20.722

CLOCKWISE ROTATION

MAJOR AXIS: 0.692
MINOR AXIS: 0.522
AZIMUTH: -9.915

INPUT IMPEDANCE TENSOR
 -0.0325 -0.0338 0.1485 0.1014
 -0.0778 -0.0731 -0.0149 -0.0171

NORMALIZED TELLURIC TRANSFER TENSOR
 0.5587 -0.1053 0.1481 0.0028
 -0.0715 -0.0051 0.3374 -0.0104

SF-2

SANTE FE (SATELLITE)
 SF-B92-2 (#332)
 PERIOD: 1000

AXIS: 1.5

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 0.578
 MINOR AXIS: 0.344
 AZIMUTH: 2.665

INPUT IMPEDANCE TENSOR:
 -0.0325 -0.0338 0.1485 0.1014
 -0.0778 -0.0731 -0.0149 -0.0171

COMPENSATED TELLURIC TRANSFER TENSOR:
 0.5587 -0.1053 0.1481 0.0028
 -0.0715 -0.0051 0.3374 -0.0104

SANTE FE (SATELLITE)
 SF-B92-2 (#332)
 PERIOD: 1000

AXIS: 2

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.559
 MINOR AXIS: 0.335
 AZIMUTH: -5.670

CLOCKWISE ROTATION
 MAJOR AXIS: 0.621
 MINOR AXIS: 0.343
 AZIMUTH: 8.856

SECTION A

Part 1

Normalized Telluric Ellipses (Unit Amplitude Circularly
Polarized electric Field)

T = 20 Seconds

INPUT IMPEDANCE TENSOR
-0.7814 0.1217 0.7029 0.6352
-0.3824 -3.4264 -0.7648 0.9577

NORMALIZED TELLURIC TRANSFER TENSOR
0.4232 -0.0214 0.2086 -0.2856
0.0610 0.5447 1.2044 0.9626

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
PRED-EX: 0.623 PRED-EY: 0.722

JEMEZ-BACA LOCATION (REMOTE)
JB-B5-A
PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
MAJOR AXIS: 1.975
MINOR AXIS: 0.713
AZIMUTH: -84.708

CLOCKWISE ROTATION
MAJOR AXIS: 1.241
MINOR AXIS: 0.117
AZIMUTH: 78.739

INPUT IMPEDANCE TENSOR
-0.8390 1.1812 0.5336 0.3164
-1.5619 -4.1574 -1.3935 0.1726

NORMALIZED TELLURIC TRANSFER TENSOR
0.2688 -0.0687 -0.1082 -0.6389
-0.3861 0.4952 1.8086 0.8208

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
PRED-EX: 0.757 PRED-EY: 0.83

JEMEZ-BACA LOCATION (REMOTE)
JB-B7-A
PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
MAJOR AXIS: 2.669
MINOR AXIS: 0.703
AZIMUTH: -76.519

CLOCKWISE ROTATION
MAJOR AXIS: 1.393
MINOR AXIS: 0.337
AZIMUTH: -83.261

INPUT IMPEDANCE TENSOR
 -1.1419 0.3316 0.8351 1.0871
 -1.2578 -2.8143 -0.1494 0.1886

NORMALIZED TELLURIC TRANSFER TENSOR
 0.6078 0.0797 0.2563 -0.4660
 0.0124 0.1069 1.2877 0.4922

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.94 PRED-EY: 0.989

JEMEZ-BACA LOCATION (REMOTE)
 JB-B8-A
 PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 1.476
 MINOR AXIS: 1.124
 AZIMUTH: -87.065

CLOCKWISE ROTATION
 MAJOR AXIS: 1.303
 MINOR AXIS: 0.060
 AZIMUTH: 80.338

INPUT IMPEDANCE TENSOR
 -1.0942 0.1018 0.4511 0.6022
 -1.1359 -2.2656 -0.2372 -0.0536

NORMALIZED TELLURIC TRANSFER TENSOR
 0.3331 0.0478 0.3138 -0.3782
 -0.0920 0.0581 1.0756 0.3572

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.829 PRED-EY: 0.956

JEMEZ-BACA LOCATION (REMOTE)
 JB-B9-A
 PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 1.223
 MINOR AXIS: 0.792
 AZIMUTH: 83.997

CLOCKWISE ROTATION
 MAJOR AXIS: 1.080
 MINOR AXIS: 0.108
 AZIMUTH: 76.696

INPUT IMPEDANCE TENSOR
 -3.1935 0.4992 2.6051 4.0566
 -0.9660 -2.5465 -0.3867 0.3539

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
 2.1066 0.4590 0.8520 -1.1677
 -0.0104 0.2342 1.1107 0.4998

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.766 PRED-EY: 0.706

JEMEZ-BACA LOCATION (REMOTE)
 JB-B10-A
 PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 3.527
 MINOR AXIS: 1.438
 AZIMUTH: 0.513

CLOCKWISE ROTATION
 MAJOR AXIS: 1.351
 MINOR AXIS: 0.467
 AZIMUTH: 44.500

INPUT IMPEDANCE TENSOR
 -0.3414 -0.3207 1.5814 1.3473
 -0.7014 -1.0377 0.1290 0.5101

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
 0.9261 -0.0740 0.2094 -0.0065
 0.2021 0.1205 0.5500 0.1063

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.965 PRED-EY: 0.815

JEMEZ-BACA LOCATION (REMOTE)
 JB-B11-A
 PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.977
 MINOR AXIS: 0.627
 AZIMUTH: 19.991

CLOCKWISE ROTATION
 MAJOR AXIS: 1.059
 MINOR AXIS: 0.290
 AZIMUTH: 25.715

INPUT IMPEDANCE TENSOR
 -0.2914 -0.6041 1.1827 1.1066
 -0.9603 -1.5337 0.2216 0.4703

NORMALIZED TELLURIC TRANSFER TENSOR
 0.7239 -0.0241 0.2832 0.0989
 0.2188 0.0786 0.7887 0.1813

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.937 PRED-EY: 0.965

JEMEZ-BACA LOCATION (REMOTE)
 JB-B12-A
 PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.946
 MINOR AXIS: 0.563
 AZIMUTH: 60.399

CLOCKWISE ROTATION
 MAJOR AXIS: 1.126
 MINOR AXIS: 0.410
 AZIMUTH: 42.205

INPUT IMPEDANCE TENSOR
 0.9176 -0.0919 0.7250 -0.0040
 -0.3668 -0.9762 -0.0879 -0.2922

NORMALIZED TELLURIC TRANSFER TENSOR
 0.2280 -0.2306 -0.2611 0.3192
 -0.1202 -0.0646 0.4247 0.1927

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.732 PRED-EY: 0.778

JEMEZ-BACA LOCATION (REMOTE)
 JB-B13-A
 PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.623
 MINOR AXIS: 0.300
 AZIMUTH: -42.838

CLOCKWISE ROTATION
 MAJOR AXIS: 0.557
 MINOR AXIS: 0.485
 AZIMUTH: 20.805

INPUT IMPEDANCE TENSOR
-0.2473 0.4942 0.1219 0.2403
0.0183 -1.3397 0.0788 -0.1827

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.1145 0.0374 -0.0781 -0.2345
-0.0329 -0.0827 0.4179 0.4294

REMOTE TELLURIC TENSOR:
PRED-EX: 0.206 PRED-EY: 0.304

JEMEZ-BACA LOCATION (REMOTE)
JB-B14-A
PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
MAJOR AXIS: 0.653
MINOR AXIS: 0.150
AZIMUTH: -60.033

CLOCKWISE ROTATION
MAJOR AXIS: 0.660
MINOR AXIS: 0.022
AZIMUTH: -75.495

INPUT IMPEDANCE TENSOR
0.6279 0.1693 0.1780 0.0991
-0.1371 -0.1875 -0.2200 -0.1005

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.0877 -0.0250 -0.2521 0.1450
-0.1014 0.0378 0.1027 0.0159

REMOTE TELLURIC TENSOR:
PRED-EX: 0.321 PRED-EY: 0.094

JEMEZ-BACA LOCATION (REMOTE)
JB-B15-A
PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
MAJOR AXIS: 0.311
MINOR AXIS: 0.131
AZIMUTH: -27.065

CLOCKWISE ROTATION
MAJOR AXIS: 0.342
MINOR AXIS: 0.013
AZIMUTH: -18.151

INPUT IMPEDANCE TENSOR
0.1886 -0.4112 0.0942 -0.0365
-0.3208 -1.2652 -0.1126 -0.2924

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.0182 -0.0413 0.0704 0.1897
-0.1281 -0.0569 0.5015 0.2987

REMOTE TELLURIC TENSOR:
PRED-EX: 0.297 PRED-EY: 0.452

JEMEZ-BACA LOCATION (REMOTE)
JB-B16-A
PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 0.632
MINOR AXIS: 0.101
AZIMUTH: 76.889

CLOCKWISE ROTATION

MAJOR AXIS: 0.609
MINOR AXIS: 0.159
AZIMUTH: 72.771

INPUT IMPEDANCE TENSOR
0.1981 -0.7052 0.6678 0.6090
-0.8463 -1.6440 0.4776 0.3331

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.4038 -0.0186 0.1603 0.2857
0.2564 -0.0457 0.7875 0.2523

REMOTE TELLURIC TENSOR:
PRED-EX: 0.849 PRED-EY: 0.831

JEMEZ-BACA LOCATION (REMOTE)
JB-B17-A
PERIOD: 20

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 0.756
MINOR AXIS: 0.115
AZIMUTH: 78.871

CLOCKWISE ROTATION

MAJOR AXIS: 1.130
MINOR AXIS: 0.428
AZIMUTH: 57.015

SECTION A (CON'T)

Part 2

Normalized Telluric Ellipses (Unit Amplitude Circularly
Polarized Magnetic Field)

T = 30 seconds

INPUT IMPEDANCE TENSOR	NORMALIZED TELLURIC TRANSFER TENSOR
-0.5122 0.4083 0.2988 0.2825	0.2251 -0.0063 0.0403 -0.3565
-0.5352 -1.5022 -0.8519 0.2831	-0.2203 0.4396 0.7891 0.3745
BASE IMPEDANCE TENSOR:	REMOTE TELLURIC TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915	PRED-EX: 0.585 PRED-EY: 0.701

JEMEZ-BACA LOCATION (REMOTE)
JB-B7-A
PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
MAJOR AXIS: 1.386
MINOR AXIS: 0.530
AZIMUTH: -79.117

CLOCKWISE ROTATION
MAJOR AXIS: 0.382
MINOR AXIS: 0.139
AZIMUTH: -88.198

INPUT IMPEDANCE TENSOR	NORMALIZED TELLURIC TRANSFER TENSOR
-0.5274 -0.0621 0.7485 0.8199	0.6074 0.0277 0.2283 -0.1802
-1.1434 -2.0075 -0.6936 1.1314	0.1696 0.7068 1.2203 0.3347
BASE IMPEDANCE TENSOR:	REMOTE TELLURIC TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915	PRED-EX: 0.8 PRED-EY: 0.821

JEMEZ-BACA LOCATION (REMOTE)
JB-B5-A
PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
MAJOR AXIS: 1.945
MINOR AXIS: 0.802
AZIMUTH: 83.312

CLOCKWISE ROTATION
MAJOR AXIS: 0.849
MINOR AXIS: 0.139
AZIMUTH: 57.431

INPUT IMPEDANCE TENSOR
 -1.0984 -0.1435 0.6465 1.1372
 -0.5472 -1.8747 -0.3645 0.2133

NORMALIZED TELLURIC TRANSFER TENSOR
 0.6908 0.1900 0.4810 -0.3698
 -0.0586 0.2238 0.9380 0.5142

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.934 PRED-EY: 0.985

JEMEZ-BACA LOCATION (REMOTE)
 JB-B3-A
 PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.344
 MINOR AXIS: 1.203
 AZIMUTH: 53.292

CLOCKWISE ROTATION

MAJOR AXIS: 0.946
 MINOR AXIS: 0.102
 AZIMUTH: 63.406

INPUT IMPEDANCE TENSOR
 -1.0608 -0.0352 0.4737 0.9228
 -0.6569 -1.4784 -0.5448 0.0775

NORMALIZED TELLURIC TRANSFER TENSOR
 0.5409 0.1739 0.4245 -0.3972
 -0.1810 0.2410 0.8270 0.3182

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.846 PRED-EY: 0.9

JEMEZ-BACA LOCATION (REMOTE)
 JB-B9-A
 PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.225
 MINOR AXIS: 1.062
 AZIMUTH: 56.977

CLOCKWISE ROTATION

MAJOR AXIS: 0.663
 MINOR AXIS: 0.075
 AZIMUTH: 64.965

INPUT IMPEDANCE TENSOR
 -3.6558 -1.4509 2.6943 4.5658
 -0.6169 -1.6525 -0.2107 0.0724

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

NORMALIZED TELLURIC TRANSFER TENSOR
 2.8118 0.7248 1.9778 -0.8540
 -0.6536 0.1096 0.8789 0.4011

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.827 PRED-EY: 0.718

JENEZ-BACA LOCATION (REMOTE)
 JE-B10-A
 PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 4.560
 MINOR AXIS: 1.064
 AZIMUTH: 2.934

CLOCKWISE ROTATION
 MAJOR AXIS: 2.434
 MINOR AXIS: 0.440
 AZIMUTH: 17.517

INPUT IMPEDANCE TENSOR
 -0.3351 -0.3118 1.4215 1.3354
 -0.4665 -0.6179 0.0666 0.4049

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

NORMALIZED TELLURIC TRANSFER TENSOR
 1.0677 -0.0334 0.2517 -0.0102
 0.1826 0.1310 0.4200 0.0586

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.966 PRED-EY: 0.684

JENEZ-BACA LOCATION (REMOTE)
 JE-B11-A
 PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 1.130
 MINOR AXIS: 0.502
 AZIMUTH: 14.849

CLOCKWISE ROTATION
 MAJOR AXIS: 1.139
 MINOR AXIS: 0.208
 AZIMUTH: 16.270

INPUT IMPEDANCE TENSOR
 -0.2441 -0.4964 0.9387 1.2619
 -0.5906 -1.1079 -0.0350 0.3968

NORMALIZED TELLURIC TRANSFER TENSOR
 0.8523 0.1251 0.2868 0.0977
 0.1401 0.1672 0.6578 0.2003

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.884 PRED-EY: 0.96

JEMEZ-BACA LOCATION (REMOTE)
 JB-B12-A
 PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.004
 MINOR AXIS: 0.645
 AZIMUTH: 42.345

CLOCKWISE ROTATION

MAJOR AXIS: 1.066
 MINOR AXIS: 0.386
 AZIMUTH: 27.310

INPUT IMPEDANCE TENSOR
 0.4931 -0.1114 0.8524 0.1790
 -0.2364 -0.7890 -0.5661 0.0006

NORMALIZED TELLURIC TRANSFER TENSOR
 0.3995 -0.2608 -0.1478 0.2341
 -0.2190 0.2195 0.3971 0.2140

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.82 PRED-EY: 0.859

JEMEZ-BACA LOCATION (REMOTE)
 JB-B13-A
 PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 0.869
 MINOR AXIS: 0.086
 AZIMUTH: -59.992

CLOCKWISE ROTATION

MAJOR AXIS: 0.644
 MINOR AXIS: 0.176
 AZIMUTH: 2.525

INPUT IMPEDANCE TENSOR
 -0.1420 0.7999 0.5195 0.9135
 0.1726 -0.5463 -0.3630 -0.3620

NORMALIZED TELLURIC TRANSFER TENSOR
 0.5550 0.1526 -0.2548 -0.3648
 -0.2808 0.0004 0.1447 0.2784

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.554 PRED-EY: 0.256

JEMEZ-BACA LOCATION (REMOTE)
 JE-B14-A
 PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 1.089
 MINOR AXIS: 0.070
 AZIMUTH: -31.857

CLOCKWISE ROTATION
 MAJOR AXIS: 0.469
 MINOR AXIS: 0.057
 AZIMUTH: -16.584

INPUT IMPEDANCE TENSOR
 0.1968 0.5414 0.5437 0.0471
 -0.2725 0.0451 -0.3727 0.0600

NORMALIZED TELLURIC TRANSFER TENSOR
 0.2288 -0.1923 -0.2859 -0.1334
 -0.1211 0.1676 0.0880 -0.1230

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.362 PRED-EY: 0.176

JEMEZ-BACA LOCATION (REMOTE)
 JE-B15-A
 PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 0.635
 MINOR AXIS: 0.147
 AZIMUTH: -19.766

CLOCKWISE ROTATION
 MAJOR AXIS: 0.266
 MINOR AXIS: 0.114
 AZIMUTH: -73.309

INPUT IMPEDANCE TENSOR
0.3458 -0.4446 0.1680 -0.1802
-0.4062 -0.8633 -0.4316 -0.0984

NORMALIZED TELLURIC TRANSFER TENSOR
-0.0047 -0.1349 0.0383 0.3061
-0.2053 0.1291 0.4917 0.1770

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.457 PRED-EY: 0.455

JEMEZ-BACA LOCATION (REMOTE)
JB-B16-A
PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 0.734
MINOR AXIS: 0.313
AZIMUTH: 82.265

CLOCKWISE ROTATION

MAJOR AXIS: 0.426
MINOR AXIS: 0.268
AZIMUTH: 48.010

INPUT IMPEDANCE TENSOR
0.1169 -0.2747 0.4040 0.2861
-0.5509 -1.1913 -0.6100 0.0426

NORMALIZED TELLURIC TRANSFER TENSOR
0.2673 -0.0457 0.0611 0.1517
-0.2197 0.2527 0.6748 0.2480

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.547 PRED-EY: 0.689

JEMEZ-BACA LOCATION (REMOTE)
JB-B17-A
PERIOD: 30

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 1.040
MINOR AXIS: 0.110
AZIMUTH: -87.866

CLOCKWISE ROTATION

MAJOR AXIS: 0.490
MINOR AXIS: 0.355
AZIMUTH: 42.989

SECTION B

Part 1

Compensated Telluric Ellipses (20 ohm-m)

T = 20 seconds

INPUT IMPEDANCE TENSOR
-0.7814 0.1217 0.7029 0.6352
-0.3824 -3.4264 -0.7648 0.9577

NORMALIZED TELLURIC TRANSFER TENSOR
0.4232 -0.0214 0.2086 -0.2856
0.0610 0.5447 1.2044 0.9626

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
PRED-EX: 0.623 PRED-EY: 0.722

JEME2-BACA LOCATION (REMOTE)
JB-B5-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.230
MINOR AXIS: 0.404
AZIMUTH: 77.889

INPUT IMPEDANCE TENSOR
-0.8390 1.1812 0.5336 0.3164
-1.7391 -4.4630 -1.3764 0.2119

NORMALIZED TELLURIC TRANSFER TENSOR
0.2688 -0.0687 -0.1082 -0.6389
-0.3682 0.5023 1.9613 0.8614

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
PRED-EX: 0.757 PRED-EY: 0.83

JEME2-BACA LOCATION (REMOTE)
JB-B7-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 2.002
MINOR AXIS: 0.243
AZIMUTH: -85.464

INPUT IMPEDANCE TENSOR
 -1.1419 0.3316 0.8351 1.0871
 -1.2579 -2.8144 -0.1494 0.1886

NORMALIZED TELLURIC TRANSFER TENSOR
 0.6078 0.0797 0.2563 -0.4660
 0.0124 0.1069 1.2878 0.4922

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.939 PRED-EY: 0.989

JENEZ-BACA LOCATION (REMOTE)
 JB-B8-A
 PERIOD: 20

AXIS: 1

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 1.321
 MINOR AXIS: 0.590
 AZIMUTH: 75.555

INPUT IMPEDANCE TENSOR
 -1.0942 0.1018 0.4511 0.6022
 -1.1359 -2.2656 -0.2372 -0.0536

NORMALIZED TELLURIC TRANSFER TENSOR
 0.3331 0.0478 0.3138 -0.3782
 -0.0920 0.0581 1.0756 0.3572

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.829 PRED-EY: 0.956

JENEZ-BACA LOCATION (REMOTE)
 JB-B9-A
 PERIOD: 20

AXIS: 1

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 1.120
 MINOR AXIS: 0.345
 AZIMUTH: 73.649

INPUT IMPEDANCE TENSOR
-3.1935 0.4992 2.6051 4.0566
-0.9660 -2.5465 -0.3867 0.3539

NORMALIZED TELLURIC TRANSFER TENSOR
2.1066 0.4590 0.2520 -1.1677
-0.0104 0.2342 1.1107 0.4998

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
PRED-EX: 0.766 PRED-EY: 0.706

JEMEZ-BACA LOCATION (REMOTE)
JB-B10-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 2.317
MINOR AXIS: 1.014
AZIMUTH: 12.599

INPUT IMPEDANCE TENSOR
-0.2914 -0.6041 1.1827 1.1066
-0.9603 -1.5337 0.2216 0.4703

NORMALIZED TELLURIC TRANSFER TENSOR
0.7239 -0.0241 0.2832 0.0989
0.2188 0.0786 0.7887 0.1813

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

REMOTE TELLURIC TENSOR:
PRED-EX: 0.937 PRED-EY: 0.965

JEMEZ-BACA LOCATION (REMOTE)
JB-B12-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.010
MINOR AXIS: 0.504
AZIMUTH: 47.457

INPUT IMPEDANCE TENSOR
-0.3414 -0.3207 1.5814 1.3473
-0.7014 -1.0377 0.1290 0.5101

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.9261 -0.0740 0.2094 -0.0065
0.2021 0.1205 0.5500 0.1063

REMOTE TELLURIC TENSOR:
PRED-EX: 0.965 PRED-EY: 0.815

JEMEZ-BACA LOCATION (REMOTE)
JB-B11-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.017
MINOR AXIS: 0.459
AZIMUTH: 23.642

INPUT IMPEDANCE TENSOR
0.9176 -0.0919 0.7250 -0.0040
-0.3668 -0.9762 -0.0879 -0.2922

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.2280 -0.2306 -0.2611 0.3192
-0.1202 -0.0646 0.4247 0.1927

REMOTE TELLURIC TENSOR:
PRED-EX: 0.732 PRED-EY: 0.778

JEMEZ-BACA LOCATION (REMOTE)
JB-B13-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.548
MINOR AXIS: 0.119
AZIMUTH: -52.554

INPUT IMPEDANCE TENSOR
-0.2473 0.4942 0.1219 0.2403
0.0183 -1.3397 0.0788 -0.1827

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.1145 0.0374 -0.0781 -0.2345
-0.0329 -0.0827 0.4179 0.4294

REMOTE TELLURIC TENSOR:
PRED-EX: 0.206 PRED-EY: 0.304

JEMEZ-BACA LOCATION (REMOTE)
JB-B14-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.429
MINOR AXIS: 0.106
AZIMUTH: -77.528

INPUT IMPEDANCE TENSOR
0.6279 0.1693 0.1700 0.0991
-0.1371 -0.1875 -0.3200 -0.1005

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.0877 -0.0250 -0.2521 0.1450
-0.1014 0.0378 0.1027 0.0159

REMOTE TELLURIC TENSOR:
PRED-EX: 0.321 PRED-EY: 0.094

JEMEZ-BACA LOCATION (REMOTE)
JB-B15-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.298
MINOR AXIS: 0.055
AZIMUTH: -27.026

INPUT IMPEDANCE TENSOR
0.1886 -0.4112 0.0942 -0.0365
-0.3208 -1.2652 -0.1126 -0.2924

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.0182 -0.0413 0.0704 0.1897
-0.1281 -0.0569 0.5015 0.2987

REMOTE TELLURIC TENSOR:
PRED-EX: 0.297 PRED-EY: 0.452

JENEZ-BACA LOCATION (REMOTE)
JB-B16-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.522
MINOR AXIS: 0.035
AZIMUTH: 82.952

INPUT IMPEDANCE TENSOR
0.1981 -0.7052 0.6678 0.6090
-0.8463 -1.6440 0.4776 0.3331

BASE IMPEDANCE TENSOR:
PRED-EX: 0.906 PRED-EY: 0.944

NORMALIZED TELLURIC TRANSFER TENSOR
0.4038 -0.0186 0.1603 0.2857
0.2564 -0.0457 0.7875 0.2523

REMOTE TELLURIC TENSOR:
PRED-EX: 0.849 PRED-EY: 0.831

JENEZ-BACA LOCATION (REMOTE)
JB-B17-A
PERIOD: 20

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.881
MINOR AXIS: 0.314
AZIMUTH: 68.625

SECTION B (CON'T)

Part 2

Compensated Telluric Ellipses (20 ohm-m)

T = 30 seconds

INPUT IMPEDANCE TENSOR
-0.5274 -0.0621 0.7485 0.8199
-1.1434 -2.0075 -0.6936 1.1314

NORMALIZED TELLURIC TRANSFER TENSOR
0.6074 0.0277 0.2283 -0.1802
0.1696 0.7068 1.2203 0.3347

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.8 PRED-EY: 0.821

JEMEZ-BACA LOCATION (REMOTE)
JB-85-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.280
MINOR AXIS: 0.549
AZIMUTH: 72.584

INPUT IMPEDANCE TENSOR
-0.5122 0.4083 0.2988 0.2825
-0.5352 -1.5022 -0.8519 0.2831

NORMALIZED TELLURIC TRANSFER TENSOR
0.2251 -0.0063 0.0403 -0.3565
-0.2203 0.4396 0.7891 0.3745

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.585 PRED-EY: 0.701

JEMEZ-BACA LOCATION (REMOTE)
JB-87-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.820
MINOR AXIS: 0.228
AZIMUTH: -88.351

INPUT IMPEDANCE TENSOR
-1.0984 -0.1435 0.6465 1.1372
-0.5472 -1.8747 -0.3645 0.2133

NORMALIZED TELLURIC TRANSFER TENSOR
0.6908 0.1900 0.4810 -0.3698
-0.0586 0.2238 0.9380 0.5142

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.934 PRED-EY: 0.985

JEMEZ-BACA LOCATION (REMOTE)
JB-B8-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.103
MINOR AXIS: 0.613
AZIMUTH: 51.003

INPUT IMPEDANCE TENSOR
-1.0608 -0.0352 0.4737 0.9228
-0.6569 -1.4784 -0.5448 0.0775

NORMALIZED TELLURIC TRANSFER TENSOR
0.5409 0.1739 0.4245 -0.3972
-0.1810 0.2410 0.8270 0.3182

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.846 PRED-EY: 0.899

JEMEZ-BACA LOCATION (REMOTE)
JB-B9-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.936
MINOR AXIS: 0.560
AZIMUTH: 57.864

INPUT IMPEDANCE TENSOR
-3.6558 -1.4509 2.6943 4.5658
-0.6169 -1.6525 -0.2107 0.0724

NORMALIZED TELLURIC TRANSFER TENSOR
2.8118 0.7248 1.9778 -0.8540
-0.0536 0.1096 0.8789 0.4011

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.827 PRED-EY: 0.718

JEMEZ-BACA LOCATION (REMOTE)
JB-B10-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 3.470
MINOR AXIS: 0.743
AZIMUTH: 8.022

INPUT IMPEDANCE TENSOR
-0.3381 -0.3118 1.4215 1.3354
-0.4665 -0.6179 0.0666 0.4049

NORMALIZED TELLURIC TRANSFER TENSOR
1.0677 -0.0334 0.2517 -0.0102
0.1826 0.1310 0.4200 0.0586

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.966 PRED-EY: 0.684

JEMEZ-BACA LOCATION (REMOTE)
JB-B11-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.135
MINOR AXIS: 0.355
AZIMUTH: 15.592

INPUT IMPEDANCE TENSOR
-0.2441 -0.4964 0.9387 1.2619
-0.5906 -1.1079 -0.0350 0.3968

NORMALIZED TELLURIC TRANSFER TENSOR
0.8523 0.1251 0.2868 0.0977
0.1401 0.1672 0.6578 0.2003

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.884 PRED-EY: 0.96

JEMEZ-BACA LOCATION (REMOTE)
JB-12-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.993
MINOR AXIS: 0.524
AZIMUTH: 29.982

INPUT IMPEDANCE TENSOR
0.4931 -0.1114 0.8524 0.1790
-0.2364 -0.7890 -0.5661 0.0006

NORMALIZED TELLURIC TRANSFER TENSOR
0.3995 -0.2608 -0.1478 0.2341
-0.2190 0.2195 0.3971 0.2140

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.92 PRED-EY: 0.86

JEMEZ-BACA LOCATION (REMOTE)
JB-B13-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.583
MINOR AXIS: 0.216
AZIMUTH: -47.371

INPUT IMPEDANCE TENSOR
 -0.1420 0.7999 0.5195 0.9135
 0.1726 -0.5463 -0.3630 -0.3620

NORMALIZED TELLURIC TRANSFER TENSOR
 0.5550 0.1526 -0.2548 -0.3648
 -0.2808 0.0004 0.1447 0.2784

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.554 PRED-EY: 0.256

JEMEZ-BACA LOCATION (REMOTE)
 JE-B14-A
 PERIOD: 30

AXIS: 1

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 0.687
 MINOR AXIS: 0.013
 AZIMUTH: -27.335

INPUT IMPEDANCE TENSOR
 0.1968 0.5414 0.5437 0.0471
 -0.2725 0.0451 -0.3727 0.0600

NORMALIZED TELLURIC TRANSFER TENSOR
 0.2288 -0.1923 -0.2859 -0.1334
 -0.1211 0.1676 0.0880 -0.1230

BASE IMPEDANCE TENSOR:
 PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
 PRED-EX: 0.362 PRED-EY: 0.176

JEMEZ-BACA LOCATION (REMOTE)
 JE-B15-A
 PERIOD: 30

AXIS: 1

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 0.394
 MINOR AXIS: 0.037
 AZIMUTH: -21.723

INPUT IMPEDANCE TENSOR
0.3458 -0.4446 0.1680 -0.1802
-0.4062 -0.8633 -0.4316 -0.0984

NORMALIZED TELLURIC TRANSFER TENSOR
-0.0047 -0.1349 0.0383 0.3061
-0.2053 0.1291 0.4917 0.1770

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.457 PRED-EY: 0.455

JEMEZ-BACA LOCATION (REMOTE)
JB-B16-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.534
MINOR AXIS: 0.010
AZIMUTH: 86.012

INPUT IMPEDANCE TENSOR
0.1169 -0.2747 0.4040 0.2861
-0.5509 -1.1913 -0.6100 0.0426

NORMALIZED TELLURIC TRANSFER TENSOR
0.2673 -0.0457 0.0611 0.1517
-0.2197 0.2527 0.6748 0.2480

BASE IMPEDANCE TENSOR:
PRED-EX: 0.9 PRED-EY: 0.915

REMOTE TELLURIC TENSOR:
PRED-EX: 0.547 PRED-EY: 0.689

JEMEZ-BACA LOCATION (REMOTE)
JB-B17-A
PERIOD: 30

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 0.710
MINOR AXIS: 0.273
AZIMUTH: -87.667

SECTION C

Normalized and Compensated Telluric Ellipses
(20 ohm-m) for Baca Satellite 1 (B-1) deter-
mined at 50 sec. and 65 sec.

INPUT IMPEDANCE TENSOR
-0.9538 -0.5754 1.0740 2.0088
-0.4593 -1.5235 0.0331 0.3330

NORMALIZED TELLURIC TRANSFER TENSOR
1.5414 0.4674 0.7646 -0.1892
0.1830 0.1500 0.9909 0.5326

JEMEZ-BACA (SATELLITE)
JB-BS1-1 (#386)
PERIOD: 50

AXIS: 1

COMPENSATED TELLURIC
ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION

MAJOR AXIS: 2.170
MINOR AXIS: 1.108
AZIMUTH: 13.699

CLOCKWISE ROTATION

MAJOR AXIS: 1.684
MINOR AXIS: 0.549
AZIMUTH: 37.007

-0.9538	-0.5754	1.0740	2.0088	1.5414	0.4674	0.7646	-0.1892
-0.4593	-1.5235	0.0331	0.3330	0.1830	0.1500	0.9909	0.5326

PRED-EX: 0.95

PRED-EY: 0.94

JEMEZ-BACA (SATELLITE)
JB-BS1-1 (#386)
PERIOD: 50

AXIS: 1

PHASE-CORRECTED
COMPENSATED TELLURIC
ELLIPSE PARAMETERS

MAJOR AXIS: 1.847
MINOR AXIS: 0.751
AZIMUTH: 23.455

INPUT IMPEDANCE TENSOR
 -0.9200 -0.6908 1.1157 1.9728
 -0.3285 -1.4533 -0.1826 0.4285
 PRED-EX: 0.95585 PRED-EY: 0.9548

NORMALIZED TELLURIC TRANSFER TENSOR
 1.7687 0.4886 0.9183 -0.1306
 0.1402 0.3483 1.0158 0.6413

JEMEZ-BACA (SATELLITE)
 JB-BS1-1 (#386)
 PERIOD: 65

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 2.411
 MINOR AXIS: 1.363
 AZIMUTH: 14.714

CLOCKWISE ROTATION
 MAJOR AXIS: 1.936
 MINOR AXIS: 0.389
 AZIMUTH: 30.113

INPUT IMPEDANCE TENSOR
 -0.9367 -0.2567 0.6455 1.5909
 -0.3010 -1.1680 -0.1931 0.3335

NORMALIZED TELLURIC TRANSFER TENSOR
 1.2750 0.5389 0.6234 -0.3306
 0.0801 0.3002 0.8374 0.4943

PRED-EX: 0.8715 PRED-EY: 0.83511

JEMEZ-BACA (SATELLITE)
 JB-BS1-1 (#386)
 PERIOD: 65

AXIS: 1

COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

COUNTER-CLOCKWISE ROTATION
 MAJOR AXIS: 2.023
 MINOR AXIS: 1.141
 AZIMUTH: 14.044

CLOCKWISE ROTATION
 MAJOR AXIS: 1.167
 MINOR AXIS: 0.393
 AZIMUTH: 38.292

INPUT IMPEDANCE TENSOR
 -0.9200 -0.6908 1.1157 1.9728
 -0.3285 -1.4533 -0.1826 0.4285

NORMALIZED TELLURIC TRANSFER TENSOR
 1.7607 0.4886 0.9183 -0.1306
 0.1402 0.3483 1.0158 0.6413

JEMEZ-BACA (SATELLITE)
 JB-BS1-1 (#386)
 PERIOD: 65

AXIS: 1

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 2.089
 MINOR AXIS: 0.795
 AZIMUTH: 19.604

INPUT IMPEDANCE TENSOR
 -0.8367 -0.2567 0.6455 1.5909
 -0.3010 -1.1680 -0.1931 0.3335

NORMALIZED TELLURIC TRANSFER TENSOR
 1.2750 0.5389 0.6234 -0.3306
 0.0801 0.3002 0.8374 0.4943

JEMEZ-BACA (SATELLITE)
 JB-BS1-1 (#386)
 PERIOD: 65

AXIS: 1

PHASE-CORRECTED
 COMPENSATED TELLURIC
 ELLIPSE PARAMETERS

MAJOR AXIS: 1.505
 MINOR AXIS: 0.676
 AZIMUTH: 21.848

MAGNETOTELLURIC PARAMETERS JEMEZ BASE

LOCATION: BURNT MESA, BANDALIER NATIONAL MONUMENT

DATA SETS INCLUDED:

#345
#347
#379
#385
#405
#416

JEMEZ MOUNTAINS (BASE) JE-B-1 DATA SET #345 PAGE 1

PERIOD	HU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
5000	8	0.95	0.96	13.0	14.97	30.0	2.99	55.1	0.07
3000	12	0.98	0.88	8.4	18.14	37.0	3.64	39.1	0.04
2000	9	0.98	0.90	17.1	18.39	41.0	2.92	50.3	0.21
1500	10	0.98	0.88	15.4	16.92	43.9	2.06	61.5	0.20
1000	24	0.95	0.88	12.5	14.22	47.8	2.09	60.9	0.14
750	26	0.89	0.90	19.1	11.41	39.6	2.46	58.3	0.25
500	57	0.84	0.86	27.6	10.47	45.2	2.00	52.2	0.31
500	57	0.10	0.00						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IN(ZXX)	RE(ZXY)	IN(ZXY)	RE(ZYX)	IN(ZYX)	RE(ZYY)	IN(ZYY)
5000	-0.0187	-0.0144	0.1028	0.0576	-0.0345	-0.0483	0.0118	0.0036
3000	-0.0026	-0.0241	0.1395	0.1032	-0.0597	-0.0537	0.0041	0.0144
2000	-0.0449	-0.0541	0.1579	0.1266	-0.0585	-0.0798	-0.0003	0.0103
1500	-0.0617	-0.0369	0.1618	0.1583	-0.0488	-0.0792	0.0058	0.0100
1000	-0.0615	-0.0005	0.1691	0.1972	-0.0598	-0.0896	0.0104	0.0167
750	-0.0051	-0.0520	0.1904	0.1655	-0.0814	-0.1193	0.0013	-0.0027
500	-0.0919	-0.1191	0.2108	0.1790	-0.0956	-0.1624	-0.0054	0.0133

JE-B-1 (#345) JEMEZ MOUNTAINS (BASE)

PLOT OF APPARENT RESISTIVITY VS PERIOD

JE-B-2 (#347)

JEMEZ MOUNTAINS (BASE)

PLOT OF APPARENT RESISTIVITY VS PERIOD

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
10000	4	0.91	0.89	33.0	39.41	15.4	1.77	-22.5	0.75
7500	5	0.91	0.85	59.1	7.61	-7.3	3.95	44.9	0.45
5000	7	0.84	0.71	22.8	14.83	24.7	1.92	89.1	0.43
3000	12	0.93	0.86	11.6	23.93	39.4	2.06	59.7	0.15
2000	18	0.95	0.77	10.5	19.73	41.7	2.69	69.8	0.13
1500	11	0.95	0.84	16.5	17.71	40.6	2.67	71.9	0.21
1000	12	0.89	0.79	10.7	15.48	37.0	2.22	55.0	0.26
750	17	0.83	0.73	15.3	11.45	39.1	2.39	58.2	0.17
500	30	0.58	0.67						
300	53	0.45	0.60						
200	90	0.54	0.60						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
10000	-0.0840	-0.0749	0.1065	0.0161	-0.0563	-0.0099	0.0117	-0.0244
7500	-0.0412	0.0052	0.0534	0.0304	-0.0536	0.0032	-0.0024	-0.0283
5000	-0.0627	-0.0294	0.0945	0.0437	-0.0169	-0.0509	0.0152	-0.0126
3000	-0.0356	-0.0271	0.1480	0.1257	-0.0359	-0.0516	0.0195	-0.0063
2000	-0.0455	-0.0014	0.1559	0.1443	-0.0341	-0.0766	0.0091	0.0093
1500	-0.0721	-0.0346	0.1736	0.1484	-0.0397	-0.1000	0.0057	0.0173
1000	-0.0796	-0.0717	0.2106	0.1489	-0.0720	-0.1048	0.0057	0.0039
750	-0.0676	-0.0312	0.2053	0.1669	-0.0755	-0.1146	0.0030	0.0126

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
5000	8	0.82	0.90	33.6	15.81	49.7	0.26	81.8	0.34
3000	13	0.82	0.93	68.6	9.59	47.9	6.48	-13.4	0.61
2000	8	0.73	0.85	6.4	8.20	24.2	3.87	63.4	0.43
1500	20	0.88	0.95	26.3	11.81	23.7	2.51	60.6	0.46
1000	25	0.87	0.93	36.1	13.09	47.4	1.14	55.1	0.40
750	27	0.87	0.95	51.3	9.17	51.3	0.42	79.9	0.65
500	28	0.82	0.92	47.9	9.39	51.2	1.18	62.6	0.47
300	70	0.85	0.92	36.4	13.08	50.4	2.90	57.5	0.33
200	109	0.84	0.92	40.7	13.17	57.2	2.59	73.8	0.27
150	130	0.84	0.91	50.9	11.16	55.4	2.08	83.4	0.40
100	199	0.82	0.90	53.8	10.57	57.3	0.99	73.4	0.45
75	323	0.79	0.88	55.2	9.74	58.3	0.90	72.5	0.45
50	498	0.68	0.79						
30	822	0.57	0.73						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
5000	-0.0628	-0.0216	0.0449	0.0836	-0.0388	-0.0284	0.0203	0.0418
3000	-0.0327	-0.1047	0.1288	-0.0044	-0.0571	-0.0740	0.0210	-0.0158
2000	-0.0398	-0.0703	0.1274	0.0525	-0.0473	-0.0941	-0.0013	-0.0196
1500	-0.1074	-0.0508	0.1549	0.0608	-0.0717	-0.0986	0.0013	-0.0220
1000	-0.1222	-0.0850	0.1361	0.1363	-0.0803	-0.1139	-0.0034	0.0406
750	-0.1591	-0.1077	0.0729	0.1000	-0.0910	-0.1453	-0.0143	0.0263
500	-0.1484	-0.1295	0.1345	0.1400	-0.1076	-0.1952	-0.0029	0.0080
300	-0.1750	-0.1478	0.2508	0.2816	-0.1651	-0.2637	-0.0137	0.0291
200	-0.2219	-0.1638	0.1963	0.3940	-0.1856	-0.3325	0.0188	0.0677
150	-0.3066	-0.1957	0.1331	0.3876	-0.2441	-0.3759	-0.0066	0.0521
100	-0.3483	-0.2899	0.1957	0.3375	-0.2603	-0.4877	-0.0236	0.0806
75	-0.3944	-0.2956	0.2228	0.3530	-0.2736	-0.5662	-0.0407	0.1078

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
5000	11	0.99	0.96	14.4	25.79	45.9	1.94	65.9	0.25
3000	17	0.99	0.98	14.2	30.69	38.8	2.62	61.7	0.18
2000	12	0.99	0.96	16.4	27.13	39.0	2.46	59.2	0.22
1500	13	0.98	0.96	18.9	26.02	38.4	2.53	58.1	0.28
1000	25	0.94	0.92	16.8	18.58	36.7	2.88	51.1	0.31
750	36	0.90	0.87	14.8	14.54	40.1	3.11	48.2	0.19
500	41	0.90	0.82	12.8	13.84	45.2	2.96	54.8	0.12
300	89	0.81	0.79	20.5	12.92	50.8	3.37	55.2	0.21
200	165	0.68	0.73						
150	171	0.66	0.71						
100	371	0.71	0.81	38.8	14.86	49.7	3.19	74.7	0.42
75	508	0.86	0.89	32.5	22.82	51.1	6.44	79.2	0.38
50	653	0.87	0.91	26.7	26.60	48.7	7.57	73.6	0.29
30	940	0.60	0.70						
20	1600	0.30	0.34						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
5000	-0.0419	-0.0337	0.1070	0.1093	-0.0227	-0.0463	-0.0007	0.0077
3000	-0.0564	-0.0330	0.1674	0.1369	-0.0402	-0.0632	0.0128	0.0064
2000	-0.0780	-0.0405	0.1885	0.1576	-0.0540	-0.0738	0.0124	0.0078
1500	-0.0794	-0.0892	0.2179	0.1612	-0.0614	-0.0996	0.0164	0.0027
1000	-0.0799	-0.0905	0.2361	0.1636	-0.0836	-0.1122	-0.0042	-0.0074
750	-0.0716	-0.0467	0.2282	0.1956	-0.1059	-0.1124	0.0008	-0.0045
500	-0.0613	-0.0464	0.2544	0.2575	-0.1071	-0.1468	0.0083	0.0078
300	-0.1133	-0.0961	0.2733	0.3398	-0.1550	-0.2145	-0.0088	0.0118
100	-0.4508	-0.2573	0.3744	0.5606	-0.2881	-0.4825	-0.0068	0.0040
75	-0.6682	-0.1229	0.5368	0.9694	-0.3602	-0.6342	-0.0313	0.0698
50	-0.7052	-0.1380	0.8763	1.2131	-0.4446	-0.8479	0.0086	0.0780

JEMEZ MOUNTAINS (BASE) JB-B-A DATA SET #405 PAGE 1

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
150	11	0.95	0.78	31.4	36.10	43.4	0.70	41.4	0.70
100	15	0.96	0.76	26.1	29.17	34.8	3.76	88.2	0.29
75	21	0.94	0.84	27.0	26.00	42.2	4.16	74.3	0.23
50	32	0.88	0.80	25.2	21.36	48.7	2.57	74.7	0.20
30	81	0.90	0.92	21.2	28.53	45.7	10.15	69.3	0.33
20	109	0.91	0.94	34.5	22.66	41.8	13.21	69.5	0.25
15	140	0.74	0.86	63.5	9.46	47.8	2.33	69.3	0.43
10	211	0.27	0.37						
8	291	0.05	0.09						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
150	-0.7213	-0.3269	0.6440	0.5434	-0.2682	-0.3109	-0.1469	0.2870
100	-0.6110	-0.0864	0.7877	0.6978	-0.2175	-0.4254	0.1838	0.0269
75	-0.5180	-0.2503	0.7980	0.8192	-0.3206	-0.5716	0.1648	0.0354
50	-0.4322	-0.3976	0.8399	0.9507	-0.2578	-0.6362	0.1640	0.1334
30	-0.9212	0.0834	1.3661	1.5735	-0.6180	-1.2032	-0.1644	0.1870
20	-0.9710	0.2768	1.4020	1.5531	-1.0066	-1.7364	0.0968	0.2235
15	-0.0907	0.2893	0.6113	0.6970	-0.8929	-1.4421	-0.0142	0.3415

JEMEZ MOUNTAINS (BASE) JB-B-C DATA SET #405 PAGE 1

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEM
150	11	0.52	0.72						
100	17	0.78	0.79						
75	29	0.90	0.88	23.7	23.48	47.1	3.24	75.9	0.21
50	43	0.89	0.74	12.8	19.49	48.3	2.24	64.4	0.10
30	93	0.83	0.78	27.3	20.46	36.5	6.36	73.9	0.29
20	129	0.85	0.87	24.9	23.75	31.3	8.15	60.5	0.28
15	147	0.68	0.75						
10	181	0.15	0.25						
8	275	0.07	0.07						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
75	-0.4763	-0.1104	0.6970	0.8974	-0.2671	-0.4781	0.1307	0.1303
50	-0.2657	-0.0338	0.8757	1.0329	-0.2569	-0.4371	0.1175	0.1470
30	-0.8824	0.1285	1.2235	1.1709	-0.5458	-0.9179	0.1054	0.0832
20	-0.9610	0.2321	1.8403	1.1948	-0.9469	-1.3115	0.0900	0.3604

JEMEZ-BAC0_LOCATION(BASE) JB-B54=1 DATA SET #416 PAGE 1

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
5000	10	0.77	0.63						
3000	17	0.86	0.87	22.7	49.49	44.3	1.91	64.7	0.42
2000	22	0.80	0.92	20.6	26.54	48.2	2.97	62.4	0.37
1500	13	0.72	0.90	17.3	19.37	47.0	2.55	57.0	0.30
1000	19	0.68	0.82						
750	28	0.69	0.87						
500	58	0.68	0.86						
300	64	0.64	0.72						
200	96	0.58	0.60						
150	187	0.54	0.68						
100	312	0.68	0.72						
75	463	0.66	0.72						
50	571	0.52	0.62						
30	1155	0.29	0.37						
20	1393	0.14	0.16						

JEMEZ-BAC0_LOCATION(BASE) JB-B54=1 DATA SET #416 PAGE 2

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
3000	-0.1559	-0.0130	0.1579	0.2036	-0.0719	-0.0480	0.0143	0.0433
2000	-0.1176	-0.0375	0.1454	0.1892	-0.0662	-0.0793	-0.0081	0.0126
1500	-0.0796	-0.0540	0.1638	0.1747	-0.0600	-0.0884	-0.0132	0.0117

MAGNETOTELLURIC PARAMETERS FROM
JEMEZ MOUNTAINS SATELLITE SITES

JEMEZ_MOUNTAINS(SATELLITE)-----JE-BS2-2-----DATA SET #380-----PAGE 1

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
5000	8	0.90	0.51	173.9	278.19	-112.0	21.36	15.8	1.13
3000	13	0.89	0.51						
2000	8	0.86	0.27						
1500	20	0.94	0.54	19.0	55.81	33.6	1.09	5.0	0.44
1000	25	0.97	0.47	15.8	39.04	42.2	0.33	17.1	0.65
750	27	0.97	0.59	22.1	31.51	44.4	0.12	-0.1	0.58
500	28	0.95	0.67	24.7	27.20	39.3	0.05	9.6	0.67
300	70	0.96	0.82	28.7	26.85	50.1	0.07	83.9	0.79
200	109	0.95	0.87	30.0	24.64	54.2	0.14	129.0	0.84
150	130	0.94	0.90	35.3	20.03	53.1	0.50	154.4	1.02
100	199	0.91	0.90	40.2	16.82	52.8	0.59	-173.7	1.24
75	323	0.89	0.89	39.0	15.73	52.4	0.41	-177.7	1.18
50	498	0.77	0.79						
30	822	0.73	0.74						

JEMEZ_MOUNTAINS(SATELLITE)-----JE-BS2-2-----DATA SET #380-----PAGE 2

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
5000	-0.3048	-0.1814	-0.1731	-0.4962	-0.1164	-0.0469	-0.0443	-0.1908
1500	-0.1431	-0.1734	0.3387	0.1999	-0.0806	-0.0441	0.0123	0.0064
1000	-0.1851	-0.1848	0.3048	0.2769	-0.0618	-0.0317	-0.0297	-0.0401
750	-0.2041	-0.2080	0.2876	0.2733	-0.0677	-0.0476	-0.0010	0.0202
500	-0.2493	-0.2800	0.3640	0.2415	-0.0606	-0.0927	-0.0061	0.0233
300	-0.3787	-0.3916	0.3349	0.3995	-0.0978	-0.1487	-0.0256	0.0161
200	-0.4543	-0.4932	0.3203	0.5005	-0.1022	-0.1812	-0.0079	0.0054
150	-0.6048	-0.5414	0.2484	0.4940	-0.1258	-0.2153	-0.0051	-0.0057
100	-0.7201	-0.7137	0.2355	0.4352	-0.1483	-0.2767	-0.0002	0.0196
75	-0.7966	-0.7617	0.3003	0.4972	-0.1593	-0.3071	-0.0181	0.0336

PERIOD	HU	PRED EX	PRED EY	ANGLE (CN)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
5000	3	0.92	0.94	175.3	326.26	125.5	112.45	-71.7	0.98
3000	5	0.84	0.87	178.5	289.63	175.1	124.49	36.5	2.28
2000	7	0.87	0.91	64.5	70.05	61.3	10.76	-151.0	1.71
1500	10	0.91	0.94	60.9	52.79	55.9	9.52	-152.1	1.77
1000	14	0.85	0.90	57.1	39.83	55.7	5.17	-60.8	0.99
750	10	0.82	0.87	44.7	45.83	58.8	2.94	-0.6	0.47
500	15	0.80	0.91	47.9	36.65	51.6	5.25	45.6	0.32
300	38	0.89	0.92	58.4	37.93	52.3	148.40	48.3	0.52
200	39	0.86	0.85	56.9	24.50	57.7	0.21	48.5	0.47
150	54	0.81	0.78	54.1	17.26	62.2	0.30	64.5	0.51
100	81	0.68	0.70						
75	128	0.54	0.58						
50	196	0.41	0.45						
30	361	0.51	0.52						
20	603	0.45	0.47						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
5000	-0.1410	0.1546	-0.3251	0.4618	-0.0987	0.3151	-0.0276	0.0500
3000	-0.3587	-0.2965	-0.5883	0.0503	-0.3655	-0.2709	-0.3084	-0.2932
2000	-0.2086	-0.4075	-0.0650	-0.0081	-0.1227	-0.2956	0.0026	-0.0787
1500	-0.3057	-0.3778	-0.0307	-0.0122	-0.1085	-0.2763	0.0701	-0.0500
1000	-0.2165	-0.3890	0.1975	-0.0120	-0.1322	-0.2413	0.0020	0.0551
750	-0.1207	-0.3795	0.2864	0.2156	-0.1403	-0.2555	0.0245	0.0949
500	-0.1533	-0.2792	0.2877	0.2823	-0.2484	-0.3559	0.0671	0.0260
300	-0.3419	-0.4172	0.2243	0.2133	-0.3428	-0.5054	0.0535	0.0387
200	-0.2997	-0.4347	0.1771	0.2251	-0.2892	-0.4915	0.0545	0.1113
150	-0.3105	-0.4068	0.0859	0.3243	-0.3107	-0.4377	-0.0531	0.1671

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
5000	3	1.00	0.98	49.7	180.96	98.2	120.31	-30.4	2.36
3000	4	0.87	0.99	64.5	275.65	68.0	13.73	151.6	1.12
2000	6	0.98	0.97	66.1	57.65	44.9	17.57	45.4	0.52
1500	8	0.99	0.96	78.0	39.83	56.3	18.85	42.8	0.47
1000	11	0.96	0.91	75.2	18.47	60.9	14.42	35.2	0.44
750	15	0.79	0.82	69.6	23.37	61.3	12.02	31.1	0.39
500	12	0.71	0.79						
300	30	0.66	0.68						
200	44	0.68	0.52						
150	70	0.59	0.53						
100	82	0.71	0.65						
75	92	0.69	0.65						
50	124	0.53	0.62						
30	255	0.24	0.28						
20	427	0.10	0.10						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
5000	0.3298	-0.6629	0.0028	-0.0136	-0.2356	-0.2591	-0.0733	-0.1033
3000	-0.3926	-0.5323	-0.0361	0.1580	-0.1566	-0.5426	-0.0513	-0.1274
2000	-0.1064	-0.1924	0.1499	0.1865	-0.2664	-0.2305	-0.0475	-0.0720
1500	-0.0902	-0.1413	0.1849	0.1759	-0.2013	-0.2974	-0.0820	-0.0876
1000	-0.1014	-0.1168	0.2276	0.1701	-0.1398	-0.2500	-0.0919	-0.0330
750	-0.0800	-0.1714	0.2516	0.1746	-0.1804	-0.3178	-0.0784	-0.0313

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
5000	0.0257	0.0966	0.1085	0.0424	-0.1907	-0.3293	-0.1033	-0.0997
3000	0.0584	0.1430	0.1616	0.1216	-0.2622	-0.4067	-0.1665	-0.1626
2000	0.0562	0.1396	0.1803	0.1115	-0.3173	-0.5009	-0.1370	-0.1501
1500	0.1137	0.1670	0.2058	0.1021	-0.4876	-0.7146	-0.2049	-0.1945
1000	0.1272	0.2667	0.1973	0.1302	-0.5380	-0.8441	-0.2078	-0.2286
750	0.2013	0.3202	0.2146	0.1540	-0.6107	-0.9643	-0.2094	-0.2609
500	0.2230	0.3291	0.2210	0.1885	-0.6570	-1.0041	-0.2087	-0.2953
200	0.6043	0.4725	0.5019	0.3696	-1.4981	-1.2078	-0.8531	-0.0045
100	0.7805	0.7888	0.5220	0.7404	-2.4717	-3.1245	-0.6643	-0.7155
50	1.2035	0.7878	0.1510	0.3401	-3.0116	-4.2175	0.3193	-0.0453
30	0.0291	0.5788	-0.4863	0.7780	-0.5452	-3.7203	2.9232	-0.7541

PERIOD	HU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
10000	4	0.99	0.59	33.5	45.11	-6.7	18.60	171.8	4.12
7500	5	0.99	0.84	24.1	42.08	11.4	9.68	-148.0	1.35
5000	7	0.92	0.65	26.5	34.27	1.4	1.67	-175.3	0.25
3000	12	0.88	0.36						
2000	18	0.97	0.81	18.0	17.11	31.3	2.08	59.0	0.26
1500	9	0.94	0.89	19.3	11.71	32.8	1.97	54.0	0.20
1000	17	0.92	0.88	23.2	10.35	43.5	1.59	57.9	0.21
750	17	0.93	0.87	21.0	8.47	46.5	1.43	58.9	0.27
500	31	0.89	0.76	25.3	5.38	45.5	1.29	55.5	0.25
300	58	0.83	0.62						
200	94	0.78	0.57						
150	141	0.70	0.46						
100	205	0.51	0.32						
75	340	0.36	0.29						
50	506	0.24	0.15						
30	1000	0.14	0.10						
20	1377	0.08	0.11						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IN(ZXX)	RE(ZXY)	IN(ZXY)	RE(ZYX)	IN(ZYX)	RE(ZYY)	IN(ZYY)
10000	-0.0671	-0.0756	0.0781	0.0199	0.0244	0.0236	0.1551	-0.1279
7500	-0.0626	-0.0730	0.1205	0.0359	0.0245	0.0454	0.1194	-0.0442
5000	-0.0942	-0.0202	0.1401	0.0032	-0.0043	0.0021	0.0861	-0.0143
2000	-0.0619	-0.0479	0.1652	0.0978	-0.0486	-0.0715	0.0151	-0.0061
1500	-0.0442	-0.0477	0.1558	0.0950	-0.0580	-0.0775	0.0234	-0.0033
1000	-0.0504	-0.0661	0.1503	0.1386	-0.0619	-0.0934	0.0279	0.3030
750	-0.0622	-0.0717	0.1550	0.1535	-0.0590	-0.1024	0.0004	0.0045
500	-0.0560	-0.0745	0.1595	0.1323	-0.0675	-0.1269	-0.0044	0.0142

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEN
5000	10	0.87	0.88	155.2	32.23	47.6	1.69	45.6	0.66
3000	16	0.81	0.91	156.6	16.17	42.7	0.49	59.1	0.96
3000	11	0.95	0.99	157.1	18.59	47.8	1.38	54.6	0.63
2000	16	0.98	0.99	165.2	26.88	35.9	1.25	63.6	0.55
2000	10	0.92	0.95	164.1	23.77	36.5	1.22	62.9	0.61
1500	15	0.89	0.97	159.0	17.28	38.4	1.54	61.4	0.54
1500	11	0.95	0.99	160.6	19.81	37.5	1.42	58.7	0.51
1000	20	0.90	0.98	157.4	12.98	31.0	1.28	51.0	0.56
1000	24	0.82	0.96	156.3	12.27	35.7	1.30	57.4	0.57
750	28	0.76	0.94	159.6	10.11	31.7	2.07	62.7	0.56
750	24	0.86	0.97	159.0	11.72	35.8	2.05	60.1	0.58
500	30	0.87	0.95	161.9	12.36	48.5	1.88	65.3	0.47
500	66	0.84	0.92	160.8	11.37	46.6	1.75	64.4	0.48
300	79	0.78	0.83	156.2	8.08	47.6	1.23	64.2	0.50
300	52	0.82	0.86	158.8	7.84	48.8	1.64	63.8	0.54
300	15	0.92	0.96	48.3	16.18	42.8	4.72	35.4	1.14
200	105	0.73	0.78						
150	140	0.76	0.79						
100	17	0.97	0.97	160.1	13.63	45.4	3.27	71.0	0.56
75	235	0.69	0.76						
50	317	0.43	0.51						
30	842	0.17	0.18						
20	1233	0.10	0.08						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
5000	-0.0252	-0.0008	0.1022	0.1167	-0.0476	-0.0453	-0.1000	-0.0755
3000	-0.0478	-0.0012	0.1043	0.0972	-0.0311	-0.0388	-0.1244	-0.0653
3000	-0.0301	-0.0046	0.1113	0.1099	-0.0348	-0.0597	0.0817	-0.0831
2000	-0.0193	-0.0292	0.1982	0.1450	-0.0368	-0.0570	-0.1102	-0.0801
2000	-0.0256	-0.0295	0.1828	0.1385	-0.0382	-0.0558	-0.1163	-0.0783
1500	-0.0270	-0.0018	0.1712	0.1328	-0.0512	-0.0792	-0.1236	-0.0709
1500	-0.0278	0.0076	0.1907	0.1364	-0.0489	-0.0787	-0.1200	-0.0765
1000	-0.0392	0.0233	0.2045	0.0944	-0.0641	-0.0992	-0.1364	-0.0790
1000	-0.0368	0.0123	0.1845	0.1142	-0.0613	-0.1002	-0.1362	-0.0762
750	-0.0426	-0.0072	0.2046	0.1119	-0.0703	-0.1288	-0.1426	-0.0760
750	-0.0503	-0.0136	0.2107	0.1400	-0.0743	-0.1248	-0.1504	-0.0998
500	-0.0530	-0.0033	0.2167	0.2491	-0.0735	-0.1390	-0.1548	-0.0876
500	-0.0502	-0.0028	0.2142	0.2294	-0.0746	-0.1351	-0.1548	-0.0864
300	-0.0311	-0.0225	0.2083	0.2597	-0.1016	-0.1399	-0.1845	-0.1055
300	-0.0616	-0.0367	0.2114	0.2629	-0.1000	-0.1573	-0.1947	-0.1044
300	-0.4171	-0.3956	0.3546	0.2000	-0.2548	-0.3152	-0.2525	-0.2169
100	-0.1933	0.0388	0.5306	0.5573	-0.1807	-0.4131	-0.4723	-0.1093

PERIOD	HU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEN
5000	4	0.97	0.61	47.8	47.98	3.3	17.39	66.6	0.48
3000	7	0.99	0.95	17.9	38.19	42.9	5.51	77.4	0.42
2000	10	1.00	0.98	18.2	45.24	37.5	5.03	57.6	0.28
1500	13	0.99	0.97	18.5	41.46	38.9	3.74	61.5	0.28
1000	10	0.98	0.95	20.2	41.61	40.7	5.02	61.9	0.23
750	19	0.99	0.97	19.7	36.03	38.1	5.55	60.1	0.24
500	17	0.98	0.96	22.2	28.39	44.4	5.93	59.0	0.20
300	28	0.88	0.80	25.3	16.11	38.9	5.32	68.4	0.26
200	64	0.85	0.80	29.5	20.56	50.1	4.13	69.8	0.23
150	77	0.78	0.75						
100	106	0.69	0.66						
75	132	0.86	0.81	31.7	35.52	64.1	13.13	82.2	0.41
50	172	0.78	0.68						
30	345	0.53	0.42						
20	657	0.22	0.18						
75	19	0.96	0.96	27.3	105.20	63.6	16.59	80.1	0.31
65	108	0.87	0.84	29.1	48.56	64.3	13.60	83.9	0.35
65	21	0.96	0.95	27.8	90.34	61.7	16.35	80.0	0.30
50	26	0.95	0.93	29.9	70.18	59.4	16.01	81.6	0.25

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
5000	-0.1555	0.0643	0.1435	0.0969	-0.1275	-0.0368	0.0133	-0.0388
3000	-0.1230	0.0431	0.1593	0.1859	-0.0466	-0.0792	0.0013	0.0286
2000	-0.1120	-0.0686	0.2487	0.1901	-0.0783	-0.1092	0.0054	0.0069
1500	-0.1149	-0.0980	0.2731	0.2070	-0.0697	-0.1243	0.0076	0.0170
1000	-0.1431	-0.0942	0.3233	0.2619	-0.0971	-0.1754	0.0093	0.0478
750	-0.1402	-0.1257	0.3672	0.2562	-0.1144	-0.2129	0.0091	0.0350
500	-0.1182	-0.1554	0.3714	0.3061	-0.1320	-0.2769	0.0062	0.0471
300	-0.1988	-0.0975	0.3563	0.2765	-0.1567	-0.3254	0.0171	0.0057
200	-0.1931	-0.2299	0.4040	0.4498	-0.1670	-0.4014	0.0722	0.0306
75	-0.7712	-0.1834	0.4616	1.3290	-0.3373	-0.9027	-0.2257	0.1553
75	-0.8393	-0.7580	1.1270	1.9718	-0.2299	-1.4369	-0.2540	0.5011
65	-0.8367	-0.2567	0.6455	1.5909	-0.3010	-1.1680	-0.1931	0.3335
65	-0.9200	-0.6908	1.1157	1.9728	-0.3285	-1.4533	-0.1826	0.4285
50	-0.9538	-0.5754	1.0740	2.0088	-0.4583	-1.5235	0.0331	0.3330

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
5000	7	0.99	0.87	178.6	27.17	34.4	1.54	83.8	0.07
3000	11	0.98	0.81	0.7	25.60	35.8	0.65	47.0	0.23
2000	17	0.99	0.87	4.3	22.52	37.5	0.96	63.7	0.26
1500	16	0.98	0.98	2.0	19.05	40.8	0.61	66.5	0.27
1000	16	0.93	0.75	169.4	24.17	46.2	1.11	49.1	0.36
750	21	0.92	0.63	174.3	18.16	47.1	1.03	60.8	0.33
500	41	0.90	0.63	170.9	12.95	47.9	2.71	66.8	0.32
300	44	0.83	0.25						
200	91	0.76	0.29						
150	147	0.57	0.37						
100	246	0.61	0.47						
75	324	0.71	0.50						
50	386	0.68	0.38						
30	634	0.38	0.16						
20	1286	0.23	0.12						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
5000	0.0071	0.0094	0.1360	0.0928	-0.0047	-0.0394	0.0073	-0.0095
3000	0.0190	0.0169	0.1675	0.1208	-0.0225	-0.0242	0.0201	0.0232
2000	-0.0141	0.0419	0.1861	0.1459	-0.0239	-0.0424	0.0276	0.0294
1500	0.0048	0.0333	0.1906	0.1644	-0.0182	-0.0413	0.0172	0.0418
1000	0.1021	0.0741	0.2315	0.2468	-0.0581	-0.0602	0.0184	0.0176
750	0.0630	0.0748	0.2358	0.2521	-0.0414	-0.0754	0.0351	0.0273
500	0.0892	0.0738	0.2407	0.2584	-0.0655	-0.1598	0.0575	0.0026

PERIOD	NU	PRED EX	PRED EY	ANGLE (CW)	RES-MAX	PHASE MAX	RES-MIN	PHASE MIN	SKEW
5000	10	0.57	0.66						
3000	16	0.90	0.36						
2000	13	0.87	0.62						
1500	19	0.91	0.76	15.9	22.67	34.1	2.71	75.8	0.62
1000	21	0.94	0.69	14.8	17.79	33.9	3.97	66.6	0.35
750	26	0.91	0.57	7.2	13.81	36.9	5.04	54.4	0.27
500	48	0.84	0.65						
300	70	0.69	0.49						
200	144	0.46	0.27						
150	261	0.39	0.41						
100	346	0.49	0.48						
75	430	0.46	0.38						
50	599	0.31	0.33						
30	1183	0.17	0.14						
20	1823	0.07	0.07						

IMPEDANCE TENSOR

PERIOD	RE(ZXX)	IM(ZXX)	RE(ZXY)	IM(ZXY)	RE(ZYX)	IM(ZYX)	RE(ZYY)	IM(ZYY)
1500	0.0315	0.0434	0.2144	0.1425	-0.0364	-0.1039	0.1320	0.0990
1000	0.0096	0.0467	0.2339	0.1700	-0.0697	-0.1255	0.1086	0.0434
750	0.0289	0.0549	0.2396	0.1855	-0.1097	-0.1457	0.0700	0.0330