# BULLETIN NUMBER 32

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SEISMICITY OF THE SOUTHEASTERN UNITED STATES DURING 1997 included 101 tectonic (not induced) earthquakes, 2 mining induced earthquakes, and 54 earthquakes associated with reservoirs. The largest earthquake reported during the year was mb(Lg) = 4.9 occurring on October 24, 1997. The epicenter was in southern Alabama, near Brewton.

Figure 1 is an epicenter map of earthquakes located during the report period. Figures 2 and 3 are cumulative epicenter maps for the period from July 1977 through December 1997, covered by SEUSSN Bulletins 1 through 32.

SOUTHEASTERN U.S. EARTHQUAKES DURING 1997 lists hypocentral parameters, magnitudes, and arrival times for tectonic and mining induced earthquakes in the southeastern United States.

SOUTHEASTERN U.S. RESERVOIR ACTIVITY DURING 1997 lists hypocentral parameters, magnitudes, and arrival times for earthquakes near the Monticello and Jocassee Reservoirs in South Carolina.

SEISMIC STATION LISTING AND NETWORK MAPS contains a listing of seismic stations potentially operational during the report period and maps showing the major network operators in the region. The SEUSSN monitoring area is considered to include all of Florida, Georgia, Alabama, South Carolina, North Carolina, Virginia, West Virginia (south of latitude 37.72 deg N), Maryland, and Delaware; and includes Tennessee and Kentucky - east of longitude 87 degrees West (see Figure 4).

INTERNET ACCESS TO SOUTHEASTERN U.S. EARTHQUAKE CATALOG INFORMATION AND ELECTRONIC VERSIONS OF THE BULLETIN describes how to download southeastern U.S. earthquake catalogs and electronic versions of the SEUSSN Bulletins via the Virginia Tech Seismological Observatory website http://www.geol.vt.edu/outreach/vtso/.

DEFINITIONS AND NETWORK OPERATOR CODES contains definitions of various terms and abbreviations used in the Bulletin as well as a listing of codes for network operators and/or contributors.

## Acknowledgments

This report is the thirty-second SOUTHEASTERN UNITED STATES SEISMIC NETWORK BULLETIN and covers the period from January through December, 1997. The organizations supplying data for this Bulletin are Auburn University, Charleston Southern University, Delaware Geological Survey, Georgia Institute of Technology, Maryland Geological Survey, Millersville University, United States Geological Survey, University of Florida, University of Memphis (Center for Earthquake Research and Information), University of North Carolina, University of South Carolina, University of Tennessee/Tennessee Valley Authority- Joint Institute for Energy and Environment, Virginia Polytechnic Institute and State University (Virginia Tech Seismological Observatory), and the Westinghouse Savannah River Company.

Several of the plots in this report were generated using the Generic Mapping Tools (GMT) software package developed by Wessel and Smith (1991).

## References

Bollinger, G. A., Frederick C. Davison, Jr., Matthew S. Sibol, and Jeffrey B. Birch, (1989), Magnitude recurrence relations for the southeastern United States and its subdivisions, Journal of Geophysical Research, 94, pp. 2857-2873.

Chapman, M. C., J. A. Snoke, and G. A. Bollinger, (1988), A procedure for calibrating short-period telemetered seismograph systems, Bulletin of the Seismological Society of America, 78, pp. 2077-2088.

Hoaglin, David C., Frederick Mosteller, and John W. Tukey, (1983), Understanding Robust And Exploratory Data Analysis, John Wiley & Sons, New York, NY, 447 pp.

Lahr, J. C., (1980), HYPOELLIPSE/VAX: A computer program for determining local earthquake hypocentral parameters, magnitude, and first-motion pattern, U.S. Geological Survey Open-File Report 80-59, 59 pp.
Lee, W. H. K., and J. C. Lahr, (1974), HYPO71: A computer program for determining hypocenter, magnitude, and first motion pattern of local earthquakes, U.S. Geological Survey Open-File Report 75-311, Revised: January 1974, 134 pp.
Lee, W. H. K., and S. W. Stewart, (1981), Principles and Applications of Microearthquake Networks, Academic Press, New York, NY, 293 pp.
Nuttli, O. W., (1973), Seismic wave attenuation and magnitude relations for eastern North America, Journal of Geophysical Research, 78, pp. 876-885.
Shedlock, Kaye M., (1987), Earthquakes recorded by the South Carolina Seismic Network (1974-1986), U.S. Geological Survey Open-File Report 87-437, 92 pp.
Wessel, P., and W. H. F. Smith, (1991), Free software helps map and display data, EOS Trans. Am. Geophys. Union, 72, pp. 441, 445-446.

## SEUSSN EARTHQUAKE CATALOG STATISTICS

TABLE 1. SEUSSN Report Period/Cumulative Earthquake Catalog Statistics

| Period: January through December 1997 (1 year) | Tectonic | Reservoir |
|---|---|---|
| Number of Earthquakes with M ≥ 0.0 | 100 | 53 |
| Number of Earthquakes with M ≥ 2.0 | 40 | 0 |
| Number of Earthquakes with M ≥ 3.0 | 7 | 0 |
| Number of Earthquakes with M ≥ 4.0 | 1 | 0 |
| Number of Felt Earthquakes | 10 | 0 |
| Number of Earthquakes with Known ERZ ≤ 5.0 km | 82 | 51 |

Largest Earthquake: 24 October 1997; 08:35 - southern AL, mb(Lg)= 4.9, VI MM

| Period: July 1977 through December 1997 (20.5 years) | Tectonic | Reservoir |
|---|---|---|
| Number of Earthquakes with M ≥ 0.0 | 1584 | 844 |
| Number of Earthquakes with M ≥ 2.0 | 596 | 201 |
| Number of Earthquakes with M ≥ 3.0 | 100 | 9 |
| Number of Earthquakes with M ≥ 4.0 | 8 | 0 |
| Number of Felt Earthquakes | 208 | 21 |
| Number of Earthquakes with Known ERZ ≤ 5.0 km | 1172 | 256 |

Largest Earthquake: 27 July 1980; 18:52 - Sharpsburg, KY, mb= 5.2, MMI= VII

## SOUTHEASTERN U.S. EARTHQUAKES DURING 1997

Events are listed chronologically (this also applies to multiple hypocenter locations for the same event). All times are Universal Coordinated Time. Most entries in the listing are self-explanatory. Items that might require further explanation are defined in the section entitled DEFINITIONS AND NETWORK OPERATOR CODES.

*****1997 JANUARY 10; 23:25 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970110 | 232519.6 | 32.944 | 80.202 | 2.3 | 6 | 4 | 228 | 0.1 | C | | 0.7 | 360 | 0.7 | 1.4 | | | 0.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | RGR | 4.1 | 170 | iPd | 23:25:20.71 ( 0.00 ) | iSu | 23:25:21.56 (-0.01 ) |
| USC | SVS | 5.1 | 302 | iPd | :20.91 (-0.05 ) | iSu | :22.07 ( 0.06 ) |
| USC | HBF | 12.2 | 272 | iPu | :22.19 (-0.03 ) | iSu | :23.96 (-0.10 ) |

## *****1997 JANUARY 23; 02:15 - NORTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970123 | 021513.3 | 35.267 | 84.016 | 2.8 | 11 | 49 | 233 | 0.3 | D | C/D | 1.0 | 312 | 0.4 | 1.8 | B | | 2.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | TKL | 48.6 | 27 | | | S-P | 5.89 SEC ( 0.01 ) |
| UTK | CRTN | 104.7 | 9 | eP | 02:15:30.62 ( 0.22 ) | iS | 02:15:42.74 (-0.35 ) |
| UTK | PDTN | 166.9 | 271 | iP- | :40.52 ( 0.26 ) | iS | :59.87 (-0.22 ) |
| UTK | ABTN | 201.8 | 290 | iP- | :45.77 ( 0.05 ) | iS | :16:09.36 (-0.14 ) |
| UTK | FDKY | 232.9 | 317 | | | eS | :18.91 ( 1.20 ) |
| UTK | MSAL | 246.9 | 260 | iP+ | :52.18 (-0.32 ) | eS | :21.52 ( 0.46 ) |
| UTK | MOTN | 388.4 | 294 | | | eS | :52.31 ( 1.09 ) |

## *****1997 FEBRUARY 15; 04:29 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970215 | 042950.0 | 32.896 | 80.131 | 6.9 | 14 | 1 | 214 | 0.1 | B | | 1.5 | 360 | 1.5 | 1.7 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MGS | 1.0 | 284 | iPd | 04:29:51.69 ( 0.01 ) | iSu | 04:29:52.05 (-0.13 ) |
| USC | RGR | 6.0 | 282 | iPu | :52.05 (-0.01 ) | iSu | :52.71 (-0.06 ) |
| USC | BCS | 11.1 | 33 | iPd | :53.04 ( 0.14 ) | iSu | :54.98 ( 0.60 ) |
| USC | SVS | 13.6 | 306 | iPu | :53.16 (-0.02 ) | iSd | :54.96 ( 0.09 ) |
| USC | WAS | 14.2 | 248 | iPd | :53.30 (-0.01 ) | iSd | :55.69 ( 0.27 ) |
| USC | HBF | 19.7 | 287 | iPd | :54.06 (-0.09 ) | iSd | :56.81 ( 0.42 ) |
| USC | TWB | 24.4 | 6 | iPu | :55.11 ( 0.10 ) | iSd | :57.67 (-0.07 ) |

## *****1997 FEBRUARY 21; 07:16 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970221 | 071612.9 | 35.700 | 84.464 | 0.2 | 8 | 63 | 151 | 0.1 | D | C/D | 1.3 | 352 | 0.7 | 4.1 | C | | 2.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | TKL | 62.6 | 94 | | | S-P | 7.52 SEC (-0.04 ) |
| UTK | CRTN | 79.0 | 45 | iPc | 07:16:25.95 ( 0.04 ) | eS | 07:16:35.57 ( 0.00 ) |
| UTK | PDTN | 134.4 | 250 | eP | :34.73 (-0.12 ) | eS | :51.22 ( 0.16 ) |
| UTK | ABTN | 150.1 | 278 | eP | :37.12 (-0.23 ) | eS | :55.38 ( 0.02 ) |
| UTK | MSAL | 222.2 | 245 | eP | :45.24 (-3.40X) | eS | :17:14.55 (-0.23 ) |

## *****1997 FEBRUARY 22; 14:32-FAYETTE COUNTY, WEST VIRGINIA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VTSO | 970222 | 143233.1 | 37.921 | 81.027 | 5.0 | 4 | 70 | 343 | 0.1 | D | D/D | 56.8 | 326 | 4.6 | 19.8 | D | | 2.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| VTSO | NAV | 70.3 | 163 | eP | 14:32:45.20 ( 0.01 ) | eS | 14:32:59.70 ( 6.16X) |
| VTSO | BLA | 95.3 | 146 | ePc | :49.30 (-0.03 ) | iS | :33:06.70 ( 6.04X) |
| VTSO | CVL | 225.7 | 88 | eP | :33:03.80 (-5.59X) | S | :34.60 (-0.19 ) |
| VTSO | GHV | 257.3 | 92 | eP | :05.18 (-8.89X) | eS | :43.30 ( 0.42 ) |

*****1997 MARCH 2; 02:56 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970302 | 025626.8 | 32.980 | 80.172 | 7.5 | 14 | 7 | 78 | 0.1 | B | | 0.8 | 360 | 0.8 | 1.9 | | | 1.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | SVS | 7.3 | 260 | iPd | 02:56:29.00 (-0.02 ) | iSu | 02:56:29.99 (-0.04 ) |
| USC | RGR | 8.3 | 195 | ePu | :29.16 ( 0.04 ) | iSu | :30.15 ( 0.03 ) |
| USC | MGS | 9.5 | 163 | iPu | :29.42 ( 0.09 ) | iSd | :30.34 (-0.25 ) |
| USC | BCS | 9.9 | 90 | iPu | :29.36 (-0.12 ) | iSu | :30.51 (-0.35 ) |
| USC | HBF | 15.5 | 257 | iPd | :30.16 (-0.03 ) | iSu | :32.05 ( 0.14 ) |
| USC | TWB | 16.3 | 23 | iPd | :30.37 (-0.01 ) | iSd | :32.33 ( 0.26 ) |
| USC | DRC | 24.7 | 305 | iPu | :32.06 ( 0.09 ) | iSn | :36.69 ( 1.25 ) |

*****1997 MARCH 15; 05:56 - CENTRAL WEST VIRGINIA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VTSO | 970315 | 055636.4 | 38.347 | 80.484 | 10.0 | 10 | 90 | 263 | 0.4 | D | D/D | 8.7 | 329 | 1.3 | 14.5 | D | | 1.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| VTSO | FWV | 89.7 | 199 | eP | 05:56:52.02 ( 0.43 ) | S | 05:57:02.88 ( 0.70 ) |
| VTSO | NAV | 117.7 | 193 | eP | :55.28 (-0.58 ) | S | :08.98 (-0.46 ) |
| VTSO | BLA | 126.2 | 177 | ePc | :56.89 (-0.27 ) | S | :11.50 (-0.16 ) |
| VTSO | CVL | 181.9 | 102 | eP | :57:05.67 ( 0.03 ) | S | :26.53 ( 0.45 ) |
| VTSO | GHV | 217.4 | 106 | eP | :10.90 (-0.17 ) | S | :35.25 (-0.07 ) |

*****1997 MARCH 22; 23:31 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970322 | 233156.5 | 33.093 | 80.151 | 9.1 | 8 | 5 | 209 | 0.1 | A | | 1.2 | 360 | 1.2 | 1.0 | | | 0.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | TWB | 5.1 | 62 | iPd | 23:31:58.69 (-0.06 ) | iSd | 23:31:59.40 ( 0.03 ) |
| USC | BCS | 14.9 | 147 | iPd | :32:00.10 ( 0.02 ) | iSu | :32:01.96 (-0.17 ) |
| USC | SVS | 16.5 | 213 | iPd | :00.17 (-0.06 ) | iSd | :02.53 ( 0.13 ) |
| USC | RGR | 21.0 | 191 | iPd | :00.95 ( 0.05 ) | iSd | :03.46 (-0.03 ) |

*****1997 MARCH 24; 08:24 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970324 | 082403.1 | 36.373 | 83.425 | 0.0 | 11 | 42 | 163 | 0.4 | C | C/C | 1.8 | 343 | 0.4 | 1.2 | B | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 42.0 | 243 | iPd | 08:24:09.97 (-0.06 ) | iSd | 08:24:15.06 (-0.11 ) |
| UTK | TKL | 85.4 | 202 | | | S-P | 10.63 SEC ( 0.33 ) |
| UTK | SLTN | 117.2 | 86 | eP | :22.50 ( 0.12 ) | eS | :36.55 (-0.11 ) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UTK | FDKY | 217.0 | 283 | eP | :33.10 | (-4.97X) | eS | :25:04.12 ( 0.45 ) |
| UTK | ABTN | 247.6 | 258 | eP | :42.27 | (-0.46 ) | iS | :12.76 ( 1.18 ) |
| UTK | PDTN | 250.8 | 242 | iP | :41.94 | (-1.18 ) | eS | :12.25 (-0.01 ) |
| UTK | MSAL | 339.6 | 241 | eP | :55.55 | ( 1.49 ) | eS | :36.11 (4.93X) |

*****1997 MARCH 26; 06:05 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970326 | 060522.6 | 35.798 | 84.188 | 0.0 | 20 | 7 | 131 | 0.5 | C | D/B | 0.7 | 352 | 0.3 | 1.2 | A | | 2.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | TKL | 40.6 | 112 | | | S-P | 5.41 SEC ( 0.51 ) |
| UTK | CRTN | 54.5 | 35 | eP+ | 06:05:31.60 (-0.02 ) | eS | 06:05:38.99 ( 0.71 ) |
| UTK | ANTN | 102.8 | 294 | iP+ | :39.04 (-0.53 ) | | |
| UTK | PDTN | 161.5 | 249 | eP- | :48.85 (-0.06 ) | iS | :06:08.25 ( 0.01 ) |
| UTK | ABTN | 173.8 | 274 | eP | :50.48 (-0.37 ) | eS | :11.97 ( 0.38 ) |
| UTK | FDKY | 181.5 | 308 | eP- | :51.50 (-0.55 ) | iS | :14.35 ( 0.68 ) |
| UTK | SLTN | 199.4 | 68 | iPu | :54.70 (-0.21 ) | eS | :19.47 ( 0.86 ) |
| UTK | MSAL | 249.4 | 246 | iPu | :06:01.54 (-0.93 ) | iS | :32.37 ( 0.90 ) |
| UTK | LAL | 324.3 | 243 | eP | :12.84 ( 1.13 ) | eS | :47.53 ( 0.06 ) |
| UTK | NAV | 347.6 | 60 | | | S-P | 38.3 SEC ( 0.34 ) |
| UTK | MOTN | 353.5 | 286 | eP | :14.15 (-1.14 ) | eS | :55.21 ( 1.55 ) |
| UTK | BLA | 372.1 | 64 | | | S-P | 37.55 SEC (-2.62 ) |

*****1997 MARCH 29; 10:16 - RUSSELL COUNTY, VIRGINIA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VTSO | 970329 | 101657.1 | 37.088 | 81.906 | 4.4 | 7 | 102 | 314 | 0.4 | D | D/D | 11.4 | 341 | 2.4 | 9.9 | D | | 2.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| VTSO | NAV | 102.0 | 75 | P | 10:17:14.20 (-0.20 ) | eS | 10:17:26.30 (-0.22 ) |
| VTSO | BLA | 132.7 | 84 | ePd | :19.48 ( 0.30 ) | eS | :34.96 ( 0.30 ) |
| VTSO | CEH | 284.9 | 117 | eP | :40.51 (-0.93 ) | eS | :18:12.70 ( 0.00 ) |
| VTSO | CVL | 320.2 | 71 | eP | :47.00 ( 1.23 ) | eS | :23.50 ( 3.41X) |

*****1997 MARCH 29; 14:29 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970329 | 142955.2 | 32.989 | 80.143 | 5.8 | 18 | 7 | 83 | 0.1 | B | | 0.5 | 360 | 0.5 | 1.9 | | | 1.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | BCS | 7.3 | 98 | iPu | 14:29:57.27 (-0.06 ) | iSu | 14:29:58.20 (-0.09 ) |
| USC | SVS | 10.1 | 257 | iPu | :57.64 (-0.02 ) | iSd | :58.85 (-0.02 ) |
| USC | MGS | 10.1 | 179 | iPu | :57.74 ( 0.07 ) | iSu | :59.05 ( 0.17 ) |
| USC | RGR | 10.3 | 208 | iPd | :57.69 ( 0.03 ) | iSd | :59.03 ( 0.27 ) |
| USC | TWB | 14.4 | 15 | iPd | :58.38 ( 0.01 ) | iSd | :30:00.07 ( 0.31 ) |
| USC | HBF | 18.4 | 255 | iPu | :58.92 (-0.06 ) | iSd | :01.04 ( 0.03 ) |
| USC | WAS | 19.9 | 217 | iPd | :59.27 (-0.04 ) | iSd | :01.65 (-0.45 ) |
| USC | DRC | 26.4 | 300 | iPu | :30:00.68 ( 0.07 ) | iSd | :04.13 (-0.16 ) |
| USC | SGS | 41.0 | 303 | iPu | :02.97 (-0.15 ) | iSn | :08.04 (-0.60 ) |

*****1997 APRIL 1; 03:11 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970401 | 031140.2 | 36.356 | 84.966 | 0.0 | 15 | 31 | 144 | 0.3 | C | B/C | 0.7 | 354 | 0.4 | 1.9 | B | 1.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ANTN | 31.4 | 229 | iP | 03:11:45.20 (-0.16 ) | | |
| UTK | FDKY | 88.4 | 303 | iP- | :54.93 ( 0.16 ) | eS | 03:12:05.78 ( 0.20 ) |
| UTK | CRTN | 102.6 | 99 | eP+ | :57.05 (-0.04 ) | eS | :09.55 (-0.07 ) |
| UTK | ABTN | 115.4 | 243 | iP+ | :59.17 ( 0.04 ) | iS | :13.37 ( 0.21 ) |
| UTK | TKL | 132.5 | 125 | | | S-P | 16.50 SEC ( 0.65 ) |
| UTK | PDTN | 144.2 | 214 | eP+ | :12:03.73 (-0.01 ) | eS | :21.16 ( 0.08 ) |
| UTK | MSAL | 228.0 | 223 | eP | :16.30 (-0.55 ) | eS | :42.69 (-0.94 ) |
| UTK | SLTN | 255.5 | 87 | eP | :20.11 (-0.78 ) | eS | :48.84 (-1.68X) |
| UTK | MOTN | 272.2 | 277 | eP | :22.66 (-0.17 ) | eS | :54.47 ( 0.59 ) |

*****1997 APRIL 2; 08:05 - GEORGIA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970402 | 080559.9 | 34.980 | 84.975 | 4.0 | 13 | 86 | 218 | 0.3 | C | B/D | 0.8 | 333 | 0.3 | 2.2 | B | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 86.1 | 292 | iPd | 08:06:14.15 ( 0.18 ) | eS | 08:06:24.43 ( 0.01 ) |
| UTK | ANTN | 134.3 | 350 | eP | :22.55 ( 0.87 ) | iS | :37.69 (-0.03 ) |
| UTK | ABTN | 143.9 | 315 | eP | :22.84 (-0.34 ) | iS | :39.77 (-0.56 ) |
| UTK | MSAL | 156.0 | 265 | eP | :24.56 (-0.52 ) | iS | :43.58 (-0.02 ) |
| UTK | CRTN | 170.0 | 37 | iP- | :26.92 (-0.38 ) | iS | :47.62 ( 0.17 ) |
| UTK | FDKY | 214.1 | 340 | eP | :35.97 ( 1.81X) | iS | :59.43 ( 0.23 ) |
| UTK | LAL | 224.7 | 255 | eP | :36.13 ( 0.32 ) | eS | :07:01.38 (-0.62 ) |

*****1997 APRIL 11; 08:02 - TENNESSEE*****

| RCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970411 | 080220.7 | 35.892 | 83.537 | 0.0 | 12 | 22 | 132 | 0.5 | C | C/C | 0.4 | 336 | 0.3 | 2.3 | B | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | EGT | 21.6 | 87 | iPu | 08:02:23.98 (-0.26 ) | iS | 08:02:26.80 (-0.09 ) |
| UTK | TKL | 33.6 | 220 | iP- | :25.95 (-0.27 ) | iS | :30.58 ( 0.24 ) |
| UTK | CRTN | 43.8 | 321 | iPd | :27.93 ( 0.03 ) | eS | :33.31 ( 0.06 ) |
| UTK | SLTN | 141.4 | 64 | eP | :44.30 ( 0.47 ) | eS | :03:02.96 ( 2.07 ) |
| UTK | ANTN | 155.8 | 282 | eP- | :45.49 (-0.58 ) | eS | :03.21 (-1.55 ) |
| UTK | FDKY | 225.8 | 297 | eP | :57.76 ( 0.75 ) | | |
| UTK | ABTN | 232.2 | 271 | eP | 03:02.58 ( 4.57X) | eS | :25.61 ( 0.36 ) |

*****1997 APRIL 27; 20:50 - KENTUCKY*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970427 | 205024.3 | 36.780 | 83.394 | 14.6 | 15 | 76 | 197 | 0.3 | D | C/D | 0.6 | 348 | 0.4 | 1.6 | B | | 1.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 75.8 | 212 | iPd | 20:50:36.62 (-0.07 ) | iS | 20:50:45.96 ( 0.15 ) |
| UTK | EGT | 97.9 | 175 | iP- | :39.91 (-0.26 ) | eS | :53.25 ( 1.42 ) |
| UTK | SLTN | 119.9 | 108 | eP | :43.95 ( 0.35 ) | eS | :57.83 ( 0.05 ) |
| UTK | TKL | 129.0 | 195 | eP | :44.48 (-0.49 ) | eS | :51:00.00 (-0.14 ) |
| UTK | ANTN | 177.9 | 248 | eP | :52.37 (-0.22 ) | eS | :14.37 ( 1.16 ) |
| UTK | MYNC | 200.5 | 199 | | | eS | :31.86 (12.70X) |
| UTK | FDKY | 214.2 | 271 | eP | :58.70 ( 0.55 ) | eS | :22.37 (-0.39 ) |
| UTK | ABTN | 263.1 | 249 | eP | :51:04.92 ( 0.60 ) | eS | :36.23 ( 2.79X) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UTK | PDTN | 277.3 | 234 | eP- | :05.56 | (-0.50 ) | eS | :41.03 ( 4.57X) |
| UTK | MSAL | 365.8 | 235 | | | | eS | :56.63 ( 1.32 ) |

*****1997 MAY 4; 03:39 - ALABAMA*****

NEIC Felt at Brewton and Flomaton, Alabama.

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970504 | 033912.8 | 30.934 | 87.494 | 0.0 | 14 | 389 | 303 | 0.5 | D | D/D | 16.3 | 27 | 2.6 | 14.4 | D | | 3.1 | | |
| NEIC | 970504 | 033913.0 | 31.000 | 87.400 | 5.0F | 10 | 381 | | | | | | | | | | | 3.1 | | F |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | LAL | 388.7 | 2 | eP | 03:40:08.47 ( 0.34 ) | eS | 03:40:47.09 (-0.35 ) |
| UTK | OXF | 435.5 | 336 | P | :23.58 ( 9.76X) | | |
| UTK | MSAL | 440.7 | 10 | ePd | :14.36 (-0.11 ) | eS | :58.19 (-0.10 ) |
| UTK | GOGA | 468.7 | 53 | P | :17.81 (-0.07 ) | | |
| UTK | PDTN | 505.2 | 17 | ePu | :21.91 (-0.45 ) | eS | :41:12.40 ( 0.62 ) |
| UTK | ABTN | 564.1 | 13 | eP | :29.47 (-0.11 ) | iS | :27.32 ( 3.21 ) |
| UTK | ANTN | 617.8 | 19 | eP | :36.63 ( 0.46 ) | eS | :38.02 ( 2.63 ) |
| UTK | MOTN | 632.2 | 356 | iP | :38.44 ( 0.57 ) | eS | :39.78 ( 1.48 ) |
| UTK | CRTN | 675.3 | 29 | eP- | :43.01 (-0.18 ) | | |
| NEIC | LAL | 381.4 | 1 | eP | 03:40:08.47 ( 0.3 ) | eS | 03:40:47.09 ( X) |
| NEIC | MSAL | 431.5 | 9 | ePd | :14.36 (-0.3 ) | eS | :58.19 ( X) |
| NEIC | OXF | 432.6 | 335 | (P) | :23.05 ( 8.3 ) | | |
| NEIC | GOGA | 457.0 | 53 | eP | :17.81 ( 0.0 ) | eS | :41:07.18 ( X) |
| NEIC | PDTN | 495.9 | 17 | ePc | :21.91 (-0.9 ) | eS | :12.40 ( X) |
| NEIC | MYNC | 544.9 | 33 | (P) | :52.05 (22.9 ) | | |
| NEIC | ABTN | 554.9 | 12 | eP | :29.47 (-0.9 ) | iS | :27.32 ( X) |
| NEIC | MOTN | 624.9 | 355 | iP | :38.44 (-0.9 ) | eS | :39.78 ( X) |
| NEIC | CRTN | 665.0 | 29 | eP | :43.01 (-1.2 ) | | |
| NEIC | MIAR | 699.4 | 306 | (P) | :45.45 (-3.2 ) | | |

Additional Data:

| | | | | | | |
|---|---|---|---|---|---|---|
| GIT | ATL | | P | 03:40:18.7 | S | 03:41:00.5 |

*****1997 MAY 10; 14:42 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970510 | 144217.5 | 32.940 | 80.157 | 6.6 | 6 | 5 | 294 | 0.0 | A | | 1.1 | 360 | 1.1 | 0.9 | | | 0.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | RGR | 5.0 | 224 | iPu | 14:42:19.33 (-0.02 ) | iSu | 14:42:19.95 ( 0.01 ) |
| USC | SVS | 9.1 | 290 | ePd | :19.99 ( 0.09 ) | iSu | :21.05 ( 0.00 ) |
| USC | HBF | 16.5 | 273 | iPd | :21.05 ( 0.02 ) | iSu | :22.85 (-0.01 ) |

*****1997 MAY 17; 23:38 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WSRC | 970517 | 233838.6 | 32.315 | 82.665 | 5.4 | 12 | 129 | 97 | 0.0 | D | D/D | 0.1 | | | 0.5 | | | 2.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| WSRC | NPR | 6.2 | 36 | iPu | 23:38:40.24 ( 0.04X) | S | 23:38:410.28 ( 0.04 ) |
| WSRC | SRD | 7.2 | 209 | iPd | :40.24 ( 0.12 ) | | |
| WSRC | SRW | 9.2 | 97 | iPu | :40.52 ( 0.12 ) | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| WSRC | SRV | 12.6 | 359 | iPu | :40.97 | ( 0.35 ) | S | :42.56 | ( 0.02 ) |
| WSRC | MBY | 13.1 | 261 | iPd | :41.08 | ( 0.35 ) | S | :43.02 | ( 0.16 ) |
| WSRC | SRN | 15.3 | 32 | iPd | :41.32 | (-0.65 ) | | | |
| WSRC | DXN | 18.2 | 162 | iPu | :41.96 | (-0.65 ) | S | :44.24 | ( 0.02 ) |
| WSRC | BLK | 34.2 | 64 | iP- | :44.31 | (-0.65 ) | S | :48.24 | ( 0.00 ) |

*****1997 MAY 19; 02:32 - ALABAMA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970519 | 023205.8 | 34.866 | 87.831 | 6.5 | 11 | 106 | 164 | 0.3 | D | C/D | 0.4 | 10 | 0.3 | 1.9 | B | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | MSAL | 105.8 | 91 | eP | 02:32:23.20 ( 0.19 ) | iS | 02:32:35.48 (-0.20 ) |
| UTK | TCT | 128.9 | 11 | eP- | :26.87 ( 0.22 ) | iS | :41.52 (-0.45 ) |
| UTK | OXF | 149.9 | 255 | | | S | :47.50 (-0.18 ) |
| UTK | PDTN | 186.3 | 75 | iP- | :35.53 (-0.13 ) | iS | :58.02 ( 0.49 ) |
| UTK | ABTN | 193.1 | 54 | eP | :36.77 ( 0.05 ) | eS | :59.19 (-0.16 ) |
| UTK | MOTN | 194.9 | 356 | iPu | :37.16 ( 0.17 ) | iS | :33:00.51 ( 0.69 ) |
| UTK | FDKY | 281.8 | 40 | | | eS | :23.94 ( 3.58X) |
| UTK | GOGA | 433.6 | 111 | P | :33:01.10 (-6.56X) | | |

*****1997 MAY 19; 19:45 - ALABAMA*****

NEIC Felt in the Summerville, Georgia, area. Standard deviation 1.3 on 7 of 8 observations.

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 970519 | 194533.7 | 34.782 | 85.444 | 5.0F | 7 | 125 | | | | | | | | | | | 2.9 | | F |
| UTK | 970519 | 194535.8 | 34.622 | 85.353 | 2.7 | 26 | 85 | 120 | 0.4 | D | C/D | 0.3 | 7 | 0.2 | 1.2 | A | | 3.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| NEIC | MYNC | 124.5 | 75 | eP | 19:45:56.03 ( 0.9 ) | eS | 19:46:10.46 ( X) |
| NEIC | ATL | 181.3 | 145 | P | :46:02.79 (-0.3 ) | | |
| NEIC | GOGA | 238.0 | 129 | eP | :11.15 ( 0.7 ) | eS | :35.94 ( X) |
| NEIC | OXF | 364.7 | 266 | eP | :26.78 ( 0.0 ) | | |
| NEIC | NAV | 504.8 | 55 | (P) | :45.79 ( 1.1 ) | | |
| NEIC | CEH | 590.5 | 76 | (P) | :53.72 (-1.8 ) | | |
| NEIC | CVL | 719.5 | 58 | (P) | :47:11.37 (-0.6 ) | | |
| NEIC | GHV | 738.4 | 61 | (P) | :20.12 (5.8X) | | |
| UTK | PDTN | 85.3 | 328 | iPu | 19:45:49.83 ( 0.00 ) | iS | 19:46:00.55 ( 0.33 ) |
| UTK | MYNC | 122.8 | 66 | eP | :56.03 ( 0.19 ) | eS | :10.46 (-0.17 ) |
| UTK | MSAL | 123.5 | 282 | eP | :55.78 (-0.16 ) | iS | :10.57 (-0.21 ) |
| UTK | ABTN | 156.2 | 334 | iPu | :46:00.85 (-0.26 ) | iS | :19.92 ( 0.20 ) |
| UTK | ATL | 161.8 | 144 | P | :02.80 ( 0.81 ) | S | :21.20 (-0.04 ) |
| UTK | ORT | 171.8 | 33 | eP | :03.74 ( 0.16 ) | eS | :25.14 ( 1.15 ) |
| UTK | LAL | 183.3 | 264 | iPu | :05.43 ( 0.05 ) | iS | :27.34 ( 0.26 ) |
| UTK | TKL | 184.2 | 51 | iPd | :05.19 (-0.33 ) | eS | :26.96 (-0.37 ) |
| UTK | GOGA | 220.0 | 127 | eP | :11.15 ( 0.08 ) | eS | :35.94 (-0.88 ) |
| UTK | EGT | 234.8 | 52 | eP- | :12.96 (-0.46 ) | eS | :41.76 ( 0.92 ) |
| UTK | TCT | 252.1 | 308 | iPd | :15.21 (-0.48 ) | eS | :45.34 ( 0.62 ) |
| UTK | MOTN | 325.5 | 314 | eP | :24.52 (-0.21 ) | eS | :47:00.82 ( 0.46 ) |
| UTK | SLTN | 356.1 | 54 | iP+ | :27.81 (-0.81 ) | iS | :07.62 ( 0.53 ) |
| UTK | OXF | 372.4 | 269 | eP | :26.78 (-3.72X) | | |
| UTK | CEH | 586.8 | 74 | P | :53.72 (-3.22X) | | |

Additional Data:

| | | | | | | |
|---|---|---|---|---|---|---|
| GIT | ATL | | P | 19:46:02.4 | S | 19:46:21.6 |

*****1997 MAY 19; 22:22 - GEORGIA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970519 | 222233.9 | 34.605 | 85.364 | 5.4 | 14 | 86 | 218 | 0.4 | D | C/D | 0.8 | 358 | 0.3 | 2.2 | B | | 1.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 86.4 | 329 | eP- | 22:22:47.88 (-0.10 ) | eS | 22:22:58.21 (-0.21 ) |
| UTK | MSAL | 122.9 | 283 | iPd | :53.88 ( 0.07 ) | iS | :23:08.50 ( 0.03 ) |
| UTK | MYNC | 124.4 | 65 | P | :54.10 ( 0.04 ) | S | :08.55 (-0.36 ) |
| UTK | ABTN | 157.5 | 335 | eP- | :58.94 (-0.32 ) | eS | :17.89 (-0.01 ) |
| UTK | ORT | 173.9 | 33 | eP | :23:02.36 ( 0.51 ) | iS | :24.13 ( 1.77 ) |
| UTK | TKL | 186.1 | 51 | eP | :04.41 ( 0.66 ) | eS | :25.37 (-0.28 ) |
| UTK | EGT | 236.7 | 52 | eP | :13.35 ( 1.69 ) | eS | :38.74 (-0.40 ) |

*****1997 MAY 20; 05:56 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970520 | 055620.5 | 35.717 | 84.210 | 0.0 | 13 | 23 | 78 | 0.7 | D | D/C | 0.5 | 228 | 0.3 | 2.5 | B | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ORT | 23.0 | 338 | iP- | 05:56:23.65 (-0.60 ) | eS | 05:56:26.80 (-0.27 ) |
| UTK | LVTN | 24.6 | 45 | | | S-P | 3.12 SEC ( 0.15 ) |
| UTK | TKL | 40.0 | 99 | P | :27.25 ( 0.18 ) | S | :32.44 ( 0.48 ) |
| UTK | MYNC | 71.8 | 174 | eP | :31.80 (-0.51 ) | S | :39.63 (-1.46 ) |
| UTK | PDTN | 156.7 | 252 | eP | :45.70 (-0.29 ) | eS | :57:05.99 ( 1.22 ) |
| UTK | ABTN | 172.7 | 277 | eP | :49.20 ( 0.69 ) | iS | :10.67 ( 1.54 ) |
| UTK | SLTN | 204.7 | 66 | eP | :52.59 (-0.99 ) | eS | :16.70 (-1.17 ) |

*****1997 MAY 24; 09:15 - ALABAMA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970524 | 091548.2 | 34.843 | 88.067 | 0.0 | 11 | 127 | 164 | 0.5 | D | C/D | 1.0 | 27 | 0.7 | 3.8 | C | | 1.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | MSAL | 127.4 | 89 | iP+ | 09:16:08.80 (-0.32 ) | iS | 09:16:24.61 ( 0.06 ) |
| UTK | OXF | 128.4 | 254 | P | :09.60 ( 0.34 ) | S | :22.90 (-1.88X) |
| UTK | WVT | 144.5 | 8 | P | :12.59 ( 0.77 ) | S | :27.97 (-1.21 ) |
| UTK | MOTN | 197.1 | 2 | eP | :19.73 (-0.40 ) | eS | :43.71 ( 0.15 ) |
| UTK | PDTN | 207.8 | 76 | eP- | :21.46 (-0.37 ) | iS | :47.28 ( 0.78 ) |
| UTK | ABTN | 212.3 | 56 | eP+ | :21.78 (-0.74 ) | eS | :47.81 ( 0.11 ) |
| UTK | ANTN | 296.5 | 59 | eP | :36.82 ( 2.85X) | eS | :17:11.86 ( 4.59X) |
| UTK | CRTN | 411.8 | 67 | eP | :53.58 ( 5.41X) | eS | :36.15 ( 4.30X) |

*****1997 MAY 27; 02:38 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970527 | 023854.1 | 36.178 | 82.481 | 0.0 | 18 | 44 | 182 | 0.5 | D | C/D | 1.3 | 328 | 0.3 | 1.6 | B | | 2.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | SLTN | 43.8 | 48 | eP- | 02:39:01.17 (-0.18 ) | eS | 02:39:07.36 ( 0.65 ) |
| UTK | EGT | 79.8 | 248 | eP | :06.14 (-1.16X) | iS | :17.51 ( 0.45 ) |
| UTK | CRTN | 122.3 | 272 | iP+ | :14.52 ( 0.33 ) | eS | :29.02 (-0.04 ) |
| UTK | TKL | 130.2 | 244 | P | :15.10 (-0.34 ) | eS | :36.00 ( 4.81X) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UTK | ORT | 167.0 | 260 | eP | :20.70 | (-0.58 ) | eS | :40.72 (-0.53 ) |
| UTK | MYNC | 193.0 | 231 | P | :24.90 | (-0.49 ) | S | :49.10 ( 0.75 ) |
| UTK | NAV | 196.8 | 50 | P | :25.50 | (-0.48 ) | S | :50.50 ( 1.11 ) |
| UTK | ANTN | 247.4 | 271 | eP | :33.69 | (-0.11 ) | eS | :40:01.85 (-0.84 ) |
| UTK | FDKY | 304.6 | 284 | eP | :43.81 | ( 3.00X) | eS | :16.38 ( 1.57 ) |
| UTK | PDTN | 320.8 | 253 | | | | eS | :19.03 ( 0.74 ) |
| UTK | ABTN | 328.6 | 265 | eP | :41.90 | (-1.88 ) | eS | :19.31 (-0.64 ) |

*****1997 MAY 27; 04:54 - TENNESSEE*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970527 | 045419 | .0 | 36.064 | 83.677 | 12.5 | 20 | 21 | 118 | 0.4 | C | C/B | 0.4 | 255 | 0.2 | 0.5 | A | | 2.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 21.1 | 316 | iPu | 04:54:23.09 ( 0.04 ) | iS | 04:54:26.04 ( 0.03 ) |
| UTK | TKL | 45.9 | 191 | iP | :26.68 (-0.05 ) | iS | :32.74 ( 0.33 ) |
| UTK | ORT | 59.2 | 253 | eP- | :28.78 (-0.02 ) | iS | :36.52 ( 0.51 ) |
| UTK | MYNC | 117.2 | 201 | iP | :37.83 (-0.12 ) | iS | :51.57 (-0.26 ) |
| UTK | ANTN | 140.5 | 275 | iPd | :41.17 (-0.45 ) | eS | :58.04 (-0.14 ) |
| UTK | SLTN | 146.1 | 73 | eP+ | :41.99 (-0.54 ) | eS | :55:01.05 ( 1.29 ) |
| UTK | FDKY | 206.3 | 294 | eP | :51.40 (-0.48 ) | eS | :16.43 ( 0.69 ) |
| UTK | PDTN | 215.4 | 247 | eP | :52.49 (-0.79 ) | eS | :19.05 ( 0.90 ) |
| UTK | ABTN | 220.3 | 266 | eP | :53.65 (-0.38 ) | iS | :19.83 ( 0.36 ) |
| UTK | MSAL | 303.7 | 244 | | | eS | :39.18 ( 1.94 ) |
| UTK | TCT | 349.4 | 270 | eP | :55:14.81 ( 4.87X) | eS | :45.86 (-1.12 ) |

*****1997 JUNE 3; 05:15 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970603 | 051520 | .4 | 32.923 | 80.157 | 5.9 | 10 | 3 | 210 | 0.0 | A | | 1.2 | 360 | 1.2 | 0.6 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MGS | 3.1 | 151 | iPd | 05:15:21.99 ( 0.03 ) | iSd | 05:15:22.42 (-0.03 ) |
| USC | RGR | 3.8 | 244 | iPu | :21.96 (-0.03 ) | iSd | :22.44 ( 0.03 ) |
| USC | SVS | 9.9 | 301 | iPd | :22.92 ( 0.08 ) | iSn | :23.86 (-0.17 ) |
| USC | WAS | 13.6 | 292 | iPd | :23.47 ( 0.01 ) | iSd | :25.19 (-0.26 ) |
| USC | HBF | 16.6 | 280 | iPd | :23.93 ( 0.03 ) | iSn | :25.64 (-0.07 ) |

*****1997 JUNE 4; 23:07 - TENNESSEE*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970604 | 230730 | .6 | 35.497 | 85.114 | 23.8 | 25 | 71 | 83 | 0.3 | D | C/D | 0.3 | 2 | 0.2 | 1.8 | B | | 2.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 71.3 | 250 | iPd | 23:07:42.46 (-0.11 ) | iS | 23:07:51.40 ( 0.09 ) |
| UTK | ANTN | 75.7 | 352 | iPu | :43.29 ( 0.04 ) | iS | :51.90 (-0.59 ) |
| UTK | ORT | 86.4 | 58 | ePd | :44.65 (-0.20 ) | eS | :55.95 ( 0.69 ) |
| UTK | ABTN | 99.9 | 296 | eP+ | :46.83 (-0.07 ) | eS | :58.96 ( 0.18 ) |
| UTK | MYNC | 101.2 | 117 | iPc | :47.10 (-0.02 ) | iS | :58.97 (-0.19 ) |
| UTK | CDG | 106.2 | 158 | P | :48.00 ( 0.13 ) | S | :08:00.80 ( 0.35 ) |
| UTK | TKL | 122.8 | 81 | iP | :50.55 ( 0.15 ) | iS | :04.77 (-0.03 ) |
| UTK | CRTN | 139.0 | 55 | iPu | :52.61 (-0.28 ) | eS | :08.55 (-0.54 ) |
| UTK | FDKY | 156.0 | 337 | iPd | :55.54 ( 0.06 ) | eS | :14.07 ( 0.50 ) |
| UTK | MSAL | 159.3 | 244 | iP- | :55.18 (-0.80 ) | eS | :14.89 ( 0.47 ) |
| UTK | EGT | 170.4 | 74 | eP | :57.46 (-0.27 ) | eS | :17.91 ( 0.47 ) |
| UTK | LAL | 234.6 | 241 | eP | :08:06.49 ( 0.19 ) | | |
| UTK | SLTN | 289.7 | 68 | eP | :12.42 (-0.78 ) | eS | :45.76 ( 1.58 ) |

*****1997 JUNE 8; 09:42 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970608 | 094204.1 | 36.079 | 83.671 | 9.3 | 22 | 20 | 122 | 0.2 | C | B/C | 0.3 | 228 | 0.3 | 0.8 | A | | 2.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 20.3 | 311 | ePu | 09:42:07.54 (-0.22 ) | eS | 09:42:10.67 ( 0.19 ) |
| UTK | EGT | 39.0 | 120 | eP | :10.64 (-0.03 ) | eS | :16.07 ( 0.52 ) |
| UTK | TKL | 47.6 | 191 | iP | :12.05 ( 0.05 ) | iS | :17.80 (-0.05 ) |
| UTK | ORT | 60.1 | 252 | iPd | :13.95 (-0.04 ) | iS | :21.65 ( 0.32 ) |
| UTK | MYNC | 118.9 | 200 | iP+ | :23.16 (-0.13 ) | iS | :37.23 (-0.16 ) |
| UTK | ANTN | 140.8 | 275 | eP | :27.32 ( 0.58 ) | eS | :43.30 (-0.06 ) |
| UTK | SLTN | 145.1 | 73 | iP | :27.49 ( 0.04 ) | eS | :44.51 (-0.09 ) |
| UTK | FDKY | 206.1 | 293 | eP | :36.58 (-0.44 ) | eS | :43:01.17 ( 0.20 ) |
| UTK | PDTN | 216.5 | 246 | eP | :39.07 ( 0.45 ) | eS | :02.98 (-0.75 ) |
| UTK | ABTN | 220.9 | 265 | eP | :39.31 ( 0.01 ) | eS | :05.09 ( 0.20 ) |
| UTK | HAKY | 284.5 | 294 | eP | :48.62 ( 1.32 ) | | |
| UTK | MSAL | 304.9 | 244 | P | :54.32 ( 4.50X) | eS | :24.45 ( 1.35 ) |

*****1997 JUNE 10; 15:41 - KENTUCKY*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970610 | 154159.4 | 37.273 | 84.507 | 6.6 | 16 | 127 | 208 | 0.3 | D | C/D | 1.2 | 24 | 0.3 | 3.0 | C | | 1.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | FDKY | 126.5 | 245 | iP | 15:42:20.28 ( 0.41 ) | eS | 15:42:35.18 ( 0.28 ) |
| UTK | CRTN | 133.1 | 153 | iP- | :20.84 (-0.08 ) | eS | :36.58 (-0.15 ) |
| UTK | ANTN | 138.3 | 208 | iP | :21.75 ( 0.00 ) | eS | :38.65 ( 0.50 ) |
| UTK | ORT | 152.3 | 173 | eP | :24.60 ( 0.65 ) | eS | :41.77 (-0.20 ) |
| UTK | HAKY | 185.5 | 265 | eP | :28.45 (-0.72 ) | iS | :50.84 (-0.15 ) |
| UTK | EGT | 186.7 | 144 | eP | :29.50 ( 0.08 ) | iS | :51.93 ( 0.50 ) |
| UTK | TKL | 190.8 | 160 | eP | :29.63 (-0.39 ) | iS | :52.58 ( 0.11 ) |
| UTK | ABTN | 210.4 | 223 | eP | :35.31 ( 2.20X) | eS | :57.23 (-0.46 ) |
| UTK | SLTN | 231.8 | 113 | eP | :40.68 ( 4.14X) | eS | :43:04.50 ( 0.96 ) |

*****1997 JUNE 11; 01:50 - KENTUCKY*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970611 | 015059.9 | 37.259 | 83.315 | 0.0 | 21 | 127 | 222 | 0.6 | D | D/D | 0.7 | 8 | 0.5 | 1.3 | A | | 2.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 126.6 | 202 | eP+ | 01:51:20.42 (-0.19 ) | eS | 01:51:35.93 (-0.02 ) |
| UTK | SLTN | 139.8 | 130 | ePd | :22.96 ( 0.19 ) | eS | :40.40 ( 0.76 ) |
| UTK | EGT | 150.7 | 179 | eP | :24.24 (-0.24 ) | eS | :44.39 ( 1.79 ) |
| UTK | ORT | 174.0 | 211 | iP+ | :28.07 (-0.04 ) | eS | :49.39 ( 0.51 ) |
| UTK | TKL | 182.3 | 193 | eP | :28.60 (-0.83 ) | iS | :51.08 (-0.08 ) |
| UTK | ANTN | 209.4 | 235 | iP | :35.10 ( 1.38 ) | eS | :59.60 ( 1.02 ) |
| UTK | FDKY | 226.7 | 257 | eP | :35.98 (-0.44 ) | eS | :52:03.27 ( 0.12 ) |
| UTK | MYNC | 253.2 | 197 | eP | :38.58 (-1.67 ) | eS | :09.38 (-0.27 ) |
| UTK | HAKY | 290.9 | 268 | eP | :45.97 ( 1.12 ) | eS | :18.25 ( 0.65 ) |
| UTK | ABTN | 292.8 | 239 | eP | :44.37 (-0.74 ) | eS | :20.67 ( 2.61 ) |
| UTK | MSAL | 403.9 | 230 | eP | :58.51 (-0.29 ) | eS | :49.20 ( 7.46X) |

*****1997 JUNE 14; 13:34 - NORTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 970614 | 133423.9 | 35.162 | 82.499 | 5.0F | 5 | 149 | | | | | | | | | | | 2.5 | | |
| UTK | 970614 | 133424.5 | 35.274 | 82.487 | 6.6 | 29 | 101 | 127 | 0.5 | D | C/D | 0.7 | 336 | 0.4 | 1.3 | A | | 2.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| NEIC | MYNC | 149.0 | 267 | eP | 13:34:49.28 | ( 0.2 ) | eS | 13:35:06.15 | ( X) |
| NEIC | GOGA | 213.5 | 205 | (Pn) | :57.28 | (-0.2 ) | eS | :26.22 | ( X) |
| NEIC | NAV | 283.6 | 32 | (Pn) | :35:05.53 | ( 1.1 ) | eS | 38.83 | ( X) |
| NEIC | BLA | 294.7 | 39 | (Pn) | :08.85 | ( 0.9 ) | eS | :40.23 | ( X) |
| NEIC | CEH | 319.1 | 74 | (Pn) | :11.37 | ( 0.2 ) | | | |
| UTK | EGT | 101.2 | 314 | ePd | 13:34:40.99 | (-0.00 ) | eS | 13:34:53.28 | ( 0.10 ) |
| UTK | TKL | 124.4 | 290 | ePu | :44.17 | (-0.46 ) | iS | :59.15 | (-0.28 ) |
| UTK | SLTN | 133.9 | 14 | ePd | :45.96 | (-0.22 ) | eS | :35:02.54 | ( 0.43 ) |
| UTK | MYNC | 151.1 | 262 | eP+ | :49.41 | ( 0.55 ) | eS | :07.24 | ( 0.49 ) |
| UTK | ORT | 179.2 | 294 | iPd | :53.57 | ( 0.29 ) | eS | :14.43 | ( 0.03 ) |
| UTK | GOGA | 225.4 | 204 | eP | :59.99 | (-0.54 ) | eS | :25.76 | (-0.97 ) |
| UTK | ANTN | 267.5 | 293 | eP | :35:06.21 | ( 0.25 ) | eS | :34.81 | (-1.31 ) |
| UTK | NAV | 273.0 | 33 | P | :05.83 | (-0.81 ) | S | :39.40 | ( 2.11 ) |
| UTK | BLA | 284.0 | 40 | eP | :08.85 | ( 0.85 ) | eS | :39.44 | (-0.20 ) |
| UTK | PDTN | 305.9 | 271 | eP | :10.77 | ( 0.11 ) | eS | :44.23 | (-0.02 ) |
| UTK | CEH | 315.1 | 76 | eP | :12.25 | ( 0.47 ) | eS | :43.10 | (-3.08 ) |
| UTK | ABTN | 335.2 | 283 | eP | :13.96 | (-0.32 ) | eS | :51.17 | ( 0.66 ) |
| UTK | FDKY | 342.2 | 300 | eP | :16.03 | ( 0.89 ) | eS | :53.32 | ( 1.33 ) |
| UTK | HAKY | 420.9 | 300 | eP | :25.90 | ( 1.08 ) | eS | :36:07.67 | (-1.07 ) |
| UTK | TCT | 465.9 | 281 | eP | :29.87 | (-0.51 ) | | | |

Additional Data:

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GIT | BEV | | | P | 13:34:42.59 | | S | 13:34:58.23 | |
| GIT | ATL | | | P | :35:02.00 | | S | :35:32.00 | |

*****1997 JUNE 26; 01:47 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970626 | 014742.8 | 35.032 | 84.622 | 17.5 | 17 | 45 | 180 | 0.3 | C | B/D | 0.6 | 349 | 0.3 | 1.2 | A | | 1.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| UTK | MYNC | 45.3 | 84 | iP- | 01:47:50.88 | ( 0.23 ) | iS | 01:47:56.47 | ( 0.04 ) |
| UTK | ORT | 101.5 | 16 | eP | :59.84 | ( 0.51 ) | iS | :48:11.65 | ( 0.21 ) |
| UTK | TKL | 103.7 | 48 | iPd | :59.33 | (-0.35 ) | eS | :11.72 | (-0.32 ) |
| UTK | PDTN | 115.0 | 284 | eP | :48:01.31 | (-0.14 ) | iS | :15.02 | (-0.08 ) |
| UTK | ANTN | 138.0 | 337 | eP | :04.90 | (-0.14 ) | eS | :20.95 | (-0.26 ) |
| UTK | CRTN | 147.6 | 28 | iPd | :06.42 | (-0.09 ) | eS | :24.01 | ( 0.27 ) |
| UTK | ABTN | 164.9 | 305 | eP | :09.04 | (-0.11 ) | eS | :28.73 | ( 0.45 ) |
| UTK | MSAL | 188.6 | 264 | eP | :13.22 | ( 0.45 ) | iS | :34.36 | (-0.15 ) |
| UTK | SLTN | 275.1 | 55 | | | | eS | :56.21 | ( 1.91 ) |

*****1997 JULY 12; 13:35 - GILES COUNTY, VIRGINIA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VTSO | 970712 | 133504.5 | 37.285 | 80.859 | 20.3 | 5 | 7 | 296 | 0.0 | C | D/D | 4.0 | 26 | 2.2 | 2.9 | C | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| VTSO | NAV | 6.7 | 59 | iPd | 13:35:08.13 | (-0.05 ) | iS | 13:35:10.72 | ( 0.04 ) |
| VTSO | ELN | 11.4 | 123 | iPc | :08.53 | ( 0.05 ) | iS | :11.17 | (-0.04 ) |
| VTSO | BLA | 39.8 | 102 | eP | :15.47 | ( 3.53X) | iS | :17.06 | ( 0.00 ) |

*****1997 JULY 19; 17:06 - GEORGIA*****

NEIC Felt.

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 970719 | 170634 | 3.3 | 35.056 | 84.808 | 10.0F | 8 | 62 | | | | | | | | | | 3.5 | | | F |
| UTK | 970719 | 170634 | 4 | 34.953 | 84.811 | 2.8 | 25 | 64 | 121 | 0.3 | D | C/D | 0.4 | 355 | 0.2 | 0.8 | A | | 3.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| NEIC | MYNC | 62.3 | 88 | eP | 17:06:45.15 (-0.5 ) | eS | 17:06:52.79 ( X) |
| NEIC | GOGA | 220.2 | 146 | iPc | :07:08.64 ( 0.4 ) | eS | :07:33.44 ( X) |
| NEIC | WVT | 299.1 | 294 | ePc | :21.94 (3.6X) | eS | :55.17 ( X) |
| NEIC | JSC | 336.9 | 104 | (P) | :22.86 (-0.3 ) | | |
| NEIC | LHS | 371.4 | 99 | ePn | :27.66 ( 0.0 ) | eS | :08:15.73 ( X) |
| NEIC | WCI | 375.9 | 340 | ePn | :32.59 (4.3X) | eSg | :22.58 ( X) |
| NEIC | OXF | 425.9 | 263 | ePn | :34.37 (-0.2 ) | | |
| NEIC | NAV | 439.2 | 54 | ePn | :36.28 (-0.1 ) | | |
| NEIC | SGS | 447.0 | 116 | (Pn) | :35.38 (-1.8X) | | |
| NEIC | BLA | 461.5 | 58 | ePn | :39.52 ( 0.4 ) | eSg | :07:47.47 ( X) |
| NEIC | MSAR | 491.5 | 281 | (Pn) | :47.84 (4.9X) | | |
| NEIC | CEH | 527.1 | 78 | (Pn) | :47.80 ( 0.3 ) | ePg | :58.66 ( X) |
| NEIC | CVL | 655.0 | 58 | ePn | :55.93 (-7.7X) | | |
| NEIC | MCWV | 673.9 | 39 | (Pn) | :08:03.23 (-2.8X) | | |
| NEIC | MIAR | 804.0 | 269 | ePn | :19.93 (-2.7X) | | |
| UTK | MYNC | 63.8 | 78 | eP | 17:06:45.15 ( 0.15 ) | eS | 17:06:52.79 (-0.03 ) |
| UTK | PDTN | 101.1 | 291 | ePu | :50.99 (-0.01 ) | iSd | :07:03.01 (-0.25 ) |
| UTK | ORT | 115.7 | 23 | ePd | :53.47 ( 0.13 ) | iS | :07.24 (-0.08 ) |
| UTK | TKL | 122.6 | 50 | | | S-P | 14.65 SEC ( 0.04 ) |
| UTK | ANTN | 140.5 | 344 | eP | :57.42 ( 0.12 ) | eS | :14.60 ( 0.49 ) |
| UTK | ABTN | 156.9 | 312 | ePu | :07:00.05 ( 0.19 ) | iS | :19.12 ( 0.57 ) |
| UTK | CRTN | 164.0 | 32 | eP | :00.93 (-0.07 ) | eS | :20.36 (-0.15 ) |
| UTK | MSAL | 170.6 | 267 | ePu | :01.67 (-0.36 ) | eS | :21.98 (-0.31 ) |
| UTK | EGT | 173.1 | 52 | ePd | :02.18 (-0.28 ) | eS | :24.37 ( 1.33X) |
| UTK | GOGA | 211.2 | 144 | iPc | :08.64 ( 0.22 ) | eS | :33.44 ( 0.12 ) |
| UTK | SLTN | 294.4 | 55 | eP | :19.06 (-0.63 ) | iS | :51.99 (-0.63 ) |
| UTK | WVT | 303.3 | 296 | ePc | :21.94 ( 1.28 ) | eS | :55.17 ( 0.86 ) |
| UTK | OXF | 423.9 | 265 | ePn | :34.37 (-1.15 ) | | |
| UTK | BLA | 468.1 | 56 | ePn | :39.52 (-1.52 ) | | |
| UTK | CEH | 529.6 | 77 | Pn | :47.80 (-0.77 ) | | |

Additional Data:

| | | | | | |
|---|---|---|---|---|---|
| GIT | DALG | P | 17:06:39.5 | | 17:06:44.1 |
| GIT | CDG | P | :42.4 | S | :47.3 |
| GIT | ATL | P | :07:03.8 | S | :07:22.4 |

*****1997 JULY 24; 07:49 - CENTRAL VIRGINIA*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VTSO | 970724 | 074944 | 2.2 | 37.620 | 77.761 | 9.3 | 6 | 36 | 316 | 0.2 | D | D/D | 3.9 | 333 | 1.9 | 12.6 | D | | 1.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| VTSO | GHV | 36.2 | 302 | iPc | 07:49:50.16 (-0.21 ) | iS | 07:49:55.01 ( 0.16 ) |
| VTSO | NA12 | 42.2 | 346 | iP | :51.50 ( 0.17 ) | iS | :56.37 (-0.13 ) |
| VTSO | CVL | 73.6 | 303 | eP | :56.45 ( 0.04 ) | eS | :50:05.27 (-0.03 ) |

*****1997 JULY 27; 08:52 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970727 | 085208.9 | 35.086 | 85.136 | 10.1 | 16 | 68 | 169 | 0.3 | D | C/D | 0.7 | 359 | 0.3 | 6.6 | D | | 1.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 68.3 | 288 | eP | 08:52:20.49 ( 0.40 ) | iS | 08:52:28.24 (-0.09 ) |
| UTK | MYNC | 91.9 | 91 | eP | :23.65 (-0.18 ) | eS | :34.47 (-0.33 ) |
| UTK | ORT | 118.5 | 39 | eP | :28.48 ( 0.47 ) | eS | :42.56 ( 0.53 ) |
| UTK | ANTN | 120.8 | 356 | eP | :28.26 (-0.13 ) | eS | :42.17 (-0.52 ) |
| UTK | ABTN | 125.2 | 315 | eP- | :28.91 (-0.17 ) | eS | :43.67 (-0.20 ) |
| UTK | TKL | 139.1 | 62 | | | S-P | 15.70 SEC (-0.62 ) |
| UTK | MSAL | 142.9 | 260 | eP | :32.16 ( 0.30 ) | eS | :48.76 ( 0.07 ) |
| UTK | CRTN | 170.4 | 43 | eP | :35.93 (-0.28 ) | eS | :58.38 ( 2.17X) |
| UTK | EGT | 189.7 | 61 | eP | :39.10 (-0.18 ) | eS | :53:02.17 ( 0.67 ) |

*****1997 JULY 27; 15:10 - VIRGINIA*****

NEIC Felt (V) at Brandy Station and Culpeper; (III) at Jeffersonton; (II) at Casanova.

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 970727 | 151035.9 | 38.675 | 78.388 | 5.0F | 7 | 77 | | | | | | | | | | 2.5 | | | 5 |
| VTSO | 970727 | 151043.2 | 38.429 | 77.982 | 19.0 | 6 | 50 | 309 | 0.1 | D | C/D | 1.7 | 352 | 1.0 | 7.5 | D | | 2.5 | | F |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| NEIC | CVL | 76.7 | 185 | eP | 15:10:53.52 (3.7X) | eS | 15:11:01.62 ( X) |
| NEIC | NA12 | 89.0 | 150 | P | :51.83 ( 0.0 ) | S | :10:58.11 ( X) |
| NEIC | GHV | 101.2 | 166 | eP | :54.79 ( 1.1 ) | eS | :11:02.69 ( X) |
| NEIC | MCWV | 166.8 | 311 | ePn | :11:03.47 ( 0.0 ) | | |
| | | | | ePg | :16.59 | | |
| NEIC | SSPA | 222.4 | 11 | ePn | :10.54 (-0.1 ) | eS | :48.94 ( X) |
| | | | | ePg | :21.53 | | |
| NEIC | BLA | 241.3 | 228 | ePn | :13.16 (-0.1 ) | eSg | :53.22 ( X) |
| | | | | ePg | :23.12 | | |
| NEIC | NED | 258.0 | 63 | P | :23.29 (7.9X) | S | :53.79 ( X) |
| NEIC | NAV | 259.1 | 235 | (Pn) | :16.50 ( 0.9 ) | | |
| NEIC | BWD | 273.5 | 62 | P | :23.20 (6.0X) | S | :54.90 ( X) |
| NEIC | BVD | 278.0 | 63 | P | :23.79 (6.0X) | S | :55.00 ( X) |
| NEIC | CEH | 315.8 | 192 | ePn | :20.84 (-1.8 ) | | |
| NEIC | MYNC | 649.4 | 234 | (P) | :12:00.20 (5.0X) | | |
| VTSO | NA12 | 49.7 | 169 | iPc | 15:10:51.83 (-0.01 ) | eS | 15:10:58.11 ( 0.01 ) |
| VTSO | CVL | 65.0 | 220 | ePd | :54.06 (-0.08 ) | iS | :11:02.14 ( 0.07 ) |
| VTSO | GHV | 71.3 | 189 | eP | :55.20 ( 0.10 ) | eS | :03.63 (-0.09 ) |
| VTSO | NED | 242.4 | 54 | ePc | :11:23.30 ( 5.23X) | eS | :53.80 (10.40X) |
| VTSO | BWD | 257.7 | 53 | ePd | :23.20 ( 3.26X) | eS | :54.90 ( 8.26X) |
| VTSO | BVD | 261.6 | 54 | ePd | :23.80 ( 3.39X) | eS | :55.00 ( 7.54X) |

*****1997 JULY 27; 15:25 - GEORGIA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970727 | 152534.5 | 34.961 | 84.896 | 0.0 | 14 | 94 | 210 | 0.4 | D | C/D | 1.0 | 348 | 0.3 | 2.7 | B | | 1.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 93.6 | 292 | iP | 15:25:49.87 (-0.07 ) | eS | 15:26:01.48 ( 0.09 ) |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| UTK | ORT | 118.1 | 27 | eP | :53.57 | (-0.30 ) | eS | :07.75 | (-0.48 ) |
| UTK | TKL | 128.0 | 53 | | | | S-P | 15.15 SEC | (-0.17 ) |
| UTK | ABTN | 150.5 | 313 | eP- | :58.92 | (-0.12 ) | iS | :17.67 | ( 0.56 ) |
| UTK | MSAL | 163.0 | 266 | eP- | :26:00.43 | (-0.57 ) | | | |
| UTK | CRTN | 167.4 | 35 | iP | :01.76 | ( 0.05 ) | eS | :21.88 | ( 0.15 ) |
| UTK | EGT | 178.7 | 54 | eP | :04.21 | ( 0.70 ) | eS | :25.60 | ( 0.75 ) |
| UTK | SLTN | 300.2 | 56 | iPd | :22.22 | ( 1.48 ) | eS | :55.66 | ( 1.23 ) |

*****1997 JULY 30; 12:29 - TENNESSEE*****

NEIC Felt (V) at Bean Station and Morristown; (IV) at Blaine, Harrogate, New Tazewell, Speedwell, Talbott and Washburn. Also felt (IV) at Ewing, Virginia, and Asheville, North Carolina. Felt in parts of Kentucky, North Carolina, Tennessee and Virginia.

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 970730 | 122923.4 | 36.436 | 83.509 | 5.0F | 11 | 90 | | | | | | | | | | | 3.8 | | 5 |
| UTK | 970730 | 122925.3 | 36.512 | 83.547 | 23.3 | 33 | 44 | 63 | 0.6 | C | D/B | 0.4 | 334 | 0.2 | 0.5 | A | | 3.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| NEIC | TKL | 90.1 | 196 | Pg | 12:29:37.90 | (-1.6 ) | | | |
| | | | | Lg | :49.40 | | | | |
| | | | | Rg | :55.40 | | | | |
| NEIC | MYNC | 161.2 | 201 | ePc | :51.78 | ( 1.4 ) | eS | 12:30:10.26 | ( X) |
| NEIC | NAV | 261.3 | 67 | eP | :30:04.04 | ( 0.8 ) | eS | :33.44 | ( X) |
| NEIC | BLA | 289.1 | 72 | eP | :07.51 | ( 0.7 ) | eS | :40.86 | ( X) |
| NEIC | WCI | 316.9 | 310 | ePn | :10.34 | (-0.1 ) | eS | :47.58 | ( X) |
| NEIC | GOGA | 335.8 | 179 | ePn | :13.10 | ( 0.4 ) | eS | :57.44 | ( X) |
| NEIC | CEH | 401.4 | 97 | ePn | :21.00 | (-0.2 ) | eSn | :31:00.96 | ( X) |
| | | | | ePg | :28.21 | | eSg | :16.45 | ( X) |
| NEIC | CVL | 479.3 | 68 | ePn | :31.61 | ( 0.5 ) | | | |
| | | | | ePg | :39.58 | | | | |
| NEIC | MCWV | 480.4 | 41 | ePn | :31.02 | (-0.3 ) | | | |
| NEIC | GHV | 502.6 | 71 | (Pn) | :33.48 | (-0.6 ) | | | |
| NEIC | NA12 | 528.2 | 69 | ePn | :36.34 | (-1.0 ) | | | |
| NEIC | OXF | 576.0 | 250 | eP | :41.32 | (-2.1X) | | | |
| NEIC | AAM | 651.6 | 359 | (P) | :50.55 | (-2.4X) | | | |
| NEIC | SSPA | 676.1 | 45 | (Pn) | :52.79 | (-3.3X) | | | |
| NEIC | CCM | 709.5 | 287 | eP | :31:13.60 | (13.2X) | | | |
| NEIC | YSNY | 795.1 | 31 | (Pn) | :06.86 | (-4.3X) | | | |
| NEIC | MIAR | 937.4 | 260 | eP | :25.33 | (-3.7X) | | | |
| NEIC | ULM | 1829.2 | 331 | Pn | :33:25.40 | ( 9.1X) | | | |
| NEIC | TXAR | 2038.3 | 253 | P | :36.90 | (-3.3X) | | | |
| NEIC | PDAR | 2335.2 | 296 | P | :34:13.10 | ( 2.8X) | | | |
| NEIC | ILAR | 5164.1 | 328 | P | :37:59.70 | ( 7.2X) | | | |
| UTK | CRTN | 43.5 | 217 | iPu | 12:29:33.14 | (-0.07 ) | | | |
| UTK | EGT | 71.4 | 162 | iPu | :37.14 | (-0.18 ) | | | |
| UTK | ORT | 95.4 | 226 | iPd | :41.03 | ( 0.12 ) | eS | 12:29:52.08 | (-0.22 ) |
| UTK | TKL | 96.9 | 192 | | | | S-P | 11.6 SEC | (-0.01 ) |
| UTK | SLTN | 128.1 | 93 | iPu | :46.14 | ( 0.19 ) | iS | :30:02.36 | ( 1.36 ) |
| UTK | ANTN | 155.8 | 256 | eP+ | :50.01 | (-0.16 ) | eS | :06.47 | (-1.77X) |
| UTK | MYNC | 168.0 | 198 | iPc | :51.79 | (-0.24 ) | iS | :11.89 | ( 0.46 ) |
| UTK | ABTN | 240.6 | 254 | eP+ | :30:02.23 | ( 0.44 ) | eS | :28.42 | ( 0.11 ) |
| UTK | PDTN | 249.2 | 237 | ePd | :02.85 | ( 0.01 ) | eS | :31.64 | ( 1.52 ) |
| UTK | NAV | 261.2 | 69 | iPd | :04.07 | (-0.28 ) | S | :33.67 | ( 0.93 ) |
| UTK | BLA | 289.4 | 74 | iPd | :07.81 | (-0.02 ) | S | :40.94 | ( 2.18 ) |
| UTK | WCI | 312.4 | 308 | ePn | :10.34 | (-0.28 ) | eS | :47.58 | ( 4.00X) |
| UTK | GOGA | 344.0 | 179 | eP | :13.31 | (-1.20 ) | eS | :51.46 | ( 1.14 ) |
| UTK | CEH | 406.4 | 98 | iPn | :21.23 | (-0.98 ) | iS | :31:02.54 | (-1.10 ) |
| UTK | MCWV | 476.8 | 42 | ePn | :31.01 | ( 0.11 ) | iS | :18.33 | (-0.35 ) |
| UTK | CVL | 479.8 | 69 | ePn | :31.61 | ( 0.36 ) | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| UTK | GHV | 503.7 | 72 | ePn | :34.25 | ( 0.05 ) |
| UTK | NA12 | 528.6 | 70 | ePn | :36.61 | (-0.66 ) |
| UTK | OXF | 576.1 | 249 | eP | :41.32 | (-1.80 ) |
| UTK | AAM | 642.7 | 359 | P? | :50.55 | (-0.81 ) |
| UTK | SSPA | 672.7 | 45 | Pn? | :52.79 | (-2.25 ) |
| UTK | CCM | 703.5 | 286 | eP | :31:13.60 | (14.78X) |
| UTK | YSNY | 789.8 | 31 | Pn? | :06.86 | (-2.67 ) |
| UTK | MIAR | 934.6 | 259 | eP | :25.33 | (-2.01 ) |

Additional Data:

| | | | | | |
|---|---|---|---|---|---|
| GIT | ATL | P | 12:30:16.1 | S | 12:30:54.2 |

## *****1997 AUGUST 1; 04:48 - ALABAMA*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970801 | 0448 | 12.3 | 34.923 | 85.988 | 0.0 | 11 | 41 | 287 | 0.5 | D | D/D | 1.7 | 325 | 1.2 | 2.3 | B | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 40.9 | 18 | iPu | 04:48:18.77 (-0.29 ) | eS | 04:48:24.17 ( 0.10 ) |
| UTK | ABTN | 107.4 | 354 | iP- | :30.37 ( 0.39 ) | eS | :42.53 (-0.54 ) |
| UTK | ANTN | 154.6 | 26 | iP | :37.04 (-0.49 ) | iS | :56.11 ( 0.03 ) |
| UTK | ORT | 188.0 | 54 | iP | :44.50 ( 1.72 ) | eS | :49:07.91 ( 2.74 ) |
| UTK | TKL | 217.3 | 67 | | | S-P | 27.00 SEC ( 1.38 ) |
| UTK | CRTN | 240.8 | 53 | eP | :53.23 ( 2.13 ) | eS | :22.90 ( 3.55 ) |

## *****1997 AUGUST 3; 03:07 - TENNESSEE*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970803 | 0307 | 05.2 | 35.881 | 83.823 | 16.4 | 13 | 35 | 163 | 0.2 | C | B/C | 0.6 | 359 | 0.2 | 0.9 | A | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 35.4 | 357 | iPu | 03:07:11.52 ( 0.00 ) | eS | 03:07:16.06 (-0.09 ) |
| UTK | ORT | 43.6 | 274 | iP | :12.73 (-0.00 ) | iS | :18.35 ( 0.09 ) |
| UTK | EGT | 47.5 | 87 | iPd | :13.19 (-0.17 ) | iS | :19.63 ( 0.28 ) |
| UTK | ANTN | 131.0 | 285 | iP | :25.99 (-0.35 ) | iS | :41.94 ( 0.11 ) |
| UTK | SLTN | 165.4 | 67 | eP | :31.38 (-0.34 ) | eS | :51.79 ( 0.80 ) |
| UTK | PDTN | 195.7 | 250 | eP | :35.86 (-0.44 ) | eS | :59.09 ( 0.22 ) |
| UTK | ABTN | 206.4 | 271 | eP | :39.31 ( 1.36X) | iS | :08:02.12 ( 0.41 ) |

## *****1997 AUGUST 4; 05:16 - TENNESSEE*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970804 | 0516 | 45.8 | 36.265 | 82.867 | 0.0 | 13 | 56 | 165 | 0.7 | D | D/D | 2.8 | 329 | 0.4 | 2.6 | C | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | EGT | 56.0 | 224 | iP+ | 05:16:54.48 (-0.62 ) | iS | 05:17:02.26 ( 0.30 ) |
| UTK | SLTN | 69.8 | 73 | eP | :57.22 (-0.16 ) | eS | :06.58 ( 0.65 ) |
| UTK | CRTN | 87.9 | 266 | eP | :17:03.74 ( 3.38X) | eS | :17.88 ( 6.77X) |
| UTK | TKL | 106.0 | 231 | | | S-P | 13.22 SEC ( 0.47 ) |
| UTK | ORT | 135.4 | 253 | P? | :11.21 ( 3.20X) | eS | :27.07 ( 2.73 ) |
| UTK | MYNC | 174.6 | 221 | iP | :15.34 ( 1.13 ) | eS | :35.69 ( 0.62 ) |
| UTK | ANTN | 212.9 | 268 | eP | :22.64 ( 2.39 ) | eS | :50.73 ( 5.23X) |
| UTK | PDTN | 291.3 | 249 | eP | :30.95 ( 0.04 ) | eS | :18:06.25 ( 2.53 ) |
| UTK | ABTN | 295.1 | 263 | eP | :31.42 ( 0.04 ) | eS | :07.30 ( 2.77 ) |

*****1997 AUGUST 4; 06:28 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970804 | 062813.4 | 35.963 | 83.711 | 19.7 | 17 | 29 | 93 | 0.2 | B | B/B | 0.4 | 345 | 0.3 | 0.7 | A | | 1.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 28.8 | 336 | iPu | 06:28:19.07 ( 0.07 ) | eS | 06:28:22.84 (-0.32 ) |
| UTK | TKL | 34.3 | 190 | | | S-P | 4.77 SEC ( 0.12 ) |
| UTK | EGT | 37.9 | 100 | iP- | :20.38 ( 0.07 ) | eS | :25.26 (-0.15 ) |
| UTK | ORT | 53.9 | 264 | iPd | :22.68 ( 0.09 ) | iS | :29.62 ( 0.26 ) |
| UTK | MYNC | 105.6 | 201 | iP | :30.59 ( 0.07 ) | iS | :42.77 (-0.27 ) |
| UTK | ANTN | 138.9 | 280 | eP | :35.65 ( 0.01 ) | eS | :51.35 (-0.49 ) |
| UTK | SLTN | 152.7 | 69 | eP | :37.34 (-0.45 ) | eS | :55.90 ( 0.36 ) |
| UTK | PDTN | 208.3 | 249 | eP | :47.21 ( 1.03 ) | iS | :29:10.52 ( 0.51 ) |
| UTK | ABTN | 216.6 | 268 | eP | :48.20 ( 1.00 ) | eS | :12.99 ( 1.20 ) |
| UTK | GOGA | 283.9 | 175 | | | eS | :32.44 ( 6.33X) |

*****1997 AUGUST 6; 07:37 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970806 | 073741.5 | 35.113 | 87.508 | 0.0 | 14 | 82 | 305 | 0.4 | D | C/D | 1.2 | 228 | 0.8 | 1.9 | B | | 2.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | MSAL | 81.7 | 111 | ePu | 07:37:54.93 (-0.09 ) | iS | 07:38:04.68 (-0.33 ) |
| UTK | PDTN | 152.1 | 83 | iP- | :38:06.27 (-0.05 ) | eS | :24.73 ( 0.16 ) |
| UTK | ABTN | 153.1 | 56 | eP | :06.46 (-0.04 ) | eS | :25.18 ( 0.32 ) |
| UTK | ANTN | 237.3 | 60 | eP | :19.17 (-0.61 ) | eS | :49.11 ( 1.45 ) |
| UTK | ORT | 303.7 | 72 | eP | :28.50 ( 0.38 ) | eS | :39:02.88 ( 0.83 ) |
| UTK | MYNC | 308.2 | 90 | eP | :31.19 ( 2.49X) | eS | :04.39 ( 1.34 ) |
| UTK | TKL | 344.6 | 79 | eP | :36.17 ( 3.01X) | eS | :12.25 ( 1.48 ) |
| UTK | CRTN | 353.3 | 69 | eP | :35.70 ( 1.45 ) | eS | :14.60 ( 1.95 ) |
| UTK | EGT | 391.8 | 76 | iP | :45.25 ( 6.19X) | | |
| UTK | GOGA | 417.3 | 116 | | | eS | :33.79 ( 7.56X) |

*****1997 AUGUST 7; 08:30 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970807 | 083058.5 | 35.530 | 84.384 | 14.6 | 11 | 43 | 130 | 0.3 | C | B/C | 0.5 | 246 | 0.3 | 2.2 | B | | 0.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ORT | 42.7 | 10 | iPu | 08:31:05.77 (-0.01 ) | iSu | 08:31:11.34 ( 0.19 ) |
| UTK | MYNC | 55.7 | 155 | iP+ | :07.92 ( 0.14 ) | iS | :14.54 (-0.08 ) |
| UTK | TKL | 57.1 | 75 | eP | :07.03 (-0.95X) | iS | :14.93 (-0.04 ) |
| UTK | CRTN | 89.1 | 33 | eP | :13.31 ( 0.32 ) | eS | :22.35 (-1.30 ) |
| UTK | ANTN | 104.6 | 313 | eP | :15.18 (-0.24 ) | eS | :27.10 (-0.77 ) |
| UTK | EGT | 106.6 | 67 | eP | :15.55 (-0.20 ) | eS | :29.11 ( 0.65X) |
| UTK | ABTN | 161.0 | 285 | eP | :30.26 ( 5.95X) | iS | :43.57 ( 0.46 ) |

*****1997 AUGUST 12; 01:02 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970812 | 010205.2 | 35.104 | 84.752 | 10.2 | 14 | 98 | 206 | 0.3 | D | C/D | 1.1 | 346 | 0.4 | 33.3 | D | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| UTK | ORT | 98.1 | 24 | iP | 01:02:20.36 | (-0.71 ) | iS | 01:02:33.39 | ( 0.65 ) |
| UTK | PDTN | 101.7 | 281 | eP | :21.47 | (-0.17 ) | iS | :33.57 | (-0.16 ) |
| UTK | TKL | 108.0 | 55 | iP | :22.25 | (-0.38 ) | iS | :35.08 | (-0.37 ) |
| UTK | ANTN | 126.1 | 340 | iP | :25.77 | ( 0.27 ) | eS | :40.37 | (-0.04 ) |
| UTK | CRTN | 146.9 | 34 | eP | :28.59 | (-0.18 ) | eS | :46.21 | ( 0.14X) |
| UTK | ABTN | 150.6 | 306 | eP | :29.83 | ( 0.48 ) | eS | :47.32 | ( 0.26 ) |
| UTK | EGT | 158.8 | 56 | eP | :31.11 | ( 0.43 ) | eS | :50.02 | ( 0.66 ) |
| UTK | MSAL | 177.8 | 261 | eP | :30.17 | (-3.47X) | eS | :54.70 | ( 0.22 ) |

*****1997 AUGUST 13; 21:48 - KENTUCKY*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970813 | 214830 | .1 | 36.871 | 83.018 | 16.8 | 22 | 105 | 175 | 0.5 | D | D/D | 0.9 | 326 | 0.5 | 0.8 | A | | 2.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 104.8 | 225 | ePd | 21:48:47.08 (-0.03 ) | iS | 21:48:59.83 ( 0.25 ) |
| UTK | EGT | 110.6 | 193 | iPd | :48.34 ( 0.29 ) | iS | :49:02.03 ( 0.81 ) |
| UTK | TKL | 150.8 | 207 | eP | :53.40 (-0.88 ) | eS | :11.20 (-0.68 ) |
| UTK | ORT | 157.2 | 228 | eP+ | :55.11 (-0.16 ) | eS | :14.31 ( 0.74 ) |
| UTK | NAV | 203.9 | 75 | P | :49:02.30 (-0.15 ) | S | :28.00 ( 2.07X) |
| UTK | ANTN | 212.9 | 249 | iP | :03.15 (-0.65 ) | eS | :28.91 ( 0.63 ) |
| UTK | MYNC | 223.1 | 207 | eP | :04.22 (-0.84 ) | eS | :30.92 ( 0.47 ) |
| UTK | BLA | 234.1 | 80 | eP | :08.97 ( 2.55 ) | eS | :34.37 ( 1.55 ) |
| UTK | ABTN | 298.1 | 249 | eP | :14.28 (-0.00 ) | eS | :47.05 ( 0.63 ) |
| UTK | PDTN | 310.6 | 236 | eP | :14.76 (-1.06 ) | eS | :48.09 (-0.98 ) |
| UTK | CEH | 368.6 | 106 | eP | :28.31 ( 5.36X) | eS | :50:01.31 (-0.10 ) |
| UTK | GOGA | 386.0 | 186 | eP | :32.44 ( 7.35X) | eS | :11.99 ( 6.87X) |
| UTK | MSAL | 399.3 | 237 | | | eS | :07.49 (-0.48 ) |
| UTK | WVT | 438.8 | 261 | eP | :35.23 ( 3.62X) | eS | :16.58 ( 5.05 ) |

*****1997 AUGUST 17; 05:01 - KENTUCKY*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970817 | 050105 | .4 | 36.897 | 83.096 | 0.0 | 22 | 102 | 143 | 0.6 | D | D/D | 0.8 | 329 | 0.4 | 1.5 | B | | 2.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 102.1 | 221 | ePd | 05:01:22.45 ( 0.16 ) | eS | 05:01:34.94 ( 0.18 ) |
| UTK | EGT | 112.0 | 189 | eP+ | :24.09 ( 0.19 ) | eS | :37.43 (-0.13 ) |
| UTK | TKL | 150.4 | 204 | | | S-P | 18.46 SEC ( 0.54 ) |
| UTK | ORT | 154.2 | 225 | eP | :30.42 (-0.16 ) | eS | :49.76 ( 0.69 ) |
| UTK | ANTN | 207.5 | 248 | iP | :38.47 (-0.53 ) | eS | :02:04.31 ( 0.67 ) |
| UTK | MYNC | 222.7 | 205 | eP | :40.22 (-1.18 ) | eS | :06.82 (-0.90 ) |
| UTK | BLA | 240.5 | 81 | eP | :45.75 ( 1.55 ) | eS | :12.45 ( 0.02 ) |
| UTK | ABTN | 292.7 | 248 | eP | :51.50 ( 0.82 ) | eS | :23.33 (-0.29 ) |
| UTK | PDTN | 306.5 | 235 | eP | :53.69 ( 1.30 ) | eS | :23.94 (-2.62 ) |
| UTK | WCI | 323.1 | 298 | eP | :56.53 ( 2.22 ) | eS | :28.13 (-1.94 ) |
| UTK | CEH | 376.0 | 106 | | | eS | :45.18 ( 3.82 ) |
| UTK | GOGA | 388.2 | 185 | | | eS | :50.14 ( 6.19X) |
| UTK | MSAL | 395.1 | 236 | eP | :02:10.13 ( 6.83X) | eS | :43.57 (-1.87 ) |
| UTK | WVT | 432.5 | 260 | | | eS | :50.60 (-2.80 ) |

*****1997 AUGUST 20; 16:10 - ALABAMA*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970820 | 161019 | .8 | 34.578 | 85.937 | 0.0 | 12 | 146 | 283 | 0.4 | D | C/D | 1.8 | 33 | 0.5 | 4.0 | C | | 2.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| UTK | ABTN | 145.9 | 354 | eP- | 16:10:43.54 | (-0.08 ) | iS | 16:11:01.20 | ( 0.04 ) |
| UTK | MYNC | 174.4 | 71 | iP | :48.37 | ( 0.24 ) | iS | :08.52 | (-0.43 ) |
| UTK | ANTN | 188.1 | 20 | eP+ | :49.42 | (-0.87 ) | eS | :13.23 | ( 0.54 ) |
| UTK | ORT | 209.5 | 45 | eP | :53.93 | ( 0.28 ) | eS | :19.31 | ( 0.80 ) |
| UTK | TKL | 230.7 | 58 | | | | S-P | 27.37 SEC | ( 0.20 ) |
| UTK | CRTN | 262.0 | 46 | iPd | :11:02.12 | ( 0.86 ) | eS | :32.39 | ( 0.94 ) |
| UTK | EGT | 281.5 | 58 | eP | :04.43 | ( 0.70 ) | | | |
| UTK | BLA | 577.3 | 58 | | | | eS | :53.75 | (15.02X) |

*****1997 AUGUST 23; 00:42 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970823 | 004206.8 | 36.477 | 84.237 | 2.6 | 12 | 47 | 237 | 0.2 | C | B/D | 0.7 | 24 | 0.4 | 1.6 | B | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| UTK | CRTN | 47.0 | 131 | iP+ | 00:42:14.60 | ( 0.01 ) | iS | 00:42:20.59 | ( 0.23 ) |
| UTK | ANTN | 95.5 | 250 | eP | :22.09 | (-0.39 ) | iS | :34.16 | ( 0.08 ) |
| UTK | TKL | 100.0 | 155 | | | | S-P | 12.05 SEC | ( 0.08 ) |
| UTK | EGT | 105.9 | 127 | iP | :24.33 | ( 0.16 ) | eS | :40.07 | ( 3.04X) |
| UTK | MYNC | 156.0 | 176 | eP | :32.70 | ( 0.59 ) | iS | :50.40 | (-0.30 ) |
| UTK | ABTN | 180.7 | 249 | eP | :36.25 | ( 0.25 ) | eS | :57.77 | ( 0.33 ) |

*****1997 SEPTEMBER 1; 07:38 - BOWMAN, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970901 | 073856.5 | 33.362 | 80.732 | 1.5 | 19 | 4 | 111 | 0.4 | C | | 1.6 | 360 | 1.6 | 3.6 | | | 2.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| USC | COW | 3.8 | 50 | iPu | 07:38:57.17 | (-0.11 ) | iSu | 07:38:57.93 | ( 0.03 ) |
| USC | SGS | 27.8 | 132 | iPu | :39:01.58 | ( 0.43 ) | iSu | :39:05.04 | ( 0.32 ) |
| USC | DRC | 42.7 | 131 | iPu | :03.09 | (-0.52 ) | iSu | :08.44 | (-0.60 ) |
| USC | HBF | 57.9 | 145 | iPd | :06.83 | ( 0.65 ) | iSu | :12.75 | (-0.81X) |
| USC | SVS | 62.7 | 134 | iPu | :07.58 | ( 0.84 ) | | | |
| USC | RGR | 71.1 | 135 | iP | :07.64 | (-0.45X) | | | |
| USC | MGS | 75.5 | 133 | iP | :08.20 | (-0.59X) | | | |
| USC | SRPN | 79.9 | 267 | iPd | :09.32 | (-0.17 ) | | | |
| USC | SRPW | 80.8 | 257 | iPu | :09.30 | (-0.33 ) | | | |
| USC | SRAV | 88.4 | 267 | iPu | :10.68 | (-0.17 ) | S | :21.70 | (-0.09 ) |
| USC | SRPD | 94.2 | 256 | iPd | :11.58 | (-0.18 ) | | | |
| USC | MBY | 102.6 | 259 | iPd | :12.91 | (-0.17 ) | S | :25.88 | ( 0.17 ) |
| USC | MR02 | 103.1 | 333 | iPu | :13.78 | ( 0.57 ) | iSu | :25.75 | (-0.19 ) |
| USC | JSC | 113.0 | 334 | iPu | :15.34 | ( 0.64 ) | iSd | :28.57 | ( 0.01 ) |
| USC | LHS | 124.1 | 357 | iPu | :16.54 | ( 0.09 ) | | | |

*****1997 SEPTEMBER 12; 01:10 - KENTUCKY*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970912 | 011021.7 | 37.030 | 85.534 | 0.0 | 12 | 99 | 277 | 0.5 | D | D/D | 2.5 | 342 | 1.1 | 4.9 | C | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| UTK | ANTN | 99.0 | 164 | eP | 01:10:37.76 | (-0.32 ) | eS | 01:10:50.97 | ( 0.80 ) |
| UTK | ABTN | 137.0 | 202 | eP | :44.68 | ( 0.51 ) | eS | :11:00.47 | (-0.21 ) |
| UTK | CRTN | 177.3 | 121 | eP | :50.11 | (-0.41 ) | eS | :13.69 | ( 2.02 ) |
| UTK | PDTN | 196.9 | 188 | eP | :53.80 | ( 0.19 ) | eS | :17.15 | ( 0.12 ) |
| UTK | TKL | 219.4 | 133 | | | | S-P | 24.10 SEC | (-1.76 ) |
| UTK | EGT | 236.3 | 121 | eP | :59.82 | (-0.04 ) | eS | :24.13 | (-3.54X) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| UTK | MSAL | 263.1 | 203 | eP | :11:03.11 | (-0.21 ) | eS | :33.51 | (-0.08 ) |

*****1997 SEPTEMBER 14; 07:23 - ALABAMA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970914 | 072350.5 | 34.521 | 85.654 | 2.3 | 19 | 85 | 213 | 0.2 | C | B/D | 0.7 | 334 | 0.4 | 2.2 | B | | 1.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 85.3 | 348 | iPd | 07:24:04.43 (-0.13 ) | iS | 07:24:14.90 (-0.06 ) |
| UTK | MSAL | 100.1 | 291 | iPd | :07.11 ( 0.18 ) | eS | :19.01 (-0.07 ) |
| UTK | LAL | 154.9 | 267 | eP | :14.92 (-0.72 ) | eS | :34.14 ( 0.03 ) |
| UTK | ABTN | 156.9 | 345 | eP | :15.53 (-0.43 ) | eS | :34.98 ( 0.30 ) |
| UTK | ANTN | 187.1 | 12 | eP | :21.09 ( 0.35 ) | eS | :43.39 ( 0.46 ) |
| UTK | ORT | 197.0 | 38 | eP | :22.54 ( 0.25 ) | eS | :45.48 (-0.14 ) |
| UTK | TKL | 212.8 | 53 | eP | :24.73 (-0.05 ) | iS | :49.88 (-0.03 ) |
| UTK | CRTN | 248.7 | 41 | eP | :30.89 ( 0.80 ) | iS | :58.05 (-0.84 ) |
| UTK | EGT | 263.5 | 54 | eP | :32.51 ( 0.53 ) | eS | :25:01.53 (-0.64 ) |
| UTK | MOTN | 314.4 | 318 | eP | :45.42 ( 7.27X) | eS | :12.33 (-0.51 ) |

*****1997 SEPTEMBER 14; 07:24 - ALABAMA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970914 | 072454.5 | 34.533 | 85.693 | 8.2 | 7 | 83 | 212 | 0.3 | D | C/D | 2.1 | 319 | 0.8 | 6.4 | D | | 0.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 83.4 | 350 | eP | 07:25:08.13 ( 0.01 ) | iS | 07:25:17.99 (-0.16 ) |
| UTK | MSAL | 96.3 | 291 | eP | :09.96 (-0.21 ) | eS | :21.39 (-0.29 ) |
| UTK | LAL | 151.4 | 266 | eP | :16.63 (-2.22X) | eS | :37.81 ( 1.10 ) |
| UTK | ABTN | 154.8 | 346 | | | eS | :38.15 ( 0.51 ) |
| UTK | ANTN | 186.6 | 13 | | | eS | :50.18 ( 3.83X) |
| UTK | ORT | 198.3 | 39 | eP | :34.00 ( 7.75X) | eS | :51.55 ( 2.10X) |
| UTK | TKL | 215.0 | 54 | eP | :31.10 ( 2.23X) | eS | :53.72 (-0.13 ) |

*****1997 SEPTEMBER 14; 07:53 - ALABAMA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970914 | 075337.9 | 34.505 | 85.628 | 10.7 | 7 | 88 | 215 | 0.3 | D | C/D | 3.0 | 317 | 0.6 | 14.2 | D | | 0.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 87.6 | 347 | eP | 07:53:51.52 (-0.66 ) | iS | 07:54:02.54 (-0.10 ) |
| UTK | MSAL | 103.0 | 292 | eP | :55.26 ( 0.66 ) | iS | :06.69 (-0.15 ) |
| UTK | LAL | 157.2 | 268 | eP | :54:06.20 ( 3.06X) | eS | :22.41 ( 0.80 ) |
| UTK | ABTN | 159.3 | 344 | eP | :06.62 ( 3.13X) | eS | :22.61 ( 0.40 ) |
| UTK | TKL | 212.1 | 52 | eP | :07.87 (-3.88X) | eS | :36.12 (-0.19 ) |

*****1997 SEPTEMBER 14; 23:42 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970914 | 234250.3 | 35.930 | 84.467 | 9.2 | 14 | 15 | 130 | 0.1 | B | B/B | 0.7 | 348 | 0.3 | 0.7 | A | | 1.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ORT | 14.8 | 99 | iPc | 23:42:53.09 (-0.10 ) | iS | 23:42:55.39 ( 0.06 ) |
| UTK | CRTN | 63.9 | 62 | iP | :43:00.83 (-0.01 ) | iS | :43:08.62 ( 0.00 ) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UTK | TKL | 69.5 | 115 | iPd | :01.75 | ( 0.02 ) | iS | :10.22 ( 0.08 ) |
| UTK | ANTN | 73.9 | 292 | eP | :02.44 | (-0.01 ) | eS | :11.82 ( 0.45 ) |
| UTK | EGT | 105.5 | 91 | eP | :07.46 | ( 0.00 ) | iS | :18.83 (-1.21X) |
| UTK | PDTN | 144.9 | 240 | | | | eS | :30.65 (-0.06 ) |
| UTK | ABTN | 148.3 | 269 | eP | :13.62 | (-0.55 ) | eS | :31.75 ( 0.11 ) |
| UTK | SLTN | 218.6 | 74 | eP | :25.76 | ( 0.50 ) | eS | :49.68 (-0.98 ) |

*****1997 SEPTEMBER 17; 03:40 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970917 | 034024.1 | 35.601 | 86.423 | 1.5 | 11 | 43 | 96 | 0.2 | C | B/C | 0.8 | 281 | 0.4 | 1.7 | B | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ABTN | 42.5 | 42 | iPd | 03:40:31.06 (-0.03 ) | eS | 03:40:36.35 ( 0.06 ) |
| UTK | PDTN | 63.5 | 125 | iP- | :34.59 ( 0.03 ) | eS | :42.43 ( 0.10 ) |
| UTK | MSAL | 86.7 | 195 | iP | :38.45 ( 0.08 ) | eS | :48.14 (-0.82 ) |
| UTK | ANTN | 124.9 | 59 | iP- | :44.42 (-0.08 ) | eS | :59.59 ( 0.01 ) |
| UTK | LAL | 153.7 | 213 | eP | :50.35 ( 1.29X) | eS | :41:07.87 ( 0.43 ) |
| UTK | MOTN | 180.5 | 309 | eP | :55.81 ( 2.54X) | eS | :15.26 ( 0.55 ) |
| UTK | ORT | 194.6 | 79 | | | eS | :20.44 ( 1.85X) |
| UTK | TKL | 240.0 | 88 | eP | :41:04.78 ( 2.13X) | iS | :30.80 ( 0.08 ) |
| UTK | CRTN | 242.4 | 73 | | | eS | :29.63 (-1.63X) |

*****1997 SEPTEMBER 17; 21:32 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970917 | 213200.4 | 32.952 | 80.148 | 6.2 | 5 | 7 | 208 | 0.1 | C | | 0.2 | 360 | 0.2 | 0.5 | | | 2.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | RGR | 6.6 | 226 | iPd | 21:32:02.35 ( 0.07 ) | iS | 21:32:03.20 (-0.51X) |
| USC | WAS | 16.5 | 227 | iPu | :03.70 (-0.10 ) | iS | :05.50 (-0.89X) |
| USC | HBF | 17.7 | 269 | iPd | :04.00 ( 0.03 ) | iS | :06.00 (-0.69X) |
| USC | TWB | 18.7 | 12 | eP | :04.20 (-0.06 ) | iS | :06.30 (-0.90X) |
| USC | DRC | 28.9 | 307 | iPd | :06.00 ( 0.04 ) | iS | :09.50 (-0.69X) |

*****1997 SEPTEMBER 24; 02:16 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970924 | 021616.7 | 35.669 | 84.218 | 16.6 | 12 | 28 | 157 | 0.2 | C | B/C | 0.9 | 30 | 0.3 | 1.3 | A | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ORT | 27.9 | 344 | iP+ | 02:16:21.75 (-0.17 ) | iS | 02:16:25.85 ( 0.07 ) |
| UTK | TKL | 40.2 | 92 | iPu | :23.58 (-0.09 ) | iS | :28.90 ( 0.05 ) |
| UTK | CRTN | 68.1 | 30 | iP | :27.78 (-0.15 ) | eS | :36.44 ( 0.21 ) |
| UTK | EGT | 87.1 | 73 | | | eS | :41.57 ( 0.16 ) |
| UTK | ANTN | 107.2 | 302 | eP | :33.64 (-0.41 ) | eS | :46.65 (-0.15 ) |
| UTK | PDTN | 154.4 | 254 | eP | :42.81 ( 1.40 ) | | |
| UTK | ABTN | 172.7 | 279 | eP | :49.06 ( 4.85X) | eS | :17:04.54 ( 0.31 ) |
| UTK | SLTN | 207.6 | 65 | eP | :55.07 ( 5.44X) | eS | :15.77 ( 2.21X) |
| UTK | MSAL | 241.3 | 249 | | | iS | :21.29 ( 0.41 ) |

*****1997 SEPTEMBER 27; 12:50 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970927 | 125043.3 | 32.888 | 80.172 | 5.0 | 12 | 3 | 175 | 0.1 | A | | 0.6 | 360 | 0.6 | 0.9 | | | 0.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | RGR | 3.0 | 316 | iPu | 12:50:44.65 (-0.02 ) | iSd | 12:50:45.83 ( 0.92 ) |
| USC | MGS | 3.1 | 69 | iPu | :44.67 (-0.05 ) | iSu | :45.04 (-0.05 ) |
| USC | WAS | 10.4 | 244 | iPd | :45.79 ( 0.02 ) | iSu | :47.11 (-0.20 ) |
| USC | SVS | 11.4 | 321 | iPu | :45.87 (-0.03 ) | iSu | :47.24 (-0.01 ) |
| USC | CSB | 14.4 | 41 | iPd | :46.30 ( 0.10 ) | iSu | :47.98 (-0.91 ) |
| USC | HBF | 16.4 | 294 | iPu | :46.70 (-0.01 ) | iSu | :48.53 ( 0.07 ) |

*****1997 SEPTEMBER 28; 07:47 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970928 | 074727.5 | 36.077 | 83.588 | 15.2 | 15 | 27 | 131 | 0.1 | B | B/B | 0.4 | 44 | 0.4 | 0.9 | A | | 1.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 26.5 | 301 | eP | 07:47:32.67 ( 0.20 ) | eS | 07:47:36.05 (-0.07 ) |
| UTK | EGT | 32.7 | 127 | eP | :33.31 (-0.07 ) | eS | :37.27 (-0.46 ) |
| UTK | TKL | 49.5 | 200 | iP- | :35.85 ( 0.01 ) | iS | :42.05 ( 0.07 ) |
| UTK | ORT | 67.3 | 254 | iP+ | :38.54 (-0.06 ) | eS | :46.69 (-0.08 ) |
| UTK | SLTN | 138.0 | 72 | eP | :49.73 (-0.02 ) | eS | :48:06.60 ( 0.53 ) |
| UTK | ANTN | 148.3 | 275 | eP | :51.20 (-0.15 ) | eS | :08.66 (-0.11 ) |
| UTK | PDTN | 223.3 | 247 | eP- | :48:02.68 ( 0.07 ) | eS | :27.36 (-0.77X) |
| UTK | ABTN | 228.4 | 265 | eP- | :03.36 ( 0.12 ) | eS | :29.44 ( 0.23 ) |
| UTK | HAKY | 291.5 | 294 | eP | :23.16 (12.16X) | eS | :47.18 ( 4.55X) |

*****1997 SEPTEMBER 29; 17:45 - VIRGINIA*****

NEIC Felt in the Manassas area.

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VTSO | 970929 | 174508.3 | 38.816 | 77.445 | 2.5 | 6 | 99 | 338 | 0.5 | D | D/D | 18.4 | 360 | 8.5 | 99.0 | D | | 2.1 | | F |
| NEIC | 970929 | 174509.5 | 38.700 | 77.500 | 5.0F | 7 | 87 | | | | | | | | | | | 2.5 | | F |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| VTSO | NA12 | 99.3 | 202 | iP | 17:45:24.84 ( 0.23 ) | iS | 17:45:35.68 (-0.85 ) |
| VTSO | GHV | 127.4 | 207 | P | :29.26 ( 0.05 ) | eS | :45.38 ( 0.90 ) |
| VTSO | CVL | 128.3 | 224 | P | :29.19 (-0.18 ) | iS | :44.68 (-0.07 ) |
| VTSO | BLA | 316.2 | 237 | P | :46:00.00 ( 6.05X) | eS | :34.92 ( 7.74X) |
| VTSO | NAV | 337.7 | 241 | P | :00.80 ( 4.22X) | eS | :40.37 ( 8.64X) |
| NEIC | NA12 | 86.7 | 203 | ePn | 17:45:24.90 (-0.1 ) | eS | 17:45:34.98 ( X) |
| NEIC | GHV | 113.4 | 208 | eP | :29.37 ( 0.1 ) | | |
| NEIC | CVL | 115.6 | 227 | ePn | :28.84 (-0.8 ) | | |
| NEIC | SSPA | 218.0 | 351 | ePn | :44.23 ( 0.6 ) | | |
| NEIC | MCWV | 229.1 | 298 | (Pn) | :45.43 ( 0.3 ) | eS | :46:12.46 ( X) |
| NEIC | ATPA | 265.8 | 38 | eP | :48.30 (-1.6 ) | eS | :48.94 ( X) |
| NEIC | BLA | 305.8 | 238 | (Pn) | :57.39 ( 2.3 ) | | |

*****1997 SEPTEMBER 29; 19:46 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 970929 | 194654.9 | 35.475 | 85.076 | 4.7 | 15 | 74 | 165 | 0.3 | C | B/D | 0.4 | 348 | 0.2 | 1.9 | B | | 1.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UTK | PDTN | 73.8 | 253 | iP- | 19:47:07.23 | ( 0.22 ) | iS | 19:47:16.38 ( 0.41 ) |
| UTK | ANTN | 78.5 | 350 | eP | :07.58 | (-0.21 ) | iS | :17.40 ( 0.08 ) |
| UTK | ORT | 84.8 | 55 | iPd | :08.74 | (-0.05 ) | eS | :19.90 ( 0.84 ) |
| UTK | ABTN | 104.0 | 296 | iPd | :11.90 | ( 0.04 ) | iS | :24.25 (-0.15 ) |
| UTK | TKL | 119.8 | 80 | eP | :14.45 | ( 0.06 ) | iS | :28.63 (-0.10 ) |
| UTK | CRTN | 137.6 | 54 | iP- | :17.01 | (-0.20 ) | eS | :33.61 ( 0.02 ) |
| UTK | MSAL | 161.4 | 245 | iP | :20.27 | (-0.68 ) | eS | :39.78 (-0.29 ) |
| UTK | WVT | 259.3 | 287 | eP | :43.10 | ( 7.60X) | eS | :48:05.10 ( 0.07 ) |

*****1997 OCTOBER 12; 06:55 - GEORGIA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971012 | 065532.6 | 34.394 | 85.427 | 0.0 | | 20 | 105 | 245 | 0.4 | D | C/D | 0.7 | 3 | 0.4 | 1.3 | A | 2.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 104.9 | 338 | eP- | 06:55:49.80 (-0.13 ) | iS | 06:56:02.63 (-0.09 ) |
| UTK | MSAL | 124.9 | 294 | eP | :53.19 ( 0.07 ) | eS | :08.42 ( 0.15 ) |
| UTK | ABTN | 176.8 | 340 | eP- | :56:00.93 (-0.41 ) | iS | :22.35 (-0.08 ) |
| UTK | ORT | 196.7 | 31 | eP | :04.44 (-0.06 ) | eS | :29.19 ( 1.30 ) |
| UTK | ANTN | 198.0 | 5 | eP | :04.67 (-0.04 ) | iS | :28.85 ( 0.60 ) |
| UTK | TKL | 205.9 | 47 | eP | :05.88 (-0.06 ) | iS | :30.00 (-0.39 ) |
| UTK | CRTN | 246.9 | 35 | iPu | :12.31 ( 0.06 ) | iS | :42.31 ( 1.24 ) |
| UTK | EGT | 256.0 | 49 | eP | :13.55 ( 0.10 ) | eS | :43.76 ( 0.61 ) |
| UTK | WVT | 291.4 | 312 | eP | :17.71 ( 0.01 ) | eS | :50.04 (-0.47 ) |
| UTK | HAKY | 318.6 | 341 | iP | :25.56 ( 4.50X) | eS | :57.17 ( 0.86 ) |
| UTK | MOTN | 338.8 | 317 | | | eS | :57:01.26 ( 0.63 ) |

*****1997 OCTOBER 13; 07:00 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971013 | 070042.7 | 36.170 | 83.156 | 3.5 | | 15 | 32 | 151 | 0.3 | C | B/C | 0.7 | 343 | 0.4 | 1.4 | B | 1.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | EGT | 32.4 | 203 | eP | 07:00:48.05 (-0.10 ) | eS | 07:00:52.07 (-0.08 ) |
| UTK | CRTN | 61.7 | 273 | iPd | :52.86 (-0.10 ) | iS | :01:00.72 ( 0.20 ) |
| UTK | TKL | 79.6 | 225 | eP | :56.08 ( 0.26 ) | eS | :05.68 ( 0.17 ) |
| UTK | SLTN | 97.9 | 72 | eP | :01:00.25 ( 1.46 ) | iS | :10.56 (-0.11 ) |
| UTK | ANTN | 186.7 | 271 | eP | :12.66 (-0.19 ) | | |
| UTK | PDTN | 263.2 | 249 | eP | :23.17 (-0.79 ) | eS | :54.10 ( 0.14 ) |
| UTK | ABTN | 268.0 | 264 | eP | :23.84 (-0.72 ) | iS | :54.93 (-0.06 ) |
| UTK | BLA | 270.4 | 64 | iP- | :25.29 ( 0.41 ) | eS | :57.04 ( 1.49 ) |

*****1997 OCTOBER 14; 06:16 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971014 | 061623.4 | 35.463 | 85.170 | 6.4 | | 20 | 65 | 164 | 0.2 | C | B/D | 0.4 | 342 | 0.2 | 1.2 | A | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 65.3 | 251 | eP | 06:16:34.21 ( 0.07 ) | eS | 06:16:41.95 (-0.11 ) |
| UTK | ANTN | 78.8 | 356 | iP+ | :36.35 ( 0.02 ) | iS | :45.76 (-0.10 ) |
| UTK | ORT | 92.7 | 57 | eP- | :38.53 ( 0.00 ) | eS | :50.24 ( 0.54 ) |
| UTK | ABTN | 97.1 | 299 | iPd | :39.51 ( 0.27 ) | iS | :50.91 (-0.03 ) |
| UTK | TKL | 128.4 | 80 | eP | :44.50 ( 0.29 ) | iS | :59.35 (-0.12 ) |
| UTK | CRTN | 145.3 | 55 | iP- | :46.78 (-0.10 ) | eS | :17:05.42 ( 1.33 ) |
| UTK | MSAL | 153.1 | 244 | eP- | :47.52 (-0.59 ) | iS | :06.40 ( 0.19 ) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UTK | EGT | 176.3 | 73 | eP | :52.47 | ( 0.67 ) | eS | :11.38 (-1.22X) |
| UTK | HAKY | 222.2 | 326 | eP | :58.97 | (-0.02 ) | eS | :24.48 (-0.36 ) |
| UTK | WVT | 251.6 | 288 | eP | :17:04.31 | ( 1.42 ) | eS | :32.36 ( 0.77 ) |
| UTK | MOTN | 284.4 | 298 | | | | eS | :38.97 ( 0.39 ) |

*****1997 OCTOBER 14; 07:22 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971014 | 072233.2 | 35.372 | 84.473 | 13.5 | 14 | 62 | 191 | 0.2 | C | B/D | 0.7 | 346 | 0.4 | 2.0 | B | | 1.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ORT | 61.6 | 14 | eP | 07:22:43.65 ( 0.26 ) | iS | 07:22:50.83 (-0.04 ) |
| UTK | TKL | 70.9 | 63 | iP- | :45.00 ( 0.15 ) | iS | :53.33 (-0.09 ) |
| UTK | CRTN | 108.2 | 32 | eP | :50.96 ( 0.23 ) | eS | :23:04.02 ( 0.44 ) |
| UTK | ANTN | 112.1 | 323 | iP | :51.02 (-0.33 ) | eS | :05.64 ( 0.98X) |
| UTK | EGT | 121.6 | 61 | | | eS | :07.75 ( 0.48 ) |
| UTK | PDTN | 125.6 | 265 | eP | :53.74 ( 0.27 ) | iS | :08.36 ( 0.05 ) |
| UTK | ABTN | 158.8 | 292 | eP | :59.02 ( 0.33 ) | iS | :17.40 ( 0.06 ) |
| UTK | MSAL | 208.9 | 254 | eP | :23:06.56 ( 0.13 ) | eS | :29.99 (-0.56 ) |

*****1997 OCTOBER 15; 21:06 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 971015 | 210601.3 | 32.947 | 80.232 | 10.4 | 6 | 3 | 89 | 0.0 | A | | 0.2 | 360 | 0.2 | 0.3 | | | 0.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | SVS | 2.8 | 328 | iPu | 21:06:03.46 (-0.02 ) | iSd | 21:06:04.84 (-0.32X) |
| USC | RGR | 5.6 | 141 | iPu | :03.61 ( 0.01 ) | iSu | :05.55 ( 0.18X) |
| USC | HBF | 9.4 | 270 | iPd | :03.99 (-0.03 ) | iSd | :05.47 (-0.54X) |
| USC | MGS | 10.1 | 122 | iPd | :04.13 ( 0.05 ) | iSd | :05.54 (-0.78X) |
| USC | WAS | 11.7 | 198 | iPd | :04.27 (-0.01 ) | iSu | :05.93 (-0.65X) |
| USC | TWB | 22.2 | 33 | iPu | :05.91 ( 0.09 ) | iSd | :08.82 (-0.66X) |

*****1997 OCTOBER 16; 04:36 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971016 | 043615.8 | 35.262 | 84.885 | 0.0 | 10 | 88 | 205 | 0.6 | D | D/D | 1.3 | 346 | 0.4 | 2.5 | B | | 0.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 87.7 | 271 | eP | 04:36:30.13 (-0.21 ) | eS | 04:36:41.24 ( 0.16 ) |
| UTK | ORT | 89.0 | 36 | eP | :29.70 (-0.86X) | eS | :40.95 (-0.49 ) |
| UTK | ANTN | 105.6 | 343 | iP | :32.68 (-0.58 ) | eS | :46.33 ( 0.19 ) |
| UTK | TKL | 110.0 | 66 | eP | :32.72 (-1.23X) | eS | :46.48 (-0.87 ) |
| UTK | ABTN | 130.7 | 302 | eP | :37.28 ( 0.02 ) | iS | :53.03 (-0.04 ) |
| UTK | CRTN | 140.5 | 42 | iP- | :39.23 ( 0.39 ) | iS | :57.59 ( 1.83 ) |

*****1997 OCTOBER 19; 12:11 - NORTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971019 | 121156.2 | 35.230 | 84.183 | 0.0 | 19 | 60 | 108 | 0.3 | D | C/D | 0.4 | 359 | 0.3 | 1.6 | B | | 2.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | TKL | 60.3 | 38 | eP- | 12:12:05.88 (-0.32 ) | iS | 12:12:13.35 (-0.22 ) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UTK | ORT | 76.2 | 352 | eP | :08.97 | ( 0.14 ) | eS | :18.75 ( 0.61 ) |
| UTK | EGT | 109.4 | 47 | eP | :13.91 | (-0.37 ) | eS | :27.79 ( 0.16 ) |
| UTK | ANTN | 141.1 | 318 | eP | :19.28 | (-0.05 ) | eS | :36.11 (-0.21 ) |
| UTK | PDTN | 151.7 | 272 | iPd | :21.42 | ( 0.43 ) | iS | :39.35 ( 0.15 ) |
| UTK | ABTN | 189.1 | 293 | eP+ | :27.11 | ( 0.22 ) | iS | :49.39 (-0.01 ) |
| UTK | GOGA | 212.3 | 162 | eP | :31.18 | ( 0.65 ) | iS | :55.71 ( 0.01 ) |
| UTK | SLTN | 229.9 | 54 | eP | :32.41 | (-0.95 ) | eS | :13:01.07 ( 0.57 ) |
| UTK | MSAL | 231.2 | 260 | iPu | :33.02 | (-0.50 ) | eS | :01.63 ( 0.90 ) |
| UTK | HAKY | 300.0 | 315 | | | | iS | :18.46 ( 2.52X) |
| UTK | WVT | 344.9 | 288 | eP | :50.67 | ( 2.78X) | eS | :25.67 ( 0.16 ) |

*****1997 OCTOBER 19; 18:39 - TENNESSEE*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971019 | 183955 | .1 | 35.286 | 84.753 | 15.1 | 24 | 80 | 190 | 0.3 | D | C/D | 0.5 | 346 | 0.2 | 0.9 | A | | 2.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ORT | 80.2 | 30 | eP- | 18:40:08.27 ( 0.09 ) | eS | 18:40:18.14 ( 0.32 ) |
| UTK | TKL | 98.0 | 65 | iPd | :10.88 (-0.08 ) | iS | :22.68 ( 0.05 ) |
| UTK | PDTN | 99.8 | 270 | eP | :11.52 ( 0.27 ) | iS | :23.69 ( 0.55 ) |
| UTK | ANTN | 107.4 | 336 | eP | :12.15 (-0.31 ) | iS | :25.42 ( 0.18 ) |
| UTK | CRTN | 130.7 | 39 | eP+ | :15.99 (-0.14 ) | iS | :33.10 ( 1.52 ) |
| UTK | ABTN | 139.8 | 299 | eP- | :17.34 (-0.21 ) | eS | :33.36 (-0.68 ) |
| UTK | EGT | 148.4 | 62 | iP | :19.03 ( 0.08 ) | eS | :38.79 ( 2.36X) |
| UTK | MSAL | 181.9 | 255 | iPu | :23.65 (-0.41 ) | eS | :45.49 ( 0.35 ) |
| UTK | HAKY | 260.7 | 321 | iPu | :34.26 (-0.51 ) | eS | :41:03.91 ( 0.27 ) |
| UTK | SLTN | 270.2 | 61 | eP | :35.70 (-0.37 ) | eS | :05.75 (-0.14 ) |
| UTK | WVT | 293.8 | 289 | eP | :39.04 ( 0.18 ) | eS | :11.12 ( 0.41 ) |
| UTK | MOTN | 327.1 | 298 | eP | :45.25 ( 2.29 ) | eS | :19.52 ( 1.71 ) |
| UTK | WCI | 354.9 | 337 | eP | :54.08 ( 7.70X) | eS | :25.63 ( 1.90 ) |

*****1997 OCTOBER 19; 20:45 - ALABAMA*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971019 | 204520 | .6 | 34.518 | 85.590 | 1.9 | 15 | 87 | 169 | 0.2 | D | C/D | 0.6 | 2 | 0.5 | 2.9 | C | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 87.1 | 344 | iP+ | 20:45:34.86 (-0.09 ) | iS | 20:45:45.64 ( 0.06 ) |
| UTK | MSAL | 105.8 | 291 | eP | :38.11 ( 0.18 ) | eS | :50.72 (-0.05 ) |
| UTK | ABTN | 159.0 | 343 | eP | :46.06 (-0.33 ) | eS | :46:05.29 (-0.06 ) |
| UTK | ANTN | 186.4 | 10 | eP | :50.83 ( 0.10 ) | eS | :13.07 ( 0.20 ) |
| UTK | ORT | 193.8 | 37 | eP | :52.67 ( 0.79 ) | | |
| UTK | TKL | 208.4 | 52 | eP | :54.60 ( 0.40 ) | eS | :18.57 (-0.28 ) |
| UTK | GOGA | 231.5 | 121 | eP | :58.48 ( 0.66 ) | eS | :24.71 (-0.22 ) |
| UTK | CRTN | 245.2 | 40 | eP | :46:00.55 ( 0.76 ) | eS | :28.69 ( 0.38 ) |

*****1997 OCTOBER 24; 08:35 - ALABAMA*****

NEIC Felt (VI) at Brewton, Canoe and Lambeth; (V) at Atmore, Flomaton, Frisco City and Huxford; (IV) at Perdido and Robinsonville; (III) at Butler, Demopolis, Goodway, Mobile and Uriah. Felt (V) at Century; (IV) at McDavid, Pensacola and Walnut Hill; (III) at Milton, Florida. Felt (IV) at Leakesville, Mississippi. Also felt at Megargel; Elgin AFB, Florida; Biloxi and Gulfport, Mississippi. Surface wave magnitude 4.2 Ms. Following listing gives arrival time data to 20 degrees.

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

NEIC 971024 083517.9 31.118 87.339 10.0F 87 418 4.9 4.8 6

UTK 971024 083518.7 31.043 87.437 0.1 19 427 282 0.6 D D/D 9.0 6 1.6 14.1 D 3.6

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| NEIC | MSAL | 418.1 | 8 | eP | 08:36:17.71 | ( 0.5 ) | iS | 08:37:01.96 | ( X) |
| NEIC | OXF | 423.7 | 333 | eP | :18.25 | ( 0.4 ) | | | |
| NEIC | PWLA | 433.7 | 351 | P | :19.29 | ( 0.2 ) | | | |
| NEIC | GOGA | 444.8 | 54 | eP | :21.73 | ( 1.2 ) | | | |
| NEIC | WVT | 558.2 | 356 | eP | :34.08 | (-0.8 ) | | | |
| NEIC | EDIT | 564.9 | 339 | P | :36.25 | ( 0.4 ) | | | |
| NEIC | ANTN | 593.8 | 19 | eP | :40.36 | ( 0.8 ) | eS | :42.11 | ( X) |
| NEIC | ORT | 601.6 | 27 | eP | :40.58 | ( 0.0 ) | eS | :44.97 | ( X) |
| NEIC | TKL | 602.7 | 32 | Pn | :40.60 | (-0.1 ) | | | |
| | | | | Pg | :57.00 | ( ) | Lg | :38:06.60 | ( X) |
| NEIC | MOTN | 612.7 | 355 | ePc | :41.13 | (-0.9 ) | eS | :37:44.65 | ( X) |
| NEIC | CRTN | 650.5 | 29 | eP | :46.47 | (-0.2 ) | eS | :54.00 | ( X) |
| NEIC | HAKY | 668.3 | 6 | eP | :48.00 | (-0.9 ) | eS | :57.99 | ( X) |
| NEIC | JSC | 669.4 | 57 | eP | :48.30 | (-0.7 ) | | | |
| NEIC | SGS | 683.9 | 69 | eP | :49.46 | (-1.4X) | | | |
| NEIC | HBF | 687.2 | 71 | (P) | :49.62 | (-1.7X) | | | |
| NEIC | MIAR | 696.1 | 305 | eP | :50.72 | (-1.9X) | | | |
| NEIC | LHS | 716.1 | 57 | eP | :53.74 | (-1.3X) | | | |
| NEIC | SLTN | 762.8 | 38 | ePd | :37:00.70 | (-0.4 ) | eS | :38:17.89 | ( X) |
| NEIC | WCI | 795.1 | 7 | eP | :04.55 | (-0.4 ) | | | |
| NEIC | CCM | 848.4 | 336 | eP | :09.44 | (-2.3X) | | | |
| NEIC | WMV | 886.3 | 40 | iPn | :15.48 | (-1.2X) | iSn | :44.34 | ( X) |
| NEIC | NAV | 914.1 | 40 | eP | :12.95 | (-7.1X) | | | |
| NEIC | BLA | 928.5 | 42 | eP | :19.84 | (-2.1X) | | | |
| NEIC | CEH | 930.7 | 53 | eP | :19.56 | (-2.5X) | | | |
| NEIC | WMOK | 1142.0 | 294 | eP | :44.18 | (-4.2X) | | | |
| NEIC | MCWV | 1165.4 | 34 | eP | :48.81 | (-2.4X) | | | |
| NEIC | AAM | 1283.2 | 14 | eP | :38:01.26 | (-4.4X) | | | |
| NEIC | JFWS | 1334.4 | 350 | eP | :07.31 | (-4.6X) | | | |
| NEIC | SSPA | 1356.6 | 36 | eP | :11.72 | (-2.8X) | | | |
| NEIC | CBKS | 1415.6 | 310 | eP | :18.54 | (-3.2X) | | | |
| NEIC | YSNY | 1483.4 | 29 | eP | :26.61 | (-3.2X) | | | |
| NEIC | ATPA | 1490.1 | 42 | Pn | :26.60 | (-3.9X) | iS | :40:56.60 | ( X) |
| NEIC | TXAR | 1582.4 | 267 | Pn | :38.50 | (-3.1X) | | | |
| NEIC | BINY | 1591.3 | 36 | eP | :39.51 | (-3.1X) | | | |
| NEIC | SADO | 1675.8 | 23 | eP | :46.97 | (-5.5X) | | | |
| NEIC | LSCT | 1721.4 | 43 | eP | :54.80 | (-3.0X) | | | |
| NEIC | ALQ | 1832.6 | 289 | eP | :39:08.96 | (-1.9 ) | | | |
| NEIC | ANMO | 1832.6 | 289 | eP | :09.01 | (-1.8 ) | | | |
| NEIC | GLD | 1880.4 | 306 | eP | :14.10 | (-2.1 ) | | | |
| NEIC | ISCO | 1912.6 | 305 | eP | :17.79 | (-2.3 ) | | | |
| NEIC | RW4 | 2010.5 | 298 | (P) | :30.75 | (-0.3 ) | | | |
| NEIC | RSSD | 2056.1 | 319 | eP | :34.14 | (-1.7 ) | | | |
| UTK | OXF | 426.8 | 335 | eP | 08:36:18.25 | ( 0.56 ) | | | |
| UTK | MSAL | 427.9 | 9 | eP- | :17.72 | (-0.12 ) | iS | 08:37:01.96 | (-0.42 ) |
| UTK | ANTN | 604.6 | 19 | eP | :40.37 | ( 0.71 ) | eS | :42.12 | ( 1.11 ) |
| UTK | ORT | 613.2 | 27 | eP+ | :40.58 | (-0.13 ) | eS | :44.98 | ( 2.12 ) |
| UTK | MOTN | 620.5 | 355 | ePu | :41.14 | (-0.45 ) | eS | :44.66 | ( 0.24 ) |
| UTK | EGT | 662.0 | 34 | eP | :46.76 | (-0.03 ) | eS | :51.23 | (-2.38 ) |
| UTK | CRTN | 662.1 | 29 | eP | :46.48 | (-0.27 ) | eS | :54.01 | ( 0.46 ) |
| UTK | HAKY | 677.2 | 6 | eP- | :48.01 | (-0.56 ) | iS | :57.99 | ( 1.21 ) |
| UTK | SLTN | 775.3 | 38 | ePd | :37:00.70 | (-0.09 ) | eS | :38:17.90 | (-0.49 ) |
| UTK | BLA | 941.3 | 41 | eP | :19.84 | (-1.35 ) | | | |
| UTK | CEH | 943.3 | 53 | eP | :19.56 | (-1.82 ) | | | |

Additional Data:

GIT ATL P 08:36:14.9

*****1997 OCTOBER 26; 23:27 - ALABAMA*****

NEIC Felt (VI) at Atmore, Flomaton, and Huxford. Held to mainshock location.

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 971026 | 232712.0 | 31.100 | 87.300 | 10.0F | | 14 | 419 | | | | | | | | | | 3.7 | | F |
| UTK | 971026 | 232714.8 | 31.082 | 87.470 | 7.5 | | 22 | 422 | 251 | 0.5 | D | C/D | 4.1 | 11 | 1.3 | 7.2 | D | 3.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| NEIC | MSAL | 419.2 | 8 | eP | 23:28:12.61 ( 1.1 ) | eS | 23:28:56.25 ( X) |
| NEIC | OXF | 427.0 | 333 | eP | :12.44 ( 0.1 ) | | |
| NEIC | GOGA | 442.6 | 54 | eP | :16.90 ( 2.5 ) | | |
| NEIC | PDTN | 482.6 | 16 | iPc | :20.31 ( 0.8 ) | | |
| NEIC | ABTN | 542.7 | 12 | eP | :27.84 ( 0.7 ) | | |
| NEIC | WVT | 560.4 | 355 | eP | :28.96 (-0.4 ) | | |
| NEIC | ORT | 601.6 | 27 | eP | :36.29 ( 1.6 ) | eS | :29:37.99 ( X) |
| NEIC | HAKY | 669.4 | 6 | eP | :45.20 ( 2.0 ) | | |
| NEIC | MIAR | 700.6 | 305 | eP | :44.73 (-2.5 ) | | |
| NEIC | SLTN | 761.7 | 38 | eP | :55.95 ( 0.8 ) | | |
| NEIC | WCI | 796.2 | 6 | eP | :57.99 (-1.3 ) | | |
| NEIC | CEH | 928.5 | 53 | eP | :29:14.78 (-1.2 ) | | |
| NEIC | WMOK | 1146.5 | 294 | eP | :38.86 (-4.1 ) | | |
| NEIC | ISCO | 1917.1 | 305 | eP | :31:17.79 ( 3.1 ) | | |
| UTK | OXF | 421.5 | 335 | eP | 23:28:12.44 ( 0.08 ) | | |
| UTK | MSAL | 424.1 | 10 | eP | :12.62 (-0.08 ) | eS | 23:28:56.25 (-0.17 ) |
| UTK | GOGA | 457.2 | 55 | eP | :16.90 ( 0.13 ) | | |
| UTK | PDTN | 488.8 | 18 | iPu | :20.32 (-0.36 ) | eS | :29:10.81 ( 0.26X) |
| UTK | ABTN | 547.6 | 13 | eP- | :27.84 (-0.10 ) | eS | :23.80 ( 0.42X) |
| UTK | WVT | 560.9 | 357 | eP | :28.96 (-0.60 ) | | |
| UTK | ORT | 610.8 | 28 | eP | :36.30 ( 0.56 ) | eS | :37.99 ( 0.80 ) |
| UTK | MOTN | 616.0 | 356 | eP | :36.92 ( 0.57 ) | eS | :38.73 ( 0.46 ) |
| UTK | EGT | 660.2 | 35 | eP | :41.83 (-0.06 ) | eS | :51.01 ( 2.93 ) |
| UTK | HAKY | 673.2 | 7 | eP | :45.20 ( 1.80 ) | eS | :50.57 (-0.20 ) |
| UTK | MIAR | 688.5 | 306 | eP | :44.73 (-0.56 ) | | |
| UTK | SLTN | 773.9 | 38 | eP | :55.95 ( 0.02 ) | eS | :30:09.07 (-3.85 ) |
| UTK | WCI | 797.3 | 7 | eP | :57.99 (-0.72 ) | | |
| UTK | BLA | 940.2 | 42 | eP | :29:15.43 (-0.94 ) | eS | :47.67 (-1.44 ) |
| UTK | CEH | 943.2 | 53 | eP | :14.78 (-1.92 ) | | |

Additional Data:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GIT | ATL | | | P | 23:28:09.7 | S | 23:28:59.8 |

*****1997 OCTOBER 28; 09:00 - ALABAMA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 971028 | 090011.0 | 31.100 | 87.300 | 10.0F | | 3 | 427 | | | | | | | | | | 3.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| NEIC | OXF | 427.0 | 333 | eP | 09:01:10.84 (-0.5 ) | | |
| NEIC | GOGA | 442.6 | 54 | (P) | :14.32 ( 0.9 ) | | |
| NEIC | MIAR | 700.6 | 305 | eP | :42.73 (-3.5 ) | | |

*****1997 OCTOBER 28; 10:36 - VIRGINIA*****

VTSO Confirmed mining induced event.

NEIC Probable coal bump. Felt.

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 971028 | 103646.6 | 37.162 | 82.025 | 1.0F | | 21 | 111 | | | | | | | | | 3.4 | | | F |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| NEIC | NAV | 111.2 | 81 | eP | 10:37:05.37 (-0.9 ) | | |
| NEIC | BLA | 142.3 | 87 | eP | :10.40 (-0.8 ) | eS | 10:37:27.24 ( X) |
| NEIC | TKL | 229.1 | 224 | Pn | :24.90 ( 2.2 ) | | |
| NEIC | CEH | 298.0 | 117 | eP | :32.10 ( 0.5 ) | | |
| NEIC | LHS | 316.9 | 159 | eP | :34.50 ( 0.4 ) | | |
| NEIC | JSC | 326.9 | 168 | (P) | :34.66 (-0.7 ) | | |
| NEIC | CVL | 328.0 | 73 | eP | :37.19 ( 1.8 ) | | |
| NEIC | MCWV | 335.8 | 34 | eP | :36.17 (-0.3 ) | | |
| NEIC | WCI | 394.8 | 289 | eP | :44.31 ( 0.3 ) | | |
| NEIC | GOGA | 435.9 | 198 | eP | :49.36 ( 0.1 ) | | |
| NEIC | SSPA | 527.1 | 42 | eP | :38:00.01 (-0.8 ) | | |
| NEIC | WVT | 531.5 | 259 | eP | :01.92 ( 0.5 ) | | |
| NEIC | AAM | 587.1 | 347 | eP | :07.82 (-0.7 ) | | |
| NEIC | OXF | 728.4 | 248 | eP | :25.07 (-1.4 ) | | |
| NEIC | MIAR | 1082.0 | 258 | eP | :39:08.13 (-2.6 ) | | |
| NEIC | ULM | 1828.1 | 327 | Pn | :40:41.70 ( 1.8 ) | | |
| NEIC | TXAR | 2188.4 | 253 | P | :41:19.60 (-0.6 ) | | |
| NEIC | PVO8 | 2339.6 | 282 | (P) | :35.09 ( 0.4 ) | | |
| NEIC | PDAR | 2421.9 | 294 | P | :42.50 ( 0.5 ) | | |
| NEIC | ILAR | 5166.3 | 328 | P | :45:16.60 ( 0.1 ) | | |
| NEIC | LPAZ | 6088.1 | 164 | P | :46:15.30 (-5.5X) | | |
| NEIC | WRA | 16013.8 | 288 | PKP | :56:23.10 (-2.8X) | | |
| NEIC | ASAR | 16282.9 | 283 | PKP | :30.50 ( 0.5 ) | | |

*****1997 OCTOBER 30; 06:42 - GALAX, VIRGINIA*****

VTSO Felt in the Galax/Fries/Ivanhoe area, Virginia.

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 971030 | 064222.8 | 36.705 | 80.917 | 9.7 | 7 | 46 | | | | | | | | | | | 2.2 | | F |
| VTSO | 971030 | 064222.9 | 36.705 | 80.899 | 7.6 | 14 | 45 | 185 | 0.6 | C | D/D | 3.4 | 313 | 1.8 | 4.8 | C | | 2.2 | | F |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| NEIC | WMV | 45.6 | 354 | eP | 06:42:30.34 (-0.8 ) | eS | 06:42:35.90 ( X) |
| NEIC | NAV | 68.9 | 9 | eP | :33.24 (-2.0 ) | | |
| NEIC | BLA | 71.2 | 38 | eP | :34.59 (-1.1 ) | eS | 43.01 ( X) |
| NEIC | CEH | 186.8 | 118 | eP | :53.40 ( 1.0 ) | eS | :43:14.68 ( X) |
| NEIC | CVL | 260.2 | 56 | (P) | :43:02.05 ( 0.2 ) | | |
| NEIC | JSC | 271.3 | 187 | eP | :01.52 (-1.8 ) | | |
| NEIC | GHV | 276.9 | 63 | (P) | :06.71 ( 2.7 ) | | |
| VTSO | WMV | 45.2 | 352 | eP | 06:42:30.34 (-0.44 ) | S | 06:42:35.90 (-0.26 ) |
| VTSO | ELN | 59.5 | 13 | eP | :33.90 ( 0.79 ) | S | :41.13 ( 0.94 ) |
| VTSO | BLA | 70.5 | 37 | iP | :34.54 (-0.39 ) | S | :43.12 (-0.20 ) |
| VTSO | FMV | 97.6 | 5 | eP | :39.19 (-0.19 ) | S | :50.36 (-0.58 ) |
| VTSO | SLTN | 113.1 | 255 | eP | :41.16 (-0.64 ) | S | :55.74 ( 0.69 ) |
| VTSO | EGT | 233.2 | 248 | P | :43:00.09 (-0.08 ) | | |
| VTSO | CRTN | 269.6 | 259 | P | :04.42 (-0.61 ) | S | :43:36.28 ( 1.55 ) |
| VTSO | GHV | 275.6 | 63 | eP | :07.10 ( 1.38 ) | S | :40.00 ( 4.09X) |
| VTSO | ABTN | 476.7 | 261 | P | :30.08 (-0.25X) | S | :44:11.94 (-6.05X) |

*****1997 OCTOBER 30; 15:59 - GALAX, VIRGINIA*****

VTSO Felt in the Galax/Fries/Ivanhoe area, Virginia.

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEIC | 971030 | 155940 | 4 | 36.718 | 80.931 | 8.8 | | 7 | 43 | | | | | | | | | | 2.1 | | F |
| VTSO | 971030 | 155940 | 5 | 36.718 | 80.931 | 8.8 | | 10 | 43 | 316 | 0.7 | D | D/D | 5.5 | 242 | 5.1 | 7.4 | D | 2.1 | | F |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| NEIC | WMV | 43.4 | 355 | eP | 15:59:48.09 (-0.3 ) | eS | 15:59:53.20 ( X) |
| NEIC | NAV | 67.8 | 10 | eP | :51.00 (-1.6 ) | | |
| NEIC | BLA | 71.2 | 40 | (P) | :52.07 (-1.2 ) | eS | 16:00:00.50 ( X) |
| NEIC | CEH | 189.0 | 119 | eP | 16:00:10.36 ( 0.0 ) | eS | :30.83 ( X) |
| NEIC | LHS | 249.1 | 177 | (P) | :17.45 (-0.7 ) | | |
| NEIC | JSC | 272.4 | 186 | eP | :25.86 ( 4.7 ) | eS | :57.38 ( X) |
| NEIC | GHV | 278.0 | 64 | (P) | :23.98 ( 2.2 ) | | |
| VTSO | WMV | 43.4 | 355 | iP | 15:59:48.10 (-0.05 ) | eS | 15:59:53.21 (-0.15 ) |
| VTSO | ELN | 58.8 | 16 | eP | :51.69 ( 1.04 ) | eS | :58.81 ( 1.15 ) |
| VTSO | NAV | 67.4 | 10 | iP | :51.51 (-0.55 ) | eS | :59.04 (-1.05 ) |
| VTSO | BLA | 71.2 | 40 | eP | :52.05 (-0.63 ) | eS | 16:00:01.16 ( 0.01 ) |
| VTSO | FWV | 96.4 | 6 | eP | :57.07 ( 0.30 ) | iS | :07.96 (-0.19 ) |
| VTSO | JSC | 272.0 | 186 | eP | 16:00:25.86 ( 3.06X) | eS | :57.39 ( 4.80X) |
| VTSO | GHV | 277.5 | 64 | eP | :00.00 (-23.48X) | eS | :56.61 ( 2.87X) |

*****1997 OCTOBER 31; 11:01 - TENNESSEE*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971031 | 110137 | 3 | 35.926 | 84.607 | 11.5 | | 9 | 27 | 130 | 0.2 | C | C/C | 1.6 | 17 | 0.5 | 3.1 | C | 1.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ORT | 27.3 | 94 | eP | 11:01:42.11 (-0.06 ) | iS | 11:01:45.75 ( 0.01 ) |
| UTK | ANTN | 62.5 | 296 | iP- | :47.43 (-0.20 ) | eS | :55.43 ( 0.22 ) |
| UTK | CRTN | 75.4 | 66 | eP | :51.32 ( 1.67X) | eS | :59.88 ( 1.15 ) |
| UTK | TKL | 81.0 | 111 | eP | :50.30 (-0.21 ) | eS | :02:00.18 (-0.05 ) |
| UTK | EGT | 118.2 | 91 | eP | :59.69 ( 3.26X) | eS | :13.88 (3.43X) |
| UTK | PDTN | 133.9 | 238 | iP | :02:02.78 ( 3.91X) | eS | :14.89 ( 0.24 ) |
| UTK | ABTN | 135.7 | 269 | iP+ | :03.35 ( 4.20X) | eS | :15.71 ( 0.56 ) |

*****1997 NOVEMBER 3; 16:34 - GEORGIA-ALABAMA BORDER*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971103 | 163459 | 3 | 34.471 | 85.506 | 0.0 | | 26 | 94 | 170 | 0.5 | D | C/D | 0.4 | 16 | 0.3 | 1.2 | A | 2.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 94.4 | 341 | iPu | 16:35:14.95 ( 0.07 ) | iS | 16:35:26.53 ( 0.10 ) |
| UTK | MSAL | 114.9 | 292 | eP+ | :18.16 ( 0.01 ) | eS | :31.88 (-0.24 ) |
| UTK | MYNC | 142.8 | 62 | eP | :22.70 ( 0.07 ) | iS | :39.37 (-0.45 ) |
| UTK | ABTN | 166.3 | 341 | eP+ | :25.84 (-0.49 ) | iS | :46.10 (-0.12 ) |
| UTK | ANTN | 190.4 | 7 | eP- | :30.21 ( 0.07 ) | eS | :52.46 (-0.35 ) |
| UTK | ORT | 193.5 | 34 | eP | :31.35 ( 0.73 ) | eS | :55.18 ( 1.54 ) |
| UTK | TKL | 205.7 | 50 | eP- | :32.28 (-0.26 ) | eS | :56.38 (-0.58 ) |
| UTK | GOGA | 221.1 | 121 | eP | :35.68 ( 0.56 ) | iS | :36:01.38 ( 0.02 ) |
| UTK | CRTN | 244.4 | 38 | iP- | :38.57 (-0.01 ) | eS | :08.68 ( 1.50 ) |
| UTK | EGT | 256.2 | 51 | eP | :40.22 ( 0.13 ) | eS | :10.80 ( 0.99 ) |
| UTK | WVT | 280.3 | 312 | eP | :42.77 (-0.20 ) | eS | :14.99 ( 0.21 ) |
| UTK | MOTN | 327.7 | 317 | eP- | :47.52 (-1.29 ) | eS | :27.62 ( 2.74 ) |
| UTK | SLTN | 377.3 | 54 | eP | :54.39 (-0.66 ) | eS | :35.61 (-0.06 ) |

*****1997 NOVEMBER 12; 15:10 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971112 | 151044.1 | 35.065 | 84.307 | 5.8 | 19 | 16 | 107 | 0.3 | C | C/C | 0.4 | 289 | 0.3 | 1.2 | A | | 2.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | MYNC | 16.4 | 86 | eP | 15:10:47.37 ( 0.36 ) | iS | 15:10:49.33 ( 0.16 ) |
| UTK | TKL | 81.7 | 36 | iPu | :57.00 (-0.47 ) | iS | :11:07.50 ( 0.16 ) |
| UTK | EGT | 130.4 | 44 | eP | :11:05.29 ( 0.03 ) | iS | :20.85 ( 0.05 ) |
| UTK | CRTN | 132.9 | 18 | eP | :05.29 (-0.34 ) | eS | :21.43 ( 0.00 ) |
| UTK | ABTN | 187.2 | 300 | eP | :14.41 ( 0.22 ) | eS | :36.79 ( 0.54 ) |
| UTK | GOGA | 199.0 | 157 | eP | :16.06 ( 0.01 ) | eS | :39.36 (-0.10 ) |
| UTK | MSAL | 217.5 | 264 | eP | :18.31 (-0.66 ) | eS | :44.26 (-0.09 ) |
| UTK | SLTN | 250.0 | 52 | eP | :23.02 (-0.55 ) | eS | :53.43 ( 1.17 ) |
| UTK | HAKY | 305.6 | 318 | eP | :32.43 ( 2.13 ) | eS | :12:06.60 ( 2.69X) |
| UTK | WVT | 340.4 | 291 | eP | :35.37 ( 0.77 ) | eS | :12.67 ( 1.33 ) |
| UTK | MOTN | 374.5 | 298 | eP | :44.22 (5.43X) | eS | :27.38 ( 8.78X) |

*****1997 NOVEMBER 14; 03:44 - LITITZ, PENNSYLVANIA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DGS | 971114 | 034411.73 | 40.741 | 76.549 | | 4 | 80 | | 0.1 | | | | | | | | | 3.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| DGS | NED | 80 | 229 | iPd | 03:44:23.37 | iS | 03:44:31.68 |
| DGS | BWD | | 160 | iPd | :23.51 | iS | :31.46 |

*****1997 NOVEMBER 19; 16:10 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971119 | 161007.9 | 35.740 | 84.265 | 15.0 | 15 | 19 | 145 | 0.2 | C | B/C | 1.1 | 20 | 0.2 | 1.2 | A | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ORT | 19.2 | 349 | iPu | 16:10:11.78 (-0.05 ) | iS | 16:10:14.81 ( 0.07 ) |
| UTK | TKL | 45.3 | 101 | eP | :15.82 ( 0.24 ) | iS | :21.38 ( 0.13 ) |
| UTK | EGT | 89.2 | 78 | iP | :22.13 (-0.30 ) | eS | :33.06 (-0.06 ) |
| UTK | ANTN | 99.5 | 299 | eP | :23.56 (-0.46 ) | iS | :35.94 ( 0.05 ) |
| UTK | PDTN | 152.8 | 251 | eP | :32.28 (-0.13 ) | eS | :50.14 (-0.17 ) |
| UTK | ABTN | 167.5 | 276 | eP | :34.16 (-0.52 ) | iS | :54.33 ( 0.15 ) |
| UTK | SLTN | 208.3 | 67 | eP | :47.13 ( 6.13X) | eS | :11:05.70 ( 0.65 ) |
| UTK | MSAL | 240.5 | 246 | eP | :49.96 ( 4.85X) | eS | :13.47 ( 1.29 ) |
| UTK | HAKY | 257.4 | 307 | eP | :55.91 ( 8.72X) | eS | :18.91 ( 3.13 ) |

*****1997 NOVEMBER 19; 19:46 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971119 | 194602.2 | 35.769 | 83.724 | 21.8 | 13 | 13 | 134 | 0.2 | B | B/B | 0.5 | 336 | 0.3 | 0.6 | A | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | TKL | 13.2 | 200 | iPd | 19:46:06.25 (-0.05 ) | iS | 19:46:09.43 ( 0.11 ) |
| UTK | EGT | 41.2 | 69 | iP- | :09.55 (-0.17 ) | eS- | :15.36 ( 0.12 ) |
| UTK | ORT | 54.7 | 287 | | | iS | :18.48 (-0.04 ) |
| UTK | MYNC | 85.4 | 206 | eP | :16.22 (-0.04 ) | eS | :26.47 (-0.07 ) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| UTK | ANTN | 143.1 | 289 | eP | :24.95 | (-0.14 ) | eS | :41.77 ( 0.02 ) |
| UTK | SLTN | 162.6 | 62 | iP | :27.88 | (-0.24 ) | iS | :47.48 ( 0.51 ) |
| UTK | PDTN | | 54 | | | | eS | :58.46 ( 1.60 ) |
| UTK | ABTN | 215.9 | 274 | eP | :38.28 | ( 2.53X) | eS | :47:01.68 ( 1.53 ) |

*****1997 NOVEMBER 23; 13:02 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971123 | 130243.6 | 35.572 | 86.035 | 0.0 | 10 | 35 | 128 | 0.8 | D | D/C | 0.7 | 253 | 0.3 | 2.2 | B | | 1.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ABTN | 35.4 | 349 | iP- | 13:02:49.56 ( 0.09 ) | iS | 13:02:53.27 (-0.53 ) |
| UTK | PDTN | 37.2 | 153 | eP | :49.89 ( 0.11 ) | iS | :53.95 (-0.38 ) |
| UTK | MSAL | 99.3 | 216 | eP | :03:00.66 ( 0.65 ) | iS | :03:13.44 ( 1.31 ) |
| UTK | ORT | 161.0 | 76 | | | eS | :31.92 ( 2.82 ) |
| UTK | HAKY | 177.2 | 344 | | | eS | :32.23 (-1.28 ) |
| UTK | TKL | 205.1 | 87 | eP | :17.10 ( 0.30 ) | eS | :37.55 (-3.60 ) |

*****1997 NOVEMBER 23; 22:40 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971123 | 224019.1 | 35.760 | 84.247 | 22.2 | 19 | 17 | 74 | 0.2 | B | B/A | 0.3 | 30 | 0.2 | 0.6 | A | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ORT | 17.4 | 343 | iPd | 22:40:23.54 (-0.08 ) | iS | 22:40:26.97 ( 0.00 ) |
| UTK | TKL | 44.3 | 105 | eP+ | :26.92 (-0.07 ) | iS | :32.95 ( 0.15 ) |
| UTK | CRTN | 61.1 | 37 | iPd | :29.31 (-0.14 ) | iS | :37.33 ( 0.27 ) |
| UTK | MYNC | 76.8 | 172 | iP- | :31.74 (-0.09 ) | iS | :41.06 (-0.10 ) |
| UTK | EGT | 87.2 | 79 | eP | :33.19 (-0.24 ) | eS | :43.74 (-0.21 ) |
| UTK | ANTN | 99.9 | 298 | eP | :35.05 (-0.29 ) | eS | :47.28 ( 0.05 ) |
| UTK | PDTN | 155.0 | 250 | iP- | :43.88 ( 0.10 ) | eS | :41:03.00 ( 1.26 ) |
| UTK | ABTN | 168.8 | 275 | iP | :46.12 ( 0.22 ) | eS | :05.25 (-0.13 ) |
| UTK | SLTN | 206.0 | 68 | eP | :51.52 ( 0.06 ) | eS | :15.25 ( 0.24 ) |
| UTK | MSAL | 242.8 | 246 | iP- | :56.12 ( 0.23 ) | eS | :25.02 ( 2.35X) |

*****1997 NOVEMBER 26; 05:20 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 971126 | 052037.1 | 32.931 | 80.157 | 6.9 | 18 | 4 | 101 | 0.1 | B | | 0.6 | 360 | 0.6 | 1.3 | | | 2.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MGS | 3.9 | 158 | iPd | 05:20:38.93 ( 0.00 ) | iSd | 05:20:39.72 ( 0.14 ) |
| USC | RGR | 4.3 | 234 | iPd | :38.96 ( 0.02 ) | iSu | :39.77 ( 0.27 ) |
| USC | SVS | 9.5 | 296 | iPd | :39.60 (-0.01 ) | iSd | :40.80 (-0.03 ) |
| USC | CSB | 10.1 | 53 | iPu | :39.61 ( 0.12 ) | iSd | :41.04 (-0.69 ) |
| USC | BCS | 10.1 | 57 | iPd | :39.73 (-0.08 ) | iSd | :41.09 (-0.08 ) |
| USC | WAS | 14.2 | 229 | iPd | :40.36 (-0.01 ) | iSu | :42.15 (-0.33 ) |
| USC | HBF | 16.6 | 277 | iPd | :40.68 ( 0.00 ) | iSd | :42.68 ( 0.15 ) |
| USC | TWB | 21.0 | 14 | iPd | :41.43 (-0.07 ) | iSu | :43.89 ( 0.10 ) |
| USC | DRC | 29.2 | 312 | iPu | :42.95 (-0.13 ) | iSu | :46.67 (-0.47 ) |

*****1997 NOVEMBER 27; 17:03 - TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971127 | 170306.5 | 35.165 | 84.977 | 1.7 | 20 | 78 | 160 | 0.3 | C | B/D | 0.4 | 354 | 0.2 | 2.0 | B | 1.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | MYNC | 78.1 | 97 | eP | 17:03:20.00 ( 0.59 ) | iS | 17:03:28.92 (-0.06 ) |
| UTK | PDTN | 80.3 | 279 | eP | :20.42 ( 0.65 ) | iS | :29.76 ( 0.16 ) |
| UTK | ORT | 102.7 | 36 | eP | :23.36 ( 0.01 ) | eS | :36.25 ( 0.42 ) |
| UTK | ANTN | 114.1 | 348 | eP- | :24.89 (-0.30 ) | iS | :39.14 ( 0.11 ) |
| UTK | TKL | 122.2 | 63 | eP | :26.08 (-0.40 ) | eS | :40.88 (-0.37 ) |
| UTK | ABTN | 130.1 | 308 | eP | :27.76 ( 0.01 ) | iS | :43.11 (-0.30 ) |
| UTK | CRTN | 154.2 | 42 | eP | :31.24 (-0.31 ) | eS | :50.36 ( 0.38 ) |
| UTK | MSAL | 158.8 | 258 | eP- | :31.90 (-0.37 ) | eS | :51.53 ( 0.31 ) |
| UTK | EGT | 172.8 | 61 | eP | :34.48 (-0.04 ) | eS | :55.66 ( 0.54 ) |
| UTK | HAKY | 259.5 | 327 | eP | :41.42 (-6.02X) | eS | :04:17.08 (-0.16 ) |
| UTK | SLTN | 294.6 | 60 | eP | :50.79 (-1.10 ) | eS | :28.88 ( 3.94X) |

*****1997 DECEMBER 2; 02:34- TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971202 | 023400.8 | 36.062 | 83.756 | 0.0 | 15 | 45 | 138 | 0.2 | C | C/C | 0.6 | 351 | 0.4 | 2.7 | C | 1.4 | | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | TKL | 44.9 | 182 | iPu | 02:34:08.05 (-0.16 ) | iS | 02:34:13.78 ( 0.08 ) |
| UTK | EGT | 45.0 | 113 | iP- | :08.10 (-0.13 ) | eS | :13.98 ( 0.24 ) |
| UTK | ORT | 52.3 | 251 | eP | :09.55 ( 0.11 ) | eS | :16.02 ( 0.18 ) |
| UTK | ANTN | 133.4 | 276 | eP | :21.63 (-1.02 ) | eS | :38.34 (-0.43 ) |
| UTK | SLTN | 152.9 | 73 | eP | :26.49 ( 0.71 ) | eS | :44.97 ( 0.80 ) |
| UTK | PDTN | 208.8 | 246 | iP | :34.88 ( 0.34 ) | eS | :59.68 ( 0.36 ) |
| UTK | ABTN | 213.1 | 265 | eP | :35.16 (-0.07 ) | eS | :35:00.27 (-0.24 ) |
| UTK | HAKY | 278.4 | 295 | eP | :50.93 ( 6.68X) | eS | :16.17 ( 0.28 ) |

*****1997 DECEMBER 5; 13:29 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 971205 | 132943.4 | 32.960 | 80.181 | 8.9 | 14 | 6 | 155 | 0.1 | B | | 0.9 | 360 | 0.9 | 1.5 | | 1.3 | | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | RGR | 5.9 | 192 | iPu | 13:29:45.64 ( 0.00 ) | iSd | 13:29:46.74 ( 0.20 ) |
| USC | SVS | 6.4 | 279 | iPu | :45.72 ( 0.01 ) | iSd | :46.73 (-0.05 ) |
| USC | MGS | 7.8 | 152 | iPd | :45.89 ( 0.01 ) | iSu | :46.93 (-0.14 ) |
| USC | CSB | 10.7 | 74 | iPd | :46.20 ( 0.19 ) | iSd | :47.52 (-0.94 ) |
| USC | BCS | 11.0 | 78 | iPd | :46.31 (-0.06 ) | iSd | :47.77 (-0.21 ) |
| USC | HBF | 14.3 | 265 | iPd | :46.70 (-0.02 ) | iSd | :48.50 ( 0.13 ) |
| USC | WAS | 15.1 | 214 | iPd | :46.92 ( 0.01 ) | iSd | :48.87 (-0.36 ) |

*****1997 DECEMBER 5; 14:01- TENNESSEE*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971205 | 140129.7 | 35.199 | 84.916 | 8.7 | 15 | 85 | 193 | 0.4 | D | C/D | 0.7 | 340 | 0.3 | 2.8 | C | 1.6 | | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 85.4 | 276 | eP | 14:01:44.26 ( 0.60 ) | iS | 14:01:54.00 ( 0.09 ) |
| UTK | ORT | 96.4 | 35 | eP | :45.70 ( 0.31 ) | eS | :57.50 ( 0.60 ) |
| UTK | ANTN | 111.7 | 345 | iP | :47.88 ( 0.06 ) | eS | :02:00.08 (-1.02 ) |
| UTK | TKL | 115.5 | 63 | iP | :48.28 (-0.13 ) | eS | :01.93 (-0.19 ) |
| UTK | ABTN | 132.4 | 306 | eP | :51.12 ( 0.05 ) | eS | :06.97 ( 0.25 ) |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| UTK | MSAL | 165.1 | 257 | iP+ | :55.73 | (-0.50 ) | eS | :15.83 | ( 0.18 ) |
| UTK | HAKY | 259.5 | 325 | eP | :02:10.44 | ( 0.51 ) | eS | :38.00 | (-1.16 ) |
| UTK | SLTN | 287.9 | 61 | eP | :14.14 | ( 0.59 ) | eS | :49.86 | ( 4.44X) |

*****1997 DECEMBER 6; 08:07 - SOUTH CAROLINA*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 971206 | 080752.5 | | 32.938 | 80.174 | 6.5 | 12 | 4 | 125 | 0.1 | B | | 1.1 | 360 | 1.1 | 1.5 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | RGR | 3.9 | 209 | iPd | 08:07:54.20 (-0.01 ) | iSd | 08:07:54.89 ( 0.19 ) |
| USC | MGS | 5.4 | 146 | iPd | :54.45 ( 0.04 ) | iSd | :55.04 (-0.11 ) |
| USC | SVS | 7.7 | 296 | iPd | :54.68 (-0.02 ) | iSd | :55.73 ( 0.06 ) |
| USC | CSB | 11.0 | 61 | iPd | :55.19 ( 0.23 ) | iSu | :56.55 (-0.73 ) |
| USC | WAS | 13.7 | 222 | iPd | :55.65 ( 0.02 ) | iSu | :57.34 (-0.31 ) |
| USC | HBF | 14.9 | 274 | iPd | :55.75 (-0.01 ) | iSd | :57.50 ( 0.12 ) |

*****1997 DECEMBER 8; 06:36- TENNESSEE*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971208 | 063648.3 | | 35.883 | 86.340 | 0.0 | 25 | 21 | 87 | 0.5 | C | C/C | 0.3 | 15 | 0.2 | 0.7 | A | | 2.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | ABTN | 20.8 | 89 | iP- | 06:36:51.44 (-0.28 ) | iS | 06:36:54.27 ( 0.01 ) |
| UTK | PDTN | 80.9 | 147 | iPu | :37:01.68 ( 0.02 ) | eS | :37:11.87 ( 0.31 ) |
| UTK | ANTN | 104.9 | 72 | eP+ | :05.40 (-0.17 ) | eS | :18.02 (-0.35 ) |
| UTK | MSAL | 118.9 | 195 | ePu | :07.21 (-0.60 ) | iS | :23.14 ( 0.88 ) |
| UTK | WVT | 137.1 | 282 | ePd | :10.66 (-0.06 ) | iS | :26.99 (-0.25 ) |
| UTK | HAKY | 137.4 | 351 | eP | :10.96 ( 0.20 ) | eS | :27.50 ( 0.18 ) |
| UTK | MOTN | 169.0 | 299 | eP- | :15.73 (-0.02 ) | iS | :35.77 (-0.17 ) |
| UTK | ORT | 183.7 | 89 | eP+ | :17.81 (-0.27 ) | eS | :40.91 ( 0.94 ) |
| UTK | MYNC | 219.9 | 113 | iP+ | :24.03 ( 0.24 ) | iS | :49.40 (-0.42 ) |
| UTK | TKL | 233.3 | 95 | iPd | :25.28 (-0.62 ) | iS | :53.35 ( 0.01 ) |
| UTK | WCI | 258.2 | 360 | ePd | :30.20 ( 0.95 ) | eS | :38:01.18 ( 2.11 ) |
| UTK | EGT | 274.6 | 89 | eP- | :31.47 ( 0.10 ) | eS | :03.30 ( 0.56 ) |
| UTK | GOGA | 380.2 | 135 | eP | :50.32 ( 6.03X) | eS | :32.82 ( 7.74X) |
| UTK | SLTN | 384.6 | 79 | eP | :48.59 ( 3.63X) | | |
| UTK | BLA | 549.9 | 73 | eP | :38:03.55 (-1.72 ) | eS | :39:09.70 ( 8.31X) |

*****1997 DECEMBER 9; 05:23- TENNESSEE*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971209 | 052317.6 | | 35.638 | 87.755 | 10.0 | 12 | 55 | 218 | 0.3 | D | C/D | 0.8 | 232 | 0.3 | 2.9 | C | | 1.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | WVT | 55.1 | 353 | iPu | 05:23:26.96 ( 0.30 ) | iS | 05:23:33.29 (-0.08 ) |
| UTK | MOTN | 110.8 | 349 | eP | :35.73 ( 0.28 ) | iS | :48.29 (-0.29 ) |
| UTK | MSAL | 131.9 | 131 | eP | :38.78 (-0.00 ) | eS | :54.24 (-0.10 ) |
| UTK | ABTN | 151.4 | 79 | iP- | :41.65 (-0.22 ) | iS | :59.87 ( 0.20 ) |
| UTK | PDTN | 177.6 | 103 | eP | :45.66 (-0.35 ) | eS | :24:07.42 ( 0.58X) |
| UTK | HAKY | 193.8 | 32 | eP | :47.61 (-0.94 ) | eS | :11.25 ( 0.09 ) |
| UTK | ANTN | 235.4 | 75 | | | eS | :22.23 ( 0.51 ) |

*****1997 DECEMBER 12; 08:42 - ALABAMA*****

VTSO Confirmed mining induced event.

NEIC Felt in the epicentral area. Probable mine collapse.

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971212 | 0842 | 19.8 | 33.427 | 87.280 | 0.0 | | 29 | 167 | 195 | 0.7 | D | D/D | 0.7 | 1 | 0.5 | 0.9 | A | 3.7 | | |
| NEIC | 971212 | 0842 | 20.3 | 33.427 | 87.280 | 1.0F | | 21 | 164 | | | | | | | | | 4.0 | 3.9 | | F |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| UTK | MSAL | 167.2 | 19 | eP+ | 08:42:46.92 | (-0.04 ) | iS | 08:43:06.12 | (-0.82 ) |
| UTK | OXF | 230.6 | 302 | eP | :57.11 | ( 0.15 ) | eS | :24.53 | ( 0.43 ) |
| UTK | PDTN | 243.5 | 32 | eP | :58.31 | (-0.64 ) | iS | :28.25 | ( 0.79 ) |
| UTK | ABTN | 293.1 | 21 | eP+ | :43:04.97 | (-0.10 ) | eS | :39.08 | ( 1.03 ) |
| UTK | WVT | 304.1 | 351 | eP | :05.75 | (-0.65 ) | eS | :41.78 | ( 1.43 ) |
| UTK | MYNC | 343.1 | 57 | eP | :11.46 | ( 0.21 ) | eS | :49.49 | ( 0.75 ) |
| UTK | GOGA | 354.7 | 89 | eP | :13.23 | ( 0.59 ) | eS | :55.78 | ( 4.64X) |
| UTK | ANTN | 357.6 | 31 | eP+ | :12.62 | (-0.43 ) | eS | :51.91 | ( 0.06 ) |
| UTK | MOTN | 359.9 | 350 | eP | :12.30 | (-0.98 ) | eS | :56.22 | ( 3.96X) |
| UTK | TKL | 406.0 | 51 | eP+ | :18.30 | (-0.69 ) | eS | :44:02.40 | ( 0.28 ) |
| UTK | HAKY | 413.1 | 9 | eP- | :19.12 | (-0.72 ) | eS | :03.63 | ( 0.03 ) |
| UTK | EGT | 456.6 | 52 | eP | :25.00 | (-0.32 ) | eS | :15.31 | ( 2.24 ) |
| UTK | WCI | 537.3 | 9 | eP | :36.82 | ( 1.67 ) | | | |
| UTK | SLTN | 578.0 | 53 | iP+ | :39.75 | (-0.55 ) | | | |
| UTK | MIAR | 594.5 | 284 | eP | :41.19 | (-1.02 ) | eS | :13.34 | (31.04X) |
| UTK | CCM | 626.2 | 326 | eP | :44.55 | (-1.56 ) | eS | :15.31 | (26.27X) |
| UTK | BLA | 751.6 | 54 | eP | :44:00.36 | (-1.28 ) | eS | :45:33.58 | (17.67X) |
| UTK | CEH | 798.5 | 68 | eP | :06.26 | (-1.10 ) | eS | :26.66 | ( 0.85 ) |
| NEIC | MSAL | 163.5 | 21 | ePc | 08:42:46.91 | (-1.1 ) | iS | 08:43:06.11 | ( X) |
| NEIC | OXF | 225.7 | 301 | ePd | :57.09 | ( 1.0 ) | eS | :24.53 | ( X) |
| NEIC | PDTN | 241.3 | 33 | eP | :58.31 | ( 0.3 ) | iS | :28.25 | ( X) |
| NEIC | ABTN | 290.2 | 22 | ePc | :43:04.96 | ( 0.7 ) | eS | :39.08 | ( X) |
| NEIC | WVT | 299.1 | 351 | eP | :05.65 | ( 0.2 ) | eS | :41.22 | ( X) |
| | | | | | | | Rg | :44:05.58 | ( X) |
| NEIC | MYNC | 342.5 | 58 | eP | :10.89 | (-0.1 ) | eS | :43:49.49 | ( X) |
| | | | | | | | Rg | :44:27.60 | ( X) |
| NEIC | ANTN | 354.7 | 32 | ePc | :12.61 | ( 0.0 ) | eS | :43:51.90 | ( X) |
| NEIC | MOTN | 354.7 | 350 | eP | :12.30 | (-0.2 ) | eS | :56.22 | ( X) |
| NEIC | GOGA | 356.9 | 90 | eP | :13.23 | ( 0.4 ) | eS | :55.78 | ( X) |
| NEIC | TKL | 404.8 | 52 | ePc | :18.29 | (-0.7 ) | | | |
| NEIC | HAKY | 409.2 | 9 | eP | :19.12 | (-0.4 ) | eS | :44:03.63 | ( X) |
| NEIC | WCI | 536.0 | 10 | eP | :36.82 | ( 1.0 ) | eS | :53.34 | ( X) |
| NEIC | JSC | 567.1 | 79 | eP | :37.67 | (-1.9X) | eS | :56.07 | ( X) |
| NEIC | SLTN | 577.1 | 54 | iPc | :39.75 | (-1.3X) | | | |
| NEIC | MIAR | 591.6 | 283 | eP | :41.19 | (-1.6X) | eS | :45:13.34 | ( X) |
| NEIC | LHS | 610.5 | 78 | eP | :43.12 | (-2.1X) | eS | :08.74 | ( X) |
| NEIC | CCM | 621.6 | 326 | eP | :44.55 | (-2.0X) | eS | :15.31 | ( X) |
| NEIC | SGS | 632.7 | 91 | eP | :45.91 | (-2.1X) | eS | :18.42 | ( X) |
| NEIC | HBF | 648.3 | 93 | eP | :48.21 | (-1.8X) | | | |
| NEIC | BLA | 750.6 | 55 | (Pn) | :59.57 | (-3.5X) | eSn | :12.37 | ( X) |
| NEIC | CEH | 799.5 | 68 | eP | :44:06.26 | (-2.8X) | eS | :26.66 | ( X) |
| NEIC | CVL | 944.1 | 55 | eP | :24.68 | (-2.6X) | eS | :46:39.95 | ( X) |
| NEIC | MCWV | 957.4 | 42 | eP | :24.92 | (-4.1X) | eS | :47.43 | ( X) |
| NEIC | SSPA | 1154.2 | 44 | eP | :48.86 | (-4.5X) | eS | :47:39.93 | ( X) |
| NEIC | YSNY | 1261.0 | 35 | eP | :45:02.00 | (-4.5X) | | | |
| NEIC | CBKS | 1265.4 | 302 | eP | :04.54 | (-2.5X) | | | |
| NEIC | SADO | 1438.9 | 27 | Pn | :23.10 | (-4.8X) | Lg | :49:01.50 | ( X) |
| NEIC | TXAR | 1620.2 | 258 | Pn | :48.40 | (-1.2X) | | | |
| NEIC | ISCO | 1778.1 | 299 | eP | :46:06.52 | (-1.8X) | (S) | :50:41.10 | ( X) |
| NEIC | RSSD | 1868.1 | 314 | eP | :16.08 | (-2.4X) | | | |
| NEIC | ULM | 1992.7 | 342 | P | :28.20 | (-4.1X) | | | |
| NEIC | PV10 | 2030.5 | 292 | eP | :37.19 | ( 0.3 ) | | | |
| NEIC | PDAR | 2198.4 | 305 | P | :54.20 | (-0.7 ) | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| NEIC | BW06 | 2198.4 | 305 | eP | :54.20 | (-0.7 ) |

Additional Data:

| | | | |
|---|---|---|---|
| GIT | ATL | P | 08:43:03.6 |

*****1997 DECEMBER 23; 21:07- KENTUCKY*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971223 | 2107 | 07.0 | 36.951 | 83.642 | 1.9 | 14 | 85 | 229 | 0.5 | D | D/D | 0.8 | 343 | 0.4 | 1.8 | B | | 1.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | CRTN | 85.2 | 192 | eP+ | 21:07:21.07 (-0.01 ) | iS | 21:07:31.89 ( 0.41 ) |
| UTK | EGT | 120.5 | 165 | iP | :26.51 (-0.25 ) | eS | :40.68 (-0.69 ) |
| UTK | ORT | 130.0 | 207 | iP+ | :28.47 ( 0.23 ) | iS | :44.28 ( 0.41 ) |
| UTK | TKL | 144.0 | 185 | eP | :30.20 (-0.25 ) | iS | :46.55 (-1.14 ) |
| UTK | SLTN | 147.2 | 112 | eP | :31.19 ( 0.18 ) | iS | :48.94 ( 0.29 ) |
| UTK | ANTN | 166.5 | 239 | iP | :33.57 (-0.45 ) | eS | :54.96 ( 1.10 ) |
| UTK | ABTN | 250.8 | 243 | eP | :50.57 ( 3.67X) | iS | :08:15.54 (-0.37 ) |
| UTK | PDTN | 272.3 | 228 | eP | :55.75 ( 6.21X) | eS | :22.38 ( 1.90 ) |

*****1997 DECEMBER 24; 01:35- TENNESSEE*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971224 | 0135 | 49.4 | 35.493 | 85.125 | 6.5 | 11 | 70 | 162 | 0.3 | C | B/D | 0.7 | 340 | 0.4 | 2.3 | B | | 1.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | PDTN | 70.2 | 250 | eP | 01:36:01.15 ( 0.25 ) | eS | 01:36:09.37 (-0.05 ) |
| UTK | ANTN | 75.9 | 353 | iPd | :01.79 (-0.04 ) | iS | :11.07 ( 0.03 ) |
| UTK | ABTN | 99.1 | 296 | eP | :05.79 ( 0.23 ) | iS | :17.43 (-0.04 ) |
| UTK | TKL | 123.8 | 81 | eP | :10.35 ( 0.88 ) | eS | :23.70 (-0.51 ) |
| UTK | CRTN | 140.0 | 56 | eP | :18.85 ( 6.81X) | eS | :30.65 ( 2.00 ) |
| UTK | MSAL | 158.2 | 244 | eP | :14.89 (-0.01 ) | eS | :34.60 ( 1.01 ) |
| UTK | EGT | 171.4 | 74 | iP | :18.93 ( 1.91X) | | |

*****1997 DECEMBER 27; 03:36- ALABAMA*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971227 | 0336 | 46.2 | 34.126 | 87.263 | 0.0 | 11 | 97 | 230 | 0.6 | D | D/D | 1.8 | 339 | 0.4 | 3.7 | C | | 1.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | MSAL | 96.6 | 34 | eP- | 03:37:01.78 (-0.38 ) | iS | 03:37:13.68 (-0.29 ) |
| UTK | PDTN | 181.6 | 45 | eP | :15.45 (-0.23 ) | iS | :38.60 ( 1.27 ) |
| UTK | OXF | 202.1 | 283 | eP | :24.53 ( 5.63X) | iS | :43.03 ( 0.14 ) |
| UTK | ABTN | 221.8 | 28 | eP | :22.29 ( 0.26 ) | eS | :47.83 (-0.42 ) |
| UTK | WVT | 228.3 | 347 | eP | :22.11 (-0.92 ) | eS | :50.38 ( 0.45 ) |
| UTK | ORT | 334.7 | 53 | eP | :38.17 ( 1.52 ) | eS | :38:18.95 ( 5.58X) |
| UTK | TKL | 361.4 | 61 | eP | :44.98 ( 5.05X) | eS | :14.95 (-4.10X) |
| UTK | CRTN | 387.5 | 53 | eP | :47.16 ( 4.00X) | eS | :22.93 (-1.72 ) |

*****1997 DECEMBER 27; 07:44 - BATH COUNTY, VIRGINIA*****

| SRCE | DATE | HRMN | SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VTSO | 971227 | 0744 | 46.7 | 37.986 | 79.953 | -9.5F | 5 | 95 | 343 | 0.7 | D | D/D | 4.4 | 116 | 2.2 | 99.0 | D | | 2.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| VTSO | BLA | 95.3 | 206 | eP | 07:44:58.00 (-0.41 ) | eS | 07:45:07.22 ( 0.50 ) |
| VTSO | ELN | 109.7 | 220 | eP | :59.42 (-0.75 ) | eS | :09.23 (-0.49 ) |
| VTSO | WMV | 132.5 | 223 | eP | :45:04.09 ( 1.15 ) | eS | :17.16 ( 2.70X) |
| VTSO | MCWV | 185.9 | 3 | | | eS | :40.36 (14.73X) |
| VTSO | CEH | 244.7 | 161 | | | eS | :46.60 ( 8.69X) |
| VTSO | SLTN | 257.5 | 229 | eP | :25.52 ( 7.32X) | eS | :50.86 (10.30X) |

*****1997 DECEMBER 29; 17:31- ALABAMA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UTK | 971229 | 173158.6 | 34.658 | 87.008 | 5.4 | 11 | 37 | 277 | 0.4 | D | C/D | 1.7 | 10 | 0.4 | 3.4 | C | | 2.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| UTK | MSAL | 37.1 | 55 | iPd | 17:32:04.79 (-0.00 ) | iS | 17:32:09.65 ( 0.27 ) |
| UTK | PDTN | 125.9 | 57 | eP | :18.60 (-0.41 ) | iS | :33.96 (-0.07 ) |
| UTK | ABTN | 158.9 | 31 | eP- | :24.25 ( 0.03 ) | eS | :42.54 (-0.49 ) |
| UTK | WVT | 179.6 | 336 | eP | :26.90 (-0.58 ) | eS | :48.85 ( 0.18 ) |
| UTK | MOTN | 234.9 | 338 | iP | :38.03 ( 1.92 ) | eS | :33:00.59 (-2.79X) |
| UTK | TKL | 314.8 | 68 | eP | :52.78 ( 6.80X) | eS | :24.22 ( 3.75X) |
| UTK | CRTN | 334.6 | 58 | eP | :49.70 ( 1.26 ) | eS | :25.77 ( 1.05 ) |

## SOUTHEASTERN U.S. RESERVOIR ACTIVITY DURING 1997

Events are listed chronologically (this also applies to multiple hypocenter locations for the same event). All times are Universal Coordinated Time. Most entries in the listing are self-explanatory. Items that might require further explanation are defined in the section entitled DEFINITIONS AND NETWORK OPERATOR CODES.

*****1997 JANUARY 9; 05:14 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970109 | 051452.9 | 34.317 | 81.297 | 1.5 | 12 | 2 | 88 | 0.4 | B | | 1.5 | 360 | 1.5 | 3.4 | | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.6 | 5 | iPd | 05:14:52.98 (-0.29 ) | | |
| USC | MR10 | 4.3 | 300 | iPd | :53.00 (-0.64 ) | | |
| USC | JSC | 5.4 | 140 | iPu | :53.85 ( 0.04 ) | | |
| USC | MR05 | 6.5 | 212 | iPd | :53.80 (-0.19 ) | | |
| USC | MR02 | 15.1 | 156 | iP+ | :55.45 ( 0.05 ) | | |
| USC | LHS | 48.4 | 68 | iPd | :15:00.71 ( 0.08 ) | | |

*****1997 JANUARY 10; 18:44 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970110 | 184427.9 | 34.331 | 81.315 | 0.3 | 10 | 2 | 162 | 0.1 | C | | 1.1 | 360 | 1.1 | 2.4 | | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.8 | 88 | iPu | 18:44:28.28 ( 0.06 ) | | |
| USC | MR10 | 2.1 | 285 | iPu | :28.32 ( 0.04 ) | | |
| USC | MR05 | 7.3 | 194 | iPd | :29.16 ( 0.03 ) | | |
| USC | JSC | 7.6 | 138 | iPu | :29.16 ( 0.01 ) | | |
| USC | MR02 | 17.2 | 153 | iPd | :30.80 ( 0.05 ) | | |

*****1997 JANUARY 11; 07:44 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970111 | 074419.4 | 34.334 | 81.315 | 1.0 | 10 | 2 | 177 | 0.0 | B | | 0.3 | 360 | 0.3 | 0.8 | | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.8 | 96 | iPu | 07:44:19.76 ( 0.01 ) | | |
| USC | MR10 | 2.1 | 279 | iPd | :19.84 ( 0.05 ) | | |
| USC | MR05 | 7.5 | 193 | iPd | :20.67 ( 0.02 ) | | |
| USC | JSC | 7.8 | 139 | iPd | :20.67 (-0.02 ) | | |
| USC | MR02 | 17.4 | 153 | iPd | :22.29 ( 0.02 ) | | |

*****1997 JANUARY 11; 07:51 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970111 | 075147.8 | 34.332 | 81.314 | 0.6 | 10 | 2 | 171 | 0.1 | B | | 0.9 | 360 | 0.9 | 1.9 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.6 | 92 | iPu | 07:51:48.15 ( 0.07 ) | | |
| USC | MR10 | 2.3 | 281 | iPu | :48.23 ( 0.05 ) | | |
| USC | MR05 | 7.4 | 195 | iPd | :49.05 ( 0.03 ) | | |
| USC | JSC | 7.6 | 140 | iPd | :49.06 ( 0.02 ) | | |
| USC | MR02 | 17.3 | 154 | iPd | :50.67 ( 0.05 ) | | |

*****1997 JANUARY 11; 07:53 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970111 | 075326.8 | 34.332 | 81.315 | 0.5 | 10 | 2 | 168 | 0.1 | C | | 1.0 | 360 | 1.0 | 2.8 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.8 | 91 | iPu | 07:53:27.20 ( 0.06 ) | | |
| USC | MR10 | 2.1 | 283 | iPd | :27.26 ( 0.06 ) | | |
| USC | MR05 | 7.4 | 194 | iPd | :28.09 ( 0.04 ) | | |
| USC | JSC | 7.7 | 139 | iPd | :28.09 (-0.01 ) | | |
| USC | MR02 | 17.3 | 153 | iPd | :29.71 ( 0.03 ) | | |

*****1997 JANUARY 11; 19:59 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970111 | 195901.8 | 34.329 | 81.317 | 0.7 | 8 | 2 | 149 | 0.0 | B | | 0.6 | 360 | 0.6 | 1.3 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 2.0 | 81 | iPu | 19:59:02.22 ( 0.00 ) | | |
| USC | MR10 | 2.1 | 293 | iPu | :02.25 ( 0.01 ) | | |
| USC | JSC | 7.5 | 136 | ePd | :03.13 ( 0.01 ) | | |
| USC | MR02 | 17.1 | 152 | iPd | :04.73 ( 0.05 ) | | |

*****1997 JANUARY 11; 23:09 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970111 | 230953.9 | 34.329 | 81.317 | 0.6 | 8 | 2 | 146 | 0.0 | C | | 0.9 | 360 | 0.9 | 2.6 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 2.0 | 80 | iPu | 23:09:54.25 (-0.01 ) | | |
| USC | MR10 | 2.1 | 294 | iPd | :54.30 ( 0.02 ) | | |
| USC | JSC | 7.5 | 136 | ePd | :55.19 ( 0.03 ) | | |
| USC | MR02 | 17.0 | 152 | iPd | :56.76 ( 0.04 ) | | |

*****1997 JANUARY 18; 09:54 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970118 | 095452.8 | 34.328 | 81.331 | 0.6 | 8 | 2 | 240 | 0.0 | C | | 0.4 | 360 | 0.4 | 1.1 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.7 | 75 | iPd | 09:54:53.08 (-0.01 ) | | |
| USC | MR05 | 6.9 | 196 | iPd | :53.95 ( 0.01 ) | | |
| USC | JSC | 7.3 | 137 | ePd | :54.00 ( 0.01 ) | | |
| USC | MR02 | 16.8 | 153 | iPd | :55.58 ( 0.03 ) | | |

*****1997 JANUARY 18; 11:16 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970118 | 111648.6 | 34.329 | 81.311 | 0.2 | 10 | 1 | 233 | 0.1 | C | | 0.5 | 360 | 0.5 | 1.1 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.4 | 79 | iPd | 11:16:48.88 ( 0.00 ) | | |
| USC | JSC | 7.2 | 140 | iPu | :49.81 (-0.04 ) | | |
| USC | MR05 | 7.2 | 198 | iPd | :49.77 (-0.08 ) | | |
| USC | MR02 | 16.8 | 154 | iPu | :51.38 (-0.05 ) | | |
| USC | LHS | 49.1 | 70 | iPd | :56.61 ( 0.11 ) | | |

*****1997 JANUARY 18; 11:39 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970118 | 113932.2 | 34.326 | 81.312 | 0.4 | 10 | 2 | 228 | 0.1 | C | | 0.3 | 360 | 0.3 | 0.5 | | | 1.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.6 | 66 | iPd | 11:39:32.43 (-0.09 ) | | |
| USC | MR05 | 6.8 | 198 | iPd | :33.33 (-0.05 ) | | |
| USC | JSC | 7.0 | 137 | iPu | :33.34 (-0.06 ) | | |
| USC | MR02 | 16.5 | 153 | iPu | :34.96 (-0.01 ) | | |
| USC | LHS | 49.3 | 70 | iPd | :40.18 ( 0.06 ) | | |

*****1997 FEBRUARY 22; 14:37 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970222 | 143751.4 | 34.342 | 81.316 | 2.0 | 10 | 2 | 230 | 0.0 | C | | 0.3 | 360 | 0.3 | 0.3 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR10 | 2.1 | 252 | iPu | 14:37:51.88 (-0.03 ) | iSu | 14:37:52.31 ( 0.02 ) |
| USC | MR01 | 2.2 | 122 | iPd | :51.92 ( 0.01 ) | iSd | :52.28 (-0.02 ) |
| USC | MR05 | 8.5 | 192 | iPd | :52.94 ( 0.10 ) | iSd | :53.89 (-0.04 ) |
| USC | JSC | 8.6 | 143 | iPu | :52.91 ( 0.05 ) | iSd | :53.91 (-0.06 ) |
| USC | MR02 | 18.3 | 155 | iPd | :54.45 ( 0.05 ) | iSd | :56.75 (-0.01 ) |

*****1997 FEBRUARY 24; 02:32 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970224 | 023216.3 | 34.335 | 81.316 | 1.8 | 10 | 2 | 186 | 0.1 | C | | 0.4 | 360 | 0.4 | 0.6 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.9 | 100 | iPd | 02:32:16.84 ( 0.05 ) | iSd | 02:32:17.16 ( 0.02 ) |
| USC | MR10 | 2.0 | 275 | iPu | :16.78 (-0.02 ) | iSu | :17.08 (-0.07 ) |
| USC | MR05 | 7.7 | 193 | iPd | :17.64 ( 0.00 ) | iSd | :18.71 ( 0.08 ) |
| USC | JSC | 8.0 | 140 | iPu | :17.71 ( 0.02 ) | iSd | :18.66 (-0.06 ) |
| USC | MR02 | 17.6 | 153 | iPu | :19.30 ( 0.05 ) | iSd | :21.31 (-0.18 ) |

*****1997 FEBRUARY 24; 20:49 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970224 | 204954.7 | 34.334 | 81.297 | 3.0 | 10 | 0.2 | 225 | 1.1 | D | | 8.4 | 360 | 8.4 | 7.3 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 0.2 | 140 | iPd | 20:49:55.27 ( 0.02 ) | iSd | 20:49:55.53 (-0.11 ) |
| USC | MR10 | 3.7 | 275 | iPd | :55.35 (-0.19 ) | iSu | :55.66 (-0.49 ) |
| USC | JSC | 6.9 | 150 | iPd | :56.33 ( 0.35 ) | iSd | :57:30 ( 0.38 ) |
| USC | MR05 | 8.1 | 205 | iPu | :56.34 ( 0.18 ) | iSu | :57.62 ( 0.38 ) |
| USC | MR02 | 16.8 | 158 | iPu | :57.94 ( 0.05 ) | iSu | :50:00.19 ( 0.11 ) |

*****1997 FEBRUARY 28; 14:31 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970228 | 143111.7 | 34.344 | 81.313 | 0.7 | 10 | 2 | 242 | 0.0 | C | | 0.3 | 360 | 0.3 | 0.4 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 2.1 | 131 | iPu | 14:31:12.12 ( 0.03 ) | iSu | 14:31:12.40 ( 0.00 ) |
| USC | MR10 | 2.4 | 249 | iPd | :12.11 (-0.03 ) | iSd | :12.47 (-0.01 ) |
| USC | JSC | 8.6 | 146 | iPu | :13.13 (-0.01 ) | iSu | :14:18 (-0.06 ) |
| USC | MR05 | 8.7 | 193 | iPd | :13.20 ( 0.05 ) | iSd | :14.28 ( 0.01 ) |
| USC | MR02 | 18.4 | 156 | iPu | :14.77 ( 0.05 ) | iSu | :17.05 (-0.02 ) |

*****1997 MARCH 1; 19:32 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970301 | 193220.0 | 34.343 | 81.313 | 0.7 | 10 | 2 | 236 | 0.0 | C | | 0.4 | 360 | 0.4 | 0.4 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 2.0 | 128 | iPd | 19:32:20.38 ( 0.01 ) | iSd | 19:32:20.68 ( 0.01 ) |
| USC | MR10 | 2.4 | 252 | iPd | :20.40 (-0.03 ) | iSd | :20.74 (-0.03 ) |
| USC | JSC | 8.5 | 145 | iPu | :21.39 (-0.02 ) | iSd | :22.42 (-0.07 ) |
| USC | MR05 | 8.6 | 193 | iPd | :21.48 ( 0.06 ) | iSd | :22.54 ( 0.02 ) |
| USC | MR02 | 18.3 | 155 | iPd | :23.05 ( 0.05 ) | iSu | :25.30 (-0.01 ) |

*****1997 MARCH 2; 17:29 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970302 | 172908.4 | 34.338 | 81.318 | 1.2 | 10 | 2 | 204 | 0.1 | C | | 0.5 | 360 | 0.5 | 1.0 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.8 | 264 | iPd | 17:29:08.73 | (-0.02 ) | iSu | 17:29:09.04 | ( 0.00 ) |
| USC | MR01 | 2.2 | 108 | iPd | :08.83 | ( 0.03 ) | iSu | :09.13 | ( 0.00 ) |
| USC | MR05 | 8.0 | 191 | iPd | :09.67 | (-0.04 ) | iSd | :10.81 | ( 0.09 ) |
| USC | JSC | 8.4 | 140 | iPd | :09.77 | ( 0.00 ) | iSd | :10.73 | (-0.11 ) |
| USC | MR02 | 18.0 | 153 | iPd | :11.52 | ( 0.05 ) | iSu | :13.51 | (-0.11 ) |

*****1997 MARCH 2; 18:12 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970302 | 181227.3 | 34.342 | 81.322 | 1.4 | 10 | 2 | 228 | 0.1 | C | | 0.6 | 360 | 0.6 | 0.7 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.5 | 246 | iPd | 18:12:27.70 | ( 0.03 ) | iSd | 18:12:27.95 | (-0.01 ) |
| USC | MR01 | 2.7 | 115 | iPd | :27.86 | ( 0.03 ) | iSu | :28.19 | (-0.04 ) |
| USC | MR05 | 8.3 | 188 | iPd | :28.51 | (-0.19 ) | iSd | :29.86 | ( 0.09 ) |
| USC | JSC | 8.9 | 140 | iPu | :28.84 | ( 0.04 ) | iSu | :29.89 | (-0.05 ) |
| USC | MR02 | 18.6 | 153 | iPd | :30.47 | ( 0.05 ) | iSu | :32.67 | (-0.04 ) |

*****1997 MARCH 13; 01:52 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970313 | 015214.8 | 34.338 | 81.322 | 1.4 | 10 | 1 | 203 | 0.1 | C | | 1.1 | 360 | 1.1 | 1.8 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.4 | 262 | iPu | 01:52:15.20 | ( 0.05 ) | iSu | 01:52:15.39 | (-0.03 ) |
| USC | MR01 | 2.6 | 106 | iPu | :15.27 | (-0.03 ) | iSd | :15.49 | (-0.20 ) |
| USC | MR05 | 7.9 | 188 | iPu | :15.93 | (-0.20 ) | iSu | :17.23 | ( 0.09 ) |
| USC | JSC | 8.6 | 138 | iPu | :16.25 | ( 0.01 ) | iSd | :17.32 | (-0.03 ) |
| USC | MR02 | 18.2 | 152 | iPd | :18.62 | ( 0.81 ) | iSd | :20.18 | ( 0.08 ) |

*****1997 APRIL 19; 05:11 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970419 | 051159.3 | 34.334 | 81.315 | 1.1 | 10 | 2 | 177 | 0.0 | B | | 0.2 | 360 | 0.2 | 0.4 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.8 | 96 | iPd | 05:11:59.66 | ( 0.01 ) | iSd | 05:11:59.94 | ( 0.00 ) |
| USC | MR10 | 2.1 | 279 | iPu | :59.70 | ( 0.02 ) | iSd | :59.97 | (-0.03 ) |
| USC | MR05 | 7.5 | 193 | iPd | :12:00.53 | (-0.01 ) | iSu | :12:01.56 | ( 0.06 ) |
| USC | JSC | 7.8 | 139 | iPu | :00.58 | ( 0.00 ) | iSd | :01.52 | (-0.07 ) |
| USC | MR02 | 17.4 | 153 | iPu | :02.19 | ( 0.05 ) | iSd | :04.34 | (-0.03 ) |

*****1997 APRIL 19; 05:23 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970419 | 052337.7 | 34.334 | 81.317 | 0.6 | 10 | 2 | 176 | 0.1 | B | | 0.9 | 360 | 0.9 | 2.0 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.9 | 95 | iPd | 05:23:38.12 | ( 0.01 ) | iSd | 05:23:38.39 | (-0.01 ) |
| USC | MR10 | 1.9 | 279 | iPd | :38.16 | ( 0.05 ) | iSd | :38.31 | (-0.09 ) |
| USC | MR05 | 7.5 | 192 | iPd | :39.02 | ( 0.01 ) | iSd | :40.11 | ( 0.13 ) |
| USC | JSC | 7.9 | 139 | iPu | :39.04 | (-0.04 ) | iSd | :39.98 | (-0.11 ) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| USC | MR02 | 17.5 | 153 | iPu | :40.75 | ( 0.05 ) | iSd | :42.81 | (-0.05 ) |

*****1997 MAY 29; 06:15 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970529 | 061524.7 | 34.332 | 81.304 | 1.0 | 10 | 1 | 172 | 0.0 | B | | 0.2 | 360 | 0.2 | 0.3 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 0.7 | 91 | iPd | 06:15:24.95 ( 0.01 ) | iSu | 06:15:25.11 ( 0.00 ) |
| USC | MR10 | 3.1 | 279 | iPd | :25.27 (-0.01 ) | iSd | :25.72 ( 0.00 ) |
| USC | JSC | 7.0 | 145 | iPu | :25.90 ( 0.00 ) | iSu | :26.78 (-0.03 ) |
| USC | MR05 | 7.7 | 201 | iPd | :25.96 (-0.04 ) | iSu | :26.95 (-0.04 ) |
| USC | MR02 | 16.8 | 156 | iPd | :27.54 ( 0.03 ) | iSu | :29.72 ( 0.09 ) |

*****1997 JUNE 28; 20:30 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970628 | 203056.6 | 34.286 | 81.176 | 2.2 | 12 | 8 | 148 | 0.1 | B | | 0.2 | 360 | 0.2 | 1.6 | | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | JSC | 7.7 | 265 | iPd | 20:30:57.89 (-0.03 ) | iSd | 20:30:58.69 (-0.24 ) |
| USC | MR02 | 11.4 | 206 | iPu | :58.56 ( 0.02 ) | iSu | :59.98 (-0.05 ) |
| USC | MR01 | 12.1 | 295 | iPd | :58.60 ( 0.00 ) | iSd | :31:00.11 (-0.02 ) |
| USC | MR05 | 14.7 | 262 | iPd | :59.05 ( 0.04 ) | iSu | :00.96 ( 0.12 ) |
| USC | MR10 | 15.9 | 291 | iPd | :59.23 ( 0.03 ) | iSd | :01.24 ( 0.06 ) |
| USC | LHS | 40.1 | 58 | iPd | :31:03.05 ( 0.02 ) | iSd | :08.33 ( 0.40 ) |

*****1997 JUNE 29; 02:56 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970629 | 025612.7 | 34.285 | 81.180 | 3.2 | 12 | 7 | 147 | 0.0 | B | | 0.2 | 360 | 0.2 | 1.1 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | JSC | 7.4 | 266 | iPd | 02:56:13.99 (-0.06 ) | iSd | 02:56:14.99 (-0.06 ) |
| USC | MR02 | 11.1 | 204 | iPu | :14.67 ( 0.00 ) | iSu | :16.15 ( 0.00 ) |
| USC | MR01 | 11.9 | 296 | iPd | :14.70 (-0.03 ) | iSd | :16.22 (-0.03 ) |
| USC | MR05 | 14.3 | 262 | iPd | :15.13 ( 0.02 ) | iSu | :16.98 ( 0.02 ) |
| USC | MR10 | 15.6 | 292 | iPd | :15.33 ( 0.02 ) | iSd | :17.33 ( 0.06 ) |
| USC | LHS | 40.4 | 58 | iPd | :19.16 (-0.07 ) | iSd | :24.24 ( 0.06 ) |

*****1997 JUNE 30; 19:30 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970630 | 193056.8 | 34.283 | 81.190 | 4.0 | 10 | 7 | 142 | 0.1 | C | | 0.5 | 360 | 0.5 | 2.0 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | JSC | 6.5 | 267 | iPd | 19:30:57.95 (-0.06 ) | iSu | 19:30:58.96 ( 0.01 ) |
| USC | MR02 | 10.7 | 200 | iPu | :58.71 ( 0.04 ) | iSu | :31:00.09 (-0.03 ) |
| USC | MR01 | 11.1 | 299 | iPu | :58.75 ( 0.07 ) | iSd | :00.08 (-0.07 ) |
| USC | MR05 | 13.4 | 262 | iPd | :31:00.20 ( 1.06X) | iSu | :01.02 ( 0.26 ) |
| USC | MR10 | 14.8 | 293 | iPd | :00.30 ( 0.95X) | iSd | :01.26 ( 0.12 ) |
| USC | LHS | 41.3 | 58 | iPd | :03.10 (-0.30 ) | iSd | :08.51 ( 0.06 ) |

*****1997 JULY 5; 14:20 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970705 | 142010.7 | 34.329 | 81.317 | 0.9 | 11 | 2 | 138 | 0.0 | B | | 0.3 | 360 | 0.3 | 1.0 | | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 2.0 | 82 | iPu | 14:20:11.10 (-0.01 ) | iSu | 14:20:11.42 ( 0.01 ) |
| USC | MR10 | 2.1 | 292 | iPu | :11.09 (-0.04 ) | iSu | :11.43 (-0.01 ) |
| USC | MR05 | 7.0 | 193 | iPd | :11.94 ( 0.03 ) | iSd | :12.90 ( 0.08 ) |
| USC | JSC | 7.6 | 136 | iPu | :12.00 ( 0.01 ) | iSd | :12.94 (-0.02 ) |
| USC | MR02 | 17.1 | 152 | iPd | :13.59 ( 0.03 ) | iSd | :15.62 (-0.09 ) |
| USC | LHS | 49.6 | 70 | iPd | :20.87 ( 2.20X) | iSd | :24.73 ( 0.01 ) |

*****1997 JULY 5; 16:42 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970705 | 164216.0 | 34.330 | 81.322 | 1.8 | 9 | 2 | 148 | 0.1 | B | | 0.8 | 360 | 0.8 | 1.1 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.6 | 297 | iPd | 16:42:16.52 ( 0.08 ) | iSd | 16:42:16.70 (-0.06 ) |
| USC | MR01 | 2.4 | 84 | iPd | :16.53 (-0.01 ) | iSu | :16.85 (-0.08 ) |
| USC | MR05 | 7.0 | 190 | iPd | :16.60 (-0.60 ) | iSu | :17.24 (-0.99X) |
| USC | JSC | 7.9 | 134 | iPu | :17.40 ( 0.04 ) | iSu | :18.38 ( 0.00 ) |
| USC | MR02 | 17.3 | 151 | iPd | :18.97 ( 0.05 ) | iSu | :21.21 ( 0.11 ) |

*****1997 JULY 5; 19:28 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970705 | 192808.6 | 34.338 | 81.317 | 2.1 | 10 | 2 | 205 | 0.1 | C | | 0.5 | 360 | 0.5 | 0.6 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.9 | 264 | iPu | 19:28:08.99 (-0.12 ) | iSu | 19:28:09.49 ( 0.01 ) |
| USC | MR01 | 2.1 | 109 | iPd | :09.21 ( 0.07 ) | iSd | :09.52 ( 0.00 ) |
| USC | MR05 | 8.0 | 191 | iP | :09.98 (-0.01 ) | iSd | :11.10 ( 0.07 ) |
| USC | JSC | 8.3 | 141 | iPu | :10.08 ( 0.03 ) | iS | :11.03 (-0.09 ) |
| USC | MR02 | 18.0 | 153 | iPu | :11.68 ( 0.06 ) | iSu | :13.87 (-0.02 ) |

*****1997 JULY 5; 21:46 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970705 | 214625.6 | 34.334 | 81.315 | 1.8 | 9 | 2 | 177 | 0.0 | B | | 0.3 | 360 | 0.3 | 0.4 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.8 | 96 | iPd | 21:46:26.08 ( 0.01 ) | iSu | 21:46:26.40 ( 0.00 ) |
| USC | MR10 | 2.1 | 279 | iPd | :26.09 (-0.02 ) | iSd | :26.48 ( 0.01 ) |
| USC | MR05 | 7.5 | 194 | iPd | :26.91 (-0.01 ) | iSu | :27.87 (-0.02 ) |
| USC | JSC | 7.8 | 140 | ePu | :26.98 ( 0.02 ) | iSu | :27.92 (-0.05 ) |
| USC | MR02 | 17.4 | 153 | iPd | :28.04 (-0.49X) | iSu | :30.87 ( 0.13 ) |

*****1997 JULY 7; 03:04 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970707 | 030434.0 | 34.334 | 81.313 | 2.0 | 10 | 2 | 179 | 0.1 | B | | 0.4 | 360 | 0.4 | 0.5 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.6 | 97 | iPu | 03:04:34.46 ( 0.04 ) | iSu | 03:04:34.76 ( 0.01 ) |
| USC | MR10 | 2.3 | 278 | iPd | :34.50 ( 0.00 ) | iSd | :34.80 (-0.01 ) |
| USC | MR05 | 7.6 | 195 | iPd | :35.27 (-0.01 ) | iSu | :36.36 ( 0.10 ) |
| USC | JSC | 7.7 | 141 | ePu | :35.31 ( 0.02 ) | iSd | :36.24 (-0.05 ) |
| USC | MR02 | 17.3 | 154 | iPu | :36.90 ( 0.03 ) | iSd | :38.96 (-0.10 ) |

*****1997 JULY 7; 03:11 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970707 | 031124.4 | 34.334 | 81.313 | 2.0 | 10 | 2 | 180 | 0.1 | C | | 0.4 | 360 | 0.4 | 0.5 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.6 | 98 | iPu | 03:11:24.83 ( 0.03 ) | iSu | 03:11:25.15 ( 0.01 ) |
| USC | MR10 | 2.3 | 277 | iPd | :24.87 ( 0.00 ) | iSd | :25.18 (-0.09 ) |
| USC | MR05 | 7.6 | 195 | iPd | :25.65 (-0.01 ) | iSu | :26.74 ( 0.09 ) |
| USC | JSC | 7.7 | 141 | ePd | :25.69 ( 0.01 ) | iSu | :26.62 (-0.06 ) |
| USC | MR02 | 17.4 | 154 | iPd | :27.28 ( 0.03 ) | iSu | :29.36 (-0.09 ) |

*****1997 JULY 7; 06:07 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970707 | 060749.7 | 34.334 | 81.315 | 1.7 | 8 | 2 | 177 | 0.0 | B | | 0.2 | 360 | 0.2 | 0.3 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.8 | 96 | iPd | 06:07:50.14 ( 0.03 ) | iSd | 06:07:50.44 ( 0.01 ) |
| USC | MR10 | 2.1 | 279 | iPu | :50.15 ( 0.00 ) | iSu | :50.46 (-0.04 ) |
| USC | MR05 | 7.5 | 194 | iPd | :50.95 (-0.01 ) | iSd | :51.98 ( 0.04 ) |
| USC | JSC | 7.8 | 140 | iPu | :51.00 ( 0.00 ) | iSd | :51.97 (-0.04 ) |

*****1997 JULY 7; 06:25 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970707 | 062512.0 | 34.331 | 81.317 | 0.2 | 11 | 2 | 143 | 0.1 | B | | 0.3 | 360 | 0.3 | 1.0 | | | 1.6 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR10 | 2.0 | 287 | iPd | 06:25:12.41 ( 0.00 ) | iSd | 06:25:12.65 (-0.04 ) |
| USC | MR01 | 2.0 | 87 | iPd | :12.45 ( 0.04 ) | iSd | :12.76 ( 0.06 ) |
| USC | MR05 | 7.2 | 193 | iPd | :13.26 (-0.03 ) | iSu | :14.34 ( 0.10 ) |
| USC | JSC | 7.7 | 137 | iPu | :13.32 (-0.05 ) | iSd | :14.26 (-0.12 ) |
| USC | MR02 | 17.3 | 152 | iPd | :14.95 ( 0.01 ) | iSu | :16.97 (-0.17 ) |
| USC | LHS | 49.6 | 71 | iPd | :20.21 ( 0.20 ) | iSd | :27.46 ( 1.38X) |

*****1997 JULY 7; 08:46 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970707 | 084613.7 | 34.329 | 81.316 | 0.3 | 11 | 2 | 139 | 0.1 | B | | 0.6 | 360 | 0.6 | 1.7 | | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.9 | 95 | iPu | 08:46:14.07 ( 0.03 ) | iSd | 08:46:14.26 (-0.05 ) |
| USC | MR10 | 2.1 | 292 | iPu | :14.11 ( 0.03 ) | iSd | :14.30 (-0.09 ) |
| USC | MR05 | 7.0 | 194 | iPd | :14.90 ( 0.00 ) | iSu | :16.00 ( 0.18 ) |
| USC | JSC | 7.5 | 137 | ePd | :14.94 (-0.03 ) | iSd | :15.96 (-0.09 ) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| USC | MR02 | 17.0 | 152 | iPd | :16.54 | ( 0.01 ) | iSd | :18.57 | (-0.13 ) |
| USC | LHS | 49.5 | 70 | iPu | :21.87 | ( 0.23 ) | iSd | :27.95 | ( 0.26X) |

*****1997 JULY 7; 08:46 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970707 | 084631.3 | 34.334 | 81.297 | 3.0 | 10 | 0.2 | 225 | 1.7 | D | | 13.3 | 360 | 13.3 | 11.3 | | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 0.2 | 140 | iPu | 08:46:31.57 (-0.25 ) | iSd | 08:46:31.86 (-0.34 ) |
| USC | MR10 | 3.7 | 275 | iPu | :31.61 (-0.49 ) | iSd | :31.81 (-0.90 ) |
| USC | JSC | 6.9 | 150 | iPd | :32.65 ( 0.11 ) | iSd | :33.36 (-0.12 ) |
| USC | MR05 | 8.1 | 109 | iPd | :42.41 ( 9.69 ) | iSu | :33.50 (-0.30 ) |
| USC | MR02 | 16.8 | 158 | iPd | :34.05 (-0.07 ) | iSu | :36.07 (-0.19 ) |

*****1997 JULY 7; 09:43 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970707 | 094339.1 | 34.334 | 81.322 | 1.9 | 10 | 1 | 173 | 0.1 | B | | 0.5 | 360 | 0.5 | 0.8 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.4 | 282 | iPu | 09:43:39.57 ( 0.05 ) | iSd | 09:43:39.72 (-0.12 ) |
| USC | MR01 | 2.5 | 95 | iPd | :39.59 (-0.05 ) | iSd | :40.20 ( 0.15 ) |
| USC | MR05 | 7.4 | 188 | iPd | :40.42 ( 0.04 ) | iSd | :41.35 ( 0.01 ) |
| USC | JSC | 8.3 | 136 | iPu | :40.48 (-0.03 ) | iSd | :41.44 (-0.14 ) |
| USC | MR02 | 17.8 | 151 | iPd | :42.07 ( 0.01 ) | iSu | :44.26 (-0.04 ) |

*****1997 JULY 7; 10:03 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970707 | 100336.9 | 34.329 | 81.316 | 0.4 | 10 | 2 | 150 | 0.1 | B | | 0.6 | 360 | 0.6 | 1.4 | | | 1.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.8 | 81 | iPu | 10:03:37.33 ( 0.08 ) | iSd | 10:03:37.43 (-0.09 ) |
| USC | MR10 | 2.2 | 291 | iPu | :37.35 ( 0.04 ) | iSd | :37.54 (-0.08 ) |
| USC | MR05 | 7.1 | 194 | iPd | :38.13 ( 0.02 ) | iSu | :39.02 (-0.01 ) |
| USC | JSC | 7.5 | 137 | iPu | :38.16 (-0.01 ) | iSu | :39.10 (-0.05 ) |
| USC | MR02 | 17.0 | 153 | iPu | :39.78 ( 0.05 ) | iSu | :41.91 ( 0.00 ) |

*****1997 JULY 16; 01:10 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970716 | 011049.2 | 34.329 | 81.320 | 0.4 | 10 | 2 | 142 | 0.1 | B | | 0.7 | 360 | 0.7 | 1.6 | | | 1.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.9 | 298 | iPu | 01:10:49.49 (-0.03 ) | iSd | 01:10:49.79 ( 0.00 ) |
| USC | MR01 | 2.2 | 80 | iPd | :49.58 ( 0.00 ) | iSd | :49.90 ( 0.00 ) |
| USC | MR05 | 6.9 | 191 | iPd | :50.36 ( 0.02 ) | iSu | :51.31 ( 0.06 ) |
| USC | JSC | 7.7 | 134 | iPd | :50.60 ( 0.13 ) | iSd | :51.40 (-0.07 ) |
| USC | MR02 | 17.1 | 151 | iPu | :52.05 ( 0.03 ) | iSd | :54.07 (-0.13 ) |

*****1997 JULY 16; 05:17 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970716 | 051708.7 | 34.329 | 81.320 | 0.3 | 12 | 2 | 135 | 0.1 | B | | 0.3 | 360 | 0.3 | 1.0 | | | 1.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.8 | 296 | iPu | 05:17:09.05 ( 0.02 ) | iSd | 05:17:09.22 (-0.07 ) |
| USC | MR01 | 2.2 | 83 | iPu | :09.11 ( 0.01 ) | iSd | :09.44 ( 0.02 ) |
| USC | MR05 | 7.0 | 191 | iPd | :09.92 ( 0.04 ) | iSd | :10.87 ( 0.07 ) |
| USC | JSC | 7.8 | 135 | iPu | :09.99 (-0.02 ) | iSd | :10.94 (-0.08 ) |
| USC | MR02 | 17.2 | 151 | iPd | :11.58 ( 0.02 ) | iSd | :13.61 (-0.04 ) |
| USC | LHS | 49.9 | 71 | iP | :16.85 ( 0.16 ) | iSd | :14.04 (-0.06 ) |

*****1997 JULY 16; 14:38 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970716 | 143814.6 | 34.329 | 81.319 | 0.7 | 12 | 2 | 136 | 0.1 | B | | 0.5 | 360 | 0.5 | 1.2 | | | 1.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.9 | 294 | iPu | 14:38:15.01 ( 0.01 ) | iSu | 14:38:15.16 (-0.12 ) |
| USC | MR01 | 2.2 | 83 | iPd | :15.07 ( 0.02 ) | iSd | :15.25 (-0.11 ) |
| USC | MR05 | 7.0 | 192 | iPd | :15.86 ( 0.04 ) | iSd | :16.92 ( 0.19 ) |
| USC | JSC | 7.7 | 135 | iPu | :15.93 (-0.01 ) | iSd | :16.89 (-0.04 ) |
| USC | MR02 | 17.2 | 152 | iPd | :17.53 ( 0.04 ) | iSd | :19.53 (-0.14 ) |
| USC | LHS | 49.8 | 71 | iPd | :22.80 ( 0.18 ) | iSd | :28.91 ( 0.17 ) |

*****1997 JULY 16; 14:40 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970716 | 144012.1 | 34.328 | 81.319 | 1.6 | 10 | 2 | 140 | 0.0 | B | | 0.2 | 360 | 0.2 | 0.4 | | | 1.3 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|
| USC | MR10 | 2.0 | 298 | iPu | 14:40:12.55 (-0.01 ) | iSd | 14:40:12.86 (-0.04 ) | |
| USC | MR01 | 2.1 | 78 | iPd | :12.59 ( 0.01 ) | iSd | :12.96 ( 0.03 ) | |
| USC | MR05 | 6.9 | 192 | iPd | :13.29 ( 0.00 ) | iSu | :14.21 ( 0.03 ) | |
| USC | JSC | 7.6 | 135 | ePd | :13.38 (-0.02 ) | iSd | :14.31 (-0.07 ) | USC |
| MR02 | 17.0 | 151 | iPd | :15.01 | ( 0.06 ) | iSu | :17.08 | (-0.02 ) |

*****1997 JULY 16; 14:56 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970716 | 145645.0 | 34.331 | 81.340 | 1.2 | 10 | 1 | 204 | 0.1 | C | | 0.7 | 360 | 0.7 | 0.9 | | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|
| USC | MR10 | 0.7 | 20 | iPd | 14:56:45.16 (-0.07 ) | iSd | 14:56:45.43 ( 0.00 ) | |
| USC | MR01 | 4.1 | 88 | iPd | :45.70 (-0.01 ) | iSu | :46.37 ( 0.10 ) | |
| USC | MR05 | 7.0 | 176 | iPd | :46.46 ( 0.29 ) | iSu | :47.01 (-0.07 ) | |
| USC | JSC | 9.3 | 127 | iPd | :46.48 (-0.05 ) | iSd | :47.60 (-0.10 ) | USC |
| MR02 | 18.3 | 146 | iPd | :48.11 | ( 0.10 ) | iSd | :50.31 | (-0.01 ) |

*****1997 JULY 16; 15:52 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970716 | 155256.7 | 34.332 | 81.339 | 1.5 | 10 | 1 | 202 | 0.1 | C | | 0.5 | 360 | 0.5 | 0.5 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| USC | MR10 | 0.5 | 19 | iPd | 15:52:56.95 | (-0.03 ) | iSu | 15:52:57.21 | ( 0.02 ) | |
| USC | MR01 | 4.0 | 91 | iPd | :57.45 | ( 0.03 ) | iSd | :58.07 | ( 0.09 ) | |
| USC | MR05 | 7.2 | 176 | iPd | :58.14 | ( 0.22 ) | iSd | :58.78 | (-0.07 ) | |
| USC | JSC | 9.3 | 128 | iPd | :58.24 | (-0.01 ) | iSu | :59.35 | (-0.09 ) | USC |
| MR02 | 18.4 | 147 | iPd | :59.76 | ( 0.01 ) | iSd | :53:02.44 | ( 0.37 ) | | |

*****1997 JULY 23; 14:10 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970723 | 141020.5 | 34.332 | 81.317 | 1.8 | 10 | 2 | 163 | 0.1 | B | | 0.3 | 360 | 0.3 | 0.6 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|
| USC | MR10 | 1.9 | 286 | iPd | 14:10:20.92 ( 0.00 ) | iSd | 14:10:21.23 | (-0.04 ) |
| USC | MR01 | 2.0 | 89 | iPd | :21.02 ( 0.09 ) | iSu | :21.29 | ( 0.01 ) |
| USC | MR05 | 7.3 | 192 | iPd | :21.69 (-0.02 ) | iSd | :22.72 | ( 0.07 ) |
| USC | JSC | 7.8 | 137 | iPd | :21.79 ( 0.00 ) | iSd | :22.72 | (-0.07 ) USC |
| MR02 | 17.3 | 152 | iPd | :23.96 | ( 0.61 ) | iSd | :25.74 | (-0.07 ) |

*****1997 JULY 23; 17:54 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970723 | 175459.0 | 34.338 | 81.316 | 1.8 | 10 | 2 | 206 | 0.1 | C | | 0.4 | 360 | 0.4 | 0.6 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|
| USC | MR01 | 2.0 | 110 | iPd | 17:54:59.55 ( 0.06 ) | iSd | 17:54:59.86 | ( 0.02 ) |
| USC | MR10 | 2.0 | 265 | iPd | :59.54 ( 0.04 ) | iSu | :59.76 | (-0.09 ) |
| USC | MR05 | 8.0 | 192 | iPd | :55:00.25 (-0.13 ) | iSu | :55:01.45 | ( 0.03 ) |
| USC | JSC | 8.2 | 142 | iPu | :00.44 ( 0.02 ) | iSu | :01.41 | (-0.07 ) USC |
| MR02 | 17.9 | 154 | iPd | :02.08 | ( 0.08 ) | iSu | :04.23 | (-0.03 ) |

*****1997 JULY 23; 17:55 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970723 | 175546.7 | 34.335 | 81.316 | 0.6 | 10 | 2 | 185 | 0.1 | C | | 0.8 | 360 | 0.8 | 1.6 | | | 1.8 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.9 | 100 | iPd | 17:55:47.17 ( 0.07 ) | iSd | 17:55:47.33 | (-0.05 ) |
| USC | MR10 | 2.0 | 275 | iPu | :47.16 ( 0.06 ) | iSd | :47.34 | (-0.05 ) |
| USC | MR05 | 7.6 | 192 | iPu | :48.00 (-0.02 ) | iSu | :49.09 | (-0.07 ) |
| USC | JSC | 8.0 | 140 | iPu | :48.06 (-0.02 ) | iSd | :49.03 | (-0.07 ) USC |
| MR02 | 17.6 | 153 | iPu | :49.67 | ( 0.02 ) | iSu | :51.83 | (-0.05 ) |

*****1997 JULY 23; 18:45 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970723 | 184530.0 | 34.336 | 81.315 | 1.0 | 10 | 2 | 190 | 0.1 | C | | 0.5 | 360 | 0.5 | 1.1 | | | 1.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.8 | 103 | iPd | 18:45:30.44 ( 0.07 ) | iSd | 18:45:30.66 | ( 0.00 ) |
| USC | MR10 | 2.1 | 273 | iPu | :30.41 ( 0.01 ) | iSu | :30.65 | (-0.07 ) |
| USC | MR05 | 7.7 | 193 | iPd | :31.28 (-0.02 ) | iSd | :32.36 | ( 0.07 ) |
| USC | JSC | 8.0 | 141 | iPu | :31.34 ( 0.01 ) | iSd | :32.29 | (-0.06 ) USC |
| MR02 | 17.6 | 154 | iPu | :33.00 | ( 0.05 ) | iSu | :34.99 | (-0.14 ) |

*****1997 JULY 24; 01:00 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970724 | 010037.8 | 34.331 | 81.313 | 1.5 | 10 | 2 | 163 | 0.1 | B | | 0.3 | 360 | 0.3 | 0.6 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.5 | 87 | iPd | 01:00:38.15 (-0.02 ) | iSu | 01:00:38.48 ( 0.02 ) | |
| USC | MR10 | 2.4 | 284 | iPd | :38.35 ( 0.07 ) | iSu | :38.60 (-0.05 ) | |
| USC | MR05 | 7.3 | 196 | iPd | :38.98 (-0.05 ) | iSd | :40.03 ( 0.05 ) | |
| USC | JSC | 7.4 | 140 | ePd | :39.02 (-0.03 ) | iSd | :40.03 ( 0.02 ) | USC |
| MR02 | 17.1 | 154 | iPd | :40.72 ( 0.09 ) | iSu | :42.76 (-0.03 ) | | |

*****1997 JULY 24; 12:13 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970724 | 121322.6 | 34.331 | 81.310 | 1.7 | 10 | 1 | 161 | 0.0 | B | | 0.2 | 360 | 0.2 | 0.4 | | | 1.0 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) | |
|---|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.3 | 85 | iPd | 12:13:23.01 ( 0.00 ) | iSu | 12:13:23.30 ( 0.01 ) | |
| USC | MR10 | 2.6 | 284 | iPd | :23.21 ( 0.04 ) | iSd | :23.54 (-0.04 ) | |
| USC | JSC | 7.3 | 141 | ePd | :23.91 ( 0.04 ) | iSu | :24.82 ( 0.00 ) | USC |
| MR05 | 7.4 | 198 | iPd | :23.83 (-0.06 ) | iSd | :24.89 ( 0.05 ) | | |
| USC | MR02 | 17.0 | 154 | iPu | :25.48 ( 0.05 ) | iSu | :27.54 (-0.06 ) | |

*****1997 JULY 24; 12:45 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970724 | 124539.9 | 34.331 | 81.317 | 1.1 | 10 | 2 | 160 | 0.0 | B | | 0.2 | 360 | 0.2 | 0.5 | | | 1.5 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.9 | 87 | iPd | 12:45:40.31 ( 0.00 ) | iSd | 12:45:40.62 ( 0.01 ) |
| USC | MR10 | 2.0 | 287 | iPd | :40.31 (-0.01 ) | iSd | :40.62 (-0.01 ) |
| USC | MR05 | 7.2 | 193 | iPd | :41.16 ( 0.03 ) | iSd | :42.09 ( 0.02 ) |
| USC | JSC | 7.7 | 137 | iPu | :41.20 (-0.01 ) | iSd | :42.16 (-0.03 ) |
| USC | MR02 | 17.3 | 153 | iPd | :42.81 ( 0.04 ) | iSu | :44.88 (-0.07 ) |

*****1997 JULY 24; 12:46 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 970724 | 124644.3 | 34.338 | 81.314 | 1.9 | 10 | 2 | 207 | 0.1 | C | | 0.4 | 360 | 0.4 | 0.5 | | | 1.2 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 1.8 | 112 | iPd | 12:46:44.85 ( 0.06 ) | iSd | 12:46:45.15 ( 0.02 ) |
| USC | MR10 | 2.2 | 128 | iPd | :44.84 ( 0.01 ) | iSd | :45.16 (-0.05 ) |
| USC | MR05 | 8.0 | 193 | iPd | :45.68 (-0.02 ) | iSu | :46.80 ( 0.06 ) |
| USC | JSC | 8.1 | 142 | iPd | :45.76 ( 0.05 ) | iSd | :46.70 (-0.06 ) |
| USC | MR02 | 17.8 | 154 | iPu | :47.36 ( 0.05 ) | iSu | :49.40 (-0.15 ) |

*****1997 OCTOBER 16; 18:50 - JOCASSEE RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 971016 | 185024.0 | 34.766 | 82.933 | 1.8 | 12 | 2 | 289 | 0.1 | C | | 0.8 | 360 | 0.8 | 0.8 | | | 1.9 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MMC | 2.2 | 48 | iPu | 18:50:24.45 (-0.06 ) | S | 18:50:24.93 ( 0.03 ) |
| USC | SMM | 13.9 | 58 | iPd | :26.38 ( 0.02 ) | S | :28.31 ( 0.12 ) |
| USC | SMT | 18.6 | 349 | iPd | :27.10 (-0.01 ) | S | :29.70 ( 0.17 ) |
| USC | BG3 | 25.1 | 0 | iPd | :28.15 (-0.02 ) | S | :31.22 (-0.20 ) |
| USC | JVW | 25.7 | 347 | iPd | :28.28 ( 0.01 ) | S | :32.03 ( 0.44 ) |
| USC | CCK | 28.9 | 349 | iPu | :28.83 ( 0.04 ) | S | :32.32 (-0.19 ) |

*****1997 OCTOBER 16; 19:46 - JOCASSEE RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 971016 | 194638.0 | 34.750 | 82.934 | 0.2 | 12 | 4 | 295 | 0.1 | C | | 1.0 | 360 | 1.0 | 1.0 | | | 1.4 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MMC | 3.7 | 28 | iPu | 19:46:38.74 ( 0.01 ) | S | 19:46:39.22 (-0.06 ) |
| USC | SMM | 15.0 | 53 | iPd | :40.67 ( 0.04 ) | S | :42.73 ( 0.07 ) |
| USC | SMT | 20.3 | 351 | iPd | :41.54 ( 0.05 ) | S | :44.30 ( 0.12 ) |
| USC | BG3 | 26.9 | 1 | iPu | :42.45 (-0.11 ) | S | :45.51 (-0.57 ) |
| USC | JVW | 27.5 | 348 | iPd | :42.56 (-0.08 ) | S | :46.30 ( 0.06 ) |
| USC | CCK | 30.7 | 350 | iPu | :43.13 (-0.03 ) | S | :47.23 ( 0.07 ) |

*****1997 OCTOBER 28; 05:42 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 971028 | 054240.8 | 34.312 | 81.285 | 1.6 | 8 | 2 | 171 | 0.0 | B | | 0.4 | 360 | 0.4 | 0.6 | | | 1.7 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | MR01 | 2.4 | 336 | iPd | 05:42:41.34 ( 0.01 ) | iSu | 05:42:41.75 ( 0.03 ) |
| USC | JSC | 4.2 | 147 | iPu | :41.58 (-0.01 ) | iSd | :42.11 (-0.06 ) |
| USC | MR10 | 5.6 | 299 | iPu | :41.78 (-0.02 ) | iSd | :42.53 (-0.01 ) |
| USC | MR02 | 14.1 | 159 | iPu | :43.22 ( 0.03 ) | iSu | :45.02 ( 0.03 ) |

*****1997 NOVEMBER 22; 18:10 - MONTICELLO RESERVOIR, SOUTH CAROLINA*****

| SRCE | DATE | HRMN SEC | LAT-N | LON-W | DPTH | PH | DMN | GAP | RMS | Q | SQD | ERH1 | AZ | ERH2 | ERZ | Q | MN | MD | MAGT | I |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| USC | 971122 | 181016.3 | 34.296 | 81.166 | 0.7 | 10 | 9 | 279 | 0.1 | C | | 1.1 | 360 | 1.1 | 3.7 | | | 1.1 | | |

| SRCE | STA | DIST (KM) | AZM | PHASE | ARRIVAL TIME (RES) | PHASE | ARRIVAL TIME (RES) |
|---|---|---|---|---|---|---|---|
| USC | JSC | 8.8 | 259 | iPd | 18:10:17.79 (-0.01 ) | iSu | 18:10:18.77 (-0.16 ) |
| USC | MR01 | 12.6 | 289 | iPu | :18.30 (-0.10 ) | iSu | :20.01 ( 0.03 ) |
| USC | MR02 | 12.8 | 207 | iPu | :18.48 (-0.01 ) | iSu | :20.19 ( 0.05 ) |
| USC | MR05 | 15.8 | 259 | iPu | :18.90 (-0.01 ) | iSu | :20.82 (-0.05 ) |
| USC | MR10 | 16.4 | 286 | iPu | :19.12 ( 0.11 ) | iSd | :21.12 ( 0.07 ) |

## SEISMIC STATION LISTING AND NETWORK MAPS

Stations potentially operational in the SEUSSN during the report period are listed below. A list of operator code definitions may be found in the section entitled DEFINITIONS AND NETWORK OPERATOR CODES. After the station listing is a plot of all the stations, followed by maps of individual networks (with station identification codes) operated by major member agencies or groups of the SEUSSN.

| Sta. Code | Lat. N (Dg-Min) | Lon. W (Dg-Min) | Elev. (M) | Dates Open-Close | Current Operator | Locality |
|---|---|---|---|---|---|---|
| ABTN | 35-53.13 | 86-06.54 | 363 | 9608 - | UTK | Auburntown, TN |
| AMG | 32-03.56 | 84-13.06 | 122 | 7309- | GSW | Americus, GA |
| ANTN | 36-10.30 | 85-13.88 | 612 | 96 | UTK | Anderson, TN |
| ASB | 35-37.74 | 79-46.38 | 227 | - | UNC | Asheboro, NC |
| ATL | 33-26.00 | 84-20.25 | 272 | 6306- | GIT | Atlanta, GA |
| BAV | 37-13.32 | 80-25.50 | 622 | 7309- | VTSO | Blacksburg, VA |
| BBG | 34-52.44 | 83-48.66 | 1355 | 8201- | CERI | Brasstown Bald, GA |
| BC | 35-01.06 | 83-01.88 | 860 | 8701- | DPC | Bad Creek Res., SC |
| BCS | 32-58.78 | 80-03.92 | 9 | 8701- | CSU-USGS | Charleston Southern Univ., SC |
| BENN | 35-33.90 | 81-39.66 | 878 | 8201- | CERI | Benn Knob, NC |
| BG3 | 34-59.58 | 82-55.90 | 366 | 86 - | DPC | Lake Jocassee, SC |
| BHT | 35-50.82 | 84-56.70 | 826 | 8110- | CERI | Blowhole, TN |
| BLA | 37-12.68 | 80-25.21 | 634 | 6209- | VTSO/NEIC | Blacksburg, VA |
| BRBC | 35-44.34 | 82-17.16 | 1976 | 8205- | CERI | Mt. Mitchell, NC |
| BRTN | 36-21.40 | 82-52.07 | 630 | 9608 - | UTK | Brown Mt., TN |
| BTR | 36-10.56 | 78-45.78 | 122 | - | UNC | Butner, NC |
| BVD | 39-46.49 | 75-29.96 | 58 | 8502- | DGS | Bellevue State Park, DE |
| BWD | 39-47.97 | 75-34.60 | 63 | 8502- | DGS | Brandywine State Park, DE |
| CBN | 38-12.30 | 77-22.40 | 70 | 71 - | USGS | Corbin, VA |
| CCK | 35-01.37 | 82-59.49 | 701 | 9201- | USC | Bad Creek Res., SC |
| CCVA | 36-36.18 | 83-40.02 | 571 | 8211- | CERI | Cudjo Cave, VA |
| CDG | 34-36.65 | 84-40.00 | 332 | - | GIT | Carters Dam, GA |
| CEH | 35-53.46 | 79-05.58 | 152 | 7508- | UNC/USGS | Chapel Hill, NC |
| COR | 35-33.30 | 78-59.34 | 91 | - | UNC | Corinth, NC |
| COW | 33-22.90 | 80-41.96 | 60 | 7710- | USC | Cow Castle Creek, SC |
| CRTN | 36-11.99 | 83-50.44 | 488 | 9608 - | UTK | Comb Ridge, TN |
| CVL | 37-58.88 | 78-27.65 | 167 | 7807- | VTSO | Charlottesville, VA |
| CVV | 37-58.88 | 78-27.65 | 167 | 7404- | VDMR | Charlottesville, VA |
| DALG | 34-46.43 | 85-00.47 | 329 | 9103- | GIT | Dalton, GA |
| DRC | 33-06.45 | 80-23.30 | 20 | 8303- | CSU-USGS | Dorchester, SC |
| EGT | 35-54.05 | 83-17.88 | 1103 |  | UTK | TN |
| ELK | 33-20.88 | 81-20.83 | 88 | 9511-- | WSRC | Elko, SC |
| ELN | 37-13.70 | 80-45.10 | 634 | 9612 - | VTSO | Prospectdale, VA |
| ETT | 35-19.56 | 84-27.30 | 588 | 8111- | CERI | Etowah, TN |
| EVE | 25-23.24 | 80-40.97 | 2 | 8910- | UFL | Homestead, FL |
| FDKY | 36-47.40 | 85-47.65 | 306 | 9608 - | UTK | Freedom, KY |
| FGTN | 36-26.02 | 83-11.72 | 509 | 9112- | CERI | TN |
| FWV | 37-34.90 | 80.48.70 | 756 | 9612 - | VTSO | Forrest Hill, WV |
| GAI | 29-39.02 | 82-20.01 | 51 | 7711- | UFL | Gainesville, FL |
| GBTN | 35-39.96 | 84-12.66 | 326 | 8303- | CERI | Greenback, TN |
| GFM | 36-06.66 | 81-48.42 | 1726 | 8205- | CERI | Grandfather Mtn., NC |
| GHV | 37-47.65 | 78-06.44 | 107 | 7810- | VTSO | Goochland, VA |
| GLT | 36-21.72 | 86-29.88 | 159 | 8111- | CERI-VCSS | Gallatin, TN |
| GMG | 34-50.16 | 84-40.20 | 1097 | 8509- | CERI | Grassy Mtn., GA |
| GOGA | 33-24.67 | 83-28.00 | 150 | 94 - | USGS | Godfrey, GA |
| GRB | 36-04.02 | 79-44.70 | 236 | - | UNC | Greensboro, NC |
| HAKY | 37-06.34 | 86-35.10 | 169 | 9608 - | UTK | Hadley, KY |

| | | | | | | |
|---|---|---|---|---|---|---|
| HBF | 32-56.85 | 80-19.96 | 10 | 7303- | USC | Harts Bluff, SC |
| HWD | 32-44.33 | 80-17.01 | 9 | 8303- | CSU-USGS | Hollywood, SC |
| HPKT | 35-55.56 | 83-63.75 | 305 | 9608 - | UTK | Knoxville, TN |
| JSC | 34-16.90 | 81-15.62 | 120 | 7405- | USC | Jenkinsville, SC |
| JVW | 34-59.54 | 82-59.86 | 554 | 9111- | USC | Bad Creek Res., SC |
| LAL | 34-26.20 | 87-20.23 | 320 | 9608 - | UTK | Leola, AL |
| LEX | 37-47.36 | 79-26.50 | 311 | 7105- | WAL | Lexington, VA |
| LHS | 34-28.57 | 80-48.37 | 120 | 7405- | USC | Liberty Hill, SC |
| MCWV | 39-39.49 | 79-50.74 | 280 | 94 - | USGS | Mont Chateau, WV |
| MGS | 32-53.87 | 80-08.46 | 9 | 7603- | CSU -USC | Middleton Gardens, SC |
| MMC | 34-46.79 | 82-54.91 | 280 | 8707- | DPC | Morgan Memorial Church, SC |
| MOB | 33-11.60 | 81-48.89 | 67 | 9510- | WSRC | Waynsboro, GA |
| MOTN | 36-37.08 | 87-59.20 | 177 | 9608- | UTK | Model, TN |
| MRG | 39-37.98 | 79-57.26 | 281 | 7511- | WVU | Morgantown, WV |
| MR01 | 34-19.91 | 81-17.74 | 131 | 7711- | USC -SCEG | Monticello Res., SC |
| MR02 | 34-11.58 | 81-13.81 | 84 | 7711- | USC -SCEG | Monticello Res., SC |
| MR05 | 34-16.05 | 81-20.05 | 103 | 7807- | USC -SCEG | Monticello Res., SC |
| MR07 | 34-22.32 | 81-19.50 | 134 | 7807- | USC -SCEG | Monticello Res., SC |
| MR10 | 34-20.18 | 81-20.25 | 137 | 7807- | USC -SCEG | Monticello Res., SC |
| MSAL | 34-50.80 | 86-40.41 | 260 | 9608- | UTK | Monte Sano, AL |
| MTT | 33-45.02 | 81-38.40 | 182 | 7608- | USC | Monetta, SC |
| MVL | 39.9992 | 76.3506 | 91 | | MVU | Millersville, PA |
| MYNC | 35-04.43 | 89-07.67 | 550 | 94 - | USGS | Murphy, NC |
| NAV | 37-18.94 | 80-47.61 | 610 | 7710- | VTSO | Narrows, VA |
| NA12 | 37-59.29 | 77-52.62 | 134 | 7808- | VTSO | North Anna, VA |
| NED | 39-42.25 | 75-42.29 | 47 | 7211- | DGS | Newark, DE |
| NPRS | 33-15.42 | 81-38.28 | 79 | 91 - | WSRC | Savannah River Lab, SC |
| OLT | 35-09.00 | 85-01.44 | 445 | 9608 - | UTK | Ooltewah, TN |
| ORT | 35-54.57 | 84-18.29 | 370 | 9608 - | UTK | Oak Ridge, TN |
| PDTN | 35-16.40 | 85-50.97 | 335 | 9608 - | UTK | Piedmont, TN |
| PKNC | 36-02.76 | 81-09.48 | 785 | 8211- | CERI | Pores Knob, NC |
| PLVA | 36-39.98 | 81-09.63 | 1353 | 8211- | CERI | Point Lookout, VA |
| PRM | 34-04.98 | 82-21.78 | 254 | 7507- | USC | Parsons Mtn., SC |
| PWLA | 34-58.80 | 88-03.84 | 204 | 8005- | CERI- SLU | Pickwick Lake, AL |
| PWV | 37-20.16 | 81-02.86 | 829 | 7803- | VTSO | Princeton, WV |
| RBNC | 35-21.42 | 82-59.16 | 1829 | 8205- | CERI | Richland Balsam, NC |
| RCG | 34-58.50 | 85-20.88 | 468 | 8110- | CERI | Rock City, GA |
| RGR | 32-54.45 | 80-11.65 | -52 | 8606- | CSU-USGS | (Roger Stewart) SC |
| RICH | 35-55.20 | 82-49.20 | 967 | 8306- | CERI | Rich Mtn., NC |
| SAR | 27-10.53 | 82-27.94 | 4 | 8910- | UFL | Osprey, FL |
| SGS | 33-11.55 | 80-30.57 | 25 | 7303- | USC | St. George, SC |
| SLTN | 36-26.59 | 82-07.23 | 1280 | 9608 - | UTK | Sullivan, TN |
| SMT | 34-55.85 | 82-58.26 | 498 | 7704- | USC | Smeltzer Mtn. (Jocassee), SC |
| SRAV | 33-19.50 | 81-40.80 | 91 | - | WSRC | Savannah River Lab, SC |
| SRPD | 33-09.30 | 81-42.75 | 31 | 7608- | WSRC | Savannah River Lab, SC |
| SRPN | 33-19.74 | 81-35.33 | 95 | 7608- | WSRC | Savannah River Lab, SC |
| SRPW | 33-12.14 | 81-34.69 | 77 | 7608- | WSRC | Savannah River Lab, SC |
| SVS | 32-58.10 | 80-14.89 | 3 | 7603- | USC | Slandsville, SC |
| TKL | 35-39.48 | 83-46.44 | 350 | 78 - | UTK | Tuckaleechee Caverns, TN |
| TCT | 36-00.32 | 87-33.17 | 245 | 9608 | UTK | Tennessee City, TN |

| | | | | | | |
|---|---|---|---|---|---|---|
| TQTN | 35-30.96 | 84-43.55 | 260 | 9608 - | UTK | Tranquillity, TN |
| TRYN | 35-14.76 | 82-16.02 | 915 | 8303- | CERI | Tryon Peak, NC |
| TWB | 33-06.88 | 80-06.18 | 9 | 8803- | CSU -USC | Tillman's/White's Bay, SC |
| VBV | 36-47.12 | 76-06.48 | 5 | 7705- | TCC | Virginia Beach, VA |
| VWV | 37-27.96 | 80-23.50 | 963 | 8207- | VTSO | VA-WV Border |
| WAK | 30-14.83 | 84-17.90 | 5 | 9302- | UFL | Wakulla, FL |
| WAS | 32-50.81 | 80-16.30 | 9 | 8303- | CSU-USGS | West Ashley, SC |
| WMV | 37-06.51 | 80-58.23 | 1157 | 8210- | VTSO | Walker Mtn., VA |
| WSSR | 35-16.68 | 83-34.68 | 1340 | 8510- | CERI | Wesser Bald, NC |
| WVT | 36-07.8 | 87-49.80 | 153 | 94 | NEIC | Waverly, TN |
| WYC | 31-12.32 | 82-23.39 | 43 | 9304- | UFL | Waycross, GA |

**FIGURE 4.** Seismic stations (triangles) in the SEUSSN. Solid triangles indicate stations operating during the report period. Open triangles indicate inactive stations. The SEUSSN monitoring area is outlined.

## INTERNET ACCESS TO SOUTHEASTERN U.S. EARTHQUAKE CATALOG INFORMATION AND ELECTRONIC VERSIONS OF THE BULLETIN

### Southeastern U. S. Seismic Network Bulletins

Text files of SEUSSN Bulletins No. 1 through 32, are accessible at http://www.geol.vt.edu/outreach/vtso/.

### Catalog of Southeastern United States Earthquakes

A catalog of pre-instrumental and instrumentally located earthquakes in the southeastern U.S. region is available at http://www.geol.vt.edu/outreach/vtso/. The catalog is a synthesis of information contained in the U.S. Geological Survey State Seismicity Map Series (Stover, C. W., B. G. Reagor, and S. T. Algermissen, 1984, “United States Earthquake Data File”, U.S. Geological Survey Open File Report 84-225) and earthquake hypocenter parameters and magnitudes determined by regional seismic network operators in the region. For the period subsequent to July, 1977, the catalog is composed of data appearing in the SEUSSN Bulletins. An important aspect of the Southeastern U.S. Catalog is the estimation of magnitude for a large number of pre-instrumental shocks in the region. These estimates were derived using the region specific relationships between felt area, maximum intensity, and mb(Lg) magnitude developed by Sibol et al. (Bull. Seism. Soc. Am., 77, 1987, pp. 1635-1654).

The Southeastern U.S. Catalog of earthquakes subsequent to July, 1977, is incorporated into the CNSS Composite Catalog, accessible at http://quake.geo.berkeley.edu/cnss/.

## DEFINITIONS AND NETWORK OPERATOR CODES

Below are some entries in this Bulletin that might require definition. Also given is a detailed listing of agencies or groups (and their letter codes) that supply information to this Bulletin.

AZM: Azimuthal angle from epicenter to station as measured from north (in deg),

DEP: Focal depth estimate (in km); FXD indicates that the depth was held fixed during the epicentral determination,

DIST (KM) Epicentral distance (in km) between the epicenter and a station,

ERROR ELLIPSE: Semi-axes, expressed as lengths (km) and azimuths (deg), of the vertical projection of the error ellipsoid (Lahr, 1980). Horizontal axes are expressed as the semi-major axis (ERHMAX), it's azimuth (AZ), and the semi-minor axis (ERHMIN). The vertical axis (ERZ) is the largest vertical deviation of the error ellipsoid from the hypocenter. A quality measure (Q) for the ellipsoid based on the length of the largest semi-axis (ERHMAX, ERHMIN, or ERZ) may also be supplied. For this Bulletin the following statistics apply for error estimates:
CERI, UTK, and VTSO: Error ellipse projected semi-axes from HYPOELLIPSE corresponding to a chi-square statistic (68%) with one degree of freedom,
GIT: Error ellipse projected semi-axes from LOCA, and
USC: Standard error estimates from HYPO71.
NEIC and USGS: Unknown,

GAP: The largest azimuthal separation (in deg) between recording stations,

HYPOELLIPSE: Computer hypocenter location program (Lahr, 1980),

HYPO71: Computer hypocenter location program (Lee and Lahr, 1974),

LOCA: Computer hypocenter location program developed at the Georgia Institute of Technology,

MBN or mb(Lg): Body wave magnitude determination using Nuttli's formulas for the Lg phase (Nuttli, 1973),

MDB, MDL, MD: Duration/coda length magnitude that approximates either the mb, ML, or an unknown magnitude scale, respectively. As of June 1986 (SEUSSN Bulletin 17), those using a duration magnitude approximating mb(Lg) are CERI, DGS, GIT, UTK and VTSO. Specifically:
CERI: $MDB = -2.36 + 2.23 \log(D) + 0.12 \log(K)$ $(MDB > 2.6)$
$MDB = -3.38 + 2.74 \log(D)$ $(MDB < 2.7)$
VTSO, UTK, and GIT: $MDB = -3.45 + 2.85 \log(D)$ where D is signal duration measured from the P-wave arrival time to the time when the signal returns to background noise, and K is the epicentral distance in kilometers. Those using a duration magnitude approximating ML are USC and USGS.
Specifically:
USGS: $MDL = -0.87 + 2.0 \log(D) + 0.0035 X$ where D is signal duration measured from the P-wave arrival time to the time when the signal returns to twice background noise, and X is the epicentral distance in kilometers. For more information please see

SEUSSN Bulletin 17 (page 1) or contact the agency making the estimate for details on their specific procedure,

ML: Local magnitude; contact the agency or group making the estimate for details on their specific procedure,

NO: Number of P, S, and S-P readings used in locating the event,

PHASE: Phase descriptions for either P or S waves, or S-P times. Included under this heading may also be the descriptors; 'i' for an impulsive arrival or 'e' for an emergent arrival. Preliminary first motions may also be given for P wave polarities. These include; 'u', 'c', or '+' for a compressional first arrival, and 'd' or '-' for a dilatational first arrival. '?' indicates that the arrival time is questionable.

Q: Solution quality of the hypocenter (the average of the SQD quality measures, see below; Lee and Lahr, 1974),

RES: Arrival time residual (the difference between the observed and the calculated arrival time, in seconds). An "X" following the value of the arrival time residual means that the arrival time was not used to compute the location of that event,

RMS: Root-mean-square of the weighted arrival time residuals (in sec),

S-P: Difference between the S and P wave arrival times (in sec),

SQD: Measures of the statistical quality of the solution (S), and of the distribution of stations (D) around the hypocenter (Lee and Lahr, 1974),

*XXXX: Code indicating the agency or group that made the hypocentral/magnitude determination; a listing of agencies and groups that operate seismographs in the SEUSSN and/or who supply information to this BULLETIN follows.

## Operator Codes

AUAL - Auburn University, AL
CERI - Center for Earthquake Research and Information, TN (formerly Tennessee Earthquake Information Center, TEIC, changed 7/1/87)
CPL - Carolina Power and Light Company, NC
CSU - Charleston Southern University, SC (formerly BCC, Baptist College at Charleston-changed 1991)
DGS - Delaware Geological Survey, DE
DPC - Duke Power Company, SC
GIT - Georgia Institute of Technology, GA
GSA - Geological Survey of Alabama, AL
GSW - Georgia Southwestern College, GA
MGS - Maryland Geological Survey, MD
MVU - Millersville University, PA
NASA - National Aeronautics and Space Administration/Goddard Space Flight Center, WV
NEIC - National Earthquake Information Center, USGS, CO
SCEG - South Carolina Electric and Gas Company, SC
SLU - St. Louis University, MO
TCC - Tidewater Community College, VA
UFL - University of Florida, FL
UNC - University of North Carolina, NC

USC - University of South Carolina, SC
USGS - United States Geological Survey, CO
UTK - University of Tennessee/Tennessee Valley Authority- Joint Institute for Energy and Environment
UTM - University of Tennessee at Martin, TN
VP - Virginia Power, VA
VTSO - Virginia Tech Seismological Observatory, VA
VSCC - Volunteer State Community College, TN
WAL - Washington and Lee University, VA
WSRC - Westinghouse Savannah River Company, SC
WVGS - West Virginia Geological and Economic Survey, WV
WVU - West Virginia University, WV