

# Southeastern United States Seismic Network Bulletin

Number 35

January 1, 2000 - December 31, 2000

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December 2001

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 Publication of this Bulletin is supported by the U.S. Geological Survey (USGS),  
 Department of Interior, under USGS award number 99HQAG0172. The views and  
 conclusions contained in this document are those of the authors and should not be  
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**SEISMICITY OF THE SOUTHEASTERN UNITED STATES DURING 2000** included 81 tectonic (not induced) earthquakes and 56 earthquakes associated with reservoirs with magnitudes exceeding 1.0. The largest earthquake reported during the year was  $m_b(Lg) = 3.1$  occurring on January 17, 1999. The epicenter was near Barbourville, Kentucky.

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 2000, covered by SEUSSN Bulletins 1 through 35.

**SOUTHEASTERN U.S. EARTHQUAKES DURING 2000** lists hypocentral parameters, magnitudes, and arrival times for tectonic earthquakes in the southeastern United States.

**SOUTHEASTERN U.S. RESERVOIR ACTIVITY DURING 2000** lists hypocentral parameters, magnitudes, and arrival times for earthquakes near the 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>. Hypocentral parameters of events in Bulletin 35 are accessible via the CNSS catalog at <http://quake.geo.berkeley.edu/cnss>.

**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.

Publications reported to us during the report period concerning seismicity in the southeast are Open-File Report 99-03-01, [Earthquake Hazard Maps for Maryland](#) and Educational Series No. 9, [Earthquakes in Maryland](#).

#### Acknowledgments

This report is the thirty-fifth SOUTHEASTERN UNITED STATES SEISMIC NETWORK BULLETIN and covers the period from January through December, 2000. 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 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).

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## SEUSSN EARTHQUAKE CATALOG STATISTICS

TABLE 1. SEUSSN Report Period Earthquake Catalog Statistics

<u>Period: January through December 2000 (1 year)</u>	<u>Tectonic</u>
Number of Earthquakes with $M \geq 0.0$	81
Number of Earthquakes with $M \geq 2.0$	24
Number of Earthquakes with $M \geq 3.0$	1
Number of Earthquakes with $M \geq 4.0$	0
Number of Felt Earthquakes	5
Number of Earthquakes with Known ERZ $\leq 5.0$ km	73

Largest Earthquake: 1 January 1999; 18:38 - Barbourville, KY, MD= 3.1, III MM

<u>Period: July 1977 through December 2000 (23.5 years)</u>	<u>Tectonic</u>
Number of Earthquakes with $M \geq 0.0$	1772
Number of Earthquakes with $M \geq 2.0$	670
Number of Earthquakes with $M \geq 3.0$	106
Number of Earthquakes with $M \geq 4.0$	8
Number of Felt Earthquakes	220
Number of Earthquakes with Known ERZ $\leq 5.0$ km	1335

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

### SOUTHEASTERN U.S. EARTHQUAKES DURING 2000

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.

#### \*\*\*\*\*2000 JANUARY 02; 15:04 - ATHENS, ALABAMA\*\*\*\*\*

NEIC/UTK Felt in Limestone County, Alabama, and Giles County, 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
NEIC	200102	150444.5		34.960	87.180	13.0	9	82									2.7	2.9			F
UTK	200102	150444.6		34.962	87.184	10.3	22	48	119	0.5	D	D/C	0.4	12	0.2	1.1	A		2.9		3

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
NEIC	PLAL	82.3	272	eP	15:04:57.72 (-0.9)	eS	15:05:07.96 ( X)
NEIC	WVT	142.3	336	eP	:05:06.57 (-1.4)	eS	:23.19 ( X)
NEIC	OXF	210.2	257	eP	:16.02 (-0.7)	eS	:41.25 ( X)
NEIC	GLST	240.2	308	eP	:20.97 ( 0.4)		
NEIC	SFTN	262.4	281	eP	:22.88 (-0.6)		
NEIC	TWAR	311.4	279	eP	:33.35 ( 3.6)		
NEIC	SIUC	355.8	330	eP	:36.58 ( 1.1)		
NEIC	GOGA	382.5	116	ePn	:38.65 (-0.2)		
				ePg	:42.41		
NEIC	UALR	472.6	269	eP	:52.94 ( 2.6)		
UTK	MSAL	48.4	105	iPd	15:04:53.22 ( 0.54)	iS	15:04:58.34 (-0.28)
UTK	SHAL	79.3	138	iPd	:57.88 ( 0.32)	eS	:05:06.37 (-0.70)
UTK	PLAL	81.4	272	eP	:57.48 (-0.40)	iS	:08.08 ( 0.46)
UTK	PDTN	126.5	74	iPd	:05:05.16 ( 0.16)	eS	:19.54 (-0.40)
UTK	WVT	142.2	336	eP	:06.66 (-0.81)	iS	:24.14 (-0.07)
UTK	OXF	209.8	257	eP	:17.02 (-1.06)	iS	:42.52 ( 0.13)
UTK	ANTN	222.2	52	eP+	:19.84 (-0.18)	eS	:45.83 ( 0.11)
UTK	ORT	281.8	67	eP-	:27.94 ( 0.50)	eS	:59.93 ( 1.36)
UTK	TKL	319.6	75			S-P	34.5 SEC (-0.15)
UTK	CRTN	332.7	65	eP	:34.07 ( 0.34)	eS	:06:10.57 ( 1.11)
UTK	EGT	367.9	72	iP	:38.06 (-0.08)		
UTK	GOGA	383.4	116	eP	:42.61 ( 2.67)	eS	:16.46 (-3.74)

Additional Data:

GIT	ATL	P	15:06
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#### \*\*\*\*\*2000 JANUARY 03; 21:24 - ATHENS, 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	200103	212460.0		35.368	84.782	26.2	13	74	114	0.2	D	C/D	1.1	334	0.3	3.6	C		1.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	74.0	36	eP	21:25:12.28 (-0.16)	eS	21:25:21.54 (-0.01)
UTK	TKL	96.9	70			S-P	11.3 SEC (-0.30)

UTK	PDTN	97.7	264	iP-	:15.85	(-0.15)	iS	:27.72	(0.05)
UTK	ANTN	98.0	336	eP	:16.29	(0.23)	iS	:27.63	(-0.16)
UTK	CRTN	125.5	42	eP	:20.31	(0.06)	eS	:35.05	(0.07)
UTK	EGT	146.8	66	eP	:23.70	(0.16)	eS	:41.74	(1.08)
UTK	GOGA	248.5	151	eP	:34.24	(-2.92)	eS	:26:04.01	(-0.17)

\*\*\*\*\*2000 JANUARY 11; 10:03 - CHARLESTON, 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	200111	100320.1		32.862	80.128	2.5	8	4	279	0.1	C	B/D	0.7	360	0.7	1.8						0.8

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MGS	4.1	343	iPu	10:03:21.37 (-0.09)	iSd	10:03:21.81 (0.07)
USC	RGR	8.0	309	iPd	:21.57 (-0.51)	iSd	:22.70 (-0.05)
USC	WAS	13.5	263	iPu	:23.16 (0.04)	iSu	:25.01 (0.00)
USC	SVS	16.3	316	iPu	:23.62 (0.04)	iSd	:25.70 (0.18)

\*\*\*\*\*2000 JANUARY 12; 09:11 - ASHEVILLE, 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	200112	091104.0		35.765	82.400	11.5	14	83	126	0.9	D	D/D	2.5	347	1.0	2.3	B					1.6

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	EGT	82.5	281	eP	09:11:16.34 (-1.08)		
UTK	TKL	124.9	265			S-P	13.7 SEC (-0.99)
UTK	ORT	172.8	276	eP	:31.46 (-0.18)	eS	09:11:53.10 (1.18)
UTK	BLA	239.2	47	eP	:48.20 (6.77X)	eS	:12:08.65 (-0.01)
UTK	ANTN	259.3	281	eP	:43.08 (-0.82)	eS	:11.67 (-1.28)
UTK	GOGA	278.8	201	eP	:47.63 (1.38)	eS	:16.83 (-0.18)
UTK	CEH	299.2	86	eP	:44.50 (-4.27X)	eS	:20.30 (-1.06)
UTK	PDTN	317.6	261	eP	:50.90 (-0.16)	eS	:25.41 (0.09)
UTK	ABTN	335.4	273	eP	:52.45 (-0.81)	eS	:28.41 (-0.72)

\*\*\*\*\*2000 JANUARY 18; 22:19 - MACON, GEORGIA\*\*\*\*\*

NEIC Felt (V) at McIntyre; (III) at Eatonton, Gordon, Greensboro, Haddock and Milledgeville; (II) at Juliette and Macon. Felt in Baldwin, Bibb, Greene, Hancock, Jones, Putnam, Twiggs, Washington and Wilkinson Counties; standard deviation = 0.9 on 11 of 12 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	200118	221932.0		32.993	83.214	5.0F	12	52						12.8	5.3							5
WSRC	200118	221932.2		32.920	83.465	19.2	5	55	275	0.1	D	D/D	25.0	360	25.0	22.9	D					3.2

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
NEIC	GOGA	52.3	333	eP	22:19:41.68 (0.3)	eS	22:19:46.87 ( X)
NEIC	JSC	231.3	51	ePn	:20:08.24 (0.4)	eS	:20:36.50 ( X)
NEIC	COW	238.0	79	ePn	:09.48 (0.6)	eS	:39.84 ( X)
NEIC	MYNC	245.7	340	eP	:11.22 (1.4)		
NEIC	LHS	276.9	53	ePn	:13.91 (0.1)	eS	:42.89 ( X)
NEIC	TKL	300.2	350	eP	:16.53 (-0.3)	eS	:48.70 ( X)
NEIC	PDTN	350.3	317	eP	:26.55 (3.3X)	eS	:21:04.11 ( X)
NEIC	CEH	497.1	49	iP	:41.15 (-0.7)	eS	:29.46 ( X)
NEIC	PWLA	499.3	298	ePn	:41.34 (-0.9)		
NEIC	PLAL	500.4	298	ePn	:41.64 (-0.7)	eSg	:49.22 ( X)
NEIC	BLA	532.6	28	ePn	:45.48 (-1.1)		
NEIC	OXF	598.3	288	ePn	:55.54 (0.7)		

WSRC	GOGA	54.5	360	22:19:41.85	( 0.00 )
WSRC	SRD	165.7	80	:58.10	( 0.10 )
WSRC	SRV	172.5	74	:58.90	( 0.00 )
WSRC	DXN	172.9	85	:58.20	(-0.04 )
WSRC	SRN	180.9	75	:20:00.10	(-0.05 )

Additional Data:

GIT	ATL	P	22:21:07.1	S	22:21:19.3
GIT	CDG	P	:23.5	S	:45.0

\*\*\*\*\*2000 JANUARY 25; 20:35 - FAYETTEVILLE, 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	200125	2035	26.4	35.080	86.361	0.02	13	39	146	0.6	D	D/C	0.8	282	0.4	2.4	B		2.4		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	MSAL	38.5	228	iPd	20:35:32.64 (-0.11)	eS	20:35:37.19 (-0.27)														
UTK	SHAL	75.1	197	eP	:38.45 (-0.34)	iS	:47.46 (-0.52)														
UTK	ABTN	92.3	14	eP	:42.03 (0.39)	iS	:53.08 (0.14)														
UTK	ANTN	158.6	40	eP+	:52.29 (0.06)	eS	:36:11.70 (0.46)														
UTK	ORT	208.0	63	eP	:59.36 (-0.66)	eS	:26.83 (2.12)														
UTK	TKL	243.7	74			S-P	30.6 SEC (1.93)														
UTK	CRTN	259.9	61	eP+	:36:07.26 (-0.34)	eS	:39.53 (1.94)														

\*\*\*\*\*2000 FEBRUARY 13; 05:56 - KNOXVILLE, 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	200213	0556	36.8	35.917	83.878	8.9	7	30	156	0.1	C	B/C	1.1	305	0.5	2.1	B		1.2		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	TKL	30.2	162			S-P	3.8 SEC (0.03)														
UTK	CRTN	31.6	6	iP	05:56:42.21 (0.01)	eS	05:56:46.23 (0.04)														
UTK	ORT	38.5	269	eP	:43.18 (-0.09)	eS	:48.15 (0.08)														
UTK	PDTN	192.4	249			eS	:30.69 (0.56)														
UTK	ABTN	201.4	270			eS	:32.54 (0.02)														

\*\*\*\*\*2000 FEBRUARY 18; 03:47 - 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	200218	0347	40.0	34.556	80.500	-0.1	17	29	148	0.2	C	B/C	0.7	360	0.7	1.5			2.4		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	LHS	29.5	253	iPd	03:47:45.12 (0.18)	iSu	03:47:49.08 (0.31)														
USC	JSC	76.2	247	iPd	:52.40 (-0.08)	iSd	:48:02.34 (0.15)														
USC	MR02	78.3	239	iPd	:52.79 (-0.02)	iSd	:03.54 (0.77)														
USC	MR07	78.5	255	iPd	:52.88 (0.03)	iSd	:02.40 (-0.45)														
USC	MR10	80.7	253	iPd	:53.15 (-0.06)	iSd	:02.84 (-0.65)														
USC	COW	131.5	188	iPu	:48:01.29 (-0.10)	iSd	:17.55 (-0.48)														
USC	SMNC	154.1	318	iPd	:04.89 (-0.18)	iSd	:23.84 (-0.76)														
USC	TRYN	178.1	297	iPd	:08.90 (0.27)	iSd	:30.01 (-0.91)														
USC	CEH	195.9	40	iPd	:11.55 (0.76)																

\*\*\*\*\*2000 FEBRUARY 19; 22:25 - ELLIJAY, 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	200219	222500.3		34.843	84.575	0.0	14	86	110	0.8	D	D/D	1.0	32	0.9	3.2	C		2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	OLT	53.3	310			S-P	8.8 SEC (2.33X)
UTK	DATN	86.5	328			S-P	9.8 SEC (-0.66)
UTK	TKL	116.1	39			S-P	15.3 SEC (1.32)
UTK	ORT	120.8	12			S-P	13.9 SEC (-0.55)
UTK	PDTN	125.7	293			S-P	14.4 SEC (-0.62)
UTK	CRTN	164.6	24			S-P	20.4 SEC (0.82)
UTK	EGT	165.0	44			S-P	20.6 SEC (1.01X)
UTK	ABTN	181.2	310			S-P	21.3 SEC (-0.17)
UTK	GOGA	188.9	147	eP	22:25:30.97 (0.05)	iS	22:25:53.00 (-0.40)
UTK	SHAL	191.4	257			S-P	23.2 SEC (0.57)
UTK	MSAL	192.0	271			S-P	22.4 SEC (-0.27)
UTK	PLAL	320.3	274	eP	:47.73 (-1.22)	iS	:26:26.88 (2.52)
UTK	WVT	328.1	297	eP	:49.96 (0.05)	eS	:24.11 (-1.91)

\*\*\*\*\*2000 FEBRUARY 21; 14:27 - TAZEWEEL, 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	200221	142731.2		36.363	83.591	0.02	12	29	255	0.2	D	C/D	1.0	32	0.8	4.8	C		1.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CRTN	28.8	231	iPu	14:27:35.92 (-0.02)	eS	14:27:39.40 (-0.07)
UTK	EGT	57.6	153	eP	:40.73 (0.03)		
UTK	TKL	79.9	192	eP	:41.70 (-2.68X)	eS	:54.15 (-0.01)
UTK	ORT	81.6	232	eP	:45.02 (0.36)	eS	:54.65 (0.00)
UTK	OLT	186.8	224	eP	:28:00.58 (-0.89)	eS	:28:24.62 (0.90)
UTK	ABTN	232.8	258	eP	:09.11 (0.40)	eS	:36.62 (0.52)
UTK	PDTN	237.2	240	eP	:08.96 (-0.45)	eS	:38.68 (1.42)

\*\*\*\*\*2000 MARCH 04; 19:08 - LOUDON, 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	200304	190825.1		35.664	84.335	0.05	23	27	72	0.4	C	C/C	0.4	335	0.3	1.0	A		2.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	27.4	6	iPu	19:08:29.80 (0.22)	iS	19:08:33.26 (0.32)
UTK	TKL	50.8	91			S-P	6.3 SEC (0.14)
UTK	DATN	70.5	255	iPd	:36.96 (0.26)	eS	:44.74 (-0.59)
UTK	CRTN	74.4	37	eP-	:37.13 (-0.21)	eS	:45.09 (-1.34)
UTK	OLT	84.7	228	eP	:41.71 (2.67X)	eS	:49.98 (0.58)
UTK	EGT	97.4	74	eP-	:40.57 (-0.58)		
UTK	ANTN	98.6	305	eP-	:40.99 (-0.35)		
UTK	ABTN	162.3	279	eP+	:51.28 (-0.19)	eS	:09:11.00 (0.10)
UTK	MSAL	231.3	248	eP	:09:00.08 (-2.27)	eS	:29.27 (-0.30)
UTK	SHAL	247.8	237	eP	:04.00 (-0.75)	eS	:31.82 (-1.83)
UTK	GOGA	262.2	162	iP+	:06.41 (-0.10)	iS	:37.66 (0.97)
UTK	WVT	319.8	280	iP+	:13.23 (-0.38)		
UTK	WCI	335.3	328	eP	:16.56 (1.04)		
UTK	MOTN	345.3	289	eP	:19.53 (2.77X)	eS	:53.81 (-0.61)
UTK	PLAL	348.4	259	eP	:16.13 (-1.01)	eS	:55.43 (0.35)

\*\*\*\*\*2000 MARCH 11; 08:22 - NASHVILLE, TENNESSEE\*\*\*\*\*

## UTK Unusually shallow earthquake or collapse of an underground cavern.

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	200311	0822	41.3	36.151	86.645	0.02	24	57	82	0.3	C	B/D	0.4	19	0.2	0.9	A		2.1		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ABTN	56.5	121	eP	08:22:51.08 (0.48)	eS	08:22:57.24 (-0.28)
UTK	WVT	106.7	269	iPd	:58.85 (0.03)	eS	:23:11.80 (-0.02)
UTK	PDTN	121.1	143	iP-	:23:01.14 (0.01)	eS	:15.64 (-0.19)
UTK	MOTN	131.1	294	eP+	:02.63 (-0.10)	iS	:18.36 (-0.21)
UTK	MSAL	144.7	181	iP+	:05.12 (0.22)	eS	:21.70 (-0.59)
UTK	DATN	158.3	117	eP	:07.24 (0.18)	iS	:25.72 (-0.31)
UTK	PLAL	183.4	225	eP-	:10.93 (-0.06)	eS	:33.03 (0.19)
UTK	SHAL	190.6	179	eP	:13.33 (1.18X)	eS	:34.94 (0.11)
UTK	ORT	212.6	97	eP	:15.84 (0.23)	eS	:41.37 (0.55)
UTK	WCI	229.9	6	eP	:18.56 (0.22)	eS	:45.34 (-0.07)
UTK	CRTN	252.3	88	eP+	:21.45 (-0.09)	eS	:51.12 (0.27)
UTK	TKL	264.8	101	eP	:22.53 (-0.54)	eS	:54.13 (0.64)
UTK	OXF	310.2	235	eP	:28.72 (0.09)		

## \*\*\*\*\*2000 MARCH 12; 06:20 - SODDY-DAISY, 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	200312	0620	23.6	35.315	85.109	13.2	13	20	108	0.1	B	B/B	0.5	265	0.4	1.5	B		1.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	OLT	19.9	157	iPu	06:20:27.57 (0.02)	eS	06:20:30.51 (0.08)
UTK	DATN	20.6	6	iPu	:27.59 (-0.07)	eS	:30.65 (0.03)
UTK	PDTN	67.5	266	eP	:34.62 (-0.11)	eS	:42.86 (-0.05)
UTK	ORT	98.3	48	eP	:39.43 (-0.15)	eS	:52.11 (0.83)
UTK	ABTN	110.5	305	eP	:41.56 (0.05)	iS	:54.75 (0.13)
UTK	CRTN	151.0	49	iP	:47.70 (-0.19)	eS	:21:05.85 (0.19)
UTK	MSAL	151.8	250	iP-	:47.20 (-0.81)		

## \*\*\*\*\*2000 MARCH 20; 04:54 - \*\*\*\*\*

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	200320	0454	08.0	35.049	86.356	8.6	18	37	125	0.4	C	C/C	0.5	323	0.2	1.4	B		2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	MSAL	36.7	232	iPd	04:54:14.24 (0.10)	eS	04:54:19.12 (0.41)
UTK	PDTN	52.4	62	iPu	:16.57 (-0.06)	iS	:22.96 (-0.08)
UTK	SHAL	72.0	198	eP	:20.34 (0.58)	eS	:27.50 (-0.99)
UTK	ABTN	95.4	13	eP	:24.05 (0.57)	eS	:34.61 (-0.28)
UTK	PLAL	157.2	268	eP-	:33.28 (0.07)	iS	:51.53 (-0.18)
UTK	WVT	179.5	312	eP	:36.28 (-0.46)	eS	:57.38 (-0.43)
UTK	ORT	209.2	62	eP	:41.54 (0.12)	eS	:55:08.11 (2.36)
UTK	MOTN	228.1	320	eP	:43.87 (-0.43)	eS	:11.16 (0.45)
UTK	TKL	244.2	73	eP	:46.70 (0.39)	eS	:15.95 (1.77)

## \*\*\*\*\*2000 MARCH 20; 10:00 - LAFAYETTE, 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	200320	1000	50.2	34.685	85.362	3.9	32	60	128	0.3	D	C/D	0.3	344	0.2	0.7	A		2.8		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	OLT	60.1	31	iPd	10:01:00.63 (0.48)		
UTK	PDTN	79.0	326	iPu	:03.28 (0.11)	iS	10:01:12.77 (-0.01)
UTK	DATN	93.8	15	eP-	:05.84 (0.28)	iS	:16.70 (-0.23)
UTK	SHAL	117.2	257	ePu	:09.45 (0.16)	iS	:23.52 (0.15)
UTK	MSAL	121.4	279	ePd	:09.77 (-0.19)	eS	:24.11 (-0.41)
UTK	ABTN	149.5	333	ePu	:14.14 (-0.27)	iS	:32.16 (-0.04)
UTK	ORT	166.4	35	eP+	:17.50 (0.42)	eS	:37.35 (0.53)
UTK	TKL	180.5	53	eP-	:18.90 (-0.40)	eS	:40.30 (-0.36)
UTK	CRTN	217.5	39	iPu	:25.21 (0.06)	eS	:50.55 (-0.12)
UTK	GOGA	224.9	128	eP	:26.43 (0.14)	eS	:52.50 (-0.08)
UTK	EGT	231.2	54	eP	:26.99 (-0.33)		
UTK	PLAL	250.4	278	eP	:29.28 (-0.50)	iS	:58.83 (0.26)
UTK	WVT	275.6	306	eP	:33.00 (0.11)	eS	:02:04.80 (0.85)
UTK	MOTN	320.1	313	eP	:39.80 (1.42)	eS	:12.47 (-0.98)
UTK	SLTN	352.7	55	eP	:41.20 (-1.32)	eS	:18.62 (-1.99)
UTK	OXF	371.7	268	eP	:44.61 (-0.12)	eS	:24.98 (0.54)
UTK	WCI	401.3	347	eP	:50.64 (2.26X)	eS	:31.36 (0.60)
UTK	BLA	526.5	56	eP	:02:10.91 (7.03X)	eS	:59.06 (1.50)

Additional Data:

GIT	ATL		P	10:01:20.5	S	10:01:40.5
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\*\*\*\*\*2000 MARCH 20; 19:36 - LAFAYETTE, GEORGIA\*\*\*\*\*

UTK Event is an aftershock of the magnitude 2.8 earthquake that occurred earlier the same day.

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	200320	193650.3		34.694	85.393	3.5	21	61	201	0.3	C	B/D	0.5	331	0.3	1.8	B		1.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	OLT	60.8	34	iP	19:37:00.28 (-0.07)	eS	19:37:07.87 (0.06)
UTK	PDTN	76.6	327	iP+	:02.90 (0.02)	iS	:12.31 (0.10)
UTK	DATN	93.7	17	eP	:05.45 (-0.18)	eS	:16.66 (-0.33)
UTK	SHAL	114.7	256	eP	:09.66 (0.68)	eS	:22.83 (0.03)
UTK	MSAL	118.4	279	eP	:09.52 (-0.07)	iS	:23.81 (-0.02)
UTK	ABTN	147.4	334	eP+	:13.84 (-0.33)	iS	:31.72 (-0.01)
UTK	ORT	167.3	36	eP-	:17.61 (0.30)	eS	:38.30 (1.14)
UTK	TKL	182.2	54			S-P	21.2 SEC (-0.25)
UTK	CRTN	218.6	40	eP	:25.16 (-0.25)	eS	:49.00 (-2.07)
UTK	EGT	232.9	54	eP	:27.52 (-0.17)		
UTK	WVT	272.7	306	eP	:32.83 (0.18)	eS	:38:03.15 (-0.34)
UTK	MOTN	317.4	313	eP	:37.06 (-1.10)		

\*\*\*\*\*2000 MARCH 24; 19:45 - DUNLAP, 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	200324	194526.6		35.415	85.349	15.2	16	26	110	0.1	B	B/B	0.4	354	0.3	1.2	A		1.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	DATN	25.7	68	iPd	19:45:31.44 (0.01)	eS	19:45:34.94 (-0.07)
UTK	OLT	41.7	135	iP+	:33.90 (0.16)	eS	:38.56 (-0.47)
UTK	PDTN	48.1	251	eP-	:34.71 (0.01)	iS	:40.72 (0.04)
UTK	ABTN	86.4	307	eP+	:40.68 (0.03)	iS	:50.99 (-0.00)
UTK	ORT	109.4	60	eP	:47.33 (3.08X)	eS	:57.34 (0.09)
UTK	MSAL	136.2	243	eP	:46.34 (-2.14X)	eS	:46:04.31 (-0.23)
UTK	TKL	145.4	79	eP	:48.88 (-1.05)	eS	:06.93 (-0.10)

UTK	SHAL	158.0	227	eP	:51.06 (-0.85)	eS	:10.46 (0.11)
UTK	CRTN	161.8	57	eP	:52.58 (0.08)		
UTK	WVT	237.9	290	eP	:59.75 (-3.70X)	eS	:30.72 (0.45)

\*\*\*\*\*2000 MARCH 29; 07:03 - CAMPTON, KENTUCKY\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
UTK	200329	070336.0		37.762	83.587	18.3	9	175	262	0.5	D	D/D	6.9	237	1.6	3.2	D			2.0	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	CRTN	174.8	187	eP+	07:04:03.82 (0.04)	eS	07:04:23.25 (-0.73)														
UTK	ORT	215.3	198	eP	:10.47 (0.69)	eS	:33.17 (-1.18)														
UTK	TKL	234.0	184	eP	:12.93 (0.84)	iS	:34.48 (0.13)														
UTK	WCI	248.6	282	eP	:13.06 (-0.81)	eS	:41.31 (-0.11)														
UTK	ABTN	306.5	228	eP	:24.74 (3.71X)	eS	:56.24 (2.43)														

\*\*\*\*\*2000 APRIL 03; 23:39 - DAYTON, TENNESSEE\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
UTK	200403	233934.3		35.464	85.087	19.0	8	4	170	0.1	C	C/C	1.7	247	0.5	1.6	B			0.6	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	DATN	4.0	1	iP	23:39:37.53 (0.02)	eS	23:39:39.73 (-0.15)														
UTK	OLT	35.3	171	iP+	:40.78 (0.02)	eS	:45.46 (-0.06)														
UTK	PDTN	72.5	253	eP	:47.06 (0.75)	eS	:55.19 (0.06)														
UTK	ABTN	103.7	297	eP	:51.81 (0.64)	eS	:40:03.31 (-0.20)														

\*\*\*\*\*2000 APRIL 07; 01:29 - SOUTH CAROLINA\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
USC	200407	012936.3		33.944	81.030	1.0	8	33	352	0.2	D		6.12	360	6.12	11.1				1.8	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR02	33.2	326	iPd	01:29:41.49 (-0.19)	iSu	01:29:45.58 (-0.20)														
USC	JSC	42.9	330	iPu	:43.13 (-0.03)	iSu	:48.13 (-0.26)														
USC	MR05	45.5	322	iPu	:43.64 (0.06)	iSd	:49.16 (0.03)														
USC	MR10	51.9	327	iPd	:44.84 (0.24)	iSd	:51.33 (0.41)														

\*\*\*\*\*2000 APRIL 07; 01:36 - SOUTH CAROLINA\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
USC	200407	013655.1		33.939	81.057	0.8	9	32	304	0.1	D		0.9	360	0.9	3.8				1.4	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR02	32.4	330	iPu	01:37:00.23 (-0.10)	iSu	01:37:04.25 (-0.08)														
USC	JSC	42.2	334	iPu	:01.85 (0.02)	iSu	:06.80 (-0.19)														
USC	MR05	44.6	325	iPd	:02.28 (0.08)	iSu	:07.82 (0.19)														
USC	MR10	51.2	330	iPd	:03.34 (0.09)	iSu	:10.37 (0.89X)														
USC	LHS	64.2	21	iPu	:05.29 (-0.02)	iSu	:13.15 (0.04)														

\*\*\*\*\*2000 APRIL 07; 01:40 - SOUTH CAROLINA\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
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USC 200407 014003.0 33.972 81.006 1.0 6 32 352 0.2 D 8.4 360 8.4 4.7 1.2

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MR02	32.1	320	iPu	01:40:08.00 (-0.19)	iSu	01:40:11.96 (-0.19)
USC	JSC	41.4	326	iPd	:09.60 (-0.02)	iSu	:14.71 (0.03)
USC	MR05	44.6	317	iPu	:10.59 (0.46)	iSu	:15.65 (0.08)

\*\*\*\*\*2000 APRIL 10; 12:48 - TELlico PLAINS, 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 200410 124815.5 35.458 84.175 10.3 18 43 105 0.2 C B/C 0.4 345 0.2 2.1 B 1.8

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	TKL	42.6	58	iPd	12:48:22.58 (-0.09)	iS	12:48:28.13 (0.17)
UTK	ORT	51.5	347	iPd	:24.18 (0.11)	iS	:30.41 (0.03)
UTK	DATN	82.8	273			iS	:39.07 (0.12)
UTK	OLT	84.4	246	eP	:29.90 (0.63)	eS	:39.24 (-0.13)
UTK	CRTN	87.7	20	eP-	:29.62 (-0.17)	iS	:40.28 (0.01)
UTK	EGT	93.4	58	eP+	:30.43 (-0.29)	eS	:41.54 (-0.34)
UTK	PDTN	153.5	263	eP	:40.14 (-0.03)	iS	:58.09 (-0.14)
UTK	ABTN	181.4	286	eP	:44.24 (-0.33)	eS	:49:05.60 (-0.23)
UTK	GOGA	236.2	164	eP	:52.64 (-0.06)	eS	:19.87 (0.16)
UTK	MSAL	237.5	254			iS	:20.82 (0.80)

\*\*\*\*\*2000 APRIL 12; 03:54 - LOUDON, 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 200412 035405.9 35.673 84.319 7.0 15 26 136 0.3 C C/C 0.5 0 0.3 2.8 C 1.6

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	26.3	3	iPu	03:54:10.38 (-0.02)	iS	03:54:13.78 (0.07)
UTK	TKL	49.3	92	eP	:14.00 (-0.06)	iS	:19.95 (-0.15)
UTK	DATN	72.2	255	eP-	:17.57 (-0.16)	eS	:26.18 (-0.30)
UTK	CRTN	72.7	36	eP-	:17.66 (-0.15)	eS	:25.64 (-0.97)
UTK	OLT	86.4	228	eP	:20.43 (0.42)	eS	:30.58 (0.14)
UTK	EGT	95.7	74	eP	:22.55 (1.04)		
UTK	PDTN	145.8	253	iP-	:30.41 (0.99)	eS	:47.05 (0.37)
UTK	ABTN	163.6	279	eP	:32.06 (-0.16)	eS	:51.51 (-0.01)

\*\*\*\*\*2000 APRIL 12; 04:38 - MIDDLESBOROUGH, 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 200412 043816.9 36.617 83.789 18.3 13 46 290 0.3 C B/D 1.0 230 0.8 0.9 A 1.9

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CRTN	46.5	186	iPd	04:38:25.22 (0.30)	eS	04:38:30.24 (-0.61)
UTK	ORT	91.1	211	eP-	:31.64 (-0.14)	eS	:42.82 (0.11)
UTK	TKL	106.4	179	iPd	:33.95 (-0.21)	iS	:46.90 (0.06)
UTK	DATN	170.3	224	iP-	:43.92 (-0.10)	eS	:39:03.90 (0.16)
UTK	OLT	197.3	215	eP	:49.47 (1.33X)	eS	:10.28 (-0.55)
UTK	ABTN	223.7	249	eP-	:51.04 (-0.70)	eS	:16.91 (-0.16)
UTK	PDTN	238.3	232	iP-	:53.67 (0.14)	eS	:21.62 (1.46)

## \*\*\*\*\*2000 APRIL 14; 13:13 - JACKSON, 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	200414	131341.2		37.321	83.348	0.02	12	132	253	0.5	D	C/D	1.4	348	0.8	1.7	B		2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CRTN	131.9	200	iPu	13:14:02.38 (-0.40)	eS	13:14:18.85 (0.12)
UTK	SLTN	146.4	131	eP	:06.43 (1.30)	eS	:22.94 (0.18)
UTK	EGT	157.6	178	eP	:06.31 (-0.57)		
UTK	ORT	178.5	209	eP	:09.44 (-0.69)	iS	:31.90 (0.48)
UTK	TKL	188.4	192	eP	:10.75 (-0.95X)	eS	:33.95 (-0.18)
UTK	DATN	255.2	218	eP	:23.09 (1.28X)	eS	:52.28 (0.88)
UTK	ABTN	293.9	238	eP	:27.51 (0.95)	eS	:15:00.31 (0.70)
UTK	PDTN	319.5	225	eP	:31.40 (1.69X)	eS	:07.42 (2.36)

## \*\*\*\*\*2000 APRIL 16; 02:38 - MAYNARDVILLE, 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	200416	023845.0		36.241	83.947	8.7	15	11	182	0.3	C	B/D	0.6	342	0.4	0.8	A		1.9		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CRTN	10.6	115	iPu	02:38:47.17 (-0.15)	iS	02:38:49.09 (0.07)
UTK	ORT	48.9	221	iP	:53.13 (-0.00)	eS	:59.52 (0.39)
UTK	TKL	66.5	166	eP	:55.47 (-0.48)	iS	:39:04.09 (0.07)
UTK	EGT	69.6	123	eP	:56.83 (0.36)		
UTK	DATN	131.7	232	eP	:39:06.38 (0.11)		
UTK	OLT	155.4	219	eP	:10.47 (0.47)	eS	:28.20 (-0.11)
UTK	SLTN	165.5	82	eP	:11.69 (0.04)	eS	:31.86 (0.70)
UTK	ABTN	198.7	259	iP	:17.98 (1.15)	eS	:39.66 (-0.39)
UTK	PDTN	202.8	239	iP+	:17.08 (-0.39)		

## \*\*\*\*\*2000 APRIL 22; 00:59 - ONEONTA, 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	200422	005927.7		33.861	86.528	0.02	18	64	187	0.5	D	D/D	1.2	318	0.9	1.4	B		1.9		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	SHAL	63.8	354	iP-	00:59:38.05 (-0.16)	iS	00:59:45.69 (-0.32)
UTK	MSAL	110.2	353	eP	:46.88 (1.09)	eS	:58.86 (-0.34)
UTK	PDTN	168.6	21	eP	:55.62 (0.54)	eS	01:00:16.17 (0.94)
UTK	PLAL	189.0	312	eP	:57.73 (-0.55)	eS	:22.33 (1.56)
UTK	DATN	224.8	36	eP	01:00:06.16 (2.21X)	eS	:30.30 (-0.21)
UTK	ABTN	227.9	10	eP	:04.67 (0.24)	eS	:31.29 (-0.00)
UTK	OXF	275.2	286	eP	:10.37 (-0.35)	eS	:43.27 (1.21)
UTK	WVT	278.4	335	eP	:11.52 (0.40)	eS	:44.22 (1.46)
UTK	GOGA	288.4	99	eP	:07.16 (-5.19X)	eS	:45.51 (0.63)
UTK	MOTN	333.5	337	eP	:18.83 (0.92)	eS	:56.35 (1.84)

## \*\*\*\*\*2000 APRIL 25; 03:00 - DECATUR, 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	200425	030019.4		35.538	84.782	10.5	23	28	76	0.2	C	B/C	0.3	335	0.2	1.4	B		1.9		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
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UTK	DATN	27.9	261	iPu	03:00:24.39	( 0.06 )	iS	03:00:28.05	( 0.10 )
UTK	OLT	48.4	207	eP	:27.04	(-0.45)	iS	:33.46	( 0.02 )
UTK	ORT	59.7	46	eP	:29.56	( 0.29 )	eS	:36.45	(-0.06)
UTK	ANTN	81.2	330	iPd	:32.53	(-0.14)			
UTK	TKL	92.3	81	eP	:34.67	( 0.26 )	iS	:45.25	(-0.16)
UTK	PDTN	101.3	253	eP	:36.05	( 0.22 )	iS	:47.78	(-0.09)
UTK	CRTN	112.3	49	eP	:37.69	( 0.11 )			
UTK	ABTN	126.1	288	eP	:39.80	( 0.06 )	eS	:54.63	(-0.02)
UTK	EGT	140.2	73	eP	:45.19	( 3.19X)	eS	:59.01	( 0.45 )
UTK	MSAL	188.6	247	eP	54.75	( 5.15X)	eS	:01:11.35	(-0.26)
UTK	SHAL	206.5	234	eP+	:51.32	(-1.08)	eS	:16.64	( 0.29 )
UTK	GOGA	265.1	153	eP	:01:01.04	( 0.90 )	eS	:31.04	( 1.31 )
UTK	WVT	283.1	284	eP	:00:59.52	(-2.85)	eS	:33.72	( 0.14 )
UTK	PLAL	306.0	259				eS	:39.29	( 0.83 )

\*\*\*\*\*2000 APRIL 29; 03:34 - VIRGINIA\*\*\*\*\*

NEIC Felt in Henrico County. Also felt at Rockville.

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	200429	033453.1		37.700	77.500	5.0F	8	207									2.5					F
DGS	200429	033453.1					3	282														

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
NEIC	GWDE	206.8	52	eP	03:35:27.52 ( 1.6 )		
NEIC	BLA	264.7	259	eP	:33.07 (-0.4)	eS	03:35:59.79 ( X )
NEIC	NED	271.3	35	P	:36:03.50 (29.2)		
NEIC	MVL	273.5	21	P	:35:38.00 ( 3.4 )		
NEIC	SSPA	328.0	354	eP	:41.31 (-0.1)		
NEIC	PAL	480.4	39	eP	:36:01.16 ( 0.3 )		
NEIC	BINY	516.0	14	eP	:08.76 ( 3.2 )		
NEIC	LSCT	573.8	38	eP	:17.42 ( 4.5 )		
DGS	NED	282	217	ePu	03:36:03.5		
DGS	BWD	297	217	ePu	:06.5		
DGS	BVD	299	219	ePu	:07.0		

\*\*\*\*\*2000 MAY 03; 12:48 - HARRIMAN, TENNESSEE\*\*\*\*\*

UTK Felt (II) by resident of Roane County.

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	200503	124831.2		35.892	84.570	26.4	18	24	125	0.3	B	B/B	0.5	340	0.2	0.7	A		2.1		2

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	24.0	85	iPd	12:48:36.83 (-0.05)	iS	12:48:41.17 ( 0.11 )
UTK	DATN	63.9	227	iPd	:42.00 (-0.18)	iS	:50.03 (-0.18)
UTK	ANTN	67.2	298	eP	:42.50 (-0.16)	eS	:50.65 (-0.40)
UTK	CRTN	74.0	62	ePu	:43.77 ( 0.13 )	eS	:53.32 ( 0.56 )
UTK	TKL	76.5	110	eP	:44.10 ( 0.09 )	iS	:52.90 (-0.48)
UTK	OLT	92.1	207	eP	:46.43 ( 0.07 )	eS	:58.24 ( 0.81 )
UTK	EGT	114.8	89	eP	:49.56 (-0.28)		
UTK	PDTN	134.8	240	iPd	:52.80 (-0.04)	iS	:49:09.05 ( 0.46 )
UTK	ABTN	139.0	270	eP	:53.42 (-0.06)	eS	:09.66 (-0.04)
UTK	PLAL	333.9	253	eP	:49:18.98 ( 0.12 )		

\*\*\*\*\*2000 MAY 07; 07:13 - CHARLESTON, 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	200507	071302.3		33.025	80.157	7.7	14	9	145	0.1	B	A/C	0.3	360	0.3	0.8					1.3	
SRCE	STA	DIST (KM)		AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)													
USC	CSU	9.2	118	iPu	07:13:04.63	(0.05)	iSu	07:13:06.44	(-0.37)													
USC	SVS	10.6	234	iPd	:04.96	(-0.03)	iSd	:06.25	(-0.12)													
USC	TWB	11.1	27	iPd	:04.98	(-0.12)	iSd	:06.26	(0.09)													
USC	RGR	13.5	195	iPd	:05.41	(0.02)	iSu	:07.18	(0.17)													
USC	MGS	14.2	174	iPd	:05.51	(-0.02)	iSu	:07.27	(-0.09)													
USC	HBF	18.6	242	iPd	:06.22	(0.03)	iSu	:08.37	(0.05)													
USC	WAS	22.5	209	iPd	:06.90	(-0.02)	iSd	:10.21	(0.10)													

\*\*\*\*\*2000 MAY 07; 10:23 - MARION, 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	200507	102345.5		32.730	87.180	9.1	20	196	265	1.1	D	D/D	2.4	348	1.8	2.1	B				2.4	
SRCE	STA	DIST (KM)		AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)													
UTK	SHAL	196.3	16	eP	10:24:16.36	(-0.51)	eS	10:24:41.31	(1.51)													
UTK	MSAL	239.4	11	eP	:22.35	(-0.80)	eS	:50.46	(-0.09)													
UTK	PLAL	263.2	342	iPd	:26.13	(0.06)	eS	:55.08	(-0.53)													
UTK	PDTN	307.7	23	eP	:32.46	(0.88)	eS	:25:04.50	(-0.63)													
UTK	OLT	334.3	36	eP	:43.92	(9.05X)	eS	:12.08	(1.26)													
UTK	GOGA	354.9	77	eP	:37.60	(0.23)	eS	:14.82	(-0.34)													
UTK	DATN	362.9	32	eP	:41.59	(3.17)	eS	:15.41	(-1.55)													
UTK	ABTN	363.7	15	eP	:43.02	(4.54)	eS	:17.35	(0.28)													
UTK	MOTN	437.6	350				eS	:33.20	(0.39)													
UTK	TKL	451.7	43	eP	:49.33	(-0.00)	eS	:37.25	(1.41)													
UTK	CRTN	492.2	38	eP	:48.72	(-5.62)	eS	:44.23	(-0.28)													

\*\*\*\*\*2000 MAY 08; 22:37 - CHATTANOOGA, 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	200508	223707.1		35.070	85.174	8.5	18	16	103	0.2	B	B/B	0.6	358	0.3	0.8	A				1.8	
SRCE	STA	DIST (KM)		AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)													
UTK	OLT	16.3	57	iPd	22:37:10.16	(0.03)	iS	22:37:12.45	(0.06)													
UTK	DATN	48.3	10	eP	:13.23	(-1.89X)	eS	:20.78	(-0.28)													
UTK	PDTN	65.5	290	eP	:16.50	(-1.34X)	iS	:25.76	(-0.04)													
UTK	ORT	122.1	40	eP	:24.91	(-1.90X)	eS	:40.80	(-0.49)													
UTK	ABTN	124.0	317	eP	:27.44	(0.32)	iS	:41.87	(0.05)													
UTK	MSAL	139.2	260	eP	:24.42	(-5.08X)	eS	:45.86	(-0.08)													
UTK	TKL	143.0	62	eP	:29.88	(-0.23)	eS	:46.92	(-0.08)													
UTK	SHAL	148.6	242	eP	:30.56	(-0.43)	eS	:49.21	(0.69)													
UTK	CRTN	174.1	44	eP	:35.35	(0.33)	eS	:55.94	(0.45)													
UTK	EGT	193.6	61	eP	:38.52	(0.39)																
UTK	GOGA	242.1	139	eP	:51.80	(6.63X)	eS	:38:12.77	(-0.08)													
UTK	PLAL	264.9	269	eP	:37.24	(-10.75X)	eS	:18.64	(0.91)													
UTK	MOTN	306.7	305				iS	:26.10	(-0.53)													

\*\*\*\*\*2000 MAY 11; 08:41 - JOHNSON CITY, 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	200511	084157.4		36.375	82.589	11.0	9	43	179	0.4	C	C/C	3.0	313	1.7	99.0	D				1.8	
SRCE	STA	DIST (KM)		AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)													



UTK	SLTN	42.7	80	iPu	08:42:04.92	( 0.30 )	iS	08:42:09.56	(-0.38 )
UTK	EGT	82.8	231	eP	:11.17	( 0.26 )	eS	:21.61	( 0.76 )
UTK	CRTN	114.2	261	eP+	:15.62	(-0.21 )	eS	:29.30	(-0.06 )
UTK	TKL	133.2	234	eP-	:18.20	(-0.64 )	eS	:34.45	(-0.10 )
UTK	ORT	162.9	252	eP	:26.32	( 2.81X )	eS	:43.73	( 1.09 )

\*\*\*\*\*2000 MAY 15; 15:05 - CLEVELAND, TENNESSEE\*\*\*\*\*

NEIC/UTK Felt at Cleveland; standard deviation 0.5 on 14 of 14 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	200515	150533.8		35.233	84.874	5.0F	14	40									2.5					F
UTK	200515	150534.1		35.181	84.874	0.04	39	14	90	0.5	D	D/C	0.2	342	0.2	0.6	A		2.9			F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
NEIC	ETT	40.0	75	P	15:05:41.20	( 0.2 )	
NEIC	BHT	68.9	355	P	:46.25	( 0.1 )	
NEIC	ORT	91.2	34	P	:50.25	( 0.1 )	
NEIC	ANTN	109.0	343	P	:52.49	(-0.4 )	
NEIC	ABTN	133.4	303	P	:56.29	(-0.4 )	
NEIC	CRTN	142.3	41	P	:57.93	(-0.1 )	
NEIC	MSAL	170.1	256	P	:06:00.72	(-1.1 )	
NEIC	RBNC	172.4	85	P	:02.14	(-0.2 )	
NEIC	SCCK	173.5	97	eP	:01.83	(-0.5 )	
NEIC	GOGA	240.2	147	eP	:11.10	( 0.2 )	
NEIC	PWLA	292.5	265	ePn	:18.35	( 0.7 )	
NEIC	PLAL	293.6	266	eP	:18.30	( 0.5 )	
NEIC	JSC	346.9	107	ePn	:24.81	( 0.2 )	
NEIC	WCI	355.8	340	eP	:26.30	( 0.5 )	
UTK	OLT	14.1	256	iP	15:05:36.86	( 0.43 )	
UTK	DYTN	39.7	330	eP	:40.69	( 0.03 )	
UTK	GMG	39.9	152	eP	:41.20	( 0.51 )	
UTK	DATN	40.3	331	ePc	:40.92	( 0.16 )	
UTK	ETT	41.3	67	eP	:41.20	( 0.27 )	
UTK	RCG	48.9	242	eP	:42.31	( 0.12 )	
UTK	BCRT	70.3	22	eP	:46.02	( 0.31 )	
UTK	BHT	74.2	355	eP	:46.26	(-0.10 )	
UTK	GRBT	82.3	48	eP	:47.42	(-0.27 )	
UTK	PDTN	89.4	277	iP+	:48.79	(-0.09 )	eS 15:05:59.41 (-0.41 )
UTK	ORT	95.9	32	eP+	:50.26	( 0.33 )	iS :06:02.44 ( 0.78 )
UTK	TKL	113.0	62	iPu	:51.92	(-0.76 )	iS :05.68 (-0.75 )
UTK	ANTN	114.6	344	ePc	:52.52	(-0.42 )	eS :06.76 (-0.13 )
UTK	ABTN	136.6	305	ePc	:56.32	(-0.14 )	eS :12.01 (-0.92 )
UTK	CRTN	146.7	39	eP	:57.96	(-0.10 )	iS :16.88 ( 1.19 )
UTK	MSAL	168.4	258	eP	:06:00.76	(-0.72 )	eS :21.48 (-0.12 )
UTK	CCK	172.5	95	eP	:02.49	( 0.35 )	
UTK	RBNC	172.9	83	eP	:02.14	(-0.11 )	
UTK	SHAL	178.6	243	eP	:02.33	(-0.76 )	eS :26.10 ( 1.72 )
UTK	GOGA	235.2	146	eP	:11.86	(-0.14 )	eS :39.49 (-0.14 )
UTK	BRBC	242.9	74	eP	:13.03	(-0.35 )	
UTK	PLAL	292.8	267	eP	:19.03	(-0.30 )	eS :53.78 ( 1.51 )
UTK	GFM	296.3	69	eP	:19.18	(-0.75 )	
UTK	MOTN	323.1	300	eP	:25.05	( 1.98 )	eS :59.73 ( 1.00 )
UTK	WCI	361.4	339	eP	:27.56	(-0.23 )	iS :07:08.89 ( 1.99 )
UTK	OXF	421.4	261	eP	:33.96	(-1.22 )	eS :18.33 (-1.34 )

Additional Data:

GIT	CDG		P	15:05:48.7		
GIT	ATL		P	:06:09.5	S	15:06:32.8

**\*\*\*\*\*2000 MAY 16; 01:25 - RUTLEDGE, 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	200516	0125	18.0	36.335	83.450	15.3	11	38	185	0.3	C	B/D	0.7	324	0.4	2.2	B		1.6		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CRTN	38.2	247	iPd	01:25:24.71 (0.01)	eS	01:25:29.68 (0.08)
UTK	EGT	50.1	164	eP	:27.01 (0.49)		
UTK	TKL	80.6	201	eP	:30.68 (-0.54)	iS	:40.88 (-0.03)
UTK	ORT	90.3	239	eP	:32.95 (0.21)	eS	:43.06 (-0.48)
UTK	SLTN	119.9	84	iP-	:37.36 (-0.07)	eS	:51.36 (-0.31)
UTK	ABTN	244.6	259	eP	:55.45 (-0.32)	eS	:26:25.18 (1.98)

**\*\*\*\*\*2000 MAY 23; 17:53 - CHARLESTON, 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	200523	1753	07.3	32.929	80.151	6.5	14	4	115	0.1	B	A/B	0.4	360	0.4	0.5			1.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MGS	3.6	165	iPd	17:53:09.03 (0.01)	iSd	17:53:09.45 (-0.15)
USC	RGR	4.7	240	iPd	:09.09 (-0.01)	iSd	:09.86 (0.21)
USC	CSU	9.8	50	iPd	:09.68 (0.07)	iSu	:11.95 (0.12)
USC	CSB	9.8	50	iPd	:09.63 (0.03)	iSd	:11.62 (-0.15)
USC	SVS	10.1	296	iPd	:09.77 (-0.09)	iSd	:11.01 (-0.09)
USC	WAS	14.5	231	iPd	:10.60 (0.02)	iSd	:12.48 (-0.22)
USC	HBF	17.1	277	iPd	:10.89 (-0.04)	iSd	:12.90 (0.06)

**\*\*\*\*\*2000 MAY 27; 13:31 - CHARLESTON, 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	200527	1331	50.9	32.950	80.129	6.8	8	6	181	0.0	C	B/D	0.9	360	0.9	0.9			1.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MGS	5.9	191	iPu	13:31:52.89 (-0.02)	iSd	13:31:53.73 (0.01)
USC	CSB	6.8	54	iPu	:52.84 (0.05)	iSu	:54.29 (-0.36)
USC	RGR	7.7	232	iPd	:53.03 (-0.08)	iSd	:54.01 (0.03)
USC	WAS	17.6	229	iPd	:54.73 (0.03)	iSd	:57.26 (0.01)

**\*\*\*\*\*2000 MAY 28; 11:32 - FAYETTE, ALABAMA\*\*\*\*\***

UTK Felt at Fayette, Alabama, and in other areas of Fayette County, Alabama.

NEIC Felt at Fayette; standard deviation = 0.6 on 6 of 9 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
UTK	200528	1132	06.3	33.708	87.811	0.02	23	138	208	0.6	D	D/D	0.6	0	0.3	0.8	A		3.0		F
NEIC	200528	1132	07.0	33.809	87.820	5.0F	6	132					13.4		8.4				3.0		F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	SHAL	137.6	54	eP-	11:32:28.95 (0.17)	iS	11:32:46.34 (0.99)
UTK	PLAL	143.5	350	ePu	:29.53 (-0.18)	eS	:47.08 (0.12)
UTK	MSAL	164.1	39	eP	:32.74 (-0.22)	eS	:51.52 (-1.07)
UTK	OXF	172.4	302	ePd	:34.47 (0.21)	iS	:55.17 (0.34)

UTK	PDTN	250.2	45	eP-	:45.26	(-1.01)	iS	:33:15.38	(-0.00)
UTK	ABTN	287.4	32	eP	:50.22	(-0.64)	eS	:23.74	(0.41)
UTK	MOTN	323.3	357	ePd	:54.24	(-1.02)	eS	:33.79	(2.85X)
UTK	ANTN	360.9	40	eP	:59.38	(-0.57)	eS	:40.25	(1.21)
UTK	ORT	403.2	52	eP	:33:08.28	(3.15X)	eS	:47.28	(-0.73)
UTK	GOGA	404.7	93	eP-	:04.80	(-0.50)	eS	:49.00	(0.70)
UTK	TKL	428.5	59				S-P	45.0 SEC	(-0.25)
UTK	CRTN	455.9	52	eP	:10.60	(-1.05)	eS	:54.94	(-4.36X)
UTK	EGT	479.2	58	eP	:13.37	(-1.22)	eS	:34:01.56	(-2.82X)
UTK	WCI	516.5	14	eP	:28.04	(8.96X)	eS	:11.94	(-0.20)
UTK	SLTN	601.1	58	eP	:28.31	(-1.32)		:	
NEIC	PWLA	132.3	350	eP	11:32:29.44	(-0.1)			
NEIC	PLAL	132.3	350	eP	:29.42	(-0.2)			
NEIC	OXF	165.7	299	eP	:33.98	(-0.5)			
NEIC	EBZ	203.5	317	eP	:40.23	(0.8)	eS	11:33:05.41	( X)
NEIC	SWET	233.5	48	eP	:43.41	(0.1)	eS	:11.79	( X)
NEIC	TWAR	304.7	305	ePn	:53.75	(1.3X)			
NEIC	GOGA	405.9	95	ePn	:33:05.35	(-0.1)			
NEIC	WCI	509.3	15	ePn	:17.67	(-0.9X)			
NEIC	MIAR	537.1	280	ePn	:18.17	(-3.9X)			

Additional Data:

GIT ATL P 11:33:00.5 S 11:33:38

\*\*\*\*\*2000 JUNE 04; 05:06 - MADISONVILLE, 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	200604	0506	47.6	35.552	84.161	5.0	27	37	93	0.3	C	C/C	0.4	5	0.2	0.8	A		2.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	TKL	37.0	71	iPd	05:06:53.90 (0.11)	iS	05:06:58.65 (0.29)
UTK	ORT	41.7	342	iPu	:54.59 (0.02)	iS	:59.83 (0.11)
UTK	DATN	84.1	266	iPu	:07:01.31 (-0.07)	iS	:07:11.71 (0.14)
UTK	EGT	87.1	63	ePu	:01.59 (-0.30)	eS	:12.74 (0.29)
UTK	OLT	90.2	241	eP	:02.61 (0.25)	eS	:13.38 (0.12)
UTK	ANTN	118.6	306	ePu	:06.40 (-0.51)	iS	:21.07 (-0.05)
UTK	PDTN	156.4	259	eP+	:12.63 (-0.24)	iS	:31.79 (0.38)
UTK	ABTN	180.1	282	eP-	:16.54 (-0.06)	iS	:38.19 (0.32)
UTK	SLTN	208.9	61	eP-	:20.64 (-0.55)	eS	:45.79 (0.02)
UTK	MSAL	241.8	252			eS	:54.19 (0.22)
UTK	GOGA	245.9	165	iPd	:26.29 (-0.23)	eS	:54.99 (0.17)
UTK	SHAL	255.1	242	eP	:27.21 (-0.47)	eS	:57.86 (1.04)
UTK	WCI	354.2	327	eP	:41.36 (1.49)	eS	:08:20.01 (2.09)
UTK	PLAL	361.7	261	eP	:43.59 (2.78X)	eS	:18.89 (-0.64)
UTK	MOTN	364.3	290	eP	:46.07 (4.95X)	eS	:19.02 (-1.06)

\*\*\*\*\*2000 JUNE 21; 02:51 - LAFAYETTE, 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	200621	0251	20.5	34.627	85.395	2.9	12	67	133	0.3	D	C/D	0.9	318	0.5	3.3	C		1.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	OLT	67.1	30	iP-	02:51:32.03 (0.44)	eS	02:51:39.64 (-0.18)
UTK	PDTN	82.8	330	iP-	:33.84 (-0.26)	eS	:44.28 (0.09)
UTK	SHAL	112.9	259	iP	:39.39 (0.48)	eS	:52.40 (-0.16)
UTK	ABTN	154.0	335	eP	:44.74 (-0.69)	iS	:52:03.90 (0.12)
UTK	TKL	186.8	52			S-P	22.2 SEC (0.15)
UTK	GOGA	223.4	127	eP	:45.47 (-10.9X)	eS	:22.30 (-0.26)

UTK PLAL 248.4 280 eP :57.92 (-2.00) eS :28.67 (0.05)

\*\*\*\*\*2000 JUNE 25; 10:35 - SAVANNAH, 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 200625 103530.3 35.195 88.051 2.1 13 24 123 0.3 C C/C 0.4 301 0.3 1.5 B 1.7

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	PLAL	23.7	185	iP	10:35:34.07 (-0.15)	iS	10:35:37.17 (0.03)
UTK	WVT	105.6	11	eP	:48.23 (0.64)	iS	:36:00.01 (-0.39)
UTK	OXF	145.5	239	eP	:54.68 (0.74)	eS	:11.18 (-0.15)
UTK	MOTN	158.0	2	eP	:56.45 (0.54)	iS	:14.98 (0.23)
UTK	ABTN	192.0	66	eP	:36:01.65 (0.35)	iS	:24.06 (0.00)
UTK	PDTN	200.6	87	eP	:03.84 (1.20)	eS	:26.07 (-0.32)
UTK	ANTN	277.3	66	eP	:15.41 (1.98X)	eS	:46.32 (1.49)

\*\*\*\*\*2000 JULY 02; 14:20 - MURPHY, 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 200702 142021.0 35.194 84.271 13.6 18 68 111 0.2 C B/D 0.4 358 0.3 1.3 A 1.9

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	TKL	68.5	41			S-P	8.4 SEC (0.23)
UTK	OLT	68.8	266	eP	14:20:32.39 (0.09)	iS	14:20:40.80 (0.17)
UTK	ORT	79.5	358	eP	:34.22 (0.25)	eS	:42.79 (-0.74)
UTK	DATN	81.5	295	eP	:33.14 (-1.17X)	eS	:43.72 (-0.39)
UTK	EGT	118.1	48	eP	:39.81 (-0.28)	eS	:54.57 (0.47)
UTK	ANTN	139.1	322	eP	:43.54 (0.16)	eS	:59.93 (0.15)
UTK	PDTN	144.0	274	eP+	:44.14 (0.00)	iS	:21:00.86 (-0.24)
UTK	ABTN	183.5	295	iPu	:50.46 (0.13)	iS	:11.66 (0.02)
UTK	GOGA	211.1	159	iP+	:54.67 (0.13)	iS	:18.88 (-0.02)
UTK	WVT	338.6	289	eP	:21:09.59 (-0.88)	eS	:48.71 (2.25)

Additional Data:

GIT CDG P 14:20:38.58

\*\*\*\*\*2000 JULY 07; 23:35 - DALTON, 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 200707 233500.6 34.956 84.988 9.0 8 22 264 0.1 C B/D 1.4 5 1.0 1.9 B 1.3

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	OLT	21.7	351	iPu	23:35:04.40 (-0.01)	iS	23:35:07.28 (0.01)
UTK	PDTN	86.1	294	eP	:14.76 (0.18)	eS	:24.81 (-0.08)
UTK	ORT	122.6	30	eP	:19.57 (-0.77)	eS	:35.20 (0.34)
UTK	ABTN	144.9	316	eP	:24.01 (0.15)	eS	:40.99 (0.04)

\*\*\*\*\*2000 JULY 08; 21:41 - ALCOA, 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 200708 214102.3 35.817 83.956 11.0 13 33 170 0.1 C B/C 0.8 337 0.3 2.4 B 1.7

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
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UTK	ORT	33.1	288	eP	21:41:08.05	( 0.03 )	iS	21:41:12.28	( 0.06 )
UTK	CRTN	43.7	14	iPu	:09.57	(-0.10)	iS	:15.11	( 0.03 )
UTK	EGT	60.2	81	iP	:12.20	(-0.08)	eS	:19.90	( 0.28 )
UTK	DATN	108.2	251	eP	:19.67	(-0.16)	eS	:32.46	(-0.22)
UTK	ANTN	121.5	289	eP	:19.52	(-2.41X)	eS	:36.17	(-0.14)
UTK	SLTN	179.2	67				eS	:52.94	( 0.81 )
UTK	PDTN	182.0	251	eP	:35.70	( 4.25X)	eS	:53.14	( 0.39 )
UTK	ABTN	194.6	273	eP	:32.91	(-0.54)	eS	:56.04	(-0.04)

\*\*\*\*\*2000 JULY 11; 14:59 – SEYMOUR, TENNESSEE\*\*\*\*\*

NEIC Felt in southern Knox County, 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	200711	145947.6		35.884	83.812	4.9	33	35	86	0.3	C	C/C	0.3	344	0.2	0.8	A		2.8		F
NEIC	200711	145947.6		35.880	83.810	5.0F	7	206											2.8		F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CRTN	35.2	356	ePd	14:59:53.51 ( 0.01 )	eS	14:59:57.96 ( 0.11 )
UTK	GRBT	41.9	236	eP-	:54.67 ( 0.08 )		
UTK	ORT	44.6	274	eP-	:55.33 ( 0.29 )	iS	15:00:00.89 ( 0.35 )
UTK	EGT	46.4	87	iPd	:55.44 ( 0.07 )	eS	:01.45 ( 0.35 )
UTK	BCRT	70.3	260	eP	:59.29 ( 0.13 )		
UTK	ETT	85.0	223	eP-	15:00:01.41 (-0.11)	eS	:11.74 (-0.07)
UTK	DYTN	123.8	250	iP-	:07.70 (-0.04)	eS	:22.50 (-0.04)
UTK	ANTN	131.9	284	iP+	:08.57 (-0.44)	eS	:24.70 (-0.04)
UTK	GMG	137.5	215	eP-	:09.58 (-0.35)		
UTK	SLTN	164.4	67	iPu	:13.92 (-0.25)	eS	:34.11 ( 0.44 )
UTK	GFM	182.5	81	eP	:16.99 (-0.07)		
UTK	PDTN	196.7	250	eP	:18.96 (-0.26)	eS	:42.83 ( 0.42 )
UTK	ABTN	207.4	271	iPu	:20.50 (-0.42)	eS	:45.50 ( 0.20 )
UTK	GOGA	276.1	173	eP-	:31.20 ( 0.94 )	eS	:01:02.88 ( 1.60 )
UTK	SHAL	300.8	238	eP-	:32.23 (-1.10)	eS	:09.19 ( 2.59 )
UTK	BLA	337.4	63	eP	:37.02 (-0.86)	eS	:13.02 (-1.45)
UTK	WCI	343.6	319	eP	:40.73 ( 2.15 )		
UTK	WVT	363.3	275	eP	:41.31 ( 0.30 )	iS	:20.84 ( 0.96 )
UTK	MOTN	384.0	283	eP	:45.50 ( 1.94 )		
UTK	PLAL	399.8	257	eP	:43.92 (-1.60)		
NEIC	SWET	205.7	250	eP	15:00:19.76 (-0.6)	eS	15:00:43.77 ( X )
NEIC	GOGA	275.8	173	ePn	:27.03 (-2.2)		
NEIC	LHS	314.7	119	ePn	:32.35 (-2.0)		
NEIC	BLA	338.0	63	ePn	:34.81 (-2.4)		
NEIC	WCI	341.4	321	ePn	:36.19 (-1.5)		
NEIC	WVT	363.6	276	ePn	:38.53 (-2.0)		
NEIC	PLAL	400.3	257	ePn	:41.93 (-3.2)		

Additional Data:

GIT	CDG			P	15:00:30	S	15:00:38
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\*\*\*\*\*2000 JULY 11; 17:44 - PIKEVILLE, 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	200711	174426.9		35.491	85.162	16.9	19	7	67	0.3	B	B/A	0.3	333	0.3	0.6	A		2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	DATN	7.0	82	iP-	17:44:30.18 ( 0.23 )	eS	17:44:32.46 ( 0.27 )

UTK	OLT	39.9	162	iPu	:33.73 (-0.17)	eS	:39.04 (-0.02)
UTK	PDTN	67.0	249	iPd	:37.74 (-0.26)	eS	:46.23 (0.06)
UTK	ANTN	75.8	355	iPu	:39.19 (-0.20)	eS	:48.48 (-0.08)
UTK	ORT	90.4	59	eP	:41.61 (-0.06)	eS	:52.74 (0.24)
UTK	ABTN	96.2	297	iPd	:42.67 (0.09)	iS	:54.22 (0.15)
UTK	CRTN	143.0	56	eP	:49.49 (-0.41)	eS	:45:07.93 (1.29)
UTK	SHAL	176.3	229	iP-	:54.87 (-0.13)	eS	:15.74 (0.34)
UTK	WVT	251.3	287	P	:45:07.86 (2.57X)	eS	:34.76 (1.57)
UTK	GOGA	278.4	145	eP	:10.08 (1.45)	eS	:40.91 (1.94)

\*\*\*\*\*2000 JULY 12; 06:27 - PIKEVILLE, TENNESSEE\*\*\*\*\*

UTK Appears to be an aftershock of magnitude 2.1 earthquake that occurred in the same area about 9 hours earlier.

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	200712	062705.2		35.546	85.168	14.9	9	9	129	0.1	B	B/B	0.9	304	0.4	1.9	B			1.3	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	DATN	9.1	125	iPd	06:27:08.16 (0.04)	eS	06:27:10.18 (-0.08)
UTK	PDTN	68.9	244	eP	:16.85 (0.28)	iS	:24.85 (-0.06)
UTK	ANTN	69.6	355	eP	:16.60 (-0.10)	eS	:25.12 (-0.01)
UTK	ABTN	93.1	294	eP	:20.14 (-0.21)	iS	:31.56 (0.10)
UTK	WVT	249.1	286	eP	:48.41 (4.89X)	eS	:28:10.84 (-0.52)

\*\*\*\*\*2000 JULY 12; 09:55 - PINEVILLE, 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	200712	095534.0		36.838	83.589	0.01	10	107	222	0.2	D	C/D	1.7	5	0.9	1.7	B			1.9	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	EGT	107.2	166	eP	09:55:53.52 (1.81X)	eS	09:56:04.56 (-0.23)
UTK	ORT	121.4	212	eP	:56.56 (2.60X)	eS	:08.44 (-0.26)
UTK	SLTN	138.4	108	eP	:55.81 (-0.93X)	eS	:13.60 (0.15)
UTK	ANTN	164.6	244	eP	:56:00.41 (-0.43)	eS	:20.65 (0.11)
UTK	ABTN	249.6	246	eP+	:13.88 (-0.09)	eS	:43.21 (0.18)
UTK	PDTN	267.6	230	eP	:16.94 (0.76)	eS	:47.12 (0.26)
UTK	GOGA	380.2	178			eS	:57:10.53 (-0.33)

\*\*\*\*\*2000 JULY 18; 10:29 - CHAPEL HILL, 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	200718	102948.7		35.639	86.713	5.7	15	61	123	0.3	D	C/D	0.5	340	0.2	1.7	B			2.1	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ABTN	61.1	63	iPu	10:29:58.79 (0.07)	iS	10:30:06.00 (-0.15)
UTK	PDTN	88.3	117	iPd	:30:03.32 (0.25)	eS	:13.78 (0.06)
UTK	PLAL	143.7	240	eP	:11.67 (-0.22)	iS	:28.77 (-0.16)
UTK	ANTN	146.3	66	eP	:12.46 (0.15)	eS	:29.19 (-0.47)
UTK	DATN	148.3	95	iP	:13.30 (0.67)	eS	:30.03 (-0.19)
UTK	MOTN	158.0	314	ePd	:14.09 (-0.05)	eS	:33.45 (0.63)
UTK	ORT	219.8	81	eP	:27.13 (3.23X)	iS	:50.07 (0.53)
UTK	OXF	275.8	244	eP	:39.94 (8.74X)	eS	:31:01.07 (-1.06)
UTK	WCI	287.1	6	eP	:47.48 (14.89X)	eS	:07.05 (2.51)

## \*\*\*\*\*2000 JULY 21; 03:59 - CHARLESTON, 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	200721	035901.8		32.786	80.317	6.7	12	8	303	0.1	C	B/D	0.7	360	0.7	0.9				1.7	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	WAS	8.0	32	ePd	03:59:04.12 (0.02)	iSd	03:59:05.44 (-0.01)														
USC	RGR	17.8	40	iPd	:05.52 (-0.05)	iSd	:07.82 (0.13)														
USC	HBF	18.0	355	iPu	:05.76 (0.15)	iSd	:07.55 (-0.08)														
USC	MGS	20.7	53	iPu	:06.07 (-0.04)	iSd	:08.20 (-0.51)														
USC	SVS	21.3	18	iPd	:06.13 (-0.07)	iSd	:08.35 (-0.53)														
USC	CSU	32.1	46	iPd	:07.84 (0.01)	iSn	:12.59 (-0.36)														

## \*\*\*\*\*2000 JULY 21; 15:35 - SODDY-DAISY, 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	200721	153512.0		35.310	85.147	17.5	10	21	119	0.0	B	B/B	0.5	265	0.3	1.2	A			1.2	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	OLT	21.0	148	iPu	15:35:16.40 (0.01)	eS	15:35:19.67 (0.01)														
UTK	DATN	21.8	15	iPd	:16.50 (-0.01)	iS	:19.85 (-0.01)														
UTK	PDTN	64.0	267	eP	:22.59 (-0.02)	iS	:30.45 (0.01)														
UTK	ANTN	95.9	355	eP	:27.68 (0.09)	eS	:39.42 (0.35)														
UTK	CRTN	154.0	50	eP	:36.22 (-0.39)	eS	:54.64 (0.09)														

## \*\*\*\*\*2000 JULY 27; 10:26 - FAYETTEVILLE, 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	200727	102640.1		35.213	86.527	1.9	18	62	92	0.4	D	C/D	0.4	313	0.2	1.3	A			2.1	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	PDTN	62.0	84	iPd	10:26:50.32 (-0.04)	iS	10:26:57.81 (-0.15)														
UTK	ABTN	83.7	27	iP	:54.42 (0.50)	iS	:27:04.45 (0.30)														
UTK	SHAL	86.8	185	eP+	:54.63 (0.23)	eS	:05.41 (0.42)														
UTK	DATN	134.8	76	eP	:27:01.94 (-0.17)	eS	:17.08 (-1.22)														
UTK	OLT	137.1	92	eP	:01.92 (-0.54)																
UTK	PLAL	143.5	260	eP-	:03.22 (-0.23)	iS	:20.32 (-0.30)														
UTK	ANTN	158.4	47	eP	:05.14 (-0.68)	eS	:24.25 (-0.48)														
UTK	MOTN	204.1	320	eP	:11.61 (-1.41)	eS	:37.51 (0.33)														
UTK	ORT	215.8	68	eP	:14.95 (0.08)	eS	:40.30 (-0.03)														
UTK	OXF	274.7	254	eP	:26.79 (3.89X)	eS	:53.34 (-0.70)														

## \*\*\*\*\*2000 JULY 27; 13:10 - FAYETTEVILLE, TENNESSEE\*\*\*\*\*

UTK Small earthquake slightly larger than, and in the same location, as the earthquake that occurred three hours earlier

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	200727	131024.5		35.211	86.518	7.6	17	61	102	0.3	C	B/D	0.3	307	0.2	1.3	A			2.1	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	PDTN	61.2	83	iPd	13:10:34.43 (-0.12)	iS	13:10:41.91 (-0.09)														
UTK	ABTN	83.6	26	iPu	:38.51 (0.38)	iS	:48.53 (0.30)														
UTK	SHAL	86.6	185	eP+	:38.71 (0.09)	iS	:49.32 (0.25)														

UTK	DATN	134.0	76	eP	:45.94	(-0.20)	eS	:11:01.48	(-0.54)
UTK	PLAL	144.3	260	eP	:47.32	(-0.42)	iS	:04.52	(-0.27)
UTK	ANTN	157.9	47	iPd	:49.33	(-0.56)	iS	:08.37	(-0.16)
UTK	MOTN	204.9	320	eP	:57.70	(0.41)	eS	:21.22	(-0.00)
UTK	ORT	215.1	68	eP	:57.99	(-0.92)	eS	:24.25	(0.32)
UTK	OXF	275.5	254	eP	:11:13.11	(6.33X)	eS	:38.19	(0.65)

\*\*\*\*\*2000 JULY 28; 20:16 - LOUDON, 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	200728	201639.4		35.662	84.239	14.8	18	28	159	0.3	C	B/C	0.4	335	0.3	0.8	A		1.9		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	28.1	348	iPu	20:16:44.62 (0.09)	iS	20:16:48.41 (0.09)
UTK	DATN	78.9	257	eP+	:52.29 (-0.01)	eS	:17:01.55 (-0.25)
UTK	EGT	89.1	72	eP	:53.87 (-0.05)	eS	:05.14 (0.55)
UTK	OLT	91.2	232	eP-	:54.51 (0.29)	eS	:05.19 (0.06)
UTK	ANTN	106.0	303	eP-	:56.08 (-0.46)	eS	:08.15 (-1.01)
UTK	PDTN	152.4	254	eP+	:17:03.58 (-0.28)	iS	:21.82 (0.08)
UTK	ABTN	171.0	279	eP	:06.30 (-0.43)	iS	:26.98 (0.36)
UTK	SLTN	209.6	65	eP	:11.85 (-0.87)	eS	:36.43 (-0.49)
UTK	SHAL	255.1	238	eP	:18.22 (-0.23)		
UTK	PLAL	356.9	259	eP	:42.59 (11.60X)	eS	:18:08.54 (-0.01)

\*\*\*\*\*2000 AUGUST 06; 07:42 - CHARLESTON, 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	200806	074235.0		32.912	80.162	7.1	6	3	227	0.1	C	B/D	1.0	360	1.0	0.6			0.6		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MGS	2.5	128	iPd	07:42:36.79 (0.08)	iSu	07:42:37.24 (-0.05)
USC	RGR	3.0	261	iPu	:36.71 (0.00)	iSu	:37.19 (-0.01)
USC	WAS	12.5	235	iPu	:37.90 (-0.07)	iSu	:39.94 (0.05)

\*\*\*\*\*2000 AUGUST 07; 07:03 - CRAB ORCHARD, 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	200807	070344.6		35.811	84.904	0.2	12	38	127	0.3	C	B/C	0.4	294	0.3	1.7	B		1.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	DATN	38.3	206	eP	07:03:50.84 (-0.05)	iS	07:03:55.74 (0.16)
UTK	ANTN	49.7	324	eP	:52.68 (-0.10)	eS	:58.89 (0.04)
UTK	ORT	55.2	78	eP	:53.24 (-0.46)	eS	:04:01.12 (0.67)
UTK	PDTN	104.4	235	eP	:04:01.62 (-0.15)	eS	:14.06 (-0.44)
UTK	ABTN	109.1	275	iP	:02.76 (0.24)	iS	:15.87 (0.06)
UTK	WVT	266.2	278	eP	:27.09 (0.58)	eS	:58.11 (1.08)

\*\*\*\*\*2000 AUGUST 09; 11:30 - RINGGOLD, 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	200809	113047.9		34.912	85.253	0.07	20	34	112	0.3	C	C/C	0.5	319	0.4	1.2	A		2.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
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UTK	OLT	33.7	38	iPd	11:30:53.79	( 0.31 )	iS	11:30:57.80	( 0.20 )
UTK	DATN	67.0	13	eP	:58.83	(-0.15)	iS	:31:06.90	(-0.28)
UTK	ABTN	133.1	325	eP-	:31:09.71	( 0.00 )	eS	:26.22	( 0.44 )
UTK	SHAL	134.5	247	eP	:09.63	(-0.31)	eS	:26.46	( 0.29 )
UTK	ANTN	139.8	1	eP	:11.07	( 0.28 )	eS	:26.36	(-1.28)
UTK	ORT	140.3	38	eP-	:10.84	(-0.01)	eS	:27.59	(-0.15)
UTK	EGT	208.8	58	eP	:21.44	(-0.26)			
UTK	GOGA	234.2	135	eP	:25.09	(-0.57)	eS	:51.89	(-1.28)
UTK	PLAL	257.9	273	iPu	:28.19	(-0.65)	iS	:59.04	( 0.41 )
UTK	WVT	270.0	301	eP	:30.04	(-0.29)	eS	:32:01.89	( 0.69 )
UTK	SLTN	330.6	58	eP	:40.17	( 2.25 )			

Additional Data:

GIT ATL P 11:46:44

**\*\*\*\*\*2000 AUGUST 10; 23:54 - CHARLESTON, 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	200810	2354	13.0	33.016	80.179	7.1	12	8	151	0.1	B	A/C	0.4	360	0.4	0.8					1.6	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	SVS	8.3	231	iPu	23:54:15.31 (-0.03)	iSu	23:54:16.42 (-0.01)
USC	CSU	10.6	108	iPd	:15.58 ( 0.10 )	iSn	:17.54 (-0.29)
USC	RGR	12.1	187	iPu	:15.79 (-0.08)	iSu	:17.24 (-0.04)
USC	TWB	13.1	33	iPd	:16.08 (-0.01)	iSu	:17.51 ( 0.14 )
USC	HBF	16.2	242	iPu	:16.47 (-0.05)	iSu	:18.39 ( 0.06 )
USC	WAS	20.6	205	iPu	:17.31 (-0.01)	iSu	:20.34 ( 0.08 )

**\*\*\*\*\*2000 AUGUST 15; 05:42 - TOWN CREEK, 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	200815	0542	08.1	34.751	87.421	10.7	10	65	178	0.4	D	C/D	1.9	28	0.4	99.0	D				1.3	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	PLAL	65.1	293	eP	05:42:17.99 (-0.76)	iS	05:42:26.59 (-0.02)
UTK	SHAL	83.1	115	eP	:22.27 ( 0.69 )	eS	:31.33 (-0.19)
UTK	PDTN	154.7	68	eP	:32.66 (-0.22)	eS	:49.78 (-1.28)
UTK	WVT	157.4	346	eP	:34.24 ( 0.94 )	eS	:52.46 ( 0.67 )
UTK	ABTN	173.4	43	eP	:36.50 ( 0.67 )	eS	:55.96 (-0.21)

**\*\*\*\*\*2000 AUGUST 16; 10:02 - 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	200816	1002	46.4	35.166	82.418	2.0	8	51	350	0.2	D		4.8	360	4.8	6.4					1.7	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	BG3	50.6	248	iPd	10:02:54.93 ( 0.07 )	S	10:03:01.58 ( 0.14 )
USC	CCK	54.6	253	iPu	:55.37 (-0.03)	S	:02.21 (-0.19)
USC	JVW	56.2	250	iPd	:55.84 ( 0.24 )	S	:02.97 ( 0.21 )
USC	SMT	56.8	243	iPd	:55.67 (-0.18)	S	:03.12 (-0.08)

**\*\*\*\*\*2000 AUGUST 16; 10:07 - 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	200816	1007	10.6	34.928	83.445	9.0	8	41	346	1.0	D		18.6	360	18.6	82.5					1.9	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	JVW	41.4	80	iPd	10:07:16.75 (-0.75)	S	10:07:24.75 (1.86)
USC	CCK	42.7	76	iPu	:17.04 (-0.72)	S	:25.06 (1.71)
USC	SMT	43.3	90	iPd	:17.50 (-0.45)	S	:24.44 (0.74)
USC	BG3	47.4	81	iPd	:17.93 (-0.68)	S	:24.83 (-0.04)

\*\*\*\*\*2000 AUGUST 18; 10:09 – ROANOKE, VIRGINIA\*\*\*\*\*

VTSO/NEIC Felt in southwestern Roanoke County.

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	200818	100955.1		37.186	79.947	10.0F	8	42	307	0.3	D	D/D	3.8	36	2.5	3.8	C	3.0	2.7		F	
NEIC	200818	100955.1		37.186	79.947	10.0F	7	42												2.7		F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
VTSO	BLA	42.1	274	eP	10:10:02.27 (-0.28)	eS	10:10:07.98 (0.35)
VTSO	WMV	91.4	265	eP	:10.56 (-0.02)	eS	:21.19 (-0.18)
VTSO	PKNC	166.6	221	eP	:22.51 (0.45)	eS	:40.51 (-0.38)
VTSO	GFM	204.7	235	eP	:27.97 (-0.02)	eS	:51.09 (0.15)
NEIC	BLA	42.3	274	eP	10:10:02.30 (-0.6)		
NEIC	MCWV	274.7	2	eP	:38.13 (2.1)		
NEIC	LHS	310.3	195	ePn	:38.75 (-1.9)		
NEIC	JSC	343.6	201	ePn	:43.15 (-1.6)		
NEIC	SSPA	422.6	24	ePn	:11:05.72 (10.8)		
NEIC	ACSO	429.2	323	ePn	:00.84 (5.1)		
NEIC	GOGA	527.1	218	ePn	:08.56 (0.2)		

\*\*\*\*\*2000 AUGUST 20; 06:44 - LOUDON, 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	200820	064417.0		35.628	84.194	9.9	8	33	192	0.1	D	C/D	1.6	227	1.1	3.2	C		1.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	32.8	342	eP	06:44:22.69 (0.13)	eS	06:44:26.64 (-0.06)
UTK	DATN	82.2	260	eP	:30.19 (-0.16)		
UTK	ANTN	111.4	303	iPd	:34.83 (-0.14)	iS	:48.24 (0.05)
UTK	PDTN	155.4	256	eP	:43.35 (1.46X)	eS	:45:00.17 (0.01)
UTK	ABTN	175.6	280	eP	:47.43 (2.36X)	iS	:05.76 (0.09)
UTK	SLTN	207.6	64	eP	:50.73 (0.56)		

\*\*\*\*\*2000 AUGUST 23; 08:12 - HARRIMAN, 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	200823	081243.1		35.916	84.631	18.7	10	29	154	0.1	C	B/C	0.7	20	0.3	1.2	A		1.6		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	29.4	91	iP+	08:12:48.67 (-0.04)	eS	08:12:52.91 (0.06)
UTK	ANTN	61.1	298	iP-	:53.24 (-0.13)	iS	:13:00.96 (0.04)
UTK	DATN	61.9	222	eP	:53.23 (-0.26)	eS	:01.10 (-0.04)
UTK	PDTN	131.5	238	eP	:13:04.34 (0.10)	eS	:20.11 (0.46)
UTK	ABTN	133.5	269	eP	:04.33 (-0.23)	iS	:20.28 (0.09)

## \*\*\*\*\*2000 SEPTEMBER 04; 02:26 - SOUTH PITTSBURG, 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	200904	0226	51.8	35.052	85.522	18.5	8	39	197	0.1	D	C/D	1.2	5	0.9	1.0	A		1.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	PDTN	38.7	310	iP+	02:26:58.90 (0.07)	iS	02:27:04.02 (-0.04)
UTK	DATN	63.6	38	eP	:27:02.30 (-0.36)	eS	:11.04 (0.31)
UTK	ABTN	106.8	330	eP	:08.93 (-0.25)	eS	:22.20 (0.30)
UTK	SHAL	120.4	236	eP	:11.43 (0.22)	eS	:25.45 (0.06)

## \*\*\*\*\*2000 SEPTEMBER 04; 07:36 - CHARLESTON, 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	200904	0736	20.4	32.923	80.166	6.3	14	3	108	0.1	B	A/B	0.3	360	0.3	0.5			1.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	RGR	3.1	238	ePd	07:36:22.07 (0.04)	iSd	07:36:22.56 (0.12)
USC	MGS	3.6	140	iPu	:22.10 (-0.01)	iSu	:22.57 (-0.11)
USC	SVS	9.2	303	iPu	:22.77 (-0.05)	iSu	:23.92 (-0.03)
USC	CSU	11.3	52	iPd	:22.99 (0.05)	iSd	:25.04 (-0.29)
USC	CSB	11.3	52	iPd	:22.94 (0.02)	iSu	:25.20 (-0.07)
USC	WAS	13.0	230	iPd	:23.56 (0.12)	iSd	:25.27 (-0.09)
USC	HBF	15.9	280	iPd	:23.75 (-0.06)	iSu	:25.68 (0.18)

## \*\*\*\*\*2000 SEPTEMBER 05; 14:17 - MONROEVILLE, 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	200905	1417	14.9	31.535	87.310	3.3	7	328	312	0.7	D	D/D	99.0	351	2.5	99.0	D		2.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	SHAL	328.2	11	eP	14:18:02.89 (-0.10)	eS	14:18:38.50 (-0.38)
UTK	OXF	384.0	330	eP	:09.49 (-0.36)	eS	:51.16 (0.13)
UTK	PDTN	436.4	18	eP	:19.16 (2.83)	eS	:19:05.55 (3.06)
UTK	ABTN	495.3	13	eP	:28.93 (5.33)		

## \*\*\*\*\*2000 SEPTEMBER 05; 14:21 - FULTON, 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	200905	1421	14.4	32.121	87.860	0.02	8	282	298	2.3	D	D/D	30.6	359	2.6	99.0	D		2.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	SHAL	281.9	24	eP	14:21:51.41 (-4.52)	eS	14:22:27.64 (0.76)
UTK	OXF	301.9	332	eP	:22:01.51 (3.14X)	eS	:32.11 (0.92)
UTK	PDTN	396.3	28	eP	:10.84 (0.81)	eS	:47.91 (-3.92)
UTK	ABTN	447.8	21	eP	:18.70 (2.31X)	eS	:23:05.80 (2.71)
UTK	DATN	454.3	34	eP	:16.38 (-0.84)	eS	:08.35 (3.80)

## \*\*\*\*\*2000 SEPTEMBER 08; 10:10 - OAK RIDGE, 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	200908	1010	38.4	35.962	84.351	20.5	18	7	160	0.9	D	D/C	0.6	351	0.3	0.3	A		2.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	7.1	144	eP	10:10:41.83 (-0.14)	iS	10:10:45.27 (0.70)
UTK	DATN	83.9	233	iPd	:51.51 (-0.75)	iS	:11:01.71 (-0.67)
UTK	EGT	95.3	94	iPu	:53.49 (-0.55)	eS	:05.58 (0.14)
UTK	ABTN	158.9	267	eP	:11:03.82 (0.08)	eS	:23.39 (1.27)
UTK	SLTN	207.6	74	eP+	:11.18 (-0.02)	eS	:34.20 (-0.81)
UTK	SHAL	266.0	231	eP	:16.90 (-1.40)	eS	:49.31 (2.03)
UTK	GOGA	294.3	164	eP	:21.67 (-0.09)	iS	:54.82 (1.55)
UTK	WVT	314.0	274	eP	:27.29 (3.09X)	eS	:12:00.44 (2.95)
UTK	PLAL	355.0	253	eP	:31.94 (2.69)	eS	:08.34 (2.11)
UTK	OXF	487.6	252	eP	:55.32 (9.73X)	eS	:34.57 (0.07)

\*\*\*\*\*2000 SEPTEMBER 09; 23:47 - SOUTH PITTSBURG, TENNESSEE\*\*\*\*\*

UTK Felt in southeastern Tennessee.

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
UTK	200909	2347	27.7	35.132	85.735	5.5	22	19	158	0.3	C	C/C	0.4	343	0.2	0.6	A	2.6			F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	PDTN	18.8	326	iPu	23:47:31.14 (0.16)	iS	23:47:33.45 (0.06)
UTK	DATN	71.7	55	ePd	:39.49 (0.01)	iS	:47.95 (-0.23)
UTK	ABTN	90.2	338	eP-	:42.51 (0.08)	eS	:53.26 (-0.06)
UTK	SHAL	111.0	226	eP+	:45.77 (0.01)	eS	:59.39 (0.32)
UTK	ORT	155.8	56	eP	:53.03 (0.19)	eS	:48:12.39 (1.11)
UTK	PLAL	214.2	266	eP	:48:01.44 (-0.61)	iS	:26.74 (-0.36)
UTK	WVT	219.7	301	eP	:02.26 (-0.66)	eS	:28.64 (0.08)
UTK	EGT	236.9	68	eP	:05.22 (-0.35)	eS	:33.69 (0.59)
UTK	OXF	343.1	259	eP	:20.80 (2.25)	eS	:57.80 (2.24)
UTK	WCI	346.1	351	eP	:21.88 (2.95)	eS	:59.20 (2.99)
UTK	SLTN	357.6	65	eP	:19.98 (-0.49)	eS	:58.60 (-0.28)

Additional Data:

GIT	ATL		P	23:47:44
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\*\*\*\*\*2000 SEPTEMBER 11; 05:35 - GATLINBURG, TENNESSEE\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
UTK	200911	0535	40.9	35.675	83.585	5.5	7	36	220	0.5	D	C/D	2.8	346	0.5	5.1	C	1.6			

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	EGT	36.1	46	iP+	05:35:46.77 (-0.21)	iS	05:35:51.98 (0.52)
UTK	ORT	70.1	292	eP	:52.23 (-0.18)	eS	:36:00.76 (-0.15)
UTK	SLTN	157.1	57	eP	:36:04.42 (-1.87)		
UTK	ABTN	229.4	277	eP+	:18.97 (1.34)	iS	:44.50 (0.17)

\*\*\*\*\*2000 SEPTEMBER 12; 10:28 - SOUTH PITTSBURG, TENNESSEE\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
UTK	200912	1028	48.0	35.027	85.704	3.6	14	30	101	0.2	C	B/C	0.5	303	0.4	1.1	A	2.0			

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	PDTN	30.4	334	iPu	10:28:53.05 (-0.00)	iS	10:28:56.83 (0.03)

UTK	DATN	76.9	47	eP	:29:00.44	(-0.21)	eS	:29:10.26	(0.23)
UTK	ABTN	102.1	339	iPd	:04.55	(-0.13)	eS	:17.15	(0.12)
UTK	SHAL	105.4	232	iP-	:05.24	(0.04)	eS	:18.41	(0.47)
UTK	ORT	160.4	52	eP	:15.43	(1.50)			
UTK	PLAL	216.5	269	eP	:22.54	(-0.24)	eS	:48.19	(0.00)
UTK	WVT	228.3	303	eP	:22.04	(-2.58X)	eS	:51.04	(-0.25)
UTK	GOGA	273.2	130	eP	:19.46	(-10.95X)	eS	:30:01.03	(-0.24)
UTK	OXF	343.9	261	eP	:37.56	(-1.57)			

\*\*\*\*\*2000 SEPTEMBER 14; 16:05 - LAFAYETTE, 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	200914	160522.0		34.675	85.296	0.04	17	83	203	0.3	C	B/D	0.5	338	0.3	1.1	A		2.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	PDTN	83.4	323	iPu	16:05:35.83 (0.05)	iS	16:05:45.82 (-0.16)
UTK	DATN	93.5	12	iP+	:37.42 (-0.04)		
UTK	SHAL	122.8	258	eP+	:42.58 (0.44)	eS	:57.48 (0.43)
UTK	MSAL	127.5	279	iPu	:42.78 (-0.12)	iS	:58.31 (-0.03)
UTK	ABTN	153.3	331	eP	:46.69 (-0.30)	eS	:06:05.44 (0.06)
UTK	ORT	164.0	33	eP-	:48.82 (0.14)	iS	:08.79 (0.49)
UTK	CRTN	214.7	38	eP+	:56.34 (-0.34)	eS	:23.11 (0.97)
UTK	EGT	227.0	53	eP	:57.87 (-0.79)	eS	:25.69 (0.21)
UTK	SLTN	348.4	55	eP	:06:13.52 (-0.69)	eS	:52.13 (-0.10)

Additional Data:

GIT	ATL			P	16:06:10.5		S		16:06:30
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\*\*\*\*\*2000 SEPTEMBER 21; 07:17 - FAIRVIEW, 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	200921	071725.6		34.848	85.278	0.02	14	70	116	0.2	C	B/D	0.5	325	0.4	1.1	A		1.9		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	PDTN	70.3	312	iPd	07:17:37.29 (0.07)	eS	07:17:45.94 (0.11)
UTK	DATN	74.4	14	eP	:37.91 (0.02)	iS	:46.91 (-0.08)
UTK	SHAL	129.8	250	eP	:46.86 (-0.02)	iS	:18:02.55 (-0.04)
UTK	ABTN	137.7	327	iPd	:47.90 (-0.24)	eS	:04.67 (-0.05)
UTK	ORT	147.2	37	eP	:49.95 (0.30)		
UTK	GOGA	230.9	133	iP	:18:02.66 (-0.18)	eS	:29.91 (-0.10)
UTK	PLAL	256.1	274	eP	:07.79 (1.48X)	iS	:36.14 (0.20)
UTK	WVT	271.8	302	eP	:07.26 (-0.98)	iS	:40.44 (1.16)

\*\*\*\*\*2000 SEPTEMBER 22; 04:25 - CHARLESTON, 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	200922	042516.5		33.010	80.151	4.8	12	8	138	0.1	C	B/C	0.3	360	0.3	1.1			2.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	CSB	8.0	110	iPu	04:25:18.52 (0.17)	iSu	04:25:20.10 (-0.10)
USC	SVS	10.2	243	iPu	:18.93 (0.01)	iSd	:20.13 (0.02)
USC	RGR	12.1	200	iPd	:19.22 (0.01)	iSu	:20.36 (-0.14)
USC	TWB	12.4	21	iPd	:19.26 (-0.06)	iSd	:20.75 (0.34)
USC	MGS	12.5	176	iPu	:19.38 (0.06)	iSu	:20.77 (-0.02)
USC	WAS	21.4	212	iPd	:20.75 (-0.10)	iSu	:24.04 (0.21)

## \*\*\*\*\*2000 SEPTEMBER 23; 03:20 - GREENVILLE, 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	200923	032047.2		35.049	82.415	2.0	14	29	203	0.2	D		1.2	360	1.2	54.4			2.4		
UTK	200923	032046.9		34.934	82.345	0.02	17	138	178	1.0	D D/D		0.8	292	0.3	1.3	A		2.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	TRY	28.8	33	iPd	03:20:52.25 (-0.16)	S	03:20:56.40 (-0.07)
USC	SMM	42.9	236	iPu	:54.18 (-0.04)	S	:59.78 (0.09)
USC	BG3	47.6	263	iPu	:55.22 (0.08)	S	:21:01.33 (-0.01)
USC	SMT	52.4	256	iPu	:55.94 (0.03)	S	:02.39 (-0.32)
USC	CCK	52.7	267	iPu	:56.23 (0.37)	S	:02.55 (-0.06)
USC	JVW	53.5	263	iPu	:56.15 (0.22)	S	:02.70 (-0.05)
USC	MMC	54.6	237	iPu	:55.89 (-0.21)	S	:02.96 (-0.09)
USC	JSC	135.9	129	iPd	:21:07.35 (-2.02X)	S	:22.56 (-4.11X)
UTK	EGT	137.9	321	eP	03:21:08.94 (-0.53)		
UTK	SLTN	168.7	7	iPd	:12.64 (-1.70)	iS	03:21:35.73 (1.19)
UTK	GOGA	198.0	212	eP+	:19.16 (0.25)	eS	:42.49 (0.05)
UTK	ORT	208.3	302	eP	:20.84 (0.29)	eS	:44.89 (-0.39)
UTK	DATN	257.4	285	iPu	:27.55 (-0.24)	iS	:58.72 (1.15)
UTK	BLA	306.4	34	iP-	:32.37 (-1.46)	eS	:22:09.67 (1.64)
UTK	PDTN	321.7	278	eP	:35.16 (-0.53)	eS	:11.76 (0.52)
UTK	ABTN	357.8	288	eP	:39.82 (-0.32)	eS	:18.63 (-0.32)
UTK	PLAL	523.4	272	eP	:22:02.99 (2.45)	eS	:55.89 (1.67)

## \*\*\*\*\*2000 SEPTEMBER 24; 13:38 - CHARLESTON, 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	200924	133848.9		33.039	80.160	7.0	14	10	102	0.1	B A/B		0.2	360	0.2	0.8			2.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	TWB	10.0	32	iPd	13:38:51.28 (-0.19)	iSu	13:38:52.45 (0.07)
USC	CSU	10.2	125	iPu	:51.40 (0.13)	iSu	:53.30 (-0.28)
USC	SVS	11.4	227	iPd	:51.60 (-0.07)	iSu	:53.06 (-0.04)
USC	RGR	14.9	193	iPd	:52.17 (-0.02)	iSd	:54.00 (0.07)
USC	MGS	15.7	174	iPu	:52.38 (0.02)	iSd	:54.34 (0.01)
USC	DRC	22.7	290	iPu	:53.90 (0.17)	iSu	:56.92 (-0.01)
USC	WAS	23.7	206	iPd	:53.62 (-0.10)	iSd	:56.83 (-0.23)

## \*\*\*\*\*2000 SEPTEMBER 25; 13:16 - ATHENS, 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	200925	131641.6		35.399	84.581	10.2	11	47	131	0.1	C C/C		1.2	333	0.3	6.2	D		1.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	DATN	47.2	284	iP-	13:16:49.34 (-0.12)	iS	13:16:55.36 (0.07)
UTK	ORT	61.9	24	iP	:51.88 (0.12)	iS	:59.18 (-0.09)
UTK	PDTN	116.2	263	eP	:17:00.16 (-0.17)	iS	:17:13.99 (-0.10)
UTK	ABTN	148.6	292	eP	:04.25 (-1.19X)	eS	:22.97 (0.04)
UTK	SHAL	213.5	240	eP	:14.79 (-0.84)	eS	:40.96 (0.59)
UTK	GOGA	243.1	155	eP	:19.87 (0.26)	eS	:47.72 (0.47)

## \*\*\*\*\*2000 SEPTEMBER 26; 01:09 - SOUTH PITTSBURG, 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	200926	010928.9		35.040	85.824	11.9	7	26	172	0.1	C	C/C	1.6	266	0.8	1.9	B		0.9		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	PDTN	26.0	355	iP-	01:09:33.56 (0.06)	iS	01:09:36.92 (-0.04)														
UTK	DATN	84.4	53	eP	:42.22 (-0.37)																
UTK	ABTN	97.4	345	eP	:40.76 (-3.86X)	iS	:56.22 (0.01)														
UTK	SHAL	98.0	227	eP	:41.19 (-3.53X)	eS	:56.29 (-0.09)														
UTK	ORT	168.3	55	eP	:55.93 (0.11)		:														
UTK	PLAL	205.6	269			eS	:10:24.29 (-1.12)														

\*\*\*\*\*2000 OCTOBER 05; 23:33 - CHESAPEAKE BAY REGION, VIRGINIA\*\*\*\*\*

NEIC Felt in Lancaster County, Pennsylvania; standard deviation = 0.5 on 6 of 6 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	201005	233356.4		39.949	76.198	5.0F	6	50					8.4		6.6		2.0				F
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
NEIC	NED	50.0	123	P	23:34:05.59 (0.2)																
NEIC	BWD	55.6	107	P	:06.59 (0.2)																
NEIC	GWDE	134.6	158	eP	:18.86 (-0.5)																
NEIC	SSPA	162.4	299	eP	:23.09 (-0.4)																
NEIC	BINY	250.2	4	eP	:34.80 (-0.1)																
NEIC	MCWV	313.6	265	eP	:43.57 (0.5)																

\*\*\*\*\*2000 OCTOBER 12; 22:49 - BARBOURVILLE, 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	201012	224925.5		36.843	83.842	0.05	12	71	161	0.7	D	D/D	1.3	338	0.7	2.2	B		1.7		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	CRTN	71.4	180	eP-	22:49:36.91 (-0.34)	eS	22:49:45.72 (-0.26)														
UTK	ORT	111.6	202	eP	:47.25 (3.45X)	eS	:58.37 (0.98)														
UTK	EGT	115.4	155	eP	:44.25 (-0.19)																
UTK	SLTN	160.2	106	eP	:51.24 (-0.35)	eS	:50:11.06 (0.25)														
UTK	DATN	186.4	217	eP	:54.15 (-1.53X)	eS	:17.57 (-0.31)														
UTK	ABTN	229.5	243	eP	:50:01.88 (-0.59)	eS	:28.25 (-1.25)														
UTK	PDTN	251.0	227	eP	:00.56 (-4.99X)	iS	:33.02 (-1.72)														
UTK	WCI	269.3	305	iP	:06.81 (-0.98)	iS	:39.51 (0.90)														

\*\*\*\*\*2000 OCTOBER 16; 17:56 - GASSAWAY, 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
UTK	201016	175613.8		38.636	80.920	16.9	17	147	133	0.4	D	C/D	1.0	282	0.3	2.0	B		2.5		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
UTK	MCWV	146.7	39	eP	17:56:37.70 (0.36)	iS	17:56:54.25 (-0.22)														
UTK	BLA	164.1	164	iPu	:40.00 (-0.03)	iS	:59.07 (-0.04)														
UTK	SLTN	265.4	204	eP	:54.04 (-0.00)	eS	:57:25.74 (2.43)														
UTK	EGT	369.5	216	eP	:57:07.11 (0.25)	eS	:48.44 (2.96)														
UTK	CRTN	374.0	225	eP	:06.64 (-0.70)	eS	:46.20 (-0.11)														
UTK	ORT	426.1	226			eS	:56.62 (-0.79)														
UTK	WCI	477.4	266	eP	:18.74 (-1.31)	eS	:58:08.76 (0.46)														

UTK	ABTN	552.1	238	eP	:29.08	(-0.21)	eS	:23.88	(-0.41)
UTK	PDTN	576.0	231	eP	:31.46	(-0.77)	eS	:28.98	(-0.39)

\*\*\*\*\*2000 OCTOBER 19; 06:39 - MARYVILLE, 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	201019	0639	26.9	35.625	84.058	5.2	15	39	102	0.3	C	C/C	0.5	1	0.3	2.1	B		1.8		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	38.7	325	iPu	06:39:33.47 (0.09)	iS	06:39:38.25 (0.08)
UTK	EGT	75.2	66	iP+	:39.24 (-0.02)	eS	:49.00 (0.60)
UTK	DATN	94.3	262	eP	:42.19 (-0.10)	eS	:54.22 (0.54)
UTK	OLT	102.4	239	eP	:44.24 (0.65)		
UTK	PDTN	167.3	257	iPd	:53.44 (-0.42)	eS	:40:13.66 (0.02)
UTK	ABTN	187.8	279	eP	:57.08 (-0.01)	eS	:18.79 (-0.45)
UTK	SLTN	196.8	62	ePu	:58.02 (-0.54)	eS	:22.50 (0.72)
UTK	GOGA	251.5	167	eP	:40:07.94 (1.46)	eS	:35.89 (0.63)

\*\*\*\*\*2000 OCTOBER 19; 18:12 - CHARLESTON, 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	201019	1812	45.7	32.969	80.227	12.3	16	2	80	0.1	A	A/A	0.3	360	0.3	0.5			2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	SVS	2.0	269	iPu	18:12:48.12 (-0.11)	iSu	18:12:49.39 (-0.04)
USC	RGR	7.4	155	iPu	:48.51 (-0.03)	iSu	:49.86 (-0.03)
USC	HBF	10.1	257	iPd	:48.76 (-0.02)	iSu	:50.37 (0.18)
USC	MGS	11.2	134	iPd	:48.97 (-0.01)	iSd	:50.50 (-0.26)
USC	WAS	14.1	197	iPu	:49.40 (0.05)	iSd	:51.44 (-0.31)
USC	CSB	14.8	82	iPu	:49.29 (0.11)	iSd	:51.86 (-0.42)
USC	TWB	19.9	36	iPu	:50.10 (-0.05)	iSn	:52.57 (0.09)
USC	DRC	21.5	316	iPd	:50.48 (-0.09)	iSd	:53.42 (-0.35)

\*\*\*\*\*2000 OCTOBER 21; 18:36 - LENOIR CITY, 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	201021	1836	00.5	35.717	84.202	17.8	18	23	154	0.3	C	B/C	0.5	330	0.2	0.7	A		2.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	23.3	336	iPu	18:36:05.28 (0.04)	iS	18:36:08.86 (0.13)
UTK	CRTN	62.7	31	iPd	:10.79 (-0.18)	eS	:18.62 (-0.05)
UTK	DATN	83.7	254	iPd	:14.16 (-0.07)	iS	:23.82 (-0.50)
UTK	EGT	84.2	76	ePu	:14.34 (0.01)		
UTK	OLT	97.6	230	iPu	:16.68 (0.29)	eS	:28.37 (0.30)
UTK	PDTN	157.4	252	eP	:25.45 (-0.20)	eS	:44.18 (0.24)
UTK	ABTN	173.4	277	eP-	:27.84 (-0.26)	iS	:48.58 (0.42)
UTK	SLTN	204.0	66	eP	:32.88 (0.02)	eS	:57.70 (1.35)
UTK	SHAL	261.2	238	eP	:46.40 (6.40X)	eS	:37:08.89 (0.15)
UTK	WVT	330.6	279	eP	:48.66 (0.11)	eS	:25.54 (2.02)

\*\*\*\*\*2000 OCTOBER 23; 07:57 - DECATUR, 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	201023	0757	30.5	35.549	84.752	8.7	19	31	118	0.2	C	B/C	0.6	322	0.3	1.5	B		1.6		



SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	DATN	30.8	260	iPd	07:57:35.76 (0.03)	eS	07:57:39.74 (0.12)
UTK	OLT	50.8	209	iP	:39.05 (0.17)	eS	:44.67 (-0.43)
UTK	ORT	56.8	45	eP	:39.80 (-0.04)	eS	:46.72 (-0.06)
UTK	PDTN	104.3	253	eP	:46.58 (-0.80)	eS	:59.72 (-0.08)
UTK	ABTN	128.3	287	eP	:51.27 (0.10)	eS	:58:06.33 (-0.04)
UTK	EGT	137.2	73	eP	:52.32 (-0.28)		
UTK	SHAL	209.5	234			eS	:28.43 (0.11)
UTK	SLTN	257.1	67	eP	:58:10.30 (-0.21)	eS	:39.81 (0.19)
UTK	GOGA	264.9	153	eP	:11.31 (-0.03)		
UTK	WVT	285.5	284	eP	:14.64 (0.76)	eS	:48.24 (2.79)
UTK	PLAL	308.9	259	eP	:17.19 (0.42)	eS	:53.04 (2.59)

\*\*\*\*\*2000 OCTOBER 24; 20:46 - PULASKI, TENNESSEE\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
UTK	201024	2046	27.7	35.006	86.966	10.8	13	32	105	0.2	C	B/C	0.5	241	0.3	2.1	B		1.8		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	MSAL	32.0	123	iP-	20:46:33.32 (0.13)	iS	20:46:37.20 (-0.06)
UTK	SHAL	71.8	152	eP	:39.55 (0.12)	iS	:47.83 (-0.24)
UTK	PDTN	106.0	73	iPd	:44.83 (0.02)	iS	:57.48 (0.09)
UTK	ABTN	124.8	38	eP+	:47.69 (-0.09)	eS	:47:02.16 (-0.37)
UTK	WVT	147.3	328	eP	:52.49 (1.18)	iS	:08.56 (-0.07)
UTK	DATN	179.6	72	eP	:56.47 (0.03)	eS	:17.53 (0.01)
UTK	OXF	230.3	257	eP	:56.05 (-8.01X)	eS	:31.28 (0.78)

\*\*\*\*\*2000 NOVEMBER 06; 03:39 - LINDEN, TENNESSEE\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
UTK	201106	0339	50.8	35.514	87.881	0.02	17	62	132	0.2	C	B/D	0.6	285	0.2	1.9	B		2.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	PLAL	61.5	197	eP	03:40:00.89 (-0.12)	iS	03:40:08.39 (-0.15)
UTK	WVT	68.5	4	eP	:02.32 (0.16)	iS	:10.42 (-0.13)
UTK	MSAL	132.6	124	eP	:12.93 (0.38)	eS	:28.22 (-0.34)
UTK	ABTN	165.6	75	eP	:17.72 (-0.06)	eS	:37.64 (0.05)
UTK	SHAL	167.4	135	eP	:18.23 (0.16)	eS	:38.51 (0.43)
UTK	OXF	178.3	232	eP	:20.21 (0.43)	eS	:41.24 (0.21)
UTK	PDTN	186.5	98	eP	:21.50 (0.43)	eS	:43.97 (0.69)
UTK	DATN	253.6	90	eP	:31.57 (0.28)	eS	:41:02.01 (1.28)
UTK	OLT	262.9	98	eP	:31.85 (-0.57)		:

\*\*\*\*\*2000 NOVEMBER 07; 05:27 - LOUDON, TENNESSEE\*\*\*\*\*

SRCE	DATE	HRMN	SEC	LAT-N	LOX-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
UTK	201107	0527	29.8	35.715	84.377	15.1	7	23	172	0.1	C	C/C	1.4	317	0.7	1.9	B		1.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	22.5	17	iPd	05:27:34.16 (-0.04)	iS	05:27:37.47 (0.03)
UTK	DATN	68.5	250	iP	:41.26 (0.16)	iS	:49.13 (-0.29)
UTK	EGT	99.7	78	eP	:45.73 (-0.27)		
UTK	PDTN	142.3	250	eP	:54.28 (1.60X)	eS	:28:10.17 (0.72)
UTK	ABTN	157.7	277	eP	:51.16 (-3.94X)	eS	:13.48 (-0.03)

## \*\*\*\*\*2000 NOVEMBER 09; 15:13 - DAYTON, 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	201109	151355.5		35.498	85.054	15.0	10	3	121	0.1	B	B/B	0.6	351	0.5	0.7	A		1.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	DATN	2.9	273	iPd	15:13:58.07 (0.01)	iS	15:13:59.95 (-0.01)
UTK	OLT	38.8	176	eP	:14:02.01 (-0.21)	eS	:14:07.66 (0.49)
UTK	PDTN	76.5	251	eP	:07.94 (-0.08)	iS	:17.21 (-0.03)
UTK	ORT	81.7	56	eP	:08.81 (-0.03)		
UTK	ABTN	104.7	295	eP	:12.18 (-0.27)	iS	:24.97 (0.05)
UTK	GOGA	273.6	147			eS	:08.74 (1.91)

## \*\*\*\*\*2000 NOVEMBER 15; 23:22 - CHARLESTON, 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	201115	232245.8		32.950	80.163	5.9	12	6	140	0.2	C	B/C	0.3	360	0.3	0.6			1.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	RGR	5.5	212	iPu	23:22:47.81 (0.16)	iSd	23:22:48.66 (0.44)
USC	MGS	6.1	161	iPu	:47.44 (-0.32)	iSd	:48.17 (-0.34)
USC	SVS	8.3	285	iPu	:47.91 (-0.14)	iSd	:48.96 (-0.10)
USC	CSB	9.5	65	iPd	:48.25 (0.22)	iSd	:50.16 (0.03)
USC	WAS	15.3	222	iPu	:49.38 (0.17)	iSd	:51.22 (-0.20)
USC	HBF	15.9	269	iPd	:49.25 (0.03)	iSu	:50.75 (-0.15)

## \*\*\*\*\*2000 NOVEMBER 18; 16:22 - MADISONVILLE, 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	201118	162209.3		35.514	84.469	17.8	9	46	164	0.1	C	B/C	1.0	325	0.3	1.0	A		1.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	46.3	19	eP	16:22:17.45 (0.15)	iS	16:22:23.12 (-0.07)
UTK	DATN	56.0	269	eP	:18.97 (0.19)	iS	:25.72 (-0.02)
UTK	OLT	64.6	231	eP	:19.99 (-0.10)		
UTK	EGT	114.4	68	eP	:30.90 (3.02X)	eS	:41.25 (-0.25)
UTK	PDTN	128.2	258	eP	:30.26 (0.27)	iS	:44.92 (-0.14)
UTK	ABTN	154.0	286	eP	:37.57 (3.61X)	iS	:51.94 (0.06)

## \*\*\*\*\*2000 NOVEMBER 18; 17:08 - NIOTA, TENNESSEE\*\*\*\*\*

UTK This earthquake occurred at essentially the same location as a smaller one which occurred 45 minutes earlier.

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	201118	170802.0		35.520	84.479	17.2	11	46	162	0.1	C	B/C	1.0	329	0.3	1.2	A		1.6		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	46.0	20	iP	17:08:09.90 (-0.06)	iS	17:08:15.78 (-0.00)
UTK	DATN	55.1	268	eP	:11.38 (0.02)	iS	:18.25 (0.05)
UTK	OLT	64.3	231	eP	:12.68 (-0.07)		
UTK	EGT	114.9	68	eP	:20.87 (0.19)	eS	:35.00 (0.65)
UTK	PDTN	127.5	258	eP+	:22.20 (-0.42)	iS	:37.60 (-0.05)

UTK ABTN 153.0 286 eP :26.48 (-0.08) eS :44.54 (0.15)

\*\*\*\*\*2000 NOVEMBER 21; 00:36 - SHELBYVILLE, 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 201121 003628.1 35.461 86.277 26.1 6 44 183 0.0 D C/D 1.7 252 0.4 3.3 C 1.5

SRCE STA DIST (KM) AZM PHASE ARRIVAL TIME (RES) PHASE ARRIVAL TIME (RES)  
 UTK PDTN 44.0 118 iP 00:36:36.18 (-0.02) iS 00:36:42.16 (-0.00)  
 UTK ABTN 49.5 18 iP :36.98 (0.03) iS :43.46 (-0.02)  
 UTK DATN 108.1 87 eS :58.48 (-0.01)  
 UTK SHAL 117.8 195 eS :37:00.95 (-0.05)

\*\*\*\*\*2000 NOVEMBER 22; 18:05 - RINGGOLD, 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 201122 180542.7 34.958 85.000 11.1 12 21 218 0.2 C B/D 1.0 313 0.5 2.0 B 1.4

SRCE STA DIST (KM) AZM PHASE ARRIVAL TIME (RES) PHASE ARRIVAL TIME (RES)  
 UTK OLT 21.4 354 iPu 18:05:46.58 (-0.02) iS 18:05:49.60 (0.08)  
 UTK DATN 60.6 353 eP :52.95 (0.30) iS :06:00.02 (-0.00)  
 UTK PDTN 85.0 295 eP :56.25 (-0.22) iS :06.55 (-0.08)  
 UTK ORT 123.0 31 eP :06:02.95 (0.48)  
 UTK ABTN 144.0 316 iP- :05.72 (-0.06) iS :23.26 (0.52)  
 UTK MSAL 153.4 266 eS :25.92 (0.62)  
 UTK SHAL 157.9 249 eP :07.63 (-0.34) iS :26.90 (0.38)

\*\*\*\*\*2000 NOVEMBER 24; 06:19 - WAYNESVILLE, 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 201124 061901.9 35.513 83.170 0.01 8 45 222 0.8 D D/D 1.7 355 1.0 2.5 B 1.6

SRCE STA DIST (KM) AZM PHASE ARRIVAL TIME (RES) PHASE ARRIVAL TIME (RES)  
 UTK EGT 44.6 345 iP 06:19:08.95 (-0.33) eS 06:19:14.69 (-0.05)  
 UTK SLTN 140.0 42 eP :25.29 (0.42) eS :43.88 (2.12)  
 UTK DATN 173.9 270 eP :33.28 (3.11X) eS :53.60 (2.66)  
 UTK PDTN 244.9 265 eP :40.91 (-0.35) eS :20:09.25 (-0.65)  
 UTK ABTN 269.2 280 eP :51.94 (7.68X) eS :18.19 (3.10)

\*\*\*\*\*2000 NOVEMBER 24; 06:45 - FLATWOODS, 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 201124 064527.1 38.524 82.811 0.02 18 239 158 0.9 D D/D 1.2 11 0.9 1.7 B 2.4

SRCE STA DIST (KM) AZM PHASE ARRIVAL TIME (RES) PHASE ARRIVAL TIME (RES)  
 UTK SLTN 238.8 165 eP 06:46:05.29 (-0.30) eS 06:46:33.41 (-0.26)  
 UTK BLA 255.8 124 eP :06.18 (-1.60) eS :38.82 (1.40)  
 UTK MCWV 285.8 63 eP :12.92 (1.48) eS :41.23 (-2.53)  
 UTK EGT 294.2 189 eP :11.99 (-0.58) eS :46.00 (0.30)  
 UTK WCI 312.1 265 eP :14.51 (-0.15) eS :50.35 (1.03)  
 UTK ORT 318.9 205 eP :15.98 (0.45) eS :49.86 (-0.97)  
 UTK DATN 391.8 212 eP :23.26 (-1.29) eS :47:07.43 (1.00)  
 UTK ABTN 413.9 226 eP :27.09 (-0.15) eS :11.04 (-0.05)

UTK PDTN 450.9 218 eP :30.55 (-1.25) eS :17.13 (-1.85)

\*\*\*\*\*2000 DECEMBER 03; 02:20 - CHARLESTON, 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 201203 022039.7 32.948 80.170 6.2 8 5 138 0.1 C B/C 0.7 360 0.7 1.2 0.8

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	RGR	5.0	207	iPu	02:20:41.49 (-0.03)	iSd	02:20:42.19 (0.12)
USC	MGS	6.2	154	iPu	:41.72 (0.02)	iSd	:42.38 (-0.11)
USC	SVS	7.7	287	iPu	:41.85 (-0.04)	iSd	:42.80 (-0.03)
USC	CSU	10.2	66	iPd	:42.14 (0.07)	iSd	:43.40 (-0.91)

\*\*\*\*\*2000 DECEMBER 07; 14:08 - KENTUCKY\*\*\*\*\*

NEIC Felt (IV) at Evansville and (III) at Mount Vernon, Indiana. Felt in Gibson, Knox, Pike, Posey, Vanderburgh and Warrick Counties, Indiana; Gallatin and White Counties, Illinois and in the Henderson, Kentucky, area; standard deviation = 1.0 on 20 of 36 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 201207 140849.4 37.973 87.660 5.0F 20 59 5.7 4.8 3.9 4

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
NEIC	MOKY	58.9	201	iPc	14:08:57.06 (-2.9)		
NEIC	SMKY	70.1	151	iP	:09:02.04 (0.0)		
NEIC	LOKY	99.0	215	iP	:06.30 (-0.7)		
NEIC	WCI	123.4	76	eP	:09.99 (-0.7)	eS	14:09:24.50 ( X)
NEIC	SIUC	140.1	259	eP	:12.40 (-0.9)		
NEIC	BLO	165.7	36	ePc	:16.57 (-0.3)		
NEIC	FMKY	182.4	218	iPd	:20.10 (1.1)		
NEIC	WVT	204.6	184	eP	:22.83 (0.8)		
NEIC	SLM	236.9	289	eP	:26.47 (0.3)		
NEIC	GLST	238.0	218	eP	:26.86 (0.6)		
NEIC	RELT	260.2	215	eP	:29.64 (0.5)		
NEIC	ABTN	270.2	149	eP	:31.06 (0.7)		
NEIC	CWPT	279.1	219	eP	:32.08 (0.5)		
NEIC	GNAR	305.8	224	ePn	:36.27 (1.2)		
NEIC	DLAR	318.0	222	ePn	:35.67 (-0.9)		
NEIC	PWLA	333.6	186	ePn	:38.69 (0.1)		
NEIC	PDTN	340.3	151	ePn	:39.65 (0.3)		
NEIC	EBZ	349.2	206	ePn	:40.48 (0.1)		
NEIC	SFTN	359.2	217	ePn	:41.60 (-0.1)		
NEIC	QUAR	371.4	227	ePn	:43.75 (0.4)		
NEIC	ACSO	475.9	57	ePn	:54.90 (-1.8X)		
NEIC	JFWS	591.6	339	ePn	:10:08.90 (-2.5X)		
NEIC	GOGA	632.7	142	ePn	:16.11 (-0.5X)		
NEIC	BLA	645.0	95	ePn	:16.80 (-1.4X)		
NEIC	MIAR	653.9	236	ePn	:17.59 (-1.7X)		
NEIC	MCWV	703.9	72	ePn	:24.01 (-1.7X)		
NEIC	JSC	706.1	124	ePn	:23.65 (-2.4X)		
NEIC	LHS	728.4	120	ePn	:26.34 (-2.4X)		
NEIC	SSPA	892.9	68	ePn	:45.92 (-3.6X)		
NEIC	SADO	1037.5	41	Pn	:11:02.33 (-5.2X)	Sn Lg	14:12:43.63 ( X) :13:42.20 ( X)
NEIC	WMOK	1059.7	254	ePn	:06.29 (-4.1X)		
NEIC	ULM	1513.4	337	Pn	:58.25 (-7.1X)		
NEIC	TXAR	1763.6	242	Pn	:12:31.13 (-3.9X)		
NEIC	SCHQ	2447.5	33	P	:13:41.88 (-4.3X)		
NEIC	YKA	3288.2	335	eP	:14:53.10 (-3.9X)		
NEIC	ILAR	4822.7	328	P	:16:52.65 (-1.4X)		

## Additional Data:

GIT ATL P 14:10:24

## \*\*\*\*\*2000 DECEMBER 10; 17:51 - ATHENS, 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	201210	175151.6		35.466	84.669	19.3	18	48	104	0.5	C	C/C	0.5	327	0.3	0.7	A		2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	OLT	47.7	223	iPd	17:51:59.93 (0.10)	eS	17:52:06.09 (0.16)
UTK	ORT	59.2	34	eP-	:52:01.35 (-0.22)	iS	:09.33 (0.41)
UTK	PDTN	109.4	259	iP	:08.91 (-0.39)	iS	:22.51 (0.27)
UTK	EGT	133.2	68	eP+	:12.18 (-0.82)	eS	:28.28 (-0.33)
UTK	ABTN	138.4	290	eP	:13.30 (-0.46)	eS	:30.43 (0.53)
UTK	SHAL	210.5	238	eP	:23.64 (-1.04)	eS	:50.27 (1.52)
UTK	GOGA	253.3	154	iP+	:30.04 (0.09)	iS	:59.12 (1.27)
UTK	SLTN	254.2	64	eP	:30.11 (-0.07)	eS	:57.74 (-0.52)
UTK	WVT	295.1	285	eP	:40.33 (5.24X)	eS	:53:07.40 (0.64)
UTK	PLAL	314.7	261	eP	:46.93 (9.41X)	eS	:13.18 (2.23)

## \*\*\*\*\*2000 DECEMBER 18; 23:34 - CHARLESTON, 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	201218	233433.8		32.950	80.199	9.5	10	5	137	0.1	B	A/C	0.4	360	0.4	0.6			1.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	RGR	4.7	175	iPu	23:34:35.92 (-0.09)	iSd	23:34:36.95 (0.07)
USC	SVS	5.1	294	iPu	:36.05 (-0.01)	iSu	:37.07 (-0.02)
USC	HBF	12.5	269	iPd	:36.97 (0.08)	iSu	:38.37 (0.03)
USC	CSB	12.6	71	iPd	:36.77 (0.02)	iSd	:39.14 (-0.31)
USC	WAS	13.3	211	iPd	:37.16 (0.07)	iSd	:39.18 (-0.06)

## \*\*\*\*\*2000 DECEMBER 21; 22:26 - RINGGOLD, 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	201221	222628.7		34.942	85.010	0.02	14	23	127	0.5	D	D/C	0.7	39	0.4	1.8	B		2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	OLT	23.1	357	eP	22:26:32.77 (0.28)		
UTK	ABTN	144.6	317	iPd	:52.36 (0.05)	iS	22:27:09.39 (-0.31)
UTK	MSAL	152.4	266	iP	:53.51 (-0.03)	eS	:11.74 (-0.08)
UTK	EGT	188.4	55	eP	:59.89 (0.64)	eS	:22.52 (0.82)
UTK	GOGA	221.5	140	eP	:27:04.29 (-0.14)	eS	:30.36 (-0.25)
UTK	PLAL	280.0	272	eP	:10.73 (-1.61)	eS	:46.13 (2.01)
UTK	WVT	287.7	298	eP	:19.74 (6.46X)	eS	:47.36 (1.60)
UTK	SLTN	310.0	57	eP	:15.08 (-1.08)	eS	:51.72 (0.98)

## \*\*\*\*\*2000 DECEMBER 26; 04:40 - SPRING CITY, TENNESSEE\*\*\*\*\*

UTK Event may be 2 very small earthquakes at essentially the same location about 5 seconds apart.

SRCE	DATE	HRMN	SEC	LAT-N	LON-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
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UTK 201226 044037.8 35.665 84.857 26.7 8 57 134 0.3 D C/D 1.4 345 0.6 4.1 C 1.7

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	ORT	56.8	61	eP	04:40:48.21 (0.41)	iS	04:40:55.00 (-0.08)
UTK	PDTN	100.0	245	eP	:54.28 (0.10)	eS	:41:06.17 (0.06)
UTK	CRTN	109.3	57	eP	:56.73 (1.13)		
UTK	ABTN	115.8	283	eP	:56.44 (-0.14)	eS	:10.30 (0.04)
UTK	GOGA	280.7	153	eP	:41:16.88 (-2.02)		

**SOUTHEASTERN U.S. RESERVOIR ACTIVITY DURING 2000**

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.

**\*\*\*\*\*2000 JANUARY 04; 12:06 - 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	200104	120622.8		34.346	81.320	1.1	14	2	113	0.1	B		0.3	360	0.3	0.9				1.9	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR10	2.0	237	iPd	12:06:23.16 (0.00)	iSu	12:06:23.50 (0.04)														
USC	MR01	2.7	126	iPd	:23.20 (-0.06)	iSu	:23.56 (-0.09)														
USC	MR07	2.7	349	iPd	:23.25 (-0.02)	iSu	:23.64 (-0.02)														
USC	MR05	8.8	189	iPd	:24.26 (0.03)	iSu	:25.33 (-0.02)														
USC	JSC	9.2	143	iPd	:24.26 (-0.02)	iSu	:25.37 (-0.07)														
USC	MR02	18.9	154	iPd	:25.81 (-0.06)	iSu	:28.16 (-0.08)														
USC	LHS	49.3	73	iPd	:30.82 (0.18)	iSu	:36.88 (0.24)														

**\*\*\*\*\*2000 JANUARY 11; 00:31 - 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	200111	003122.8		34.429	81.323	3.3	14	7	256	0.1	C		0.4	360	0.4	0.8				1.5	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR07	6.5	182	iPu	00:31:24.03 (-0.01)	iSu	00:31:24.86 (-0.10)														
USC	MR10	10.4	188	iPu	:24.64 (0.02)	iSu	:25.99 (0.02)														
USC	MR01	11.0	167	iPd	:24.75 (0.02)	iSu	:26.19 (0.03)														
USC	JSC	17.5	161	iPu	:25.68 (-0.05)	iSu	:27.87 (-0.05)														
USC	MR05	17.9	183	iPu	:25.86 (0.06)	iSu	:28.17 (0.13)														
USC	MR02	27.5	162	iPu	:27.36 (0.00)	iSu	:30.74 (-0.05)														
USC	LHS	47.6	83	iPu	:30.45 (-0.03)	iSu	:36.33 (0.05)														

**\*\*\*\*\*2000 JANUARY 11; 08:21 - 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	200111	082111.4		34.430	81.318	2.4	14	7	253	0.0	C		0.2	360	0.2	0.8				2.3	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR07	6.6	186	iPu	08:21:12.47 (-0.07)	iSu	08:21:13.43 (0.00)														
USC	MR10	10.5	190	iPd	:13.16 (0.01)	iSu	:14.55 (0.06)														
USC	MR01	11.0	169	iPd	:13.21 (-0.02)	iSu	:14.63 (-0.01)														
USC	JSC	17.4	162	iPd	:14.20 (-0.04)	iSu	:16.40 (-0.01)														
USC	MR05	18.1	185	iPd	:14.39 (0.05)	iSu	:16.63 (0.05)														

USC	MR02	27.5	163	iPd	:15.88	(0.01)	iSu	:19.21	(-0.08)
USC	LHS	47.1	83	iPd	:18.94	(0.00)	iSu	:24.70	(0.01)

\*\*\*\*\*2000 MARCH 10; 22:34 - 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	200310	2234	14.0	34.345	81.321	0.4	14	2	114	0.1	B	0.2	360	0.2	0.5				1.5			

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MR10	1.8	239	iPd	22:34:14.32 (0.01)	iSu	22:34:14.60 (0.03)
USC	MR01	2.7	121	iPu	:14.46 (-0.02)	iSu	:14.85 (-0.01)
USC	MR07	2.9	353	iPd	:14.51 (0.01)	iSu	:14.82 (-0.08)
USC	MR05	8.6	188	iPd	:15.46 (0.03)	iSu	:16.59 (0.04)
USC	JSC	9.1	142	iPd	:15.45 (-0.06)	iSd	:16.58 (-0.10)
USC	MR02	18.8	154	iPd	:17.07 (-0.02)	iSu	:19.45 (-0.02)
USC	LHS	49.5	72	iPd	:22.14 (0.23)	iSu	:28.05 (0.10)

\*\*\*\*\*2000 MAY 28; 14:52 - 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	200528	1452	44.5	34.331	81.322	1.3	12	2	103	0.1	B	0.2	360	0.2	0.5				2.0			

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MR10	1.5	292	iPd	14:52:44.86 (-0.03)	iSu	14:52:45.22 (0.06)
USC	MR01	2.4	88	iPu	:44.96 (-0.05)	iSu	:45.29 (-0.09)
USC	MR07	4.4	357	iPu	:45.31 (0.00)	iSu	:45.87 (-0.03)
USC	MR05	7.1	189	iPd	:45.72 (-0.02)	iSu	:46.68 (0.02)
USC	MR02	17.5	151	iPu	:47.39 (-0.05)	iSu	:49.70 (0.05)
USC	LHS	50.0	71	iPd	:52.66 (0.12)	iSu	:58.78 (0.15)

\*\*\*\*\*2000 MAY 29; 23:59 - 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	200529	2359	04.9	34.330	81.321	1.1	14	2	105	0.1	B	0.2	360	0.2	0.5				1.5			

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MR10	1.7	295	iPu	23:59:05.22 (-0.03)	iSu	23:59:05.54 (0.02)
USC	MR01	2.3	85	iPd	:05.33 (-0.02)	iSu	:05.66 (-0.04)
USC	MR07	4.5	355	iPd	:05.66 (-0.03)	iSu	:06.32 (0.03)
USC	MR05	7.0	190	iPd	:06.09 (0.00)	iSu	:07.06 (0.07)
USC	JSC	7.9	135	iPd	:06.20 (-0.02)	iSu	:07.15 (-0.08)
USC	MR02	17.3	151	iPd	:07.77 (0.00)	iSu	:09.84 (-0.12)
USC	LHS	50.0	71	iPd	:13.03 (0.13)	iSu	:19.11 (0.12)

\*\*\*\*\*2000 MAY 29; 23:59 - 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	200529	2359	40.1	34.330	81.321	0.7	12	2	105	0.0	B	0.2	360	0.2	0.5				1.0			

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MR10	1.7	295	iPd	23:59:40.47 (-0.01)	iSu	23:59:40.72 (-0.02)
USC	MR01	2.3	84	iPu	:40.61 (0.03)	iSu	:40.91 (0.00)
USC	MR07	4.5	355	iPd	:40.92 (-0.02)	iSu	:41.58 (0.03)
USC	MR05	7.0	190	iPd	:41.35 (0.01)	iSu	:42.30 (0.05)
USC	JSC	7.8	135	iPd	:41.46 (-0.01)	iSu	:42.40 (-0.08)
USC	MR02	17.3	151	iPu	:43.04 (0.02)	iSu	:45.08 (-0.13)

## \*\*\*\*\*2000 JUNE 13; 14:34 - 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	200613	1434	19.7	34.330	81.316	0.5	12	2	95	0.0	B		0.2	360	0.2	1.0			1.2		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR10	2.1	289	iPu	14:34:20.10 (-0.03)	iSu	14:34:20.44 (0.00)														
USC	MR07	4.6	349	iPd	:20.53 (0.00)	iSu	:21.14 (0.00)														
USC	MR05	7.1	194	iPd	:20.95 (0.00)	iSd	:21.89 (0.01)														
USC	JSC	7.6	137	iPd	:21.03 (0.01)	iSu	:21.97 (-0.02)														
USC	MR02	17.1	153	iPd	:22.63 (0.05)	iSu	:24.71 (-0.04)														
USC	LHS	49.5	70	iPd	:27.81 (0.14)	iSu	:33.73 (0.02)														

## \*\*\*\*\*2000 JUNE 16; 15:04 - 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	200616	1504	28.6	34.336	81.316	0.8	10	2	153	0.0	B		0.1	360	0.1	0.2			1.9		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR10	2.0	271	iPd	15:04:29.02 (0.01)	iSu	15:04:29.30 (-0.01)														
USC	MR07	3.9	347	iPu	:29.29 (-0.03)	iSu	:29.85 (0.00)														
USC	MR05	7.8	193	iPd	:29.94 (0.01)	iSu	:30.91 (-0.02)														
USC	JSC	8.1	140	iPd	:30.01 (0.04)	iSu	:30.97 (-0.03)														
USC	MR02	17.7	154	iPd	:31.59 (0.04)	iSu	:33.81 (0.02)														
USC	LHS	49.3	71	iPd	:34.96 (-1.56X)	iSu	:41.63 (-0.89X)														

## \*\*\*\*\*2000 JUNE 16; 15:12 - 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	200616	1512	13.7	34.333	81.318	1.2	12	2	90	0.0	A		0.2	360	0.2	0.6			1.1		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR10	1.8	281	iPd	15:12:14.04 (-0.05)	iSu	15:12:14.41 (0.02)														
USC	MR07	4.2	351	iPd	:14.43 (-0.02)	iSu	:15.04 (0.02)														
USC	MR05	7.4	192	iPd	:14.97 (0.01)	iSu	:15.99 (0.08)														
USC	JSC	7.9	138	iPu	:15.02 (-0.02)	iSu	:16.06 (0.00)														
USC	MR02	17.5	152	iPd	:16.62 (0.01)	iSu	:18.82 (0.00)														
USC	LHS	49.6	71	iPd	:21.72 (0.07)	iSu	:27.80 (0.11)														

## \*\*\*\*\*2000 JUNE 19; 21:24 - 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	200619	2124	20.8	34.282	81.288	7.1	4	3	329	0.1	C								1.1		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	JSC	2.6	94	iPd	21:24:22.01 (-0.05)	iSu	21:24:23.02 (0.03)														
USC	LHS	49.3	64	iPd	:28.85 (0.07)	iSu	:34.78 (-0.05)														

## \*\*\*\*\*2000 JUNE 20; 08:47 - 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	200620	0847	26.6	34.332	81.319	0.7	12	2	95	0.0	B		0.2	360	0.2	0.4			1.6		
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														



USC	MR10	1.8	286	iPd	08:47:26.92	(-0.03)	iSu	08:47:27.23	(0.01)
USC	MR07	4.3	353	iPd	:27.33	(-0.03)	iSu	:27.94	(0.00)
USC	MR05	7.3	191	iPd	:27.85	(0.02)	iSu	:28.85	(0.08)
USC	JSC	7.9	137	iPu	:27.92	(-0.02)	iSu	:28.90	(-0.05)
USC	MR02	17.5	152	iPu	:29.54	(0.04)	iSu	:31.62	(-0.08)
USC	LHS	49.7	71	iPd	:34.65	(0.08)	iSu	:40.68	(0.05)

\*\*\*\*\*2000 JUNE 20; 10:27 - 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	200620	102707.2		34.332	81.319	1.0	12	2	94	0.0	B		0.2	360	0.2	0.7				1.2	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)		
USC	MR10	1.8	285	iPd	10:27:07.54	(-0.05)	iSu	10:27:07.90	(0.03)
USC	MR07	4.3	353	iPd	:07.95	(-0.03)	iSu	:08.57	(0.01)
USC	MR05	7.3	191	iPd	:08.49	(0.03)	iSu	:09.42	(0.02)
USC	JSC	7.9	137	iPu	:08.59	(0.03)	iSu	:09.53	(-0.04)
USC	MR02	17.5	152	iPu	:10.16	(0.04)	iSu	:12.31	(-0.01)
USC	LHS	49.7	71	iPd	:15.19	(0.00)	iSu	:21.31	(0.07)

\*\*\*\*\*2000 AUGUST 27; 21:30 - 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	200827	213026.9		34.328	81.324	1.4	12	2	117	0.0	B		0.1	360	0.1	0.3				1.2	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)		
USC	MR10	1.6	305	iPu	21:30:27.27	(-0.04)	iSu	21:30:27.61	(0.01)
USC	MR01	2.6	81	iPd	:27.42	(-0.03)	iSu	:27.82	(-0.02)
USC	MR07	4.7	358	iPd	:27.77	(0.00)	iSu	:28.42	(0.02)
USC	MR05	6.8	188	iPu	:28.08	(-0.02)	iSu	:29.04	(0.06)
USC	JSC	7.9	132	iPu	:28.29	(0.02)	iSd	:29.27	(-0.02)
USC	MR02	17.3	150	iPu	:29.77	(-0.04)	iSu	:32.07	(0.08)

\*\*\*\*\*2000 SEPTEMBER 13; 18:34 - 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	200913	183414.1		34.380	81.313	1.7	10	2	212	0.1	C		0.4	360	0.4	0.7				1.1	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)		
USC	MR07	1.5	225	iPd	18:34:14.41	(-0.05)	iSu	18:34:14.80	(0.04)
USC	MR01	5.6	163	iPd	:15.06	(0.01)	iSu	:15.79	(-0.01)
USC	JSC	12.2	156	iPd	:16.08	(0.00)	iSu	:17.50	(-0.11)
USC	MR02	22.1	160	iPu	:17.78	(0.07)	iSu	:20.51	(0.03)
USC	LHS	47.7	77	iPd	:21.68	(-0.04)	iSu	:27.60	(0.07)

\*\*\*\*\*2000 SEPTEMBER 13; 19:04 - 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	200913	190420.7		34.380	81.315	2.4	12	1	215	0.1	C		0.5	360	0.5	0.6				1.2	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)		
USC	MR07	1.4	221	iPd	19:04:21.01	(-0.14)	iSu	19:04:21.63	(0.11)
USC	MR01	5.6	162	iPd	:21.59	(-0.10)	iSu	:22.39	(-0.08)
USC	JSC	12.2	156	iPu	:22.69	(-0.01)	iSu	:24.13	(-0.11)
USC	MR05	12.6	188	iPu	:22.83	(0.06)	iSu	:24.46	(0.10)
USC	MR02	22.2	159	iPu	:24.27	(-0.05)	iSu	:27.16	(0.06)
USC	LHS	47.8	77	iPd	:28.35	(0.01)	iSu	:34.26	(0.08)

## \*\*\*\*\*2000 SEPTEMBER 29; 16:20 - 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	200929	162047.4		34.332	81.323	0.2	12	3	170	0.0	B		0.2	360	0.2	0.6				1.1	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MR01	2.5	90	iPu	16:20:47.86 (0.01)	iSu	16:20:48.22 (0.01)
USC	MR07	4.3	358	iPd	:48.11 (-0.04)	iSu	:48.76 (0.02)
USC	MR05	7.2	188	iPd	:48.63 (0.00)	iSu	:49.61 (0.04)
USC	JSC	8.2	135	iPd	:48.76 (-0.02)	iSu	:49.78 (-0.07)
USC	MR02	17.6	151	iPd	:50.33 (0.00)	iSu	:52.55 (-0.02)
USC	LHS	50.1	71	iPu	:55.84 (0.40)	iSu	:21:01.72 (0.16)

## \*\*\*\*\*2000 OCTOBER 10; 17:35 - JOCASSE 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	201010	173536.1		35.094	82.984	6.5	6	11	331	0.0	C B/D		1.1	360	1.1	1.9				1.6	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	JVW	11.4	186	ePd	17:35:38.30 (-0.06)	eSu	17:35:40.14 (0.03)
USC	BG3	12.2	157	ePu	:38.44 (0.00)	eSu	:40.25 (-0.01)
USC	SMT	18.2	176	ePu	:39.42 (0.06)	eSu	:41.88 (-0.02)

## \*\*\*\*\*2000 OCTOBER 16; 20:34 - JOCASSE 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	201016	203429.5		34.760	83.010	12.0	6	9	295	0.0	D D/D		2.4	360	2.4	1.8				1.6	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MMC	9.0	76	ePu	20:34:31.94 (-0.01)	eSu	20:34:33.91 (0.01)
USC	SMT	19.3	11	ePu	:33.20 (-0.04)	eSu	:36.21 (0.02)
USC	BG3	26.8	15	ePu	:34.35 (0.05)	eSu	:38.06 (-0.03)

## \*\*\*\*\*2000 OCTOBER 20; 16:26 - JOCASSE 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	201020	162634.2		35.036	83.164	3.4	6	16	332	0.0	D C/D		1.6	360	1.6	9.5				1.6	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	CCK	15.8	95	ePu	16:26:36.96 (0.00)	eSd	16:26:39.14 (0.00)
USC	SMT	21.2	124	ePu	:37.77 (-0.01)	eSd	:40.59 (-0.01)
USC	BG3	21.8	103	ePu	:37.86 (0.00)	eSu	:40.75 (0.02)

## \*\*\*\*\*2000 OCTOBER 26; 16:02 - JOCASSE 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	201026	160228.3		35.126	83.022	2.2	8	12	339	0.0	D C/D		1.1	360	1.1	7.3				1.5	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	CCK	11.7	166	ePd	16:02:30.36 (0.00)	eSd	16:02:32.00 (0.00)
USC	JVW	14.9	171	ePd	:30.85 (-0.01)	eSd	:32.89 (0.00)
USC	BG3	16.8	151	ePu	:31.14 (0.00)	eSd	:33.39 (0.00)
USC	SMT	22.1	168	ePu	:32.00 (0.00)	eSu	:34.92 (0.00)

\*\*\*\*\*2000 NOVEMBER 01; 16:31 - JOCASSE 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	201101	1631	56.9	35.068	82.757	2.8	6	18	343	0.0	D	C/D	1.6	360	1.6	14.0				1.7	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	BG3	18.0	242	ePu	16:31:59.92 (-0.01)	eSu	16:32:02.32 (0.00)														
USC	JVW	23.5	249	ePd	:32:00.83 (-0.01)	eSd	:03.95 (0.00)														
USC	SMT	24.8	232	ePd	:01.03 (0.00)	eSu	:04.31 (0.02)														

\*\*\*\*\*2000 NOVEMBER 10; 16:29 - 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	201110	1629	16.8	34.337	81.313	0.6	13	2	87	0.0	A		0.1	360	0.1	0.4				1.0	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR01	1.7	109	iPd	16:29:17.12 (-0.02)	iSu	16:29:17.41 (0.01)														
USC	MR10	2.2	268	iPu	:17.22 (0.00)	iSu	:17.56 (0.02)														
USC	MR07	3.9	344	iPd	:17.48 (-0.01)	iSu	:17.99 (-0.02)														
USC	MR05	7.9	194	iPu	:18.17 (0.02)	iSu	:19.21 (0.04)														
USC	JSC	8.0	142	iPd	:18.11 (-0.04)	iSu	:19.11 (-0.08)														
USC	MR02	17.7	154	iPd	:19.76 (0.01)	iSd	:29.22 (7.23X)														
USC	LHS	49.0	71	iPu	:24.84 (0.17)	iSu	:30.78 (0.13)														

\*\*\*\*\*2000 NOVEMBER 29; 17:43 - 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	201129	1743	05.9	34.330	81.321	0.6	12	2	144	0.0	B		0.2	360	0.2	0.6				1.0	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	MR10	1.7	296	iPu	17:43:06.22 (-0.01)	iSu	17:43:06.46 (-0.02)														
USC	MR01	2.4	85	iPd	:06.37 (0.03)	iSu	:06.64 (-0.04)														
USC	MR07	4.5	356	iPu	:06.70 (0.01)	iSd	:07.28 (-0.01)														
USC	JSC	7.9	134	iPu	:07.20 (-0.03)	iSu	:08.20 (-0.04)														
USC	MR02	17.3	151	iPu	:08.77 (-0.01)	iSd	:11.03 (0.06)														
USC	LHS	50.0	71	iPu	:14.21 (0.30)	iSu	:20.00 (0.00)														

\*\*\*\*\*2000 DECEMBER 08; 08:53 - JOCASSE 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	201208	0853	47.8	34.944	82.963	1.5	10	2	139	0.0	B	A/C	0.4	360	0.4	0.8				1.3	
SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)														
USC	SMT	1.6	208	iPd	08:53:48.26 (-0.04)	iSd	08:53:48.71 (0.03)														
USC	BG3	6.2	27	iPu	:49.01 (0.04)	iSu	:49.84 (-0.03)														
USC	JVW	6.3	329	iPu	:49.08 (0.06)	iSd	:49.90 (-0.05)														
USC	CCK	9.2	343	iPd	:49.55 (0.05)	iSd	:50.78 (-0.03)														
USC	MMC	18.7	167	iPu	:51.00 (0.02)	iSd	:53.40 (-0.05)														

\*\*\*\*\*2000 DECEMBER 11; 17:28 - JOCASSE 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	201211	1728	30.6	35.110	82.992	1.2	8	10	335	0.0	D	C/D	0.9	360	0.9	33.3				1.6	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	CCK	9.7	180	ePd	20:12:32.38 (-0.03)	eSd	20:12:33.75 (-0.04)
USC	JVW	13.1	182	ePu	:32.91 (-0.02)	eSu	:34.77 (0.04)
USC	BG3	14.1	157	ePu	:33.11 (0.04)	eSu	:34.95 (-0.03)
USC	SMT	20.0	174	ePd	:34.06 (0.02)	eSd	:36.72 (0.02)

\*\*\*\*\*2000 DECEMBER 13; 16:58 - JOCASSE 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	201213	1658	21.6	34.798	82.698	2.0	8	20	309	0.0	D	C/D	2.3	360	2.3	99.0				1.8	

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
USC	MMC	19.9	264	ePu	16:58:24.93 (0.01)	eSu	16:58:27.52 (-0.02)
USC	SMT	29.0	301	ePu	:26.37 (-0.03)	eSu	:30.25 (0.06)
USC	BG3	30.4	316	ePd	:26.63 (0.02)	eSu	:30.54 (-0.02)
USC	CCK	36.6	313	ePu	:27.68 (0.01)	eSd	:32.41 (-0.03)

### 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	8409-	TVA/UTK	Auburntown, TN
AMG	32-03.56	84-13.06	106	7309-	GSW	Americus, GA
ANTN	36-10.30	85-13.88	612	8305	TVA/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
BCRT	35-45.95	84-34.58	409	9806-	CERI	Bacon Ridge, TN
BG3	34-59.58	82-55.90	366	86 -	DPC	Lake Jocassee, SC
BHT	35-51.78	84-56.39	732	8110-	CERI	Blowhole, TN
BLA	37-12.68	80-25.21	634	6209-	VTSO/NEIC	Blacksburg, VA
BRBC	35-44.30	82-17.15	1976	8205-	CERI	Mt. Mitchell, NC
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 Creek St. 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
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	8403-	TVA/UTK	Comb Ridge, TN
CSB	32-59.22	80-04.31	83	9705-	CSU-USGS	Charleston Southern Univ., SC
CSU	32-59.22	80-04.31	7	9705-	CSU-USGS	Charleston Southern Univ., SC
DALG	34-46.43	85-00.47	329	9103-	GIT	Dalton, GA
DATN	35-30.00	85-05.17	636	9903-	UTK	Dayton, TN

DEMA	39-19.12	75-36.59	12	9910-	DGS	DE Emerg. Mgmt Agency, DE
DRC	33-06.45	80-23.30	20	8303-	CSU-USGS	Dorchester, SC
DXN	33-03.23	81-37.32	61	9607-	WSRC	Girard, GA
DYTN	35-29.47	85-05.54	580	0005-	CERI	Dayton, TN
EGT	35-54.05	83-17.88	1103	9406	TVA/UTK	English Mountain, 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
FDKY	36-47.40	85-47.65	306	8703 -	TVA/UTK	Freedom, KY
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
GFM	36-06.66	81-48.42	1726	8205-	CERI	Grandfather Mtn., NC
GLT	36-21.72	86-29.88	159	8111-	CERI-VCSS	Gallatin, TN
GMG	34-51.76	84-40.22	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
GRBT	35-40.45	84-11.82	329	0007-	CERI	Greenback, TN
GWDE	38-49.54	75-37.03	19	9508-0501	USGS/DGS	Greenwood, DE**
HAKY	37-06.34	86-35.10	169	8706 -	TVA/UTK	Hadley, KY
HAW	33-21.60	81-36.60	85	0010-	WSRC	Hawthorne Fire Tower, SC
HBF	32-56.85	80-19.96	-89	7303-	USC	Harts Bluff, SC
HPKT	35-55.56	83-63.75	305	8003 -	TVA/RAH	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
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	8308-	TVA/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	8307	TVA/UTK	Monte Sano, AL
MVL	39-59.52	76-21.04	91	7410-	MVU	Millersville, PA
MYNC	35-04.43	89-07.67	550	94 -	USGS	Murphy, NC
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	9308 -	TVA/UTK	Ooltewah, TN
ORT	35-54.57	84-18.29	370	8307 -	TVA/UTK	Oak Ridge, TN
PDTN	35-16.40	85-50.97	335	8509 -	TVA/UTK	Piedmont, TN
PKNC	36-02.77	81-09.45	785	8211-	CERI	Pores Knob, NC
PLVA	36-39.96	81-09.60	1353	8211-	CERI	Point Lookout, VA
PWLA	34-58.80	88-03.84	204	8005-	CERI	Pickwick Lake, AL
RBNC	35-21.42	82-59.16	1829	8205-	CERI	Richland Balsam, NC
RCGA	34-58.57	85-20.90	460	8110-	CERI	Rock City, GA
RGR	32-54.45	80-11.65	-52	8606-	CSU-USGS	(Roger Stewart) SC

RICH	35-55.14	82-49.14	968	8306-	CERI	Rich Mtn., NC
SCOM	38-44.48	75-24.86	12	9910-	DGS	Sussex Co Emerg. Op Ctr, DE
SHAL	34-25.97	86-36.10	328	9803-	UTK	AL
SLTN	36-26.59	82-07.23	1280	8401 -	TVA/UTK	Elizabethton, TN
SMM	34-49.95	82-48.25	468	9608	DPC	Six Mile Mountain, SC
SMNC	35-35.01	81-38.16	722	0007-	CERI	South Mountain State Park, 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
SWET	35-12.98	85-55.92	581	0005-	CERI	Sewanee, TN
TCT	36-00.32	87-33.17	245	8803-	TVA/UTK	Tennessee City, TN
TKL	35-39.48	83-46.44	350	78 -	UTK	Tuckaleechee Caverns, TN
TQTN	35-30.96	84-43.55	260	8607 -	TVA/UTK	Tranquillity, TN
TRYN	35-16.02	82-14.76	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
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

\*Operated by Rich Hopkins.

\*\*Operated by US Geological Survey and maintained by DGS.

## 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 36, 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:  $MDB = -2.36 + 2.23 \text{ Log}(D) + 0.12 \text{ Log}(K)$  (MDB > 2.6)

$MDB = -3.38 + 2.74 \text{ Log}(D)$  (MDB < 2.7)

VTSO, UTK, and GIT:  $MDB = -3.45 + 2.85 \text{ Log}(D)$  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:  $MDL = -0.87 + 2.0 \text{ Log}(D) + 0.0035 X$  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  
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

## APPENDIX A

### PROGRESS REPORT ON THE ESTABLISHMENT OF MARYLAND GEOLOGICAL SURVEY SEISMIC STATION

FEMA/MEMA Quarterly Report (January 1-March 31 , 2001)

Significant accomplishments this quarter included receiving shipment of the seismometer, developing a real-time web display of data, testing of the complete system, receiving final approval of the site and the infrastructure construction needed, testing communications between the remote site and the base station, and awarding a contract to construct the radio tower needed for transmissions. All significant equipment for the project has been purchased and is on-hand to include radio transmitters, seismometer, computers, gps timing devices, and the like. Minor purchases for mounting the equipment and cabling the equipment will still need to be purchased depending upon final design. When the seismometer arrived, a thorough check of the system was performed. This included transmitting the collected data through the data radios, receiving the data at our base station, communicating that data to a computer, logging the data in the computer, retransmitting the computer logged data to University of Memphis and Columbia University, and displaying that data on a website. This test concluded that all functional areas of the design are working. To ensure that radio communications will work from the remote station to our base station, a test was conducted using the data radios and a truck with a large boom. With a height of around 55 feet, communications were not able to be established. Adjustments to the radios to include a band pass filter and a higher permanent radio tower are currently underway. The estimated completion of the project is on April 25, 2001. The only foreseeable change to this timeframe is if a repeater station is needed due to poor signal communications between the base station and the remote instrument.

The Maryland Geological Survey applied for Associate Membership in the IRIS Consortium (Incorporated Research Institutions for Seismology) to help with outreach and training activities. Several pages have been added to the seismic network web site. An educational resources page was added for teachers, students and hobbyists. Also, a series of fact sheets about earthquakes, originally created by IRIS, was adapted for the web and posted. The URLs for these pages are:

<http://www.mgs.md.gov/esic/seisnet/edu/> and  
<http://www.mgs.md.gov/esic/seisnet/edu/pagers.html>

Jerry Baum was interviewed twice by Channel 11 and 13 TV News concerning Maryland's seismograph unit. An additional interview in the Owings Mills Times appeared on January 18.

(contact Jerry Baum, Bob Conkwright, or Rich Ortt, 410-554-5500, or Fleming El-Amin, MEMA, 410-517-3609)