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CONTRIBUTORS

Auburn University
College of Charleston
Delaware Geological Survey
Georgia Institute of Technology
Maryland Geological Survey
Millersville University
United States Geological Survey
University of Memphis
University of South Carolina
University of Tennessee/Tennessee Valley Authority - JIEE
Virginia Polytechnic Institute and State University
Westinghouse Savannah River Company

Compiled and Edited by
M. C. Chapman, E. C. Mathena, and J. A. Snoke
Seismological Observatory
Virginia Polytechnic Institute and State University
Department of Geosciences
Blacksburg, Virginia 24061

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CONTRIBUTOR'S CONTACT INFORMATION

CODE	CONTRIBUTOR CONTACT	TELEPHONE	FAX	ELECTRONIC MAIL
AUAL	Auburn University			
	Lorraine Wolf	334-844-4878	334-844-4486	lwolf@geology.auburn.edu
CERI	Center for Earthquake Research and Information, University of Memphis			
	Mitchell Withers	901-678-4940	901-678-4734	withers@ceri.memphis.edu
	Christine Powell	901-678-8455	901-678-4734	powell@ceri.memphis.edu
COC	College of Charleston			
	Steven C. Jaume	843-953-1802	843-953-5446	jaumes@cofc.edu
DGS	Delaware Geological Survey			
	John Talley	302-831-8258	302-831-3579	waterman@udel.edu
	Stefanie Baxter	302-831-1576	302-831-3579	steff@udel.edu
GIT	Georgia Institute of Technology			
	Tim Long	404-894-2860	404-853-0232	tim.long@eas.gatech.edu
MGS	Maryland Geological Survey			
	Gerald Baum	410-554-5525	410-554-5502	GBaum@mgs.md.gov
MVU	Millersville University			
	Charles Scharnberger	717-872-3295	717-871-4725	cscharnberger@millersville.edu
NEIC	National Earthquake Information Center			
	John Minsch	303-236-1500	303-273-8450	minsch@usgs.gov
USC	University of South Carolina			
	Pradeep Talwani	803-777-6449	803-777-6610	talwani@geol.sc.edu
	Rick Cannon	803-777-9058	803-777-6610	cannon@geol.sc.edu
UTK	University of Tennessee/Tennessee Valley Authority - Joint Institute for Energy and Environment			
	Rick Williams	865-974-6169	423-974-2368	rwilliams@utk.edu
	Jeff Munsey	865-632-4777	423-632-4581	jwmunsey@tva.gov
VTSO	Virginia Tech Seismological Observatory			
	Martin Chapman	540-231-5036	540-231-3386	mcc@vt.edu
	Arthur Snoke	540-231-6028	540-231-3386	snoke@vt.edu
WSRC	Westinghouse Savannah River Company			
	Don Stevenson	803-725-3568	803-725-3272	donald.stevenson@srs.gov

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BULLETIN NUMBER 40

TABLE OF CONTENTS

FIGURES

TABLE

SEISMICITY OF THE SOUTHEASTERN UNITED STATES DURING 2005 included 59 tectonic earthquakes (not induced) with magnitudes exceeding 0.0. The largest earthquake reported during the year was $mb_{(Lg)}$ = 3.7 occurring on August 25, 2005. The epicenter was near Hot Springs, North Carolina.

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 2005, covered by SEUSSN Bulletins 1 through 40.

SOUTHEASTERN U.S. EARTHQUAKES DURING 2005 lists hypocentral parameters, magnitudes, and arrival times for tectonic earthquakes in the southeastern United States.

SEISMIC STATION LISTING AND NETWORK MAPS contains a listing of seismic stations potentially operational during the report period. 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 North), Maryland, and Delaware; and includes Tennessee and Kentucky (east of longitude 87 degrees West).

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 40 are also accessible via the ANSS catalog at ***http://quake.geo.berkeley.edu/anss***.

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

Acknowledgments

This report is the fortieth SOUTHEASTERN UNITED STATES SEISMIC NETWORK BULLETIN and covers the period from January through December, 2005. The organizations supplying data for this Bulletin are Auburn University, College of Charleston, Delaware Geological Survey, Georgia Institute of Technology, Maryland Geological Survey, Millersville University, United States Geological Survey (National Earthquake Information Center), 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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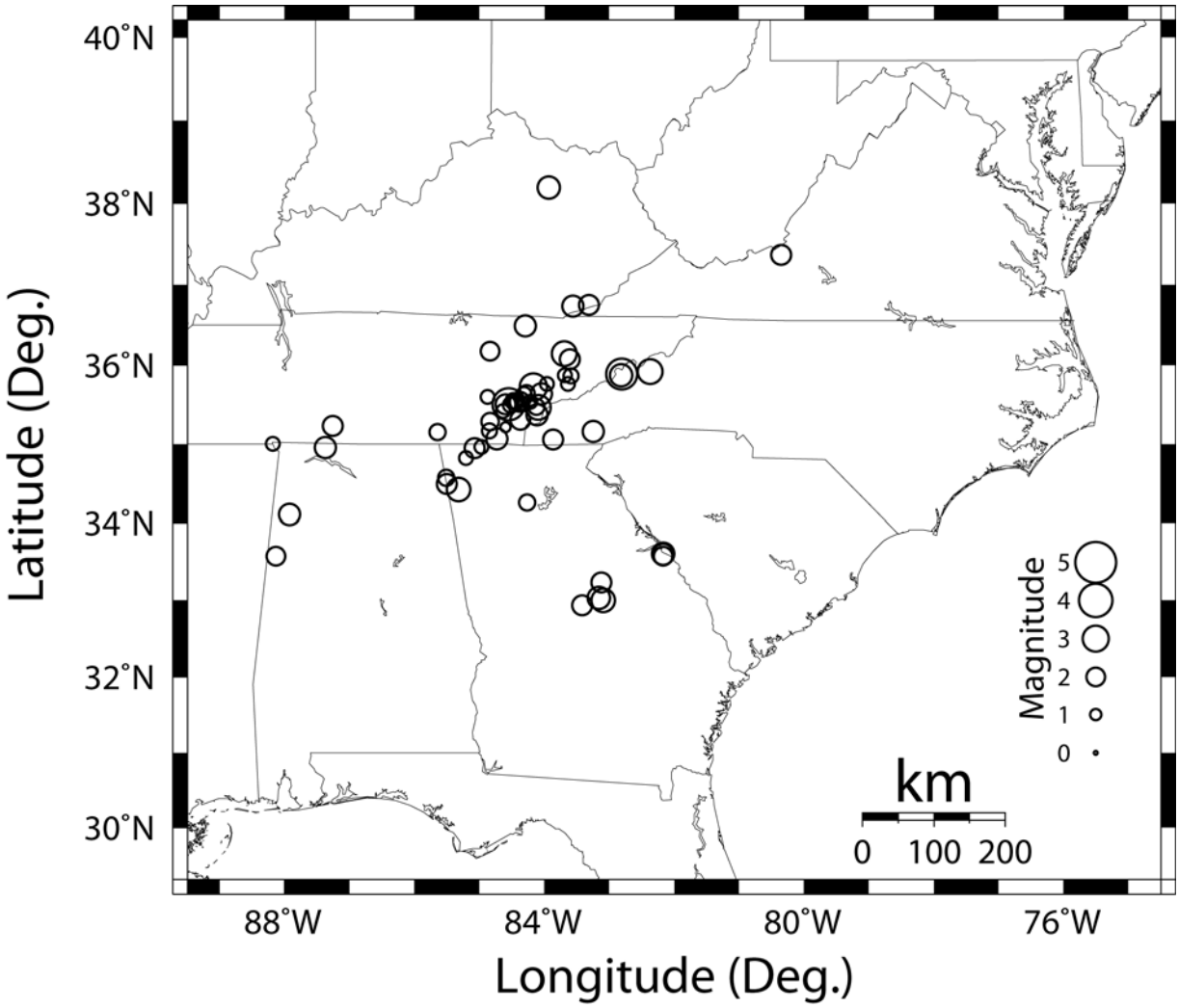

FIGURE 1. Epicenters of earthquakes (M ≥ 0.0) in the southeastern United States for this report period.

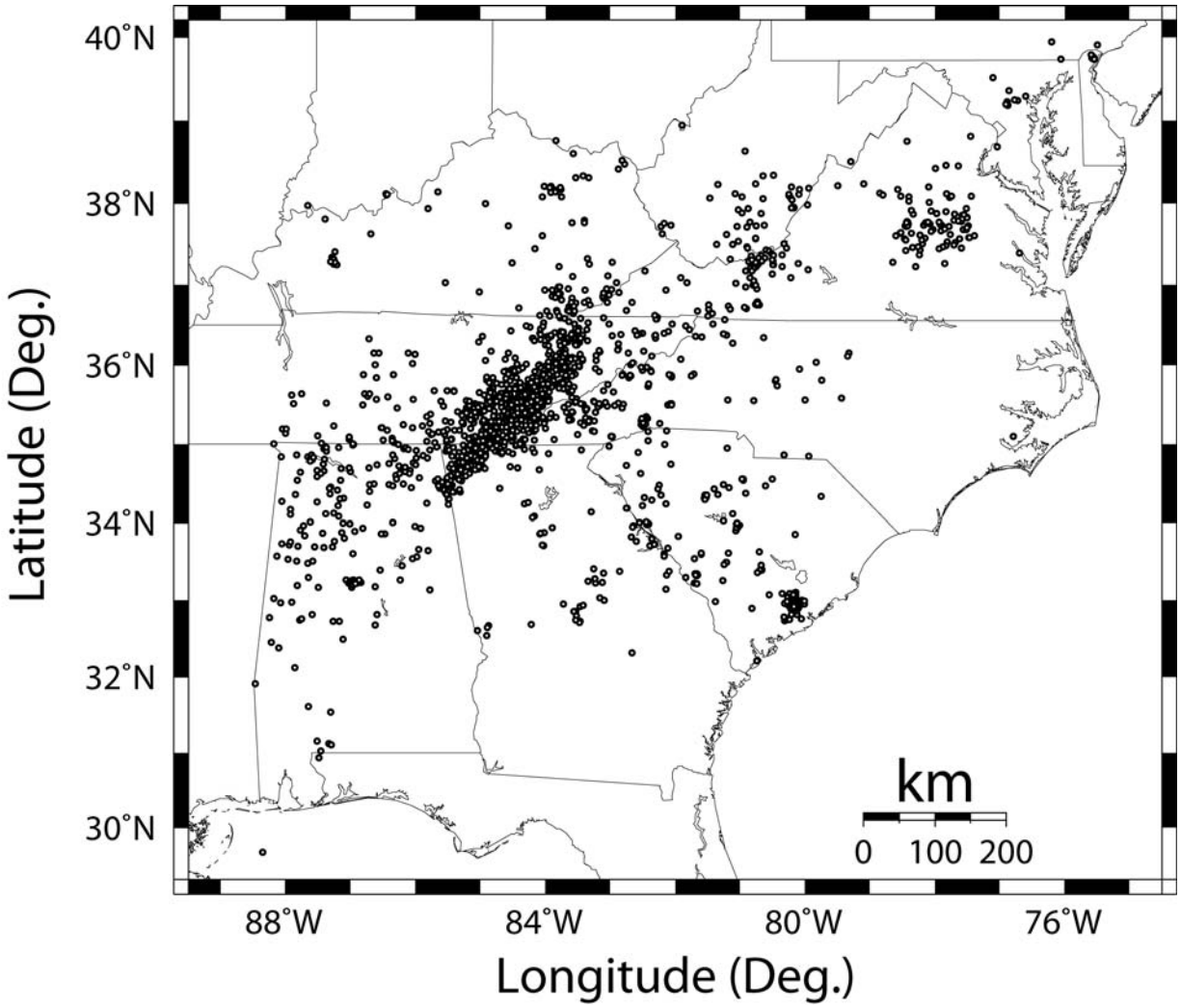

FIGURE 2. Epicenters of earthquakes (M ≥ 0.0) in the southeastern United States from July 1977 through this report period.

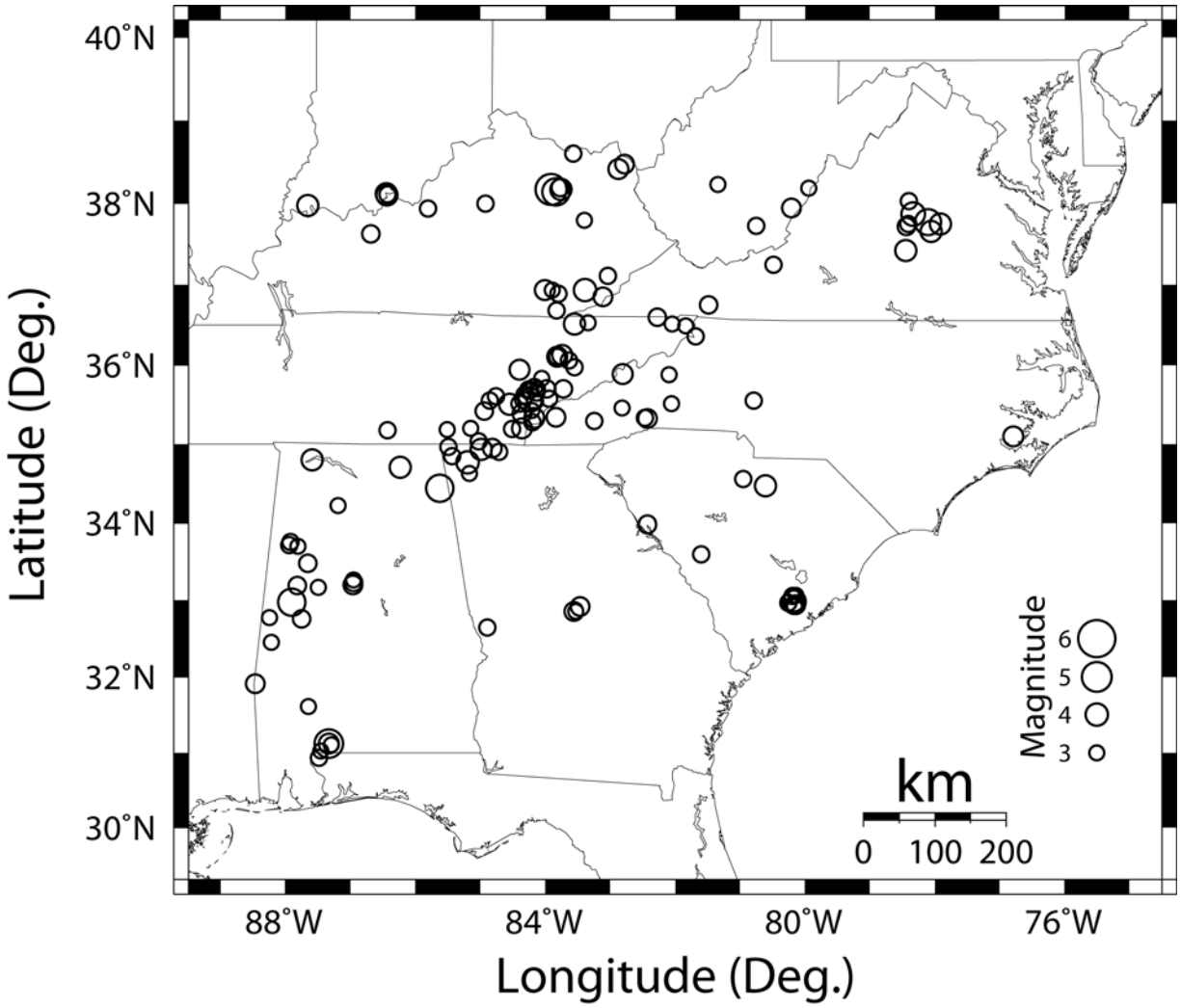

FIGURE 3. Epicenters of earthquakes (M ≥ 3.0) in the southeastern United States from July 1977 through this report period.

SEUSSN EARTHQUAKE CATALOG STATISTICS

TABLE 1. SEUSSN Report Period Earthquake Catalog Statistics

Period: January through December 2005 (1 year)	Tectonic
Number of Earthquakes with M ≥ 0.0	59
Number of Earthquakes with M ≥ 2.0	36
Number of Earthquakes with M ≥ 3.0	3
Number of Earthquakes with M ≥ 4.0	0
Number of Felt Earthquakes	5
Number of Earthquakes with Known ERZ ≤ 5.0 km	46

Largest Earthquake: 25 August 2005; 03:09 – Hot Springs, NC, $mb_{(Lg)}$ = 3.7

Period: July 1977 through December 2005 (29.5 years)	Tectonic
Number of Earthquakes with M ≥ 0.0	2203
Number of Earthquakes with M ≥ 2.0	922
Number of Earthquakes with M ≥ 3.0	145
Number of Earthquakes with M ≥ 4.0	11
Number of Felt Earthquakes	240
Number of Earthquakes with Known ERZ ≤ 5.0 km	1600

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

SOUTHEASTERN U.S. EARTHQUAKES DURING 2005

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.

*****2005 JANUARY 18; 05:48 – EVANS, 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
WSRC	050118	0548	34.1	33.606	82.163	8.8	16	49	268	0.1	D	C/D	0.8	360	0.8	4.9	D		2.5		F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
WSRC	TAL	49.4	121	P	05:48:42.20 (-0.05)	S	05:48:48.52 (-0.06)
WSRC	SRAV	54.7	125	P	:43.05 (-0.04)	S	:50.10 (0.02)
WSRC	HAW	58.2	118	P	:43.55 (0.06)	S	:50.80 (0.01)
WSRC	SRPN	61.6	120	Pn	:44.15 (-0.02)	Sn	:52.02 (0.02)
WSRC	NPRS	62.3	128	P	:44.18 (-0.10)	S	:52.43 (0.23)
WSRC	SRPD	65.3	140	P	:44.85 (-0.03)	S	:53.20 (-0.23)
WSRC	SRPW	70.5	129	P	:45.90 (0.21)	S	:55.08 (0.20)
WSRC	JSC	112.1	48	P	:52.00 (-0.02)	S	:49:06.00 (0.02)

*****2005 JANUARY 18; 09:53 – EVANS, 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
WSRC	050118	0953	01.8	33.598	82.168	15.4	13	49	269	0.1	D	C/D	1.7	360	1.7	6.3	D		2.3		F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
WSRC	TAL	49.3	120	P	09:53:10.08 (-0.04)	S	09:53:16.63 (0.03)
WSRC	SRAV	54.5	124	P	:10.79 (-0.13)	S	:18.04 (0.02)
WSRC	HAW	58.1	117	P	:11.41 (0.02)	S	:18.10 (-0.75)
WSRC	SRPN	61.6	119	Pn	:11.95 (-0.04)	Sn	:19.89 (-0.03)
WSRC	NPRS	62.1	127	P	:12.11 (0.04)	S	:20.10 (0.03)
WSRC	SRPD	64.9	139	P	:12.69 (0.07)	S	:21.36 (0.15X)
WSRC	JSC	113.1	48	P	:20.00 (0.03)	S	:34.00 (-0.13)

*****2005 JANUARY 18; 10:22 – EVANS, 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
WSRC	050118	1022	11.3	33.579	82.162	17.4	13	48	268	0.2	C	B/D	0.9	360	0.9	2.0	D		2.0		F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
WSRC	TAL	47.8	118	P	10:22:19.10 (-0.33)	S	10:22:25.76 (-0.01)
WSRC	SRAV	52.9	122	P	:19.95 (-0.23)	S	:27.16 (0.05)
WSRC	HAW	56.7	115	P	:20.51 (-0.23)	S	:28.32 (0.22)
WSRC	SRPN	60.1	117	Pn	:21.20 (-0.05)	Sn	:28.80 (-0.21)
WSRC	NPRS	60.4	126	P	:21.65 (0.35)	S	:29.17 (0.07)
WSRC	SRPD	62.9	138	P	:22.00 (0.21)		
WSRC	JSC	114.2	47	P	:29.80 (0.14)	S	:43.00 (-0.98)

*****2005 FEBRUARY 08; 11:42 – MAVISDALE, VIRGINIA*****

VTSO Probably mining induced.

SRCE	DATE	HRMN	SEC	LAT-N	LON-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
CERI	050208	1142	53.1	37.222	81.926	9.4	12	134	134	0.3	D	D/D	5.9	33	3.5	15.8	D		2.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	BLA	133.6	90	eP	11:43:14.63 (0.02)		
CERI	PKKY	161.6	323	eP	:19.37 (0.37)		
CERI	ROKY	192.5	294	eP	:24.11 (0.31)		
CERI	FLKY	209.0	310	eP	:26.16 (-0.18)		
CERI	CPRT	211.0	236	eP	:26.67 (-0.11)		
CERI	WMTN	220.0	247	eP	:28.26 (0.14)		
CERI	GTTN	220.9	225	eP	:28.21 (-0.03)		
CERI	BHKY	244.9	292	eP	:32.31 (1.14)		
CERI	GRBT	266.4	231	eP	:33.58 (-0.28)		
CERI	BCRT	287.2	237	eP	:36.22 (-0.25)		
CERI	CPCT	304.9	231	eP	:39.51 (0.84)		
CERI	ETT	309.7	228	ep	:40.86 (1.56X)		
CERI	GMG	360.1	224	ep	:45.43 (-0.23)		

*******2005 FEBRUARY 15; 02:36 – MAVISDALE, VIRGINIA*******

VTSO Probably mining induced.

SRCE	DATE	HRMN	SEC	LAT-N	LON-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
CERI	050215	0236	55.0	37.191	81.916	11.2	8	133	138	0.2	D	D/D	4.5	336	4.1	11.8	D		2.8		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	BLA	132.7	89	eP	02:37:16.32 (-0.03)		
CERI	PKKY	164.9	324	eP	:22.57 (1.22)		
CERI	ROKY	194.7	295	eP	:25.87 (-0.12)		
CERI	CPRT	209.9	237	eP	:28.47 (0.04)		
CERI	FLKY	211.9	311	eP	:28.37 (-0.24)		
CERI	GTTN	219.1	226	eP	:26.67 (-0.07)		
CERI	WMTN	219.5	247	eP	:29.73 (-0.05)		
CERI	BHKY	247.1	293	eP	:33.17 (0.01)		
CERI	GRBT	264.9	231	eP	:35.34 (-0.06X)		
CERI	BCRT	286.1	237	eP	:37.78 (-0.28X)		
CERI	SOKY	360.7	277	eP	:47.52 (0.17X)		

*******2005 FEBRUARY 15; 04:17 – JEWELL RIDGE, VIRGINIA*******

VTSO Probably mining induced.

SRCE	DATE	HRMN	SEC	LAT-N	LON-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
CERI	050215	0417	44.0	37.175	81.833	9.1	9	125	140	0.6	D	D/D	10.1	275	4.4	99.0	D		2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	BLA	125.4	88	eP	04:18:05.20 (-0.10)		
CERI	PKKY	170.9	322	eP	:11.91 (0.41)		
CERI	ROKY	202.2	294	eP	:15.64 (-0.20)		
CERI	CPRT	215.1	239	eP	:17.34 (-1.22)		
CERI	FLKY	218.7	310	eP	:17.50 (-0.38)		
CERI	GTTN	223.3	228	eP	:18.79 (-0.20)		
CERI	WMTN	225.7	249	eP	:18.86 (-0.42)		
CERI	GRBT	269.6	233	eP	:25.63 (0.61)		
CERI	BCRT	291.4	238	eP	:28.93 (0.88)		

*****2005 MARCH 18; 01:02 – FRIENDSVILLE, 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
CERI	050318	0102	16.3	35.723	84.164	9.1	15	6	129	0.1	C	C/B	1.9	306	0.5	1.4	B		3.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	GRBT	6.2	209	iPd	01:02:18.11 (0.00)		
CERI	BCRT	37.6	277	eP	:22.60 (0.01)		
CERI	CPCT	44.4	227	eP	:23.60 (-0.06)		
CERI	GTTN	46.0	77	eP	:23.97 (0.02)		
CERI	ETT	51.3	211	eP	:24.62 (-0.15)		
CERI	CPRT	54.5	28	eP	:25.33 (-0.02)		
CERI	WMTN	76.3	359	iPu	:28.77 (0.00)		
CERI	DYTN	88.0	253	iPd	:30.58 (-0.02)		
CERI	GMG	105.9	206	eP	:33.31 (-0.14)	eS	01:02:46.19 (0.11)
CERI	TZTN	106.6	31	eP	:33.50 (-0.03)		
CERI	RCGA	135.8	233	eP	:38.66 (0.52)		
CERI	SWET	170.0	251	eP	:43.60 (0.09)		
CERI	ROKY	243.6	5	eP	:54.33 (0.11)		
CERI	SOKY	256.9	322	eP	:56.34 (0.47)		

*****2005 MARCH 27; 22:08 –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
CERI	050327	2208	49.9	35.010	88.181	3.1	9	10	91	0.1	D	D/C	2.4	244	1.2	2.2	B		1.3		
UTK	050327	2208	50.5	35.021	88.109	5.3	13	5	120	0.4	C	C/B	0.5	16	0.2	0.5	A		2.6		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	PLAL	10.1	108	eP	22:08:51.74 (-0.43)		
CERI	PWLA	11.2	107	iPu	:52.38 (0.02)		
CERI	EBZ	107.7	278	eP	:09:08.09 (-0.27)		
CERI	OXF	125.3	244	eP	:11.59 (0.38)		
CERI	WVT	127.1	17	eP	:11.44 (-0.03)	eS	22:09:26.71 (-0.06)
CERI	RELT	152.4	318	eP	:15.69 (0.23)		
CERI	LRAL	244.8	153	eP	:27.36 (-0.77)		
CERI	DYTN	286.1	78	eP	:34.56 (0.53)		
UTK	PLAL	5.3	145	iPd	22:08:51.47 (-0.37)	iS	22:08:53.07 (0.24)
UTK	PLDM	14.0	293	eP	:53.18 (0.17)	iS	:54.79 (-0.07)
UTK	OXF	131.8	245	eP	:09:11.90 (0.09)	eS	:09:27.87 (0.40)
UTK	SWET	199.6	83	iPu	:22.48 (-0.05)	iS	:46.36 (0.33)
UTK	LRAL	243.1	155	eP	:27.35 (-1.60)	eS	:57.98 (1.07)
UTK	CPCT	330.0	81	eP	:40.94 (1.25)	eS	:10:16.16 (0.68)
UTK	WCI	386.9	23	eP	:54.72 (8.03X)	eS	:30.92 (3.32X)
UTK	CCM	438.3	321	eP	:10:00.49 (7.47X)	eS	:37.74 (-0.81)

*****2005 APRIL 04; 13:23 –ELK VALLEY, 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
CERI	050404	1323	39.7	36.493	84.293	4.2	9	14	158	0.0	D	D/C	4.0	323	2.9	4.9	C		2.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	WMTN	14.0	131	iPu	13:23:42.19 (0.00)		
CERI	CPRT	52.6	135	eP	:48.55 (0.00)		
CERI	ASTN	75.6	104	eP	:52.08 (-0.10)		
CERI	BCRT	84.7	198	eP	:53.59 (-0.02)		
CERI	GRBT	91.3	175	eP	:54.97 (0.30)		
CERI	GTTN	94.3	143	eP	:55.60 (0.42)		
CERI	ETT	130.3	186	eP	:24:00.91 (-0.01)		
CERI	DYTN	132.5	213	eP	:01.21 (-0.06)		
CERI	ROKY	160.5	12	eP	:05.72 (0.06)		

*****2005 APRIL 05; 03:54 – HIGH POINT, 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
CERI	050405	0354	56.2	36.171	84.833	10.3	16	51	159	0.1	D	D/D	4.3	301	1.5	26.8	D		2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	BCRT	50.5	153	iPu	03:55:04.59	(0.01)	eS	03:55:10.92	(0.15)
CERI	WMTN	64.8	66	eP	:07.03	(0.19)			
CERI	DYTN	78.9	197	eP	:08.95	(-0.12)	eS	:18.77	(0.23)
CERI	GRBT	79.5	134	eP	:09.08	(-0.07)	eS	:18.59	(-0.09)
CERI	CPCT	84.7	161	eP	:09.72	(-0.25)			
CERI	CPRT	85.7	91	eP	:10.11	(-0.10)			
CERI	ETT	99.7	160	eP	:12.01	(-0.34)			
CERI	GTTN	112.4	110	eP	:14.52	(0.15)			
CERI	TZTN	122.5	70	eP	:15.73	(-0.19)			
CERI	ASTN	123.2	82	eP	:15.99	(-0.07)			
CERI	RCGA	140.5	200	eP	:19.27	(0.50)			
CERI	SWET	145.3	224	eP	:19.30	(-0.23)			
CERI	ROKY	209.1	22	eP	:29.67	(0.22)			

*****2005 APRIL 05; 20:37 – BLAINE, 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
CERI	050405	2037	42.6	36.147	83.693	10.0	16	17	132	0.1	C	C/B	2.8	296	1.2	5.2	C		2.9		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	CPRT	16.9	274	eP	20:37:46.05	(0.08)			
CERI	ASTN	28.0	44	iPd	:47.45	(0.00)			
CERI	GTTN	37.2	176	eP	:49.12	(0.23)			
CERI	TZTN	46.0	16	eP	:50.18	(-0.05)			
CERI	WMTN	52.3	304	eP	:51.36	(0.10)			
CERI	GRBT	69.4	221	eP	:53.89	(-0.05)			
CERI	BCRT	90.2	242	eP	:57.30	(0.08)			
CERI	CPCT	107.6	224	eP	:59.88	(-0.09)			
CERI	ETT	114.2	217	eP	:38:00.93	(-0.08)	eS	20:38:14.53	(-0.01)
CERI	DYTN	145.8	241	eP	:05.74	(-0.27)	S	:23.75	(0.56)
CERI	GMG	167.8	212	eP	:09.16	(-0.30)			
CERI	RCGA	198.4	230	eP	:14.19	(0.00)			
CERI	CMGA	207.8	216	eP	:15.15	(-0.49)			
CERI	SOKY	254.0	308	eP	:21.79	(0.07)			

*****2005 APRIL 14; 15:38 – TALLASSEE, 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
CERI	050414	1538	15.7	35.468	84.091	15.5	20	25	121	0.0	B	B/B	0.8	325	0.4	2.0	B		2.8		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	GRBT	24.9	337	iPu	15:38:20.48	(-0.01)	eS	15:38:24.08	(0.10)
CERI	ETT	36.6	245	iPd	:22.18	(0.00)	eS	:35.07	(8.16X)
CERI	CPCT	39.2	267	eP	:22.51	(-0.02)	eS	:27.41	(-0.12)
CERI	GTTN	54.2	45	iPu	:24.86	(0.00)			
CERI	BCRT	55.0	307	iPu	:24.97	(0.02)	eS	:31.63	(-0.09)
CERI	CPRT	78.8	14	eP	:28.62	(-0.10)	eS	:38.02	(-0.26)
CERI	GMG	85.4	218	eP	:29.60	(-0.08)			
CERI	DYTN	90.9	272	eP	:30.53	(0.02)	eS	:41.37	(0.00)
CERI	WMTN	104.9	356	eP	:32.64	(-0.05)			
CERI	ASTN	110.4	30	eP	:33.50	(-0.04)	eS	:46.52	(-0.10)
CERI	RCGA	126.8	245	eP	:36.02	(-0.06)			
CERI	TZTN	129.0	22	eP	:36.43	(0.00)			
CERI	SWET	169.7	261	eP	:42.63	(-0.12)			
CERI	GOGA	235.2	166	eP	:52.41	(0.41)			
CERI	SOKY	283.5	324	eP	:59.80	(1.75X)			

*****2005 MAY 01; 22:47 – PIGEON FORGE, 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
CERI	050501	2247	50.3	35.764	83.636	23.4	12	6	210	0.1	D	D/D	3.0	309	1.3	2.2	C		1.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME	(RES)	PHASE	ARRIVAL TIME	(RES)
CERI	GTTN	6.0	333	iPu	22:47:54.29	(0.00)	eS	22:47:57.18	(-0.03)
CERI	CPRT	48.8	333	eP	:58.77	(-0.30)			
CERI	GRBT	51.7	259	eP	:59.19	(-0.14)			
CERI	ASTN	64.1	13	eP	:48:01.28	(0.13)	eS	:48:09.10	(-0.02)
CERI	BCRT	85.0	270	eP	:04.32	(0.05)	eS	:14.65	(0.16)
CERI	WMTN	86.6	326	eP	:04.44	(-0.09)			
CERI	CPCT	87.5	247	eP	:04.50	(-0.13)			
CERI	ETT	88.7	237	eP	:04.84	(0.00)			
CERI	GMG	137.3	224	eP	:12.54	(0.25)			

*****2005 MAY 19; 12:04 –MILLPORT, 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
CERI	050519	1204	15.0	33.554	88.186	0.0	7	125	196	0.4	D	D/D	6.0	36	2.0	11.0	D		2.0		
UTK	050519	1204	15.7	33.580	88.142	13.5	10	123	193	0.3	D	C/D	0.6	226	0.2	2.6	B		2.6		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME	(RES)	PHASE	ARRIVAL TIME	(RES)
CERI	LRAL	124.7	117	eP	12:04:35.42	(-0.14)			
CERI	OXF	155.1	314	eP	:40.35	(-0.15)			
CERI	PWLA	158.6	4	eP	:40.75	(-0.32)			
CERI	PLAL	158.8	4	eP	:40.66	(-0.44)			
CERI	EBZ	206.1	329	eP	:47.26	(-0.74)			
CERI	SFTN	261.6	320	eP	:55.80	(1.05)			
CERI	BCRT	411.9	52	eP	:05:13.44	(0.26)			
UTK	LRAL	122.5	119	iPu	12:04:35.44	(-0.05)	iS	12:04:50.14	(0.17)
UTK	PLAL	155.7	2	eP-	:40.43	(-0.28)	iS	:59.08	(0.07)
UTK	OXF	156.1	312	iPu	:40.34	(-0.43)	iS	:59.84	(0.72)
UTK	CPCT	391.8	57	eP	:05:11.48	(-0.31)	eS	05:52.54	(-0.06)
UTK	GOGA	434.9	91	eP	:16.88	(-0.21)	eS	:06:01.18	(-0.58)

*****2005 MAY 20; 14:32 – 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	050520	1432	01.6	35.153	85.643	10.3	16	33	147	0.5	C	C/C	0.6	299	0.4	2.1	B		1.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME	(RES)	PHASE	ARRIVAL TIME	(RES)
UTK	RCGA	33.3	126	iPu	14:32:07.42	(0.15)	iS	14:32:11.73	(0.25)
UTK	DYTN	62.5	53	iPd	:11.68	(-0.19)	iS	:19.34	(-0.11)
UTK	GMG	94.4	110	iPd	:16.66	(-0.27)	eS	:27.66	(-0.55)
UTK	ETT	109.8	80	iPd	:18.87	(-0.46)	iS	:31.99	(-0.36)
UTK	BCRT	118.3	55	ePu	:20.25	(-0.41)	eS	:35.51	(0.86)
UTK	GRBT	143.5	66				eS	:41.02	(-0.50)
UTK	CPRT	194.6	55	iPd	:33.55	(0.87)	iS	:57.36	(2.01)
UTK	PLAL	222.7	266	iPd	:36.53	(-0.49)	iS	:33:03.28	(0.52)
UTK	ASTN	235.3	56				eS	:04.62	(-1.06)

*****2005 MAY 22; 00:00 – 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	050522	0000	39.3	34.830	85.201	12.7	18	21	235	0.3	C	B/D	0.5	34	0.3	1.1	A		1.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
UTK	RCGA	21.1	320	iPu	00:00:43.42	(0.14)	iS	00:00:46.23	(-0.02)
UTK	GMG	48.7	86	iPu	:47.81	(0.36)	iS	:53.22	(-0.26)
UTK	DYTN	74.0	8	iPu	:51.36	(-0.02)	iS	:01:00.21	(-0.08)
UTK	ETT	87.5	51	iPd	:53.12	(-0.39)	iS	:04.53	(0.56)
UTK	BCRT	118.3	29	iPd	:58.22	(-0.14)	iS	:12.26	(-0.10)
UTK	GRBT	130.8	44	iPu	:59.84	(-0.48)	iS	:15.72	(-0.04)
UTK	GTTN	177.0	52	iPd	:01:07.97	(0.34)	iS	:28.11	(-0.20)
UTK	CPRT	189.8	39	iPd	:09.44	(-0.13)	iS	:32.41	(0.81)
UTK	ASTN	228.1	43	iPd	:15.93	(0.68)	iS	:42.95	(1.54)

*****2005 MAY 23; 09:11 – LAWRENCEBURG, 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	050523	0911	48.2	35.232	87.264	5.1	8	79	111	0.2	C	B/D	0.9	292	0.4	2.0	B		2.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
UTK	PLAL	79.0	250	iP+	09:12:00.88	(-0.23)	iS	09:12:10.73	(0.06)
UTK	WVT	112.1	333	iPu	:06.58	(0.16)	iS	:19.78	(-0.08)
UTK	LRAL	244.9	174	eP	:25.67	(-1.29)	eS	:55.74	(0.59)
UTK	CPCT	250.4	84	eP	:27.42	(-0.24)	eS	:55.32	(-1.04)

*****2005 MAY 23; 19:35 – 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
CERI	050523	1935	35.6	35.506	84.591	11.6	15	9	95	0.1	B	B/B	0.6	270	0.5	1.6	B		2.1		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	CPCT	8.9	135	iPu	19:35:38.01	(0.00)	eS	19:35:39.83	(0.04)
CERI	ETT	23.5	148	iPu	:39.91	(0.01)	eS	:43.06	(-0.02)
CERI	BCRT	28.9	3	iPu	:40.69	(0.01)			
CERI	GRBT	40.3	62	eP	:42.23	(-0.19)	eS	:47.27	(-0.17)
CERI	DYTN	45.5	268	iPd	:43.21	(-0.03)			
CERI	GMG	71.7	186	eP	:47.21	(-0.17)			
CERI	GTTN	90.3	68	eP	:50.11	(-0.19)			
CERI	RCGA	90.6	230	eP	:50.80	(0.49)			
CERI	WMTN	107.1	20	eP	:53.53	(0.60)	eS	:36:06.32	(0.65)
CERI	ASTN	135.8	48	eP	:57.68	(0.23)			
CERI	TZTN	148.6	39	eP	:59.46	(0.03)			

*****2005 MAY 24; 09:42 – CHARLESTON, 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
CERI	050524	0942	54.4	35.287	84.835	9.5	14	33	80	0.1	C	C/C	1.1	13	0.4	3.2	C		1.9		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	DYTN	32.6	314	iPu	09:42:59.96	(-0.01)	eS	09:43:04.25	(0.16)
CERI	CPCT	33.7	57	iPd	:43:00.08	(-0.05)			
CERI	ETT	34.8	83	iPd	:00.34	(0.02)	eS	:04.98	(0.29)
CERI	GMG	49.4	162	eP	:02.47	(-0.18)			
CERI	BCRT	58.1	24	eP	:04.05	(0.05)	eS	:11.48	(0.39)

CERI	RCGA	58.1	234	eP	:04.33	(0.32)	eS	:11.10	(-0.01)
CERI	GRBT	72.1	53	eP	:05.95	(-0.27)			
CERI	GTTN	120.9	61	eP	:14.26	(0.31)			
CERI	CPRT	129.5	42	eP	:15.48	(0.12)			
CERI	WMTN	138.1	25	eP	:16.48	(-0.18)			

*****2005 MAY 25; 03:43 – PHILADELPHIA, 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
CERI	050525	034325.7	35.645	84.274	8.1	11	8	134	0.0	C	C/B	1.7	332	1.1	2.8	C		1.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	GRBT	7.7	65	iPd	03:43:27.59 (0.00)		
CERI	BCRT	30.5	296	eP	:30.90 (0.01)	eS	03:43:34.75 (0.02)
CERI	CPCT	31.2	226	eP	:30.87 (-0.13)		
CERI	ETT	39.0	205	eP	:32.32 (0.06)	eS	:37.28 (0.18)
CERI	GTTN	58.0	71	eP	:35.45 (0.16)		
CERI	CPRT	66.9	32	eP	:36.79 (0.02)		
CERI	DYTN	76.1	257	eP	:38.14 (-0.05)	eS	:47.55 (0.14)
CERI	TZTN	119.2	33	eP	:44.99 (-0.01)		

*****2005 JUNE 06; 15:22 – HALLS CROSSROADS, 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
CERI	050606	152215.1	36.065	83.865	4.8	16	10	97	0.1	C	C/C	1.8	273	1.2	2.8	C		2.1		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	CPRT	10.3	352	iPu	15:22:17.07 (-0.01)	eS	15:22:18.77 (0.19)
CERI	GTTN	33.3	147	eP	:20.59 (-0.04)	eS	:25.07 (0.32)
CERI	ASTN	45.5	50	eP	:22.58 (-0.07)	eS	:28.61 (0.34)
CERI	WMTN	47.4	324	eP	:23.06 (0.10)	eS	:29.34 (0.53)
CERI	GRBT	52.7	215	eP	:23.81 (0.03)	eS	:30.63 (0.39)
CERI	TZTN	60.3	28	eP	:25.00 (0.00)		
CERI	BCRT	72.3	243	eP	:27.07 (0.15)		
CERI	CPCT	90.5	221	eP	:29.77 (-0.06)		
CERI	ETT	97.8	213	eP	:31.03 (0.00)	eS	:42.77 (-0.08)
CERI	DYTN	127.9	241	eP	:35.58 (-0.26)		

*****2005 JUNE 08; 09:13 – BENTON, 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	050608	091302.7	35.054	84.720	6.3	12	47	115	0.3	C	C/C	0.5	330	0.3	1.9	B		2.4		
CERI	050608	091303.0	35.074	84.731	11.3	20	24	98	0.1	C	C/C	1.5	326	1.0	5.8	D		2.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CPCT	47.4	22	iPd	09:13:10.66 (0.16)	iS	09:13:16.16 (-0.14)
UTK	SWET	111.9	280	iPd	:20.96 (0.12)	iS	:33.90 (-0.32)
UTK	TZTN	196.3	32	ePu	:33.86 (-0.28)	iS	:57.34 (0.12)
UTK	GOGA	215.7	147	iP-	:37.23 (0.04)	eS	:14:01.83 (-0.52)
UTK	PLAL	306.4	269	iP	:51.08 (2.21)	iS	:25.88 (3.37)
UTK	LRAL	307.2	224	eP	:48.94 (-0.04)	eS	:22.37 (-0.32)
CERI	GMG	24.1	167	eP	09:13:07.45 (0.07)		
CERI	ETT	37.6	42	eP	:09.39 (0.00)	eS	09:13:14.17 (0.06)
CERI	CPCT	45.8	25	eP	:10.70 (0.05)	eS	:16.15 (-0.15)
CERI	DYTN	56.7	325	eP	:12.33 (-0.04)	eS	:19.22 (-0.07)
CERI	RCGA	57.3	259	eP	:12.37 (-0.09)	eS	:19.45 (0.00)
CERI	BCRT	78.0	10	eP	:15.98 (0.26)	eS	:25.48 (0.40)
CERI	GRBT	82.4	36	eP	:16.23 (-0.17)	eS	:26.28 (0.01)
CERI	SWET	110.5	279	eP	:20.88 (0.02)		

CERI	GTTN	126.7	49	eP		:23.37	(-0.05)
CERI	CPRT	142.7	32	eP		:26.00	(0.00)
CERI	WMTN	156.5	19	eP		:27.83	(-0.24)
CERI	ASTN	179.5	39	eP		:31.74	(0.09)
CERI	TZTN	195.0	33	eP		:34.17	(0.14)
CERI	GOGA	218.2	147	eP		:37.25	(-0.27)

*****2005 JUNE 08; 09:50 – FRANKLIN, 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
CERI	050608	0950	30.9	35.165	83.245	5.4	15	81	265	0.3	D	D/D	4.7	314	2.4	11.9	D		2.3		
UTK	050608	0950	32.0	35.212	83.334	0.0	10	111	191	0.4	D	C/D	0.5	249	0.3	2.5	B		2.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	GTTN	81.3	332	eP	09:50:43.88	(-0.36)			
CERI	GRBT	103.2	303	eP	:47.55	(-0.18)	eS	09:51:00.65	(0.48)
CERI	ETT	111.5	280	eP	:49.20	(0.13)	eS	:02.01	(-0.45)
CERI	CPCT	120.3	286	eP	:50.45	(-0.01)			
CERI	CPRT	124.1	333	eP	:50.83	(-0.33)			
CERI	ASTN	130.6	351	eP	:52.10	(0.00)			
CERI	GMG	134.3	256	eP	:52.98	(0.27)			
CERI	BCRT	138.0	299	eP	:53.07	(-0.18)			
CERI	TZTN	155.4	350	eP	:56.02	(0.02)			
CERI	WMTN	161.7	329	eP	:56.89	(-0.13)			
CERI	DYTN	171.8	283	eP	:58.95	(0.36)			
CERI	RCGA	193.0	264	eP	:51:02.21	(0.33)			
CERI	GOGA	195.6	186	eP	:04.25	(1.97X)			
CERI	SWET	244.8	272	eP	:09.88	(0.45)			
UTK	CPCT	111.2	284	iP	09:50:50.24	(-0.05)	iS	09:51:03.96	(0.14)
UTK	TZTN	149.1	353	iPu	:56.01	(-0.34)	eS	:15.26	(1.00)
UTK	GOGA	200.1	184	iPd	:51:04.17	(-0.21)	eS	:28.65	(0.51)
UTK	SWET	236.5	271	eP	:09.36	(-0.79)	eS	:38.06	(0.11)
UTK	LRAL	415.3	235	eP	:36.39	(4.05X)	eS	:52:23.69	(7.39X)
UTK	PLAL	433.0	268	eP	:33.73	(-0.81)	iS	:19.98	(-0.11)

*****2005 JUNE 11; 05:32 – GRAY, 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
WSRC	050611	0532	01.8	32.937	83.413	12.5	18	161	188	0.1	D	D/D	2.9	360	2.9	1.8	D		2.1		
UTK	050611	0532	01.2	33.067	83.582	0.0	10	278	183	1.1	D	D/D	2.1	357	0.9	3.2	C		2.6		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
WSRC	SRPD	160.6	81	P	05:32:27.00	(0.00)	S	05:32:47.02	(0.18)
WSRC	TAL	166.4	72	P	:27.79	(0.05)	S	:47.88	(-0.12)
WSRC	SRAV	167.3	75	P	:27.90	(0.02)	S	:48.30	(0.06)
WSRC	DXN	168.0	85	P	:27.98	(-0.13)	S	:49.36	(0.55)
WSRC	NPRS	169.4	77	P	:28.79	(0.60)	S	:49.10	(0.30)
WSRC	SRPW	173.8	80	P	:29.07	(0.10)	S	:50.57	(0.22)
WSRC	HAW	174.6	74	P	:28.95	(0.07)	S	:50.23	(0.20)
WSRC	SRPN	175.6	75	Pn	:29.10	(-0.02)	Sn	:50.45	(-0.01)
WSRC	LRAL	335.3	273	P	:49.35	(-0.03)	Sn	:33:26.10	(-0.58)
UTK	CPCT	278.1	342	iP	05:32:44.14	(-0.50)	eS	05:33:18.44	(2.19)
UTK	NHSC	317.9	88	eP	:48.47	(-1.04)	eS	:25.87	(1.18)
UTK	LRAL	319.0	270	eP	:48.47	(-1.20)	iS	:25.89	(0.94)
UTK	SWET	322.2	318	eP	:50.50	(0.40)	eS	:23.72	(-1.99X)
UTK	TZTN	385.7	0	eP	:55.77	(-2.15X)	eS	:40.09	(0.85)
UTK	PLAL	466.2	298	eP	:33:06.28	(-1.53)	eS	:57.38	(1.03)

*****2005 JUNE 20; 19:08 – 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
CERI	050620	190827.9	35.529	84.487	12.2	9	9	143	0.0	C	C/C	1.7	261	0.9	1.5	B		1.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	CPCT	9.3	200	iPd	19:08:30.41 (-0.02)	eS	19:08:32.31 (0.01)
CERI	ETT	22.7	173	iPu	:32.14 (0.01)	eS	:35.32 (0.07)
CERI	BCRT	27.5	343	eP	:32.78 (-0.01)	eS	:36.58 (0.16)
CERI	GRBT	30.8	58	eP	:33.17 (-0.13)		
CERI	CCRT	40.1	100	eP	:34.84 (0.11)	eS	:39.81 (0.04)

*****2005 JUNE 27; 14:01 – 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
CERI	050627	140139.6	35.374	84.107	15.5	20	11	183	0.1	C	B/D	1.5	312	0.6	1.9	B		2.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	CCRT	11.3	26	iPd	14:01:42.88 (0.02)	eS	14:01:45.05 (-0.18)
CERI	ETT	32.1	261	iPd	:45.42 (0.00)		
CERI	GRBT	34.3	346	iPu	:45.68 (-0.04)	eS	:50.20 (0.01)
CERI	CPCT	38.6	283	eP	:46.36 (0.01)	eS	:51.39 (0.11)
CERI	BCRT	60.8	316	iPu	:49.75 (0.01)	eS	:57.32 (0.15)
CERI	GTTN	62.9	39	eP	:49.87 (-0.21)		
CERI	GMG	76.5	222	eP	:51.99 (-0.22)		
CERI	CPRT	89.2	13	eP	:53.90 (-0.34)		
CERI	DYTN	90.4	279	eP	:54.34 (0.00)		
CERI	WMTN	115.1	357	eP	:58.35 (0.16)		
CERI	ASTN	120.1	28	eP	:59.31 (0.35)		
CERI	RCGA	121.4	249	eP	:59.03 (-0.12)	eS	:02:13.56 (0.10)
CERI	TZTN	139.2	21	eP	:02:02.08 (0.17)		
CERI	SWET	166.9	265	eP	:06.18 (-0.05)		
CERI	ROKY	281.8	3	eP	:22.06 (0.30)		

*****2005 JULY 12; 21:07 – HAMILTON, 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	050712	210720.7	34.110	87.927	8.1	9	98	145	0.2	C	A/D	0.5	41	0.3	0.9	A		2.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	PLAL	97.7	352	eP	21:07:36.79 (0.01)	iS	21:07:48.64 (-0.04)
UTK	OXF	143.5	289	iPu	:44.18 (-0.04)	iS	:08:01.51 (0.04)
UTK	LRAL	147.2	144	eP	:45.10 (0.29)	eS	:02.20 (-0.22)
UTK	SWET	220.2	56	eP	:54.68 (-0.77)	eS	:21.00 (0.23)
UTK	MYNC	364.6	72	eP	:08:12.94 (-0.15)	eS	:49.57 (-1.71X)

*****2005 JULY 23; 17:28 – 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
CERI	050723	172827.2	35.539	84.216	20.0	11	15	104	0.0	B	B/B	1.1	330	0.5	1.6	B		1.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	GRBT	15.1	6	eP	17:28:31.20 (-0.06)	eS	17:28:34.16 (-0.08)
CERI	CCRT	16.9	119	iPu	:31.55 (0.03)	eS	:34.64 (-0.04)
CERI	ETT	32.1	223	iPd	:33.28 (-0.03)	eS	:37.74 (-0.05)
CERI	BCRT	41.2	308	eP	:34.59 (0.04)	eS	:39.97 (0.01)
CERI	GTTN	58.2	58	iPd	:37.08 (-0.01)		
CERI	DYTN	79.7	266	eP	:40.49 (0.16)	eS	:50.23 (0.28)

*****2005 JULY 25; 02:30 – JONESVILLE, 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
CERI	050725	023053.2	36.750	83.312	9.8	15	31	220	0.1	D	D/D	6.6	280	2.6	5.2	D		2.2		
UTK	050725	023052.9	36.743	83.273	7.8	13	33	207	0.2	D	C/D	2.0	315	0.9	1.5	B		2.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	TZTN	31.2	223	eP	02:30:58.54 (-0.05)	eS	02:31:02.58 (0.03)
CERI	ASTN	49.2	197	eP	:31:01.50 (0.06)	eS	:07.86 (0.35)
CERI	CPRT	83.3	218	eP	:06.82 (-0.07)	eS	:17.14 (0.20)
CERI	WMTN	86.0	244	eP	:07.15 (-0.10)		
CERI	GTTN	108.8	197	eP	:10.81 (-0.05)	eS	:23.62 (-0.18)
CERI	ROKY	139.7	337	eP	:15.93 (0.23)		
CERI	GRBT	143.5	214	eP	:15.98 (-0.31)		
CERI	CCRT	157.3	205	eP	:18.39 (-0.11)		
CERI	BCRT	157.6	227	eP	:18.57 (0.06)		
CERI	ETT	188.6	213	eP	:23.11 (-0.24)		
CERI	DYTN	212.6	229	eP	:26.80 (-0.26)		
UTK	TZTN	33.1	228	iPd	02:30:58.52 (0.09)	iS	02:31:02.49 (-0.07)
UTK	CCRT	158.1	207	eP-	:31:18.35 (0.04)	eS	:36.64 (-0.34)
UTK	BCRT	159.6	228	eP-	:18.61 (0.10)	eS	:37.71 (0.38)
UTK	ETT	189.9	214	eP	:23.10 (-0.20)	eS	:44.99 (-0.62)
UTK	MYNC	200.6	203	eP	:24.87 (-0.11)	eS	:48.79 (0.32)
UTK	DYTN	214.7	230	iPd	:26.72 (-0.49)	eS	:52.23 (0.03)
UTK	BLA	259.2	78			eS	:32:02.06 (-0.43)

*****2005 JULY 28; 08:39 – COHUTTA, 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
CERI	050728	083921.1	34.970	84.969	10.1	13	35	215	0.1	D	C/D	2.4	334	1.8	13.0	D		1.3		
UTK	050728	083921.2	34.977	84.964	8.6	20	30	107	0.2	C	B/C	0.3	14	0.2	1.0	A		2.0		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	RCGA	34.7	271	eP	08:39:27.02 (0.02)	eS	08:39:31.53 (0.17)
CERI	DYTN	59.0	349	eP	:30.69 (-0.13)	eS	:37.99 (-0.01)
CERI	ETT	61.3	50	eP	:31.14 (-0.05)		
CERI	SWET	92.0	288	eP	:35.80 (-0.24)		
CERI	BCRT	95.3	22	eP	:36.57 (0.02)	eS	:48.04 (0.14)
CERI	CCRT	99.9	56	eP	:37.24 (-0.06)	eS	:48.98 (-0.23)
CERI	GRBT	105.1	42	eP	:37.90 (-0.19)		
CERI	GTTN	150.8	51	eP	:45.25 (-0.08)		
CERI	TZTN	216.8	36	eP	:55.86 (0.32)		
UTK	GMG	29.7	115	iPu	08:39:27.12 (0.79)	eS	08:39:29.58 (-0.52)
UTK	RCGA	35.1	270	iPu	:27.09 (-0.04)	iS	:31.51 (-0.01)
UTK	DYTN	58.3	348	iPd	:30.77 (-0.06)	iS	:38.03 (0.09)
UTK	ETT	60.5	50	iPd	:31.20 (0.01)	iS	:38.65 (0.09)
UTK	MYNC	77.1	82	iPd	:34.04 (0.20)	iS	:43.32 (0.16)
UTK	BCRT	94.4	22	iPu	:36.73 (0.15)	iS	:47.74 (-0.13)
UTK	CCRT	99.1	57	iPu	:37.30 (-0.05)	iS	:49.05 (-0.15)

UTK	GRBT	104.2	42	eP	:38.01	(-0.12)	eS	:48.41	(-2.13X)
UTK	WMTN	174.3	24	ePd	:49.19	(-0.02)	eS	:40:09.41	(-0.31)
UTK	TZTN	215.9	36	iPu	:55.51	(-0.21)	eS	:21.01	(0.21)
UTK	PWLA	283.0	271				eS	:38.77	(-56.9X)
UTK	PLAL	284.1	271	iPu	:38.48	(34.0X)	iS	:43.93	(8.0X)
UTK	LRAL	285.8	222	ePd	:40:04.51	(-0.17)	eS	:31.17	(-5.1X)
UTK	WVT	289.6	297	iPd	:34.18	(29.0X)	iS	:42.03	(4.9X)

*****2005 JULY 31; 12:49 – PATHFORK, 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
CERI	050731	124904	.2	36.736	83.560	13.4	15	21	156	0.1	C	C/C	1.9	226	1.6	4.6	C		2.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	TZTN	21.3	177	eP	12:49:08.36 (0.07)	eS	12:49:11.64 (0.32)
CERI	ASTN	46.0	171	iPu	:11.94 (-0.01)	eS	:17.80 (0.11)
CERI	WMTN	65.9	237	eP	:14.83 (-0.23)	eS	:23.17 (0.10)
CERI	CPRT	70.4	204	eP	:15.53 (-0.30)	eS	:24.49 (0.07)
CERI	GTTN	102.9	185	eP	:20.50 (-0.39)	eS	:33.29 (0.15)
CERI	ROKY	134.2	346	eP	:25.77 (0.05)		
CERI	BHKY	166.7	330	eP	:31.46 (0.69)		
CERI	PKKY	188.6	14	eP	:34.44 (0.26)		
CERI	SOKY	231.0	293	eP	:40.22 (0.09)		
CERI	SWET	272.4	232	eP	:45.33 (-0.01)		

*****2005 AUGUST 23; 23:40 – SWEETWATER, 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
CERI	050823	234003	.8	35.548	84.473	13.8	15	12	75	0.0	B	C/A	1.4	305	0.6	4.2	C		1.6		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	CPCT	11.7	202	eP	23:40:06.85 (0.06)		
CERI	ETT	24.7	176	iPu	:08.43 (-0.01)	eS	23:40:11.94 (0.10)
CERI	BCRT	25.9	339	eP	:08.65 (0.05)		
CERI	GRBT	28.7	61	iPd	:08.97 (-0.01)	eS	:12.95 (0.16)
CERI	CCRT	39.2	103	eP	:10.61 (0.02)	eS	:15.76 (0.19)
CERI	DYTN	56.5	264	eP	:13.13 (-0.10)	eS	:20.24 (0.08)
CERI	MYNC	61.2	149	eP	:14.00 (0.04)		
CERI	GTTN	78.7	68	ePn	:16.65 (-0.05)		
CERI	CPRT	86.2	38	eP	:18.00 (0.06)		
CERI	ASTN	124.8	46	eP	:24.22 (0.32)		
CERI	TZTN	138.4	37	eP	:25.96 (-0.04)		

*****2005 AUGUST 25; 03:09 – HOT SPRINGS, NORTH CAROLINA*****

UTK Felt.

SRCE	DATE	HRMN	SEC	LAT-N	LON-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
CERI	050825	030941	.8	35.880	82.795	7.9	32	79	87	0.1	D	C/D	1.8	299	1.0	4.7	C		4.1		
UTK	050825	030941	.4	35.870	82.787	5.1	33	80	87	0.4	D	C/D	0.3	298	0.3	0.9	A		4.0		F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	ASTN	78.8	309	eP	03:09:54.57 (-0.16)	eS	03:10:04.32 (0.05)
CERI	GTTN	79.1	265	eP	:54.35 (-0.42)	eS	:04.56 (0.21)
CERI	SHTN	98.5	274	eP	:58.11 (0.28)		
CERI	TZTN	100.1	318	eP	:58.58 (0.48)	eS	:10.11 (0.04)
CERI	CPRT	102.6	288	eP	:58.61 (0.04)	eS	:10.75 (-0.15)

CERI	CCRT	122.8	248	eP	:10:01.87	(0.17)				
CERI	GRBT	128.8	260	eP	:02.52	(-0.10)				
CERI	WMTN	137.5	296	ePu	:04.02	(0.01)	eS	:21.00	(0.70)	
CERI	MYNC	150.4	234	eP	:06.27	(0.23)				
CERI	BCRT	161.5	266	eP	:07.74	(-0.03)				
CERI	ETT	162.5	248	eP	:07.88	(-0.06)	eS	:27.12	(0.05)	
CERI	CPCT	163.5	254	eP	:08.23	(0.16)				
CERI	GMG	204.4	237	eP	:14.39	(-0.09)				
CERI	DYTN	212.4	259	ePu	:15.70	(0.00)				
CERI	ELN	240.0	49	eP	:19.67	(0.18)	eS	:48.31	(1.43)	
CERI	RCGA	252.6	247	eP	:21.05	(0.01)	eS	:52.08	(2.52X)	
CERI	BLA	258.9	54	eP	:22.20	(0.36)				
CERI	FWV	259.0	43	eP	:22.20	(0.33)				
CERI	BAV	259.3	54	eP	:21.66	(-0.23)				
CERI	PKKY	278.7	356	eP	:23.99	(-0.29)				
CERI	GOGA	280.7	193	eP	:24.60	(0.09)				
CERI	SWET	293.8	256	eP	:25.55	(-0.65)				
CERI	NHSC	390.3	141	eP	:37.68	(-0.52)				
CERI	WVT	449.7	275	eP	:45.99	(0.37)				
CERI	MCWV	493.4	31	eP	:50.17	(-0.94)				
UTK	GTTN	79.8	266	iPd	03:09:54.42	(-0.06)				
UTK	ASTN	80.1	309	iPu	:54.25	(-0.29)				
UTK	TZTN	101.5	318	iPu	:57.74	(-0.21)	eS	03:10:10.14	(-0.04)	
UTK	CCRT	123.2	249	iP	:10:01.70	(0.26)				
UTK	GRBT	129.4	261	iPu	:02.50	(0.11)				
UTK	WMTN	138.6	296	iPu	:04.06	(0.18)				
UTK	MYNC	150.4	234	iPd	:05.92	(0.21)	eS	:24.57	(1.01)	
UTK	BCRT	162.2	266	iPu	:07.66	(0.10)				
UTK	ETT	162.8	249	iPu	:07.95	(0.28)				
UTK	CPCT	163.9	254	iPu	:07.72	(-0.11)	eS	:27.50	(0.28)	
UTK	GMG	204.4	237	iPu	:14.46	(0.20)				
UTK	DYTN	212.9	259	iPu	:15.75	(0.17)				
UTK	JSC	224.9	141	P	:16.99	(-0.44)				
UTK	ELN	236.5	50	P	:19.43	(0.23)				
UTK	RCGA	252.9	248	iP-	:21.04	(-0.16)				
UTK	BLA	258.9	54	iPd	:22.17	(0.21)	iS	:52.02	(0.56)	
UTK	FWV	259.3	42	P	:21.94	(-0.08)				
UTK	GOGA	279.7	193	eP+	:24.10	(-0.38)	eS	:55.95	(0.14)	
UTK	SWET	294.3	257	eP-	:24.72	(-1.60)	eS	:57.78	(-1.22)	
UTK	NHSC	389.0	141	eP	:37.08	(-0.86)	eS	:11:17.78	(-1.31)	
UTK	WCI	410.5	310	P	:39.43	(-1.17)				
UTK	WVT	455.6	275	P	:45.50	(-0.67)				
UTK	ACSO	484.5	358	P	:48.67	(-1.08)				
UTK	MCWV	493.9	31	eP	:36.56	(-14.3X)	eS	:40.16	(-1.36)	
UTK	LRAL	498.5	232	eP	:50.85	(-0.60)	eS	:42.32	(-0.16)	

*******2005 AUGUST 25; 12:56 – HOT SPRINGS, NORTH CAROLINA*******

UTK Aftershock of magnitude 3.7 earthquake that occurred about 10 hours earlier at the same location.

SRCE	DATE	HRMN	SEC	LAT-N	LON-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
UTK	050825	125631	.5	35.876	82.810	8.1	30	78	179	0.3	C	B/D	0.7	280	0.4	1.8	B		2.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)	
UTK	GTTN	77.8	265	eP-	12:56:44.19 (0.00)	iS	12:56:53.78	(0.16)
UTK	ASTN	78.1	310	eP-	:44.68 (0.45)	eS	:53.95	(0.25)
UTK	TZTN	99.6	318	eP	:47.54 (-0.09)	eS	:59.21	(-0.32)
UTK	CPRT	101.5	288	iPu	:47.69 (-0.24)	iS	:57:00.23	(0.19)
UTK	CCRT	121.5	248	eP	:50.93 (-0.19)	iS	:05.46	(-0.11)
UTK	GRBT	127.4	260	eP	:51.87 (-0.16)	iS	:06.77	(-0.36)
UTK	WMTN	136.5	296	ePd	:53.51 (0.03)	eS	:13.80	(4.16X)
UTK	MYNC	149.1	234	iP-	:55.27 (-0.19)	iS	:13.95	(0.88)

UTK	BCRT	160.1	266	iP	:57.06	(-0.13)	eS	:15.88 (-0.18)
UTK	ETT	161.1	248	eP	:57.62	(0.27)	eS	:15.80 (-0.54)
UTK	CPCT	162.1	254	iP	:57.54	(0.05)	iS	:16.86 (0.28)
UTK	GMG	203.1	237	eP	:57:04.17	(0.18)	eS	:28.00 (0.25)
UTK	DYTN	211.0	259	eP-	:05.13	(-0.10)	eS	:30.80 (1.01)
UTK	RCGA	251.2	247	eP	:11.29	(0.56)	eS	:39.75 (0.46)
UTK	BLA	260.2	55	eP	:11.69	(-0.16)	eS	:41.42 (0.20)
UTK	GOGA	280.0	193	eP	:16.98	(2.74X)	eS	:48.20 (2.84X)
UTK	SWET	292.4	256	eP	:16.08	(0.26)	eS	:50.50 (2.40X)

*****2005 AUGUST 28; 21:31 – JEFFERSON 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	050828	2131	33.3	36.074	83.601	7.9	25	27	170	0.2	C	B/C	0.4	287	0.2	0.9	A		2.1		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CPRT	26.9	290	iPd	21:31:37.73 (-0.11)		
UTK	GTTN	29.6	192	iPd	:38.08 (-0.23)	iS	21:31:42.28 (0.21)
UTK	ASTN	30.2	22	iPu	:38.09 (-0.30)	iS	:42.33 (0.12)
UTK	TZTN	52.3	5	ePd	:41.72 (-0.17)	eS	:48.52 (0.22)
UTK	WMTN	63.7	306	ePd	:43.77 (0.03)	eS	:51.40 (-0.11)
UTK	GRBT	69.8	231	ePd	:44.58 (-0.11)	iS	:52.78 (-0.37)
UTK	CCRT	78.9	211	eP	:46.37 (0.19)	eS	:55.91 (0.16)
UTK	BCRT	94.5	249	iPu	:49.12 (0.48)	iS	:32:00.05 (0.09)
UTK	ETT	113.4	223	ePu	:51.71 (0.07)	eS	:04.32 (-0.83)
UTK	MYNC	120.8	203	eP	:52.75 (-0.05)	eS	:07.05 (-0.11)
UTK	DYTN	149.6	245	iPu	:57.37 (0.03)	eS	:14.98 (-0.03)
UTK	GMG	165.8	216	iPu	:32:00.67 (0.75)	iS	:19.64 (0.16)
UTK	CMGA	206.6	220	eP	:05.31 (-1.02)	eS	:30.07 (-0.36)

*****2005 SEPTEMBER 05; 20:02 – SHARPSBURG, 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
CERI	050905	2002	35.8	38.192	83.930	12.6	19	31	83	0.1	C	C/C	2.0	24	1.8	1.9	B		2.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	ROKY	31.4	179	iPd	20:02:41.33 (0.01)		
CERI	BHKY	53.4	251	eP	:44.55 (-0.13)		
CERI	PKKY	81.2	75	eP	:49.09 (0.04)		
CERI	TZTN	186.0	169	eP	:03:04.99 (-0.43)		
CERI	SOKY	193.7	248	eP	:06.67 (0.06)		
CERI	WMTN	198.9	186	eP	:06.91 (-0.53)		
CERI	WCI	206.6	272	eP	:08.60 (0.00)		
CERI	ASTN	210.9	169	eP	:08.69 (-0.58)	eS	20:03:34.61 (1.02)
CERI	ACSO	240.8	20	eP	:13.18 (0.12)		
CERI	BLO	250.4	297	eP	:14.68 (0.42)		
CERI	GTTN	265.1	175	eP	:16.00 (-0.17)	eS	:48.69 (3.16X)
CERI	BCRT	275.3	192	eP	:17.64 (0.25)		
CERI	GRBT	280.4	185	eP	:18.01 (-0.01)		
CERI	ELN	297.8	109	eP	:19.50 (-0.73)		
CERI	CCRT	302.7	182	eP	:20.96 (0.09)		
CERI	CPCT	308.8	190	eP	:21.41 (-0.15)		
CERI	DYTN	317.1	199	eP	:23.24 (0.61)		
CERI	ETT	321.4	189	eP	:24.64 (1.46)		

*****2005 SEPTEMBER 07; 23:57 – 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
CERI	050907	235729.4	35.641	84.047	10.9	18	14	121	0.1	C	C/B	2.1	316	1.2	2.9	C		2.4		
UTK	050907	235729.4	35.641	84.047	10.7	28	14	107	0.2	B	B/B	0.3	303	0.2	0.9	A		2.4		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	GRBT	14.1	285	iPu	23:57:32.27 (0.00)		
CERI	CCRT	19.5	182	eP	:32.82 (-0.23)		
CERI	GTTN	39.3	61	eP	:35.86 (-0.15)		
CERI	CPCT	48.0	244	eP	:37.19 (-0.15)	eS	23:57:43.17 (-0.07)
CERI	BCRT	49.9	286	eP	:37.61 (-0.02)		
CERI	ETT	50.9	227	eP	:37.64 (-0.16)	eS	:44.12 (0.05)
CERI	CPRT	59.2	15	eP	:38.91 (-0.28)		
CERI	MYNC	63.3	187	eP	:39.93 (0.16)		
CERI	WMTN	86.1	352	eP	:43.64 (0.26)		
CERI	ASTN	91.9	34	eP	:44.12 (-0.16)		
CERI	DYTN	96.2	260	eP	:44.95 (-0.01)	eS	:56.49 (0.07)
CERI	GMG	103.3	213	eP	:45.98 (-0.12)		
CERI	TZTN	109.8	24	eP	:47.20 (0.12)		
CERI	RCGA	139.5	238	eP	:52.42 (0.65)		
CERI	CMGA	143.9	219	eP	:52.29 (-0.17)		
UTK	GRBT	14.1	285	iPu	23:57:32.33 (0.07)		
UTK	CCRT	19.4	182	iPd	:33.26 (0.23)	iS	23:57:35.64 (-0.11)
UTK	GTTN	39.3	61	ePd	:35.95 (-0.05)		
UTK	CPCT	48.0	244	iP-	:37.14 (-0.19)	iS	:43.20 (-0.04)
UTK	BCRT	49.9	286	eP+	:37.63 (-0.02)		
UTK	ETT	50.9	227	iP	:37.75 (-0.07)		
UTK	CPRT	59.2	15	iPd	:38.87 (-0.23)	eS	:46.71 (0.43)
UTK	MYNC	63.3	187	iP	:39.92 (0.15)	eS	:47.10 (-0.34)
UTK	WMTN	86.1	352	eP	:43.57 (0.19)	eS	:53.18 (-0.51)
UTK	ASTN	91.9	34	eP	:44.06 (-0.22)	eS	:54.76 (-0.50)
UTK	DYTN	96.2	260	iPd	:44.92 (-0.04)	iS	:56.57 (0.15)
UTK	GMG	103.3	214	eP-	:46.00 (-0.10)	eS	:58.69 (0.29)
UTK	TZTN	109.8	24	iPd	:47.16 (0.08)	iS	:58:00.29 (0.19)
UTK	RCGA	139.5	238	eP-	:51.88 (0.11)	eS	:09.21 (1.01)
UTK	SWET	177.6	255	eP	:57.74 (-0.04)	eS	:17.92 (-0.69)
UTK	GOGA	253.0	168	eP	:58:08.05 (-0.49)	eS	:38.90 (1.87)

*****2005 SEPTEMBER 12; 13:20 – SUMMERVILLE, 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	050912	132015.6	34.574	85.508	16.4	19	44	250	0.3	D	C/D	0.5	21	0.3	0.7	A		1.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CMGA	43.9	82	iPd	13:20:23.17 (0.01)		
UTK	RCGA	47.0	18	iPu	:23.95 (0.33)	iS	13:20:29.46 (-0.07)
UTK	SWET	81.1	332	iPu	:28.36 (-0.54)	iS	:38.68 (0.01)
UTK	GMG	83.2	67	iPu	:29.40 (0.16)	iS	:39.00 (-0.26)
UTK	DYTN	108.6	20	ePd	:34.44 (1.24)	eS	:47.33 (1.21)
UTK	ETT	127.4	49	iPd	:36.12 (-0.02)	iS	:51.31 (0.10)
UTK	MYNC	137.9	66	ePd	:36.14 (-1.66)	iS	:53.79 (-0.24)
UTK	BCRT	157.2	32	ePu	:41.25 (0.48)	eS	:21:00.25 (1.16)
UTK	CCRT	165.6	53	ePu	:42.38 (0.29)	eS	:01.25 (-0.12)
UTK	GRBT	170.8	44	eP	:43.26 (0.39)	eS	:02.21 (-0.48)
UTK	GTTN	216.8	50			eS	:13.04 (-61.7X)

*****2005 SEPTEMBER 21; 02:10 – SPARTA, 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
WSRC	050921	021056.4	33.236	83.119	8.8	20	38	203	0.4	D	C/D	1.0	360	1.0	0.7	D		2.2		
UTK	050921	021056.2	33.179	83.152	8.0	21	39	316	0.6	D	D/D	1.7	37	0.8	0.7	B		1.8		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
WSRC	GOGA	37.7	301	P	02:57:02.70 (-0.13)	S	02:57:07.80 (-0.23)
WSRC	MBY	121.7	92	P	:16.00 (0.20)	S	:30.80 (-0.15)
WSRC	SRPD	131.5	94	P	:17.75 (0.31)	S	:34.22 (0.20)
WSRC	TAL	132.4	83	P	:17.80 (0.35)	S	:34.60 (0.71)
WSRC	SRAV	134.4	85	P	:17.61 (-0.15)	S	:34.20 (-0.23)
WSRC	NPRS	138.1	89	P	:18.50 (0.20)	S	:35.50 (0.11)
WSRC	HAW	141.3	84	P	:18.87 (-0.02)	S	:36.40 (-0.04)
WSRC	DXN	141.3	98	P	:19.30 (0.39)	S	:36.00 (-0.64)
WSRC	SRPN	142.9	85	Pn	:19.20 (0.18)	Sn	:36.80 (0.11)
WSRC	SRPW	143.7	91	P	:19.45 (0.19)	S	:36.10 (-1.17)
UTK	GOGA	39.0	311	iPd	02:11:02.65 (-0.10)	iS	02:11:07.63 (0.06)
UTK	GMG	233.6	324	iPd	:33.05 (-0.37)	iS	:59.43 (-1.02)
UTK	CMGA	237.0	313	eP	:33.75 (-0.02)	eS	:12:01.46 (0.41)
UTK	ETT	266.7	334	ePd	:37.47 (0.02)	eS	:06.52 (-0.90)
UTK	CCRT	267.0	342	eP	:38.16 (0.64)	iS	:08.48 (0.94)
UTK	CPCT	281.7	334	ePd	:39.48 (0.22)	eS	:07.74 (-2.81)
UTK	GRBT	293.0	341	iPd	:41.49 (0.83)	iS	:15.18 (2.20)
UTK	GTTN	295.9	351	ePu	:40.04 (-1.04)	eS	:11.95 (-1.76)
UTK	DYTN	312.5	326	eP	:44.66 (1.57)	eS	:18.25 (1.06)
UTK	BCRT	315.4	336	ePu	:43.48 (0.05)	iS	:17.97 (0.20)
UTK	CPRT	337.0	349	eP	:55.95 (9.86X)	eS	:27.06 (4.70X)
UTK	SWET	341.7	312			eS	:26.86 (-99.9X)
UTK	ASTN	350.5	355	eP	:45.76 (-2.04)	iS	:32.39 (7.07X)
UTK	WMTN	370.5	346	eP	:30.67 (-19.6X)	eS	:35.44 (-54.2X)

*****2005 OCTOBER 02; 00:55 – TALLASSEE, 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
CERI	051002	005548.0	35.480	84.116	10.2	11	6	136	0.1	C	C/C	1.4	304	0.6	3.5	C		1.6		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	CCRT	5.9	105	eP	00:55:50.23 (0.15)		
CERI	GRBT	22.8	341	iPu	:52.10 (-0.01)		
CERI	ETT	35.2	241	iPd	:53.99 (-0.02)	eS	00:55:58.57 (0.11)
CERI	CPCT	37.0	265	eP	:54.33 (0.05)	eS	:59.22 (0.31)
CERI	BCRT	52.4	307	eP	:56.73 (0.02)		
CERI	GTTN	54.9	48	eP	:56.91 (-0.22)	eS	:56:03.82 (-0.03)
CERI	DYTN	88.6	271			eS	:13.12 (0.10)
CERI	ASTN	110.3	31	eP	:56:06.30 (0.44)		

*****2005 OCTOBER 12; 06:27 – 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
CERI	051012	062730.1	35.509	84.544	8.1	24	7	63	0.1	B	B/A	0.6	319	0.3	0.8	A		3.8		
UTK	051012	062729.6	35.541	84.609	0.8	13	13	163	0.3	C	C/C	0.9	23	0.3	0.6	A		3.3		F

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME	(RES)	PHASE	ARRIVAL TIME	(RES)
CERI	CPCT	6.9	163	iPu	06:27:31.91	(0.04)	eS	06:27:33.18	(-0.01)
CERI	ETT	21.9	158	eP	:34.22	(0.27)			
CERI	BCRT	28.6	354	eP	:35.02	(0.05)	eS	:38.89	(0.31)
CERI	GRBT	36.4	60	ePd	:36.06	(-0.14)			
CERI	CCRT	44.9	96	eP	:37.82	(0.25)	eS	:43.59	(0.49)
CERI	DYTN	49.8	268	iPd	:38.29	(-0.04)	eS	:44.44	(0.01)
CERI	GMG	72.7	189	eP	:41.99	(-0.03)			
CERI	SHTN	76.0	52	eP	:40.63	(-1.89X)			
CERI	CSTN	77.6	234	eP	:42.27	(-0.50)			
CERI	GTTN	86.3	67	eP	:44.27	(0.08)			
CERI	CPRT	93.6	40	ePd	:45.50	(0.09)			
CERI	RCGA	94.1	231	ePd	:45.48	(0.07)			
CERI	WMTN	105.3	18	eP	:47.34	(0.14)			
CERI	CMGA	107.4	205	iPd	:47.49	(-0.02)			
CERI	SWET	130.2	256	eP	:50.16	(-0.96)	eS	:28:05.73	(-0.82)
CERI	ASTN	132.4	46	eP	:51.68	(0.21)			
CERI	GOGA	252.9	157	eP	:28:09.55	(0.27)			
CERI	SOKY	257.4	331	eP	:10.08	(0.22)			
CERI	PWLA	325.7	261	eP	:19.02	(0.64)			
CERI	LRAL	355.5	220	eP	:21.55	(-0.55)			
UTK	CPCT	12.8	142	iPu	06:27:31.94	(0.21)	iS	06:27:33.24	(-0.07)
UTK	SWET	125.5	254	ePu	:49.92	(-0.26)	eS	:28:05.78	(0.41)
UTK	GOGA	258.5	156	ePd	:28:10.15	(-0.37)	iS	:40.53	(0.24)
UTK	PLAL	321.5	260	ePu	:18.76	(0.47)	eS	:53.56	(-0.18)
UTK	LRAL	354.5	219	ePd	:21.45	(-0.90)	eS	:29:00.61	(-0.16)
UTK	BLA	418.9	63	iPd	:30.53	(0.17)	eS	:02.83	(-11.8X)
UTK	OXF	452.7	257	ePd	:34.43	(-0.03)	eS	:21.43	(-0.28)

*****2005 OCTOBER 16; 03:33 – MENLO, 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
CERI	051016	033342.6		34.498	85.499	11.2	17	45	113	0.1	C	C/C	1.4	229	1.0	3.0	C		2.1		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME	(RES)	PHASE	ARRIVAL TIME	(RES)
CERI	CMGA	45.0	71	iPd	03:33:50.15	(0.00)			
CERI	RCGA	54.8	14	eP	:52.09	(0.41)	eS	03:33:58.60	(0.22)
CERI	GMG	86.0	62	eP	:56.68	(0.05)	eS	:34:06.77	(-0.17)
CERI	SWET	89.0	334	eP	:56.43	(-0.65)	eS	:07.66	(-0.06)
CERI	DYTN	116.3	18	eP	:34:01.55	(0.18)	eS	:15.35	(0.20)
CERI	ETT	132.4	46	iPu	:03.89	(-0.03)			
CERI	CPCT	138.2	40	eP	:05.00	(0.18)			
CERI	BCRT	163.9	31	eP	:09.17	(0.36)			
CERI	CCRT	170.1	50	eP	:10.02	(0.21)			
CERI	GRBT	176.4	42	eP	:10.68	(-0.08)			
CERI	LRAL	213.6	221	eP	:16.73	(0.24)			
CERI	GTTN	221.6	48	eP	:17.51	(-0.16)			
CERI	GOGA	223.1	122	eP	:17.70	(-0.07)			

*****2005 OCTOBER 20; 15:50 – 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
CERI	051020	155040.3		35.312	84.365	8.4	18	8	150	0.1	C	C/C	1.4	274	0.9	1.7	B		2.1		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME	(RES)	PHASE	ARRIVAL TIME	(RES)
CERI	ETT	8.4	281	iPd	15:50:42.31	(0.00)			
CERI	CPCT	21.0	317	iPu	:44.02	(0.02)	eS	15:50:46.74	(-0.02)
CERI	CCRT	33.1	59	eP	:45.78	(-0.13)			
CERI	GRBT	43.0	21	eP	:47.30	(-0.17)			
CERI	BCRT	53.9	339	eP	:49.11	(-0.10)			

CERI	GMG	57.1	209	eP	:49.83	(0.09)	eS	:56.50 (-0.22)
CERI	DYTN	69.0	287	eP	:51.72	(0.10)	eS	:51:00.03 (0.01)
CERI	BHT	80.4	320	eP	:53.36	(-0.08)	eS	:02.99 (-0.17)
CERI	GTTN	84.2	49	eP	:54.02	(-0.06)		
CERI	CMGA	97.3	219	eP	:56.28	(0.15)		
CERI	CPRT	103.5	25	eP	:57.27	(0.08)		
CERI	WMTN	123.1	8	eP	:51:00.38	(0.17)		
CERI	ASTN	138.4	35	eP	:03.08	(0.46)		
CERI	TZTN	155.3	28	eP	:05.55	(0.28)		

*****2005 OCTOBER 25; 05:18 – SUMMERVILLE, 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
CERI	051025	0518	10.5	34.429	85.315	9.1	19	34	103	0.1	C	C/C	1.8	303	1.4	1.9	B		2.6		
UTK	051025	0518	10.2	34.400	85.286	1.9	29	34	104	0.4	C	C/C	0.3	313	0.2	0.6	A		2.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	CMGA	34.0	49	iPd	05:18:16.23 (-0.03)		
CERI	RCGA	60.8	357	eP	:20.83 (0.32)	eS	05:18:28.20 (0.27)
CERI	GMG	76.2	51	iPd	:23.08 (0.08)		
CERI	SWET	104.0	327	eP	:26.50 (-0.87)		
CERI	DYTN	119.6	10	eP	:29.93 (0.11)		
CERI	ETT	126.8	38	ePd	:30.92 (-0.04)	eS	:46.06 (0.08)
CERI	CPCT	134.5	32	eP	:32.07 (-0.08)		
CERI	BHT	162.8	12	eP	:36.73 (0.11)		
CERI	CCRT	162.8	45	eP	:36.46 (-0.18)		
CERI	BCRT	162.9	24	eP	:36.88 (0.25)		
CERI	GRBT	171.7	36	eP	:37.73 (-0.26)		
CERI	GOGA	204.8	123	eP	:42.99 (-0.13)		
CERI	GTTN	214.8	44	eP	:44.52 (-0.19)		
CERI	LRAL	219.6	226	eP	:45.55 (0.15)		
CERI	CPRT	231.9	34	eP	:47.15 (-0.04)		
CERI	PWLA	259.2	284	eP	:50.63 (0.24)		
CERI	TZTN	284.2	34	eP	:53.41 (-0.12)		
UTK	CMGA	34.4	42	iPd	05:18:16.31 (0.47)		
UTK	RCGA	64.2	355	iP-	:20.86 (0.09)	iS	05:18:37.22 (8.60X)
UTK	GMG	76.3	48	iPd	:23.13 (0.32)	iS	:32.10 (-0.07)
UTK	DYTN	122.3	8	eP-	:29.91 (-0.25)	eS	:44.49 (-0.46)
UTK	ETT	127.8	36	iPd	:30.95 (-0.09)	iS	:46.01 (-0.42X)
UTK	CPCT	135.8	31	iPd	:31.92 (-0.38)	iS	:48.16 (-0.43)
UTK	CCRT	163.3	43	ePd	:36.49 (-0.17)	eS	:56.14 (-0.00)
UTK	BHT	163.5	11	iPu	:36.79 (0.09)	eS	:56.71 (0.50)
UTK	BCRT	164.8	23	ePu	:36.95 (0.08)	iS	:56.78 (0.27)
UTK	GRBT	172.8	35	eP-	:37.67 (-0.46)	eS	:59.04 (0.35)
UTK	GOGA	200.8	123	iPu	:42.95 (0.40)	eS	:19:06.32 (0.00)
UTK	GTTN	215.3	43	ePd	:44.53 (-0.33)	iS	:11.18 (0.87)
UTK	LRAL	219.3	227	eP	:45.18 (-0.28)	iS	:11.38 (0.10)
UTK	CPRT	233.1	33	ePu	:47.18 (-0.46)		
UTK	PLAL	263.7	285	iP-	:50.86 (-0.73)	eS	:22.46 (0.71)
UTK	TZTN	285.4	33	iP-	:53.22 (-1.07)	eS	:25.55 (-0.87)
UTK	BLA	539.0	53	eP	:19:35.45 (9.85X)	eS	:20.07 (-0.51)

*****2005 OCTOBER 28; 21:05 – MILLEDGEVILLE, 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	051028	2105	40.3	33.003	83.094	14.4	27	57	277	1.0	D	D/D	1.3	232	0.9	0.6	A		2.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME	(RES)	PHASE	ARRIVAL TIME	(RES)
UTK	GOGA	57.1	323	ePd	21:05:50.03	(0.30)	iS	21:05:56.05	(-0.37)
UTK	GMG	252.6	325	eP+	:06:18.37	(0.11)	eS	:06:47.55	(1.11)
UTK	CMGA	254.5	316	iP-	:18.02	(-0.41)	eS	:44.88	(-1.88)
UTK	ETT	286.6	334	eP-	:18.76	(-3.64X)	iS	:55.25	(1.46)
UTK	CCRT	287.2	342	iPu	:22.89	(0.38)	eS	:52.98	(-0.99)
UTK	CPCT	301.6	335	eP	:14.94	(-9.28X)	eS	:58.90	(1.89)
UTK	RCGA	302.1	317	eP	:20.34	(-3.96X)	iS	:57.70	(0.55)
UTK	GRBT	313.2	341	eP	:28.96	(3.30X)	eS	:58.67	(-0.88)
UTK	GTTN	316.0	351	iP-	:26.19	(0.12)	eS	:07:02.44	(2.17)
UTK	DYTN	331.7	327	eP	:23.83	(-4.14X)			
UTK	BCRT	335.4	336	eP+	:28.62	(0.22)	eS	:06.63	(2.22)
UTK	SWET	358.9	314	eP	:25.88	(-5.44)	eS	:06.44	(-3.13)
UTK	LRAL	364.7	272	eP	:31.93	(-0.06)	eS	:08.38	(-2.39)
UTK	ASTN	370.4	355	iPd	:32.80	(0.05)	iS	:12.89	(0.79)
UTK	WMTN	390.7	346	eP	:35.94	(0.67)	iS	:12.99	(-3.56)
UTK	TZTN	395.0	354	eP	:35.54	(-0.21)	eS	:19.54	(2.12)
UTK	PLAL	509.9	297	eP	:59.51	(9.62X)	eS	:39.96	(-2.49)

*****2005 OCTOBER 29; 23:46 – MILLEDGEVILLE, 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	051029	2346	20.7	33.034	83.156	17.1	12	51	244	0.4	D	C/D	1.7	259	1.2	1.1	B		2.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME	(RES)	PHASE	ARRIVAL TIME	(RES)
UTK	GOGA	50.9	325	iPd	23:46:29.30	(-0.02)	iS	23:46:35.45	(0.02)
UTK	CPCT	296.1	335	iP	:47:03.44	(-0.24)	eS	:47:37.12	(1.35)
UTK	SWET	352.4	314	iP	:09.02	(-1.63)	eS	:46.72	(-1.40)
UTK	LRAL	358.9	271	iPu	:11.66	(0.25)	eS	:48.94	(-0.52)
UTK	TZTN	391.1	355	eP	:14.85	(-0.55)	eS	:58.45	(1.92)
UTK	PLAL	503.2	297	eP	:43.11	(13.91X)	eS	:48:19.81	(-1.15)
UTK	BLA	526.2	28				eS	:27.01	(0.95)

*****2005 NOVEMBER 10; 03:11 – SEVIERVILLE, 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
CERI	051110	0311	58.8	35.866	83.583	24.4	14	10	211	0.1	D	D/D	2.9	307	1.4	4.7	C		1.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME	(RES)	PHASE	ARRIVAL TIME	(RES)
CERI	GTTN	9.6	232	eP	03:12:03.20	(0.12)			
CERI	ASTN	52.1	11	eP	:07.91	(-0.03)	eS	03:12:14.55	(-0.10)
CERI	GRBT	59.5	249	eP	:08.88	(-0.09)	eS	:16.20	(-0.23)
CERI	CCRT	61.5	224	eP	:09.44	(0.13)			
CERI	TZTN	75.3	2	eP	:11.29	(-0.03)			
CERI	WMTN	80.6	319	eP	:12.10	(-0.05)	eS	:22.07	(0.16)
CERI	BCRT	90.5	263	eP	:13.67	(0.07)	eS	:24.61	(0.17)
CERI	CPCT	96.7	242	eP	:14.64	(0.11)			
CERI	ETT	99.2	233	eP	:14.85	(-0.07)			
CERI	GMG	148.8	222	eP	:22.79	(0.25)			

*****2005 NOVEMBER 15; 15:46 – 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
CERI	051115	1546	24.2	35.538	84.377	19.2	21	16	55	0.1	B	B/A	0.5	284	0.5	1.8	B		2.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	CPCT	16.4	233	eP	15:46:28.26	(-0.01)	eS	15:46:31.23	(-0.03)
CERI	GRBT	22.3	47	iPd	:28.86	(-0.07)	eS	:32.31	(-0.10)
CERI	ETT	24.5	197	iPu	:29.24	(0.01)			
CERI	CCRT	30.5	105	iPd	:30.10	(0.05)	eS	:34.40	(0.05)
CERI	BCRT	31.1	325	iPu	:30.13	(0.05)			
CERI	BHT	62.4	305	eP	:34.72	(0.05)			
CERI	GTTN	71.2	64	eP	:36.00	(-0.01)			
CERI	GMG	79.5	200	eP	:37.17	(-0.13)	eS	:46.63	(-0.28)
CERI	CPRT	82.0	33	P	:37.95	(0.20)			
CERI	WMTN	98.5	11	eP	:40.18	(-0.03)			
CERI	RCGA	108.1	235	eP	:42.16	(0.48)	eS	:55.48	(1.01)
CERI	CMGA	117.3	211	eP	:43.05	(-0.05)			
CERI	ASTN	119.5	43	eP	:43.89	(0.43)			
CERI	TZTN	134.3	34	eP	:45.72	(0.02)			
CERI	SWET	145.7	256	eP	:46.69	(-0.78)			
CERI	GOGA	250.3	160	eP	:47:03.01	(1.00)			

*****2005 NOVEMBER 16; 20:19 – 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
CERI	051116	2019	30.7	35.532	84.431	11.3	14	12	83	0.1	B	B/B	1.0	255	0.8	2.4	B		1.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	CPCT	12.3	222	iPd	20:19:33.48	(-0.01)			
CERI	ETT	23.0	185	iPd	:34.96	(0.02)	eS	20:19:38.12	(0.06)
CERI	GRBT	26.4	53	eP	:35.34	(-0.10)	eS	:38.95	(0.05)
CERI	BCRT	29.1	333	eP	:35.77	(-0.06)	eS	:39.53	(-0.05)
CERI	CCRT	35.1	102	eP	:36.83	(0.04)	eS	:41.26	(0.01)
CERI	BHT	58.9	309	eP	:40.45	(-0.02)			
CERI	DYTN	60.1	266	eP	:40.65	(-0.01)	eS	:48.20	(0.22)
CERI	GTTN	75.9	66				eS	:52.43	(1.00)
CERI	GMG	77.4	196				eS	:52.37	(-0.36)

****2005 NOVEMBER 18; 03:41 – 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
CERI	051118	0341	20.2	35.424	84.638	13.1	8	11	208	0.0	D	D/D	4.2	243	2.0	4.8	C		1.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	CPCT	10.9	74	eP	03:41:22.99	(0.00)	eS	03:41:25.05	(0.00)
CERI	ETT	19.8	123	eP	:24.11	(0.01)	eS	:26.97	(0.00)
CERI	BCRT	38.4	8	eP	:26.80	(0.03)			
CERI	GRBT	48.7	55				eS	:42:34.36	(0.00)
CERI	BHT	55.9	331	eP	:29.42	(-0.08)	eS	:36.37	(0.02)

*****2005 NOVEMBER 18; 07:26 – SEYMOUR, 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
CERI	051118	0726	32.3	35.870	83.681	19.2	10	7	198	0.1	D	D/D	4.2	282	2.7	3.9	C		1.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	GTTN	6.5	168	eP	07:26:35.75	(0.03)	eS	07:26:38.23	(0.02)
CERI	CPRT	36.6	331	eP	:39.09	(-0.03)			
CERI	GRBT	51.5	245	eP	:41.04	(-0.09)	eS	:47.42	(-0.17)
CERI	CCRT	56.1	217	eP	:41.85	(-0.01)	eS	:48.90	(0.03)
CERI	BCRT	81.7	262	eP	:45.79	(0.05)	eS	:55.78	(0.22)
CERI	MYNC	97.2	205	eP	:48.11	(-0.03)			

****2005 NOVEMBER 18; 08:33 – EVENSVILLE, 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
CERI	051118	083319.2	35.603	84.871	10.4	11	30	219	0.1	D	C/D	2.4	41	1.8	15.0	D		1.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	BHT	29.5	348	eP	08:33:24.36 (0.04)	eS	08:33:28.32 (0.19)
CERI	BCRT	32.3	56	iPd	:24.70 (-0.03)	eS	:29.08 (0.25)
CERI	CPCT	36.0	118	eP	:25.33 (0.05)	eS	:29.91 (0.11)
CERI	ETT	48.7	129	eP	:27.40 (0.09)	eS	:33.37 (0.07)
CERI	GRBT	61.6	82	eP	:29.29 (-0.04)	eS	:36.87 (0.07)
CERI	CCRT	75.8	101			eS	:40.82 (0.10)

*****2005 NOVEMBER 27; 04:02 – 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
CERI	051127	040223.6	35.761	83.956	14.1	12	24	114	0.1	C	C/B	1.6	342	1.0	4.4	C		1.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	GRBT	23.8	246	iPd	04:02:28.06 (-0.04)	eS	04:02:31.65 (0.24)
CERI	GTTN	26.8	78	eP	:28.50 (-0.06)	eS	:32.44 (0.23)
CERI	CCRT	33.9	195	eP	:29.47 (-0.12)	eS	:34.14 (0.14)
CERI	CPRT	44.5	9			eS	:36.70 (-0.19)
CERI	BCRT	56.1	271	eP	:33.27 (0.33)	eS	:40.01 (0.20)
CERI	CPCT	61.8	236	eP	:33.52 (-0.30)		
CERI	MYNC	77.8	192	eP	:36.35 (0.02)		
CERI	GMG	118.9	213			eS	:57.09 (0.24)

*****2005 DECEMBER 03; 22:29 –LAWRENCEBURG, 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	051203	222924.8	34.995	87.372	0.0	21	134	172	0.7	D	D/D	0.6	337	0.3	1.0	A		2.4		
CERI	051203	222925.1	34.962	87.379	5.0F	12	63	86	0.4	D	D/D	4.3	1	1.4	12.7	D		2.3		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	SWET	133.6	79	iPd	22:29:45.74 (-0.97)	iS	22:30:02.08 (-0.77)
UTK	RCGA	184.8	90	iP	:55.45 (0.65)	iS	:17.64 (0.82)
UTK	OXF	194.0	255	eP	:56.25 (0.02)	iS	:18.70 (-0.60)
UTK	CMGA	217.8	100	eP+	:59.68 (-0.32)	eS	:25.83 (0.03)
UTK	LRAL	220.1	171	iP	:59.96 (-0.39)	iS	:26.38 (0.00)
UTK	BHT	239.8	66	eP	:30:03.44 (-0.05)		
UTK	GMG	247.3	93	iPd	:05.18 (0.63)	iS	:34.33 (0.87)
UTK	CPCT	264.4	78	iPu	:06.68 (0.12)	eS	:38.38 (1.44)
UTK	BCRT	268.0	71	iPu	:07.10 (0.07)	iS	:41.01 (3.26X)
UTK	ETT	268.3	81			eS	:38.61 (0.77)
UTK	GRBT	298.3	74	iPd	:11.54 (0.78)	eS	:46.13 (1.93)
UTK	CCRT	306.5	79	iPd	:12.85 (1.02)	iS	:47.45 (1.38)
CERI	PWLA	62.6	272	eP	22:29:35.52 (0.16)	eS	22:29:42.68 (-0.30)
CERI	WVT	132.0	344	eP	:47.02 (0.58)		
CERI	SWET	135.0	77	eP	:46.14 (-0.81)	eS	:30:02.08 (-0.95)
CERI	RCGA	185.5	89	eP	:55.49 (0.61)		
CERI	OXF	192.4	256	eP	:56.38 (0.44)		
CERI	LRAL	216.6	171	eP	:59.39 (-0.31)	eS	:26.15 (1.21)
CERI	CMGA	217.8	99	eP	:59.80 (-0.10)		
CERI	BCRT	269.9	70	eP	:30:07.17 (0.44)		
CERI	GRBT	300.0	74	eP	:11.41 (0.93)		

*****2005 DECEMBER 04; 00:08 – CUMMING, 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	051204	000824.4	34.262	84.263	0.0	8	26	310	0.7	D	D/D	1.8	305	1.4	2.3	B		1.7		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
UTK	BTGA	25.8	340				S	00:08:31.60	(-0.23)
UTK	CMGA	81.7	300	eP	00:08:36.96	(-0.96)	eS	:49.51	(1.60)
UTK	CPCT	133.9	350	eP	:45.66	(-0.68)	eS	:09:02.24	(-0.26)
UTK	BCRT	169.3	350	eP	:52.21	(0.27)	iS	:14.28	(2.11)
UTK	SWET	185.9	305				eS	:16.18	(-0.55)

*****2005 DECEMBER 07; 19:29 – BALD CREEK, 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
CERI	051207	192947.4	35.916	82.364	11.6	9	110	206	0.3	D	D/D	7.7	259	6.2	19.7	D		2.8		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	ASTN	110.0	295	eP	19:30:05.02	(-0.13)	eS	19:30:18.02	(-0.20)
CERI	GTTN	118.2	265	eP	:06.62	(0.15)			
CERI	TZTN	127.3	304	eP	:08.28	(0.40)			
CERI	CPRT	139.3	282	eP	:09.34	(-0.51)			
CERI	WMTN	172.0	289	eP	:14.59	(-0.27)			
CERI	CPCT	202.0	256	eP	:19.13	(-0.36)			
CERI	BLA	225.7	50	eP	:22.75	(-0.13)			
CERI	PKKY	280.2	348	eP	:30.21	(0.55)			

*****2005 DECEMBER 08; 08:47 – DELANO, 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
CERI	051208	084703.0	35.217	84.592	10.0	9	17	149	0.1	C	C/C	3.0	288	0.9	4.5	C		0.8		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	ETT	17.3	46	iPd	08:47:06.31	(0.00)	eS	08:47:08.84	(0.09)
CERI	CPCT	26.6	14	eP	:07.56	(-0.07)	eS	:10.97	(-0.11)
CERI	GMG	40.0	190				eS	:14.90	(0.13)
CERI	BCRT	60.9	1				eS	:20.58	(0.17)
CERI	GRBT	62.1	35	eP	:13.42	(0.21)	eS	:20.49	(-0.24)
CERI	GMGA	76.8	212				eS	:24.59	(-0.17)

*****2005 DECEMBER 09; 20:30 – 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
CERI	051209	203057.0	35.498	84.523	14.3	20	5	63	0.0	B	B/A	0.8	254	0.5	0.7	A		1.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)		PHASE	ARRIVAL TIME (RES)	
CERI	CPCT	5.4	179	eP	20:30:59.57	(0.03)	eS	20:31:01.36	(-0.02)
CERI	ETT	20.1	162	iPu	:31:01.05	(-0.01)	eS	:04.06	(0.02)
CERI	BCRT	30.1	351	eP	:02.46	(0.03)	eS	:06.51	(0.09)
CERI	GRBT	35.4	56	eP	:03.07	(-0.15)	eS	:07.64	(-0.13)
CERI	CCRT	42.8	95	eP	:04.34	(-0.03)	eS	:09.72	(-0.05)
CERI	DYTN	51.6	269	eP	:05.63	(-0.06)	eS	:12.16	(0.08)
CERI	BHT	55.3	317	eP	:06.21	(-0.07)			
CERI	MYNC	59.2	143	eP	:06.99	(0.11)			
CERI	GMG	71.8	191	eP	:08.72	(-0.14)	eS	:17.31	(-0.24)
CERI	GTTN	85.0	66				eS	:21.29	(0.15)
CERI	CPRT	93.3	38	eP	:12.33	(0.04)			
CERI	CMGA	107.1	206	eP	:14.13	(-0.21)	eS	:26.98	(-0.05)

*****2005 DECEMBER 13; 17:42 – VONORE, 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
CERI	051213	1742	43.8	35.634	84.306	9.1	13	11	92	0.1	C	C/B	1.3	319	1.2	4.4	C		1.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	GRBT	10.8	66	eP	17:42:46.21 (0.02)		
CERI	CPCT	28.3	224	eP	:48.62 (-0.08)		
CERI	BCRT	28.5	301	eP	:48.72 (-0.02)	eS	17:42:52.36 (-0.02)
CERI	CCRT	29.6	129	eP	:48.96 (0.02)		
CERI	ETT	36.7	202	eP	:50.00 (-0.03)	eS	:54.69 (0.06)
CERI	GTTN	61.2	71			eS	:43:01.25 (-0.15)
CERI	BHT	62.7	294	eP	:54.11 (-0.06)	eS	:01.89 (0.08)
CERI	CPRT	69.6	33	eP	:55.40 (0.08)		
CERI	DYTN	73.0	258	eP	:55.75 (-0.06)	eS	:04.67 (0.04)

*****2005 DECEMBER 24; 15:35 – 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	051224	1535	03.5	34.955	85.076	23.4	6	36	240	0.5	D	D/D	6.2	316	0.6	12.4	D		2.1		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
UTK	CMGA	36.4	174	iPd	15:35:10.71 (0.31)	eS	15:35:14.59 (-0.89)
UTK	GMG	38.5	105	iP	:10.75 (0.01)	iS	:16.28 (0.21)
UTK	ETT	70.0	54	iP+	:14.26 (-0.98)	eS	:24.19 (0.35)
UTK	BCRT	100.8	27	iP+	:32.03 (12.14X)	iS	:51.16 (19.29X)
UTK	CCRT	109.0	58	iP	:30.99 (9.81X)	iS	:51.52 (17.43X)
UTK	GRBT	113.0	45	iP-	:32.39 (10.65X)	eS	:52.84 (17.78X)

****2005 DECEMBER 30; 03:15 – CLEVELAND, 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
CERI	051230	0315	20.2	35.171	84.847	9.3	10	38	135	0.1	C	C/C	1.8	319	1.1	6.4	D		1.5		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
CERI	GMG	37.8	155	eP	03:15:26.61 (0.05)	eS	03:15:31.37 (0.07)
CERI	ETT	39.6	64	eP	:26.68 (-0.14)	eS	:31.68 (-0.08)
CERI	CPCT	42.8	44	eP	:27.18 (-0.14)		
CERI	RCGA	50.6	245			eS	.34.66 (-0.11)
CERI	CMGA	62.5	196	eP	:30.79 (0.33)	eS	:38.06 (-0.02)
CERI	BCRT	70.4	20	eP	:31.98 (0.25)		
CERI	CCRT	79.3	65			eS	:42.46 (-0.23)

*****2005 DECEMBER 30; 23:24 – CATAWBA, VIRGINIA*****

SRCE	DATE	HRMN	SEC	LAT-N	LON-W	DPTH	PH	DMN	GAP	RMS	Q	SQD	ERH1	AZ	ERH2	ERZ	Q	MN	MD	MAGT	I
VTSO	051230	2324	38.6	37.366	80.343	14.0	8	18	262	0.2	D	C/D	2.8	228	1.2	4.3	C		2.2		

SRCE	STA	DIST (KM)	AZM	PHASE	ARRIVAL TIME (RES)	PHASE	ARRIVAL TIME (RES)
VTSO	BLA	18.5	202	P	23:24:42.62 (0.05)	S	23:24:45.48 0.15)
VTSO	BAV	24.9	271	P	:43.32 (-0.22)	S	:46.86 (-0.09)
VTSO	ELN	37.4	255	P	:45.14 (-0.25)	S	:50.27 (0.18)
VTSO	FWV	47.8	300	P	:47.19 (0.13)	S	:53.09 (0.15)

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 operated by the various groups contributing to the SEUSSN bulletin.

Sta. Name	Lat. N. Dg-Min	Long. W Dg-Min	Elev. (m)	Type*	State	Operator	Locality
ADSC	32.8119	-80.0167	6	sm	SC	CERI	
ASTN	36.3270	-83.476	730	sp	TN	CERI	Avondale Springs, TN
ATTN	35.4433	-84.6301	282	sm	TN	CERI	
BCRT	35.7660	-84.576	409	sp	TN	CERI	Bacon Ridge, TN
BHKY	38.0350	-84.505	284	sp	KY	UKY	Bowman Hall, KY
BHT	35.8630	-84.94	732	sp	TN	CERI	Blowhole, TN
BLA	37.2110	-80.421	634	sp,sm,bb	VA	VTSO/USNSN	Blacksburg, VA
BRBC	35.7380	-82.286	1976	sp	NC	CERI	Mount Mitchell, NC
BVD	39.7748	-75.4993	58	sp	DE	DGS	Bellevue State Park, DE
BWD	39.7995	-75.5767	63	sp	DE	DGS	Brandywine Creek St. Park, DE
C1SC	32.7980	-79.959	5	sm	SC	CERI	Charleston, SC
C2SC	32.7990	-79.964	2	sm	SC	CERI	Charleston, SC
CBN	38.2050	-77.373	70	sm,bb	VA	USNSN	Corbin, VA
CCRT	35.4660	-84.053	915	sp	TN	CERI	Cow Camps Ridge, TN
CMGA	34.6290	-85.034	478	sp	TN	CERI	
COW	33.3840	-80.701	60	sp	SC	USC	Cow Castle Creek, SC
CPCT	35.4500	-84.522	275	bb	TN	CERI	Cooper Cave, TN
CPRT	36.5530	-83.892		sp	TN	CERI	
CSB	32.9860	-80.071	-82	sp	SC	USC	Charleton Southern Univ, SC
CSTN	35.1010	-85.2365	203	sm	TN	CERI	
CSU	32.9860	-80.071	7	sp	SC	USC	Charleston Southern Univ., SC
CVVA	38.0220	-78.532	159	sm	VA	CERI	Charlottesville, VA
DEMA	39.3187	-75.6098	12	sp	DE	DGS	DE Emergency Mgmt. DE
DRC	33.1080	-80.388	20	sp	SC	USC	Dorchester, SC
DWPF	28.1100	-81.433	-142	sm,bb	FL	USNSN	Disney Wilderness Preserve, FL
DXN	33.0538	-81.622	61	sp	GA	WSRC	Girard, GA
DYTN	35.4910	-85.092	580	sp	TN	CERI	Dayton, TN
ELK	33.3480	-81.3472	88	sp	SC	WSRC	Elko, SC

Sta. Name	Lat. N. Dg-Min	Long. W Dg-Min	Elev. (m)	Type*	State	Operator	Locality
ELN	37.2790	-80.751	634	sp	VA	VTSO	Prospectdale, VA
ETT	35.3260	-84.455	588	sp	TN	CERI	Etowah, TN
FLKY	38.4260	-83.751	280	sp	KY	UKY	Flemingsburg, KY
FMKY	36.6640	-88.909	52	sp	KY	UKY	Fulgham, KY
FWV	37.5810	-80.812	756	sp	WV	VTSO	Forrest Hill, WV
GBT	35.6680	-84.208	357	sp	TN	CERI	
GFM	36.1110	-81.807	1726	sp	TN	CERI	Grandfather Mountain, NC
GMG	34.8630	-84.67	1097	sp	GA	CERI	Grassy Mountain, GA
GOGA	33.4110	-83.467	150	sm,bb	GA	USNSN	Godfrey, GA
GRBT	35.6740	-84.197	329	sp	TN	CERI	Greenback, TN
GTTN	35.8120	-83.667	917	sp	TN	CERI	Green Top, TN
HAW	33.3600	-81.61	85	sp	SC	WSRC	Hawthorne fire tower, SC
HBF	32.9480	-80.337	-89	sp	SC	USC	Harts Bluff, SC
HEKY	37.8150	-87.592	94	sp,sm	KY	UKY	
JSC	34.2790	-81.258	160	sp	SC	USC	Jenkinsville, SC
LAKY	37.0790	-88.969	88	sp	KY	UKY	
LHS	34.4790	-80.808		sp	SC	USC	Liberty Hill, SC
LLKY	36.9220	-88.097	177	sp	KY	UKY	Land-Between-the-Lakes, KY
LOKY	37.2370	-88.295	230	sp	KY	UKY	Lockhart, KY
LRAL	33.0350	-86.998	130	sm,bb	AL	USNSN	Lakeview Retreat, AL
LVKY	36.9700	-88.829	92	sp	KY	UKY	
MCWV	39.6580	-79.846	280	sm,bb	WV	USNSN	Mount Chateau, WV
MGS	32.8980	-80.141	9	sp	SC	USC	Middleton Gardens, SC
MMC	34.7800	-82.915	280	sp	SC	USC	Morgan Memorial Church, SC
MOB	33.1933	-81.8148	67	sp	GA	WSRC	Waynesboro, GA
MOKY	37.6470	-87.901	204	sp	KY	UKY	Morgansfield, KY
MR01	34.3320	-81.296	131	sp	SC	USC	Monticello Reservoir, SC
MR02	34.1930	-81.23	84	sp	SC	USC	Monticello Reservoir, SC
MR07	34.3710	-81.325	134	sp	SC	USC	Monticello Reservoir, SC
MR10	34.3360	-81.338	137	sp	SC	USC	Monticello Reservoir, SC
MVKY	38.6460	-83.761	213	sm	KY	SLU	Maysville, KY
MVL	39.9993	-76.349	91	sp	PA	MVU	Millersville, PA
MYNC	35.0740	-84.128	550	sm,bb	NC	USNSN	Murphy, NC

Sta. Name	Lat. N. Dg-Min	Long. W Dg-Min	Elev. (m)	Type*	State	Operator	Locality
NED	39.7263	-75.7362	90	sp	DE	DGS	Newark, De
NHSC	33.1070	-80.178	12	sm,bb	SC	USNSN	New Hope, SC
NPRS	33.2570	-81.6381	79	sp	SC	WSRC	Savannah River Lab., SC
OXF	34.5120	-89.409	101	sm,bb	MS	USNSN	Oxford, MS
PAKY	37.0680	-88.772	98	sp	KY	UKY	Paducah, KY
PKKY	38.3830	-83.034	336	sp	KY	UKY	Potato Knob, KY
PLAL	34.9820	-88.076	165	sm,bb	AL	SLU	Pickwick Lake, AL
PLVA	36.6660	-81.16	1353	sp	VA	CERI	Point Lookout, VA
RBNC	35.3570	-82.986	1829	sp	NC	CERI	Richland Balsam, NC
RCGA	34.9760	-85.348	460	sp	GA	CERI	Rock City, GA
RGR	32.9080	-80.194	-61	sp	SC	USC	
RICH	35.9190	-82.819	968	sp	TN	CERI	Rich Mountain, NC
ROKY	37.9090	-83.926	433	sp	KY	UKY	Rotten Point, KY
SDMD	39.4102	-76.8403	215	sp	MD	MGS	Soldiers Delight, MD
SHTN	35.9330	-83.9672	271	sm	TN	CERI	Sandy Hook, TN
SMKY	37.4230	-87.276	158	sp	KY	UKY	Sacramento, KY
SOKY	37.5260	-85.965	304	sp	KY	UKY	Sonora, KY
SRAV	33.3250	-81.6800	91	sp	SC	WSRC	Savannah River Lab., SC
SRPD	33.1550	-81.7125	31	sp	SC	WSRC	Savannah River Lab., SC
SRPN	33.3290	-81.5888	95	sp	SC	WSRC	Savannah River Lab., SC
SRPW	33.2023	-81.5782	77	sp	SC	WSRC	Savannah River Lab., SC
SWET	35.2160	-85.932	581	bb	TN	CERI	Sewanee, TN
TAL	33.3777	-81.7075	125	SP	sc	WSRC	Savannah River Lab., SC
TP1H	33.0180	-80.135		sp	SC	USC	
TP1T	33.0180	-80.062		sp	SC	USC	
TRSC	32.8718	-80.0336	7	sm	TN	CERI	
TRYN	35.2670	-82.246	915	sp	NC	CERI	Tryon Peak, NC
TWB	33.1150	-80.103	9	sp	SC	USC	Tillman's/White's Bay, SC
TZTN	36.5440	-83.549	394	sm,bb	TN	USNSN	
VSAP	37.1310	-88.813	113	sp,sm	KY	UKY	Tazewell, TN
VWCCP	37.2458	-79.9777	361	sp	VA	VTSO	Roanoke, VA

Sta. Name	Lat. N. Dg-Min	Long. W Dg-Min	Elev. (m)	Type*	State	Operator	Locality
WAS	32.8470	-80.272	9	sp	SC	USC	West Ashley, SC
WIKY	36.9740	-89.084	116	sp,sm	KY	UKY	
WMTN	36.4100	-84.176	830	sp	TN	CERI	Walnut Mountain, TN
WVT	500.0000	-87.83	153	bb	TN	SLU	Waverly, TN
2405	36.3100	-82.37		sm	TN	NSMP	
2412	35.2700	-85.7		sm	KY	NSMP	
2510	35.5900	-82.48		sm	NC	NSMP	
2511	39.4100	-77.91		sm	WV	NSMP	
2531	33.8000	-84.31		sm	GA	NSMP	
2541	33.9800	-80.96		sm	SC	NSMP	
2543	32.8350	-80.047		sm	SC	NSMP	
2544	32.7810	-79.932		sm	SC	NSMP	
2544	32.7810	-79.932		sm	SC	NSMP	
2549	37.3270	-80.735		sm	VA	NSMP	
2551	39.0910	-77.759		sm	VA	NSMP	
2552	33.0250	-80.176		sm	SC	NSMP	

*Station types: bb=broadband; sm=strong motion; sp=short period

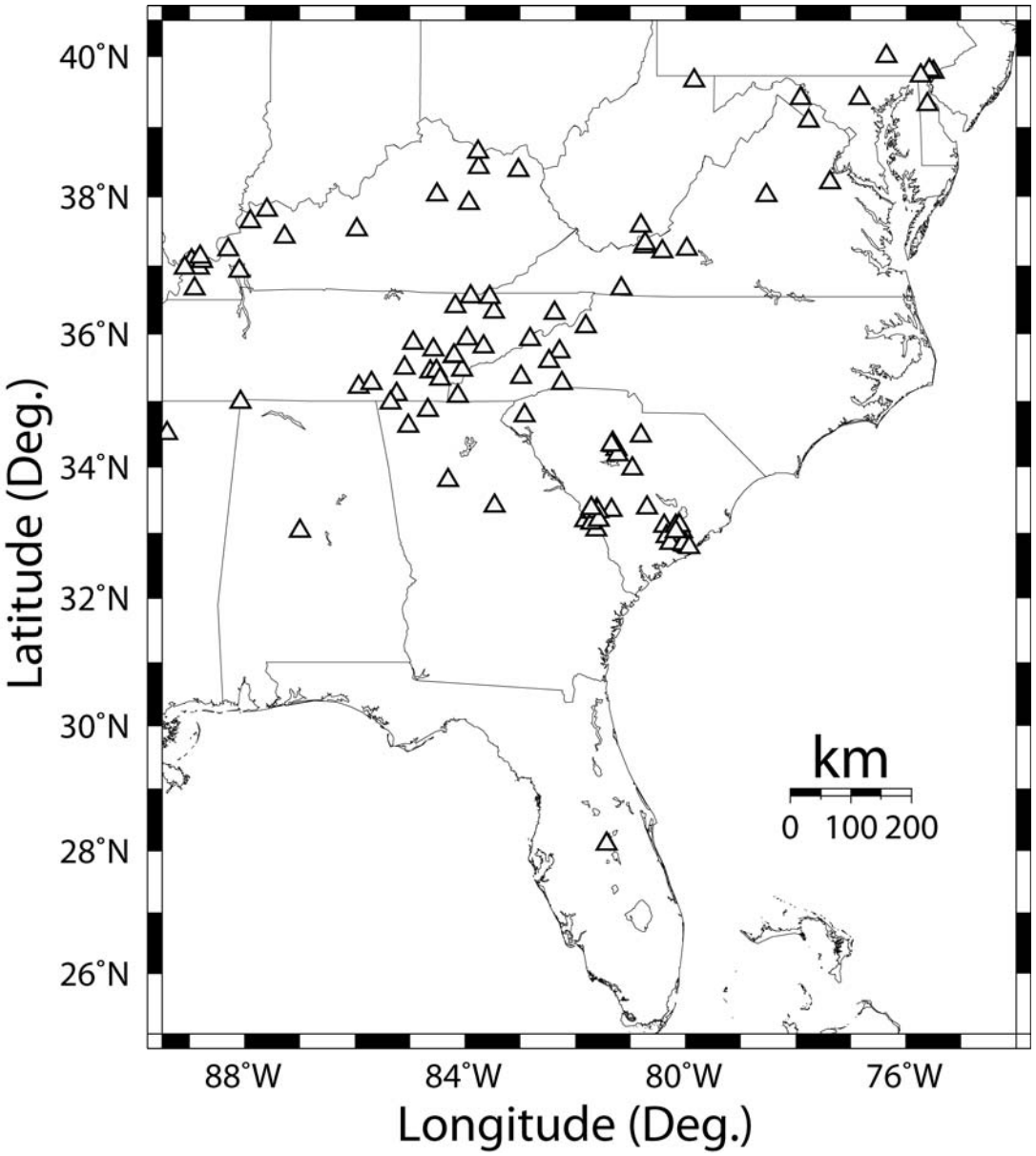

FIGURE 4. Seismic stations (triangles) in the SEUSSN. Triangles indicate stations operating during the report period.

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 40, 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 ANSS Composite Catalog, accessible at **http://quake.geo.berkeley.edu/anss/.**

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 NEIC: Unknown,

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

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

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

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

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

MDB, MDL, MD: Duration/coda length magnitude that approximates either the mb, ML, or an unknown magnitude scale, respectively. As of June 1986 (SEUSSN Bulletin 17), those using a duration magnitude approximating mb(Lg) are CERI, DGS, GIT, UTK and VTSO. Specifically:
CERI: $MDB = -2.36 + 2.23 \log(D) + 0.12 \log(K)$ $(MDB > 2.6)$
$MDB = -3.38 + 2.74 \log(D)$ $(MDB < 2.7)$
VTSO, UTK, and GIT: $MDB = -3.45 + 2.85 \log(D)$ where D is signal duration measured from the P-wave arrival time to the time when the signal returns to background noise, and K is the epicentral distance in kilometers. Those using a duration magnitude approximating ML are USC and NEIC.
Specifically:
NEIC: $MDL = -0.87 + 2.0 \log(D) + 0.0035 X$ where D is signal duration measured from the P-wave arrival time to the time when the signal returns to twice background noise, and X is the epicentral distance in kilometers. For more information please see SEUSSN Bulletin 17 (page 1) or contact the agency making the estimate for details on their specific procedure,

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

MW: Magnitude based on seismic moment,

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
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
IRIS - Incorporated Research Institutions for Seismology, DC
MGS - Maryland Geological Survey, MD
MVU - Millersville University, PA
NASA - National Aeronautics and Space Administration/Goddard Space Flight Center, WV
NEIC - United States Geological Survey, 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
USNSN - National Earthquake Information Center, NEIC, 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