The International Seismological Summary

1958 OCTOBER, NOVEMBER, DECEMBER

The 1958 number of the Summary includes a few modifications to the presentation due to the output format of the electronic computer and card-controlled typewriter.

No lower case letters are available so the letterpress is uniformly in capitals. Phases pP, sP, sS when available are therefore designated by *PP, *SP, *SS; the asterisk implying that the first letter of the pair is equivalent to lower case. An additional column is provided and used exclusively for the phase pP. Surface waves are no longer included in a separate column. Residuals are by comparison with the Jeffreys-Bullen tables; P is used up to 105°, PKP from 110°, S up to 106° and SKS from 106°. For P and PKP beyond the scope of the tables the dummy figure of 777 is placed to complete the residual column. The quantity called SE at the head of each earthquake is the standard error of the computed P residuals.

KEW OBSERVATORY
October 1964

The Director of the I.S.S. wishes to express his thanks to H.M. Treasury, to UNESCO, and to the National Science Foundation of the United States, for financial support, which has covered the cost of the preparation and printing of this volume. Also to the United Kingdom Atomic Energy Authority for the services of their electronic computer which has performed the necessary calculations.

He also thanks the Director-General of the Meteorological Office and the Superintendent of Kew Observatory for the hospitality extended to the staff, and assistance administration.

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

OCTOBER 1 9.H 29.M 42.S EPICENTRE -57.09 147.65 DEPTH= 0.KM

A=-0.46122 B= 0.29215 C=-0.83781 D= 0.5351 E= 0.8448
G= 0.7078 H=-0.4483 K=-0.5460 HT= -7.9

SE= 2.07

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
DUMONT	10.26	197.3	2	29	-2						4	56	
FORT NELSON	14.17	359.1	3	24A	0	6	7	4					
ROXBURGH	17.71	58.6	4	11A	2	7	28	3					
CAPE HALLETT	17.87	157.4	4	10K	-1	7	40	11			4	18	
MELBOURNE	19.35	353.6	4	28A	-1	7	58	-4			4	54	PPP
WILKES	19.55	227.0	4	30	-1	8	10	3					
KAIMATA	21.01	56.2	4	40	-7								
SCOTT BASE	21.86	169.3	4	58	2	9	5	12			5	17	PP
COBB RIVER	22.74	56.0	5	4	0	9	23	14					
ADELAIDE	22.97	340.9	5	6A	-1	9	18	5					
RIVERVIEW	23.38	7.4	5	11A	0	9	27	6					
OASIS-BUNG.	23.50	228.1	5	13	1	9	31	8					
WELLINGTON	23.53	59.4	5	14A	2	9	31	8			10	4	
MIRNY	26.59	226.8	5	42	1	10	22	7					
BRISBANE	29.83	9.6	6	9	-2	11	15	8					
SOUTH POLE	33.09	180.0	6	39	0						9	20	PCP
PERTH	33.32	305.3	6	43	2	12	8	6					
BYRD STATION	34.89	162.3	6	51	-4	12	27	1			8	16	PP
CHARTERS TS.	37.04	357.8	7	12A	-1	12	59	0					
NOUMEA	37.37	29.5	7	15A	-1						8	39	PP
SUVA	45.14	43.4	8	19A	-1	15	1	2			10	12	PP
PORT MORESBY	47.57	359.3	8	38	-1	15	32	-2			13	51	PCS
RABAUL	52.86	5.7	9	17	-2								
AFIAMALU	52.94	52.3									9	15	PP
LEMBANG	59.06	311.9	10	5K	1	18	13	3					
DJAKARTA	59.97	311.4	10	11	1	18	23	1					
KOROR	65.09	345.6	10	42	-2	19	30	4					
GUAM	70.33	357.0	11	16	-1								
MEDAN	72.20	307.7	11	28K	0	20	58	7					
MANILA	74.76	333.2	11	35	-8						19	7	
BAGUIO CITY	76.63	333.3	12	18	24								
PIETERMZBURG	78.80	232.1	12	5	-1								
HERMANUS	78.99	221.3				22	19	14			22	56	PS
TANANARIVE	79.67	251.3	12	8	-2								
KIMBERLEY	81.91	228.2	12	26K	4								
PORT BLAIR	82.01	305.9	12	28	5	22	39	2			23	48	PS
HONG KONG	83.93	329.1	12	34K	1	22	53	-3			28	24	SS
COLOMBO	83.97	292.4	12	48	15	22	58	1					
SANTA LUCIA	84.19	148.6	12	36	2						15	37	PP
PHU-LIEN	84.86	321.9	13	20	43						16	1	
CANTON	84.93	328.5	12	37	-1	23	4	-2			23	58	PS
KODAIKANAL	88.03	292.1				23	25	-11					
MADRAS	89.05	295.8	13	27	29	23	33	-12			24	32	PS
KUNMING	90.14	320.1	13	4	1	23	59	4			16	42	PP
ZO-SE	90.65	337.5	13	7K	2						17	40	PP
NAGASAKI	90.72	345.1	12	54	-12						16	40	
NANKING	92.08	335.8	13	10	-2	24	11	-2			16	51	PP
ABUYAMA	92.17	350.1	13	12A	0	23	49	-24					
CALCUTTA	93.53	307.2	13	37	19	24	36	11					
MATUSIRO	93.62	352.4	13	18	-1	23	52	-34			17	0	PP
HYDERABAD	93.69	296.6				23	55	-32					
SHILLONG	94.72	311.5	13	25	1	24	27	-8			23	55	SKS
CHENGTU	94.85	323.4	13	27	2	24	37	0			17	14	PP
SIAN	96.69	328.5	13	34	1	24	55	3			17	34	PP
BOMBAY	97.73	292.8				25	3	2			17	29	PP
CHATRA	97.80	308.3				24	26	-35			17	32	PP
LHASA	98.66	312.7	13	46	4	25	9	0			24	23	SKS
PEKING	100.32	335.9				25	26	3			17	44	PP
VLADIVOSTOK	100.71	348.3	17	7	777								
LA PAZ	100.86	145.2	13	52	0	24	36	-51			18	1	PP
AGRA	102.16	301.3				24	40	-58			17	45	PP
CHANGCHUN	102.28	343.6	13	58A	0	25	37	-2			18	10	PP
HUANCAYO	102.53	136.9									27	26	PS
LWIRO	103.33	244.1									27	43	
DEHRA DUN	104.85	303.0				24	51	-69			17	55	PP
ULAN-BATOR	109.98	332.1	19	2	777								
QUETTA	110.04	294.6	17	59	-34								
MAGADAN	116.32	1.8									19	49	PP
NAMANGAN	116.56	304.8	18	48	2								
CHINCHINA	117.92	129.4				25	47	5			29	53	PS

BOGOTA	118.25	131.1			25	47	4	30 4	PS
YAKUTSK	119.59	350.4						20 13	PP
PASADENA	120.08	72.9	18	47 -5				28 27	S
SEMIPALATNSK	120.63	316.6						20 12	PP
LICK	120.76	68.0	18	56 2					
BERKELEY	120.85	67.2						37 5	SS
TUCSON	122.50	79.9	18	59 2				20 39	PP
TUCSON TELE.	122.63	79.9	18	58 1				20 38	PP
MINERAL	123.08	65.8	19	0 2					
RENO	123.36	67.7	19	2 3					
EUREKA	125.28	70.4	19	3 1				22 49	PP
JERUSALEM	128.06	271.0	19	5 -3				21 22	PP
SALT LAKE C.	128.36	72.2	19	10 2					
HELWAN	128.71	266.2	19	12 3				21 30	PP
TIKSI	129.10	352.4	19	9 -1					
KSARA	129.25	273.2	19	15 5				21 33	PP
MAKHACH-KALA	129.76	290.0						22 41	
TIFLIS	130.27	287.0	18	55 -17				22 39	
COLLEGE	131.10	30.8	19	8 -6				22 43	PP
BUTTE	131.72	66.9	19	17 2				22 46	PP
HUNGRY HORSE	132.60	63.7	19	17 1					
SVERDLOVSK	133.18	311.2						21 49	
SOTCHI	134.24	285.2	19	22 2					
FAYETTEVILLE	134.43	90.0	19	18K -2					
RAPID CITY	135.23	75.2	19	25 4				23 0	PP
TAMANRASSET	136.08	234.8	20	21 58				22 3	PP
SIMFEROPOL	138.13	282.7	19	44 17				22 30	
ST. LOUIS 1	138.45	90.8	19	25 -2					
MOSCOW	142.81	298.4	19	40 5				22 43	PP
MESSINA	143.55	259.7			26	31	-13	22 30	PP
MORGANTOWN	144.74	98.9	19	40A 2					
BELGRADE	145.43	272.3	19	42 3				23 16	PP
GEORGETOWN	145.76	102.6	19	48A 8					
KHEYS	146.53	341.7	19	40 -1					
LWOW	146.53	282.1	19	44 3					
BERMUDA	146.81	124.2	19	52 10				33 34	
SETIF	147.33	246.6	19	46 3				19 59	PKP2
PULKOVO	148.15	301.6	19	48 4					
ZAGREB	148.51	270.1	19	50 5					
HURBANOVO	148.54	275.0						20 39	
KRAKOW	148.85	279.7	19	41 -4				23 58	
ALGIERS UNI.	148.95	244.4	19	52 7				20 9	PKP2
APATITY	149.27	316.7	19	49 3				23 41	PP
BRATISLAVA	149.32	274.6	19	51 5				21 22	PP
RELIZANE	149.34	240.0	19	50 4				20 0	PKP2
WARSAW	149.42	284.0	19	53 7					
TRIESTE	149.62	267.9	19	46 0				19 58	PKP2
RACIBORZ	149.80	278.5	19	50 3				20 6	PKP2
HELSINKI	150.80	300.4	19	54 6					
OTTAWA	150.95	94.9	19	54 6				20 43	PKP2
RESOLUTE	150.99	29.1	19	53A 5				30 24	SKKS
WESTON	151.30	104.0	19	5K -44					
PRUHONICE	151.72	275.7	19	48 -2				20 10	PKP2
SODANKYLA	151.81	315.4	19	54 4					
ALICANTE	151.91	241.9	19	50 0	26	56	0	23 37	PP
BREBEUF	152.15	96.7	19	55K 5					
MALAGA	152.41	234.4	19	56K 5				20 12	PKP2
GRANADA	152.43	236.1	20	14K 23				28 2	PPP
COLLMBERG	153.25	277.1	19	44 -8					
SHAWINIGAN	153.27	95.8	19	58 6				20 47	PKP2
PLAUEN	153.30	274.9	19	58 6					
SONNEBERG	153.76	274.0	20	12 20					
EBINGEN	153.76	268.0	19	54 2				20 16	PKP2
JENA	153.83	275.3	20	2 9				23 42	PP
STUTTGART	153.97	269.3	19	54 1				23 54	PP
NEUCHATEL	154.16	264.0						30 4	
UPPSALA	154.22	297.3	20	0 7					
KIRUNA	154.22	316.0	19	53 0					
STRASBOURG	154.64	267.7						24 56	PP
TOLEDO	154.82	239.0	20	13 19					
MUNSTER	156.50	274.6	20	26 30					
DE BILT	157.89	273.0						44 18	SS
KEW	160.59	266.8						44 39	SS
DURHAM	162.68	275.4	19	56A -7					

OCTOBER 1 17.H 47.M 17.S EPICENTRE 52.67-165.40 DEPTH= 0.KM

A=-0.58937 B=-0.15356 C= 0.79314 D=-0.2521 E= 0.9677
G=-0.7675 H=-0.2000 K=-0.6090 HT= -6.4

SE= 1.78

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
COLLEGE	15.18	29.5	3 31	-4				
SITKA	17.78	63.8	4 10	2				
MAGADAN	24.98	303.4	5 25	1				
ALBERNI	25.54	81.2	5 31K	2				
HORSESHOE B.	26.42	80.1	5 38K	0				
VICTORIA	26.69	81.9	5 41K	1				
SHASTA	31.37	95.0	6 23K	1				
KIPAPA	31.71	166.8	6 25	0				
HONOLULU	31.81	167.0	6 26	0				
UKIAH	31.84	98.1	6 25	-1				
HUNGRY HORSE	32.38	76.7	6 31	0				9 17 PCP
BERKELEY	33.22	99.0	6 39K	1				
RENO	33.64	94.5	6 44K	2				
TIKSI	33.74	328.6	6 42	-1				
LICK	33.94	99.1	6 45K	1				
YAKUTSK	34.78	311.5	6 50	-2				
RESOLUTE	35.05	25.9	6 55K	1	12 26	1		
FRESNO	35.42	98.2	6 58K	1				
BOZEMAN	35.47	79.1	6 57	-1				
EUREKA	36.02	91.3	7 3	1				
SALT LAKE C.	37.74	86.4	6 17	-60				
PASADENA	38.17	99.9	7 20K	0	13 16	3	7 23	
BOULDER CITY	38.95	94.8	7 28	1				
RAPID CITY	41.01	76.3	7 44	0				8 17
MATUSIRO	42.12	270.6	7 53K	0	14 14	2		9 48 PP
TUCSON	43.91	95.5	8 9	1				9 15
TUCSON TELE.	43.92	95.3	8 9	1				10 8 PP
ABUYAMA	44.84	270.9	8 15K	0				
NORD	44.93	6.2	8 15K	-1				
CHANGCHUN	45.32	287.8	8 19A	0				
KHEYS	45.81	351.5	8 14	-9				
NAGASAKI	49.76	273.2	8 53	-1				
FAYETTEVILLE	51.39	78.9	9 3K	-3				
FLORISSANT	51.84	73.8	9 8	-1				
DALLAS	52.04	83.8	9 12	1				
SCORESBY SD.	54.37	14.3	9 32	4				
OTTAWA	55.58	58.7	9 34	-3				
SHAWINIGAN	56.31	56.0	9 40	-2				
BREBEUF	56.60	57.4	9 41	-3				
SEVEN FALLS	56.89	54.4	9 44	-2				
TRUK	56.91	233.5	9 46	-1				
MORGANTOWN	57.23	66.3	9 47A	-2				
APATITY	59.28	351.7	10 3	0	18 3	-6		
KIRUNA	59.75	357.4	10 6	0				
SODANKYLA	59.95	354.7	10 6	-2				
SODANKYLA	59.95	354.7	10 6	-2				
WESTON	59.96	58.6	10 7A	-1				
CHAPEL HILL	60.35	68.8	10 9	-1				
SKALSTUGAN	64.08	1.2	10 36	1				
SVERDLOVSK	64.53	334.0	10 38	0				
HONG KONG	66.86	276.7			19 51	7		
RABAUL	67.01	227.0	10 53	-1	19 45	-1		11 35
HELSINKI	67.21	354.4	10 55	0				11 22 PCP
BAGUIO CITY	67.44	267.6	10 55	-2				
UPPSALA	67.81	358.4	10 59	0				
MANILA	68.61	266.0	10 58	-6				
GOTEBORG	69.97	1.5	11 13	1				
MOSCOW	70.31	346.4	11 14	-1				
KUNMING	71.61	287.2	11 22	0	20 42	2		
DURHAM	72.09	9.8	11 16	-9				
NAMANGAN	74.49	318.7	11 41	2				
KHODCHIKENT	74.62	320.2	11 59	19				12 10 PCP
MUNSTER	75.57	4.5	11 44	-2				
HALLE	76.18	1.7	11 50	1				12 2 PCP
COLLMBERG	76.40	1.0	11 51	1				
BENSBERG	76.56	4.8	11 52	1				
JENA	76.75	2.0	11 56	4				12 37
PLAUEN	77.19	1.6	11 53	-2				
SHILLONG	77.34	295.5	11 55K	0				
RACIBORZ	77.59	357.6	11 58	1				12 9 PCP
PRUHONICE	77.73	0.0	11 59	1				14 9

STUTTGART	78.84	3.6	12	4	0						
CHATRA	78.87	299.7	12	6	2						
STRASBOURG	78.96	4.6	12	6	2					12	28
TUBINGEN	79.07	3.7	12	6	1						
EBINGEN	79.42	3.8	12	8	1						
BRATISLAVA	79.52	358.3	12	10	3						
BASLE	80.00	4.8	12	12K	2						
WARSAK DAM	80.47	315.1	12	13	0						
NEUCHATEL	80.50	5.3	12	13	0						
SAN JUAN	81.06	71.6	12	15	-1						
SIMFEROPOL	81.33	346.1	12	19	2						
CLERMONT-FD.	81.45	8.1	12	19	1						
SOTCHI	81.72	341.8	12	20	1						
TIFLIS	82.43	337.7	12	25	2	22	43	6			
CHARTERS TS.	83.63	225.0	12	29K	0						
QUETTA	85.73	316.6	12	40	1	23	14	4		15	57 PP
BRISBANE	87.66	216.2	12	49	0						
KSARA	91.90	342.4	13	10	1						
CAPE HALLETT	125.83	188.9	18	3	-58					19	3
DUMONT	125.94	203.6	18	59	-2						
SCOTT BASE	131.38	187.6	19	9	-3						
BYRD STATION	134.99	169.8	19	9	-10						
SOUTH POLE	142.48	180.0	19	26	-6						
WINDHOEK	149.89	355.4	19	51	7						
PIETERMZBURG	154.20	327.0	20	9K	18						
KIMBERLEY	154.94	338.5	20	19	27						

OCTOBER 2 15.H 0.M 57.S EPICENTRE 8.39 127.47 DEPTH= 24.KM

A=-0.60192 B= 0.78529 C= 0.14497 D= 0.7937 E= 0.6083
G=-0.0882 H= 0.1151 K=-0.9894 HT= 6.7

SE= 1.75

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KOROR	7.02	98.1	1	38	-6	2	48	-16					
MANILA	8.85	314.6	1	11	-58	3	42	-7					
BAGUIO CITY	10.44	320.5	2	32	1	4	52	24					
GUAM	17.70	71.9	4	8	2								
HONG KONG	18.84	318.7	4	19	-1	7	58	12					
ZO-SE	23.34	346.3	5	8K	1								
TRUK	24.16	90.4	5	17	2								
NANKING	24.88	342.3	5	24K	2	9	44	3					
LEMBANG	24.91	233.2	5	23	1	9	42	1					
DJAKARTA	25.16	235.5	5	27	2	9	51	6					
ABUYAMA	27.38	14.6	5	47A	2						6	37	PP
RABAUL	27.63	116.0	5	48	0						16	43	SCS
KUNMING	28.86	308.0	6	0	1	10	45	-1					
MATUSIRO	29.69	17.7	6	5A	-1	11	1	2			17	4	SCS
PEKING	33.08	344.0	6	36K	0	11	53	1					
CHARTERS TS.	33.74	147.0	6	42	0						12	9	
PORT BLAIR	34.36	278.4				12	33	21			7	43	PP
CHANGCHUN	35.35	357.3	6	56	1								
CHITTAGONG	36.95	296.2	7	8	-1	12	50	-2			8	34	PP
SHILLONG	37.92	301.2	6	45A	-32	12	33	-34	7	17	7	57	PP
LHASA	40.15	306.7	7	37	2	13	41	1			17	47	SCS
CHATRA	42.32	300.9	7	51	-2	14	11	-1					
ULAN-BATOR	43.08	339.8	8	1	1								
BRISBANE	43.41	146.1	8	2	0	14	30	2					
ADELAIDE	44.38	166.8	8	11A	1								
IRKUTSK	47.67	340.9	8	38	2	15	30	1					
CANBERRA	47.99	156.2	8	40A	1				8	52			
MELBOURNE	48.80	161.6	8	46	1								
DEHRA DUN	51.00	302.3	9	5	3	16	13	-3					
YAKUTSK	53.55	1.3	9	20	-1								
BOMBAY	53.94	287.2				16	56	0			19	9	
MAGADAN	54.02	14.4	9	25	1								
LAHORE	54.39	302.8	9	37	10								
SUVA	56.79	118.0	9	48	4						13	23	PPP
SEMIPALATNSK	57.22	326.0	9	48	1								
WARSAK DAM	57.23	305.1	9	46	-1								
NAMANGAN	58.95	313.0	10	0	0	18	5	3					
QUETTA	60.39	299.9	10	8	-1	18	20	-1			12	17	PP
TIKSI	63.18	0.5	10	26	-2	18	54	-2					
SVERDLOVSK	70.43	327.6	11	14	0	20	23	-1					

DUMONT	75.42	174.9	11 42	-1						
OASIS-BUNG.	76.91	190.8	11 51	-1					14 31	
MIRNY	78.84	193.3	12 2	0						
TIFLIS	79.01	310.9	12 5	2	21 59	0				
COLLEGE	80.21	25.6	12 10	0						
MOSCOW	83.04	325.3	12 24	-1	22 36	-5				
APATITY	83.85	337.3	12 29A	0	22 47	-2	12 43			
PULKOVO	86.40	329.8	12 42	1						
SODANKYLA	86.46	337.6	12 42	0						
SIMFEROPOL	86.50	314.7	12 42	0	23 13	-2				
KSARA	86.71	303.5	12 44	1	23 25	8			16 12	PP
JERUSALEM	87.54	301.6	12 42	-5						
NORD	88.54	355.1	12 51	-1						
KIRUNA	88.62	338.7	12 51	-1						
SCOTT BASE	88.82	172.3	12 53A	0						
HELSINKI	88.94	330.8	12 54	0						
RESOLUTE	93.13	10.3	13 14A	1	24 23	8			30 38	SS
SKALSTUGAN	93.37	336.1	13 12	-2						
SOUTH POLE	98.34	180.0	13 37	0					30 9	PKKP
EUREKA	104.51	45.7	17 29	777					18 24	PP
TUCSON TELE.	111.36	50.6	18 41	9					19 14	PP
TAMANRASSET	115.30	300.0	18 41	2	25 58	32			19 40	PP
SEVEN FALLS	122.39	14.7	18 55	2						
SHAWINIGAN	122.40	16.4	18 55	2						
SAN JUAN	150.21	26.7	19 51	8						

OCTOBER 3 0.H 33.M 8.S EPICENTRE 13.84 120.59 DEPTH= 0.KM

A=-0.49426 B= 0.83618 C= 0.23771 D= 0.8609 E= 0.5088
G=-0.1210 H= 0.2046 K=-0.9713 HT= 6.0

SE= 2.88

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
MANILA	0.83	27.4	0 11	-8	0 26	-6		
BAGUIO CITY	2.56	359.8	0 54	10	1 25	9		
HONG KONG	10.39	325.0	2 40	6	4 22	-10		
CANTON	11.51	324.0	2 54A	5				
KOROR	15.11	113.9	3 42	5	6 37	11		
ZO-SE	17.19	1.7	4 8A	5	7 19	5		
NANKING	18.20	355.1	4 20A	4	7 43	6		
KUNMING	20.21	306.2	4 44A	4	8 28	6		
CHENGTU	22.66	320.3	5 7A	3	9 11	2		
SIAN	22.90	334.5	5 7	0				
GUAM	23.48	88.0	5 15	3				
LEMBANG	24.24	212.9	5 23A	3	9 40	4		
PEKING	26.38	352.4	5 38A	-2	10 3	-9		
LANCHOW	26.77	328.8	5 44A	0				
PORT BLAIR	27.26	268.7			10 20	-7	6 41	PP
CHITTAGONG	28.58	291.4	6 1	1	10 39	-9	6 48	PP
SHILLONG	29.37	297.8	6 8	1	10 53	-8		
CHANGCHUN	30.16	6.8	6 13A	-1				
TRUK	31.35	98.4	6 29	4				
LHASA	31.50	304.8	6 29A	3				
CHATRA	33.78	297.7	6 49	3	12 1	-9		
ULAN-BATOR	35.83	344.2	7 4	0				
RABAUL	36.10	117.6	7 8K	2				
WARSAK DAM	48.60	303.2	8 48A	0				
NAMANGAN	50.31	312.1	9 1	0	16 7	-6		
KARACHI	51.45	292.0	9 10A	1				
ADELAIDE	51.47	160.9	9 10K	0				
BRISBANE	51.74	142.6	8 12	-60			11 18	PP
QUETTA	51.86	297.6	9 13A	0	16 26	-9	11 11	PP
CANBERRA	55.82	151.9	9 41	-1				
TIKSI	57.98	3.1	9 55	-2				
TIFLIS	70.36	309.6	11 18	0				
MOSCOW	74.73	324.4	11 42	-2			14 31	
APATITY	76.23	336.7	11 50A	-2				
SIMFEROPOL	77.88	313.5	12 0	-2				
KSARA	78.10	302.1	12 3	0	22 1	4	15 1	PP
COLLEGE	78.26	25.8	12 1	-3			15 7	PP
SODANKYLA	78.86	336.8	12 5	-2				
JERUSALEM	78.97	300.1	12 0	-8			16 52	PPP
HELSINKI	80.89	329.7	12 16	-2				
KIRUNA	81.09	337.8	12 17	-2				

DUMONT	81.56	172.3	12	8A	-13				12	35	
ISTANBUL KA.	82.18	310.3	12	24A	-1						
NORD	82.52	354.2	12	24	-2						
HELWAN	82.60	298.9	12	27A	0				22	34	
LWOW	83.73	319.7	12	31	-2						
UPPSALA	84.53	330.4	12	34A	-3				13	14	
SKALSTUGAN	85.64	334.8	12	40	-2						
KRAKOW	86.22	320.6	12	44	-1	22	18	-62	15	50	
RACIBORZ	87.27	321.0	12	49	-1						
GOTEBORG	88.04	329.4	12	56A	2						
RESOLUTE	88.92	8.9	12	56A	-2				29	52	SS
PRUHONICE	89.52	321.6	13	0	-1				16	37	PP
HALLE	90.49	323.7	13	1	-4						
PLAUEN	90.76	322.7	13	2	-5						
JENA	90.92	323.2	13	6	-1				14	5	
STUTTGART	93.22	321.9	13	15	-3				17	3	PP
EBINGEN	93.60	321.4	13	18	-2						
SOUTH POLE	103.75	180.0	14	6	0						
EUREKA	105.29	42.0	17	43	777				18	32	PP
TAMANRASSET	106.76	299.2	14	39	777				18	45	PP
TUCSON	112.77	45.9							19	26	PP
TUCSON TELE.	112.80	45.8							19	26	PP
HUANCAYO	164.38	85.3	21	4	58						
LA PAZ	171.18	108.5	21	35	85						

OCTOBER 4 0.H 49.M 42.S EPICENTRE -4.61 143.97 DEPTH= 102.KM

DEPTH OF FOCUS= 0.011R

A=-0.80617 B= 0.58628 C=-0.07978 D= 0.5882 E= 0.8087
G= 0.0645 H=-0.0469 K=-0.9968 HT= 7.1

SE= 1.42

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
PORT MORESBY	5.71	146.7	1	21K	-3	2	28	-1			8	7	PCP
RABAUL	8.18	87.5	1	58K	0	3	34	5			2	12	PP
KOROR	15.18	321.3	3	32	2	6	29	14	4	10			
CHARTERS TS.	15.47	171.9	3	34	0	6	28	6					
GUAM	17.98	2.4	4	5	0	7	37	19					
BRISBANE	24.33	160.2	5	9A	0	9	21	3					
NOUMEA	27.98	131.0	5	47	4				6	3	6	34	PP
MANILA	29.72	310.3	5	25	-34						6	10	
RIVERVIEW	29.83	167.9				10	58	11					
ADELAIDE	30.56	188.5	6	7A	1	11	4	5			16	27	SCS
CANBERRA	30.91	172.0	6	9	0						8	36	
MELBOURNE	33.08	178.6	6	30	2						16	51	SCS
HONG KONG	39.56	313.7	7	24	1								
ABUYAMA	40.05	349.2	7	26K	-1								
CANTON	40.69	313.9	7	33K	1	13	37	3					
MATUSIRO	41.29	353.0	7	35K	-2	13	26	-17					
ZO-SE	41.64	330.0	7	40K	0	13	49	1					
NANKING	43.62	328.4	7	57K	1	14	21	4					
MEDAN	45.98	279.4	8	10	-5	14	51	0					
KUNMING	49.78	308.4	8	46K	2	15	50	6					
SIAN	50.86	322.2	8	52	0								
CHANGCHUN	51.07	342.7	8	52K	-2								
PEKING	51.25	332.7	8	54K	-1	16	6	2					
LANCHOW	55.22	320.5	9	25K	0	17	0	2					
CHITTAGONG	57.59	300.0	9	43K	2	17	35	6	10	17	11	55	PP
SHILLONG	58.75	303.5	9	49K	-1	17	49	4			11	59	PP
LHASA	61.07	307.5	10	5K	0	18	17	3					
ULAN-BATOR	61.58	332.5	10	8	-1								
DUMONT	62.01	181.8	10	10	-2								
HONOLULU	62.30	63.2	10	41	27								
KIPAPA	62.41	63.1	10	14	0				10	49			
YAKUTSK	67.34	352.8	10	44	-2								
OASIS-BUNG.	68.41	197.4									12	20	
CAPE HALLETT	69.56	171.7	11	0	0	20	6	8			11	25	PCP
MIRNY	71.08	199.2	11	8	-1	20	16	0					
DEHRA DUN	71.85	303.8	11	16	2						20	27	
SCOTT BASE	74.18	175.1	11	27K	0				11	52	12	22	
WARSAK DAM	78.13	306.0	11	49K	0								
NAMANGAN	79.79	312.9	11	59	1	21	53	2					
KARACHI	80.30	297.0	12	0K	-1				12	29			

QUETTA	81.15	301.4	12	6K	0	22	5	0	12	32	23	11	PS
COLLEGE	85.07	23.5	12	24	-2				13	0			
VICTORIA	95.15	41.8	13	13	0								
HORSESHOE B.	95.26	41.0	13	13K	0								
SHASTA	95.73	49.7	13	16A	1								
BERKELEY	95.77	52.5	13	16A	0						13	51	
LICK	96.25	53.1	13	19A	1								
MINERAL	96.33	50.1	13	18A	0								
FRESNO	97.72	53.7	13	25	0								
PASADENA	99.07	56.3	13	31	0								
EUREKA	100.67	50.8	13	37	-1						17	48	PP
HUNGRY HORSE	101.40	41.7	13	41	0								
RESOLUTE	102.35	13.5									26	6	SS
MOSCOW	102.97	326.1									18	2	PP
PRUHONICE	118.01	325.6	18	36	1						19	52	PP
STUTTGART	121.62	326.5	18	42	0				19	9	19	21	*SPKP
OTTAWA	126.66	34.1	18	52	1								
SHAWINIGAN	127.52	31.4	18	54	1								
BREBEUF	127.75	32.9	18	53A	-1								
SEVEN FALLS	128.12	29.7	18	55	1								
COLUMBIA	129.05	49.2	18	58	2								
WESTON	131.03	34.6									22	16	PKS
HALIFAX	133.38	27.1									22	23	SKP
TAMANRASSET	135.99	298.2	19	1	-8				19	31	22	36	PKS
HUANCAYO	137.56	113.3	19	13	1						19	53	*SPKP
LA PAZ	141.96	124.2	19	19	-1				19	47			
SAN JUAN	147.56	62.6	19	33	3						20	0	
MBOUR	158.86	298.7	20	25	40								

OCTOBER 4 9.H 51.M 27.S EPICENTRE 22.64 144.75 DEPTH= 0.KM

A=-0.75440 B= 0.53325 C= 0.38279 D= 0.5772 E= 0.8166
G=-0.3126 H= 0.2210 K=-0.9238 HT= 4.0

SE= 1.68

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
GUAM	9.12	180.0	2	20	4	4	7	7				
ARUYAMA	14.59	328.6	3	30K	1							
ABUYAMA	14.59	328.6	3	30K	1							
MATUSIRO	14.97	339.2	3	34	0	6	12	-10			6	28
TRUK	16.56	154.5	3	52	-3	6	42	-17				
KOROR	18.15	214.6	4	15	0							
ZO-SE	22.61	296.9	5	3A	0							
MANILA	23.88	254.5	5	14	-2							
NANKING	24.83	297.8	5	25A	0							
CHANGCHUN	26.53	327.4	5	44	3							
SIAN	33.39	298.2	6	42	0							
LANCHOW	37.82	300.1	7	20A	0							
KUNMING	38.44	282.2	7	27	2							
ULAN-BATOR	39.29	319.3	7	33	1							
CHARTERS TS.	42.42	177.9	7	57	-1							
SHILLONG	48.09	284.6	8	42	-1							
BRISBANE	50.47	170.4				15	51	-25				
CHATRA	52.09	287.1	9	8	-6							
CANBERRA	57.79	175.9	9	55A	0							
COLLEGE	60.16	27.0	10	12	0							
LAHORE	62.37	294.8	10	26	-1							
NAMANGAN	63.02	305.6	10	32	1							
WARSAK DAM	64.22	298.0	10	41	2							
SVERDLOVSK	68.17	323.9	11	3	-1							
QUETTA	68.86	294.9	11	7	-1	20	10	-2			13	40 PP
KARACHI	69.93	290.4	11	18	3							
HORSESHOE B.	74.40	42.7	11	41	0							
VICTORIA	74.56	43.6	11	41	-1							
RESOLUTE	75.82	13.7				21	23	-8				
SHASTA	77.67	51.0	12	0	0							
MINERAL	78.35	51.1	12	2	-2							
BERKELEY	78.71	53.7	12	5	0							
LICK	79.35	54.0	12	8	-1							
SODANKYLA	79.37	339.7	12	8	-1							
RENO	79.93	51.4	12	14	2							
HUNGRY HORSE	80.49	41.6	12	15	0							
MOSCOW	80.69	326.8	12	17	1							
KIRUNA	81.00	341.5	12	17	-1							
TIFLIS	82.28	311.9	12	24	0	21	58	-42				

BUTTE	82.35	43.3	12	25	0					
EUREKA	82.70	50.4	12	26	-1					
PASADENA	83.14	56.0	12	32	3					
BOULDER CITY	84.93	53.2	12	37	-1					
SALT LAKE C.	85.05	47.9	12	38	0				13	32
SKALSTUGAN	86.37	340.7	12	43	-2					
UPPSALA	87.19	336.2	12	47	-2					
LARAMIE	89.00	45.2	12	58	0					
RAPID CITY	89.12	41.9	12	59	1					
TUCSON	89.53	55.2	13	3	3					
TUCSON TELE.	89.57	55.0	13	0	0					
GOTEBORG	90.79	336.8	13	5	-1					
RATHFARNHAM	100.31	342.8							24	29
TAMANRASSET	119.89	316.0	18	53	1				20	28 PP
LA PAZ	148.47	84.8	19	49	4				19	58 PKP2

OCTOBER 4 11.H 33.M 10.S EPICENTRE 22.62 144.89 DEPTH= 0.KM
A=-0.75593 B= 0.53139 C= 0.38236 D= 0.5751 E= 0.8181
G=-0.3128 H= 0.2199 K=-0.9240 HT= 4.0

SE= 2.87

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
GUAM	9.10	180.9	2	17	2	4	15	16				
ABUYAMA	14.68	328.3	3	33A	3	7	59	104				
MATUSIRO	15.04	338.9	3	32	-3	6	15	-8			3	41
TRUK	16.48	155.0	3	52	-2	6	45	-12				
KOROR	18.21	215.0	4	15	0	8	8	31				
ZO-SE	22.75	296.8	5	3A	-1	9	14	5				
BAGUIO CITY	23.71	259.3	5	24	10							
MANILA	24.01	254.7	5	14	-3							
NANKING	24.96	297.7	5	25A	-1	9	55	7				
CHANGCHUN	26.63	327.2	5	41	-1	10	18	2				
RABAUL	27.58	164.2	5	1	-49	10	27	-4			6	46 PP
HONG KONG	28.37	275.3	6	1	4	11	19	35				
PORT MORESBY	31.89	175.8				11	48	9				
SIAN	33.53	298.2	6	42	-1							
LANCHOW	37.96	300.1	7	20A	-1							
KUNMING	38.58	282.2	7	24A	-2							
ULAN-BATOR	39.40	319.3	7	34	1							
CHARTERS TS.	42.39	178.1	7	55	-2							
SHILLONG	48.23	284.7	8	41A	-3							
CHITTAGONG	48.81	280.5	8	47	-1	15	54	2			10	41 PP
TIKSI	49.89	353.4	8	53	-4							
BRISBANE	50.42	170.6									18	38
CHATRA	52.23	287.1	9	7	-7							
CANBERRA	57.75	176.0	9	52K	-3							
COLLEGE	60.13	27.0	10	9	-2							
LAHORE	62.51	294.8	10	25	-2							
NAMANGAN	63.15	305.7	10	50	19							
WARSAK DAM	64.35	298.0	10	37	-2							
QUETTA	69.00	294.9	11	7A	-2	20	12	-1				
KARACHI	70.07	290.4	11	17A	2							
HORSESHOE B.	74.33	42.7	11	40	-1							
RESOLUTE	75.82	13.7	12	1K	12	21	29	-2				
APATITY	77.10	338.5	11	56	0							
UKIAH	77.49	52.8	11	59	1							
SHASTA	77.58	51.0	12	0	1							
MINERAL	78.26	51.2	12	7	4							
BERKELEY	78.61	53.7	12	4	-1							
LICK	79.26	54.1	12	6	-2							
SODANKYLA	79.44	339.7	12	18	9							
RENO	79.83	51.5	12	12	1							
HUNGRY HORSE	80.42	41.6	12	15	1							
MOSCOW	80.78	326.8	12	17	1							
FRESNO	80.83	54.1	12	17	0							
KIRUNA	81.07	341.5	12	16	-2	22	23	-4				
BUTTE	82.27	43.4	12	24	0							
TIFLIS	82.40	312.0	12	24	-1	21	53	-48				
EUREKA	82.61	50.4	12	26	0							
PASADENA	83.04	56.0	12	27	-1							
BOZEMAN	83.38	43.2	12	32	2							
BOULDER CITY	84.84	53.3	12	37	0							
SALT LAKE C.	84.96	47.9	12	38	0							

SKALSTUGAN	86.44	340.7	12	44K	-1							
UPPSALA	87.27	336.3	12	47	-2							
SIMFEROPOL	87.91	318.4				23	30	-5				
RAPID CITY	89.05	42.0	12	59	1							
TUCSON	89.43	55.2	13	2	2							
TUCSON TELE.	89.47	55.1	13	1	1							
OASIS-BUNG.	94.59	196.5	13	22	-1							
CAPE HALLETT	96.24	172.4	13	31	0							
BYRD STATION	113.09	169.1	18	39	0							
TAMANRASSET	120.00	316.1	18	52	0						20	17 PP
LA PAZ	148.34	84.9	19	53	9						20	8 PKP2

OCTOBER 6 0.H 47.M 25.S EPICENTRE -32.42 179.96 DEPTH= 263.KM

DEPTH OF FOCUS= 0.036R

A=-0.84575 B= 0.00065 C=-0.53358 D= 0.0008 E= 1.0000
G= 0.5336 H=-0.0004 K=-0.8457 HT= 1.0

SE= 2.36

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ONERAHI	5.71	232.7	1	30	4	2	44	11					
KARAPIRO	6.57	212.2	1	37K	0	2	52	0					
TONGARIRO	7.66	206.7	1	50	0								
WELLINGTON	9.77	203.7	2	12	-5	3	58	-6					
COBB RIVER	10.40	211.8	2	23	-2	4	15	-3					
KAIMATA	12.14	211.5	2	57	11	4	49	-8					
GEBBIES PASS	12.64	204.9	2	49	-3	5	2	-7					
SUVA	14.28	354.1	3	15	3	5	54	9					
NOUMEA	15.66	306.7	3	29A	0	6	38	23			3	51	
AFIAMALU	19.93	24.2	4	10A	-3	7	38	0					
BRISBANE	23.82	274.9	4	54A	3				5	46			
RIVERVIEW	24.14	258.8	4	56A	2	9	35	45					
MELBOURNE	29.01	249.4	5	42	4								
CHARTERS TS.	32.52	284.0	6	9A	0	11	4	1					
ADELAIDE	34.24	254.3	6	24K	1								
PORT MORESBY	38.00	299.7	6	54	-1						14	0	
RABAUL	38.27	311.4	6	56	-1				7	55			
CAPE HALLETT	40.27	184.6	7	16A	3	13	12	11			16	25	SS
DUMONT	41.61	202.6	7	23	-1								
SCOTT BASE	45.90	183.9	8	OK	2				8	23	9	31	PCP
TRUK	47.87	321.0	8	11	-3				8	56	13	5	SCP
BYRD STATION	53.27	169.1	8	55	1						13	29	SCP
OASIS-BUNG.	56.51	208.6	9	15	-2				10	8			
GUAM	56.72	317.9	9	17	-2								
SOUTH POLE	57.75	180.0	9	26	0				10	15	13	47	SCP
KOROR	58.63	304.1	9	30	-2								
MIRNY	59.54	207.6	9	36	-2	17	22	-4					
MATUSIRO	78.94	326.9	11	34K	-2								
LICK	88.23	42.8	12	23	0								
FRESNO	88.91	44.2	12	27	1								
SHASTA	90.15	40.0	12	32	0								
MINERAL	90.34	40.6	12	36	3								
TUCSON	91.66	52.4	12	40	1				13	44	29	58	PKKP
TUCSON TELE.	91.79	52.4	12	41	2				13	44	29	57	PKKP
HUNGRY HORSE	99.68	38.2									17	19	PP
COLLEGE	100.19	13.4	13	16	-2				14	22			
SHILLONG	101.74	292.8	13	24	-1								
PORT-PRINCE	114.38	82.8	15	31	777						17	41	PP
RESOLUTE	119.69	17.8	18	17K	-2								
WARSAK DAM	121.25	292.8	18	24	2								
OTTAWA	121.74	53.4	18	22	-1						21	31	PKS
NAMANGAN	123.33	300.6	18	25	-1								
QUETTA	123.58	286.9	18	27	1								
SHAWINIGAN	124.02	52.7	18	28	1								
SEVEN FALLS	125.44	52.3	18	29	-1								
THULE	126.34	15.8	18	40	8								
NORD	130.31	3.2	18	37	-2						21	34	PP
UVIRA	134.83	223.3	18	49	1						21	52	PP
ASTRIDA	135.18	224.7	18	51	2						21	50	PP
LWIRO	136.01	224.0	18	52	2						21	56	
APATITY	139.78	340.8	18	50	-7								
SODANKYLA	141.67	343.7	18	53	-8				19	46	22	11	SKP
KIRUNA	142.60	347.4	18	58	-4								
TIFLIS	143.39	297.7	19	1	-3								

MOSCOW	144.95	323.0	19 5	-1
PULKOVO	146.05	332.7	19 8	0
SIDA	146.65	14.5	19 13	4
HELSINKI	147.70	336.7	19 14	3
SKALSTUGAN	147.87	349.7	19 13	2
KSARA	149.97	282.6	19 20	6
UPPSALA	150.16	342.1	19 18A	4
JERUSALEM	150.20	278.4	19 13	-1
SIMFEROPOL	150.77	305.3	19 21	6
HELWAN	153.08	273.0	19 18	-1
GOTEBORG	153.42	345.5	19 20	1
LWOW	155.05	321.2	19 21	0
COPENHAGEN	155.15	343.0		
COLLMBERG	158.84	336.9	19 26	0
PRUHONICE	159.37	332.5	20 7	40
JENA	159.62	338.5	19 26	-1
PARIS	163.52	354.1	20 27	56
MESSINA	166.03	298.7	19 40	7
TAMANRASSET	169.20	208.5	19 37A	2
RELIZANE	176.64	351.7	19 40	2

19 27 PKP2
19 48 PKP2
21 17
20 7
20 36
20 50 PKP2

OCTOBER 6 9.H 29.M 21.S EPICENTRE 37.32 54.39 DEPTH= 0.KM

A= 0.46422 B= 0.64811 C= 0.60370 D= 0.8130 E=-0.5823
G= 0.3515 H= 0.4908 K=-0.7972 HT= -0.7

SE= 2.69

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KIZYL-ARVAT	2.26	40.4	0	39	-1								
ASHKABAD	3.21	77.5	0	59	6						1	42	S*
LENKORAN	4.63	289.9	1	16	3	2	7	-2					
BAKU	4.65	312.5	1	18	5	2	10	1			1	54	
SHEMAKHA	5.57	308.1	1	28	1	2	32	0					
GORIS	6.69	291.4	1	40	-2						2	56	
KIROVOBAD	7.11	301.1	1	46	-2	3	6	-5			4	23	
MAKHACH-KALA	7.72	319.1	1	55	-2	3	19	-7					
QUETTA	12.64	120.6	3	4	0	5	25	-2			3	14	PP
TCHIMKENT	12.71	62.3	3	1	-4								
SOTCHI	12.79	303.8	3	5K	-1						3	27	
DZHERGETAL	13.36	76.7	3	13	-1								
KHOROG	13.69	84.1	3	15	-3						7	13	
FERGANA	13.90	72.0	3	29	8	6	3	6					
NAMANGAN	13.90	69.4	3	29	8								
WARSAK DAM	14.34	98.2	3	22	-5								
ANDIJAN	14.39	70.7	3	28	1	6	8	-1			6	24	
KSARA	15.46	262.5	3	45	4	6	50	16			8	37	PCP
KARACHI	15.71	133.2	3	56	11	7	1	21			4	9	PP
JERUSALEM	16.72	256.4	4	1	3	7	19	16					
YALTA	16.87	301.4	3	59	0								
SIMFEROPOL	17.04	302.9	4	0K	-2	7	10	-1			4	12	
NARYN	17.20	69.5	4	5	1	7	14	0					
FABRICHNAYA	17.77	63.9	4	11	0								
ALMATA	18.18	63.9	4	17	1						7	57	SS
KURMENTY	19.10	65.1	4	25	-2								
PRZHEVALSK	19.11	66.9	4	26	-1								
SVERDLOVSK	19.96	10.1	4	34	-3	8	15	-2					
ISTANBUL UN.	20.01	288.6	4	38	0	8	31	13					
HELWAN	20.56	255.6	4	43	0	8	33	4					
DEHRA DUN	20.83	102.6	4	45	-1	8	31	-3			8	54	
MOSCOW	21.62	333.7	4	53	-1	8	43	-6			8	58	PCP
FOCSANI	21.93	301.0				9	2	7					
IASI	22.07	305.0	4	58	-1	8	59	1					
BACAU	22.34	303.1	5	7	6								
AGRA	22.37	110.2	5	1K	-1	9	25	22					
ATHENS	24.24	281.0	5	22A	2								
SOFIA	24.31	292.5	5	21	1						9	51	
BOMBAY	24.44	133.6	5	20	-2								
LWOW	25.12	309.5	5	29	1						11	15	SSS
TIMISOARA	26.07	299.3	5	43	6	10	20	13					
PULKOVO	27.25	333.2	5	47	-1						6	10	
KRAKOW	27.72	308.3	5	52	0	10	37	3			7	7	
HURBANOVO	28.41	303.3									11	8	
RACIBORZ	28.81	307.9	6	7	5						12	29	SS
BRATISLAVA	29.18	303.7	6	3	-3						7	20	

HELSINKI	29.54	330.1	6	8	-1				11	44	
CHATRA	29.55	101.2	5	57	-12	11	13	10			
MESSINA	30.57	283.7				11	16	-4			
PRUHONICE	31.10	306.8	6	23	0				7	4	
PRAGUE	31.19	307.0	6	23	0				9	56	
LHASA	31.37	93.2	6	28	3						
UPPSALA	32.48	325.8	6	34	-1				13	12	PCS
APATITY	32.51	345.2	6	34K	-1	11	47	-3	7	7	
JENA	33.12	308.1	6	40	0				7	55	PP
SONNEBERG	33.29	307.0	6	43	1						
COPENHAGEN	33.55	316.8	6	45K	1						
SHILLONG	33.85	99.3	6	45A	-2						
SODANKYLA	33.93	341.2	6	46	-1				7	49	PP
GOTEBORG	34.38	320.1	6	49K	-2				7	49	PP
STUTTGART	34.47	304.0	6	51	-1				8	4	PP
EBINGEN	34.61	302.9	6	50	-3						
CHITTAGONG	35.48	104.2	6	59	-2						
KIRUNA	35.95	338.8	7	3	-2				8	12	PP
SKALSTUGAN	36.44	329.7	7	9	0				8	17	PP
PARIS	38.91	304.1	7	30	1						
LANCHOW	39.29	76.4	7	32	-1						
ULAN-BATOR	39.37	57.3	7	34	1						
RELIZANE	42.79	284.8	7	53	-8						
KHEYS	42.86	359.4	8	7	5				9	52	PCP
TAMANRASSET	44.24	265.1	8	13	0				10	0	PP
GRANADA	45.51	288.3				15	51	45			
LWIRO	45.98	216.9	10	4A	97						
UVIRA	46.90	215.7							9	51	PCP
TIKSI	50.20	23.4	8	58	-2				18	56	SCS
NORD	50.57	349.6	9	1	-2						
SCORESBY SD.	50.81	335.1				16	26	6			
TANANARIVE	56.31	187.8	9	44	-1						
RESOLUTE	66.44	351.5	10	52A	-2	19	47	4			
MBOUR	66.68	270.6	10	38	-17						
COLLEGE	76.66	9.5	11	54	-1						
HUNGRY HORSE	94.08	352.3	13	21	-1						
EUREKA	103.06	352.4	14	4	2						
SOUTH POLE	127.14	180.0	19	5	-2				21	2	PP
BYRD STATION	137.12	181.6	19	25	-1						

OCTOBER 6 18.H 52.M 44.S EPICENTRE 56.00 162.95 DEPTH= 0.KM

A=-0.53709 B= 0.16467 C= 0.82729 D= 0.2931 E= 0.9561
G=-0.7910 H= 0.2425 K=-0.5618 HT= -7.6

SE= 2.21

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KLYUCHI	1.26	285.6	0	28	3	0	46	4					
PETROPAVLOVK	3.81	222.8	1	3	2	1	47	-1					
SEVERO-KUR.	6.73	220.4	1	44	2	3	1	0			2	17	
MAGADAN	7.41	303.7	1	58	6								
KURILSK	14.38	227.8	3	26	-1								
UGLEGORSK	14.44	250.1	3	31	4	6	15	6			3	46	*SP
Y.-SAKHLINSK	15.47	242.6	3	42	1						3	57	*SP
TIKSI	21.23	330.6	4	51	2						5	21	PP
VLADIVOSTOK	23.68	250.2	5	18	4								
COLLEGE	25.21	49.4	5	28	0								
MATUSIRO	25.66	231.1	5	31A	-2	9	55	-5					
SITKA	33.04	62.0	6	57	18								
IRKUTSK	33.66	288.8	6	41	-3	12	4	-3					
ULAN-BATOR	34.60	280.7	6	51	-1								
KHEYS	38.74	344.9	7	19	-8						8	46	PP
RESOLUTE	40.00	23.9	7	38A	0	13	56	12			9	22	PP
NORD	42.63	359.9	8	0A	1								
THULE	43.88	15.4	8	20	11								
ISFJORD	44.88	351.3	8	25	7								
SEMIPALATNSK	47.05	299.9	8	35	0								
HUNGRY HORSE	48.56	62.0	8	46	-1						10	12	PCP
HONG KONG	49.09	247.2	8	50K	-1	15	39	-17					
TRUK	49.20	194.6	8	51	0								
SHASTA	49.43	74.9	8	54A	1								
BUTTE	50.87	63.4	9	4	0								
BAGUIO CITY	50.90	236.5	9	3	-1								
APATITY	51.21	337.7	9	6A	-1								

SVERDLOVSK	51.31	316.5	9	4	-4					
BERKELEY	51.51	77.3	9	9A	0					
RENO	51.64	74.1	9	12A	2					
BOZEMAN	51.88	62.8	9	13	1					
LICK	52.23	77.3	9	14A	-1				10	26
SODANKYLA	52.73	340.4	9	17	-1					
KIRUNA	53.40	343.3	9	22	-1					
KOROR	53.51	216.0	9	23	-1					
FRESNO	53.65	76.5	9	26A	1					
EUREKA	53.75	71.5	9	26	0				10	32
SALT LAKE C.	54.98	67.5	9	36	1					
FRUNSE	55.07	296.3	9	34A	-2					
PASADENA	56.49	77.4	9	46A	0	17	50	14		
RAPID CITY	56.88	59.2	9	48	-1				39	6 PKPPKP
BOULDER CITY	56.93	73.5	9	49	0					
LARAMIE	57.78	62.9	9	57	2					
PULKOVO	58.60	334.1	10	0	-1	17	58	-6	12	13 PP
SKALSTUGAN	58.62	345.1	9	59A	-2					
SHILLONG	58.69	269.9	9	59	-2					
BOULDER	58.88	63.7	10	4	1					
HELSINKI	59.48	337.1	10	6	-1					
MOSCOW	60.10	327.8	10	9	-2					
RABAUL	60.65	192.4	10	12	-3					
STALINABAD	61.23	296.9	10	16	-3	18	34	-4		
UPPSALA	61.25	340.9	10	18A	-1					
TUCSON TELE.	61.91	73.3	10	24	1					
TUCSON	61.92	73.4	10	24	1					
WARSAK DAM	63.32	291.6	10	29	-4					
LAHORE	63.75	287.9	10	32	-4					
GOTEBORG	64.27	343.2	10	37	-2					
PORT MORESBY	66.48	197.0	10	55	2					
ASHKABAD	66.76	303.6	10	55	0					
OTTAWA	67.58	40.6	10	59A	-1					
SHAWINIGAN	67.65	38.1	10	59A	-2					
SEVEN FALLS	67.81	36.5	11	1	-1					
BREBEUF	68.26	39.2	11	3	-1					
QUETTA	68.72	292.5	11	5	-2	20	5	-5		
LWOW	69.14	332.9	11	10	0					
POTSDAM	69.16	340.8	11	10	0					
TIFLIS	69.51	315.2	11	12	0	20	19	0		
KRAKOW	69.93	335.6	10	51	-24	20	26	2	17	41 PCS
COLLMBERG	70.21	340.5	11	16	0					
HALLE	70.21	341.2	11	14	-2				13	49 PP
RACIBORZ	70.30	336.7	11	18	1					
IASI	70.58	329.5	11	18	-1					
SIMFEROPOL	70.59	324.1	11	18	-1					
SKALNATE PL.	70.67	335.1	11	22	3					
RATHFARNHAM	70.70	353.2	11	29A	10					
JENA	70.82	341.3	11	19	-1				13	54 PP
MORGANTOWN	70.86	46.7	11	20	0					
PRAGUE	71.10	339.2	11	24	2				13	56
PLAUEN	71.13	340.8	11	19	-3					
PRUHONICE	71.16	339.1	11	22	0				13	44 PP
WESTON	71.79	39.3	11	26A	0					
KEW	72.00	349.1	11	27A	0					
BRATISLAVA	72.34	336.8	11	33	4					
MEDAN	72.86	250.2	11	30K	-2				11	36 PCP
STUTTGART	73.32	342.2	11	34	-1					
BUCHAREST	73.54	329.3	11	36	0					
TUBINGEN	73.58	342.2	11	36	0					
STRASBOURG	73.74	343.1	11	37A	0				12	8
EBINGEN	73.93	342.2	11	39	1					
PARIS	74.29	346.7	11	42	1					
CHAPEL HILL	74.39	48.1	11	42	1				17	10
NEUCHATEL	75.41	343.3	11	47	C					
TRIESTE	75.46	338.2	11	51	4				22	26 SP
CHARTERS TS.	77.02	196.1	11	55A	-1					
CINE	79.17	325.0	12	7	-1					
ROME	79.31	338.0	12	12	3	21	52	-17	14	32 PP
KSARA	79.84	317.6	12	14	3					
JERUSALEM	81.91	317.1	12	21	-1					
MESSINA	82.15	334.6	11	32	-52				14	15 PP
HELWAN	85.08	319.3	12	38	-1					
SAN JUAN	95.17	46.1	13	27	1					
TAMANRASSET	99.22	339.0	13	42	-2				17	41 PP
CAPE HALLETT	128.11	177.2	19	7	-1					
MIRNY	132.93	210.9							21	26 PP
SCOTT BASE	133.61	178.9	19	16A	-2					

BYRD STATION	142.51	163.7	19	27	-8							
SOUTH POLE	145.82	180.0	19	39	-1							

OCTOBER 7 12.H 32.M 47.S EPICENTRE -5.40 152.04 DEPTH= 40.KM

DEPTH OF FOCUS= 0.001R

A=-0.87938 B= 0.46684 C=-0.09351 D= 0.4689 E= 0.8833
G= 0.0826 H=-0.0438 K=-0.9956 HT= 7.0

SE= 2.36

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
RABAUL	1.20	6.3	0	23	2								
PORT MORESBY	6.27	230.4	1	32A	0	2	43	-1			5	28	
TRUK	12.79	359.2	2	59	-3	5	13	-11					
CHARTERS TS.	15.57	200.7	3	39	1	6	35	5					
GUAM	20.10	339.0	4	34	1	8	23	11					
KOROR	21.61	305.7	4	52A	3	8	53	13					
NOUMEA	21.83	141.7	4	47K	-4	8	47	2			7	45	
BRISBANE	21.98	177.6	4	50	-2	8	52	5					
RIVERVIEW	28.30	181.6	5	59	7	10	34	0					
SUVA	28.72	118.4	5	53K	-3	10	40	-1			6	34	PP
CANBERRA	29.90	185.0	6	4K	-2	12	37	97					
ADELAIDE	31.86	201.0	6	23K	-1	11	35	5			13	25	SS
MELBOURNE	32.91	190.3	6	31	-2	11	45	-2			15	59	
ONERAHI	36.55	148.7	7	7	3						8	33	
AFIAMALU	36.62	106.0	7	2	-2	12	47	3			7	26	
BAGUIO CITY	37.92	305.4	7	16	1	13	0	-4					
KARAPIRO	38.80	149.8	7	20K	-3	13	20	3			9	32	
TONGARIRO	39.79	151.1	7	29	-2								
COBB RIVER	40.06	155.5	7	35	2								
TUAI	40.29	149.1	7	39	4								
WELLINGTON	41.10	153.7	7	40	-2	13	47	-5			9	36	
PERTH	42.93	227.5	7	57	0	14	21	2			9	35	PP
ABUYAMA	42.96	340.0	7	55A	-2	14	38	19					
NAGASAKI	43.37	332.4	7	59	-1	14	17	-8					
MATUSIRO	43.69	343.8	8	0K	-3	14	26	-4			9	50	PP
LEMBANG	44.18	265.8	8	6	-1	14	38	1					
SENDAI	44.66	347.5	8	10	-1	14	51	7					
DJAKARTA	44.97	266.7	8	13	0	14	45	-3					
HONG KONG	46.16	308.0	8	22	-1	15	5	0			9	59	PP
ZO-SE	46.76	322.8	8	28A	1	15	16	2			10	16	PP
CANTON	47.27	308.3	8	32A	1	15	26	5			10	22	PP
NANKING	48.87	321.8	8	44A	0	15	47	4			10	35	PP
PHU-LIEN	51.61	301.8	9	5	C						11	32	
VLADIVOSTOK	51.63	341.2	9	4	-1	16	21	-1					
Y.-SAKHLINSK	52.77	352.0	9	12	-1	16	34	-3					
MEDAN	54.04	278.3	9	21	-2	17	3	9					
CHANGCHUN	54.62	336.5	9	25A	-2	17	3	1			11	30	PP
UGLEGORSK	54.95	352.0	9	27	-2								
HONOLULU	55.62	59.7	9	41	7	17	17	1					
KIPAPA	55.73	59.7	9	35	0								
PEKING	55.97	327.1	9	36A	-1	17	21	1			11	37	PP
SIAN	56.66	317.3	9	41	-1	17	33	4			10	38	PCP
KUNMING	56.71	304.6	9	42	0	17	37	7			11	46	PP
CHENGTU	58.24	311.1	9	52A	-1						12	3	PP
PETROPAVLOVK	58.58	4.7	9	50	-5								
LANCHOW	61.15	316.4	10	14A	1	18	31	3			10	56	PCP
PORT BLAIR	61.39	286.3	10	20	6								
DUMONT	61.73	185.4	10	14	-3	18	35	0					
MAGADAN	64.75	359.3	10	35	-2								
CHITTAGONG	65.01	297.6	10	39	1	19	24	8			13	5	PP
SHILLONG	65.97	300.9	10	43A	-2								
ULAN-BATOR	66.22	328.6	10	46	0	19	33	2					
WILKES	67.18	197.0	10	50	-2	19	45	3					
CAPE HALLETT	67.77	174.1	10	55K	-1	19	53	4			11	8	PCP
LHASA	68.02	304.8	10	59A	2	19	56	4			13	30	PP
CALCUTTA	68.14	296.7	10	56	-2	20	4	10					
YAKUTSK	69.39	349.0	11	4	-2	20	6	-3					
OASIS-BUNG.	70.22	199.7	11	10	-1				12	22			
IRKUTSK	70.25	331.1	11	10	-1	20	15	-4					
CHATRA	70.37	300.8	10	59	-13	20	12	-8					
BOKARO	70.74	297.4				21	13	49					
SCOTT BASE	72.82	176.8	11	25K	-1	20	53	5			14	47	PP
MIRNY	73.10	201.0	11	26	-2	20	49	-2					

KODAIKANAL	75.86	281.9	11	53	9					
HYDERABAD	76.07	289.4	11	48	3	21	27	2	21	48 SCS
AGRA	78.35	299.0	11	58A	0	21	51	2	14	43 PP
TIKSI	78.37	352.7	11	56	-2	21	46	-3		
DEHRA DUN	79.02	302.2	12	5	3	21	54	-2	23	2
BOMBAY	81.59	289.9	12	21	6	22	24	1		
LAHORE	82.40	302.7	12	18A	-1	22	32	1	17	20 PPP
SEMIPALATNSK	82.69	322.2	12	19	-2					
COLLEGE	82.70	21.9	12	20	-1	22	33	-1	17	42 PPP
BYRD STATION	84.45	169.9	12	29	-1	22	49	-3	15	46 PP
SOUTH POLE	84.63	180.0	12	29	-2	22	48	-6		
SITKA	85.18	31.6	12	35	1					
NAMANGAN	86.27	311.6	12	39	0	22	42	-27		
KARACHI	87.84	296.0	12	45A	-1	23	30	6	23	13 SKS
QUETTA	88.45	300.3	12	49A	0	23	39	9	16	15 PP
UKIAH	89.30	50.8	13	5	12					
ALBERNI	89.59	40.6	12	53	-2					
BERKELEY	89.89	52.1	12	56	0	23	52	9	16	32 PP
CORVALLIS	89.96	45.4	12	56	-1					
SHASTA	90.13	49.3	12	58	1					
LICK	90.32	52.7	12	58A	0				16	39 PP
HORSESHOE B.	90.60	40.6	12	59	-1					
MINERAL	90.69	49.7	12	59A	-1					
FRESNO	91.73	53.4	13	6	1					
RENO	91.98	50.7	13	5	-1					
PASADENA	92.82	56.1	13	11K	1	23	55	-14	30	19 SS
EUREKA	94.93	50.9	13	21	2				29	53 PKKP
SVERDLOVSK	95.25	326.5	13	17	-4					
BOULDER CITY	95.67	54.5	13	24	1				17	21 PP
HUNGRY HORSE	96.62	42.1	13	27	0				30	10 PKKP
KHEYS	97.00	350.1	13	23	-6	24	42	-3		
BUTTE	97.60	44.4	13	32	0				17	35 PP
SALT LAKE C.	98.13	49.7	13	34	0					
BOZEMAN	98.67	44.8	13	39	3					
TUCSON	98.88	58.3	13	40	3				17	47 PP
TUCSON TELE.	98.98	58.2	13	41	3				17	48 PP
RESOLUTE	101.18	14.4	13	47K	-1	25	15	-5	18	12 PP
TANANARIVE	101.87	249.5	13	50	-1				18	0 PP
LARAMIE	102.85	49.0	13	56	1				18	17 PP
MAKHACH-KALA	104.30	312.8	17	14	777	24	35	-71		
RAPID CITY	104.34	46.0	14	4	2				18	22 PP
APATITY	105.63	339.5	14	4	777	25	43	56	24	42 SKS
TIFLIS	106.43	311.8	14	11	777	24	50	0		
SODANKYLA	108.03	340.6	14	16	777	24	51	0	19	11 PP
MOSCOW	108.05	327.2	14	16	777					
KIRUNA	109.72	342.5	18	27	777	24	57	0	19	1 PP
SOTCHI	109.82	314.4							19	1 PP
PULKOVO	110.21	332.7	14	31	777	25	2	-1		
SIMFEROPOL	113.38	316.9	19	28	54					
KSARA	114.66	304.7	18	34	-2				19	32 PP
FLORISSANT	114.75	49.7				25	45	25	26	34 SKKS
SKALSTUGAN	115.06	341.4	18	37	0					
JERUSALEM	115.57	302.6	18	37	-1				20	5
UPPSALA	115.62	336.4				25	24	0	29	25 SKSP
ISTANBUL UN.	118.16	314.0	18	39	-4				22	19 PKS
WARSAW	118.40	328.2	18	45	2	25	36	2	20	10 PP
BUCHAREST	118.94	318.5							19	36
HELWAN	119.21	301.2	18	46	1	25	43	6		
KRAKOW	120.12	326.4	18	43	-4	25	59	19	20	15 PP
COPENHAGEN	120.43	334.8							20	3 PP
ASTRIDA	121.83	263.6	18	49K	-1				20	33 PP
POTSDAM	122.29	331.6	18	54	3				21	7 PP
UVIRA	122.30	262.5	18	53K	2				20	25 PP
OTTAWA	122.54	38.2	18	52K	0					
BRATISLAVA	122.70	325.7	19	4	12				22	3
LWIRO	122.80	263.9	18	54K	2				30	37
COLLMBERG	123.01	330.6	18	53	1					
PRUHONICE	123.04	328.6	18	53	1				22	18 PKS
PRAGUE	123.05	328.8							33	2
HALLE	123.39	331.3	18	50	-3				20	34 PP
SHAWINIGAN	123.72	35.8	18	55	1					
PLAUEN	123.93	330.3	18	53	-1				20	36 PP
JENA	123.94	330.9	18	55	1				20	40 PP
ABERDEEN	124.50	343.2							28	11
SEVEN FALLS	124.52	34.3	18	57	2					
MUNSTER	125.06	333.9	18	58	2					
FORDHAM	125.90	42.3	19	0	2					
BENSBERG	125.97	333.3	18	59	1					

TRIESTE	126.01	324.8	19	2	4					20	46	PP
DURHAM	126.37	341.3	19	0	1							
STUTTGART	126.52	330.2	18	58	-1					20	59	PP
TUBINGEN	126.74	330.0	19	1	1							
WESTON	126.81	39.4	19	1K	1							
EBINGEN	127.02	329.8	19	2	2							
UCCLE	127.32	334.8	19	4	3							
STRASBOURG	127.35	330.8	19	2	1					21	3	PP
WINDHOEK	127.90	236.0	19	4	2							
KEW	128.66	338.2								36	13	SS
REGGIO CALA.	128.77	315.7	19	6	2					22	30	PKS
MESSINA	128.79	315.9	19	6	2	26	7	1		21	10	PP
ROME	128.89	321.5	19	16	12					27	54	SKKS
PARIS	129.61	334.2	19	6	1					21	21	PP
HUANCAYO	129.81	110.5	19	9	3					22	30	PKS
HALIFAX	130.04	32.9	19	8K	2					22	28	PKS
CLERMONT-FD.	131.58	331.1								22	34	PKS
CHINCHINA	132.55	88.2	19	19	8					22	47	SKP
BOGOTA	134.07	88.8	19	13	-1					22	45	SKP
LA PAZ	134.71	119.5	19	16K	1					22	48	PKS
SETIF	136.68	319.6	19	23	5					22	48	PP
GRANADA	141.32	328.2	19	18A	-9							
LISBON	142.70	335.4	19	29K	0					20	35	
TAMANRASSET	143.36	301.4	19	28A	-2					22	34	PP
GRENADA	146.00	76.5	19	35	0							
FORT FRANCE	146.08	71.6	19	37	2							
ST. VINCENT	146.27	74.4	19	36K	1					19	47	PKP2
PONTA DELGDA	147.76	356.6	19	43	5							
BARBADOS	147.88	74.0	19	43	5					19	59	PKP2
MBOUR	165.98	310.3	20	3A	2					24	53	PP

OCTOBER 8 14.H 0.M 52.S EPICENTRE -6.93 156.02 DEPTH= 44.KM

DEPTH OF FOCUS= 0.002R

A=-0.90711 R= 0.40346 C=-0.11987 D= 0.4064 E= 0.9137
G= 0.1095 H=-0.0487 K=-0.9928 HT= 6.9

SE= 1.57

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
RABAUL	4.70	305.1									1	16	PG
PORT MORESBY	9.12	253.8	2	12K	0	3	54	0					
TRUK	14.90	343.7	3	28	-1	5	56	-18					
CHARTERS TS.	16.09	215.1	3	46K	1	6	50	9					
NOUMEA	18.29	147.7	4	13A	1								
BRISBANE	20.63	187.6	4	38A	0	8	26	5					
GUAM	23.15	331.1	5	24	21	9	33	25					
KOROR	25.74	303.0	5	28	0						6	47	
RIVERVIEW	27.14	188.9	5	40A	-1								
ADELAIDE	32.10	207.4	6	25A	0								
MELBOURNE	32.35	196.5	6	27A	-1								
AFIAMALU	32.40	105.0				11	26	-12					
KARAPIRO	35.57	153.0	6	55	0						9	23	
COBB RIVER	37.13	158.9	7	11	3								
GEBBIES PASS	39.42	160.9	7	27	0								
BAGUIO CITY	42.05	303.8	8	51	62								
MATUSIRO	46.36	340.1	8	24	0	15	11	4					
VLADIVOSTOK	54.42	338.4	9	26	1								
DUMONT	60.66	187.2	10	8	-1								
CAPE HALLETT	65.89	175.3	10	43K	-1						10	56	PCP
CHITTAGONG	69.23	297.0	11	7	3								
SHILLONG	70.15	300.2	11	9A	-1								
OASIS-BUNG.	70.17	200.8	11	9	-1								
SCOTT BASE	71.11	177.6	11	16K	0						11	30	PCP
YAKUTSK	71.70	347.3	11	32	13								
MIRNY	73.14	201.9	11	27	-1	20	51	0					
CHATRA	74.56	300.2	11	35	-1								
BYRD STATION	82.26	169.9	12	19	1				12	35			
COLLEGE	82.66	21.0	12	19	-1								
SOUTH POLE	83.12	180.0	12	22	-1				12	38			
NAMANGAN	90.25	311.1	12	59	2								
PASADENA	90.39	55.8	12	50	-8						13	21	
QUETTA	92.64	299.9	13	9	1								
EUREKA	92.82	50.8	13	11	2								
HUNGRY HORSE	95.09	42.0	13	34	14								

RESOLUTE	101.64	14.9				32 48	SS
MOSCOW	111.46	327.7	18 11	-18			
KIRUNA	112.34	343.3	18 31	0			
SKALSTUGAN	117.73	342.6	18 42	0			
UPPSALA	118.57	337.6	18 44	1			
BRATISLAVA	126.16	327.0	18 49	-9			
COLLMBERG	126.24	332.1	19 0	2			
PRUHONICE	126.37	330.0	19 0	2			
JENA	127.15	332.5	19 1	1			
STUTTGART	129.76	331.9	19 20	15			
WINDHOEK	130.24	232.7				22 28	PKS
TAMANRASSET	147.53	302.2	19 37	0		19 42	PKP2

OCTOBER 9 11.H 20.M 18.S EPICENTRE -55.59 -27.78 DEPTH= 0.KM

A= 0.50221 B=-0.26459 C=-0.82327 D=-0.4661 E=-0.8847
G=-0.7284 H= 0.3837 K=-0.5676 HT= -7.4
SE= 2.93

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
LA PLATA	29.27	302.4	6	6	0	10	52	-7			7	7	PP
SOUTH POLE	34.59	180.0	6	53	0	12	15	-7			39	14	PKPPKP
BYRD STATION	36.13	197.2	7	6	0	12	46	0			8	21	PP
SANTA LUCIA	36.95	288.7	8	28	75	15	34	156			12	50	
HERMANUS	38.45	76.5	7	29	4	13	24	3			8	57	PP
GRAHAMSTOWN	43.36	82.4	8	6	0								
KIMBERLEY	45.82	76.5	8	25A	-1								
SCOTT BASE	46.51	184.2	8	30K	-1	14	49	-31			10	4	PCP
WINDHOEK	46.69	63.7	8	32	0								
PIETERMZBURG	48.29	82.4	8	46K	1								
LA PAZ	49.65	305.4	8	54A	-2						10	18	PCP
MIRNY	50.34	153.5	9	0	-1	16	11	-3			11	6	PP
CAPE HALLETT	51.78	186.9	9	10K	-2	16	37	4			10	19	PCP
LCO. MARQUES	52.33	81.4	9	14	-2								
OASIS-BUNG.	52.51	156.4	9	16	-1	16	42	-1			11	17	PP
WILKES	54.51	160.6	9	34	2	17	13	3					
HUANCAYO	56.94	300.5	9	48	-2	17	44	1					
DUMONT	57.71	174.3	9	52	-3	17	44	-9					
TANANARIVE	66.33	89.1	10	53A	0						13	19	PP
UVIRA	68.96	63.6	11	10K	1								
LWIRO	69.85	62.7	11	16K	1	20	32	8					
ASTRIDA	70.02	63.7	11	15K	-1						13	48	PP
MBOUR	70.30	11.1	11	15A	-2	20	28	-1			21	3	PS
BOGOTA	71.03	310.4	11	20	-2	20	32	-6			13	56	PP
FUQUENE	71.64	311.1	11	32	6						14	12	
CHINCHINA	72.02	309.1	11	23	-5	20	40	-9			13	43	PP
GRENADA	73.15	325.2	11	30	-4								
GALERAZAMBA	77.06	312.0				21	46	1					
BALBOA HTS.	77.31	307.3	11	57	-1	21	41	-7					
GEBBIES PASS	79.57	194.9	12	14	3								
WELLINGTON	81.61	197.0	12	24	3								
COBB RIVER	82.13	195.5	12	28	4								
TAMANRASSET	83.05	30.7	12	28K	-1	22	50	2			15	41	PP
KARAPIRO	84.75	198.3	12	34A	-3						12	48	
MELBOURNE	86.74	174.3	12	47	0								
ADELAIDE	89.10	168.9	12	58K	-1								
RIVERVIEW	90.93	179.1				23	39	-24			16	37	PP
BERMUDA	93.13	329.4									24	17	
MALAGA	94.10	18.6	13	21K	-1								
RELIZANE	94.15	22.8	13	29	7								
ALGIERS UNI.	95.70	24.4	13	32	3	24	6	-38			25	0	
TACUBAYA	95.80	295.9	13	33	3	24	51	6			17	24	PP
ALICANTE	96.44	21.3	13	31	-1	24	48	-3			24	7	SKS
TOLEDO	97.23	18.2	13	31	-5								
BRISBANE	97.26	180.7									24	14	
HELWAN	98.91	49.0	13	50	6	25	32	21					
MESSINA	100.47	33.4				24	28	-1			17	4	PP
JERUSALEM	102.24	50.9	14	9	10	24	39	1					
ROME	102.97	29.7									34	32	SS
SUVA	103.26	205.6									18	19	PP
KSARA	104.27	50.3	14	6	-2						18	27	PP
HALIFAX	104.33	334.4				25	55	-2			24	43	SKS
CHARTERS TS.	104.53	174.2	17	20	777						18	26	
PENNSYLVANIA	105.03	322.9									33	20	SS

TRIESTE	106.78	29.1	18	15	777	26	14	7			18	42 PP
KODAIKANAL	106.99	96.8				25	3	4				
STRASBOURG	107.99	24.0				26	32	4			28	12 SP
OTTAWA	108.44	326.5	18	58	777							
UCCLE	109.34	21.0				26	50	10			19	11 PP
BUCHAREST	109.54	37.9	18	55	777				20	6	28	57
DE BILT	110.74	21.0									28	42 SP
PRUHONICE	110.97	27.7									19	6 PP
JENA	111.08	25.5	19	6	30							
BOMBAY	111.34	87.6									19	29 PP
TUCSON	112.27	294.6	18	38	0						19	22 PP
TUCSON TELE.	112.28	294.8	18	38	0						19	8 PP
SIMFEROPOL	112.94	42.9									19	32 PP
LWOW	113.58	33.7									29	17 PS
PORT MORESBY	115.11	174.5									19	45 PP
COPENHAGEN	115.66	23.9									29	37 PS
LARAMIE	116.81	304.4	18	46	-1							
QUETTA	116.89	75.4	18	48	1	25	40	1			20	1 PP
BOULDER CITY	117.25	294.3	18	47	-1							
PASADENA	117.59	290.7	18	48	0	25	38	-4			19	58 PP
RAPID CITY	117.89	307.9	18	47	-2						20	10 PP
FRESNO	120.45	291.4	18	52	-2							
EUREKA	120.49	296.1	18	53	-1						20	16 PP
UPPSALA	120.63	24.7	18	53	-1						27	14 SKKS
AGRA	120.74	86.2				25	15	-38			20	33 PP
LICK	121.85	290.6	18	56	-1							
LAHORE	122.03	79.9	18	59	2							
RENO	122.52	293.6	18	57	-1						20	20
BOZEMAN	122.70	304.2	18	58	0							
HELSINKI	122.77	28.2	18	57	-1							
SKALSTUGAN	122.82	20.0	19	0	2							
CALCUTTA	123.01	98.2	17	37	-82						19	21 PP
MOSCOW	123.04	37.9	18	58	-1						20	47 PP
DEHRA DUN	123.19	83.8				26	1	0			20	54
BUTTE	123.68	303.5	18	58	-2							
PULKOVO	123.94	31.2									20	27 PP
MINERAL	124.04	293.0	18	59	-2							
STALINABAD	124.18	70.3	19	2	1							
SHASTA	124.71	292.8	19	1	-1							
CHITTAGONG	124.82	101.4	19	3	1							
CHATRA	125.70	93.9	18	53	-11							
SCORESBY SD.	125.84	2.4									28	24 SKKS
HUNGRY HORSE	126.05	304.6	19	2	-3						22	24 PKS
SHILLONG	127.38	99.0	19	7	0							
KIRUNA	128.18	21.1	19	7	-2						22	23 PKS
SODANKYLA	129.15	23.9	19	7	-4						21	18 PP
KOROR	129.84	156.8	19	10	-2						22	29 SKP
LHASA	130.04	95.0	19	13	1						21	34 PP
FRUNSE	130.35	70.4									22	34 PKS
APATITY	130.93	26.5	19	14	0				19	59	22	24 PP
HORSESHOE B.	131.20	300.2	19	12	-3						22	34 PP
PHU-LIEN	131.48	116.9									22	37 PP
SVERDLOVSK	132.77	48.5	19	17	0						22	53 PKS
KUNMING	132.90	109.6	19	20	2						21	48 PP
HONG KONG	136.43	124.1									23	1 PP
CANTON	136.68	122.5									22	15 PP
NORD	137.09	2.4	19	22	-3							
RESOLUTE	137.30	338.8	19	17	-9						22	12 PP
CHENGTU	138.05	106.0	19	27	0						22	21 PP
LANCHOW	142.00	100.3	19	35	1							
SIAN	143.46	107.4	19	37	0							
NANKING	146.84	121.2	19	45	2							
ZO-SE	147.18	125.3	19	46	3							
COLLEGE	149.97	312.4	19	43	-5						42	34 SS
ULAN-BATOR	151.36	86.3	19	56	6							
PEKING	151.62	108.1	19	42	-8							
IRKUTSK	152.05	76.6	19	52	1						30	19 SKKS
NAGASAKI	152.32	136.4	19	35	-16							
ABUYAMA	156.31	144.1	19	59	3							
MATUSIRO	158.70	147.6	19	53	-7				21	19	20	28 PKP2
VLADIVOSTOK	161.89	125.1	20	3	0						24	42 PP
Y.-SAKHLINSK	169.51	141.6	20	10	1						33	30
MAGADAN	175.96	10.3									25	46 PP

OCTOBER 10 8.H 30.M 26.S EPICENTRE 53.57 160.24 DEPTH= 65.KM

DEPTH OF FOCUS= 0.005R

A=-0.56126 B= 0.20162 C= 0.80271 D= 0.3381 E= 0.9411
G=-0.7554 H= 0.2714 K=-0.5964 HT= -6.7

SE= 2.11

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	1.05	245.6	0	20	0	0	34	-1					
KLYUCHI	2.77	6.1	0	44	0	1	19	3			0	58	*SP
SEVERO-KUR.	3.87	222.9	0	58	-1	1	45	1			1	14	*SP
MAGADAN	7.94	322.8	1	58	3								
KURILSK	11.59	228.9	2	45	0								
UGLEGORSK	12.21	255.7	2	58	5	5	21	12					
Y.-SAKHLINSK	13.00	246.4	3	5	1	5	32	4			6	2	
NEMURO	14.10	229.3	3	14	-4								
ABASHIRI	14.18	234.1	3	30	11								
KUSIRO	14.92	231.1	3	48	19								
OBIHIRO	15.53	233.5	3	35	-2								
URAKAWA	16.32	232.6	3	45	-2	7	22	37			4	10	
SAPPORO	16.33	237.6	3	45	-2	7	14	29			5	20	
TOMAKOMAI	16.62	235.8	4	39	49								
MORI	17.43	236.8	4	4	4								
AOMORI	18.30	233.7	4	9	-2	7	33	3					
MIYAKO	18.67	229.1	4	8	-7								
AKITA	19.48	232.8	4	23	-2								
ISINOMAKI	19.96	228.3	4	29	-1	8	18	12			5	12	
SAKATA	20.26	231.8	4	33	0								
SENDAI	20.28	228.8	4	32K	-1								
YAMAGATA	20.54	229.8	4	35	-1								
HUKUSIMA	20.90	228.7	4	39	0						9	31	
ONAHAMA	21.37	226.7	4	51	7								
VLADIVOSTOK	21.40	252.3	4	44	0						8	45	PCP
NIIGATA	21.41	231.6	5	0	15						7	20	
SHIRAKAWA	21.53	228.2	4	48	2	8	46	11					
AIKAWA	21.71	233.1	4	48	1								
MITO	22.04	226.7	4	59	8								
UTUNOMIYA	22.16	228.0	5	10	18	8	51	4					
KAKIOKA	22.29	227.0	4	52	-1								
MAEBASI	22.64	229.2	4	57K	0	9	13	18			5	18	
TIKSI	22.67	334.6	4	57	0						12	21	SCP
KUMAGAYA	22.71	228.3	4	58	1	9	30	33					
NAGANO	22.82	231.1	5	0A	2								
WAZIMA	22.86	234.3	5	0	1	9	7	8					
MATUSIRO	22.91	230.9	4	59A	0	9	7	7			5	40	PP
OIWAKE	22.93	230.0	5	1	1								
TOKYO C.M.O.	22.94	227.0	5	3	3	9	11	10					
TITIBU	22.98	228.6	5	1	1								
TOYAMA	23.26	232.8	5	0	-3						5	31	
MATUMOTO	23.27	230.9	5	5	2	9	15	8					
KOHU	23.50	229.0	5	6	1	9	19	8					
HUNATU	23.52	228.4	5	8	3								
MERA	23.55	225.8	5	4	-2								
MISIMA	23.76	227.6	5	7	-1								
IIDA	23.93	230.1	5	14	5								
SHIZUOKA	24.13	228.4	5	12	1	9	31	10					
GIHU	24.52	231.6	5	16	1	9	39	11					
OMAESAKI	24.52	228.2	5	24	9								
NAGOYA	24.62	231.0	5	18	2								
IBUKISAN	24.72	232.2	5	21	4								
HIKONE	24.87	232.3	5	19	1								
KAMEYAMA	25.11	231.4	5	12	-9								
ABUYAMA	25.52	232.8	5	24A	0	9	46	1					
OSAKA	25.72	232.6	5	30	4	10	15	27					
KOBE	25.86	233.2	5	28	0	10	6	16					
OWASE	25.88	230.8	5	29	1								
SUMOTO	26.27	233.2	5	34	3								
TOKUSIMA	26.64	233.3	5	35	0								
TAKAMATU	26.69	234.4	5	35	0								
KOTI	27.57	234.2	5	43	0								
COLLEGE	28.01	45.7	5	47	0	10	28	3			11	19	
NAGASAKI	30.04	238.3	6	5	0								
PEKING	32.51	263.5	6	25	-2	11	35	-1	6	42	6	45	*SP
IRKUTSK	33.01	290.9	6	31A	0	11	49	5			9	14	PCP
ULAN-BATOR	33.54	282.4	6	36	0								
SITKA	35.62	57.8	6	54	0								
NANKING	36.53	250.8	7	0	-1	12	36	-2	7	16	7	24	*SP
SIAN	40.67	262.8	7	35	-1				7	51	7	55	*SP

KHEYS	40.69	345.3	7	26	-10						
LANCHOW	42.45	269.2	7	50A	0	14	7	0	8 6	8	14 *SP
RESOLUTE	42.85	22.2	7	55A	1	14	14	1		9	34 PP
NORD	45.06	359.4	8	11A	-1						
KIPAPA	45.08	118.8	8	12	0					10	20 PP
HONOLULU	45.14	119.0	8	39	27	14	50	4		10	18 PP
HORSESHOE B.	45.68	62.6	8	16A	0						
VICTORIA	46.11	63.7	8	19A	-1						
CHENGTU	46.14	263.5	8	20	0	14	58	-2	8 37	8	43 *SP
TRUK	46.47	191.5	8	21	-2						
CANTON	46.55	248.0	8	22A	-1	15	6	0	8 38	8	42 *SP
THULE	46.63	14.1	8	38	14	15	23	16		10	16 PP
HONG KONG	46.69	246.4	8	24A	0	15	8	0	8 42	8	48 *SP
SEMIPALATNSK	46.91	300.3	8	24	-2						
ISFJORD	47.04	351.0	8	27	0						
BAGUIO CITY	48.23	235.2	8	35	-1						
CORVALLIS	48.60	67.8	8	39	0						
MANILA	49.62	233.5	8	35	-12	15	42	-7			
KOROR	50.62	213.9	8	53	-2				9 10	10	30
KUNMING	51.09	259.7	8	56	-2				9 14	9	18 *SP
HUNGRY HORSE	51.12	58.7	8	58	-1	16	10	0		10	13 PCP
SHASTA	51.64	71.1	9	3A	0						
SVERDLOVSK	51.99	316.5	9	4	-1						
UKIAH	52.23	73.1	9	9	2						
MINERAL	52.32	70.9	9	8A	0				9 26		
APATITY	52.85	337.3	9	9A	-3						
BUTTE	53.41	60.1	9	14	-2					10	12 PCP
BERKELEY	53.64	73.6	9	17A	0	16	51	6		10	23
RENO	53.88	70.5	9	19A	0						
LICK	54.36	73.7	9	22A	-1						
BOZEMAN	54.43	59.5	9	23	0						
SODANKYLA	54.48	339.9	9	22	-2					10	23 PCP
LHASA	54.60	273.2	9	24A	0	16	58	1			
FRUNSE	54.73	296.1	9	24	-1						
KIRUNA	55.27	342.7	9	28A	-1						
FRESNO	55.81	72.9	9	33A	0						
EUREKA	56.07	68.0	9	33	-2					39	13 PKPPKP
SCORESBY SD.	56.24	0.9	9	37	1						
SHILLONG	57.10	269.2	9	41A	-1						
SALT LAKE C.	57.41	64.3	9	44	-1					10	7
RABAUL	57.96	189.5	9	46	-2				10 12	10	33 PCP
PASADENA	58.61	74.0	9	52A	-1	17	54	4	10 12	24	16 SSS
TASHKENT	58.64	298.1	9	51	-2	18	3	12		10	42 PCP
BOULDER CITY	59.19	70.2	9	57	0						
RAPID CITY	59.51	56.2	10	0	1					39	31 PKPPKP
CHITTAGONG	59.56	266.8	9	59	-1	18	9	6		10	45 PCP
PULKOVO	60.09	333.4	10	1	-2					12	13 PP
LARAMIE	60.32	59.9	10	6	1						
SKALSTUGAN	60.54	344.2	10	6	0						
STALINABAD	60.91	296.2	10	9	0						
HELSINKI	61.09	336.3	10	9	-1						
MOSCOW	61.31	327.1	10	10	-1						
SIDA	62.98	359.2	10	26	3						
LAHORE	62.98	287.1	10	21	-2					11	0 PCP
UPPSALA	63.02	339.9	10	22A	-1						
PORT MORESBY	63.71	194.4	10	26	-1	18	54	-1		23	2 SS
TUCSON TELE.	64.16	70.1	10	30	0					39	23 PKPPKP
TUCSON	64.17	70.3	10	30	0	19	16	15		39	23 PKPPKP
GOTEBORG	66.12	342.0	10	45A	2						
ASHKABAD	66.77	302.7	10	45	-2						
PORT BLAIR	67.38	258.7	10	53	2						
COPENHAGEN	67.93	341.0	10	54	0						
QUETTA	68.17	291.4	10	55A	-1	19	53	4		13	27 PP
FAYETTEVILLE	70.06	56.1	11	6	-1						
TIFLIS	70.10	314.0	11	7	-1					21	3 SCS
OTTAWA	70.46	38.3	11	8A	-2					13	44 PP
SHAWINIGAN	70.53	35.8	11	9A	-1						
SEVEN FALLS	70.70	34.3	11	11A	0						
POTSDAM	70.91	339.4	11	13	0						
DURHAM	70.98	349.0	11	13A	0	20	2	-20			
BREBEUF	71.14	36.9	11	12A	-2						
GORIS	71.25	311.7	11	14	-1	20	30	5			
KARACHI	71.47	288.4	11	20A	4					11	38 PCP
KRAKOW	71.47	334.3	11	15	-1					11	47 PCP
CLEVELAND	71.48	44.3	11	16	0	20	14	-14			
SIMFEROPOL	71.61	322.8	11	16	-1						
IASI	71.85	328.2	11	10	-8						
RACIBORZ	71.88	335.4	11	18	0					11	37 PCP

COLLMBERG	71.94	339.1	11	19	0						
HALLE	71.98	339.8	11	19	0					11	42 PCP
MUNSTER	72.36	342.6	11	23	2						
JENA	72.59	339.8	11	23	1	20	45	4		11	36 PCP
PRAGUE	72.79	337.7	11	25	1					13	47 PP
PRUHONICE	72.84	337.6	11	25	1					13	52 PP
PLAUEN	72.88	339.3	11	24	0					11	50 PCP
RATHFARNHAM	72.91	351.6	10	34	-50						
SONNEBERG	73.19	339.9	11	27	1					11	44 PCP
BENSBERG	73.41	342.6	11	28A	1				12	2	
PENNSYLVANIA	73.54	42.2	11	27	-1	20	50	-2			
MORGANTOWN	73.68	44.3	11	29	0						
BRATISLAVA	73.92	335.3	11	40A	10					13	54 PP
UCCLE	74.04	344.4	11	30	-1						
KEW	74.07	347.5	11	31A	0						
CHARTERS TS.	74.27	193.7	11	32	0				11	44	
CAMPULUNG	74.37	328.9	11	38	5						
DJAKARTA	74.48	235.9								17	54
LEMBANG	74.65	234.9	11	32	-3						
WESTON	74.67	37.0	11	34A	-1						
DOURBES	74.68	344.0	11	35	0						
BUCHAREST	74.80	327.8	11	33	-2						
STUTTGART	75.13	340.6	11	38A	1					12	57
HALIFAX	75.24	30.8	11	37A	-1	21	14	3		14	25 PP
TUBINGEN	75.38	340.7	11	40A	1						
WASHINGTON	75.48	42.7	11	37	-2						
STRASBOURG	75.58	341.5	11	41A	1					14	38 PP
EBINGEN	75.74	340.6	11	42A	1						
RAVENSBURG	75.99	340.1	11	43	1						
BELGRADE	76.13	331.8	11	43K	0					24	9
PARIS	76.27	345.1	11	46A	2					11	56 PCP
ZAGREB	76.39	335.1	11	35	-9						
BASLE	76.63	341.3	11	47	1						
CHUR	76.89	339.8	11	49A	2						
TRIESTE	77.10	336.6	11	53A	5						
SOFIA	77.21	328.9	11	49	0						
NEUCHATEL	77.26	341.6	11	50	1					16	54
COLUMBIA	77.96	48.2	11	53	0						
CINE	80.22	323.3	12	6A	1				12	25	
MONACO	80.31	340.4	12	6A	0						
KSARA	80.53	315.8	12	8	1	22	18	11		14	14 PP
TACUBAYA	80.68	70.1	12	10	2	22	3	-6			
ROME	80.94	336.2	12	10A	1					15	18 PP
BRISBANE	80.95	186.5	12	9A	0	22	15	3			
ATHENS	81.39	326.6	12	10A	-2						
JERUSALEM	82.58	315.3	12	16K	-2					12	50
MESSINA	83.63	332.7	12	22	-1	22	42	3		23	42 PS
SERRA PILAR	85.18	351.6	12	33A	2	23	5	11		15	53 PP
HELWAN	85.85	317.3	12	34	0	23	4	4			
TOLEDO	85.94	347.9	12	36A	2					14	43
ALICANTE	86.94	344.9	12	43	4	23	24	13		18	8 PPP
RIVERVIEW	87.40	187.6	12	42A	0						
GRANADA	88.54	347.2	12	52K	5	24	2	36		34	29 SSS
CANBERRA	89.06	189.2	12	49K	-1						
MALAGA	89.10	347.7	12	50A	0				13	10	
RELIZANE	89.32	343.6	12	50	-1					13	39
ADELAIDE	90.10	197.5	12	54K	0						
MELBOURNE	91.99	192.0	13	4K	1						
KARAPIRO	92.08	168.0	13	3	-1						
TAMANRASSET	100.88	336.3	13	44	0	24	24	9		17	49 PP
LWIRO	115.20	304.1	18	33	-1						
HUANCAYO	119.76	68.4	18	46	3					20	20 PP
CAPE HALLETT	125.77	176.2	18	55K	0						
LA PAZ	127.35	64.4	19	1	3						
OASIS-BUNG.	127.63	206.2	18	57	-1						
MIRNY	130.04	208.8	19	2	-1					22	26 SKP
SCOTT BASE	131.22	178.2	19	4K	-1						
BYRD STATION	140.60	164.3	19	15	-8					22	55 SKP
SOUTH POLE	143.39	180.0	19	22	-5				19	37	29 5

OCTOBER 11 2.H 0.M 38.S EPICENTRE 53.45 159.89 DEPTH= 0.KM

A=-0.56165 B= 0.20565 C= 0.80141 D= 0.3438 E= 0.9390
G=-0.7525 H= 0.2755 K=-0.5981 HT= -6.7

SE= 2.14

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	0.81	247.2	0	24	6	0	34	3					
KLYUCHI	2.92	9.7	0	54	5	1	30	5			1	12	*SP
SEVERO-KUR.	3.64	221.5	1	1	2	1	41	-2					
MAGADAN	7.91	324.2	2	6	7	3	42	12			2	24	*SP
UGLEGORSK	11.98	255.8	3	2	7						3	21	*SP
Y.-SAKHLINSK	12.76	246.3	3	8	2						3	26	*SP
VLADIVOSTOK	21.17	252.1									5	8	PP
MATUSIRO	22.66	230.5	5	3A	-1	9	8	0					
ABUYAMA	25.28	232.5	5	29A	0								
COLLEGE	28.25	45.5	5	58	1								
IRKUTSK	32.85	290.9	6	36	-2						8	1	PPP
ULAN-BATOR	33.36	282.4	6	28	-14								
RESOLUTE	43.04	22.1	8	5A	2	14	28	-2			9	52	PCP
HORSESHOE B.	45.92	62.4	8	27	1								
HONG KONG	46.44	246.2	8	30K	0	15	14	-5					
THULE	46.80	14.0	8	50	17						10	21	PP
KOROR	50.40	213.5	8	59	-2						10	13	
HUNGRY HORSE	51.37	58.4	9	9	1						10	22	
SHASTA	51.88	70.8	9	14A	2								
SVERDLOVSK	51.94	316.4	9	12	-1								
MINERAL	52.56	70.6	9	18A	1								
APATITY	52.88	337.2	9	20A	0								
RENO	54.12	70.2	9	30A	1								
SODANKYLA	54.53	339.8	9	30	-2						10	32	PCP
LICK	54.60	73.3	9	33A	1								
BOZEMAN	54.67	59.2	9	34	1								
KIRUNA	55.32	342.5	9	36A	-2						10	36	PCP
FRESNO	56.05	72.6	9	44	1								
EUREKA	56.31	67.7	9	46	1						10	41	PCP
SHILLONG	56.89	269.0	9	46A	-3								
SALT LAKE C.	57.65	64.0	9	55	1								
RABAUL	57.80	189.1	9	53	-2								
PASADENA	58.85	73.6	10	3	0	18	0	-8					
BOULDER CITY	59.43	69.9	10	8	1								
RAPID CITY	59.75	55.9	10	10	1						39	33	PKPPKP
PULKOVO	60.10	333.3	10	11	0								
SKALSTUGAN	60.61	344.0	10	12	-3						10	57	PCP
HELSINKI	61.12	336.2	10	17	-1						10	59	PCP
MOSCOW	61.30	326.9	10	18	-2								
BOULDER	61.65	60.4									11	24	
WARSAK DAM	62.58	290.7	10	24	-4								
LAHORE	62.82	286.9	10	26	-4								
UPPSALA	63.06	339.7	10	30A	-1								
TUCSON TELE.	64.40	69.8	10	40	0								
TUCSON	64.41	70.0	10	41	1								
GOTEBORG	66.17	341.8	10	48	-3								
QUETTA	68.02	291.2	11	0	-3	19	54	-8			11	28	PCP
TIFLIS	70.03	313.8	11	15	-1								
FAYETTEVILLE	70.30	55.8	11	18	1								
SHAWINIGAN	70.76	35.5	11	20A	0								
SEVEN FALLS	70.92	34.0	11	20	-1								
DURHAM	71.06	348.8	11	1K	-21								
BREBEUF	71.36	36.6	11	22A	-2								
COLLMBERG	71.99	338.9	11	28	1								
HALLE	72.02	339.6	11	27	-1						11	44	PCP
JENA	72.64	339.6	11	31	0								
PRUHONICE	72.88	337.4	11	33	0								
PLAUEN	72.92	339.1	11	33	0								
RATHFARNHAM	73.00	351.4	11	31K	-2								
BENSBERG	73.47	342.4	11	36	0								
MORGANTOWN	73.92	44.0	11	39	0								
BRATISLAVA	73.95	335.1	11	43	4								
KEW	74.14	347.3	11	40A	0								
WESTON	74.90	36.7	11	44A	0								
STUTTGART	75.17	340.4	11	46	0								
TUBINGEN	75.43	340.4	11	46	-1								
STRASBOURG	75.64	341.3	11	48A	-1	21	42	12			12	48	
EBINGEN	75.78	340.4	11	50	1								
PARIS	76.33	344.8	11	54	1						12	5	PCP
BASLE	76.68	341.1	11	55A	1								
CHUR	76.94	339.6	11	56A	0								
TRIESTE	77.13	336.4	12	1	4								
NEUCHATEL	77.31	341.4	12	59	61								
COLUMBIA	78.20	47.9	12	2	-1								
CLERMONT-FD.	79.18	343.7	12	10	2								
CINE	80.20	323.1	12	14K	0						15	37	PP

MONACO	80.35	340.1	12 15K	0	
JERUSALEM	82.52	315.1	12 21K	-5	12 25 PCP
MESSINA	83.65	332.5	12 30	-2	
HELWAN	85.80	317.1	12 42	0	
TOLEDO	86.01	347.7	12 44A	0	
MALAGA	89.17	347.4	12 56A	-3	
KARAPIRO	92.00	167.7	12 36K	-36	
TAMANRASSET	100.90	336.0	13 51	-1	17 41 PP
BYRD STATION	140.54	164.3	19 25	-6	23 3 SKP
SOUTH POLE	143.26	180.0	19 29	-7	

OCTOBER 11 14.H 37.M 48.S EPICENTRE -23.95 -66.51 DEPTH= 207.KM

DEPTH OF FOCUS= 0.027R

A= 0.36471 B=-0.83906 C=-0.40370 D=-0.9171 E=-0.3986
G=-0.1609 H= 0.3702 K=-0.9149 HT= 3.6

SE= 1.41

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
LA PAZ	7.57	348.1	1 50A	1	3 15	1		2 1 PP
SANTA LUCIA	10.13	200.2	2 22	0	4 31	18		3 53
LA PLATA	13.22	147.6	3 1	0	5 17	-7		
CONCEPCION	13.69	199.1	2 48	-19				5 31
HUANCAYO	14.50	323.2	3 18	1	6 2	9		11 33 SCP
BOGOTA								
FUQUENE	30.08	345.5	5 52	-1	11 10	35	6 35	13 2
CHINCHINA	30.09	341.7	5 51	-2				6 41 *SP
GALERAZAMBA	35.57	345.1			12 4	4		17 12 SCS
ST. VINCENT	37.25	8.4	6 54	0				
BARBADOS	37.46	11.1	6 53	-3				
FORT FRANCE	38.80	8.3	7 6K	-1	12 49	1		
SAN JUAN	42.08	0.5	7 29	-5			8 24	9 22 PCP
COLUMBIA	59.26	346.0	9 41	-1				
BYRD STATION	60.43	189.2	9 51	1	17 54	7	10 34	38 55 PKPPKP
CHAPEL HILL	60.72	348.3	9 51	-1				20 34
MBOUR	61.59	57.0	9 58	0	18 3	1	10 44	10 39 PCP
MORGANTOWN	64.49	348.5	10 16A	-1				
FAYETTEVILLE	65.20	335.5	10 21	-1				
SOUTH POLE	66.19	180.0	10 28	0	18 55	-4		12 54 PP
BREBEUF	69.42	354.7	10 47K	-1				
OTTAWA	69.53	353.1	10 48K	-1				
TUCSON	70.11	321.0	10 53	1			11 44	
TUCSON TELE.	70.11	321.1	10 53	1			11 47	38 51 PKPPKP
SHAWINIGAN	70.40	355.4	10 53K	-1				
SEVEN FALLS	70.84	356.9	10 57	1				
SCOTT BASE	73.82	190.2	11 14A	0				11 19 PCP
LARAMIE	74.36	330.5	11 19	2				
BOULDER CITY	75.09	321.2	11 23	2				
RAPID CITY	75.59	333.6	11 24	0	20 46	0		
WINDHOEK	75.63	108.5	11 24K	0				
PASADENA	75.81	317.9	11 26K	1	20 52	3	12 23	
CAPE HALLETT	76.64	195.3	11 30K	0	21 0	2		11 35 PCP
SALT LAKE C.	76.95	326.3	11 31	-1				11 53
EUREKA	78.20	323.1	11 40	2			12 36	
FRESNO	78.55	318.9	11 40K	0				
GRAHAMSTOWN	79.65	121.8	11 16A	-30				
KIMBERLEY	79.91	116.9	11 47K	-1				
LICK	80.04	318.4	11 49K	1				
BOZEMAN	80.25	330.1	11 50	1				12 25
RENO	80.40	321.0	11 52K	2				
BERKELEY	80.75	318.5	11 53K	1				
BUTTE	81.21	329.5	11 56	1				
MINERAL	81.97	320.7	11 58K	0				
UKIAH	82.14	319.0	11 59	0				
LISBON	82.27	41.7	12 1K	1				
SHASTA	82.65	320.6	12 2K	0				
HUNGRY HORSE	83.60	330.3	12 6	-1	22 12	2		15 25 PP
TAMANRASSET	83.97	62.0	12 9A	0	22 13	0		15 22 PP
MALAGA	84.06	45.6	12 12K	3	22 18	4	13 4	
PIETERMZBURG	84.11	119.7	12 11	2				
SERRA PILAR	84.11	40.0	12 10K	1				
GRANADA	84.84	45.6	13 9K	56				
CORVALLIS	85.66	323.2	12 17	0				
TOLEDO	86.12	43.1	12 22K	3			13 14	

RELIZANE	86.83	48.6	12 24	1			13 16	13 58		
SEATTLE	87.12	326.0	12 25K	1						
DUMONT	87.46	190.3	12 25	-1						
MIRNY	88.45	171.9	12 30	0	22 56	0	13 24	24 32	*SS	
ALGIERS UNI.	89.08	48.8	12 34K	1	23 5	3	13 27	22 43	SKS	
OASIS-BUNG.	89.64	174.9	12 35	-1						
LWIRO	93.95	94.2	12 58K	2				16 40		
ASTRIDA	94.65	94.9	12 55	-4				16 44	PP	
PARIS	94.94	38.3	13 0	0				16 55	PP	
KARAPIRO	95.29	224.5	12 58	-4						
STUTTGART	98.82	40.5	13 19	1				13 39		
RESOLUTE	100.09	352.6	13 22	-2	24 29	-7		25 57	*PS	
TRIESTE	100.32	44.6						17 20	PP	
COLLEGE	107.82	333.7	13 57	777				18 13	PP	
KSARA	112.77	61.9						19 55	PP	
SODANKYLA	113.06	24.8	18 14	1						
APATITY	115.68	24.8	18 19	1						
MOSCOW	117.34	38.1						19 38	PP	
CHARTERS TS.	125.88	218.9	18 40K	2				20 33		
ASHKABAD	131.35	59.8	18 50	2				22 4		
RABAUL	133.08	238.6	18 50	-2				21 25	PP	
PORT MORESBY	133.31	228.7	18 55	3				21 22	PP	
QUETTA	138.32	70.9	18 53	-8				21 46	PP	
STALINABAD	139.49	58.1						22 37	PKS	
TRUK	139.78	252.4	18 59	-5						
LAHORE	144.67	68.8	19 13	0						
Y.-SAKHLINSK	147.25	321.8	19 18	1			20 18	19 22	PKP2	
DEHRA DUN	147.92	70.7	19 24	6						
GUAM	148.68	256.2	19 12	-7			19 46			
LEMBANG	148.87	168.7	19 22A	3				19 34	PKP2	
IRKUTSK	150.87	11.6	19 25	3						
SENDAI	152.66	307.9	19 31	6						
KOROR	153.96	234.0	19 27	0				19 51		
MATUSIRO	155.30	306.3	19 31	3				23 30		
ULAN-BATOR	155.51	10.7	19 31	2						
VLADIVOSTOK	155.58	326.0	19 31	2						
CHANGCHUN	157.92	336.8	19 32	0						
ABUYAMA	157.95	304.6	20 10A	38						
LHASA	159.19	69.3	19 38	5			20 36			
CHITTAGONG	160.01	90.2	20 20	46						
SHILLONG	160.30	80.8	19 38	3			20 18			
PAOTOW	163.17	9.1	19 41K	4						
PEKING	163.81	352.6	19 41	3			20 39	24 18	PP	
LANCHOW	165.31	32.5	19 43K	3			20 41			
SIAN	168.99	20.2	19 45	3			20 43	24 45	PP	
CHENGTU	169.25	49.5	19 45K	3			20 42	24 51	PP	
KUNMING	170.09	81.5	19 45	2			20 43	24 52	PP	
NANKING	170.67	331.0	19 46	3			20 44	24 53	PP	
HONG KONG	178.24	200.9						21 39	PKP2	
CANTON	179.11	167.3	19 48	2			20 46	25 35	PP	

OCTOBER 12 9.H 44.M 55.S EPICENTRE -17.62-175.23 DEPTH= 253.KM

DEPTH OF FOCUS= 0.035R

A=-0.95037 B=-0.07933 C=-0.30084 D=-0.0832 E= 0.9965
G= 0.2998 H= 0.0250 K=-0.9537 HT= 5.2

SE= 0.95

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
AFIAMALU	4.98	42.5	1	16K	-1	2	9	-7				
SUVA	6.06	264.0				2	46	6				
NOUMEA	17.84	251.9	3	54	1	7	9	9				
KARAPIRO	21.79	200.0	4	35A	2							
BRISBANE	30.84	245.8	5	55A	0							
CANBERRA	36.30	233.8	6	41A	-1							
CHARTERS TS.	36.48	260.0	6	42	-1						12	26
PORT MORESBY	37.42	277.6	6	51	0						15	26
MELBOURNE	40.19	231.8	7	14K	0							
TRUK	40.98	304.7	6	21	-59							
ADELAIDE	44.33	237.8	7	47K	0							
CAPE HALLETT	55.33	185.3	9	10	0							
KOROR	55.51	292.2	9	12	1							
DUMONT	56.93	199.5	9	20	-1							

SCOTT BASE	60.91	184.3	9 49	0				30 11 PKKP
BYRD STATION	67.05	171.0	10 27	-1			11 28	
MATUSIRO	69.53	321.4	10 43A	0				
SOUTH POLE	72.49	180.0	11 1	0			12 8	
BERKELEY	74.30	41.0	11 12	0				
LICK	74.37	41.8	11 13A	1				
MIRNY	74.70	204.5	11 13	-1				
PASADENA	74.81	46.2	11 15	0				
FRESNO	75.21	43.1	11 17A	0				
LEMBANG	75.75	267.3	11 19K	-1				
SHASTA	75.96	38.7	11 21	0				
MINERAL	76.22	39.3	11 23A	0				
RENO	76.83	40.8	11 26	0				
BOULDER CITY	78.10	46.1	11 34	1				
TUCSON	79.08	51.1	11 39	1			12 43	
TUCSON TELE.	79.21	51.1	11 40	1			12 43	
EUREKA	79.24	42.6	11 39	0			12 43	
HONG KONG	79.64	297.4	11 43	2	20 43	-38		
SALT LAKE C.	82.60	43.2	11 56	0				
COLLEGE	84.87	11.4	12 6	-2			13 14	
HUNGRY HORSE	85.28	35.9	12 8	-2				
HALLE	145.72	352.0	19 10	1			20 34	
JENA	146.33	352.2	19 11	1				
BENSBERG	146.68	357.2	19 13	3				
PRAGUE	146.71	348.6	19 15	5				
PRUHONICE	146.77	348.5	19 15	4			20 27	
BRATISLAVA	147.91	344.4	19 15	3				
ASTRIDA	148.23	233.2	19 18A	5				
STUTTGART	148.72	354.4	19 15	2				
PARIS	148.83	2.9	19 20	6				
TUBINGEN	148.97	354.5	19 19	5				
STRASBOURG	149.02	356.1	19 21A	7				
LWIRO	149.16	232.5	19 22	8				
EBINGEN	149.33	354.5	19 18	4				
TRIESTE	151.07	346.9	19 23	6				19 32 PKP2
TAMANRASSET	174.82	352.3	19 42	3				21 18 PKP2

OCTOBER 12 15.H 18.M 47.S EPICENTRE 27.89 126.31 DEPTH= 256.KM
DEPTH OF FOCUS= 0.035R

A=-0.52413 B= 0.71323 C= 0.46538 D= 0.8058 E= 0.5922
G=-0.2756 H= 0.3750 K=-0.8851 HT= 2.5

SE= 2.22

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
YAKUSIMA	4.46	54.2	1 9A	-1	2 1	-4		
ILAN	5.14	233.8	1 15	-3				
TAIPEI	5.16	237.5	1 20	1	2 21	1		
TOMIE	5.17	23.7	1 21A	2	2 13	-7		
KAGOSIMA	5.20	44.2	1 24	-	- --			
¿O-¿E	5.50	306.8	1 25A	2	2 30	3		
HSINCHU	5.70	238.5	1 28	3	2 36	4		
NAGASAKI	5.72	31.8	1 27A	1	2 36	4		
HWALIEN	5.75	228.3	1 25	-1				
UNZENDAKE	5.90	34.3	1 30A	2	2 42	6		
MIYAZAKI	5.98	46.6	1 29A	0	2 31	-7		14 46 SCS
KUMAMOTO	6.20	36.6	1 34A	2	2 43	0		
TAICHUNG	6.29	234.9	1 33	0				
SAGA	6.35	31.8	1 34	1				3 8
ASOSAN	6.46	38.3	1 36	1				
HSINKONG	6.54	224.2	1 33	-3	2 42	-9		
ALISHAN	6.61	230.0	1 35	-2	2 48	-4		
HUKUOKA	6.68	31.0	1 39A	1	2 59	5		14 45 SCS
ITUHARA	6.78	21.3	1 41	2	2 59	3		
TAITUNG	6.93	223.5	1 39	-2	2 55	-4		
OOITA	7.02	39.4	1 41A	-1	3 5	4		
SIMONOSEKI	7.22	32.2	1 47A	3	3 13	7		
TAINAN	7.35	229.8	1 44	-2	3 20	11		
TAWU	7.38	222.8	1 43	-3	3 3	-7		
SIMIDU	7.54	48.1	1 46	-2	3 10	-3		2 1
KAOHSIUNG	7.58	227.5	1 54	5				
NANKING	7.72	304.3	1 52	1	3 20	3		2 57 *SP
HENGCHUN	7.74	221.9	1 51	0	3 13	-5		

MATUYAMA	8.10	41.5	1	53	-2	3	20	-6		
HIROSIMA	8.31	37.6	1	51	-7	3	29	-2		
KOTI	8.39	46.0	1	57A	-2	3	26	-6	14	46 SCS
HAMADA	8.54	33.7	2	3	2	3	46	10		
MUROTO	8.63	49.9	1	57	-5	3	32	-6		
TAKAMATU	9.22	44.1	2	7	-3	3	45	-6		
OKAYAMA	9.38	42.0	2	10	-2	3	50	-5		
TOKUSIMA	9.39	47.0	2	9A	-3	3	53	-2		
MATSUE	9.48	35.7	2	6	-7	4	2	5		
HIMEJI	9.55	44.4	2	14	0	4	2	3		
YONAGO	9.61	36.8	2	12	-3	4	3	3	4	31
SUMOTO	9.76	46.6	2	13A	-3	4	1	-3	14	51 SCS
WAKAYAMA	9.88	48.1	2	17	-1	4	5	-1	3	0
TOTTORI	10.14	39.7	2	19	-2	4	8	-4	4	36
KOBE	10.16	46.1	2	21	0	4	24	11		
OSAKA	10.37	47.2	2	22	-2	4	11	-6	14	51 SCS
OWASE	10.48	51.6	2	24A	-1	4	18	-2		
TOYOOKA	10.50	41.5	2	21	-5	4	16	-4	3	29
ABUYAMA	10.53	46.4	2	23A	-3	4	32	11		
NARA	10.58	47.9	2	28	1					
MAIZURU	10.85	43.6	2	20	-10	4	39	11		
TU	11.07	49.5	2	32	-1					
KAMEYAMA	11.11	48.9	2	31	-2	4	39	5	14	54 SCS
HIKONE	11.21	46.6	2	31	-4	4	36	-1		
TSURUGA	11.34	44.6	2	36	0	4	44	5		
IBUKISAN	11.37	46.5	2	36	-1	4	37	-3		
NAGOYA	11.63	48.8	2	40	0	4	54	8	14	55 SCS
GIHU	11.63	47.4	2	39	-1	4	44	-2	14	52 SCS
DAIREN	11.65	341.6	2	43	3					
HUKUI	11.72	43.6	2	41	0	5	2	14		
HAMAMATU	11.89	52.3							5	9
OMAESAKI	12.18	53.8	2	47	0	5	15	17		
KANAZAWA	12.27	42.9	2	56	8					
HONG KONG	12.33	245.8	2	49A	0	5	3	1	7	13 PCP
IIDA	12.40	49.3	3	1	12	5	26	23		
SHIZUOKA	12.50	52.6	2	50A	-1	5	21	16		
BAGUIO CITY	12.59	206.1	2	51	-1	5	7	-1	14	57 SCP
CANTON	12.71	250.7	2	53A	0	5	11	1		
TOYAMA	12.72	43.6	2	55	2	5	25	15		
HATIDYOZIMA	12.76	62.7	3	1	7	5	28	17		
MATUMOTO	12.92	46.9	2	57	1	5	26	11		
MISIMA	12.96	53.1	2	56	0	5	24	8		
KOHU	12.96	50.5	2	57	1	5	33	17	14	55 SCS
WAZIMA	12.99	40.6	3	3	6	5	27	10	14	56 SCS
HUNATU	13.03	51.3	2	58	1	5	29	12		
AJIRO	13.03	53.7	2	57	0	5	35	18		
OSIMA	13.10	55.2	2	58A	0	5	37	18		
MATUSIRO	13.26	46.4	2	59A	-1	5	29	7	14	51 SCS
NAGANO	13.32	46.0	3	3	2	5	34	10	14	59 SCS
OIWAKE	13.34	47.9	3	3	2	5	40	16		
MERA	13.50	55.4	3	1	-2	5	38	10		
TITIBU	13.50	50.2	3	4	1					
YOKOHAMA	13.61	53.2	3	5	1	5	44	14	3	55
TAKADA	13.62	44.6	3	7	3	5	43	13		
MAEBASI	13.73	48.7	3	7	1	5	45	12	3	32
KUMAGAYA	13.80	50.1	3	9	2	5	54	20		
TOKYO C.M.O.	13.81	52.5	3	8A	1	5	42	7	4	9
AIKAWA	14.21	41.7	3	12	0	5	56	12		
UTUNOMIYA	14.35	49.6	3	14	1	5	49	3	3	57
KAKIOKA	14.39	51.3	3	11	-3	5	51	4		
NIIGATA	14.63	43.7	3	12	-5	6	3	10		
MITO	14.67	51.2	3	18	1	5	57	3		
PEKING	14.73	327.9	3	21K	3	6	3	8		
SHIRAKAWA	14.90	48.4	3	18	-2	6	1	2		
TAIYUAN	15.16	314.1	3	28	5					
ONAHAMA	15.26	50.1	3	19	-5	6	5	-2	3	53 7 25
HUKUSIMA	15.42	46.8	3	24	-2	6	10	0		
YAMAGATA	15.64	45.1	3	30	1	6	29	14		
SAKATA	15.73	42.3	3	32	2	6	40	23		
VLADIVOSTOK	15.85	15.1	3	31	0	6	22	3	15	1 SCS
CHANGCHUN	15.92	357.4	3	33K	1	6	27	6		
SENDAI	16.00	46.0	3	29	-4	6	19	-4	4	16
SIAN	16.18	297.3	3	36A	1	6	30	3		
TATUNG	16.25	321.8	3	35	-1					
ISINOMAKI	16.36	46.2	3	36	-1	6	46	16	7	37
AKITA	16.42	40.6	3	37	-1	6	50	19	15	4 SCS
MIZUSAWA	16.66	43.9	3	41	1	6	53	17		
MORIOKA	17.04	42.5	3	43	-1	6	55	11		

MIYAKO	17.49	43.9	3	46	-3	6	51	-2				
AOMORI	17.55	39.0	4	0	10	7	5	11			15	7 SCS
HATINOHE	17.78	40.9	3	50	-2	7	9	10			15	6 SCS
MORI	18.33	35.7	4	0	2	7	17	8			15	9 SCS
PAOTOW	18.44	317.5	3	59K	0							
SUIHWA	18.70	1.5	4	10	9							
TOMAKOMAI	19.15	36.4	4	16	10	7	34	9				
PHU-LIEN	19.26	252.8	4	8	1						5	23
SAPPORO	19.43	34.9	4	13	4	7	33	3			15	12 SCS
URAKAWA	19.55	39.0	4	11	1	7	40	8			15	15 SCS
CHENGTU	19.64	283.4	4	10	-1	7	34	0	4	51	5	25 *SP
OBIHIRO	20.30	38.0	4	16	-1	7	52	7			15	17 SCS
ASAHIGAWA	20.45	35.0	4	13	-6	7	44	-4				
LANCHOW	20.72	298.8	4	23	1	7	57	4			5	25 *SP
KUSIRO	21.00	39.5	4	24	0	8	1	3			15	13 SCS
KUNMING	21.34	267.8	4	29K	1	8	5	1	5	14	5	36 *SP
ABASHIRI	21.62	37.2	4	30	0	8	14	5				
KOROR	21.87	157.8	4	33K	0	8	17	4	5	27	8	42 PCP
NEMURO	21.89	40.2	4	31	-2	8	16	3			15	20 SCS
GUAM	22.39	126.1	4	38A	0	8	24	2			15	20 SCS
Y.-SAKHLINSK	22.97	29.7	4	43	0	8	33	1	5	31	6	3 *SP
ULAN-BATOR	25.06	328.1	5	3	0							
TOCKLAI	28.01	275.1	6	34	64							
IRKUTSK	29.37	332.0	5	41	-1				6	36		
SHILLONG	30.79	273.7	5	54	0	10	35	-2			6	43 PP
LHASA	30.90	281.8	5	55K	0	10	36	-3			8	46 PCP
TRUK	31.57	125.2	6	1K	0	10	53	3	6	54	7	26 PP
CHITTAGONG	31.64	267.8	6	4	3	10	57	6	6	59		
CALCUTTA	34.67	269.8	6	31A	4	11	41	4			7	50 PPP
CHATRA	34.68	277.6	6	32	5	11	43	5				
PETROPAVLOVK	34.71	34.5	6	26	-2	11	34	-4	7	23		
PORT BLAIR	35.33	249.6	6	35	2	11	46	-2			7	45 PP
MAGADAN	35.83	21.1	6	28	-9							
BOKARO	36.56	273.0	6	45	2	12	3	-3				
DJAKARTA	38.75	212.0	6	5	-56	12	41	2				
LEMBANG	38.96	210.4	6	5K	-58	12	47	5				
RABAUL	40.49	137.9	7	16	0	12	38	-27			8	55 PCP
SEMIPALATNSK	41.35	315.8	7	23	0							
DEHRA DUN	41.99	285.3	7	28	0	13	25	-2			8	41 PP
PORT MORESBY	42.21	148.5	7	30A	0	13	31	1	8	15	9	13 PP
AGRA	42.61	280.7	7	31K	-2	13	30	-6	8	23	9	14 PP
FRUNSE	44.07	303.9	7	45K	0	13	58	1	8	41	15	36 *SS
LAHORE	44.95	287.8	7	50K	-1				8	45	14	5 *SS
HYDERABAD	45.13	267.2	7	53	0	14	7	-5			9	17 PP
MADRAS	45.42	260.6	8	50	55	16	2	106			10	33 PP
TASHKENT	48.02	301.8	8	13	-2	14	53	0	9	11	10	12 PP
STALINABAD	48.60	298.1				15	2	1			8	56
COLOMBO	48.62	253.5	8	18	-2						11	23
KODAIKANAL	49.04	258.9	8	24	1	15	12	5				
BOMBAY	49.58	271.7	8	24	-3	15	20	6			11	13 PPP
CHARTERS TS.	51.38	155.8	8	41	0	15	42	3				
QUETTA	51.44	287.7	8	41K	0	15	40	0	9	38	17	25 *SS
KARACHI	52.46	282.3	8	50K	1				9	45		
SVERDLOVSK	53.90	321.7	8	59	0						18	17 SCS
ASHKABAD	56.80	298.9	9	20K	0				10	21	12	59 PPP
KHEYS	59.98	348.9	9	35	-7							
BRISBANE	60.74	152.7	9	47K	0	17	42	0				
NOUMEA	63.19	138.0	10	3A	0						12	31
COLLEGE	63.38	28.5	10	3K	-1	18	17	2	11	5	22	27 SS
ADELAIDE	63.58	168.6	10	6K	1	18	19	2	10	59	10	37 PCP
GORIS	65.55	303.2	10	18	0							
APATITY	65.63	335.1	10	18K	-1	18	42	0	11	23	12	38 PP
RIVERVIEW	65.75	157.4	10	21K	2	18	52	8				
TIFLIS	66.02	305.9	10	21	0				11	21	19	49 SCS
CANBERRA	66.42	159.9	10	25K	1				11	23		
MOSCOW	66.72	322.0	10	24	-2				11	26	19	56 SCS
ISFJORD	67.41	348.0	10	29	-1							
MELBOURNE	67.68	164.1	10	33K	1				11	42		
HONOLULU	68.07	76.8	11	33	59	19	17	5			20	57 *SS
KIPAPA	68.09	76.7	10	34K	0				11	46		
SODANKYLA	68.19	335.7	10	34	-1						10	58 PCP
NORD	69.12	354.6	10	38	-2							
PULKOVO	69.23	327.4	10	39	-2				11	40	20	16 SCS
KIRUNA	70.21	337.2	10	46K	-1				11	50	21	14 *SS
SITKA	71.38	34.8	10	55A	1							
HELSINKI	71.58	328.9	10	54	-1						13	36 PP
SIMFEROPOL	72.32	311.9	10	59K	-1	20	1	0	12	1	21	49 *SS
AFIAMALU	72.93	116.3	11	1K	-2				12	3		
RESOLUTE	74.24	10.5	11	9K	-2	20	21	-1			22	6 *SS

UPPSALA	75.01	330.3	11	13K	-2				12	18	22	14
SKALSTUGAN	75.23	335.0	11	15	-1							
KSARA	75.39	300.6	11	18	1	20	30	-4	12	22	14	17 PP
THULE	75.53	3.5	11	35K	17				12	8		
IASI	75.60	315.9	11	17	-1							
JERUSALEM	76.73	299.0	11	23A	-2				12	24		
WARSAW	77.09	322.5	11	26	-1	20	55	2	12	56	22	25 PPS
ISTANBUL UN.	77.35	309.7	11	27K	-1				12	30		
BUCHAREST	77.75	313.8	11	31K	1	21	6	6	12	37		
GOTEBORG	78.65	330.1	11	34K	-1				12	36		
KRAKOW	78.76	320.9	11	36	0				12	53	14	38 PP
SKALNATE PL.	79.02	320.0	11	37	0				12	43	14	41 PP
SCORESBY SD.	79.32	349.6	11	38	-1							
CINE	79.50	306.9	11	39K	-1				12	41		
COPENHAGEN	79.59	328.2	11	40	0	21	26	7	12	44	14	45 PP
RACIBORZ	79.71	321.5	11	40	0						13	9
KARAPIRO	80.07	142.6	11	44	1				12	46		
SOFIA	80.34	313.2	11	46	2				12	55	14	34
HELWAN	80.57	298.7	11	45	0				12	46		
BELGRADE	81.10	316.1	11	48K	0	21	37	2			15	52
POTSDAM	81.16	325.2	11	50	2				12	58	15	3 PP
BRATISLAVA	81.33	320.2	11	48	-1				12	51	14	56 PP
HORSESHOE B.	81.34	38.3	11	50K	1							
VICTORIA	81.73	39.1	11	52K	1							
PRUHONICE	81.75	322.7	11	52	1				12	55	15	1 PP
PRAGUE	81.76	322.8	11	55	3				12	55	14	43 PP
COLLMBERG	81.82	324.4	11	51	-1						15	2 PP
HALLE	82.24	324.9	11	54	0				12	50	15	6 PP
ATHENS	82.38	308.9	11	53A	-2							
PLAUEN	82.72	324.0	11	53	-3				13	1	15	7 PP
JENA	82.76	324.6	11	57	0	21	58	7	13	1	15	10 PP
SEATTLE	82.84	39.4	11	56	-1							
ROXBURGH	82.90	151.1				22	13	20				
GEBBIES PASS	82.95	148.1	11	59	1				12	45		
ZAGREB	83.25	318.7	11	59K	0							
SONNEBERG	83.28	324.3	11	59	0				13	1		
CORVALLIS	83.96	42.3	12	5K	2							
WITTEVEEN	84.02	328.0	12	4	1							
MUNSTER	84.10	326.9	12	3	0						15	24
TRIESTE	84.64	319.4	12	10K	4	22	7	-3	13	13		
ABERDEEN	84.80	334.6				22	7	-4			23	52
BENSBERG	84.96	326.3	12	8K	0						13	13 *SP
DE BILT	85.18	328.0	12	8	-1	22	18	3			15	27 PP
STUTTGART	85.29	323.8	12	9	0	22	5	-11	13	10	15	31 PP
TUBINGEN	85.51	323.6	12	10	0				13	11	15	33 PP
ARCATA	85.52	45.8	12	13	3							
RAVENSBURG	85.67	322.8	12	12	1							
EBINGEN	85.77	323.4	12	10	-2							
STRASBOURG	86.15	324.2	12	13	-1	22	13	-11	13	16	15	33 PP
CHUR	86.29	322.1	12	11K	-3							
DURHAM	86.31	332.7	12	14	0	22	26	0			15	38 PP
UCCLE	86.43	327.4	12	15	0	22	19	-8				
SHASTA	86.68	45.2	12	18K	2							
DOURBES	86.77	326.7	12	15	-1						15	42 PP
HUNGRY HORSE	86.87	35.5	12	18K	1	22	38	7	13	29	22	20 SKS
BASLE	86.91	323.5	12	16A	-1							
UKIAH	87.03	46.9	12	18K	0				13	20		
MINERAL	87.38	45.1	12	21K	2							
ROME	87.56	316.9	12	20	0	22	23	-15	13	29	15	49 PP
NEUCHATEL	87.58	323.3	12	18	-2						15	49 PP
REGGIO CALA.	87.73	312.4	12	19	-2				13	22		
MESSINA	87.74	312.5	12	20	-1	22	43	4	13	14	15	51 PP
KEW	88.12	329.9	12	23K	0	22	43	0	13	24	15	55 PP
BERKELEY	88.36	47.5	12	25K	1	22	48	3	13	28		
PARIS	88.65	326.7	12	26K	1	22	33	-15	13	32	15	59 PP
RENO	88.97	45.0	12	29K	2	22	57	6	13	32		
LICK	89.07	47.6	12	29K	2				13	31		
BUTTE	89.14	36.6	12	29K	1	22	58	6	13	33		
TANANARIVE	89.24	248.2	12	29A	1				13	33		
BOZEMAN	90.17	36.2	12	33K	1						12	54
CLERMONT-FD.	90.39	324.1									16	11 PP
JERSEY	90.56	329.1									17	42
FRESNO	90.60	47.2	12	35	1							
EUREKA	91.37	43.3	12	40K	2	23	2	-10	13	45	29	57 PKKP
SALT LAKE C.	92.98	40.2	12	46K	1						29	55 PKKP
PASADENA	93.22	48.6	12	48K	1	23	30	2	13	48	22	56 SKS
BOULDER CITY	94.26	45.4	12	54K	3				13	57		
WILKES	94.58	186.4				23	12	-28	13	54	24	57

RAPID CITY	95.25	33.4	12	57K	1	23	49	4	14	3		
OASIS-BUNG.	95.79	190.2	12	58	0	23	50	0	13	58		
LARAMIE	96.05	36.6	13	2	3							
ALGIERS UNI.	96.46	317.5	12	59	-2	22	50	-66			16	58 PP
ASTRIDA	97.03	270.8	13	4	0						14	17
MIRNY	97.50	192.8	13	5	-1	24	2	-2	14	6	17	6 PP
LWIRO	97.69	271.5	13	17A	10	23	25	7				
RELIZANE	98.63	318.1	13	9	-2						17	6 PP
TUCSON	99.19	46.1	13	16K	2				14	23	30	5 PKKP
SERRA PILAR	99.62	327.1	13	16K	0						17	23 PP
GRANADA	99.99	321.5									18	28 PP
TAMANRASSET	103.83	305.3	13	38	4	23	51	3	14	38	17	59 PP
OTTAWA	104.35	15.8	17	36	777							
CAPE HALLETT	104.38	167.3	13	38	1						17	53 PP
FLORISSANT	105.32	28.9				25	11	0				
ST. LOUIS 1	105.52	28.9				25	17	0			23	56 SKS
PIETERMZBURG	107.95	245.6	17	58	777							
SCOTT BASE	108.19	171.7	17	59	777						18	27 PP
KIMBERLEY	112.21	248.3	18	8	3							
GRAHAMSTOWN	112.32	243.1	18	7	2							
WINDHOEK	116.54	257.3	18	16	2							
SOUTH POLE	117.74	180.0	18	17	1						14	40 P
BYRD STATION	121.43	169.3	18	25	2				19	27	15	8 P
MBOUP	124.94	315.0	18	33	3						20	22 PP
SAN JUAN	132.45	16.1	18	45A	1						21	48 PP
FORT FRANCE	137.02	10.6	18	50	-3							
ST. VINCENT	138.52	11.2	18	47	-8						22	6
TRINIDAD	140.92	12.3	19	0	0						22	15
CHINCHINA	141.07	36.3	18	55	-5						22	13 PP
FUQUENE	141.60	33.3	19	1	0						22	0 SKP
BOGOTA	142.17	34.5	19	2	0						22	22 PP
HUANCAYO	154.34	56.4	19	26K	5						19	59 PKP2
LA PAZ	162.49	52.7	19	37K	6				20	24	20	49 PKP2

OCTOBER 13 8.H 58.M 12.5 EPICENTRE 41.56 74.96 DEPTH= 0.KM

A= 0.19469 B= 0.72475 C= 0.66094 D= 0.9658 E=-0.2594
G= 0.1715 H= 0.6383 K=-0.7504 HT= -2.3

SE= 1.95

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
NARYN	0.79	99.3									0	15	PG
RYBACHE	1.22	42.8									0	24	PG
FRUNSE	1.35	347.9									0	26	PG
FABRICHNAYA	1.93	32.9									0	37	PG
ANDIJAN	2.12	248.3	0	40	3						1	12	SG
ALMATA	2.25	40.1	0	42	3						1	12	S*
ALMATA-2	2.47	45.4									0	46	P*
NAMANGAN	2.55	257.9	0	45	2						1	24	SG
FERGANA	2.68	244.9	0	47	2	1	21	2			0	53	
PRZHEVALSK	2.72	69.2	0	47	2								
ILI	2.85	32.5	0	50	3								
KURMENTY	2.87	57.8	0	49	1						1	30	S*
CHILIK	3.25	50.7	0	55	2								
MURGAB	3.29	194.3	0	58	4						1	51	SG
TCHIMKENT	4.07	282.2	1	7	2						2	16	SG
LUNACHARSKOE	4.24	268.7	1	5	-2						2	6	S*
TASHKENT	4.28	268.6	1	8	0	2	0	0			1	20	
GARM	4.39	235.9	1	12	3	2	4	2					
KHOROG	4.84	213.6	1	19	3	2	17	4			2	42	
KULYAB	5.42	229.2	1	25	1						2	52	
STALINABAD	5.62	239.7	1	25	-2								
SAMARKAND	6.36	255.3	1	36	-1						2	3	
SEMIPALATNSK	9.57	20.8	2	20	-2	4	5	-6					
LAHORE	10.01	183.1	2	27	-1								
DEHRA DUN	11.49	166.5	2	47	-1						3	51	
QUETTA	13.08	212.2	3	5	-4	5	25	-12					
ASHKABAD	13.28	259.7	3	11	-1	5	34	-8					
KIZYL-ARVAT	14.49	266.1	3	25	-3						7	0	SS
AGRA	14.62	169.1	3	25	-5	6	2	-12			8	8	
KARACHI	17.01	205.1	4	14	13	7	32	23			4	21	PP
CHATRA	17.80	141.8	4	14	4	7	44	16					
SVERDLOVSK	17.86	333.7									4	37	PP
BAKU	18.95	274.8	4	28	3						8	12	SS

BOKARO	19.87	149.6	4	34	-1				14	49	
MAKHACH-KALA	20.34	283.2	4	42	2				8	30	
SHILLONG	21.22	133.5	4	48A	-1						
KIROVOBAD	21.51	277.3	4	51	-1				8	53	PCP
GORIS	21.82	274.1	4	56	1				9	4	PCP
HOWRAH	22.03	145.3	4	58	0	8	0	-56			
CALCUTTA	22.06	145.3	5	22	24	9	3!	34	9	7	PCP
TIFLIS	22.49	280.5	5	2	0				9	12	PCP
IRKUTSK	22.58	51.7	5	3A	0				9	14	PCP
BOMBAY	22.66	185.3	5	5	1				9	24	
KYAKHTA	23.44	57.2	5	12A	1				9	27	
ULAN-BATOR	23.44	63.4	5	12	1						
CHITTAGONG	23.82	138.3	5	19	4						
KABANSK	23.91	53.2	5	17A	1				6	44	
HYDERABAD	24.24	171.9	5	16K	-3	9	43	7	13	9	
SOTCHI	25.92	286.4	5	35	0				12	43	SCP
MOSCOW	28.05	313.1	5	55	0				6	30	
MADRAS	28.82	169.4							11	54	
SIMFEROPOL	29.72	290.5	6	9	-1	11	7	1			
YALTA	29.76	289.5	6	10	0						
KODAIKANAL	31.29	175.2							12	12	
KSARA	31.67	268.8	6	27	0	11	42	6	7	34	PP
PULKOVO	32.83	319.0	6	37	0	11	52	-2	7	51	PP
PHU-LIEN	33.81	118.0							21	53	
ISTANBUL UN.	34.23	284.8	8	49	120						
APATITY	34.31	333.1	6	49	-1	12	12	-5			
HELSINKI	35.55	318.8	7	!	0						
LWOW	35.92	301.0	6	59	-5				7	31	
SODANKYLA	36.63	331.0	7	9	-1				9	18	PCP
HELWAN	36.94	265.8	7	13	1						
WARSAW	37.55	305.3							16	30	SSS
KRAKOW	38.51	302.0							17	10	
KIRUNA	39.04	330.6	7	29A	-1						
UPPSALA	39.19	317.7	7	30A	-1						
KHEYS	39.54	353.9	7	35	1						
TIKSI	39.91	23.5	7	35	-2				9	39	PCP
SKALSTUGAN	41.83	323.4	7	53A	0						
PRUHONICE	41.93	302.8		54	0				8	18	PP
GOTEBORG	42.22	314.6	7	55	-1						
COLLMBERG	42.62	305.1	7	59	0						
HALLE	43.22	305.6	8	4	0				10	3	PP
PLAUEN	43.32	304.1	8	4	-1						
TRIESTE	43.57	296.9	8	10	3						
JENA	43.57	304.8	8	6	-1	14	28	-9	9	54	
STUTTGART	45.62	302.4	8	23	-1				13	18	
MUNSTER	45.72	307.1	8	27	3						
TUBINGEN	45.77	302.1	8	23	-2						
EBINGEN	45.94	301.7	8	26	0						
STRASBOURG	46.58	302.6	8	31	0				19	6	SS
MATUSIRO	48.41	74.1	8	44A	-1						
MAGADAN	48.52	41.2							10	55	
NORD	49.41	348.8	8	52	-1						
PARIS	49.81	304.4	8	59	3						
KEW	50.59	308.5	9	2	0						
GRANADA	58.90	293.9	9	39K	-24						
THULE	59.99	350.6	10	43	33						
ASTRIDA	60.12	234.9	10	8	-3						
TAMANRASSET	60.16	274.9	10	9	-2				10	53	PCP
LWIRO	60.42	236.0	10	13	0						
RESOLUTE	63.85	357.0	10	35K	-1	19	18	7			
COLLEGE	68.75	18.1	11	6	-1						
TRUK	75.27	93.1	11	45	-1						
RABAUL	83.24	101.7	12	28	-1						
HORSESHOE B.	88.03	11.8	12	51	-2						
CHARTERS TS.	89.92	117.0	13	1A	-1						
HUNGRY HORSE	90.12	6.0	13	!	-2						
BUTTE	92.54	5.2	13	14	0						
ADELAIDE	95.97	132.2	13	29K	-1						
LARAMIE	97.51	0.4	13	39	2						
EUREKA	98.73	8.5	13	43	1						
TUCSON	106.36	5.1							18	44	PP
CAPE HALLETT	130.59	156.4	19	12	-1				23	13	PKS
SOUTH POLE	131.37	180.0	19	12	-2				21	27	PP
BYRD STATION	141.04	176.0	19	26	-6						

OCTOBER 14 9.H 6.M 25.S EPICENTRE 52.86 159.50 DEPTH= 0.KM

A=-0.56800 B= 0.21232 C= 0.79517 D= 0.3501 E= 0.9367
G=-0.7448 H= 0.2784 K=-0.6064 HT= -6.5

SE= 1.72

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	0.58	298.2	0	24	9								
MAGADAN	8.27	327.6	2	10	6								
MATUSIRO	22.11	231.0	4	3A	-56								
TIKSI	23.14	335.7	5	9	0								
COLLEGE	28.83	44.8	6	2	0								
RESOLUTE	43.68	21.8	8	8A	0						9	54	PP
NORD	45.77	359.2	8	25	0								
HONG KONG	45.99	246.3	8	29K	2						10	3	PP
THULE	47.44	13.8	9	12	34								
HUNGRY HORSE	51.88	57.8	9	11	-1						10	25	PCP
SHASTA	52.30	70.1	9	16	0								
MINERAL	52.98	69.9	9	21	0								
APATITY	53.34	337.2	9	20	-3								
BUTTE	54.15	59.2	9	30	1								
BERKELEY	54.27	72.6	9	31	1								
RENO	54.54	69.5	9	33	1								
LICK	54.99	72.7	9	36	0								
SODANKYLA	55.00	339.7	9	34	-2						10	36	PCP
KIRUNA	55.82	342.5	9	40	-2								
FRESNO	56.45	72.0	9	46	0								
SHILLONG	56.65	269.1	9	47A	-1								
EUREKA	56.75	67.1	9	49	1						10	18	
RABAUL	57.18	188.7	9	52	1								
CHATRA	58.57	273.8	10	2	1								
PASADENA	59.24	73.0	10	5	-1								
BOULDER CITY	59.85	69.3	10	11	1								
RAPID CITY	60.28	55.4	10	12	-1								
LARAMIE	61.07	59.1	10	18	0								
SKALSTUGAN	61.11	343.9	10	16	-2								
HELSINKI	61.57	336.1	10	20	-2						11	18	
BOULDER	62.14	59.9	10	26	1								
UPPSALA	63.54	339.6	10	34	-1								
TUCSON TELE.	64.83	69.3	10	43	0								
TUCSON	64.83	69.4	10	43	0								
GOTEBORG	66.66	341.7	11	16A	21								
QUETTA	68.02	291.1	11	2	-1								
OTTAWA	71.30	37.7	11	21	-3						14	1	PP
SHAWINIGAN	71.38	35.2	11	23	-1								
SEVEN FALLS	71.55	33.7	11	26	1								
BREBEUF	71.98	36.3	11	26K	-2								
RACIBORZ	72.35	335.0	11	26	-4								
COLLMBERG	72.45	338.7	11	29	-1								
HALLE	72.49	339.4	11	30	-1						11	49	PCP
SKALNATE PL.	72.63	333.3	11	29	-2								
JENA	73.11	339.4	11	34	0						12	4	
PRUHONICE	73.34	337.2	11	36	0						13	41	
CHARTERS TS.	73.47	193.0	11	37	1								
BRATISLAVA	74.39	334.9	11	42	0								
MORGANTOWN	74.51	43.6	11	41A	-1								
WESTON	75.51	36.4	11	48K	0								
STUTTGART	75.65	340.2	11	49	0								
TUBINGEN	75.91	340.2	11	51	1								
STRASBOURG	76.12	341.1	11	53	1						12	23	
EBINGEN	76.26	340.2	11	53	1								
PARIS	76.84	344.6	11	58A	2								
BASLE	77.16	340.9	11	59A	2								
CHUR	77.41	339.4	11	59A	0								
NEUCHATEL	77.80	341.2	12	1	0								
KSARA	80.74	315.4	12	18	1								
ATHENS	81.74	326.2	12	21A	-1								
JERUSALEM	82.77	314.8	12	27	0								
TAMANRASSET	101.35	335.6	13	55	0								
SCOTT BASE	130.52	178.0	19	11	-2						20	17	PP
BYRD STATION	140.03	164.4	19	24	-7						23	4	SKP
SOUTH POLE	142.67	180.0	19	30	-5								

OCTOBER 14 21.H 5.M 17.S EPICENTRE 33.76 137.12 DEPTH= 366.KM

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DEPTH OF FOCUS= 0.053R

A=-0.61045 B= 0.56686 C= 0.55319 D= 0.6805 E= 0.7328
G=-0.4054 H= 0.3764 K=-0.8331 HT= 0.6

SE= 1.73

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
OWASE	0.82	292.0	0	47A	0	1	22	-2				
HAMAMATU	1.07	27.4									1	26
TU	1.08	332.9	0	47	-1							
SIOMISAKI	1.17	254.8	0	47A	-1	1	25	-1				
KAMEYAMA	1.21	333.8	0	49	1	1	26	-1				
OMAESAKI	1.24	47.3	0	50	1	1	29	2				
NARA	1.41	310.9	0	49	-1	1	27	-2				
NAGOYA	1.41	355.0	0	50	0	1	28	-1				
OSAKA	1.59	304.3	0	52	1	1	31	1				
SHIZUOKA	1.60	41.0	0	50	-1	1	32	1				
GIHU	1.66	350.1	0	50A	-1	1	29	-2				
HIKONE	1.66	334.7	0	51	0	1	31	0				
WAKAYAMA	1.69	286.5	0	51	0	1	30	-1				
IBUKISAN	1.72	339.5	0	51	0	1	30	-2				
IIDA	1.85	18.3	0	53	1	1	32	-1				
KOBE	1.85	300.1	0	51	-1	1	30	-3				
SUMOTO	1.95	288.0	0	51A	-2	1	31	-3				
MISIMA	2.03	47.7	0	53	0	1	34	-1				
AJIRO	2.08	51.4	0	53	0	1	36	0				
OSIMA	2.12	61.2	0	53K	-1	1	36	0				
TOKUSIMA	2.13	278.9	0	54A	0	1	34	-2				
MAIZURU	2.18	321.8	1	0	6	1	38	1				
HUNATU	2.20	37.7	0	56	2	1	38	1				
KOHU	2.21	32.3	0	55	1	1	38	1				
HATIDYOZIMA	2.36	105.6	0	56	0						2	49
HIMEJI	2.37	288.8	0	53	-3	1	35	-5				
HUKUI	2.38	343.2	1	35	39							
MUROTO	2.51	259.0	0	58	1	1	53	11				
MERA	2.52	62.0	0	53A	-4	1	37	-5				
MATUMOTO	2.58	15.5	0	57	0	1	43	0				
TOYOOKA	2.59	313.5	0	58	!	1	41	-2				
TAKAMATU	2.61	283.1	1	3	5	1	47	4				
YOKOHAMA	2.67	50.8	0	57	-1	1	43	-1				
TITIBU	2.74	35.5	0	58	-1							
OKAYAMA	2.80	289.9	0	59	0							
OIWAKE	2.82	24.2	1	0	1	1	47	1				
TOKYO C.M.O.	2.89	47.8	1	0A	0	1	45	-2				
MATUSIRO	2.92	17.7	0	59K	-1	1	45	-2				
TOYAMA	2.93	1.3	1	1	1	1	48	0				
KOTI	3.00	266.9	1	0A	-1	1	43	-6				
KUMAGAYA	3.02	37.3	0	59	-2	1	46	-3				
NAGANO	3.03	16.7	1	1	0	1	49	0				
MAEBASI	3.08	30.8	1	1K	0	1	49	-1				
KAKIOKA	3.52	44.7	1	3	-3	1	54	-3				
YONAGO	3.53	299.2									1	48
UTUNOMIYA	3.58	38.3	1	6K	0	1	53	-5				
WAZIMA	3.61	357.2	1	9	3							
SIMIDU	3.61	255.4	1	7	1	1	55	-4				
TYOSI	3.64	56.5	1	6K	-1	1	57	-2				
MATUYAMA	3.64	272.2	1	9	2	1	59	0				
MITO	3.79	45.5	1	7	-1	1	58	-4				
HIROSIMA	3.94	280.1				2	3	-1				
SHIRAKAWA	4.20	36.2	1	11	-1	2	5	-4				
HAMADA	4.33	286.6	1	25	11	2	10	-2				
AIKAWA	4.34	11.9	1	15	1	2	9	-3				
ONAHAMA	4.43	43.1	1	14	-1	2	10	-4			1	43
NIIGATA	4.43	20.2									1	48
OOITA	4.63	264.9	1	17	0	2	20	3				
HUKUSIMA	4.82	33.5	1	18K	-1	2	17	-4				
MIYAZAKI	5.14	250.6				2	31	4				
YAMAGATA	5.18	29.4	1	22	-1	2	24	-4				
SENDAI	5.44	33.2	1	23K	-2	2	27	-6				
KUMAMOTO	5.46	261.8	1	27	1	2	37	4				
ISINOMAKI	5.76	34.9	1	27	-2	2	35	-4			2	57
MIZUSAWA	6.25	30.0	1	33	-2	2	46	-3				
AKITA	6.41	21.1	1	36	0	2	53	1				
YAKUSIMA	6.52	241.3	1	37	-1	2	53	-2				
MORIOKA	6.76	27.6	1	38	-2	2	55	-5				
MIYAKO	7.05	32.1	1	42	-2	2	58	-8				
AOMORI	7.62	21.4	1	49	-1							

URAKAWA	9.49	26.4	2	14	2	3	56	-1			
SAPPORO	9.86	18.4	2	20A	3	4	5	0			
OBIHIRO	10.31	25.8	2	22	0	4	12	-3			
KUSIRO	10.82	29.7	2	23	-5	4	21	-5			
NANKING	15.49	268.7	3	18K	-3						
PEKING	17.87	296.5	3	44	-1	6	48	0			
PAOTOW	22.58	295.4	4	33	2						
HONG KONG	23.20	246.4	4	36	-1						
SIAN	23.36	279.1	4	38	0						
CHENGTU	28.12	272.8	5	19	-2						
KUNMING	31.12	263.0	5	46	-1						
SHILLONG	39.90	270.5	7	0A	-1						
CHATRA	43.34	274.7	7	26	-2						
COLLEGE	53.71	30.8	8	48	1						
NORD	64.07	355.9	9	56	-1						
APATITY	64.21	335.5	9	57K	-1						
SODANKYLA	66.59	336.7	10	13	0						
RESOLUTE	66.61	13.2	10	13A	0						
KIRUNA	68.30	338.6	10	23A	-1						
HELSINKI	71.21	330.7	10	41	0						
SKALSTUGAN	73.63	337.5	10	54A	-1						
UPPSALA	74.30	332.8	10	58A	-1						
SHASTA	75.88	50.4	11	10	2						
HUNGRY HORSE	76.55	40.5	11	13	1						
MINERAL	76.57	50.4	11	14	2						
BERKELEY	77.49	52.8	11	19	2						
GOTEBORG	77.92	333.3	11	21	2						
LICK	78.19	53.0	11	22	1						
EUREKA	80.63	48.6	11	35	1						
PRUHONICE	82.36	326.7	11	43	0						
JENA	83.00	328.7	11	46	0						
BOULDER CITY	83.44	50.9	11	50	2						
RAPID CITY	85.05	38.9	11	57	1						
OTTAWA	95.77	22.6	12	46K	0						
SOUTH POLE	123.59	180.0	18	14	0						
BYRD STATION	125.33	168.0	18	20	3						
HUANCAYO	143.36	61.6	18	52K	1						

OCTOBER 16 18.H 2.M 15.S EPICENTRE -11.13 166.28 DEPTH= 182.KM
DEPTH OF FOCUS= 0.023R

A=-0.95341 B= 0.23282 C=-0.19186 D= 0.2372 E= 0.9715
G= 0.1864 H=-0.0455 K=-0.9814 HT= 6.4

SE= 1.64

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
NOUMEA	11.10	179.2	2	33	-2	4	34	-2					
SUVA	13.67	122.1	3	11A	3	5	49	14			8	15	PCP
RABAUL	15.58	295.2	3	32	1	6	15	-4					
PORT MORESBY	18.90	273.5	4	8A	-1	7	38	9	4	28	4	43	*SP
BRISBANE	20.48	215.6	4	25	0	8	6	7					
CHARTERS TS.	21.19	243.0	4	32A	0	8	22	10					
AFIAMALU	21.60	99.6	5	40K	64								
TRUK	23.40	321.5	4	53	-1				5	26			
CANBERRA	28.74	210.3	5	43K	0								
COBB RIVER	30.36	170.3	5	59	2								
WELLINGTON	30.94	167.5	6	1	-1	10	52	0					
GEBBIES PASS	32.91	171.5	6	18	-1								
ADELAIDE	34.49	222.2	6	34A	1	11	51	4			7	10	*SP
KOROR	36.57	298.7	6	51	1				7	23			
KIPAPA	47.71	47.3	8	19	-1								
BAGUIO CITY	52.85	300.5	8	59	0								
MATUSIRO	54.29	332.2	9	7A	-3						15	34	
LEMBANG	58.02	268.9	9	46	10								
DUMONT	58.23	192.0	9	37	-1								
ZO-SE	60.29	315.6	9	50	-2	18	37	47			10	24	*SP
HONG KONG	60.93	303.3	9	56	0	18	6	8	10	30			
CAPE HALLETT	61.17	178.6	9	56A	-2	18	5	4					
CANTON	62.02	303.6	10	3	0						10	38	*SP
NANKING	62.49	315.1	10	6	0	18	23	6			10	40	*SP
CHANGCHUN	66.18	328.8	10	29	-1	19	8	5			11	2	*SP
SCOTT BASE	66.71	179.9	10	33K	-1						11	22	PCP
PEKING	68.88	320.8	10	47	0	19	40	5			11	22	*SP

SIAN	70.67	312.3	10	58	0					11	33 *SP
KUNMING	71.64	301.1	11	5A	1	20	15	8		11	40 *SP
CHENGTU	72.77	307.0	11	11A	1	20	24	4		11	43 *SP
LANCHOW	75.22	312.0	11	25A	1	20	55	8		11	59 *SP
BYRD STATION	76.38	170.1	11	30	-1						
SOUTH POLE	78.94	180.0	11	44	-1				12 23	38	43 PKPPKP
SHILLONG	81.03	298.3	11	55A	-1						
UKIAH	82.29	47.7	12	2	-1						
BERKELEY	82.55	49.2	12	4A	0					12	43
LICK	82.83	49.8	12	6A	1					15	17 PP
LHASA	82.92	302.0	12	8A	2	22	19	11		12	44 *SP
COLLEGE	83.21	18.0	12	6	-1				12 44		
SHASTA	83.44	46.5	12	9A	0					15	23 PP
FRESNO	84.04	50.9	12	11A	0						
CORVALLIS	84.21	42.6	12	11	-1						
PASADENA	84.50	53.8	12	13	-1	22	25	2			
RENO	84.91	48.2	12	17A	1					15	34 PP
CHATRA	85.43	298.3	12	8	-10						
HORSESHOE B.	86.01	38.1	12	20	-1						
BOULDER CITY	87.64	52.8	12	30	1						
EUREKA	87.73	49.2	12	30	1				13 9	15	57 PP
TUCSON	89.94	57.2	12	41	1						
TUCSON TELE.	90.05	57.2	12	42	2				13 20		
SALT LAKE C.	91.11	48.8	12	46	1				13 24		
HUNGRY HORSE	91.48	41.0	12	47	0				13 16	16	11 PP
BOZEMAN	92.81	44.1	12	54	1				13 33		
RAPID CITY	98.02	46.7	13	17	0				13 57		
RESOLUTE	103.00	15.6								20	18 PPP
SODANKYLA	117.80	343.5	18	26	1						
KIRUNA	119.06	345.9	18	27	0						
HELSINKI	123.31	338.0	18	36	0						
SKALSTUGAN	124.49	346.2	18	37	-1						
UPPSALA	126.06	341.0	18	42	1						
SAN JUAN	128.96	75.4	18	50	4						
TOLEDO	150.11	345.0	19	30	6					19	45
ALGIERS UNI.	150.33	332.1	19	31	7					19	51 PKP2
RELIZANE	152.29	334.5	19	28	1					20	10 PKP2
GRANADA	152.51	342.3	19	40A	13						
TAMANRASSET	158.29	304.7	19	37	2					23	52 PP

OCTOBER 17 10.H 24.M 3.S EPICENTRE -19.89-177.94 DEPTH= 412.KM

DEPTH OF FOCUS= 0.060R

A=-0.94044 B=-0.03387 C=-0.33826 D=-0.0360 E= 0.9994
G= 0.3380 H= 0.0122 K=-0.9411 HT= 4.7

SE= 1.83

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SUVA	3.85	296.2	1	13A	1	2	13	4				
AFIAMALU	8.39	45.7	1	58K	-2	3	24	-12			2	38
NOUMEA	14.77	257.9	3	13A	1	5	53	7			3	30
ONERAHI	17.20	201.6	3	46	10							
KARAPIRO	18.84	196.2	3	53A	0						4	57
TUAI	19.31	191.7				7	17	8				
WELLINGTON	22.20	194.7	4	23	-2	8	4	6				
COBB RIVER	22.57	198.6	4	29	1	8	9	5				
GEBBIES PASS	25.01	196.3	4	50	0	8	54	10				
BRISBANE	27.59	248.6	5	14A	1						7	11
RIVERVIEW	30.74	236.8	5	40	-1							
CANBERRA	32.90	235.2	5	59K	0							
RABAUL	33.04	294.3	5	50	-10				7	2	14	45 SCS
CHARTERS TS.	33.61	263.6	6	6A	1	10	57	-1				
PORT MORESBY	35.28	282.1	6	20	1							
MELBOURNE	36.78	232.9	6	32A	0							
FORT NELSON	37.09	223.9	6	34	0							
TRUK	40.29	309.5	6	58	-3							
ADELAIDE	40.96	239.3	7	6A	0							
CAPE HALLETT	52.85	184.5	8	38A	1							
DUMONT	53.94	199.3	8	43	-2							
SCOTT BASE	58.48	183.8	9	16K	-1						18	15 PS
BYRD STATION	65.23	170.6	9	59	-2							
OASIS-BUNG.	68.49	205.6	10	19	-2							
MATUSIRO	69.76	323.5	10	28	-1							

SOUTH POLE	70.23	180.0	10 32	1			
MIRNY	71.57	204.9	10 38	-1			
LEMBANG	73.11	268.7	10 48	0			
BERKELEY	77.69	42.0	11 14	0			
LICK	77.77	42.7	11 15A	1	12 51		
UKIAH	77.87	40.5	11 17	2	12 51		
PASADENA	78.23	47.0	11 16	-1			
FRESNO	78.62	44.1	11 19	0	12 52		
MINERAL	79.60	40.3	11 23A	-1	12 57		
RENO	80.23	41.8	11 28	1	13 1		
BOULDER CITY	81.52	47.0	11 35	1	13 7		
TUCSON	82.50	51.9	11 40	1			
EUREKA	82.64	43.5	11 40	0	13 11		
HALLEY BAY	83.13	173.0	11 40	-2		14 57	PP
SALT LAKE C.	86.00	44.1			13 32		
COLLEGE	87.61	12.4	12 2	-2	13 36		
BUTTE	88.24	39.3	12 6	-1	13 41		
HUNGRY HORSE	88.62	36.8	12 8	0	13 42	29 47	PKKP
BOZEMAN	88.98	40.2	12 13	3	13 45		
LARAMIE	90.43	45.9	12 19	2			
RAPID CITY	93.21	44.1			14 5		
SODANKYLA	130.02	347.9				21 5	SKP
LWIRO	145.75	233.0	18 54A	4			
COLLMBERG	147.50	347.2				20 37	
HALLE	147.52	348.5				21 49	SKP
PRUHONICE	148.37	344.6	18 59	5	20 40		
TAMANRASSET	175.68	312.3	19 24	3	21 5	25 18	PP

OCTOBER 18 6.M 34.M 13.S EPICENTRE 6.71 -72.18 DEPTH= 0.KM

A= 0.30400 B=-0.94557 C= 0.11609 D=-0.9520 E=-0.3061
G= 0.0355 H=-0.1105 K=-0.9932 HT= 6.9

SE= 3.25

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
FUQUENE	1.98	231.5	0 36	2				
BOGOTA	2.80	222.3	0 47	1	1 47	27		
CHINCHINA	3.84	2[illegible].4	1 2	2	1 49	3		2 25
GALERAZAMBA	5.07	323.1	1 20	2	2 32	15		
BALBOA HTS.	7.65	287.5	1 50	-4	3 19	-2		
TRINIDAD	11.24	68.8	2 42	-2				5 8
GRENADA	11.59	62.0	2 47	-1				
ST. VINCENT	12.51	58.3	2 59	-2				
SAN JUAN	13.01	26.4	3 4	-3			3 32	
FORT FRANCE	13.44	52.8	3 4	-9				8 34 PCP
HUANCAYO	18.90	189.[illegible]	4 23A	0	8 13	23		6 1 *SPP
LA PAZ	23.41	170.[illegible]	5 9A	0	9 38	20		10 11 SS
COLUMBIA	28.36	344.4	5 55	-1				
TACUBAYA	29.13	298.2	6 7	4				7 20
CHAPEL HILL	29.75	348.7	6 15	7				
MORGANTOWN	33.51	349.1	6 49	8				
FAYETTEVILLE	35.52	328.5	6 55A	-4				
WESTON	35.53	1.	7 4A	5				
BREBI IF	38.66	358.	7 31A	6				9 10 PP
OTTAWA	38.66	356.0	7 29	4				
SHAWINIGAN	39.69	359.4	7 [illegible]	5				
TUCSON TELE.	43.99	310.6	8 [illegible]	-1				
TUCSON	44.04	310.4	8 [illegible]	-1				
RAPID CITY	46.06	328.9	8 23	-2			8 54	
BOULDER CITY	48.67	313.0	8 45	-1				
SALT LAKE C.	48.99	320.0	8 46	-2				
PASADENA	50.42	309.3	8 57	-2	16 15	4		
EUREKA	51.07	316.5	9 2	-2				
BOZEMAN	51.32	325.7	9 4	-2				
BUTTE	52.38	325.2	9 11	-3				
FRESNO	52.65	311.7	9 13	-3				9 46
RENO	53.76	314.9	9 23A	-1				
LICK	54.22	311.7	9 26A	-2				
HUNGRY HORSE	54.55	326.9	9 27	-3				
MBOUR	54.70	77.2	9 32	1	16 53	-16		
BERKELEY	54.87	312.1	9 30A	-2				
MINERAL	55.34	315.1	9 33A	-3				
UKIAH	56.03	[illegible]13.2	9 52	11				
SHASTA	56.04	[illegible]15.2	9 37	-4				
RESOLUTE	69.18	353.7	11 11K	3	20 8	-4		15 20 PP

THULE	69.70	1.0	11 16	5			
TAMANRASSET	76.11	68.3	11 50	1	12 10	14 39	PP
COLLEGE	77.87	335.0	11 57	-2		15 9	PP
BENSBERG	78.11	39.4	12 7	7			
EBINGEN	79.13	42.3	12 4	-2			
TUBINGEN	79.21	42.0	12 5	-1			
STUTTGART	79.31	41.7	12 5	-2			
JENA	80.90	39.6	12 21	6		13 5	
GOTEBORG	81.24	32.7	12 17	0			
SKALSTUGAN	81.56	26.8	12 18	-1			
KIRUNA	84.82	22.4	12 35	0			
BYRD STATION	89.82	187.4	11 57	-63			
SOUTH POLE	96.67	180.0	13 29	-2		17 22	PP
CHARTERS TS.	140.45	246.7	19 21	-8			
SHILLONG	144.36	25.2	19 32	-4			

OCTOBER 19 1.H 54.M 3.S EPICENTRE -18.37-172.81 DEPTH= 36.KM
DEPTH OF FOCUS= 0.001R

A=-0.94223 B=-0.11883 C=-0.31317 D=-0.1251 E= 0.9921
G= 0.3107 H= 0.0392 K=-0.9497 HT= 5.1

SE= 3.04

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
AFIAMALU	4.55	12.9	1 5	-4	1 55	-6		
SUVA	8.32	270.1	2 7A	6				
NOUMEA	19.83	255.1	4 27	-4				5 19
ONERAHI	20.72	210.7	4 37	-3				
KARAPIRO	21.99	205.3	4 47A	-6				8 11
COBB RIVER	25.81	205.7	5 32	2				
KAIMATA	27.55	205.7	5 52	6	9 16	-67		10 48
GEBBIES PASS	28.07	202.8	5 55	4	10 46	15		
BRISBANE	32.65	247.6	6 28K	-3	12 10	26		
CANBERRA	37.75	235.7	7 12A	-3			7 27	
CHARTERS TS.	38.62	260.7	7 19	-3	13 14	-1		
PORT MORESBY	39.80	277.4	7 30	-2				17 2 SSS
ADELAIDE	45.90	238.9	8 18	-3				
CAPE HALLETT	54.82	186.2	9 34	5				29 52 PKKS
SCOTT BASE	60.36	184.9	10 4	-4				
WILKES	67.97	205.2						13 51 PP
MATUSIRO	71.56	320.2	11 17	-3				
SOUTH POLE	71.75	180.0	11 16	-5				
BERKELEY	73.37	39.6	11 38	8				
LICK	73.41	40.4	11 30	-1				
PASADENA	73.69	44.8	11 39	7	21 5	6		30 21 SS
FRESNO	74.21	41.8	11 33	-2				
SHASTA	75.13	37.3	11 39	-1				
MINERAL	75.36	38.0	11 41	-1				
RENO	75.91	39.5	11 44	-1				
BOULDER CITY	76.98	44.9	11 53	2				
TUCSON	77.78	49.9	11 54	-1				
TUCSON TELE.	77.90	49.9	11 55	-1				
LEMBANG	78.01	266.7	11 57	0	21 55	9		
EUREKA	78.25	41.4	11 56	-2				
ZO-SE	80.20	307.3	12 11	2	22 35	26		22 31 SKS
SALT LAKE C.	81.58	42.2	12 15	-1				
NANKING	82.43	307.2	12 21K	1	23 6	33		22 50 SKS
CANTON	83.09	297.0	12 27	3				
CHANGCHUN	83.81	320.1	12 28K	1				
BUTTE	84.04	37.5	12 27	-1				
HUNGRY HORSE	84.55	35.0	12 34	3				
BOZEMAN	84.73	38.3	12 31	-1				
COLLEGE	85.16	10.4	12 33	-1				
LARAMIE	85.93	44.1	12 37	-1				
PEKING	87.90	313.4	12 47	0	23 44	18		23 30 SKS
MEDAN	89.70	273.8	12 57	1				
SIAN	90.89	305.8	12 56	-6				
KUNMING	92.83	295.3	13 14	4	24 32	22		23 57 SKS
CHENGTU	93.54	301.0	13 16	2	24 36	20		23 54 SKS
RESOLUTE	104.42	15.6	17 56	777				37 57 SSS
THULE	111.14	14.0	18 13	-17				
QUETTA	124.80	294.3	18 44	-13	25 39	-17		
RATHFARNHAM	143.59	13.6	19 12	-19				19 46
POTSDAM	145.74	353.6	19 36	1				

HALLE	146.72	354.6	19 39	2	19 50	PKP2
IASI	146.73	334.3	19 40	3		
COLLMBERG	146.82	353.3	19 40	3		
BENSBERG	147.48	0.0	19 42	4		
BRATISLAVA	149.19	347.0	19 42	1		
PARIS	149.39	6.1	19 47	6	20 24	
ASTRIDA	149.56	229.1	19 47	6	23 18	PP
BUCHAREST	149.57	332.7	19 47	6		
STUTTGART	149.63	357.4	19 45	4	20 45	
STRASBOURG	149.86	359.2	19 48A	6	19 59	PKP2
TUBINGEN	149.87	357.5	19 54	12		
KSARA	150.12	306.7	19 53	11	20 9	PKP2
EBINGEN	150.23	357.6	19 54	12		
LWIRO	150.46	228.3	19 49	6	23 23	PP
RUMANGABO	150.72	230.4	19 53	10		
JERUSALEM	151.41	303.2	19 53	9		
TAMANRASSET	175.34	19.3	20 7	1	25 44	PP

OCTOBER 19 11.H 42.M 47.S EPICENTRE -34.39-178.30 DEPTH= 35.KM

DEPTH OF FOCUS= 0.000R

A=-0.82658 B=-0.02450 C=-0.56228 D=-0.0296 E= 0.9996
G= 0.5620 H= 0.0167 K=-0.8269 HT= 0.3

SE= 2.50

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
TUAI	5.72	218.4	1 23	-2	2 28	-2			
KARAPIRO	6.10	233.0	1 28	-2	2 41	1		7 33	
ONERAHI	6.16	255.1	1 33	2					
WELLINGTON	8.79	216.5	2 10	2	3 37	-10		11 13	
COBB RIVER	9.74	224.1	2 21	0	3 59	-11		3 12	
KAIMATA	11.43	221.7	2 48	4	4 45	-6			
GEBBIES PASS	11.65	214.4	2 42	-5	4 44	-13			
SUVA	16.44	349.0	3 48K	-1				7 59	
NOUMEA	18.01	308.0	4 13A	4	7 59	33		4 36	
AFIAMALU	21.24	17.8	4 40	-5				8 52	
RIVERVIEW	25.26	262.6	5 29A	5	9 54	9			
BRISBANE	25.48	277.8	5 26	-1	9 52	3			
CANBERRA	26.78	258.6	5 41A	2	10 15	5		6 42	PPP
MELBOURNE	29.75	252.6	6 4	-1	11 3	5			
CHARTERS TS.	34.43	285.3	6 44	-2	12 12	1			
ADELAIDE	35.15	256.6	6 53	1	12 27	5		9 26	PCP
CAPE HALLETT	38.44	185.6	7 21	1	13 25	13		8 9	PP
PORT MORESBY	40.24	300.0	7 34	-1	13 39	-1		9 43	PCP
DUMONT	40.38	204.1	7 34	-2	13 43	1			
RABAUL	40.66	311.0	7 36	-2					
SCOTT BASE	44.05	184.5	8 6	0			8 10	9 30	PP
BYRD STATION	51.07	168.9	9 0	-1	16 19	4		10 19	PCP
WILKES	51.53	209.4	9 7	3	16 28	7			
OASIS-BUNG.	55.49	209.1	9 30	-4	17 19	4			
SOUTH POLE	55.79	180.0	9 35	-1	17 24	5	9 54	10 37	PCP
MIRNY	58.48	208.0	9 54	-1	17 54	0			
KIPAPA	58.76	22.2	9 56	-1					
HALLEY BAY	68.84	172.7	11 0	-3				15 28	PPP
LEMBANG	73.04	273.3	11 25	-3					
MATUSIRO	81.38	325.9	12 12	-3	22 14	-8		27 29	SS
HONG KONG	85.38	300.8			22 53	-9			
PASADENA	88.43	46.0	12 51	1	23 33	2		24 43	PS
NANKING	88.68	310.9	12 51	0	23 41	8		23 21	SKS
LICK	88.70	41.8	12 50K	-1					
BERKELEY	88.75	41.0	12 53K	2					
FRESNO	89.32	43.2	12 57	3					
PETROPAVLOVK	89.44	346.4	12 53	-1	23 45	5			
UGLEGORSK	90.28	335.2	12 49	-9					
SHASTA	90.74	39.0	13 1	0					
RENO	91.28	41.3	13 6	3					
BOULDER CITY	91.68	46.6	13 10	5					
TUCSON	91.73	51.5	13 6	1					
TUCSON TELE.	91.86	51.5	13 7	1					
TACUBAYA	92.18	68.1	13 6	-1				15 44	
CHANGCHUN	93.25	322.9	13 11	-1	24 24	10		23 45	SKS
EUREKA	93.38	43.4	13 13	0				17 29	PP
HUANCAYO	93.72	107.2	13 17	3					
PEKING	95.58	315.4			24 45	11		24 1	SKS

SIAN	96.44	307.2	13	30	3	24	55	14	24	7	SKS
CHENGTU	97.66	301.8				25	2	11	24	10	SKS
COLLEGE	101.78	12.8	13	51	0				18	48	PP
RAPID CITY	103.68	45.8							18	9	PP
RESOLUTE	121.12	18.0	18	49A	0				30	16	PS
OTTAWA	121.73	53.9	18	50	0						
BREBEUF	123.17	54.4	18	54A	1						
SHAWINIGAN	124.04	53.4	18	58K	3						
SEVEN FALLS	125.47	53.1	18	57	-1						
QUETTA	125.52	284.9	18	55	-3						
THULE	127.82	16.3	19	2	0						
ASTRIDA	134.74	221.4	19	15	0				22	47	PKS
SVERDLOVSK	134.77	318.5							22	46	PKS
LWIRO	135.53	220.5	19	15	-2				22	53	
APATITY	142.12	340.8	19	27	-2				28	39	PPP
SODANKYLA	143.97	343.9	19	29	-3						
KIRUNA	144.83	347.8	19	31A	-2						
TIFLIS	145.57	295.2	19	35	0						
REYKJAVIK	146.90	18.8	19	36	-1						
MOSCOW	147.40	322.0	19	40	2						
SIDA	148.16	16.5	19	44	5						
PULKOVO	148.46	332.4	19	42	3						
SOTCHI	149.28	298.8	19	43	2						
HELSINKI	150.08	336.7	19	46	4						
KSARA	151.77	278.6	19	50	6				23	43	PP
JERUSALEM	151.86	274.2	19	48	3				20	23	
UPPSALA	152.47	342.6	19	52	7				20	3	PKP2
SIMFEROPOL	153.07	302.8	19	50	4						
MBOUR	153.89	135.2	19	54	7						
HELWAN	154.55	268.0	19	52	4				20	16	
GOTEBORG	155.68	346.5	19	58	8				20	16	PKP2
LWOW	157.50	320.0	19	54	2						
CINE	158.43	286.2	19	51	-2						
DURHAM	159.50	5.4	19	51A	-4				20	36	PKP2
RATHFARNHAM	160.27	14.3	19	56	1						
COLLMBERG	161.22	337.5	19	58	2				20	42	PKP2
HALLE	161.36	339.6	19	59	3				20	43	PKP2
PRUHONICE	161.79	332.6	19	59	2				20	45	PKP2
JENA	161.98	339.5	19	59	2				24	30	PP
BRATISLAVA	162.06	324.7							21	59	
PLAUEN	162.18	337.8							20	45	PKP2
KEW	162.87	4.3	20	1	3				20	50	PKP2
STUTTGART	164.59	341.0	20	1	1				24	41	PP
TUBINGEN	164.85	341.0							20	57	PKP2
STRASBOURG	165.12	344.1							20	58	PKP2
EBINGEN	165.19	340.6							20	58	PKP2
TRIESTE	165.47	324.3	20	0	-1				20	58	PKP2
PARIS	165.58	357.9	20	5	4				24	43	PP
TAMANRASSET	167.95	197.1	20	4	2				25	3	PP
MALAGA	174.51	63.2	20	9A	3				25	41	PP
GRANADA	174.87	55.6	20	1A	-5				25	40	PP
ALICANTE	175.68	23.4	20	6	0	27	8	4	21	43	PKP2
RELIZANE	178.35	34.5	20	6	0				25	52	PP

OCTOBER 20 0.H 55.M 32.S EPICENTRE 51.90-175.15 DEPTH= 0.KM

A=-0.61743 B=-0.05244 C= 0.78487 D=-0.0846 E= 0.9964
G=-0.7821 H=-0.0664 K=-0.6197 HT= -6.1

SE= 2.00

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	PP S	SUPP. M	SUPP. S
PETROPAVLOVK	15.97	284.8	3	53	5	6	47	1				
COLLEGE	19.13	36.7	4	28	1	8	6	8				
MAGADAN	20.46	305.3	4	51	9							
UGLEGORSK	27.08	281.2	5	47	1							
VICTORIA	32.70	75.0	6	37A	0							
KIPAPA	33.20	149.9	6	40	-1							
MATUSIRO	36.10	263.5	7	6A	0	12	40	-6			9	29
VLADIVOSTOK	36.11	277.4	7	5	-1							
BANFF	36.18	66.9	7	8A	2							
SHASTA	37.35	86.1	7	18	2							
MINERAL	38.04	86.0	7	24	2							
RESOLUTE	38.32	25.0	7	25	1	13	31	11			9	1 PP
HUNGRY HORSE	38.34	70.3	7	24	-1						9	50 PCP

ABUYAMA	38.83	263.7	7	29A	0	13	23	-4		
BERKELEY	39.13	89.6	7	29	-2					
RENO	39.63	85.7	7	38	3					
CHANGCHUN	39.74	282.6	7	35A	-1	13	37	-4	9	14 PP
LICK	39.85	89.8	7	39	2					
BUTTE	40.38	72.7	7	42	0					
FRESNO	41.35	89.0	7	51	1					
EUREKA	42.03	83.0	7	57	2					
THULE	43.93	19.0	8	12	1				8	55 PP
PASADENA	44.06	90.7	8	18	6	14	41	-4		
BOULDER CITY	44.93	86.2	8	19	0					
NORD	46.25	4.3	8	26	-3					
RAPID CITY	46.96	69.6	8	35	0					
PEKING	47.49	284.0	8	41	2	15	35	1		
ULAN-BATOR	48.11	297.9	9	35	51					
TUCSON	49.88	86.9	8	58	1					
TUCSON TELE.	49.89	86.8	8	58	0					
ZO-SE	50.27	271.5	9	0A	0					
NANKING	51.09	274.2	9	6A	-1	16	20	-4		
TRUK	51.93	223.3	9	13	0				10	23 PCP
SIAN	55.64	283.2	9	39	-1					
LANCHOW	57.42	288.3	9	54	1					
APATITY	58.96	347.6	10	5	1					
SODANKYLA	59.93	350.5	10	9	-2					
KIRUNA	60.03	353.2	10	10	-1					
CLEVELAND	60.76	59.3	10	16	0					
CANTON	60.90	270.9	10	16A	-1	18	31	-4		
HONG KONG	60.93	269.6	10	16	-1	18	33	-2		
OTTAWA	60.96	52.7	10	16	-2					
CHENGTU	61.10	283.7	10	18A	-1					
SHAWINIGAN	61.55	50.1	10	17	-5					
BREBEUF	61.91	51.4	10	22A	-2					
RABAUL	62.42	217.4	10	31	4				10	57
MANILA	62.58	258.3	10	27	-1					
KUNMING	65.98	280.3	10	49A	-2	19	33	-5		
UPPSALA	68.13	353.1	11	2	-2					
PORT MORESBY	69.12	220.2	11	9	-1	20	11	-5		
LHASA	69.49	292.0	11	13A	0					
SUVA	69.97	186.5				20	29	3		
GOTEBORG	70.61	356.0	11	18	-1					
SHILLONG	72.08	288.6	11	27A	-1					
CHITTAGONG	74.54	286.4	11	47A	4	21	20	2		
RATHFARNHAM	74.76	6.9	11	49	5					
HALLE	76.80	355.5	11	55	-1				12	7 PCP
COLLMBERG	76.95	354.8	11	57	1					
LAHORE	77.10	304.9	11	54A	-3					
JENA	77.39	355.6	11	58	-1				15	6 PP
BENSBERG	77.50	358.5	11	59	0				13	41
PRUHONICE	78.17	353.6	12	2	-1				14	2
CHARTERS TS.	79.14	216.7	12	7	-1					
STUTTGART	79.64	357.1	12	11	0					
PARIS	79.65	1.6	12	12	1				12	54
STRASBOURG	79.87	358.0	12	12	0	22	28	12	27	28 SS
TUBINGEN	79.89	357.2	12	12	0					
EBINGEN	80.24	357.2	12	14	0					
QUETTA	81.87	309.4	12	23A	0	22	32	-4	15	30 PP
CLERMONT-FD.	82.70	1.2	13	36	69				14	7
BRISBANE	83.83	208.1	12	32K	-1					
SAN JUAN	86.90	64.0	12	48	0					
KARAPIRO	89.81	187.4	13	1	-1					
RIVERVIEW	90.33	207.5	13	3	-2					
KSARA	90.42	334.6	13	2	-3				16	35 PP
DUMONT	123.02	199.6	18	46	-13					
CAPE HALLETT	124.32	185.3	19	0K	-1					
LWIRO	126.62	329.6	19	8A	2					
ASTRIDA	126.65	328.4	19	7A	1					
SCOTT BASE	129.96	184.9	19	12A	0				22	31 PKS
BYRD STATION	135.38	168.2	19	14	-8				22	49 SKP
SOUTH POLE	141.71	180.0	19	27	-7				23	6 SKP
WINDHOEK	149.23	337.5	19	52K	5					
PIETERMZBURG	150.78	309.7	19	55A	6					
KIMBERLEY	152.51	319.6	19	59	8					

OCTOBER 20 1.H 12.M 40.S EPICENTRE -9.08 112.44 DEPTH= 70.KM

DEPTH OF FOCUS= 0.006R

A=-0.37700 B= 0.91284 C=-0.15682 D= 0.9243 E= 0.3817
G= 0.0599 H=-0.1449 K=-0.9876 HT= 6.7

SE= 2.29

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
LEMBANG	5.27	294.8	1	19	1						15	23	SCS
DJAKARTA	6.26	297.0	1	29	-2	2	46	4					
PERTH	22.97	172.6	4	59	0	9	11	11			5	25	PP
MANILA	24.99	19.9	5	23	5	9	40	6					
BAGUIO CITY	26.59	17.7	5	33	0	10	1	0			14	51	SCS
KOROR	27.35	54.1	5	41	1						6	15	PP
PORT BLAIR	28.45	316.1	5	47	-3	10	24	-7			9	13	PCP
PHU-LIEN	30.24	349.2	6	7	1	11	4	5					
HONG KONG	31.23	3.1	6	15A	0	11	18	3			7	18	PP
CANTON	31.97	1.5	6	22A	1	11	29	3	6	40	7	35	PP
PORT MORESBY	34.25	93.4	6	39A	-2	12	3	1			8	7	PPP
CHARTERS TS.	34.42	112.2	6	42A	0	12	4	0					
ADELAIDE	35.21	140.9	6	48	-1	12	12	-5			12	45	PS
KUNMING	35.23	344.5	6	52A	3	12	24	7			8	15	PP
COLOMBO	36.13	295.0	6	55	-2	12	30	-1					
CHITTAGONG	37.22	327.4	7	11	5	12	51	4			8	51	PPP
MADRAS	38.83	303.9				13	10	-2			9	16	PPP
GUAM	39.13	55.5	7	21	-1				7	53	12	55	SCP
TOCKLAI	39.53	334.8	7	29A	4								
RABAUL	39.74	85.7	7	26	-1	13	29	4			9	20	PCP
KODAIKANAL	39.74	298.1	7	31A	4	13	28	3					
SHILLONG	39.84	330.3	7	27	-1	13	20	-7			8	57	PP
CHENGTU	40.33	348.7	7	35A	3								
ZO-SE	40.82	11.5	7	37	1	13	44	3			9	16	PP
MELBOURNE	40.96	139.5	7	39	2	13	39	-5			7	58	PP
NANKING	41.35	8.2	7	42A	2	13	54	5	8	2	9	22	PP
BOKARO	41.81	322.0	7	45	1	13	55	-1			9	52	PPP
CANBERRA	42.35	133.7	7	48K	0	13	58	-6	8	11	9	58	PP
BRISBANE	42.41	121.0	7	49A	0	14	6	1					
TRUK	42.57	68.5	7	49	-1						9	47	PCP
HYDERABAD	42.69	308.1	7	49A	-2	14	6	-3			9	18	PP
YAKUSIMA	42.96	23.1	7	53A	0	14	5	-8					
SIAN	43.22	355.7	7	55	0	14	20	3			17	46	SCS
RIVERVIEW	43.25	130.6	7	58A	2	14	20	3					
CHATRA	43.31	326.2	7	53	-3	14	15	-3					
LHASA	43.67	332.6	8	1A	2	14	24	1	8	24	17	51	SCS
KAGOSIMA	43.98	22.5	8	2A	0	14	33	5					
MIYAZAKI	44.63	23.2	8	7A	0	14	39	2					
NAGASAKI	44.78	21.0	8	8	0								
KUMAMOTO	45.16	21.8	8	12	1								
SAGA	45.40	21.2	8	18	5								
FORT NELSON	45.47	143.9				14	54	5			18	28	SSS
LANCHOW	45.65	350.2	8	17A	2	14	55	3			10	6	PP
HUKUOKA	45.74	21.1	8	16	0	14	59	6			10	36	
SIMIDU	46.00	24.2	8	18A	0	14	54	-3			10	5	
MATUYAMA	46.83	23.3	8	26	2	15	1	-8			10	9	PP
KOTI	46.90	24.3	8	25A	0	15	13	3			10	14	PP
MUROTO	46.91	25.2	8	25	0								
HIROSIMA	47.19	22.7	8	27A	0						10	20	PP
HAMADA	47.52	22.0	8	28	-2						16	11	
SIOMISAKI	47.76	26.6	8	32	0						10	20	PP
TAKAMATU	47.78	24.3	8	33	1	15	24	2					
TOKUSIMA	47.78	25.0	8	32A	0								
BOMBAY	47.95	305.6	8	33	0	15	23	-1			16	23	
HIMEJI	48.08	24.5	8	37	3						18	25	
SUMOTO	48.15	25.1	8	35A	0	15	27	0			10	29	PP
WAKAYAMA	48.17	25.4	8	34	-1								
YONAGO	48.48	22.9	8	31	-6						14	1	
OWASE	48.48	26.5	8	37	0								
DAIREN	48.49	9.6	8	47	10								
OSAKA	48.68	25.5	8	39A	0	15	9	-26			18	9	SCS
TOTTORI	48.88	23.7	8	40	0								
ABUYAMA	48.89	25.4	8	39A	-1	15	37	0					
PEKING	48.98	3.8	8	44A	3	15	42	3			18	29	SCS
AGRA	49.08	318.2	8	41A	-1	15	36	-4			9	1	PP
TOYOOKA	49.14	24.2	8	42	0	15	35	-6			10	38	PP
TU	49.18	26.4	8	44	2								
KAMEYAMA	49.26	26.2	8	43	0	15	43	0					
MAIZURU	49.36	24.9	8	40	-4	15	25	-19					
PAOTOW	49.46	357.6	8	46	1								

HIKONE	49.52	25.7	8	46A	1	15	46	0		
IBUKISAN	49.67	25.8	8	56	10					
NAGOYA	49.75	26.5	8	48	1	15	50	1		
GIHU	49.85	26.1	8	48A	0	15	47	-4	9	17
HUKUI	50.19	25.2	8	42	-8					
IIDA	50.42	27.0							9	53
OSIMA	50.52	28.9	8	52	-1					
MISIMA	50.60	28.3	8	50	-3					
HUNATU	50.83	27.8	8	54	-1					
KOHU	50.85	27.6	8	54	-1	16	4	-1		
MATUMOTO	51.09	26.6	8	57	0	16	9	1		
TOYAMA	51.14	25.6	8	57	0				16	53
YOKOHAMA	51.19	28.6	8	56	-2				9	19
DEHRA DUN	51.25	321.2	8	57	-1	16	2	-8	10	29 PP
TITIBU	51.37	27.7	8	58	-1					
OIWAKE	51.42	27.0	9	0	0					
TOKYO C.M.O.	51.44	28.5	8	58A	-2	16	36	23	9	58
MATUSIRO	51.45	26.6	8	58A	-2	16	9	-4	18	43 SCS
NAGANO	51.54	26.5	9	0	0	16	13	-1	10	54
WAZIMA	51.59	24.9	9	3	2	16	16	1		
KUMAGAYA	51.65	27.9	9	0	-1				11	23
MAEBASI	51.71	27.4	9	0A	-2				9	50
TAKADA	51.93	26.2	9	5	2					
KAKIOKA	52.09	28.5	9	0	-5					
UTUNOMIYA	52.20	28.0	9	4	-1	16	22	-1	18	49 SCS
MITO	52.34	28.6	9	4	-2					
AIKAWA	52.70	25.6	9	9	0					
SHIRAKAWA	52.83	27.9	9	9	-1				9	46
NIIGATA	52.96	26.3	9	18	7				10	12
ONAHAMA	53.01	28.6	9	10A	-1	16	34	0	10	19
NOUMEA	53.37	111.0	9	14A	0	16	44	5	9	35
HUKUSIMA	53.46	27.6	9	14	-1					
YAMAGATA	53.81	27.2	9	18	1	16	46	1	11	14
CHANGCHUN	53.94	11.5	9	18A	0	16	45	-2	11	24 PP
SENDAI	54.08	27.6	9	18	-1	16	52	3	18	18 SCS
SAKATA	54.11	26.3	9	21	1					
ISINOMAKI	54.40	27.8	9	21	-1				10	11
LAHORE	54.42	319.6	9	19A	-3	16	41	-12	11	19 PP
VLADIVOSTOK	54.90	17.3	9	25	0	17	0	0	9	58 *SP
AKITA	54.91	25.9	9	25A	0	17	1	1		
MORIOKA	55.36	26.8				17	9	3	10	18
MIYAKO	55.68	27.4	9	29A	-2	17	6	-4		
AOMORI	56.11	25.7							10	34 PP
KARACHI	56.15	309.4	9	30A	-4	17	10	-6		
HATINOHE	56.20	26.5	9	31	-4					
HAKODATE	56.88	25.0	9	39	-1				10	55
ULAN-BATOR	56.96	355.6	9	40	0					
WILKES	57.06	180.9	9	37K	-4	17	24	-4	19	22
MORI	57.08	24.7	9	42	-1	17	21	-8		
OASIS-BUNG.	57.57	185.6	9	43	-1	17	32	-3	12	3 PP
WARSAK DAM	57.79	320.0	9	45A	-1					
TOMAKOMAI	57.85	25.2	9	50	4					
URAKAWA	58.06	26.3	9	50	2					
SAPPORO	58.21	24.6	9	48A	-1	17	42	-1	12	8 PP
QUETTA	58.60	313.7	9	50A	-2	17	45	-3	10	40 PCP
OBIHIRO	58.87	26.0	9	52	-1				10	42
MIRNY	58.91	188.9	9	51	-3	17	50	-3	10	11 19 34 SCS
ASAHIGAWA	59.21	24.9	9	55	-1					
KUSIRO	59.44	26.8	9	48	-9	17	34	-25		
ABASHIRI	60.22	26.0	10	3	0					
NEMURO	60.25	27.4	9	56	-7					
DUMONT	60.49	167.8	10	3	-2	18	14	1		
KAIMATA	61.19	133.7	10	24	15					
IRKUTSK	61.50	354.3	10	11A	0	18	28	2	10	35 12 31 PP
COBB RIVER	61.79	131.8	10	13	0				19	2
Y.-SAKHLINSK	61.96	23.0	10	14	0	18	32	0	12	30 PP
FRUNSE	62.17	329.3	10	15	-1	18	34	0		
GEBBIES PASS	62.36	134.7	10	17	0				10	40
STALINABAD	62.43	322.4	10	16	-2	18	30	-7		
KARAPIRO	63.29	127.9	10	24	1				14	33
WELLINGTON	63.34	131.7	10	31	7	18	44	-5	26	30
TANANARIVE	63.43	253.4	10	10A	-14	18	54	4		
TASHKENT	63.93	325.0	10	23	-4	18	51	-5	12	45 PP
SUVA	64.49	105.8	10	31	0	19	7	4	23	35 SS
TUAI	64.69	128.6	10	35	3	19	3	-3		
SEMIPALATNSK	65.52	338.0	10	36	-2	19	14	-2		
ASHKABAD	68.78	316.6	10	59	1	19	57	2	11	30 20 40
CAPE HALLETT	71.94	164.2	11	15K	-2	20	36	4	14	25 PP
PETROPAVLOVK	73.34	27.0	11	24	-2	20	48	0	21	22 SKS

SCOTT BASE	74.02	169.7	11	28A	-2	20	49	-6			14	30 PP
AFIAMALU	74.16	101.9	11	33	3	21	51	54				
MAGADAN	74.96	19.1	11	36	1	21	6	0				
GORIS	77.87	313.6	11	51	0	21	35	-2				
SVERDLOVSK	78.19	333.8	11	53	0	21	39	-2	12	23	14	53 PP
PIETERMZBURG	78.69	241.6	11	56K	0							
TIFLIS	79.79	315.3	12	3	1	21	57	-1	12	28	15	7 PP
SOUTH POLE	80.98	180.0	12	7	-1	22	9	-1	12	28	38	50 PKPPKP
TIKSI	81.28	5.2	12	9	-1	22	24	11	12	39	12	18 PCP
GRAHAMSTOWN	81.65	237.6	12	12K	0							
ASTRIDA	82.40	268.6	12	17K	2						12	40
LWIRO	83.37	268.8	12	22	2				12	44		
KIMBERLEY	83.66	242.0	12	22A	0							
KSARA	84.02	305.5	12	26	2	22	42	1	12	52	15	34 PP
JERUSALEM	84.04	303.4	12	23	-1	22	52	11				
HELWAN	86.86	300.7	12	39	1	23	17	9				
BYRD STATION	87.23	172.1	12	39	0	22	55	-17	12	59	38	15 PKPPKP
HERMANUS	87.56	235.7	12	48	7	23	7	-8			23	34 SCS
SIMFEROPOL	88.19	315.9	12	44A	0	23	20	-1	13	15	16	10 PP
MOSCOW	89.02	326.9	12	49	1	23	10	-19	13	22	23	27 SKKS
KASTAMONU	89.75	311.9	12	35	-16						12	45 PCP
ISTANBUL KA.	90.94	311.3	12	56	-1				14	15		
CINE	91.03	307.8	12	58	1	22	48	-59				
WINDHOEK	91.44	247.0	13	2A	3							
HONOLULU	92.75	69.0	13	8	3						13	31
KIPAPA	92.84	68.9	13	8	2							
IASI	93.12	317.1	13	14	7						13	48
BACAU	93.47	316.4				23	37	-31				
BUCHAREST	93.68	314.2				23	35	-35			25	15 PS
PULKOVO	93.83	329.8	13	10	0	23	39	-32			17	0 PP
KHEYS	93.98	351.3	13	7	-4	24	1	-11			25	36 PS
APATITY	94.16	337.8	13	11	-1	23	35	-39			17	1 PP
ATHENS	94.51	307.6							13	23	17	4
LWOW	95.85	319.4	13	21	2	23	50	-38			17	11 PP
HELSINKI	96.55	329.8	13	21	-2	23	53	-41			16	41 PP
SODANKYLA	96.70	337.1	13	22	-1	23	52	-43			17	17 PP
TIMISOARA	97.28	315.1				24	0	-40			17	25 PP
BELGRADE	97.73	314.1	17	26K	777	24	0	-44			24	34 SKKS
WARSAW	97.97	321.6				24	55	9			17	55 PP
KRAKOW	98.50	319.4				24	2	-49			17	32 PP
KIRUNA	99.10	337.4	13	33A	-1	24	55	-1			17	34 PP
HURBANOVO	99.50	317.1	17	39	777	24	8	-51			26	47
RACIBORZ	99.61	319.3				24	10	-50			17	40 PP
UPPSALA	100.21	329.3	13	39A	0	25	2	-3			17	38 PP
BRATISLAVA	100.26	317.4	17	42	777	23	40	-85			13	42 P
ZAGREB	100.94	314.9				24	15	-56			17	50 PP
MESSINA	100.95	307.2				25	16	5			17	56 PP
PRUHONICE	101.96	319.2	13	44	-3	24	20	-60			17	49 PP
PRAGUE	102.04	319.3	17	38	777	24	21	-59			17	58 PP
COLLEGE	102.31	25.5	13	47	-2						17	16 PKP
TRIESTE	102.50	314.7	18	1	777	25	27	3				
SKALSTUGAN	102.60	333.2	13	50	0						18	6 PP
POTSDAM	102.85	321.7									18	6 PP
COLLMBERG	102.93	320.5	14	13	22						17	55 PP
COPENHAGEN	103.08	325.1				24	29	-60			18	0 PP
GOTEBORG	103.21	327.2	13	53	0						18	0 PP
ROME	103.41	310.9	14	16	23	24	21	-71			18	4 PP
PLAUEN	103.49	319.7				24	25	-67			18	7 PP
HALLE	103.58	320.8				25	31	-2	14	14	18	7 PP
JENA	103.84	320.2	18	4	777	24	27	-68			18	11 PP
NORD	104.28	353.2	13	57	0						18	14 PP
RAVENSBURG	105.28	317.0				24	34	-52				
STUTTGART	105.50	318.1	14	14	777	25	50	0			18	22 PP
TUBINGEN	105.60	317.8									18	25 PP
EBINGEN	105.69	317.5				24	37	0			18	26 PP
PAVIA	105.74	314.3									33	59 SS
MUNSTER	106.23	321.5	18	30	777							
STRASBOURG	106.46	317.9				26	0	0			18	24 PP
BENSBERG	106.62	320.5	17	32	777						27	50
BASLE	106.68	316.9									18	24 PPP
NEUCHATEL	107.15	316.3									18	21 PPP
DE BILT	107.71	321.8				26	12	0			31	50 SS
TAMANRASSET	109.01	291.0	14	23	777	26	24	0			18	42 PP
PARIS	109.90	318.6	18	27	4						18	57 PP
CLERMONT-FD.	109.92	315.4									18	55 PP
ABERDEEN	110.79	328.0									26	37
ALGIERS UNI.	110.90	305.8									28	20 PS
DURHAM	111.15	325.4	19	5K	40							

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
KEW	111.18	321.8						19 3	PP
SCORESBY SD.	112.33	344.9						19 6	PP
RESOLUTE	112.61	7.6	18 29A	1	25 7	2		14 33	P
THULE	112.69	0.2	18 32	4			18 58	21 16	PP
RELIZANE	113.00	304.9						19 14	PP
RATHFARNHAM	114.22	324.7	18 57A	26				19 16	PP
TOLEDO	116.05	310.0	18 42	7				19 42	PP
VICTORIA	119.06	39.0	18 41	1					
SHASTA	122.30	47.3	18 51	4				20 23	PP
BANFF	122.55	33.7	18 49K	2					
MINERAL	122.98	47.5	18 51	3				19 15	
BERKELEY	123.20	50.5	18 52	4				20 27	PP
LICK	123.81	51.0	18 53	3				19 18	
RENO	124.54	47.9	18 55	4				20 37	PP
HUNGRY HORSE	124.79	36.1	18 53	1				20 38	PP
FRESNO	125.39	51.1	18 56	3				19 18	
BUTTE	126.80	38.0	18 57	2				19 19	
EUREKA	127.35	46.7	18 59	3				20 57	PP
PASADENA	127.40	53.8	18 59	2			19 11	20 57	PP
BOULDER CITY	129.44	50.5	19 4	4				22 18	PP
SALT LAKE C.	129.71	43.6	19 4	3				19 25	
MBOUR	130.27	281.1			26 11	8		21 45	*SPP
RAPID CITY	133.41	35.3	19 10	2				22 32	PKS
TUCSON	133.84	53.6	19 3	-6				22 35	PKS
TUCSON TELE.	133.89	53.5	19 13	4				22 36	PKS
SANTA LUCIA	137.62	176.1						22 1	PP
SEVEN FALLS	141.99	3.6	19 21	-3				22 31	PP
SHAWINIGAN	142.40	5.9	19 22K	-2				22 31	PP
OTTAWA	143.14	9.6	19 24	-2				22 37	PP
BREBEUF	143.34	7.1	19 23A	-3					
ST. LOUIS 1	144.21	31.1	19 27A	-1					
HALIFAX	144.43	355.1	19 28A	0				22 21	PP
CLEVELAND	145.45	18.7	19 32	2					
LITTLE ROCK	145.80	37.9	19 34	4					
WESTON	146.67	5.1	19 35A	3					
MORGANTOWN	147.63	18.0	19 41	8					
TACUBAYA	147.72	68.0	19 38	5					
FORDHAM	147.87	9.0	19 38	4				23 3	SKP
GEORGETOWN	149.11	14.5	19 39K	3					
VERA CRUZ	150.57	66.9	20 12	34					
LA PAZ	154.58	178.7	19 51K	7				23 46	PP
BERMUDA	156.66	353.8	19 41	-5	26 50	7		23 44	PP
HUANCAYO	157.63	159.7	19 55	7				20 51	PKP2
SAN JUAN	170.65	351.6	20 0	1				21 17	PP
CHINCHINA	171.02	116.5	20 2	3				21 43	PKP2
ST. CLAUDE	171.04	321.0						25 11	PP
FORT FRANCE	171.58	312.4						20 24	
BOGOTA	172.16	124.0	20 4	4	26 20	-34		21 41	PKP2
GALERAZAMBA	172.22	76.8	19 56	-4				25 41	
ST. VINCENT	172.61	303.9	20 27	27				25 16	PP
FUQUENE	172.90	120.0	20 5	5				25 27	PP
TRINIDAD	173.84	285.3	20 7	6					

OCTOBER 21 6.H 15.M 12.S EPICENTRE -5.48 147.02 DEPTH= 174.KM

DEPTH OF FOCUS= 0.022R

A=-0.83506 B= 0.54193 C=-0.09481 D= 0.5444 E= 0.8388
G= 0.0795 H=-0.0516 K=-0.9955 HT= 7.0

SE= 1.59

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
PORT MORESBY	3.90	178.1	0 59K	-1	1 43	-4			
RABAUL	5.29	76.3	1 18K	0	2 22	3		4 39	
TRUK	13.73	20.6	3 7	-1	5 22	-15		8 22	PCP
CHARTERS TS.	14.46	182.9	3 20K	3	6 5	11			
KOROR	17.84	315.3	3 59	1					
GUAM	18.96	353.2	4 9	-1			4 51	11 45	PCS
BRISBANE	22.62	166.0	4 47A	1	8 39	2			
NOUMEA	25.15	133.5	5 8A	-2				5 30	
RIVERVIEW	28.47	172.8	5 40A	-1	10 16	2			
CANBERRA	29.75	176.7	5 51K	-1	10 34	0	6 22	12 17	SS
ADELAIDE	30.30	193.6	5 57A	0	10 54	11		6 54	PP
MELBOURNE	32.26	183.0	6 14A	0	11 17	4		8 29	
SUVA	33.15	115.0	6 21A	-1	11 37	10		7 37	PP

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BAGUIO CITY	34.02	310.2	6 29	0						
LEMBANG	39.19	265.9	7 12A	0					17 10	
ONERAHI	39.26	143.8	7 19	6						
PERTH	39.29	224.0							8 49	PP
AFIAMALU	41.42	104.7							9 53	PCP
KARAPIRO	41.42	145.2	7 31A	0					9 24	
ABUYAMA	41.56	345.8	7 32K	0	13 34	0				
COBB RIVER	42.26	150.8	7 38	1						
HONG KONG	42.37	311.8	7 40	2	14 57	71			9 52	PP
MATUSIRO	42.61	349.5	7 40K	0	13 49	0	8 19		9 28	PP
KAIMATA	42.77	153.3	7 49	7						
TUAI	42.95	144.9	7 43	0						
WELLINGTON	43.42	149.3	7 47A	0	13 55	-6				
CANTON	43.50	312.0	7 48	1						
ZO-SE	43.96	327.4	7 52	1						
GEBBIES PASS	44.25	153.3	7 53	-1						
NANKING	45.99	326.1	8 9	2						
PHU-LIEN	47.47	304.6	8 58	39					16 20	
MEDAN	49.11	279.5	9 7	36					15 7	
VLADIVOSTOK	50.27	345.6	9 18	38	15 42	4				
Y.-SAKHLINSK	52.34	356.3	9 33	37	16 8	2				
SIAN	53.43	320.5	9 5	1						
PEKING	53.45	330.7	9 3	-1						
CHENGTU	54.61	313.9	9 12A	0	16 47	10				
PAOTOW	57.03	326.9	9 31	1						
LANCHOW	57.84	319.1	9 37A	2						
KIPAPA	60.13	61.6	9 51	0					10 36	
CHITTAGONG	60.65	299.3	10 33	38						
DUMONT	61.28	183.2	9 54	-5	18 5	2				
SHILLONG	61.76	302.7	10 1	-1						
ULAN-BATOR	63.77	331.1	10 15	0						
LHASA	64.01	306.6	10 18	1						
MAGADAN	64.89	2.1	11 12	49						
WILKES	65.71	195.4	10 25	-3	18 58	0				
CHATRA	66.16	302.4	10 25	-6						
IRKUTSK	67.99	333.3	11 22	40						
CAPE HALLETT	68.28	172.5	10 44A	0	19 38	9			10 48	PCP
OASIS-BUNG.	68.52	198.4	10 45	0	19 34	2				
YAKUTSK	68.61	351.3	10 46	0	19 34	1				
MIRNY	71.28	200.0	11 2	0	20 5	1				
SCOTT BASE	73.07	175.7	11 13K	0	20 30	6			20 57	SKS
AGRA	74.04	300.1							11 59	
TIKSI	77.88	354.2	11 37	-3	21 15	-2				
WARSAK DAM	81.10	305.5	11 56	-1						
NAMANGAN	82.60	312.4	12 5	0						
QUETTA	84.19	301.0	12 13	0					23 53	PPS
SOUTH POLE	84.56	180.0	12 14	-1	22 17	-8			30 23	PKKP
COLLEGE	84.67	22.9	12 14	-1					12 59	
BYRD STATION	85.25	169.9	12 18	0	22 25	-7	13 24		30 22	PKKP
SVERDLOVSK	92.56	326.7	12 51	-2						
VICTORIA	93.77	41.8	12 58	0						
BERKELEY	93.89	52.5	12 59	0						
HORSESHOE B.	93.92	40.9	12 59K	0						
SHASTA	93.98	49.6	12 59	0						
LICK	94.35	53.0	13 1	0						
MINERAL	94.56	50.0	13 2	0						
RENO	95.90	50.9	13 8	0						
PASADENA	97.02	56.4	13 13	0	24 28	11				
EUREKA	98.86	51.0	13 21	0						
BANFF	98.91	39.2	13 22	1						
HALLEY BAY	99.04	181.6	13 20	-2					17 30	PP
HUNGRY HORSE	100.02	42.0	13 26	0					17 30	PP
BOZEMAN	102.23	44.6	13 37	1						
RESOLUTE	102.47	13.9	13 37	0	24 6	-56			32 24	SS
TIFLIS	102.74	311.4							18 32	PP
MOSCOW	105.37	326.4							18 0	PP
SOTCHI	106.27	313.7							19 2	
SODANKYLA	106.40	339.6	13 52	777					29 23	PKKP
PULKOVO	107.94	331.6							18 48	PP
KIRUNA	108.24	341.3	14 1	777					18 5	PKP
SKALSTUGAN	113.47	339.7	18 17	0						
STUTTGART	124.00	327.6	18 38	1					21 11	
EBINGEN	124.47	327.1	18 38	0						
STRASBOURG	124.87	328.1			26 0	35				
OTTAWA	125.62	36.0	18 40K	-1						
SHAWINIGAN	126.62	33.4	18 42K	0						
BREBEUF	126.78	34.9	18 42K	-1						
SEVEN FALLS	127.31	31.8	18 48	4						

RATHFARNHAM	127.56	340.1							21	19 PP
HUANCAYO	134.43	112.7	18	54	-3				22	15 PP
ALICANTE	135.95	322.6	19	1	1	26	10	18	21	46 PP
LA PAZ	138.95	122.8	19	0A	-6				22	26 PP
TAMANRASSET	139.07	298.7	19	1	-5				22	5 PP
SAN JUAN	145.22	65.5	19	16	-1				22	39 PP
DOMINICA	150.43	68.5	19	24	-1					
FORT FRANCE	150.82	69.5	19	34	9					
ST. VINCENT	151.08	72.7	19	39	13					
TRINIDAD	151.29	77.8	19	29	3					

OCTOBER 21 15.H 40.M 49.S EPICENTRE -10.85 110.84 DEPTH= 51.KM

DEPTH OF FOCUS= 0.003R

A=-0.34946 B= 0.91808 C=-0.18709 D= 0.9346 E= 0.3557
G= 0.0666 H=-0.1749 K=-0.9823 HT= 6.4

SE= 2.03

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
LEMBANG	5.11	321.2	1	15	-1	2	19	4					
DJAKARTA	6.11	319.2	1	31K	1	2	48	8					
MEDAN	18.76	319.2	4	17A	0	7	45	4					
PERTH	21.49	168.4	4	47	1						8	47	
PHU-LIEN	31.73	352.5				11	26	10			15	9	
HONG KONG	33.11	5.7	6	33	0	11	47	-1					
CANTON	33.81	4.0	6	40	1	12	3	4					
ADELAIDE	34.91	137.8	6	49	0								
CHARTERS TS.	35.27	109.3	6	51K	-1						18	23	
PORT MORESBY	35.76	91.0	6	58	2	12	33	4			8	19	PP
KUNMING	36.56	347.5	7	6K	3	12	50	9					
CHITTAGONG	37.91	330.6	7	21	7								
KODAIKANAL	39.24	301.1	7	25	0								
SHILLONG	40.65	333.2	7	38K	1								
MELBOURNE	40.70	137.1	7	41K	4								
GUAM	41.43	55.1	7	42	-1								
RABAUL	41.47	84.0	7	43	-1						9	40	PCP
CHENGTU	41.79	351.2	7	47K	1	14	7	7					
CANBERRA	42.33	131.4	7	50A	-1				8	0			
ZO-SE	42.88	13.1	7	56	1	14	19	3					
BRISBANE	42.90	118.8	7	54A	-1	14	19	3					
NANKING	43.34	9.9	7	59K	0	14	27	5					
RIVERVIEW	43.35	128.3	8	2	3	14	31	8					
CHATRA	43.95	328.9	8	0	-4								
LHASA	44.55	335.1	8	11	2	14	44	4					
SIAN	44.89	357.7	8	12	1								
LANCHOW	47.15	352.2	8	30	1	15	19	2					
AGRA	49.39	320.5	8	46K	-1	15	50	1					
PEKING	50.86	5.3	8	59	1	16	11	2					
PAOTOW	51.18	359.2	9	0	0								
MATUSIRO	53.74	27.3	9	17K	-2	16	48	0			19	17	
LAHORE	54.78	321.6	9	6K	-21								
WILKES	55.28	180.2				17	18	9					
OASIS-BUNG.	55.67	185.0	9	33	0								
CHANGCHUN	55.99	12.6	9	33	-3								
KARACHI	56.09	311.3	9	33K	-3								
MIRNY	56.93	188.4	9	40	-2	17	29	-2					
WARSAK DAM	58.16	321.7	9	45K	-6								
ULAN-BATOR	58.62	356.9	9	53	-1								
QUETTA	58.70	315.4	9	55K	0	17	55	1			10	44	PCP
NAMANGAN	62.97	327.5	10	25	1								
IRKUTSK	63.12	355.5	10	26	1	18	58	8					
KARAPIRO	63.47	127.0	10	28	1								
CAPE HALLETT	70.68	163.8	11	11	-1	20	31	10			11	20	PCP
SCOTT BASE	72.57	169.4	11	23	-1						11	33	PCP
YAKUTSK	74.13	9.1	11	32	-1	21	1	0					
SVERDLOVSK	79.09	334.5	12	0	-1								
SOUTH POLE	79.22	180.0	12	0	-1								
TIFLIS	79.94	316.0	12	8	3								
ASTRIDA	80.79	269.1	12	8	-2								
TIKSI	83.18	5.7	12	18	-4	22	35	-2					
JERUSALEM	83.70	303.9	12	27	2								
KSARA	83.77	306.0	12	28	3						15	43	PP
SOTCHI	84.12	316.3	12	28	1								
BYRD STATION	85.70	172.3	12	35	0	23	10	8					

HELWAN	86.41	301.2	12	40	2						
WINDHOEK	89.30	247.3	12	54A	2						
MOSCOW	89.64	327.2	12	53	-1						
CINE	90.87	308.0	13	0	1						
PULKOVO	94.56	330.0								24	26
APATITY	95.19	337.9				24	36	9			
KIRUNA	100.12	337.3	13	41	-1						
PRUHONICE	102.26	319.0								18	3 PP
COLLEGE	104.58	25.6	18	13	-2						
STUTTGART	105.75	317.7								18	26 PP
TAMANRASSET	108.15	290.5								18	34 PP
RESOLUTE	114.56	7.3	18	36	1						
HUNGRY HORSE	127.14	36.2	19	1	2					21	6 PP
EUREKA	129.71	47.2	19	2	-2						
BOZEMAN	130.25	37.8	19	9	4						
SHAWINIGAN	144.29	4.3	19	31	0						
OTTAWA	145.12	8.1	19	33K	1						
BREBEUF	145.27	5.5	19	33K	1						
HALIFAX	146.02	352.9	19	37K	3						
FAYETTEVILLE	146.17	38.0	19	36A	2						
MORGANTOWN	149.78	16.7	19	48A	8						
TACUBAYA	149.82	70.1	19	53	13						
LA PAZ	152.80	182.2	19	47K	3					20	6 PKP2
HUANCAYO	156.43	164.8	19	55	6						

OCTOBER 22 23.H 42.M 54.S EPICENTRE -14.87 167.80 DEPTH= 46.KM

DEPTH OF FOCUS= 0.002R

A=-0.94513 B= 0.20428 C=-0.25496 D= 0.2113 E= 0.9774
G= 0.2492 H=-0.0539 K=-0.9670 HT= 5.8

SE= 1.68

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NOUMEA	7.50	189.6	1	46K	-4	3	7	-7			3	26
SUVA	10.70	109.2	2	33K	-1	4	39	6				
BRISBANE	18.61	225.2	4	18K	2	7	41	3				
RABAUL	18.69	303.0	4	18	1							
PORT MORESBY	20.90	282.7	4	41A	0	8	36	10			5	15 PPP
CHARTERS TS.	21.17	253.0	4	45	1	8	42	11				
ONERAHI	21.63	165.4	4	53	5						5	26
KARAPIRO	23.96	164.8	5	11	0							
TUAI	25.22	162.7	5	26	3							
CANBERRA	26.46	216.3	5	36A	1						6	26 PP
WELLINGTON	27.00	168.4	6	6	26	10	26	14				
TRUK	27.25	323.5	5	41	-1							
GEBBIES PASS	29.03	172.7	5	58	0							
MELBOURNE	30.53	217.2	6	10	-1						13	10 SS
ROXBURGH	30.61	177.9				10	52	-18				
ADELAIDE	32.90	227.3	6	32A	0							
KOROR	39.72	301.5	7	29	-1							
PERTH	50.16	240.7	8	55	2						10	53 PP
DUMONT	54.93	193.1	9	26	-3							
CAPE HALLETT	57.44	179.1	9	44A	-2	17	46	8	9	53	10	23 PCP
ABUYAMA	58.17	328.9	9	51A	-1							
MATUSIRO	58.27	332.1	9	51A	-1	17	51	2			20	42
LEMBANG	59.50	270.8	10	1A	0	18	11	6				
DJAKARTA	60.41	271.3	10	7A	0							
SCOTT BASE	63.00	180.3	10	24K	-1						11	30
WILKES	63.57	202.4	10	28A	0	19	1	4				
HONG KONG	64.23	304.1									17	46
Y.-SAKHLINSK	65.53	341.4	11	1	20							
NANKING	66.17	315.5	10	46A	1							
VLADIVOSTOK	66.43	332.1	10	45	-2	19	39	7				
OASIS-BUNG.	67.29	203.9	10	51	-1	19	46	4				
CHANGCHUN	70.12	328.7	11	9A	-1							
MIRNY	70.42	204.2	11	10	-1	20	23	4				
MEDAN	70.85	279.2	11	14K	0							
BYRD STATION	72.47	169.9	11	21	-3	20	43	0				
PEKING	72.69	320.9	11	26A	1	20	53	8				
KUNMING	74.84	301.5	11	39A	2	21	13	3				
SOUTH POLE	75.23	180.0	11	38	-2				12	7	11	47 PCP
CHENGTU	76.20	307.2	11	45A	0	21	29	5				
PAOTOW	76.85	318.6	11	50	1							

YAKUTSK	82.29	342.9	12	18	0	22	37	8		
ULAN-BATOR	82.67	323.7	12	21	1					
UKIAH	83.71	46.9	12	27	2					
BERKELEY	83.88	48.4	12	27A	1					
SHILLONG	84.10	298.3	12	28A	1					
LICK	84.11	49.1	12	29K	2					
SHASTA	84.94	45.8	12	27A	-5					
FRESNO	85.25	50.2	12	34A	1					
MINERAL	85.35	46.3	12	34A	0					
PASADENA	85.51	53.1	12	34	0				24	14 PS
LHASA	86.14	301.9	12	38A	1	23	13	6	22	51 SKS
RENO	86.30	47.6	12	39A	1					
COLLEGE	86.30	17.4	12	36	-2				13	21
BOULDER CITY	88.72	52.3	12	51	1					
EUREKA	89.04	48.7	12	52	1					
COLOMBO	89.76	277.2	12	26	-29					
TIKSI	90.19	348.5	12	55	-2	23	48	3		
TUCSON	90.71	56.9	13	0	1					
TUCSON TELE.	90.83	56.9	13	1	1					
HUNGRY HORSE	93.31	40.8	13	11	0					
BOZEMAN	94.44	44.0	13	17	1					
NAMANGAN	104.17	309.1							18	23 PP
RESOLUTE	106.17	15.9				26	0	4	27	30 PS
QUETTA	106.57	297.5				24	54	13	18	39 PP
FLORISSANT	108.30	53.7							28	12 PS
ST. LOUIS 1	108.39	53.8							28	12 PS
HUANCAYO	112.00	109.7							19	17 PP
THULE	112.03	12.2	18	36	6					
OTTAWA	118.99	46.1	18	44K	0					
BREBEUF	120.43	45.8	18	46	-1					
SHAWINIGAN	120.82	44.4	18	48K	1					
MOSCOW	124.27	328.5	18	47	-7					
TIFLIS	124.29	310.5	18	57	3					
PULKOVO	125.49	335.2	19	2	6					
HALIFAX	127.54	44.7	19	2	2				31	4 PS
SIMFEROPOL	130.83	317.3							22	34 PKS
KSARA	132.77	302.5	19	14	4	26	24	9	21	41 PP
KISHINEV	133.24	321.9							22	40 PKS
JERUSALEM	133.70	299.8	19	13	1				21	57
ASTRIDA	135.01	250.8	19	17	3				22	36 PP
LWIRO	136.00	250.7	19	21K					22	39 PP
HELWAN	137.33	298.0	19	20	1				22	48 PP
CINE	137.80	310.1	19	14	-6				21	54
COLLMBERG	138.40	336.3	19	17	-4					
HALLE	138.64	337.2	19	26	5				22	58
PRUHONICE	138.78	333.8							22	10 PP
JENA	139.23	337.0							22	15 PP
DURHAM	139.33	350.6	19	23	1					
DE BILT	140.35	343.2	19	24	0				22	26 PP
RATHFARNHAM	141.37	354.3	19	35	9					
STUTTGART	141.89	337.0	19	23	-4				22	33
EBINGEN	142.46	336.6	19	26	-2					
STRASBOURG	142.58	338.1	19	26	-2				35	36 PPS
BASLE	143.53	337.3	19	30	0				20	22
PARIS	144.06	343.4	19	31	0				22	48 PP
NEUCHATEL	144.20	337.4	19	30	-1					
ROME	145.65	326.5	19	35A	2				22	15
REGGIO CALA.	146.22	318.5	19	36	2					
MESSINA	146.23	318.7	19	36	2				20	12
CLERMONT-FD.	146.60	340.4	19	36	1					
MONACO	146.71	333.7	19	38	3					
SETIF	153.57	326.7	19	56	10				20	9 PKP2
TOLEDO	154.08	345.6	19	53	7				20	6 PKP2
ALGIERS UNI.	154.30	330.9	19	47	0				20	9 PKP2
ALICANTE	154.42	338.3	19	46	-1	26	52	5	23	45 PP
ALMERIA	156.45	340.2	19	50	1					
GRANADA	156.50	342.6	21	3K	74				25	49 PP
TAMANRASSET	161.49	297.8	19	58	3				20	43 PKP2
MBOUR	175.35	95.4	20	4	-1				21	46 PKP2

OCTOBER 23 15.H 42.M 55.S EPICENTRE 33.63 46.21 DEPTH= 0.KM

A= 0.57732 B= 0.60231 C= 0.55128 D= 0.7219 E=-0.6920
G= 0.3815 H= 0.3980 K=-0.8343 HT= 0.6

SE= 2.61

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
TIFLIS	8.15	352.5	2	6	4								
KSARA	8.61	274.1	2	4	-5	3	48	0			2	55	
MAKHACH-KALA	9.38	5.8	2	23	4								
JERUSALEM	9.45	261.7	2	16	-4	4	48	40					
SOTCHI	11.15	334.8	2	44	0								
HELWAN	13.21	257.5	3	10	-1	5	56	16					
SIMFEROPOL	14.66	324.0	3	37	7	6	23	8					
ISTANBUL UN.	15.55	303.3	3	44	2						8	44	PCP
QUETTA	17.94	95.4	4	13A	1	7	35	4			4	26	
ATHENS	18.74	289.8	4	24K	2						4	54	PP
KISHINEV	18.77	320.6	4	20	-3	7	50	0					
KARACHI	19.67	107.8	4	38A	5	8	19	9					
SOFIA	20.09	303.4	4	36	-2	8	33	14			11	27	
WARSAK DAM	21.04	81.9	4	46	-2								
MOSCOW	22.89	347.5	5	5	-1	9	6	-6					
LWOW	23.02	321.3	5	5	-3	9	13	-2					
LAHORE	23.75	87.3	5	14	-1								
REGGIO CALA.	25.11	289.0	5	28	0								
MESSINA	25.19	289.2	5	30K	2	9	50	-2			11	44	SS
SVERDLOVSK	25.22	18.7	5	30	1								
KRAKOW	25.35	318.2	5	32	2						6	31	PP
BRATISLAVA	26.17	312.4	5	35	-3								
RACIBORZ	26.34	317.0	5	39	0						5	59	
DEHRA DUN	27.15	88.2	5	49	2	10	30	6					
ROME	27.78	297.2				10	42	8			12	6	SS
PULKOVO	28.17	342.9	5	53	-3								
COLLMBERG	29.85	316.3									6	58	
HELSINKI	29.98	338.7	6	11	-1								
SEMIPALATNSK	29.99	45.8	6	28	16								
STUTTGART	31.34	310.0	6	24	0								
EBINGEN	31.34	308.8	6	23	-1								
STRASBOURG	32.21	309.2	6	31	-1	11	51	6			7	59	
UPPSALA	32.25	333.1	6	30	-2						7	26	PP
NEUCHATEL	32.43	306.1	6	33	-1								
BENSBERG	33.19	313.3	6	44	4								
MUNSTER	33.22	315.2	6	44	3								
GOTEBORG	33.34	326.7	6	35	-7								
SETIF	33.39	286.2	6	43	1								
APATITY	34.76	351.4	6	52A	-2								
SODANKYLA	35.66	347.1	6	59	-3						9	28	PCP
CHATRA	35.85	89.8	6	54	-9								
SKALSTUGAN	36.61	335.2	7	11	1								
TAMANRASSET	37.24	263.9	7	14	-1	13	2	-1			8	41	PP
KIRUNA	37.33	344.2	7	14	-2								
RELIZANE	37.35	286.5	7	19	3						7	49	
KEW	37.90	312.3	7	23	3	13	7	-6					
ASTRIDA	39.25	206.6	7	32A	0						8	33	
DURHAM	39.28	317.3	7	33K	1	13	38	5					
LWIRO	39.29	208.2	7	34	2								
SHILLONG	40.24	89.1	7	37A	-3								
RATHFARNHAM	41.77	314.4	7	50A	-2						8	46	
KHEYS	46.59	1.4	8	36	5								
ULAN-BATOR	46.95	53.4	8	35	1								
TANANARIVE	52.27	178.4	9	19	4								
NORD	53.04	350.6	9	19	-2								
TIKSI	56.18	22.2	9	40	-4								
WINDHOEK	62.40	210.5	10	28	1								
THULE	63.01	346.0	10	35	4								
KIMBERLEY	65.28	200.7	11	38	52								
RESOLUTE	68.97	349.7	11	8A	-1	20	18	5					
MATUSIRO	72.34	57.6	11	27A	-2								
COLLEGE	81.21	6.0	12	18	-1								
SEVEN FALLS	81.74	322.1	12	21	-1								
SHAWINIGAN	83.11	322.5	12	28	-1								
BREBEUF	84.26	322.2	12	34K	-1								
OTTAWA	85.39	323.1	12	40	0								
HUNGRY HORSE	96.49	346.9	13	31	-1								
EUREKA	105.41	345.8	14	12	777						17	3	
HALLEY BAY	118.13	195.8	18	48	-1						20	22	PP
BYRD STATION	133.15	183.4	19	19	1						22	46	SKP

OCTOBER 26 2.H 17.M 42.S EPICENTRE 5.29 117.09 DEPTH= 58.KM

DEPTH OF FOCUS= 0.004R

A=-0.45353 B= 0.88653 C= 0.09154 D= 0.8903 E= 0.4554
G=-0.0417 H= 0.0815 K=-0.9958 HT= 7.0

SE= 1.95

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MANILA	9.99	22.2	2	8	-16								
BAGUIO CITY	11.58	16.9	2	46	1								
LEMBANG	15.31	218.3	3	34	0	6	27	5					
DJAKARTA	15.32	222.1	3	31	-3	6	23	1					
KOROR	17.40	82.4	4	0	0						4	22	
MEDAN	18.44	265.5	4	13	0	7	42	9					
KUNMING	24.03	326.3	5	12A	1	9	40	19			5	52	PP
PORT BLAIR	24.91	286.3	5	18	-1	10	6	30			6	14	PP
CHITTAGONG	29.75	307.2	6	2	-1	11	1	7			7	1	PP
SHILLONG	31.47	312.5	6	16A	-2								
PORT MORESBY	33.32	115.9	6	32K	-2				6	43	7	47	PP
ABUYAMA	34.04	27.7	6	40A	-1								
PEKING	34.60	358.8	6	44	-1								
CHATRA	35.68	310.2	6	55	0						9	36	
PAOTOW	35.71	350.8	6	58K	3								
MATUSIRO	36.65	29.1	7	0K	-3	12	56	15			8	22	PP
COLOMBO	37.04	274.4	7	8	2								
MADRAS	37.20	284.5	7	9	2	13	0	10			8	33	
CHARTERS TS.	38.14	132.1	7	15K	0						10	53	
CHANGCHUN	39.06	9.4	7	21	-2	13	30	12			8	55	PP
VLADIVOSTOK	39.89	17.0	7	34	4								
AGRA	43.07	304.7	7	58A	2	14	24	7					
ULAN-BATOR	43.37	350.0	7	59	1								
DEHRA DUN	44.38	308.8	8	11	4						18	5	0
ADELAIDE	44.89	154.6	8	12	1								
BOMBAY	45.21	291.4	8	15	2	14	58	10					
BRISBANE	47.60	135.1	8	32A	0	15	25	3					
IRKUTSK	48.01	349.5	8	34	-1	15	33	5					
CANBERRA	50.31	145.8	8	53K	0				9	2			
RIVERVIEW	50.50	142.8	8	59	5	16	16	13					
WARSAK DAM	50.92	310.2	8	58	0								
KARACHI	51.98	298.7	9	3	-3								
NAMANGAN	53.92	318.1	9	19	-1								
YAKUTSK	57.38	7.0	9	49	4	17	47	12					
SVERDLOVSK	67.73	330.3	10	52	-2								
KARAPIRO	69.13	133.8	11	3K	1								
OASIS-BUNG.	72.27	186.9	11	21	0				11	53			
TANANARIVE	72.54	248.4	11	24	1								
MIRNY	73.74	189.8	11	29	-1	20	55	0					
MOSCOW	79.72	325.6	12	1	-2								
KSARA	79.78	303.3	12	7	3				12	53	15	9	PP
JERUSALEM	80.34	301.2	12	2K	-5						12	28	
KHEYS	80.59	350.8	11	58	-10								
SIMFEROPOL	81.32	314.5	12	13	1								
APATITY	82.72	337.4	12	19A	0								
HELWAN	83.73	299.4	12	25	1	22	48	7					
PULKOVO	83.84	329.5	12	24	-1								
CAPE HALLETT	84.53	165.8	12	28	0	22	53	4			15	38	PP
ISTANBUL KA.	85.07	310.7	12	32A	1						12	45	PCP
SODANKYLA	85.34	337.2	12	32	0								
IASI	85.84	316.9	12	36	1								
HELSINKI	86.51	330.0	12	37	-1								
BUCHAREST	87.05	314.2	13	13	33								
SCOTT BASE	87.30	170.7	12	42	0								
COLLEGE	87.42	25.2	12	42	0						16	8	PP
ASTRIDA	87.61	267.2	12	44A	1								
KIRUNA	87.66	337.8	12	43	0								
LWOW	87.98	319.7	12	46	1								
UVIRA	88.30	266.4	12	48A	2								
LWIRO	88.51	267.6	12	49	2								
SOFIA	89.22	312.6	12	48	-3								
ATHENS	89.44	307.9	12	51K	-1								
UPPSALA	90.21	330.1	12	55	0								
SKALSTUGAN	91.84	334.4	13	2	-1								
GOTEBORG	93.57	328.7	13	8K	-3								
PRUHONICE	94.00	320.8	13	14	1						16	54	PP
HALLE	95.23	322.7	13	19	0								
SOUTH POLE	95.25	180.0	13	18	-1								
PLAUEN	95.37	321.7	13	16	-3								
JENA	95.61	322.2	13	20	0								

STUTTGART	97.69	320.6	13 28	-2		17 30	PP
RESOLUTE	97.83	8.2	13 30	0		32 22	PSPS
STRASBOURG	98.65	320.7				31 48	SS
BYRD STATION	100.70	171.5	13 44	1		17 46	PP
TAMANRASSET	107.62	295.8	18 25	4		29 37	PKKP
SHASTA	108.97	43.8				18 46	PP
MINERAL	109.66	43.9				18 28	PP
HUNGRY HORSE	110.41	33.6	18 27	1		14 35	P
LICK	110.89	46.8				18 29	PP
EUREKA	113.90	42.6	18 34	2		29 23	PKKP
BOULDER CITY	116.40	45.5	18 41	4			
LARAMIE	119.43	35.9	18 44	1			
TUCSON	121.12	47.3	18 49	3		28 51	PKKP
SEVEN FALLS	127.35	6.8	19 0	2			
SHAWINIGAN	127.65	8.6	19 0	1			
OTTAWA	128.26	11.5	18 56	-4			
MBOUR	130.43	293.8				21 21	PP
HUANCAYO	166.01	119.5	20 3	5			
LA PAZ	167.74	155.7	20 3	4		21 12	PKP2

OCTOBER 26 12.H 40.M 31.S EPICENTRE 37.35 44.50 DEPTH= 0.KM

A= 0.56837 B= 0.55859 C= 0.60409 D= 0.7009 E=-0.7132
G= 0.4308 H= 0.4234 K=-0.7969 HT= -0.7

SE= 2.64

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
GORIS	2.58	33.2	0	44	0								
TIFLIS	4.37	2.9	1	11	2	1	51	-11					
MAKHACH-KALA	6.06	23.33	1	56	23								
KSARA	7.86	245.9	1	59	1	3	38	9			4	2 SSS	I
JERUSALEM	9.46	236.7	2	21	1						5	17 SG	
ISTANBUL UN.	12.59	291.8	3	6K	3	5	46	21					
HELWAN	13.26	239.6	3	13	1						7	20	
KISHINEV	15.09	314.8	3	41	5								
IASI	15.90	313.6	3	51	4								
ATHENS	16.47	278.5									4	4 PP	
MOSCOW	18.97	348.0	4	22	-3								
LWOW	19.31	316.7	4	27	-2								
QUETTA	19.96	104.4	4	37A	0	8	27	11			5	9 PPP	
NAMANGAN	21.34	71.8	4	51	0								
WARSAK DAM	22.20	90.5	4	57	-2								
SVERDLOVSK	22.26	23.8	4	59	-1								
BRATISLAVA	22.72	307.1	4	54	-11								
RACIBORZ	22.74	312.4	4	56	-9								I
MESSINA	22.87	281.0	5	6	0								
PULKOVO	24.22	342.4	5	19	0								
PRUHONICE	24.89	310.0	5	27	1						5	51 PP	
LAHORE	25.21	94.4	5	30	1								
HELSINKI	26.02	337.6	5	35	-1								
COLLMBERG	26.26	312.1	5	38	-1								
STUTTGART	27.96	305.4	5	53	-1								
UPPSALA	28.32	331.3	5	55	-2								
APATITY	30.89	351.7	6	37	17								
KIRUNA	33.38	343.7	6	40	-2								
TAMANRASSET	36.46	257.7	7	8	0						8	25 PP	
ASTRIDA	42.05	202.4	7	56	1								
KHEYS	42.92	1.9	8	9	7								
UVIRA	43.07	202.8	8	2	-1								
MATUSIRO	71.54	57.9	11	26	1								
COLLEGE	77.66	5.4	11	59	-1								

OCTOBER 27 18.H 17.M 3.S EPICENTRE 44.13 147.76 DEPTH= 97.KM

DEPTH OF FOCUS= 0.010R

A=-0.60911 B= 0.38422 C= 0.69380 D= 0.5335 E= 0.8458
G=-0.5868 H= 0.3702 K=-0.7202 HT= -3.2

SE= 2.29

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S

NEMURO	1.77	244.0	0	28K	-2	0	49	-3			
ABASHIRI	2.51	268.8	0	41K	1	1	12	2			
KUSIRO	2.70	246.0	0	42	0	1	12	-2			
OBIHIRO	3.53	251.6	0	54	0	1	25	-10			
ASAHIGAWA	3.90	266.8	1	1	2						
URAKAWA	4.14	243.3	1	4	2	1	45	-5			
Y.-SAKHLINSK	4.53	310.4	1	6	-2						
SAPPORO	4.77	259.4	1	11	0	2	7	2			
TOMAKOMAI	4.78	252.5	1	13	2	2	8	2			
MURORAN	5.27	252.5	1	35	17	2	17	-1			
MORI	5.64	251.4	1	23	0	2	26	-1			
HAKODATE	5.67	248.0	1	21K	-2	2	22	-6			
HATINOHE	5.85	234.2	1	24	-2	2	24	-8			
AOMORI	6.12	239.8	1	31	2	2	33	-6			
MIYAKO	6.21	226.0	1	30	-1	2	32	-9			
UGLEGORSK	6.32	323.7	1	33	1						
MORIOKA	6.61	230.3	1	33	-3	2	41	-10			
MIZUSAWA	7.04	227.1	1	55	13	2	53	-8			
AKITA	7.21	235.0				3	1	-4			
ISINOMAKI	7.47	222.6	1	44	-4	3	17	5			
SENDAI	7.80	223.8	2	9	17	3	10	-10			3 40
HUKUSIMA	8.42	223.4	1	57	-4	3	27	-8			
ONAHAMA	8.86	218.4				3	33	-13			
MITO	9.53	218.2				3	27	-35			
UTUNOMIYA	9.66	221.2				3	38	-27			
KAKIOKA	9.78	218.9	2	22	3	4	1	-7			
MAEBASI	10.17	223.6				4	11	-6			
KUMAGAYA	10.22	221.6				4	14	-4			3 35
NAGANO	10.41	227.6	2	39	11						
TOKYO C.M.O.	10.43	218.8				4	16	-8			
OIWAKE	10.49	225.2									3 21
MATUSIRO	10.49	227.1	2	27A	-2						4 19
YOKOHAMA	10.69	218.4				4	24	-6			
KOHU	11.03	222.8				4	32	-6			3 52
HUNATU	11.04	221.7				4	33	-5			
MERA	11.04	216.3				4	29	-9			
GIHU	12.13	227.8				5	4	0			
YAKUTSK	20.81	335.7	4	35	0						
COLLEGE	40.52	36.4	7	32	1						
KHEYS	47.86	346.5	8	17	-13						
CHATRA	51.13	271.4	8	35	-20						
NAMANGAN	54.24	295.1	9	19	1						
RESOLUTE	54.49	16.9	9	17A	-3						10 21 PCP
LAHORE	57.55	284.1	9	41A	-1	17	31	1			
THULE	57.55	9.5	9	49	7						
WARSAK DAM	58.07	288.1	9	45	0						
APATITY	58.22	335.7	9	44	-2						
SODANKYLA	60.29	337.6	9	57	-4						10 44 PCP
KIRUNA	61.57	339.9	10	6	-3						
SHASTA	63.12	58.5	10	20A	0						
HUNGRY HORSE	63.37	47.6	10	21	0						10 56 PCP
QUETTA	63.47	287.2	10	22A	0						
MINERAL	63.82	58.4	10	25A	1						
BERKELEY	64.89	60.9	10	31A	0						
RENO	65.40	58.2	10	35	1						
LICK	65.61	61.1	10	35A	-1						
HELSINKI	66.05	332.6	10	37	-2						11 8 PCP
KARACHI	66.09	283.4	10	43A	4						
EUREKA	67.76	56.2	10	49	0						
UPPSALA	68.62	335.5	10	52	-3						11 17 PCP
PASADENA	69.80	61.8	11	1	-1						
RAPID CITY	71.84	45.8	11	15	1						
GOTEBORG	72.05	336.8	11	12K	-3						
LARAMIE	72.50	49.2	11	17	-1						
BOULDER	73.54	50.0	11	35	11						
TUCSON TELE.	75.67	58.9	11	37	1						
KRAKOW	75.78	328.3	11	37	0				11	59	
COLLMBERG	77.19	332.8	11	44	-1						
HALLE	77.36	333.5	11	45	-1						
PRAGUE	77.75	331.3	11	52	4						
PRUHONICE	77.79	331.2	11	49	1						12 21
JENA	77.97	333.4	11	49	0						12 27
PLAUEN	78.16	332.8	11	48	-2						
SONNEBERG	78.57	333.3	11	52	0						
RATHFARNHAM	80.43	344.5	12	17	15						
STUTTGART	80.61	333.7	12	2	-1						
KEW	80.85	340.4	12	6	1						
TUBINGEN	80.87	333.6	12	5	0						
EDINGEN	81.20	333.5	12	6	0						

STRASBOURG	81.23	334.4	12 7	0				
PARIS	82.57	337.7	12 15	2				
JERUSALEM	82.61	307.5	12 15	2				
SHAWINIGAN	82.86	26.9	12 15	0				
OTTAWA	82.87	29.2	12 15A	0				
BYRD STATION	133.56	166.1	19 6	1			22 29 SKP	
SOUTH POLE	133.93	180.0	18 53	-13	19 6			
HALLEY BAY	148.41	182.7	19 36	4			23 14 PP	

OCTOBER 28 5.H 22.M 47.S EPICENTRE 25.22 96.27 DEPTH= 0.KM

A=-0.09898 B= 0.90036 C= 0.42374 D= 0.9940 E= 0.1093
G=-0.0463 H= 0.4212 K=-0.9058 HT= 3.3

SE= 2.58

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
TOCKLAI	2.04	318.7	0 42	6				
SHILLONG	4.00	275.9	1 3	0	1 48	-4		
CHITTAGONG	4.97	236.0	1 17A	0	2 15	-1		
KUNMING	5.81	90.3	1 31	2				1 50 PG
LHASA	6.40	314.6	1 37	0	2 53	1		2 3 PG
CALCUTTA	7.74	251.4	2 28	32				3 11
CHATRA	8.34	283.0	2 5	0				5 10
CHENGTU	8.73	49.9			3 50	0		
PHU-LIEN	10.50	112.7			4 34	-1		
LANCHOW	12.62	29.1			5 37	11		
PORT BLAIR	13.89	194.6	3 20	0	6 17	21		3 30 PP
AGRA	16.50	280.6	3 55	1	6 41	-17		4 23 PPP
DEHRA DUN	16.91	291.6	4 6	7				6 53
WUHAN	17.01	67.8	4 7	7	7 19	10		
HYDERABAD	18.31	248.4	3 42K	-35	7 37	-2		8 26 SS
PAOTOW	19.15	33.5	4 22	-5	7 56	-2		
MADRAS	19.44	234.3	4 26	-4	8 9	5		4 46 PP
LAHORE	20.29	293.1	4 40	0				
NANKING	20.89	65.8	4 45	-1	8 38	3		
MEDAN	21.64	173.5	4 53A	0				
PEKING	22.26	43.6	5 1	1				
BOMBAY	22.61	258.5	5 6	3	9 11	4		5 41 PP
ZO-SE	22.70	69.4	5 4	0	9 1	2		
WARSAK DAM	23.16	298.0	5 8	-1				
ULAN-BATOR	24.16	17.6	5 20	2				
NAMANGAN	25.80	313.6	4 33	-61				
KARACHI	26.37	277.7	5 42	3				
QUETTA	26.39	287.4	5 37	-2	10 3	-9		
CHANGCHUN	30.05	44.5	6 14	1	11 17	6		
MATUSIRO	37.46	62.2	7 13	-3				
TIKSI	49.92	12.9	8 56	-1				
APATITY	56.63	335.8	9 44	-3				
KHEYS	57.97	351.8	9 53	-3				
SODANKYLA	59.16	335.0	10 1	-3			10 17	
HELSINKI	59.19	326.5	10 3	-2				
LWOW	59.89	314.5	10 9	-1				
KIRUNA	61.57	335.3	10 20	-1				
UPPSALA	62.88	326.2	10 27	-3				
SKALSTUGAN	65.08	330.6	10 44	0				
PRUHONICE	65.93	315.6	10 47	-3			12 7	
PRAGUE	65.99	315.7	10 52	2				
CHARTERS TS.	66.20	128.1	10 56	5				
HALLE	67.25	317.6	10 59	1				11 29 PCP
PLAUEN	67.34	316.5	10 57	-2				
JENA	67.60	317.0	11 0	0				
STUTTGART	69.61	315.2	11 10	-3				
EBINGEN	69.92	314.6	11 16	2				
ASTRIDA	70.06	257.1	11 14	-1				
STRASBOURG	70.58	315.3	11 21	2				25 13 SS
UVIRA	71.00	256.6	11 21	0				
PARIS	73.83	316.6	11 40	2			11 47	
KEW	74.60	319.9	11 44	2				
COLLEGE	77.63	23.2	11 57	-2				
RELIZANE	80.04	304.7	12 29	17			12 47	
TAMANRASSET	81.25	291.0	12 17	-2			15 19 PP	
SOUTH POLE	115.07	180.0	18 37	-6				
BYRD STATION	123.05	173.0	18 55	-3				

OCTOBER 28 10.H 46.M 32.S EPICENTRE 30.61 84.47 DEPTH= 0.KM

A= 0.08315 B= 0.85813 C= 0.50665 D= 0.9953 E=-0.0964
G= 0.0489 H= 0.5043 K=-0.8621 HT= 1.6

SE= 2.52

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
CHATRA	4.45	147.1	1 16	7	2 58	57		
DEHRA DUN	5.55	268.6	1 25	1	2 58	29		
LHASA	5.78	98.0	1 31K	4				
AGRA	6.63	240.1	1 39A	0				
BOKARO	6.86	169.7	1 40	-3	3 4	3		1 51 PPP
SHILLONG	8.24	125.7	1 57K	-5	3 36	0		3 47 SS
LAHORE	8.74	278.7	2 6	-3				
CALCUTTA	8.76	155.8	2 4A	-5	3 45	-4		
TOCKLAI	9.83	110.5	1 23	-61	2 47	-88		4 15
CHITTAGONG	10.53	139.6	2 31	-2	4 32	0		
WARSAK DAM	11.44	290.5	2 46	0				
VIZIANAGRAM	12.47	184.5	3 18	18				6 36
YUMEN	14.06	43.2	3 16	-5				
HYDERABAD	14.22	204.0	3 17K	-6	5 44	-18		3 36 PP
FRUNSE	14.57	329.9	3 29A	1	6 13	3		
STALINABAD	15.15	305.7	3 32	-3				8 28 PCP
BOMBAY	15.73	224.8	3 38	-5	6 31	-6		3 55 PPP
KARACHI	16.08	257.0	3 48	1	6 50	5		7 4 SS
TASHKENT	16.26	315.2						4 17
CHENGTU	16.83	84.8	3 53K	-4	6 54	-8		
KUNMING	17.03	104.5	3 58	-1	7 6	-1		
LANCHOW	17.06	66.2	3 58A	-1	7 9	1		
MADRAS	17.97	193.7	4 7K	-4	7 27	-2		4 23 PP
SEMIPALATNSK	20.02	352.1	4 34	-1	8 18	4		
PORT BLAIR	20.34	156.1	4 39	1	8 31	10		5 2 PP
SIAN	20.94	73.6	4 42A	-3				
KODAIKANAL	21.30	199.3	4 52A	4	8 52	13		5 22 PP
PHU-LIEN	22.20	110.9	4 55	-2	8 59	3		
ASHKABAD	22.74	295.8	5 5	2				5 44 PPP
PAOTOW	22.97	57.4	5 5K	0				
COLOMBO	23.98	191.3	5 18	3	9 33	5		
ULAN-BATOR	24.36	38.5	5 21	3				
TATUNG	25.24	60.1	5 23	-4				
WUHAN	25.88	82.4	5 31	-2	9 59	-1		
IRKUTSK	26.10	28.3	5 35	0	10 6	2		6 23 PP
CANTON	26.73	99.3	5 44	3	10 15	1		
FUTZELING	27.26	80.3	5 24	-22				
PEKING	27.40	61.3	5 47K	0	10 22	-3		
HONG KONG	27.79	100.2	5 56	6	10 32	1		8 56 PCP
NANKING	29.29	78.2			10 35	-20		
MEDAN	30.05	150.7	6 21A	10				
SVERDLOVSK	31.05	334.5	6 20	1	11 26	3		7 32 PP
ZO-SE	31.43	79.5	6 21K	-2	11 29	0		
DAIREN	31.46	64.6	6 26	3				
TAIPEI	33.14	90.4						7 37 PP
TIFLIS	33.62	300.3	6 43	1				14 52 SSS
CHANGCHUN	34.75	56.1	6 51K	-1	12 16	-4		8 1 PP
BAGUIO CITY	35.83	104.9	7 0	-1				
NAGASAKI	38.49	74.7	7 20	-3	13 16	-2		
VLADIVOSTOK	39.46	58.1	7 31	0	13 33	1		9 9 PP
KSARA	40.93	287.6	7 43	0	14 1	7		9 25 PP
MOSCOW	41.29	321.3	7 46	0	13 57	-3		9 23 PP
SIMFEROPOL	41.63	304.6	7 53	4				9 32 PP
JERUSALEM	41.85	284.8	7 51	0				9 36 PCP
DJAKARTA	42.39	145.9	7 40	-15				14 28
ABUYAMA	42.82	70.3	7 58K	-1	14 24	2		
LEMBANG	43.34	145.3	8 5K	2				18 0
MATUSIRO	44.69	67.4	8 13K	-1	14 39	-11		10 3 PP
ISTANBUL KA.	45.43	299.1	8 17	-3				9 27 PP
HELWAN	45.55	283.2	8 21	0	15 4	2		
PULKOVO	46.17	325.4	8 26	0	15 9	-2		10 17 PP
IASI	46.24	307.7	8 28	2				
SENDAI	46.55	64.6	8 28	-1	15 9	-7		
Y.-SAKHLINSK	47.17	52.6	8 34	0	15 20	-5		16 2
BUCHAREST	47.36	304.0	8 37	2	15 41	13		10 26 PP
APATITY	47.47	336.1	8 36K	0	15 31	2		10 25 PP
TIKSI	47.48	17.5	8 35	-1	15 29	0		10 37 PP

HELSINKI	48.88	325.1	8	48	1	15	50	1			
SOFIA	49.52	301.9	8	52	0	16	52	54	12	42	PPP
ATHENS	49.95	295.7	8	56K	1						
WARSAW	50.47	314.5	8	59	0	16	7	-4	11	0	PP
TIMISOARA	50.69	306.1	9	28	27				17	40	
SKALNATE PL.	51.07	310.6				16	44	25	21	28	
KRAKOW	51.22	311.7	9	5	0	16	22	1	10	21	
KHEYS	51.27	353.2	9	6	1				12	11	PPP
BELGRADE	51.34	305.0	9	9	3	16	26	3	11	20	PP
BUDAPEST	51.99	308.5	9	11	0						
KOROR	52.14	105.7	9	21	9				10	19	
MAGADAN	52.25	36.2	9	18	5	16	41	5			
KIRUNA	52.27	334.4	9	12	-1	16	42	6			
RACIBORZ	52.33	311.8	9	13	0				10	44	
UPPSALA	52.51	324.2	9	14K	-1	16	41	2	18	58	SCS
HURBANOVO	52.54	309.1	9	15	0				11	33	
BRATISLAVA	53.24	309.5	9	18	-2	16	57	8	20	52	SS
ZAGREB	54.32	306.8	9	28	0				12	51	PPP
PRUHONICE	54.69	312.0	9	32	1	17	11	2	10	24	PCP
PRAGUE	54.75	312.1	9	33	2	17	12	3	10	28	PCP
SKALSTUGAN	55.17	328.7	9	33	-1						
POTSDAM	55.33	315.1	9	36	1	17	23	6	11	44	PP
COPENHAGEN	55.37	319.1	9	35	-1	17	22	4	17	35	PS
GOTEBORG	55.48	321.6	9	34K	-2						
COLLMBERG	55.50	313.8	9	37	0	17	29	10			
TRIESTE	55.89	306.9	9	36	-3	17	34	9	11	39	PP
CHEB	56.06	312.4	9	40	-1				12	2	PP
HALLE	56.12	314.1	9	41	0	17	30	2	11	53	PP
PLAUEN	56.14	312.9	9	45	4	17	32	4	11	45	PP
REGGIO CALA.	56.14	297.6	9	38	-3						
MESSINA	56.19	297.8	9	44A	2	17	34	5	13	12	PPP
ISFJORD	56.32	346.3	9	48	6						
JENA	56.44	313.5	9	42	-1	17	37	5	11	52	PP
SONNEBERG	56.76	312.9	9	45	-1				11	52	PP
PETROPAVLOVK	56.91	43.8	9	47	0						
ROME	57.58	302.7	9	53A	2	17	25	-22	11	58	PP
BOLOGNA	57.80	306.0	10	13	20				16	38	
RAVENSBURG	58.26	310.0	10	0	4						
STUTTGART	58.33	311.3	9	54	-3	18	1	4	10	31	PCP
TUBINGEN	58.47	311.0	9	56	-2						
CHUR	58.52	309.0	9	56	-2						
EBINGEN	58.60	310.6	9	57	-2						
MUNSTER	58.70	315.2	9	57	-2						
WITTEVEEN	59.12	316.3	10	2A	0						
PAVIA	59.14	307.2	10	3	1	18	21	14	13	42	PPP
BENSBERG	59.18	314.1	10	1	-2				10	38	PCP
STRASBOURG	59.30	311.3	10	3	0	18	18	9	11	7	PCP
BASLE	59.66	310.1	10	7	1						
OROPA	59.85	307.9	10	12	5				16	43	
DE BILT	60.16	315.7	10	13A	4	18	26	5	22	28	SS
NEUCHATEL	60.20	309.6	10	9	-1	18	25	4			
TANANARIVE	60.71	220.7	10	10	-3						
MONACO	60.71	305.9	10	12	-1						
RUMANGABO	61.25	249.3	10	19	2	18	41	7			
NORD	61.53	350.6	10	17	-2	18	43	5			
ASTRIDA	61.68	247.9	10	19K	-1	18	43	3			
LWIRO	62.22	248.9	10	23K	0	18	52	5			
PARIS	62.63	312.5	10	26	0	18	56	4	12	46	PP
UVIRA	62.69	247.5	10	25K	-1	19	12	19			
ABERDEEN	63.06	322.4				18	57	0	23	17	SS
CLERMONT-FD.	63.09	309.1	10	28	-1				22	53	SS
DURHAM	63.42	319.7	10	27	-4	19	5	3	20	32	SKS
KEW	63.62	315.9	10	32K	-1	19	6	2	19	26	PS
SETIF	64.52	298.4	10	36A	-2				10	50	
ALGIERS UNI.	66.09	299.7	10	50A	2	19	37	2	13	29	PP
TORTOSA	66.50	304.6	10	53	2						
RATHFARNHAM	66.51	319.1	10	50K	-1				20	10	
ALICANTE	68.11	302.4	11	0	-1	20	1	2			
RELIZANE	68.34	299.5	11	3K	0				13	37	PP
TAMANRASSET	69.66	285.0	11	10K	-1	20	24	7	11	35	PCP
TOLEDO	70.08	305.1	11	14K	1	20	24	2	13	35	PP
ALMERIA	70.15	301.6	11	12K	-2	20	20	-3			
GRANADA	70.85	302.3	11	19K	1	20	33	2	14	13	PP
MALAGA	71.62	302.2	11	26A	3	20	44	4	14	7	PP
THULE	71.87	353.5	11	22	-2						
PORT MORESBY	72.05	112.8	11	25K	0	20	43	-2	11	31	29 19 SSS
SERRA PILAR	72.71	307.8	11	29K	0				14	15	PP
RABAUL	73.18	105.4	11	31	-1						

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

LISBON	74.15	305.8	11	37K	-1					
RESOLUTE	74.98	359.8	11	41K	-1	21	20	2	14	37 PP
COLLEGE	76.53	20.3	11	50	-1				14	45 PP
CHARTERS TS.	77.83	122.0	11	57	-1	21	49	0		
PIETERMZBURG	78.96	225.9	12	4	-1					
KIMBERLEY	81.97	230.0	12	10A	-11					
ADELAIDE	82.82	137.8	12	25K	0	23	3	22	12	33 PCP
WINDHOEK	83.49	239.2	12	29	1					
GRAHAMSTOWN	83.88	225.5	12	31	1					
BRISBANE	87.28	124.1	12	52	5				28	51 SS
MELBOURNE	88.47	136.4	12	52K	-1				23	34
HERMANUS	89.23	228.7				23	42	-1		
RIVERVIEW	89.81	130.1	13	3	4	23	55	6		
MBOUR	92.33	288.1	13	16	5	24	20	9	16	57 PP
WILKES	98.56	169.6	13	43	4	25	6	2	26	4 PS
HALIFAX	99.66	337.5							26	52 PS
HUNGRY HORSE	99.67	12.4	13	43	-1				17	23 PKP
OTTAWA	102.23	345.9	17	59	777					
SHASTA	104.81	20.8	18	29	8					
RAPID CITY	105.34	5.7							18	30 PP
MINERAL	105.38	20.4	14	16	777				18	1 PP
EUREKA	107.72	16.5	14	22	777				18	29 PKP
BERMUDA	110.87	332.3	19	14	42				27	14
PASADENA	112.14	20.2	19	24	49				29	1 PS
TUCSON TELE.	115.76	14.3	18	44	2				19	34 PP
TUCSON	115.82	14.4	18	45	3				29	14 PKKP
CAPE HALLETT	117.59	159.9	18	49	4				20	0 PP
SCOTT BASE	118.08	166.2	19	14	28					
SOUTH POLE	120.44	180.0	18	50	-1					
HALLEY BAY	124.63	196.6	18	58	-1				20	53 PP
BYRD STATION	129.52	174.7	19	2	-6				21	4 PP
GALERAZAMBA	134.47	331.5							23	7 SKP
FUQUENE	138.49	326.1	19	29	4				22	21 PP
BOGOTA	139.40	325.9	19	24	-3				22	50 SKP
CHINCHINA	139.82	328.3	19	22	-6					
LA PAZ	151.32	293.1	19	52A	5				20	12 PKP2
HUANCAYO	153.71	310.3	19	55	5				23	56 PP

OCTOBER 28 23.H 50.M 7.S EPICENTRE 51.53 179.30 DEPTH= 0.KM
A=-0.62461 B= 0.00760 C= 0.78090 D= 0.0122 E= 0.9999
G=-0.7808 H= 0.0095 K=-0.6247 HT= -6.0

SE= 2.06

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MAGADAN	17.90	307.7	4	17	6							
COLLEGE	21.54	39.1	4	53	1	8	53	6				
UGLEGORSK	23.74	278.8	5	18	4	9	32	5				
YAKUTSK	28.41	311.0	5	57	-1							
TIKSI	29.91	330.7	6	10	-1							
MATUSIRO	32.63	258.9	6	34A	-1	12	4	13			7	34 PP
CHANGCHUN	36.42	279.6	7	7	-1							
RESOLUTE	40.10	24.3	7	39K	1	13	29	-16			9	15 PP
SHASTA	40.82	81.7	7	45	1							
UKIAH	41.23	84.2	7	59	11							
HUNGRY HORSE	41.69	67.1	7	49	-2	13	34	-35			9	48 PCP
BERKELEY	42.60	85.1	8	7	8							
RENO	43.10	81.4	8	3	0							
LICK	43.31	85.2	8	5	0							
BUTTE	43.76	69.2	8	8	0							
PEKING	44.19	280.7	8	12A	0							
FRESNO	44.82	84.5	8	17	0							
BOZEMAN	44.84	68.8	8	17	0							
ULAN-BATOR	45.18	295.3	8	21	1							
KHEYS	45.30	348.8	8	15	-6							
THULE	45.37	17.9	8	21	0							
EUREKA	45.50	78.9	8	21	-1							
NORD	46.83	3.2	8	34	1							
SALT LAKE C.	47.22	74.8	8	36	0							
PASADENA	47.52	86.1	8	37	-1	15	32	-1			9	53
PAOTOW	47.59	285.3	8	40	1							
NANKING	47.66	270.3	8	39	0							
RAPID CITY	50.30	66.1	8	59	-1							
TUCSON	53.35	82.6	9	22	-1							
TUCSON TELE.	53.36	82.4	9	22	-1							

LANCHOW	54.22	284.8	9	29A	0						
APATITY	58.51	345.4	9	59	-1						
SODANKYLA	59.65	348.1	10	8	0						
KIRUNA	59.91	350.9	10	7	-3						
FAYETTEVILLE	60.74	67.9	10	14K	-1						
SVERDLOVSK	60.82	326.5	10	17	1						
SHAWINIGAN	64.38	46.7	10	38	-1						
SKALSTUGAN	64.78	353.6	10	41	-1						
SEVEN FALLS	64.82	45.2	10	45	3						
PULKOVO	66.26	343.4	10	51	-1					19	41
PORT MORESBY	66.73	214.9				19	43	-3			
HELSINKI	66.75	346.4	10	54	-1						
UPPSALA	67.99	350.1	11	1	-2					11	15
NAMANGAN	68.48	309.1	11	6	0	20	20	13			
MOSCOW	68.48	337.8	11	4	-2						
SHILLONG	68.87	284.7	11	8A	0						
SUVA	69.38	180.9								13	27 PP
COLUMBIA	69.67	60.9	11	12	-1						
GOTEBORG	70.64	352.8	11	25	6						
WARSAK DAM	73.95	304.6	11	38	0						
LAHORE	74.41	301.1	11	43	2						
RATHFARNHAM	75.44	3.5	11	46K	-1						
WITTEVEEN	75.84	355.4	11	50	1						
CHARTERS TS.	76.89	211.8	11	52	-3						
KEW	77.37	359.8	11	58	0					27	23 SS
JENA	77.39	352.1	11	58	0					12	23
BENSBERG	77.67	354.9	11	59	0						
PLAUEN	77.76	351.6	11	58	-2						
PRUHONICE	78.04	350.0	12	1	-1					12	42
KISHINEV	78.60	339.9	12	4	-1						
TIFLIS	79.05	327.1	12	8	1						
QUETTA	79.35	305.4	12	10	1	22	14	5		22	26 SKS
STUTTGART	79.72	353.4	12	10	-1						
TUBINGEN	79.97	353.4	12	12	0						
PARIS	80.00	357.9	12	14	2						
STRASBOURG	80.01	354.3	12	12	0					13	13
EBINGEN	80.32	353.5	12	13	-1						
KARACHI	82.81	302.8	12	32	5						
ROME	86.24	350.2								24	29 PS
KARAPIRO	89.14	183.0	12	57	-1					16	19
KSARA	89.14	330.3	12	56	-2						
SAN JUAN	90.11	59.7	13	3	0						
ALICANTE	90.49	359.8	13	3	-1	23	55	-3			
JERUSALEM	91.24	330.0								30	18
OASIS-BUNG.	131.55	212.2								22	36
MIRNY	134.39	214.0								23	12
BYRD STATION	135.76	167.3	19	19	-3						
SOUTH POLE	141.34	180.0	19	24	-8					22	43 SKP
KIMBERLEY	150.32	310.3	19	45K	-2						
HALLEY BAY	153.79	165.6	19	56	4					23	29 PKS

OCTOBER 29 7.H 44.M 10.S EPICENTRE 51.49 179.41 DEPTH= 0.KM

A=-0.62512 B= 0.00640 C= 0.78050 D= 0.0102 E= 0.9999
G=-0.7805 H= 0.0080 K=-0.6252 HT= -6.0

SE= 2.38

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
PETROPAVLOVK	12.81	285.5	3	6	0	5	30	0				
MAGADAN	17.97	307.8	4	15	2						7	43
COLLEGE	21.53	39.0	4	53	1	8	39	-8				
NEMURO	24.13	263.6	5	15A	-3	9	32	-2				
Y.-SAKHLINSK	24.22	273.7	5	19	0						7	49
ABASHIRI	24.59	266.2	5	27	5							
KUSIRO	25.05	264.0	5	27	0	9	54	5			10	17
WAKKANAI	25.54	271.2				9	11	-47			10	21
OBIHIRO	25.83	264.9	5	32	-2	9	56	-6			6	23
ASAHIGAWA	25.90	267.3	5	37	2							
URAKAWA	26.51	263.9	5	41	0	10	16	2				
SITKA	26.61	60.1	6	3	22							
SAPPORO	26.90	266.8	5	43	-1	10	19	-1			11	20 SS
TOMAKOMAI	27.05	265.6	5	49	3							
MORI	27.91	265.7	5	56	3	10	38	2				
HAKODATE	27.99	265.0	5	50	-4							

HATINOHE	28.20	262.1	5	56	0	10	41	0		
MIYAKO	28.45	260.2	6	7	9	10	41	-4		
AOMORI	28.50	263.3	5	59	0				8	18
MORIOKA	28.91	261.1	6	2	0	10	51	-2		
MIZUSAWA	29.28	260.2	6	8	2	11	54	56		
AKITA	29.56	262.1	6	7	-1	11	6	3		
ISINOMAKI	29.60	258.9	6	8	-1				6	57
SENDAI	29.95	259.0	6	9	-3	11	3	-6		
TIKSI	29.98	330.7	6	11	-1	11	7	-3	9	11 PCP
YAMAGATA	30.30	259.5	6	18	3					
HUKUSIMA	30.54	258.6	6	17	0				13	23
ONAHAMA	30.79	257.0	6	45	26				7	32
SHIRAKAWA	31.10	257.9	6	25	3	11	25	-2		
NIIGATA	31.31	260.3	7	1	37	12	9	39		
UTUNOMIYA	31.68	257.5	6	27	0	11	45	9	7	21
AIKAWA	31.74	261.2	6	29	2	11	39	2	7	32
TOKYO C.M.O.	32.33	256.4	6	36	3	11	36	-10		
TITIBU	32.54	257.4	6	34	0					
YOKOHAMA	32.55	256.1				11	48	-2	6	50
NAGANO	32.63	259.3	6	37	2	11	51	0		
OIWAKE	32.63	258.5	6	40	5					
MATUSIRO	32.69	259.1	6	34A	-2	11	41	-11	7	37 PP
VLADIVOSTOK	32.78	274.2	6	42	5	11	54	1		
MERA	32.79	255.2	6	51	14					
MATUMOTO	33.04	258.9	6	38	-1					
HUNATU	33.04	257.1							7	40 PP
KOHU	33.08	257.5	6	39	0					
MISIMA	33.19	256.4	6	45	5				12	45
SHIZUOKA	33.62	256.7	6	42	-2					
OMAESAKI	33.98	256.4	6	58	11				14	13
SUIHWA	34.08	282.9	6	48	0					
HUKUI	34.21	260.2	6	50	1					
GIHU	34.33	258.9	6	50	0				8	2
NAGOYA	34.36	258.4	6	53	3	11	56	-22		
IBUKISAN	34.58	259.3	6	56	4					
HIKONE	34.74	259.2	6	55	2				7	42
KIPAPA	34.79	141.2	6	53	-1					
HONOLULU	34.86	141.4	6	56	1	12	24	-2		
KAMEYAMA	34.88	258.5	6	51	-4				11	10
ABUYAMA	35.42	259.4	6	57A	-2	12	30	-4	7	58
TOYOOKA	35.45	260.9	7	0	0	12	46	11	8	17 PP
OSAKA	35.59	259.1	7	2A	1	12	35	-2		
TOTTORI	35.83	261.4	7	5	2	12	38	-3		
VICTORIA	36.06	71.6	7	3A	-2	12	44	0	9	29
SUMOTO	36.19	259.3	7	10A	4	12	44	-2	7	55
SIOMISAKI	36.25	257.4	7	5	-1	12	48	1		
YONAGO	36.42	262.1	7	11	3	12	54	4		
CHANGCHUN	36.50	279.7	7	8A	0	12	47	-4	8	33 PP
TOKUSIMA	36.56	259.3	7	9	0					
MATSUE	36.58	262.4	7	13	4					
TAKAMATU	36.72	260.1	7	8	-2	12	52	-2		
SEATTLE	37.13	72.3	7	15	1	13	9	8		
KOTI	37.56	259.6	7	18	1	13	8	1	8	44 PP
HAMADA	37.56	262.6	7	20	3	13	7	0		
HAWAII V.OB.	37.68	138.7	7	16	-2	13	9	0		
HIROSIMA	37.69	261.6	7	15	-3	13	2	-7		
MATUYAMA	37.85	260.7	7	20	0	12	44	-28	15	6
CORVALLIS	38.06	77.3	7	21A	-1					
SIMIDU	38.42	259.2	7	21	-4	13	1	-19		
SIMONOSEKI	38.89	262.4	7	29	0					
OOITA	38.95	261.0	7	34	5				16	26
HUKUOKA	39.46	262.5	7	35	2	13	32	-4		
SAGA	39.75	262.2	7	35	-1					
ITUHARA	39.75	264.2				12	35	-65		
KUMAMOTO	39.79	261.3	7	43	7					
MIYAZAKI	39.96	259.7	7	39	2	13	42	-2		
RESOLUTE	40.10	24.3	7	39A	0	13	47	1	9	21 PP
NAGASAKI	40.36	262.0	7	43	2	13	52	2		
KAGOSIMA	40.74	260.1	7	42	-2	13	55	0		
SHASTA	40.76	81.8	7	45K	1				9	2
TOMIE	41.12	262.8	7	48	1	14	4	3		
UKIAH	41.17	84.3	7	50	3					
MINERAL	41.45	81.7	7	50K	0					
YAKUSIMA	41.55	258.9	7	52	2	13	56	-11		
HUNGRY HORSE	41.64	67.1	7	50	-1	13	38	-30	9	27 PP
BERKELEY	42.53	85.1	7	58A	-1	14	25	3		
RENO	43.04	81.4	8	3A	0					
LICK	43.25	85.3	8	4A	0	13	34	-58		
BUTTE	43.71	69.3	8	7	-1	13	43	-56		

PEKING	44.26	280.8	8	13A	0	14	44	-3	10	2	PP
IRKUTSK	44.39	301.9	8	14A	0	14	47	-2	18	5	SCS
FRESNO	44.75	84.6	8	18A	1						
BOZEMAN	44.79	68.8	8	26	9				9	19	
ULAN-BATOR	45.26	295.4	8	21	0	15	1	0			
KHEYS	45.35	348.8	8	14	-7	14	46	-17	18	8	SCS
THULE	45.38	17.9	8	21A	-1	13	51	-72			
EUREKA	45.44	78.9	8	21	-1	15	4	0	38	58	PKPPKP
NORD	46.87	3.2	8	34A	1	15	22	-2	13	59	PCS
ZO-SE	46.88	267.6	8	32	-1	15	21	-3	10	19	PP
GUAM	47.09	229.1	8	30	-5						
SALT LAKE C.	47.16	74.8	8	36	0						
PASADENA	47.45	86.1	8	37	-1	15	29	-4	10	26	PP
PAOTOW	47.67	285.4	8	41	1	15	36	0			
NANKING	47.73	270.4	8	39A	-1	15	30	-6	10	29	PP
TRUK	49.43	217.2	8	52	-1						
RAPID CITY	50.25	66.2	8	59	-1				14	14	
ISFJORD	50.42	356.2	9	1	0						
WUHAN	51.41	272.2	9	8	0						
SIAN	52.40	279.8	9	15	-1						
TUCSON	53.29	82.6	9	22	0	16	58	5	11	43	PP
TUCSON TELE.	53.30	82.4	9	21	-2				39	46	PKPPKP
LANCHOW	54.29	284.9	9	29A	-1	17	0	-7	11	35	PP
SCORESBY SD.	57.36	8.4	9	52	0						
KOROR	57.46	236.2	9	50A	-3				10	47	PCP
CANTON	57.51	266.8	9	52	-1	17	45	-5	12	0	PP
HONG KONG	57.53	265.5	9	54	1	17	53	3	11	56	PP
SEMIPALATNSK	57.59	311.5	9	52	-2						
CHENGTU	57.87	280.0	9	54A	-2	17	50	-5			
BAGUIO CITY	58.01	255.5	9	51	-6						
APATITY	58.56	345.4	9	59	-1	18	4	0	10	34	PCP
CHIHUAHUA	58.75	82.3	10	3	1	18	3	-3	25	3	
SODANKYLA	59.70	348.2	10	6	-2				39	42	PKPPKP
KIRUNA	59.96	351.0	10	8	-2	18	20	-2			
RABAUL	60.16	211.8	10	7	-4						
FAYETTEVILLE	60.69	68.0	10	0A	-15	18	25	-6			
SVERDLOVSK	60.89	326.5	10	18	2	18	35	1	12	40	PP
FLORISSANT	60.97	63.3	10	16	-1	18	29	-6	20	29	SCS
ST. LOUIS 1	61.16	63.4	10	16A	-2	18	35	-2			
DALLAS	61.44	72.3	10	19	-1						
LITTLE ROCK	62.68	67.8	10	27	-1	18	52	-4	20	17	SCS
KUNMING	62.69	276.5	10	26A	-3	18	48	-8	12	45	PP
PHU-LIEN	63.34	270.3	10	34	1				20	16	
REYKJAVIK	63.52	10.3	10	36	2						
CLEVELAND	63.83	55.8	10	35	-1	19	7	-4			
OTTAWA	63.84	49.3	10	32	-4	19	6	-5	11	11	PCP
SHAWINIGAN	64.35	46.8	10	37	-2				11	21	PCP
BREBEUF	64.75	48.1	10	39K	-3	19	12	-10			
SEVEN FALLS	64.80	45.3	10	41	-1	19	19	-4	21	17	
PITTSBURGH	65.40	55.6	10	46	0						
AFIAMALU	65.57	170.6				19	58	26			
FRUNSE	65.70	308.8	10	48A	0	19	34	0	19	57	PS
MORGANTOWN	66.00	56.2	10	52	2						
PENNSYLVANIA	66.20	54.0	10	52	1	19	36	-4	13	18	PP
PULKOVO	66.31	343.5	10	50	-2	19	40	-1	23	56	SS
TOCKLAI	66.32	283.6	10	56	4						
LHASA	66.45	288.3	10	53A	0	19	43	0	13	20	PP
PORT MORESBY	66.73	215.0	10	52A	-3	19	41	-5	20	15	PPS
HELSINKI	66.80	346.4	10	53	-2						
GEORGETOWN	68.03	54.9	11	4K	1				21	2	SCS
WASHINGTON	68.03	54.9	10	50	-13	19	46	-16			
UPPSALA	68.04	350.2	11	2	-1	20	0	-2	39	14	PKPPKP
FORDHAM	68.15	51.5	11	1	-3	19	54	-9	22	6	
WESTON	68.20	48.9	11	2A	-2	20	6	2			
MOSCOW	68.55	337.9	11	5	-1						
SHILLONG	68.95	284.8	11	8	-1	20	18	5	13	43	PP
SUVA	69.35	181.0	11	12K	1	20	21	3	13	56	PP
TASHKENT	69.43	310.9	11	10	-2	20	19	0	13	38	PP
COLUMBIA	69.62	60.9	11	12	-1						
TACUBAYA	69.75	84.1	11	14K	0						
HALIFAX	69.89	42.7	11	14A	0	20	17	-7	13	37	PP
GOTEBORG	70.68	352.9	11	18	-1						
CHATRA	70.82	289.0	11	20	0	20	50	15			
CHITTAGONG	71.37	282.6	11	23	0	20	41	0	14	2	PP
ABERDEEN	71.69	0.9				20	44	-1	25	32	SS
VERA CRUZ	71.81	81.9	11	58	32				18	52	
STALINABAD	71.85	309.4	11	26	0				21	49	
COPENHAGEN	72.65	352.3	11	30	-1	21	0	4	21	37	SKS
DEHRA DUN	73.41	297.8	11	36	1	21	4	0	14	20	PP

BOKARO	73.89	288.0	11	37	-1	21	24	14	14	24 PP
WARSAK DAM	74.03	304.7	11	38	-1					
DURHAM	74.10	0.6	11	39A	0	21	9	-3	21	46 SKS
NOUMEA	74.35	192.5	11	39	-2	21	27	12	12	20
MERIDA	74.48	75.9	11	51	9	21	17	1	19	35
LAHORE	74.48	301.2	11	39A	-3	21	15	-1	14	21 PP
WARSAW	75.05	346.4	11	47K	2	21	29	6	21	55 PS
RATHFARNHAM	75.47	3.5	11	50	3					
POTSDAM	75.86	351.4	11	53	3	22	20	48	14	39 PP
AGRA	75.88	295.7	11	48A	-2	21	29	-3	14	41 PP
DE BILT	76.67	356.3	11	56	2	21	44	3	27	10 SS
HALLE	76.83	352.0	11	54	-1	21	2	-40	12	13 PCP
CHARTERS TS.	76.90	211.9	11	52	-3	21	37	-6		
LWOW	76.90	343.9							12	57
COLLMBERG	76.94	351.3	10	55	-61	22	23	40	27	20 SS
ASHKABAD	77.12	316.0	11	58A	1				16	41 PPP
KRAKOW	77.34	346.6	11	57	-1				14	49 PP
KEW	77.41	359.8	11	58	0	21	54	5	22	12 SCS
JENA	77.43	352.1	11	57	-1	21	50	1	14	57 PP
RACIBORZ	77.55	347.7	11	59	0				12	10 PCP
BENSBERG	77.71	355.0	12	OK	0				23	4 SP
PLAUEN	77.81	351.7	11	57	-3	23	2	69	14	56 PP
PRAGUE	78.01	350.2	12	3	1	21	56	1	22	50 PS
SONNEBERG	78.01	352.3	12	0	-2				14	55 PP
PRUHONICE	78.09	350.1	12	2	0	21	55	-1	22	43 PS
SKALNATE PL.	78.14	346.2	12	7	5	22	2	6	26	50 SS
IASI	78.75	340.8	12	6	0	22	28	25		
PORT BLAIR	78.92	274.8	12	9	2	21	58	-7	12	25 PCP
TIFLIS	79.12	327.1	12	7	-1	22	12	5	15	10 PP
BERMUDA	79.35	50.8	12	8	-1	22	6	-3	27	52 SS
SIMFEROPOL	79.36	335.7	12	9A	0	22	14	5	15	9 PP
QUETTA	79.42	305.5	12	9A	0	22	9	-1	15	8 PP
BRATISLAVA	79.57	348.1	12	12	2	22	16	4	15	3 PP
HURBANOVO	79.71	347.3				22	16	3	14	18
STUTTGART	79.76	353.4	12	10	-1	22	10	-4	14	56 PP
BUDAPEST	79.97	346.6							12	14 PCP
TUBINGEN	80.01	353.5	12	12	0					
PARIS	80.04	357.9	12	14A	1	22	18	1	15	33 PP
STRASBOURG	80.05	354.4	12	14	1	22	10	-7	15	12 PP
EBINGEN	80.37	353.5	12	14	0					
BASLE	81.11	354.4	12	17	-1					
CAMPULUNG	81.11	342.0	12	23	5					
MEDAN	81.44	265.0	12	19K	-1				23	23
CHUR	81.65	353.0	12	21A	0					
NEUCHATEL	81.67	354.8	12	21	0	22	33	0		
BUCHAREST	81.71	341.0	12	12A	-9	22	35	1	13	48
BRISBANE	81.99	203.5	12	20K	-3	22	34	-3		
ZAGREB	82.02	348.4	12	22A	-1					
TRIESTE	82.45	349.9	12	25	0	22	36	-5	15	49 PP
KARACHI	82.89	302.9	12	32A	5	22	56	10		
OROPA	82.98	354.0	12	25	-3				15	47
CLERMONT-FD.	83.06	357.4	12	30	2	22	52	4	27	50 SS
HYDERABAD	83.17	289.3	12	30A	1	22	47	-2	15	43 PP
PAVIA	83.34	353.1	12	31A	1				23	23 PS
BOLOGNA	83.83	351.5				23	24	29		
SOFIA	83.91	342.5	12	35	2	22	59	3	15	51 PP
DJAKARTA	84.11	252.5	12	32	-2					
LEMBANG	84.16	251.5	12	33	-1					
ISTANBUL KA.	84.26	337.9	12	30	-4					
MONACO	84.90	354.2	12	37	-1					
SKOPJE	84.96	343.7	12	57K	19	22	58	-9	22	15
BOMBAY	85.28	294.4	12	41	1	23	13	3	16	2 PP
MADRAS	85.60	285.2	12	44	3	23	15	2	16	11 PP
ROME	86.29	350.3	12	46A	1	23	16	-3	12	48 PCP
SERRA PILAR	87.49	6.1	12	52A	2					
ATHENS	88.40	341.0	12	41	-14					
RIVERVIEW	88.52	203.2	12	56A	1	23	40	0		
TOLEDO	88.95	2.7	12	57	0	23	44	-1	16	21 PP
KARAPIRO	89.10	183.1	12	56	-2					
KSARA	89.21	330.3	13	0	1				16	34 PP
KODAIKANAL	89.41	285.6	13	2	2	23	38	-11		
MESSINA	89.57	347.4	12	52	-8	23	36	-14	16	35
SAN JUAN	90.07	59.8	13	2	-1				17	44
CANBERRA	90.48	204.5	13	4	-1					
ALICANTE	90.53	359.9	13	2	-3	23	54	-5	29	55 SS
GALERAZAMBA	90.99	71.4	13	9	2	23	22	-41	24	17 SKKS
JERUSALEM	91.30	330.1	13	4	-4				16	41 PP
GRANADA	91.66	2.4	13	42	32					

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ALMERIA	92.01	1.5			24	4	-8			
ALGIERS UNI.	92.05	357.1	13	14	2			16	54	PP
MALAGA	92.09	3.1	13	16	4			25	32	PS
WELLINGTON	92.48	183.5			23	36	-40	33	50	SSS
ADELAIDE	93.18	212.4	13	16	-1	24	25	3		
MELBOURNE	93.92	206.7	13	22	2	24	32	3		
ST. CLAUDE	94.37	57.6	13	25	3					
DOMINICA	95.14	57.8						15	23	
CHINCHINA	95.38	75.2	13	28	1	23	59	-42	24	45 SKKS
FUQUENE	96.12	73.4	13	33	3	24	5	-42	17	26 PP
BOGOTA	96.59	74.2	13	37	4	24	9	-42	17	37 PP
ST. VINCENT	96.98	58.8	13	22	-12					
ROXBURGH	97.05	187.1				24	56	1	24	10 SKS
TRINIDAD	98.91	60.4	13	43	0					
TAMANRASSET	105.86	354.1	14	14	777	24	51	5	18	32 PP
HUANCAYO	108.83	85.7	18	21	-9				28	20 PS
MBOUR	112.87	17.3	18	39	1	25	35	12	19	46 PP
LA PAZ	116.70	83.0	17	50	-56	25	40	2	19	58 PP
CAPE HALLETT	123.66	183.3	19	0	1	26	8	6	20	55 PP
ASTRIDA	125.05	322.0	18	58	-4				20	56 PP
LWIRO	125.08	323.2	19	5	3				15	43
UVIRA	126.09	322.3	19	6	2				20	58 PP
SANTA LUCIA	127.30	98.7				26	11	-1	21	13 PP
WILKES	128.47	208.9	19	14	5				21	21 PP
SCOTT BASE	129.31	183.4	19	10	0				22	20 PKS
TANANARIVE	130.28	292.5	19	14	2				21	28 PP
OASIS-BUNG.	131.55	212.2	19	13	-2				21	33 PP
MIRNY	134.40	214.0	19	19	-1				28	31 SKKS
BYRD STATION	135.71	167.4	19	10	-12				22	27 PP
SOUTH POLE	141.31	180.0	19	24	-8				23	9 SKP
WINDHOEK	148.04	328.0	19	48	4					
PIETERMZBURG	148.26	301.5	19	48	4					
KIMBERLEY	150.40	310.4	19	49	1					
GRAHAMSTOWN	153.18	302.1	19	54	2					
HALLEY BAY	153.74	165.6	19	50	-2				23	13 PKS
HERMANUS	157.72	312.3							24	13 PP

OCTOBER 29 7.H 55.M 13.S EPICENTRE 51.37 179.15 DEPTH= 0.KM
A=-0.62672 B= 0.00929 C= 0.77919 D= 0.0148 E= 0.9999
G=-0.7791 H= 0.0116 K=-0.6268 HT= -5.9

SE= 1.60

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COLLEGE	21.72	39.0	4	56	1								
MATUSIRO	32.51	259.0	6	35A	0						9	21	PCP
HONOLULU	34.87	140.9	6	54	-2								
VICTORIA	36.26	71.3	7	8	1						9	32	
CORVALLIS	38.24	77.0	7	28A	4								
RESOLUTE	40.28	24.2	7	41	0	13	31	-18			9	43	PPP
SHASTA	40.94	81.5	7	47K	1								
UKIAH	41.35	84.0	7	51	1								
MINERAL	41.63	81.4	7	53K	1								
HUNGRY HORSE	41.84	66.8	7	53	-1								
BERKELEY	42.71	84.8	8	1K	0						9	52	
RENO	43.22	81.1	8	6K	1								
LICK	43.42	84.9	8	7K	0						9	55	
BUTTE	43.90	69.0	8	9	-2								
FRESNO	44.93	84.3	8	19K	0								
BOZEMAN	44.98	68.6	8	19	0								
EUREKA	45.62	78.6	8	24	0								
NORD	47.00	3.1	8	36	1								
SALT LAKE C.	47.35	74.6	8	38	0								
PASADENA	47.63	85.8	8	40	0								
RAPID CITY	50.45	65.9	9	1	-1								
TUCSON	53.47	82.3	9	25	0								
TUCSON TELE.	53.48	82.2	9	25	0								
SCORESBY SD.	57.50	8.2	9	54	0								
SODANKYLA	59.7	348.1	10	8	-2						10	55	PCP
KIRUNA	60.05	350.9	10	10	-2								
OTTAWA	64.04	49.2	10	36	-2								
SHAWINIGAN	64.56	46.6	10	40	-2								
BREBEUF	64.95	47.9	10	41K	-3								
SEVEN FALLS	65.00	45.1	10	42	-2								

PORT MORESBY	66.54	214.8	10	53	-1						
HELSINKI	66.88	346.3	10	55	-1						
UPPSALA	68.13	350.1	11	3	-1						
WESTON	68.41	48.7	11	5K	-1						
SHILLONG	68.82	284.6	11	13A	4						
GOTEBORG	70.78	352.7	11	20	-1						
CHITTAGONG	71.23	282.4	11	23	0	20	41	1	14	2	PP
WARSAK DAM	73.96	304.5	11	40	1						
LAHORE	74.41	301.0	11	40	-2	21	16	0			
RATHFARNHAM	75.60	3.4	11	49A	0						
CHARTERS TS.	76.71	211.6	11	53	-2				22	57	
COLLMBERG	77.03	351.1	11	57	0						
KEW	77.53	359.7	12	0	0						
PRUHONICE	78.16	349.9	12	4	1				13	17	
QUETTA	79.36	305.3	12	11A	1	22	11	1	15	10	PP
BRATISLAVA	79.65	347.9	12	14	3						
STUTTGART	79.87	353.3	12	12	0						
TUBINGEN	80.11	353.3	12	14	0						
STRASBOURG	80.15	354.2	12	13	-1				12	43	
PARIS	80.15	357.8	12	15	1						
EBINGEN	80.47	353.4	12	16	0						
BUCHAREST	81.77	340.8	11	53	-29				12	36	
KARACHI	82.82	302.7	12	34	6						
ISTANBUL UN.	84.35	337.8	12	35	-1						
SAN JUAN	90.27	59.6	13	4	0						
TAMANRASSET	105.96	353.9							18	46	PP
LA PAZ	116.88	82.8	18	13	-34						
ASTRIDA	125.04	321.6	19	4K	1				20	58	PP
LWIRO	125.08	322.8	19	6	3						
UVIRA	126.08	321.9							21	1	PP
SCOTT BASE	129.19	183.4	19	10	-1				21	17	PP
BYRD STATION	135.63	167.4	19	21	-2				22	50	SKP
SOUTH POLE	141.19	180.0	19	28	-5				23	6	SKP
WINDHOEK	148.05	327.4	19	50	5						
KIMBERLEY	150.35	309.8	19	55K	7						
HALLEY BAY	153.66	165.7	20	0	7	26	58	-1			

OCTOBER 31 19.H 2.M 58.S EPICENTRE -3.37 145.71 DEPTH= 0.KM

A=-0.82480 B= 0.56240 C=-0.05837 D= 0.5634 E= 0.8262
G= 0.0482 H=-0.0329 K=-0.9983 HT= 7.1

SE= 2.40

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT MORESBY	6.16	166.7	1	35K	0	3	1	14			3	38	
RABAUL	6.50	97.5	1	42	2	3	28	33			1	45	PP
TRUK	12.39	29.6	2	55	-6								
KOROR	15.45	313.5	3	47	6	8	2	88					
CHARTERS TS.	16.55	178.2	3	55	0	7	9	9					
GUAM	16.76	356.8	3	57	-1								
BRISBANE	24.98	164.5	5	28A	1	9	55	6					
NOUMEA	27.55	134.8	6	3	12								
RIVERVIEW	30.73	171.1	6	12	-7	11	10	-12					
CANBERRA	31.94	174.9	6	28A	-2						15	8	
ADELAIDE	32.07	190.9	6	31	0								
SUVA	35.24	117.0				12	33	1					
HONG KONG	40.01	311.1	7	42	3	13	47	2					
MATUSIRO	40.32	350.7	7	40A	-1	13	47	-3					
KARAPIRO	43.89	145.4	8	14	4								
WELLINGTON	45.89	149.3				14	57	-14			18	40	SCS
ROXBURGH	46.82	157.3				15	30	6					
VLADIVOSTOK	47.93	346.4	8	44	2	15	43	3					
KUNMING	50.41	306.6	9	2	0	16	19	4					
CHANGCHUN	50.44	340.9	9	3	1								
PAOTOW	54.56	327.0	9	33	0								
SHILLONG	59.54	302.2	10	5A	-3								
ULAN-BATOR	61.31	331.3	10	21	1								
CALCUTTA	61.61	297.7	9	35	-47	18	51	7			24	56	SSS
LHASA	61.72	306.2	10	23	0	18	48	3					
DUMONT	63.31	182.5	10	33	0	19	6	1					
CHATRA	63.94	302.0	10	34	-4								
BOKARO	64.22	298.4				18	55	-21					
WILKES	67.40	194.7									19	57	PS
OASIS-BUNG.	70.11	197.8	11	16	0						25	24	

CAPE HALLETT	70.53	172.2	11	17	-2	20	37	5	16 9	PPP
DEHRA DUN	72.62	303.1				20	59	3		
MIRNY	72.81	199.5	11	33	0	20	57	-1		
BOMBAY	74.97	290.5				21	29	6		
SCOTT BASE	75.26	175.5	11	47	0	21	34	8	22 28	
TIKSI	75.66	354.6	11	50	1					
WARSAK DAM	78.82	305.4	12	6	-1					
NAMANGAN	80.23	312.4	12	17	3	22	24	5		
KARACHI	81.29	296.6	12	20	0	22	36	6		
QUETTA	81.99	300.9	12	22	-2	22	39	1	15 34	PP
COLLEGE	83.26	23.2	12	29	-1					
SOUTH POLE	86.65	180.0	12	46	-1					
BYRD STATION	87.54	170.0	12	51	0					
TIFLIS	100.38	311.6							17 25	
RESOLUTE	100.75	13.6							27 2	PS
HALLEY BAY	101.10	182.0	13	56	2				17 59	PP
KSARA	108.32	304.4							19 1	
SETIF	130.97	316.8							22 11	
TAMANRASSET	136.91	300.1	19	25	0				21 50	PP
SAN JUAN	145.46	62.0	19	39	-1					

OCTOBER 31 23.H 39.M 31.S EPICENTRE 24.61 122.53 DEPTH= 106.KM

DEPTH OF FOCUS= 0.012R

A=-0.48951 B= 0.76736 C= 0.41417 D= 0.8431 E= 0.5378
G=-0.2227 H= 0.3492 K=-0.9102 HT= 3.5

SE= 1.92

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
ILAN	0.73	282.5	0	18	-1	0	29	-5					
TAIPEI	1.01	294.4	0	21	0	0	36	-1					
HWALIEN	1.05	232.7	0	18	-3	0	36	-2					
HSINCHU	1.43	277.8	0	27	1	0	45	-1					
TAICHUNG	1.75	255.1	0	32	2	0	49	-4					
YUSHAN	1.84	232.4	1	59	88	2	20	86					
HSINKONG	1.85	215.5	0	29	-2	0	49	-6					
ALISHAN	1.92	235.9	0	32	0	0	55	-1					
TAITUNG	2.25	214.7	0	35	-1	1	2	-2					
TAINAN	2.66	233.3	0	44	2	1	15	1					
TAWU	2.71	214.0	0	41	-2	1	10	-5					
KAOHSIUNG	2.87	226.8	0	50	5	1	19	0					
PENGHU	2.93	249.0	0	42	-4	1	16	-4					
HENGCHUN	3.08	212.6	0	47	-1	1	22	-2					
ZO-SE	6.57	349.8	1	34K	-1	2	45	-4	11	53		*SP	
HONG KONG	8.02	255.0	1	53K	-2	3	17	-7					
NANKING	8.11	336.9	1	56K	0	3	25	-2	2	14		*SP	
BAGUIO CITY	8.35	193.0	2	0	1	3	30	-3					
CANTON	8.61	261.7	2	1	-2	3	35	-4	2	19		*SP	
FUTZELING	8.64	321.8	2	4	1	3	44	4					
WUHAN	9.21	311.6	2	12	1								
MANILA	10.09	188.6	2	24	1	4	14	0					
DAIREN	14.26	357.1	3	22	4								
SIAN	15.25	312.1	3	32	2	6	25	9					
PEKING	16.28	342.3	3	55A	12	6	44	4	4	9		*SP	
TATUNG	17.29	335.5	4	1	6								
CHENGTU	17.48	294.3	3	58K	0	7	6	-1	4	13		PP	
MATUSIRO	17.97	44.9	4	0	-4	7	14	-3	5	15			
KUNMING	18.03	275.5	4	6K	2	7	23	4	4	29		*SP	
PAOTOW	19.06	329.7	4	16K	0				4	39		*SP	
CHANGCHUN	19.30	6.1	4	18K	0	7	46	0	4	36		PP	
LANCHOW	19.75	309.7	4	25K	2	7	59	4	4	45		PP	
KOROR	20.64	144.4	4	33	1								
GUAM	23.71	113.8	5	2	0				5	21	5	41	PP
ULAN-BATOR	26.35	335.9	5	27	0								
SHILLONG	27.76	278.5	5	41K	1								
CHITTAGONG	28.23	271.8	5	46	2				6	8	6	49	PP
LHASA	28.42	287.2	5	47A	1	10	27	3			6	11	*SP
IRKUTSK	30.90	338.0	6	6	-2								
MEDAN	31.07	231.5	6	11A	1						6	32	
CALCUTTA	31.36	273.3				11	6	-4					
CHATRA	31.88	281.7	6	16	-1	11	21	3					
TRUK	32.81	116.4	6	25	0				7	0			
YAKUTSK	37.71	5.5	7	4	-2								
RABAUL	40.63	130.8	7	32	2								

PORT MORESBY	41.47	141.6	7	38A	1	13	46	2	8	12	9	59	PPP
WARSAK DAM	45.04	294.2	8	8	2								
NAMANGAN	45.13	304.0	8	17	10	14	41	3					
BOMBAY	46.33	273.1									14	29	
TIKSI	47.18	2.7	8	21	-2	15	2	-5					
QUETTA	49.26	289.5	8	40A	1	15	40	4	9	3	10	39	PP
KARACHI	49.90	283.8	8	46A	2	15	52	7					
CHARTERS TS.	50.01	150.4	8	45	0						10	4	
ADELAIDE	61.17	164.8	10	5A	0				10	28			
CANBERRA	64.66	156.2	10	29K	1				10	59			
TIFLIS	65.21	306.3	11	12	40								
MELBOURNE	65.59	160.6	10	34	0						10	57	
APATITY	67.18	335.4	10	43A	-1								
MOSCOW	67.22	322.3	10	40	-4								
COLLEGE	67.86	27.5	10	46	-2				11	11			
SODANKYLA	69.78	335.8	10	59	-1								
PULKOVO	70.16	327.5	11	1	-2	20	50	46					
KIRUNA	71.90	337.0	11	12A	-1								
NORD	72.04	354.2	11	12A	-2						11	31	PCP
HELSINKI	72.61	328.7	11	16	-1								
KSARA	74.12	300.2	11	26	0								
JERUSALEM	75.32	298.4	11	27	-6				11	53			
UPPSALA	76.15	329.8	11	36A	-1						12	32	
SKALSTUGAN	76.73	334.5	11	39	-2								
RESOLUTE	78.05	9.5	11	47A	-1						14	39	PP
THULE	78.98	2.6	11	51	-2								
HELWAN	79.13	297.8	11	54	0	21	45	2					
KARAPIRO	79.64	140.1	11	57	0						12	20	
GOTEBORG	79.76	329.3	11	59A	2								
PRUHONICE	82.25	321.7	12	11	1						15	1	PP
COLLMBERG	82.45	323.4	12	12	1								
HALLE	82.92	323.9	12	11	-3				12	59	15	23	PP
PLAUEN	83.32	322.9	12	13	-3								
JENA	83.41	323.5	12	15	-1				12	42	14	35	
TANANARIVE	84.85	246.6	11	45K	-38						12	54	PP
TRIESTE	84.86	318.2	12	22	-2								
STUTTGART	85.87	322.5	12	28	0				12	50			
TUBINGEN	86.07	322.3	12	29	0								
EBINGEN	86.32	322.1	12	31	0								
VICTORIA	86.40	37.5	12	32A	1								
STRASBOURG	86.76	322.8	12	34	1								
CORVALLIS	88.66	40.7	12	43	1								
SHASTA	91.39	43.5	12	55A	0								
HUNGRY HORSE	91.49	33.8	12	57	2						30	15	PKKP
OASIS-BUNG.	92.01	188.7	12	57	-1								
MINERAL	92.08	43.5	12	59A	1								
BERKELEY	93.07	45.8	13	3A	1								
RENO	93.67	43.3	13	7A	2								
BUTTE	93.77	34.9	13	7	1								
LICK	93.78	46.0	13	7A	1								
FRESNO													
EUREKA	96.07	41.6	13	17	1				13	42	17	2	PP
PASADENA	97.93	46.9	13	26	2				13	45			
RAPID CITY	99.83	31.6	13	34	1								
CAPE HALLETT	101.96	166.6									17	49	PP
..MANRASSET	102.83	302.5									18	4	PP
TUCSON TELE.	103.91	44.3	13	53	2						18	8	PP
SCOTT BASE	105.46	171.2	18	11A	2						18	46	PP
SOUTH POLE	114.47	180.0	18	27	0				18	52	19	53	
BYRD STATION	118.83	169.9	18	36	1				19	2			
TRINIDAD	144.71	6.9	19	26	2								
CHINCHINA	145.69	33.4	19	27	1						19	54	
FUQUENE	146.16	30.0	19	29	3								
BOGOTA	146.75	31.3	19	25	-2						19	51	
HUANCAYO	158.97	56.7	19	49	4						20	25	
LA PAZ	167.16	53.0	19	43	-9						24	45	PP

NOVEMBER 1 3.H 38.M 39.S EPICENTRE -3.42 150.20 DEPTH= 0.KM

A=-0.86622 B= 0.49615 C=-0.05918 D= 0.4970 E= 0.8677
G= 0.0513 H=-0.0294 K=-0.9982 HT= 7.1

SE= 3.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S

RABAUL	2.12	111.7	0	32	-5							
TRUK	10.94	8.7	2	31	-9	4	26	-19				
CHARTERS TS.	16.93	192.8	4	1A	2	7	11	3				
GUAM	17.62	342.2	4	5	-3	6	55	-28				
KOROR	18.97	304.3	4	25	0							
BRISBANE	24.08	173.8	5	17A	-1	9	37	4				
NOUMEA	24.51	141.3	5	19A	-3	9	54	14	6	57		
RIVERVIEW	30.27	178.4	6	9	-6	11	20	6				
SUVA	31.29	120.0	6	27	4	11	30	0	8	8	PPP	
ADELAIDE	33.12	197.4	6	42	3	12	1	2	7	53	PP	
MELBOURNE	34.58	187.3	6	54	2	12	23	2	8	3	PP	
BAGUIO CITY	35.29	304.8	6	58	0	12	34	2				
TAWU	38.41	313.2	7	33	9							
YAKUSIMA	38.58	332.2	7	26	0				8	49	PP	
MERA	39.36	346.5							9	39	PP	
SIMIDU	39.53	336.9	7	17	-17	13	33	-4	9	14	PP	
OWASE	39.55	341.6							9	4		
TAIPEI	39.68	317.0	7	40	5							
MISIMA	39.76	345.5	7	35	-1							
KOTI	40.00	338.1	7	37	-1	13	39	-5	9	14	PP	
TOKUSIMA	40.09	339.7	7	43	5							
TOKYO C.M.O.	40.10	346.8	8	10	31	14	17	31	11	51		
KAMEYAMA	40.19	342.4	7	41	2				9	21	PP	
SUMOTO	40.24	340.2	7	56	16				9	20	PP	
OSAKA	40.30	341.2	8	35	55	13	38	-11				
KOHU	40.34	345.3	7	41	0							
KOBE	40.44	340.8							9	26	PP	
OOITA	40.46	335.7	7	39	-3							
ABUYAMA	40.49	341.4	7	38A	-4	13	39	-12				
KUMAMOTO	40.50	334.4	7	41	-1							
TAKAMATU	40.50	339.2	7	46	4							
TUKUBASAN	40.54	347.4	7	39	-3	13	37	-15	9	8	PP	
GIHU	40.61	343.1	7	47	4	13	58	5	9	22	PP	
KUMAGAYA	40.64	346.5	7	38	-5							
HIKONE	40.65	342.4	7	44	1				9	19	PP	
NAGASAKI	40.78	333.4	7	36	-8							
UTUNOMIYA	40.91	347.3	7	41	-4				9	16	PP	
MAEBASI	40.95	346.3	7	47	1				9	23	PP	
OIWAKE	41.01	345.6	7	54	8							
SAGA												
MATUMOTO	41.08	344.9	7	48	1							
HIROSIMA	41.14	337.4	7	45K	-2	13	46	-15	9	25	PP	
HUKUOKA	41.27	334.6	7	49	1	14	3	0				
MATUSIRO	41.30	345.3	7	43A	-5	14	0	-3	9	15	PP	
NAGANO	41.42	345.4	7	55	6	14	25	20				
KARAPIRO	41.43	149.2	7	49	0				9	45	PP	
HAMADA	41.75	337.4	7	53	1	14	5	-5	9	43	PP	
HUKUSIMA	41.94	348.4	7	58	4							
SENDAI	42.36	349.1	7	48	-9	14	2	-17				
NIIGATA	42.41	346.9	8	25	28							
TONGARIRO	42.41	150.5	7	56	-1							
YAMAGATA	42.45	348.5	7	49	-9							
COBB RIVER	42.63	154.7	8	9	10							
TUAI	42.93	148.7	8	2	0							
PERTH	42.98	224.7	8	1	-1	14	33	5	9	51	PP	
MIZUSAWA	43.15	349.7	8	3	-1	14	28	-3				
DJAKARTA	43.29	264.6	8	7	2	14	40	7				
HONG KONG	43.50	307.7	8	6A	0	14	38	2	10	13	PPP	
WELLINGTON	43.69	153.0	8	8	0	14	38	0	9	51	PP	
AKITA	43.92	348.8	8	16	6							
ZO-SE	44.08	323.3	8	8A	-3	14	40	-4				
CANTON	44.61	308.0	8	14	-1	14	45	-7				
ROXBURGH	45.19	161.1				14	59	-1	10	37		
URAKAWA	45.85	352.3	8	25	0				11	40		
MORI	46.14	350.1	8	35	7				10	53		
KUSIRO	46.48	354.1	8	29	-1				10	13		
SAPPORO	46.96	351.1	8	31	-3	14	45	-40	10	31		
PHU-LIEN	49.02	301.3	8	51	1	14	59	-56				
VLADIVOSTOK	49.18	342.3	8	49	-2	15	59	2	10	50	PP	
WAKKANAI	49.21	352.1				14	48	-69				
Y.-SAKHLINSK	50.58	353.4	8	59	-3	16	13	-3	12	17		
MEDAN	51.95	277.2	9	11	-1	16	35	0				
CHANGCHUN	52.08	337.3	9	9	-4	16	32	-5				
PEKING	53.32	327.6	9	19A	-4	16	49	-5	11	16	PP	
SIAN	53.96	317.5	9	25A	-2							
KUNMING	54.08	304.3	9	27	-1	17	2	-2				
CHENGTU	55.56	311.1	9	38	-1	17	26	2				
HONOLULU	56.25	61.7	9	43	-1	17	36	3	20	41		

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TIENSHUI	56.32	316.0	9	45	0					
KIPAPA	56.36	61.6	9	43	-2					
PETROPAVLOVK	56.79	6.1	9	46	-2	17	39	-1	12 0	PP
PAOTOW	57.13	324.2	9	48	-2					
YINCHUAN	58.15	320.1	9	56	-1					
LANCHOW	58.45	316.5	9	58A	-2	18	3	1		
PORT BLAIR	59.08	285.7	10	24	20	17	46	-24	13 54	
WUWEI	60.23	317.8	10	12	0					
TOCKLAI	61.31	302.9	10	23	4					
CHITTAGONG	62.47	297.3	10	26	-1				12 47	PP
MAGADAN	62.78	0.3	10	27	-2	18	59	2		
SHILLONG	63.38	300.7	10	33	0	19	8	3	11 57	
DUMONT	63.54	184.5	10	32	-2	19	7	0		
LHASA	65.39	304.7	10	46A	0	19	33	3		
IRKUTSK	67.64	331.5	10	57A	-3				20 39	SCS
CHATRA	67.79	300.7	11	7	6	19	44	-15		
WILKES	68.55	196.2	11	17	11	20	7	-1		
CAPE HALLETT	69.93	173.6	11	14K	-1	20	28	4	13 44	PP
MADRAS	71.38	284.8	11	23	0	20	44	3	14 14	PP
OASIS-BUNG.	71.48	199.0	11	21	-3				11 39	PCP
HYDERABAD	73.69	289.2	11	53	16	21	11	3	14 41	PP
MIRNY	74.30	200.5	11	38	-3	21	11	-3		
SCOTT BASE	74.90	176.4	11	44	0	21	21	0	11 55	PCP
AGRA	75.79	298.9	11	47K	-2	21	27	-4	14 1	PP
DEHRA DUN	76.41	302.1	12	4	11	21	40	2	14 51	PP
BOMBAY	79.19	289.9	12	24	16	22	8	0		
SEMIPALATNSK	80.00	322.4	12	9	-3				15 16	PP
COLLEGE	81.56	22.4	12	15	-6	22	26	-6	27 35	SS
FRUNSE	81.83	314.0	12	20	-2				22 40	SCS
WARSAK DAM	82.51	304.8	12	24	-1					
KARACHI	85.32	296.1	12	38	-2	23	16	6		
TASHKENT	85.42	311.7	12	38	-2					
QUETTA	85.87	300.4	12	41	-1	23	19	4	16 1	PP
SOUTH POLE	86.61	180.0	12	44	-2					
BYRD STATION	86.71	169.9	12	45	-2	23	29	6		
BERKELEY	90.13	52.2	13	5	2	24	0	5		
SHASTA	90.24	49.4	13	2	-1					
LICK	90.59	52.8	13	5	0				16 50	PP
MINERAL	90.82	49.8	13	5	-1				16 48	PP
FRESNO	92.02	53.5	13	12	0					
RENO	92.15	50.7	13	12	0					
PASADENA	93.25	56.1	13	16	-1	24	26	3	17 11	PP
ASHKABAD	93.54	307.7				23	49	-4	17 0	PP
KHEYS	94.74	350.0	13	16	-8	23	46	-13	16 29	
EUREKA	95.11	50.8	13	26	0					
HUNGRY HORSE	96.38	41.9	13	30	-2				17 33	PP
BUTTE	97.47	44.2	13	45	8				17 41	PP
BOZEMAN	98.55	44.5	13	46	5					
TUCSON	99.40	58.0	13	51	6				17 51	PP
TUCSON TELE.	99.49	57.9	13	52	6				17 11	PP
RESOLUTE	99.72	14.2	13	43	-4	25	15	-3	17 50	PP
NORD	101.62	358.0							27 10	PS
APATITY	103.14	339.4	14	4	2	25	52	6	18 25	PP
TIFLIS	103.75	312.0	14	7	2				33 9	SS
THULE	104.01	8.7	14	5	-1					
RAPID CITY	104.28	45.5	14	16	9				18 32	PP
MOSCOW	105.40	327.2	14	12	777				18 31	PP
KIRUNA	107.28	342.2							28 1	PS
PULKOVO	107.62	332.6				25	7	5	19 1	PP
TACUBAYA	110.56	70.7	14	31K	777				18 52	PP
SIMFEROPOL	110.69	317.0							19 10	PP
KSARA	112.02	305.1	14	40	777	25	18	-2	19 32	PP
SKALSTUGAN	112.60	341.0							19 29	PP
SCORESBY SD.	112.84	357.1							19 23	PP
JERUSALEM	112.95	303.0							19 37	PP
UPPSALA	113.08	336.2							28 54	PS
FLORISSANT	114.85	48.6							29 16	PS
ST. LOUIS 1	115.00	48.7							19 43	PP
LWOW	115.26	324.7							29 27	
ISTANBUL UN.	115.46	314.2							19 52	PP
WARSAW	115.76	328.0							39 55	SSS
BUCHAREST	116.25	318.6							19 56	PP
HELWAN	116.61	301.7	15	23	777				20 3	PP
CINE	117.22	310.8	18	53	6					
KRAKOW	117.46	326.3	19	42	55				20 6	PP
COPENHAGEN	117.86	334.5							20 9	PP
SOFIA	118.78	317.7	19	28	38				20 15	
POTSDAM	119.68	331.3							20 22	

ASTRIDA	120.20	265.0	19	5	12				20	38	PP
COLLMBERG	120.39	330.4	18	47	-6						
PRUHONICE	120.40	328.4	18	54	1				20	13	
HERMANUS	120.51	226.4							30	27	
HALLE	120.78	331.0	18	49	-5				22	48	PPP
JENA	121.32	330.7	18	57	2	24	48	-66	20	16	PP
SONNEBERG	121.86	330.4	20	7	71				20	23	PP
ZAGREB	121.95	323.8	19	15A	19				19	37	
ABERDEEN	122.08	342.6							30	5	PS
OTTAWA	122.09	36.7	18	54	-2						
PENNSYLVANIA	123.02	42.3	19	28	30				21	1	PP
SHAWINIGAN	123.16	34.2	18	57	-1						
TRIESTE	123.34	324.7	18	53	-6				20	35	PP
COLUMBIA	123.52	51.0	19	2	3						
STUTTGART	123.89	329.9	18	59	-1	25	40	-22	20	46	PP
DURHAM	123.91	340.7	18	56	-4				20	42	PP
EBINGEN	124.39	329.5	19	1	0						
STRASBOURG	124.73	330.5	19	12	11				20	51	PP
DOURBES	125.15	333.6	21	0	118				31	2	PS
PRATO	125.91	324.2	19	21	17						
MESSINA	126.10	316.1				26	5	-4	20	57	PP
KEW	126.14	337.6				27	57	108	31	39	PPS
ROME	126.21	321.5							20	50	PP
PAVIA	126.21	326.5				25	31	-38	22	58	
SANTA LUCIA	126.78	136.9				29	13	182	21	4	PP
PARIS	127.03	333.7	19	1	-5				21	11	PP
CLERMONT-FD.	128.96	330.7							21	33	PP
HALIFAX	129.33	30.9							23	11	PKS
HUANCAYO	132.21	109.5	19	23	7				22	55	PKS
SETIF	133.99	319.6	19	18	-1				21	49	PP
CHINCHINA	134.29	86.4	19	24	4				22	59	SKP
ALGIERS UNI.	135.12	321.9	19	19	-2				22	1	PP
BOGOTA	135.83	86.9	19	28	5	26	16	-16	30	17	
ALICANTE	136.13	326.2	19	20	-3	26	29	-3	25	1	PPP
BERMUDA	136.43	44.6	21	11	107				22	56	
TOLEDO	136.86	330.7							22	13	PP
LA PAZ	137.27	118.7	19	21	-4				22	9	PP
RELIZANE	137.32	322.7	19	26	1				22	17	PP
ALMERIA	138.30	326.4	19	19	-8						
GRANADA	138.67	327.7	19	38A	10				22	45	PP
MALAGA	139.44	328.0	19	39A	10				22	31	PP
TAMANRASSET	140.76	302.5	18	31	-60				22	35	PP
SAN JUAN	141.48	64.6	19	31	-2						
PONTA DELGDA	145.64	354.2	19	49K	9				19	56	PKP2
ST. CLAUDE	146.22	66.1	19	46	5						
DOMINICA	146.72	67.1	19	38	-4						
FORT FRANCE	147.12	68.0	19	47	5						
TRINIDAD	147.73	75.4							19	50	PKP2
MBOUR	163.30	311.5	20	15	11	27	8	1	38	29	PPS

NOVEMBER 1 6.H 6.M 49.S EPICENTRE -3.34 145.60 DEPTH= 0.KM

A=-0.82374 B= 0.56400 C=-0.05790 D= 0.5649 E= 0.8251
G= 0.0478 H=-0.0327 K=-0.9983 HT= 7.1

SE= 2.37

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
RABAUL	6.61	97.6	1	40	0							
TRUK	12.42	30.1	2	55	-6						3	41
KOROR	15.35	313.7	3	39	0							
CHARTERS TS.	16.58	177.8	3	55	0	7	17	18				
GUAM	16.72	357.1	3	59	2							
BRISBANE	25.03	164.2	5	26K	-1	9	53	4				
NOUMEA	27.64	134.7	5	53K	2							
RIVERVIEW	30.77	170.9	6	21	2							
ADELAIDE	32.07	190.7	6	31A	1						7	25
SUVA	35.35	117.0				12	37	4				
DJAKARTA	38.73	264.3	7	25	-2							
PERTH	39.90	221.2				13	45	2			15	54
HONG KONG	39.91	311.2	7	38	1	13	33	-10				
MATUSIRO	40.28	350.8	7	39	-1							
CANTON	41.03	311.4	7	48	2	13	53	-6				
KARAPIRO	43.97	145.4	8	12	2							
TONGARIRO	44.87	146.7	8	21	4							

WELLINGTON	45.97	149.3				15	11	0			
MEDAN	47.39	277.9	8	38	1	16	5	33			
VLADIVOSTOK	47.87	346.5	8	44	3						
KUNMING	50.30	306.6	9	1	1	16	19	7			
PEKING	50.91	330.9	9	4	-1	16	22	1			
CHENGTU	52.12	313.6	9	13A	-1	16	41	4			
UGLEGORSK	52.30	357.1	9	17	2	16	45	5			
CHITTAGONG	58.39	298.7	10	1	2	18	10	9			10 50 PCP
SHILLONG	59.43	302.3	10	6A	0	18	21	6			
ULAN-BATOR	61.23	331.3	10	19	0						
LHASA	61.61	306.3	10	22A	1	18	47	4			
DUMONT	63.33	182.5	10	22	-11	19	5	1			
IRKUTSK	65.46	333.5	10	47	0						
YAKUTSK	66.31	351.9	10	53	1	19	45	4			
OASIS-BUNG.	70.10	197.7	11	15	-1						
CAPE HALLETT	70.58	172.2	11	17	-2						
DEHRA DUN	72.51	303.1				20	59	5			
MIRNY	72.80	199.4	11	31	-1						
BOMBAY	74.86	290.5				21	23	2			
SCOTT BASE	75.30	175.5	11	47	1						
TIKSI	75.63	354.6	11	46	-2						
WARSAK DAM	78.72	305.5	12	5	0						
NAMANGAN	80.13	312.4	12	15	2						
KARACHI	81.18	296.6	12	17A	-2						
QUETTA	81.89	301.0	12	22A	0	22	35	-1			
COLLEGE	83.28	23.2	12	27	-2						
SOUTH POLE	86.68	180.0	12	45	-1						
BYRD STATION	87.58	170.0	12	51	0						
KHEYS	93.87	350.0	13	14	-6						
PASADENA	97.02	56.2	13	36	1						
EUREKA	98.62	50.7	13	42	0						
HUNGRY HORSE	99.38	41.7	13	50	5						
KSARA	108.21	304.4	14	23	777						18 51 PP
HUANCAYO	136.54	111.3	19	27	3						
SAN JUAN	145.54	61.9	19	41	1						

NOVEMBER 1 12.H 15.M 43.S EPICENTRE -17.72 168.11 DEPTH= 0.KM

A=-0.93270 B= 0.19645 C=-0.30246 D= 0.2061 E= 0.9785
G= 0.2960 H=-0.0623 K=-0.9532 HT= 5.2

SE= 3.52

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
NOUMEA	4.82	198.6	1	14	-2						2	1	
BRISBANE	16.96	232.4	3	58	-2	8	5	56					
RABAUL	20.59	308.9	4	40	-3								
CHARTERS TS.	20.80	260.2	4	42	-3						8	46	
KARAPIRO	21.15	163.6	4	48	-1								
TONGARIRO	22.36	164.7	5	10	9								
GEBBIES PASS	26.19	172.5	5	43	5								
TRUK	29.73	326.0	6	7	-3								
KOROR	41.50	304.0	7	58	8								
KIPAPA	51.13	41.8	10	7	60								
DUMONT	52.24	193.7	9	13	-2						17	29	
CAPE HALLETT	54.60	179.2	9	31	-1						9	57	PCP
MANILA	56.48	301.7	10	5	19								
BAGUIO CITY	57.81	303.2	9	57	1								
SCOTT BASE	60.17	180.3	10	9	-3	18	25	0			18	38	PS
DJAKARTA	60.80	272.8	10	19	3						19	23	
MATUSIRO	60.91	332.7	10	14	-3								
SENDAI	61.27	335.8	11	6	47	19	22	43					
OASIS-BUNG.	64.83	204.5	10	45	2						11	37	
HONG KONG	66.07	305.0	10	57	6								
MIRNY	67.96	204.7	11	1	-2						21	12	
BYRD STATION	69.62	169.8	11	11	-2								
PHU-LIEN	71.39	299.8	11	41	17								
MEDAN	71.61	280.0	11	24	-1								
SOUTH POLE	72.39	180.0	11	27	-3								
CHANGCHUN	72.69	329.0	11	31	-1								
PEKING	75.08	321.3	11	50	4								
KUNMING	76.57	302.0	11	59	5	21	41	1					
CHENGTU	78.15	307.6	11	11	-52								
ULAN-BATOR	85.12	323.7	12	40	1								
LICK	85.76	48.8	12	43	1								

SHASTA	86.72	45.5	12	35	-12			
FRESNO	86.84	49.9	12	45	-3			
MINERAL	87.10	46.1	12	54	5			
COLLEGE	88.92	17.3	12	54	-4			
EUREKA	90.69	48.7	13	5	-1			
TUCSON	92.02	56.9	13	12	0			
TUCSON TELE.	92.13	56.8	13	12	-1			
QUETTA	108.12	296.6	18	48	777			
KIRUNA	125.84	345.5	19	2	-2			
SCORESBY SD.	126.89	4.2	19	59	53		22 1 PP	
SKALSTUGAN	131.26	345.9	19	14	0			
COLLMBERG	141.10	335.1	19	30	-3			
HALLE	141.36	336.1	19	34	1		22 43 PP	
JENA	141.95	335.9	19	31	-3			
DURHAM	142.18	350.3	19	34A	0			
STUTTGART	144.60	335.7	19	36	-3		20 30 PKP2	
TUBINGEN	144.85	335.6	19	38	-1		20 31 PKP2	
EBINGEN	145.17	335.3	19	39A	-1		20 32 PKP2	
STRASBOURG	145.31	336.9	19	40A	0		20 25	
CHUR	146.10	333.3	19	42	1			
BASLE	146.24	336.0	19	43	2			
PARIS	146.86	342.5	19	45	3		19 57 PKP2	
NEUCHATEL	146.92	336.1	19	44	1			
SETIF	156.06	323.7	20	3	7		20 29 PKP2	
RELIZANE	158.91	330.8	20	2	2		20 35 PKP2	
MBOUR	174.10	123.5	20	18	7			

NOVEMBER 1 12.H 16.M 44.S EPICENTRE -17.64 167.93 DEPTH= 61.KM

DEPTH OF FOCUS= 0.004R

A=-0.93250 B= 0.19941 C=-0.30114 D= 0.2091 E= 0.9779
G= 0.2945 H=-0.0630 K=-0.9536 HT= 5.2

SE= 3.12

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SUVA	10.01	94.5	2	26A	2	4	27	11				
ONERAHI	18.94	163.7	4	17	-2						4	44 PP
RABAUL	20.41	309.0	4	36	1							
CHARTERS TS.	20.65	260.0	4	34	-3	8	31	12				
KARAPIRO	21.28	163.2	4	41	-2							
RIVERVIEW	22.05	219.8	4	47A	-4	8	53	8				
TONGARIRO	22.48	164.4	4	58	3							
TUAI	22.57	161.0	4	55	-1							
COBB RIVER	23.73	171.0	5	16	9	9	24	9				
WELLINGTON	24.29	167.4	5	10A	-3	9	37	12			5	52 PP
KAIMATA	24.98	173.9	5	32	12							
GEBBIES PASS	26.29	172.3	5	37	5							
ROXBURGH	27.86	177.9	5	42	-4	10	24	1				
MELBOURNE	28.46	220.4	5	53	2	10	36	3			6	30 PP
TRUK	29.58	326.2	5	1	-60							
ADELAIDE	31.18	230.8	6	14K	-2	11	20	4				
GUAM	38.45	322.0	7	16	-2							
KOROR	41.32	304.1	7	52	11							
PERTH	48.96	242.8	8	45	3	15	53	12			10	35 PP
HONOLULU	51.05	42.1				16	22	12			10	48 PP
CAPE HALLETT	54.68	179.1	9	22	-3	17	3	4			19	11 SCS
TUKUBASAN	59.68	334.1	9	58A	-3	18	10	5				
SCOTT BASE	60.25	180.3	10	2	-2	18	17	5	10	12	10	33 PCP
ABUYAMA	60.60	329.7	10	6A	-1	18	35	18				
MATUSIRO	60.77	332.8	10	7A	-1	18	23	4				
WILKES	61.08	203.0	10	22	12	18	22	-1			22	22 SS
NAGASAKI	61.91	323.9				18	33	0			30	27
HONG KONG	65.89	305.1	10	41	-1	19	29	6				
CANTON	67.00	305.3	10	51	2	19	44	8				
Y.-SAKHLINSK	68.18	341.7	10	56	0	19	58	8				
NANKING	68.23	316.3	10	55	-1	19	54	3				
VLADIVOSTOK	68.93	332.5	11	1	0	19	8	-51				
BYRD STATION	69.73	169.8	11	3	-3	20	13	5				
UGLEGORSK	70.29	342.3	11	9	0	20	24	9				
PETROPAVLOVK	70.93	354.1	11	11	-2							
MEDAN	71.43	280.1	11	11	-5							
SOUTH POLE	72.47	180.0	11	20	-2							
CHANGCHUN	72.54	329.1	11	21A	-1	20	42	1				
PEKING	74.91	321.3	11	35	-1	21	10	3				

KUNMING	76.39	302.1	11	46	1	21	28	4		
CHENGTU	77.97	307.7	11	55	2	21	47	6		
MAGADAN	78.17	351.2	11	48	-7	22	54	71		
PORT BLAIR	79.75	285.7	12	10	7	22	5	5	15	4 PP
YAKUTSK	84.96	343.0	12	28	-2					
SHILLONG	85.51	298.4	11	39	-54	22	56	-2		
BERKELEY	85.62	48.2	12	34	1					
LICK	85.83	48.8	12	35	1					
HALLEY BAY	86.62	176.3	12	38	0				16	2 PP
SHASTA	86.78	45.6	12	40	1					
FRESNO	86.92	50.0	12	41	1					
PASADENA	87.07	52.9	12	40	0	23	17	4	29	29 SS
MINERAL	87.17	46.2	12	42	1					
LHASA	87.70	301.9	12	46	3	23	27	8	23	12 SKS
RENO	88.07	47.5	12	39	-6					
IRKUTSK	88.69	326.6	12	37	-11					
COLLEGE	88.89	17.3	12	47	-2	23	28	-2		
CHATRA	89.91	298.1				23	2	-37		
COLOMBO	90.22	277.1	13	16	21	23	26	-16		
EUREKA	90.77	48.7	12	59	1					
MADRAS	91.77	283.0	13	9	7	24	8	12	23	36 SKS
TUCSON	92.11	56.9	13	5	1					
TUCSON TELE.	92.23	56.9	13	5	0					
TIKSI	92.91	348.5	13	5	-3					
KODAIKANAL	93.48	279.6	13	14	4					
HYDERABAD	94.67	286.7							23	51 PS
HUNGRY HORSE	95.31	41.0	13	20	1					
AGRA	97.77	295.9	13	27K	-3	24	4	-43		
TACUBAYA	98.31	72.3	14	6K	34				17	26 PP
DEHRA DUN	98.60	299.0							24	13
BOMBAY	100.22	286.6				24	20	-47	17	51
SANTA LUCIA	104.49	132.5							16	34 PP
NAMANGAN	105.99	308.5	17	39	777	24	49	-6		
QUETTA	107.93	296.7	18	23	777	25	1	-2		
RESOLUTE	108.78	16.2	18	21	777	26	24	-4	18	44 PP
HUANCAYO	110.93	110.7							19	16 PP
SVERDLOVSK	114.04	324.9							19	31 PP
THULE	114.70	12.5	18	35	1					
LA PAZ	115.20	118.4							19	36 PP
PITTSBURGH	117.95	53.2	19	22	42				22	7
OTTAWA	120.79	47.3	18	44	-2					
APATITY	122.33	341.1	18	49	1				30	18 PS
SHAWINIGAN	122.68	45.7	18	49	0					
MAKHACH-KALA	123.99	310.2	18	52	0					
SODANKYLA	124.45	342.9	18	53	0					
KIRUNA	125.72	345.5	18	55	0					
TIFLIS	126.14	309.1							20	47 PP
MOSCOW	126.67	327.5	19	15	18					
PULKOVO	128.03	334.3	19	1	1					
HALIFAX	129.38	46.3							22	26 PKS
SOTCHI	129.46	312.3	18	52	-10					
HELSINKI	129.89	336.9	19	4	1				21	33 PP
SKALSTUGAN	131.15	345.8	19	5	0					
UPPSALA	132.69	340.1	19	3	-5				21	47 PP
SIMFEROPOL	132.91	315.6	19	10	1					
ASTRIDA	134.15	248.1	19	16	5					
KSARA	134.31	300.2	19	16	5				21	55 PP
JERUSALEM	135.13	297.5	19	8	-5				22	41 PKS
LWOW	136.76	326.2	19	19	3				22	0
WARSAW	136.79	330.6	19	16	0				22	56 PKS
COPENHAGEN	137.70	339.6	19	20	2				22	42 PP
ISTANBUL KA.	137.74	312.3	19	20	2				22	35 PP
BUCHAREST	138.35	318.2							22	58 SKP
CINE	139.62	307.7	19	20	-1				22	35 PP
ABERDEEN	139.83	351.6							23	0 SKP
POTSDAM	140.09	336.0	19	25	3					
COLLMBERG	140.96	335.0	19	22	-2					
PRUHONICE	141.29	332.4	19	20	-4				22	32 PP
JENA	141.81	335.8	19	19	-6				22	32 PP
DURHAM	142.07	350.1	19	25A	-1				22	28 PP
SONNEBERG	142.39	335.5	19	25	-1					
RATHFARNHAM	144.12	354.1	19	24A	-5				20	28
UCCLE	144.41	342.0	19	31	1					
DOURBES	144.95	341.2	19	35	4				20	37 PP
KEW	144.98	347.2	19	31	0				23	5 PKS
RAVENSBURG	145.08	334.2	19	34	3					
STRASBOURG	145.17	336.8	19	32A	1				22	54 PP
CHUR	145.85	333.3	19	34	2					

BASLE	146.10	335.9	19	35	3				19	48	PKP2
PARIS	146.73	342.4	19	38	4				22	40	
NEUCHATEL	146.78	336.0	19	37	3						
PAVIA	147.30	331.7	19	40	6				24	47	
PRATO	147.35	328.2	19	46	11						
OROPA	147.48	333.4	19	47	12						
ROME	147.98	324.2	19	40	4				23	8	SKP
REGGIO CALA.	148.32	315.7	19	39	3						
MESSINA	148.34	315.9	19	37	1						
MONACO	149.21	331.8	19	42	4				19	52	PKP2
CLERMONT-FD.	149.23	339.0	19	44	6				23	17	PP
TORTOSA	154.48	337.5	19	59	14						
SETIF	155.90	323.5	19	47	0				23	43	PP
ALGIERS UNI.	156.73	328.0	19	50	2				24	2	PP
TOLEDO	156.77	344.2	20	20	32				20	45	PKP2
ALICANTE	157.01	336.1	19	35	-13	26	42	-4	23	7	PP
RELIZANE	158.76	330.6	19	53	2				24	20	PP
ALMERIA	159.07	338.0	19	54	3				24	11	PP
GRANADA	159.15	340.7	20	41A	50				24	14	PP
MALAGA	159.82	341.9	19	52K	0				24	8	PP
TAMANRASSET	162.72	290.1	19	58	3				24	34	PP
MBOUR	174.28	123.8	20	9K	6				25	28	PP

NOVEMBER 1 15.H 50.M 16.S EPICENTRE -17.63 167.61 DEPTH= 17.KM

A=-0.93140 B= 0.20459 C=-0.30107 D= 0.2145 E= 0.9767
G= 0.2941 H=-0.0646 K=-0.9536 HT= 5.2

SE= 2.51

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
NOUMEA	4.77	193.0	1	9	-4	2	4	-4					
SUVA	10.31	94.5	2	32A	2	4	41	15					
BRISBANE	16.64	231.4	3	52	-2	7	8	11					
ONERAHI	19.04	162.9	4	20	-3						4	44	PP
RABAUL	20.17	309.6	4	36	0								
CHARTERS TS.	20.35	259.9	4	38K	0	8	29	10					
KARAPIRO	21.37	162.6	4	47	-1								
RIVERVIEW	21.86	219.3	4	53K	0	8	58	10					
TONGARIRO	22.57	163.8	5	2	2								
TUAI	22.67	160.4	5	4	3								
COBB RIVER	23.78	170.4	5	19	7								
WELLINGTON	24.36	166.8	5	18	0						6	2	PP
GEBBIES PASS	26.33	171.7	5	41	5								
ROXBURGH	27.87	177.4				10	32	1					
MELBOURNE	28.26	220.1				10	44	7					
TRUK	29.40	326.7	6	3	-1								
ADELAIDE	30.95	230.5	6	19	1	11	27	7					
KOROR	41.06	304.4	7	41	-3								
PERTH	48.69	242.8	8	49	4	16	2	17			11	30	PPP
DUMONT	52.21	193.5	9	14	3	16	32	-1					
CAPE HALLETT	54.69	179.0	9	28	-2	17	12	5			19	14	SCS
SCOTT BASE	60.25	180.2	10	8	-1				10	20	10	47	PCP
MATUSIRO	60.62	333.0	10	12	0	18	24	2					
WILKES	60.96	202.9				18	34	5					
OASIS-BUNG.	64.71	204.4	10	39	0								
HONG KONG	65.64	305.3	10	49	4	19	31	4					
MIRNY	67.84	204.6	10	54	-5	19	59	5					
Y.-SAKHLINSK	68.08	341.9	11	2	2	20	4	7					
VLADIVOSTOK	68.78	332.7	11	6	2								
BYRD STATION	69.79	169.8	11	9	-2	20	19	2					
UGLEGORSK	70.19	342.5	11	16	3	20	27	5					
PETROPAVLOVK	70.89	354.3	11	35	18								
MEDAN	71.13	280.2	11	20	1								
SOUTH POLE	72.48	180.0	11	24	-3								
PEKING	74.72	321.5	11	41	1	21	17	4					
MAGADAN	78.12	351.3	11	58	-1								
PORT BLAIR	79.46	285.9	12	18	12	22	7	2			22	32	SCS
YAKUTSK	84.87	343.1	12	24	-10	23	0	0					
SHILLONG	85.24	298.6	12	36A	0								
HALLEY BAY	86.63	176.5	12	42	-1						16	8	PP
SHASTA	86.99	45.7	12	45	0								
FRESNO	87.15	50.1	12	45	-1								
PASADENA	87.31	53.0	12	46	0	23	25	2					
LHASA	87.44	302.0	12	50	3	23	31	6			23	17	SKS
RENO	88.29	47.6	12	51	0								

COLLEGE	88.98	17.4	12	52	-2	23	42	3				
EUREKA	90.99	48.8	13	5	1				13	25		
TUCSON	92.36	57.0	13	11	1							
TUCSON TELE.	92.48	57.0	13	11	0							
TIKSI	92.85	348.5	13	10	-2							
QUETTA	107.66	296.7	18	28	3	25	7	8				
RESOLUTE	108.86	16.2	18	28	1	26	30	6			25	2 SKS
LA PAZ	115.47	118.6									29	34 PS
KIMBERLEY	121.55	218.5	19	24	32							
KIRUNA	125.64	345.3	18	57	-3							
PULKOVO	127.90	334.2									20	54 PP
HALIFAX	129.60	46.3									22	23 PKS
BERMUDA	130.84	62.2									21	24 PP
UPPSALA	132.59	339.9									22	37 PKS
SIMFEROPOL	132.69	315.5									22	43 PKS
ASTRIDA	133.87	248.3	19	17	1							
KSARA	134.05	300.2	19	18	2						21	59 PP
KISHINEV	135.26	320.2									21	54
KASTAMONU	136.20	311.9									21	50
LWOW	136.59	326.0	19	23	2						22	17
HELWAN	138.40	295.3	19	26	2						22	23 PP
RATHFARNHAM	144.09	353.7	19	23A	-11							
UCCLE	144.31	341.7	19	37	3							
STUTTGART	144.33	335.3	19	32	-2						22	52 PP
TUBINGEN	144.57	335.2	19	35	0							
DOURBES	144.85	340.9	19	40	5							
EBINGEN	144.89	334.9	19	36	1							
KEW	144.90	346.9	19	36	1						41	47 SS
STRASBOURG	145.04	336.5	19	36A	0						22	59 PP
BASLE	145.97	335.6	19	40	3							
PARIS	146.63	342.0	19	40	2						23	13 PP
NEUCHATEL	146.65	335.6	19	40	2							
ROME	147.80	323.9	19	50	10							
CLERMONT-FD.	149.11	338.6	19	50	8						23	29 PP
SETIF	155.71	323.1	19	50	-2						23	50 PP
ALGIERS UNI.	156.57	327.5	19	54	1						24	20 PP
TOLEDO	156.68	343.6	20	26	33						44	2 SS
ALICANTE	156.88	335.6	19	37	-16	26	44	-11			23	46 PKS
RELIZANE	158.61	330.0	19	53	-3						24	17 PP
MALAGA	159.72	341.2	19	54K	-3						24	20 PP
TAMANRASSET	162.43	289.9	20	1	1						24	45 PP

NOVEMBER 2 10.H 44.M 47.S EPICENTRE 51.57-175.19 DEPTH= 0.KM

A=-0.62195 B=-0.05235 C= 0.78130 D=-0.0839 E= 0.9965
G=-0.7786 H=-0.0655 K=-0.6242 HT= -6.0

SE= 2.25

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
COLLEGE	19.41	36.2	4	30	0	8	19	15					
MAGADAN	20.63	306.0	4	50	7								
UGLEGORSK	27.12	281.8	5	33	-13								
TIKSI	31.59	329.9	6	25	-1								
KIPAPA	32.93	149.6	6	36	-2								
TUKUBASAN	35.08	261.8	6	55	-2								
MATUSIRO	36.04	263.9	7	3A	-2						9	30	PCP
VLADIVOSTOK	36.13	277.8	7	5	0								
BANFF	36.33	66.5	7	8	1								
SHASTA	37.40	85.6	7	17	1								
MINERAL	38.09	85.5	7	23	1								
HUNGRY HORSE	38.47	69.9	7	25	0						9	38	PCP
RESOLUTE	38.63	24.8	7	26	0	13	26	2			9	38	PCP
BERKELEY	39.16	89.2	7	31	0						19	43	
CHANGCHUN	39.79	283.0	7	34A	-2								
LICK	39.88	89.4	7	37	0								
BUTTE	40.50	72.3	7	43	1								
FRESNO	41.38	88.6	7	51	2								
BOZEMAN	41.59	71.9	7	52	1								
EUREKA	42.10	82.6	7	56	1								
SALT LAKE C.	43.87	78.4	8	10	1								
PASADENA	44.08	90.3	7	50	-21	14	21	-23			8	8	
THULE	44.25	18.9	8	12	-1								
BOULDER CITY	44.98	85.8	8	28	10								
KHEYS	45.91	349.7	8	15	-11								

NORD	46.58	4.3	8	30K	-1					
RAPID CITY	47.10	69.3	8	34	-1				14	36
LARAMIE	47.34	73.8	8	37	0				14	7
PEKING	47.54	284.2	8	38	-1	15	39	5	10	32 PP
ULAN-BATOR	48.24	298.1	8	45	1					
BOULDER	48.29	75.0	8	44	-1				13	57
TUCSON	49.93	86.6	8	57	0					
TUCSON TELE.	49.93	86.5	8	57	0					
ZO-SE	50.25	271.7	9	3A	3					
PAOTOW	50.87	288.7	9	4A	0					
NANKING	51.09	274.4	9	6	0					
SIAN	55.69	283.4	9	39A	-1					
FAYETTEVILLE	57.50	71.5	9	53A	0					
LANCHOW	57.50	288.4	9	55	2					
APATITY	59.27	347.6	10	4	-1					
SODANKYLA	60.25	350.5	10	11	-1				10	56 PCP
CANTON	60.88	271.0	10	23	7					
HONG KONG	60.90	269.7	10	16	-1					
CHENGTU	61.16	283.8	10	17	-1					
OTTAWA	61.18	52.5	10	17	-1					
SHAWINIGAN	61.79	49.9	10	21K	-2					
BREBEUF	62.14	51.2	10	24K	-1					
MORGANTOWN	63.11	59.6	10	32K	1					
PENNSYLVANIA	63.37	57.4	10	45	12	19	9	4		
SKALSTUGAN	65.04	356.3	10	43	-1					
HARVARD	65.34	52.3	9	45	-61					
KUNMING	66.02	280.5	10	50	0					
COLUMBIA	66.59	64.5	10	54	0					
PULKOVO	67.12	346.3	10	54	-3					
HELSINKI	67.44	349.2	10	59	0				11	26 PCP
UPPSALA	68.46	353.1	11	4	-2				11	31 PCP
LHASA	69.59	292.0	11	13	0					
MOSCOW	69.66	340.9	11	13	0					
GOTEBORG	70.94	355.9	11	18	-3					
NAMANGAN	71.05	312.6	11	23	1					
SHILLONG	72.15	288.6	11	25A	-3					
CHITTAGONG	74.61	286.5	11	34	-8	21	2	-16	11	49 PCP
HALLE	77.13	355.4							16	38
LAHORE	77.27	304.9	11	56	-2	21	42	-5		
JENA	77.72	355.6	12	1	1					
PRUHONICE	78.49	353.6	12	5	1					
STUTTGART	79.97	357.1	12	13	1					
PARIS	79.98	1.6	12	13	1					
STRASBOURG	80.20	358.0	12	16	3					
TIFLIS	80.79	330.8	12	17	0	22	38	14		
QUETTA	82.05	309.4	12	23A	0	22	38	1	23	41 PS
KARACHI	85.61	306.9	12	45	4					
SAN JUAN	87.06	64.0	12	49	1					
BOMBAY	88.26	298.6	12	56	2	23	46	8	23	31 SKS
CINE	88.89	341.7	12	59	2					
KARAPIRO	89.48	187.3	12	56	-4					
CAPE HALLETT	123.99	185.3	19	6	6				38	20 PKPPKP
LWIRO	126.89	329.5	19	8	2					
ASTRIDA	126.92	328.2	19	12	6					
BYRD STATION	135.07	168.2	19	2	-19					
SOUTH POLE	141.38	180.0	19	24	-9				23	3 SKP
WINDHOEK	149.52	337.2	19	53	7					
PIETERMZBURG	150.97	309.2	19	56A	7					
KIMBERLEY	152.74	319.1	19	58	7					
HALLEY BAY	152.90	163.3	19	56	5				23	50 PP

NOVEMBER 3 14.H 31.M 37.S EPICENTRE 30.51 84.50 DEPTH= 0.KM

A= 0.08270 B= 0.85908 C= 0.50512 D= 0.9954 E=-0.0958
G= 0.0484 H= 0.5028 K=-0.8631 HT= 1.7

SE= 2.24

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
CHATRA	4.35	146.7	0	49	-19	1	59	0				
DEHRA DUN	5.58	269.7	1	30	5	2	31	1			1	35 PP
LHASA	5.73	97.0	1	32A	5	2	38	4				
AGRA	6.61	241.0	1	40A	0	3	15	19	1	45	3	29 SS
BOKARO	6.75	169.8	1	45	3	3	17	18			1	56 PPP

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SHILLONG	8.16	125.3	1	59K	-2	3	29	-5	2 3	PP
HOWRAH	8.63	155.8	2	3	-5	4	37	51		
LAHORE	8.79	279.4	2	10	0	3	50	0		
TOCKLAI	9.77	110.0	2	24	0					
CHITTAGONG	10.43	139.4	2	29	-4	4	24	-6		
WARSAK DAM	11.50	291.0	2	46	-1					
VIZIANAGRAM	12.37	184.7	3	35	36				7 18	
KHOROG	12.76	306.5	3	3	-1				6 3	
HYDERABAD	14.14	204.3	3	19K	-3	5	44	-16	6 14	SS
KULYAB	14.23	305.1	3	21	-3	5	54	-8		
FRUNSE	14.68	330.0	3	29	0				6 33	
QUETTA	15.16	273.2	3	33	-3	6	17	-7	3 45	PP
STALINABAD	15.23	306.0	3	34	-3	6	22	-4		
BOMBAY	15.68	225.2	3	41	-1	6	34	-2	3 54	PP
KARACHI	16.09	257.4	3	50	2				4 3	PP
TASHKENT	16.36	315.4	3	48	-3					
CHENGTU	16.80	84.5	3	55	-2	6	58	-4		
KUNMING	16.98	104.3	3	59A	0					
LANCHOW	17.07	65.9	4	1	1					
MADRAS	17.88	193.8	4	11	1	7	34	7	4 26	PP
SEMIPALATNSK	20.13	352.1	4	36	-1	8	19	2		
PORT BLAIR	20.24	156.1	4	40	2	8	37	18	4 50	PP
SIAN	20.94	73.3	4	46	1					
KODAIKANAL	21.21	199.5	4	53K	5	8	50	12		
PHU-LIEN	22.13	110.7	4	57	0					
ASHKABAD	22.81	296.0	5	5K	1				5 39	PP
PAOTOW	23.00	57.1	5	7	1					
ULAN-BATOR	24.43	38.3	5	22	3	10	25	49		
IRKUTSK	26.18	28.2	5	42	6					
PEKING	27.43	61.1	5	49	1					
HONG KONG	27.74	100.0	5	41	-9	10	7	-24		
MEDAN	29.95	150.7							6 23	
SVERDLOVSK	31.15	334.5	6	20	-1					
TIFLIS	33.70	300.5	6	45	2				14 53	SSS
CHANGCHUN	34.78	56.0	6	52	0					
KSARA	40.99	287.8	7	48	4	13	58	2	17 26	SSS
MOSCOW	41.38	321.4	7	47	-1				17 46	SCS
JERUSALEM	41.91	284.9	7	52	0					
MATUSIRO	44.70	67.3	8	14A	-1					
ISTANBUL UN.	45.57	299.2	8	22	0					
HELWAN	45.60	283.3	8	23	1					
PULKOVO	46.27	325.4	8	28	1				10 57	PPP
CINE	46.68	294.6	8	28	-2					
TIKSI	47.57	17.5	8	37	0					
APATITY	47.57	336.1	8	40	3					
LWOW	48.68	311.4	8	47	1				10 41	PP
HELSINKI	48.99	325.2	8	49	1					
SODANKYLA	49.96	334.7	8	56	0					
KHEYS	51.38	353.2	9	7	0				9 30	
KIRUNA	52.37	334.5	9	14	0					
UPPSALA	52.62	324.3	9	16K	0					
PRUHONICE	54.78	312.1	9	32	0				11 39	PP
SKALSTUGAN	55.27	328.8	9	35K	0					
COPENHAGEN	55.46	319.1	9	37	0					
GOTEBORG	55.58	321.6	9	34K	-4					
COLLMBERG	55.59	313.8	9	38	0					
TRIESTE	55.97	307.0	9	39	-1				10 34	PCP
HALLE	56.22	314.2	9	43	1	17	40	10	10 0	
PLAUEN	56.23	312.9	9	41	-1				10 7	10 44 PCP
MESSINA	56.27	297.9	9	42	-1					
JENA	56.53	313.5	9	43	-1				9 54	
SONNEBERG	56.85	312.9	9	47	0				10 3	
PRATO	58.19	305.4	10	3	7					
STUTTGART	58.42	311.3	9	56	-2					
EBINGEN	58.69	310.7	9	58	-2					
WITTEVEEN	59.21	316.3	10	3	0					
STRASBOURG	59.39	311.3	10	5	0				11 21	
DOURBES	61.06	313.6	10	14	-2					
NORD	61.64	350.6	10	20K	0					
ASTRIDA	61.67	248.0	10	21	1					
LWIRO	62.21	248.9	10	24K	0					
PARIS	62.72	312.6	10	24A	-3					
DURHAM	63.52	319.8	10	31A	-1					
KEW	63.72	316.0	10	34K	0					
SETIF	64.60	298.4	10	38A	-1					
ALGIERS UNI.	66.17	299.8	10	48	-1					
TORTOSA	66.59	304.7	10	58	6					
RATHFARNHAM	66.61	319.2	11	5	13					
TRUK	66.74	95.1	10	53	0					

ALICANTE	68.19	302.5	11	3	1			
RELIZANE	68.42	299.6	1'	3	-1		11 43	PCP
TAMANRASSET	69.71	285.0	11	11K	-1		13 48	PP
TOLEDO	70.16	305.1	11	15A	1			
ALMERIA	70.23	301.7	11	14	-1			
THULE	71.98	353.5	11	25	0			
RABAUL	73.12	105.4	11	32	0			
RESOLUTE	75.08	359.8	11	42K	-1			
COLLEGE	76.62	20.3	11	52	0		14 39	PP
CHARTERS TS.	77.75	122.0	11	58	0			
ADELAIDE	82.72	137.8	12	25A	0		12 28	PCP
WINDHOEK	83.47	239.2					17 29	
MELBOURNE	88.38	136.4	12	53	0			
HUNGRY HORSE	99.76	12.4					17 51	PP
RAPID CITY	105.44	5.8					18 31	PP
EUREKA	107.81	16.5					18 48	PP
SOUTH POLE	120.34	180.0	18	50	-1			
BYRD STATION	129.41	174.7	19	11	2			
LA PAZ	151.38	292.9	20	0	13			
HUANCAYO	153.80	310.2	20	3	12		23 56	PP

NOVEMBER 4 8.H 28.M 40.S EPICENTRE 27.96 140.85 DEPTH= 101.KM

DEPTH OF FOCUS= 0.011R

A=-0.68598 B= 0.55849 C= 0.46639 D= 0.6314 E= 0.7755
G=-0.3617 H= 0.2945 K=-0.8846 HT= 2.5

SE= 3.00

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	2.56	349.3	0	42	2	1	3	-8				
HATIDYOZIMA	5.20	350.5				2	6	-10				
OSIMA	6.90	349.9	1	34	-6							
OMAESAKI	6.99	341.9	1	41	0	3	20	20				
MERA	6.99	353.1	1	35	-6	3	6	6				
SIOMISAKI	7.00	322.6	1	45	4	3	31	31				
AJIRO	7.22	348.5	1	46	2							
OWASE	7.28	327.9	1	46	1							
SHIZUOKA	7.29	344.0	1	42	-3							
MISIMA	7.32	347.7	1	44K	-1	3	49	41				
YOKOHAMA	7.52	352.5	1	44	-4	3	32	20				
TU	7.70	332.3	1	45	-6							
HUNATU	7.72	347.3	1	50	-1	4	9	52				
TOKYO C.M.O.	7.75	353.4	1	49	-2	3	22	4				
MUROTO	7.80	314.2	2	15	23							
KAMEYAMA	7.82	332.5	1	52	0							
KOHU	7.89	346.3	1	52	-1							
NAGOYA	7.91	336.3	1	53	-1							
IIDA	7.96	341.9	1	54	0							
OSAKA	8.07	327.0	1	52	-4	3	55	29				
TOKUSIMA	8.12	320.1	1	58	2							
TITIBU	8.14	349.8	1	55	-2							
SUMOTO	8.17	322.7	2	1	4	3	50	22				
GIHU	8.19	335.9	1	56A	-1							
ABUYAMA	8.23	328.1	1	54A	-4							
TUKUBASAN	8.26	355.8	1	51	-7	3	15	-16			2	5 PPP
KUMAGAYA	8.26	351.7	1	59	1							
KOBE	8.27	325.5	2	4	6	4	9	38				
HIKONE	8.27	332.9	1	59	1							
IBUKISAN	8.32	333.9	1	58	-1							
MITO	8.40	357.9	2	6	6							
KOTI	8.41	313.3	2	3	3							
MAEBASI	8.55	350.3	1	56	-6	3	58	20				
OIWAKE	8.57	347.4	2	5	3							
UTUNOMIYA	8.60	354.7	2	5	2						3	37
TAKAMATU	8.61	319.1	2	7	4							
MATUMOTO	8.62	344.3	2	2	-1							
TSURUGA	8.68	333.3	2	4	0							
MATUSIRO	8.85	346.1	2	2A	-4	3	41	-4			4	29
HUKUI	8.95	335.4	2	8	0							
ONAHAMA	8.96	0.3	2	22	14	3	45	-3			2	52
NAGANO	8.97	346.2	2	8	0							
MIYAZAKI	9.08	298.0	2	9	0	4	16	25				
MATUYAMA	9.09	312.1	2	10	1							
TOYOOKA	9.12	327.3	2	10	0							

SHIRAKAWA	9.15	356.8	2	7	-3	4	12	20		
TOYAMA	9.24	341.4	2	12	0					
KANAZAWA	9.25	338.5	2	18	6					
TAKADA	9.37	347.1	2	13	0					
YAKUSIMA	9.38	287.8	2	15	2					
HIROSIMA	9.63	313.6	2	18	1					
KAGOSIMA	9.65	294.4	2	35	18					
HUKUSIMA	9.77	358.2	2	14	-5	3	57	-10		
YONAGO	9.81	321.3	2	21	2	4	27	19		
WAZIMA	9.96	341.5	2	43	22					
KUMAMOTO	10.01	301.4	2	33	11					
NIIGATA	10.05	351.8	2	24	2					
HAMADA	10.20	314.9	2	27	3					
YAMAGATA	10.27	357.8	2	26	1					
SENDAI	10.28	0.2	2	22	-3	4	4	-15	4	25
ISINOMAKI	10.45	2.0	2	22	-6				2	42
SAGA	10.50	302.7	3	27	59					
HUKUOKA	10.57	304.5	2	34	5					
MIZUSAWA	11.14	1.1	2	45	8	4	34	-6		
TOMIE	11.42	296.9	2	52	1'	5	10	23		
MORIOKA	11.71	1.2	2	37	-8					
AKITA	11.75	357.2	2	41	-4					
URAKAWA	14.24	5.8	3	46	28					
GUAM	14.87	165.1	3	26	0					
OBIHIRO	15.05	6.7	3	40	12					
SAPPORO	15.08	1.4	3	30	2	6	0	-13		
KUSIRO	15.26	9.9	3	30	-1					
NEMURO	15.81	12.8	3	46	9					
ASAHIGAWA	15.83	4.0	3	36	-2					
VLADIVOSTOK	16.77	336.8	3	52	3	7	8	16		
ZO-SE	17.40	285.1	3	54	-3					
ILAN	17.41	263.8	3	55	-2	6	28	-38		
TAIPEI	17.55	264.9	3	53	-6					
HWALIEN	17.74	261.4	4	4	3					
HSINKONG	18.23	259.0	4	20	13					
ALISHAN	18.59	260.8	4	20	9					
TAWU	18.90	257.3	4	20	5	6	49	-49		
Y.-SAKHLINSK	19.01	3.9	4	24	8					
HENGCHUN	19.15	256.4	4	22	5					
NANKING	19.52	287.4	4	21A	0	8	3	12		
UGLEGORSK	21.11	2.2	4	40	2					
KOROR	21.39	197.6	4	38	-2					
MANILA	22.76	238.3	4	59	5	7	32	-79		
TRUK	22.89	150.9	4	54	-1					
PEKING	23.66	307.0	5	0	-2					
HONG KONG	24.78	262.8	5	13	0	9	10	-15		
SIAN	27.97	290.9	5	43	0					
PAOTOW	28.26	304.5	5	43	-2					
PHU-LIEN	31.90	264.7	6	16	-1					
CHENGTU	32.15	283.8	6	19	-1					
LANCHOW	32.27	294.0	6	20	-1					
MAGADAN	32.31	9.5	6	20	-1					
ULAN-BATOR	33.00	316.4	6	25	-2					
RABAUL	33.78	159.4	6	30	-4					
KUNMING	34.19	274.1	6	36	-1	12	13	18		
YAKUTSK	34.85	350.8	6	40	-3	12	7	1		
IRKUTSK	36.41	322.0	6	55	-1					
LHASA	43.41	284.6	7	55	1					
SHILLONG	43.57	278.6	7	55	0	14	26	10	9	40 PP
TIKSI	44.22	354.6	8	0	0					
CHITTAGONG	44.49	274.2	8	3	0	14	47	18	9	51 PP
MEDAN	46.90	246.6	8	24K	2				12	9
LEMBANG	47.18	227.9	8	23	-1	12	52	-136		
DJAKARTA	47.23	229.3	9	18	54					
CHATRA	47.35	281.8	8	5	-20					
CHARTERS TS.	47.97	173.1	8	28	-2	15	44	25		
BOKARO	49.35	278.4	8	41	0	15	45	7		
DEHRA DUN	54.27	288.7	9	21	4	16	59	14	19	32
AGRA	55.14	284.9	9	23A	-1				11	54
NOUMEA	55.75	151.0	9	26K	-2				11	58
BRISBANE	56.35	167.0	9	30A	-2	19	10	117		
LAHORE	57.06	291.1	9	35	-2					
NAMANGAN	57.13	302.6	9	39	1					
COLLEGE	57.14	28.8	9	39	1					
HYDERABAD	57.99	273.9	9	43	-1				20	21
SUVA	58.52	137.2				16	41	-60		
WARSAK DAM	58.71	294.6	9	49K	0					
SVERDLOVSK	61.82	322.1	10	8	-2					

RIVERVIEW	62.22	170.3	10	18	5						
BOMBAY	62.39	277.8	10	15	1	18	45	14			
KHEYS	62.44	348.7	10	6	-8	18	25	-6			
ADELAIDE	62.58	182.0	10	15A	0						
CANBERRA	63.41	172.5	10	9K	-12						
QUETTA	63.53	291.7	10	20K	-1	18	56	11			
KARACHI	64.89	287.1	10	30K	0						
NORD	70.05	356.6	11	2A	-1						
APATITY	70.80	337.2	11	6	-1	20	23	11		13	37 PP
RESOLUTE	71.50	13.4	11	11A	0	20	33	13			
ALBERNI	72.02	43.4	11	19	5					13	50
HORSESHOE B.	72.91	42.9	11	21	1					13	51
KARAPIRO	73.15	152.0	11	20	-1						
VICTORIA	73.16	43.7	11	23	2						
SODANKYLA	73.16	338.4	11	20	-1						
THULE	74.30	6.9	11	27	-1						
MOSCOW	74.33	325.1	11	27	-1						
KIRUNA	74.84	340.2	11	30	-1	21	7	9			
PULKOVO	75.80	330.7	11	35	-1						
TIFLIS	76.15	309.9								14	8 PP
BANFF	75.63	39.0	11	42	1						
GEBBIES PASS	77.05	156.9	11	38	-5						
SHASTA	77.07	50.8	11	45A	2						
UKIAH	77.17	52.5	11	44	0						
MINERAL	77.76	50.8	11	48A	1						
HELSINKI	77.83	332.6	11	46	-1					14	50 PP
BERKELEY	78.40	53.3	11	51	0						
SOTCHI	78.68	313.3	11	50	-2						
HUNGRY HORSE	78.84	41.0	11	54	1						
LICK	79.08	53.6	11	55	1						
RENO	79.36	50.9	11	58	2						
SKALSTUGAN	80.19	339.2	11	59A	-1						
FRESNO	80.64	53.4	12	4	1						
BUTTE	80.87	42.6	12	6	2						
UPPSALA	80.91	334.7	12	2	-2					22	29 SCS
SCORESBY SD.	81.07	354.2	12	7	2						
SIMFEROPOL	81.51	316.6	12	6	-1	22	14	5			
BOZEMAN	81.96	42.3	12	12	2						
EUREKA	82.00	49.5	12	11	1						
PASADENA	83.06	55.1	12	17	2					25	6 SP
SALT LAKE C.	84.05	46.8	12	22	2						
LWOW	84.44	324.5	12	20	-2						
GOTEBORG	84.53	335.2	12	21	-2				12	46	
BOULDER CITY	84.53	52.1	12	25	2						
COPENHAGEN	85.80	333.6	12	28	-1	22	50	-2		15	32 PP
KSARA	86.09	306.3	12	33	3	23	5	11	12	52	15 50 PP
KRAKOW	86.36	326.3	12	58	26					15	44
SKALNATE PL.	86.76	325.5	12	35	1					15	1
RAPID CITY	87.46	40.4	13	11	34						
POTSDAM	87.92	331.0	12	9	-30					16	38
BOULDER	88.62	44.6	12	12	-30						
COLLMBERG	88.72	330.3	12	41	-2					15	12
PRUHONICE	88.96	328.6	12	43	-1					13	30
BRATISLAVA	89.00	326.2	12	43	-1						
TUCSON	89.31	53.6	12	48	2					13	24
CINE	89.34	312.9	12	43	-3					14	23
TUCSON TELE.	89.34	53.4	12	48	2						
JENA	89.61	330.7	12	46	-1						
HELWAN	91.47	305.0	12	53	-3					15	26
STUTTGART	92.25	330.3	12	57	-2						
STRASBOURG	93.01	330.9	13	40	37					16	11
DOURBES	93.14	333.5	11	16	-107						
PARIS	94.99	333.8	13	13	1					16	16
FAYETTEVILLE	97.88	42.1	13	26A	1					15	57
OASIS-BUNG.	98.70	195.4								17	29 PP
GRANADA	107.11	330.9								23	20
TAMANRASSET	113.64	314.9	18	31	5						
SOUTH POLE	117.80	180.0	18	33	-1					19	47 PP
BYRD STATION	119.02	168.7	18	38	2						
KIMBERLEY	124.37	252.9	18	49	2						
CHINCHINA	131.96	52.8	19	5	4					21	35 PP
HALLEY BAY	131.96	184.2	19	0	-1					21	21 PP
FUQUENE	132.91	50.5	19	5	2	25	2	-60		21	36 PP
BOGOTA	133.29	51.6	19	20	16					21	38 PP
HUANCAYO	142.68	72.3	19	21A	0						
LA PAZ	150.93	73.0	19	39K	5						

NOVEMBER 4 8.H 31.M 12.S EPICENTRE 27.96 140.76 DEPTH= 113.KM

DEPTH OF FOCUS= 0.013R

A=-0.68506 B= 0.55961 C= 0.46640 D= 0.6326 E= 0.7744
G=-0.3612 H= 0.2951 K=-0.8846 HT= 2.5

SE= 2.70

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
OSIMA	6.89	350.5	1 14	-26	2 12	-45		
OMAESAKI	6.96	342.5	1 39	-2				
MERA	6.98	353.7			1 59	-61		
AJIRO	7.21	349.1	1 47	3				
OWASE	7.24	328.4	1 45	0				
MISIMA	7.30	348.3	1 43	-2				
MUROTO	7.74	314.6	2 43	52				
TOKYO C.M.O.	7.74	353.9	1 48	-3				
KAMEYAMA	7.78	333.0	1 51	-1				
KOHU	7.87	346.9	1 59	6				
NAGOYA	7.88	336.8	1 51	-2				
IIDA	7.94	342.5	1 53	-1				
OSAKA	8.03	327.5	1 52	-3	3 28	3		
TOKUSIMA	8.07	320.5	1 56	0				
SUMOTO	8.12	323.1	1 56	0	3 47	20		
TITIBU	8.12	350.3	1 54	-2				
HIKONE	8.24	333.3	1 57	-1				
KUMAGAYA	8.25	352.2	2 32	34				
TUKUBASAN	8.25	356.3	1 54K	-4	3 21	-9		2 12 PPP
IBUKISAN	8.28	334.4	1 59	0				
KOTI	8.35	313.6	2 3	3				
MAEBASI	8.53	350.8	1 54	-8				
TAKAMATU	8.55	319.5	2 33	31				
MATUMOTO	8.60	344.8	2 2	-1				
TSURUGA	8.64	333.7			3 40	0		
MATUSIRO	8.83	346.6	2 3	-3	4 34	50		5 34
NAGANO	8.95	346.7	2 8	0				
ONAHAMA	8.96	0.7	2 52	44	3 55	7		
MATUYAMA	9.03	312.4	2 15	6	4 38	49		
SHIRAKAWA	9.14	357.3	2 14	4				3 18
TOYAMA	9.22	341.9	2 42	31				
YAKUSIMA	9.30	287.9	2 3	-9				
OOITA	9.46	305.9	2 20	6				
KAGOSIMA	9.57	294.5	2 34	18				5 40
HIROSIMA	9.57	313.9	2 19	3				
HUKUSIMA	9.77	358.7			4 9	2		
KUMAMOTO	9.94	301.6	2 40	19				
NIIGATA	10.03	352.2	2 47	25				
HAMADA	10.14	315.2	2 25	1	4 28	12		
AIKAWA	10.25	348.8	2 22	-3				
SENDAI	10.28	0.6	2 23	-2	4 0	-19		3 24
SAGA	10.43	302.9			4 1	-22		
ISINOMAKI	10.45	2.4	1 41	-47				
HUKUOKA	10.50	304.8	2 40	12				
SAKATA	10.94	356.2	1 54	-40				
TOMIE	11.35	297.1	2 44	4				
MIYAKO	11.70	4.6	1 36	-68	4 38	-15		
AKITA	11.74	357.5	2 22	-23	3 45	-69		
HATINOHE	12.55	2.7	1 29	-87				2 57
HAKODATE	13.79	359.9	2 42	-29				
MORI	14.11	359.4	3 24	8				
URAKAWA	14.25	6.1	3 15	-2	6 5	12		
GUAM	14.89	164.7	3 26	0				
SAPPORO	15.08	1.7	3 27	-1			4 17	
KUSIRO	15.27	10.2					4 17	
NEMURO	15.82	13.0	3 41	4			5 14	
ZO-SE	17.32	285.1	3 57K	1	7 15	11		
WAKKANAI	17.44	2.2					6 5	
TAINAN	19.19	259.8	4 39	21				
NANKING	19.44	287.4	4 19K	-1	8 1	13		
CHANGCHUN	20.13	325.9	4 31	4	8 18	16		
KOROR	21.36	197.3	4 38	-1				
TRUK	22.93	150.7	4 59	4				5 23
PEKING	23.59	307.0	4 59K	-2	9 27	23		
HONG KONG	24.69	262.8	5 13	1	9 37	15		
CHENGTU	32.07	283.8	6 17	-1	11 29	8		
RABAUL	33.81	159.2	6 30	-3				

KUNMING	34.11	274.0	6	39K	3	12	4	12				
LHASA	43.33	284.6	7	55	3	14	22	11				
SHILLONG	43.48	278.6	7	55	2	14	24	11	9	34	PP	
CHITTAGONG	44.41	274.2	8	3	2	14	39	13	9	48	PP	
CHATRA	47.27	281.8	8	5	-18	14	56	-11				
PORT BLAIR	47.69	260.1	8	17	-10	15	27	14	9	29	PCP	
LAHORE	56.98	291.1	9	35	-1	17	31	12				
COLLEGE	57.18	28.8	9	37	0	17	32	10	19	30		
MADRAS	58.14	268.3	9	45	1	18	21	46	13	27		
WARSAK DAM	58.63	294.6	9	46	-1							
RIVERVIEW	62.23	170.3	10	12A	-2							
BOMBAY	62.30	277.7	10	12	0	18	45	17				
ADELAIDE	62.58	181.9	10	14A	0							
CANBERRA	63.42	172.5	10	18	-2							
QUETTA	63.45	291.6	10	19K	-1	18	53	11	10	45	PCP	
KARACHI	64.81	287.1	10	31K	2	19	16	17	13	1	PP	
MELBOURNE	65.56	176.3	10	32	-2							
NORD	70.05	356.6	11	1K	0							
RESOLUTE	71.52	13.4	11	10A	0	20	26	7				
SODANKYLA	73.13	338.3	11	19	-1							
KARAPIRO	73.19	151.9	11	20	0							
THULE	74.31	6.8	11	26	-1							
KIRUNA	74.81	340.2	11	29	0	21	5	10				
GEBBIES PASS	77.08	156.8	11	36	-6							
SHASTA	77.13	50.7	11	42	-1							
UKIAH	77.24	52.5	11	43	0							
HELSINKI	77.79	332.6	11	44	-2							
MINERAL	77.83	50.8	11	48	2							
BERKELEY	78.46	53.3	11	51	1							
HUNGRY HORSE	78.90	41.0	11	54	2							
LICK	79.14	53.6	11	56	2							
RENO	79.42	50.9	11	57	2							
SKALSTUGAN	80.16	339.2	11	58	-1							14 59 PP
FRESNO	80.71	53.4	12	4	2							
UPPSALA	80.87	334.6	12	1	-2							
BUTTE	80.93	42.5	12	5	2							
SCORESBY SD.	81.06	354.2	12	5	1				12	14		
BOZEMAN	82.02	42.3	12	12	3							
EUREKA	82.06	49.5	12	10	1							
PASADENA	83.13	55.1	12	16	2							
KISHINEV	83.44	320.3	12	18	2							
IASI	84.05	320.9	12	17	-2							
SALT LAKE C.	84.11	46.8	12	21	2							12 57
WARSAW	84.38	327.5	12	21	0							
GOTEBORG	84.49	335.1	12	20	-1							
BOULDER CITY	84.60	52.1	12	24	2							
COPENHAGEN	85.77	333.5	12	27	-1	22	52	3				
KSARA	86.02	306.2	12	29	0	23	3	11	12	49		15 48 PP
BUCHAREST	86.51	319.3	12	32	1							32 58
ISTANBUL KA.	86.67	315.3	12	31	-1							
RAPID CITY	87.51	40.4	12	38	2							
JERUSALEM	87.55	304.8	12	33	-3							16 0 PP
POTSDAM	87.88	331.0										18 22
BOULDER	88.67	44.6	12	5	-37							
PRUHONICE	88.92	328.6	12	42	-1							16 13 PP
BRATISLAVA	88.95	326.1	12	42	-1							
TUCSON	89.38	53.5	12	47	2							
TUCSON TELE.	89.40	53.4	12	46	1							
JENA	89.57	330.6	12	44	-2							
SONNEBERG	90.14	330.4	12	42	-6							13 28
STUTTGART	92.20	330.3	12	56	-2							
MESSINA	96.58	319.6				25	31	65				28 27
SETIF	103.58	324.2	13	48	-1							18 0 PP
ALGIERS UNI.	104.32	326.1										18 12 PP
TAMANRASSET	113.58	314.8	18	22	-3							19 17 PP
SOUTH POLE	117.80	180.0	18	33	0							19 46 PP
BYRD STATION	119.03	168.7	18	37	2							
HUANCAYO	142.76	72.2	19	20	0							
LA PAZ	151.01	73.0										19 40 PKP2

NOVEMBER 4 9.H 16.M 47.S EPICENTRE 6.82 -73.04 DEPTH= 154.KM

DEPTH OF FOCUS= 0.019R

A= 0.28960 B=-0.94985 C= 0.11800 D=-0.9565 E=-0.2916
G= 0.0344 H=-0.1129 K=-0.9930 HT= 6.9

SE= 1.26

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
FUQUENE	1.51	207.0	0 29	-1	0 46	-8		
BOGOTA	2.41	205.1	0 42	1	1 12	0		
CHINCHINA	3.15	234.5	0 49	-1	1 24	-5		
GALERAZAMBA	4.51	330.9	1 9	1	2 2	2		
TRINIDAD	12.01	70.6	2 49	2				2 57 PP
GRENADA	12.31	64.2	2 50	-1				2 57 PP
ST. VINCENT	13.20	60.5	2 58	-4				
SAN JUAN	13.32	29.8	3 3	-1	5 23	-6		
BARBADOS	14.64	63.7	3 21	1				
HUANCAYO	18.89	186.9	4 11	0	7 56	24	4 33	9 24
LA PAZ	23.68	168.2	5 1	3	10 5	67		
MORGANTOWN	33.25	350.2	6 26	2				
FAYETTEVILLE	34.98	329.4	6 39	0				9 8
WESTON	35.44	2.2	6 44A	1				
HARVARD	35.57	1.9	6 45	1				
OTTAWA	38.50	357.0	7 9A	1				
BREBEUF	38.53	359.3	7 10A	1				
SHAWINIGAN	39.58	0.3	7 18A	1				
SEVEN FALLS	40.20	2.3	7 24A	2				
TUCSON TELE.	43.27	311.0	7 47	0				
TUCSON	43.31	310.8	7 48	0				8 49
BOULDER	43.91	323.8	7 53	0				
LARAMIE	44.91	325.0	8 1	0				
RAPID CITY	45.52	329.5	8 6	1			8 43	
BOULDER CITY	47.97	313.3	8 26	1				
SALT LAKE C.	48.36	320.4	8 28	0				
PASADENA	49.69	309.6	8 37	-1				9 14
EUREKA	50.40	316.8	8 43	0				
BOZEMAN	50.74	326.1	8 47	1				
FRESNO	51.93	312.0	8 53	-2				
RENO	53.07	315.2	9 3A	0				
LICK	53.51	312.0	9 6A	0				
HUNGRY HORSE	53.99	327.3	9 9	-1				
BERKELEY	54.16	312.3	9 11A	0				
MINERAL	54.66	315.4	9 14A	-1				
SHASTA	55.35	315.5	9 17	-3				
RESOLUTE	68.97	353.9	10 49A	-1				
COLLEGE	77.41	335.0	11 39	0				14 37 PP
NORD	78.60	7.2	11 44A	-2				
SKALSTUGAN	81.85	26.8	12 3K	0				
UPPSALA	84.49	30.5	12 16	0				
KIRUNA	85.05	22.4	12 19	0				
SODANKYLA	87.47	22.4	12 30	-1				
BYRD STATION	89.82	187.3	12 42	0				
SOUTH POLE	96.78	180.0	13 13	-1				
SHILLONG	144.62	24.0	19 18A	0				

NOVEMBER 4 22.H 55.M 16.S EPICENTRE -50.35-114.64 DEPTH= 266.KM

DEPTH OF FOCUS= 0.037R

A=-0.26708 B=-0.58234 C=-0.76782 D=-0.9090 E= 0.4169
G= 0.3201 H= 0.6979 K=-0.6407 HT= -5.5

SE= 1.27

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
BYRD STATION	29.84	181.7	5 44	-1				
CONCEPCION	33.20	82.5			11 37	24		13 33
SANTA LUCIA	36.23	79.2	6 57	17	12 18	18		8 32 PPP
CAPE HALLETT	38.60	208.3	7 2	3	13 7	31		8 4 PP
SCOTT BASE	39.00	199.3	7 4	1	13 21	40	7 27	8 24 PP
SOUTH POLE	39.84	180.0	7 9	-1				8 41 PP
ROXBURGH	49.08	244.5			15 42	36		
KARAPIRO	49.87	256.2	8 28	-1				
HUANCAYO	49.89	54.1	8 28	-1	15 45	28		
LA PAZ	50.23	64.9	8 31	0	15 44	22		10 2 PCP
WILKES	58.77	199.7			17 46	31		
OASIS-BUNG.	60.70	195.6	9 44	-2				18 13 PS
MIRNY	61.54	192.2	9 52	1				18 17 PS
CHINCHINA	64.54	44.0	10 8	-3	18 53	25		

FUQUENE	65.84	45.6	10	20	1	19	37	54			
RIVERVIEW	67.28	244.2							12	20	PP
TACUBAYA	70.77	15.4	10	49	0	19	48	7	13	52	PP
ADELAIDE	73.33	235.3	11	4	-1						
CHARTERS TS.	80.45	250.3	11	42K	-2						
SAN JUAN	80.66	46.1							12	54	
TUCSON	82.30	3.3	11	53	0						
TUCSON TELE.	82.40	3.3	11	54	0						
PASADENA	84.19	357.1	12	2	-1	22	29	25	23	29	PS
BOULDER CITY	85.96	359.8	12	13	1						
FAYETTEVILLE	87.94	16.4	12	20A	-1						
RABAUL	88.84	264.9	12	26	1						
COLUMBIA	89.09	27.4	12	27	1						
EUREKA	89.46	359.0	12	28	0						
BERMUDA	93.47	40.5				23	54	26	25	4	PS
BOZEMAN	95.69	2.5	12	59	2						
MBOUR	105.80	86.5				25	44	32	33	8	SS
LWIRO	118.96	137.1							19	1	PP
ASTRIDA	119.05	138.3							19	47	PP
RESOLUTE	125.44	6.3	18	31	1				37	24	SS
TAMANRASSET	126.34	97.8	18	28K	-3				37	40	SS
MATUSIRO	127.40	284.4							34	41	
MALAGA	129.43	77.4							20	55	PP
GRANADA	130.22	77.5	21	41A	182				22	20	PP
TOLEDO	131.58	74.4	18	26	-16				38	37	SS
RELIZANE	131.94	81.7	18	47	5				21	22	PP
HONG KONG	132.88	252.0	18	53	9						
ALICANTE	132.89	78.3	18	48	4	25	58	31	21	18	PP
SETIF	135.31	84.6	18	53	5						
STRASBOURG	143.33	69.8							41	2	SS
EBINGEN	143.88	71.0	19	4	0						
TUBINGEN	144.09	70.5	19	4	-1						
STUTTGART	144.27	70.2	19	3	-2				23	1	SKP
TIKSI	144.97	330.4	19	4	-2						
CHITTAGONG	145.22	226.3	19	5	-1						
TRIESTE	145.72	77.5	19	3	-4				22	1	
HALLE	146.93	66.9	19	14	5				21	6	
ZAGREB	147.19	78.5	19	15	5				24	11	
HELWAN	147.31	115.8	19	16	6				23	23	
COLLMBERG	147.49	67.7	19	15	5						
POTSDAM	147.87	65.8	19	14	4						
PRUHONICE	147.96	70.6	19	13	2						
ATHENS	148.08	96.6	19	14A	3				19	26	PKP2
COPENHAGEN	148.39	59.5	19	20	9				41	56	SS
BRATISLAVA	148.86	75.0	19	18	6				22	48	
KHEYS	149.84	4.5	19	18	5						
RACIBORZ	150.21	72.0	19	22	8				20	52	
SOFIA	150.41	88.6	19	16	2						
TIMISOARA	150.47	81.6	19	7	-7						
CINE	150.63	101.3	19	20	5						
JERUSALEM	150.96	118.2	19	20	5						
SKALNATE PL.	151.17	74.6	19	19	3				20	16	
CHATRA	151.19	223.5	19	5	-11				21	3	
UPPSALA	151.68	52.0	19	31	15						
KIRUNA	151.95	34.7	19	19	2						
KSARA	152.83	116.2	19	22	4	26	37	40	26	47	PPP
BUCHAREST	153.00	87.4	19	25	7				23	58	
ISTANBUL KA.	153.25	96.2	19	20	2				19	44	PKP2
LWOW	153.71	75.0	19	24	5				19	42	PKP2
SODANKYLA	154.34	34.0	19	32	12						
KISHINEV	155.81	83.7	19	29	7						
PULKOVO	158.08	51.1	19	30	5				23	47	PP
SIMFEROPOL	158.37	92.3	19	30	5				20	10	PKP2
QUETTA	159.82	184.0	19	34	7	26	30	26	20	19	PKP2
MOSCOW	162.54	61.3	19	32	2						
WARSAK DAM	163.04	197.9	19	29	-1						
ASHKABAD	166.63	155.3	19	49	16						
NAMANGAN	169.65	207.6	19	43	8						
FRUNSE	170.21	223.8	19	34	-2				24	50	PP
TASHKENT	170.57	198.3	19	47	11				31	41	SKKS
SVERDLOVSK	172.92	21.6							29	32	PPP

NOVEMBER 6 15.H 30.M 21.S EPICENTRE -6.03 128.44 DEPTH= 355.KM

DEPTH OF FOCUS= 0.051R

A=-0.61835 B= 0.77894 C=-0.10436 D= 0.7832 E= 0.6217
G= 0.0649 H=-0.0817 K=-0.9945 HT= 7.0

SE= 1.96

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
KOROR	14.57	24.5	3 12	0	5 52	6		10 58 SCP
LEMBANG	20.71	266.7	4 11	-3	7 39	0		
DJAKARTA	21.49	268.5	4 20	-1	7 53	0		
CHARTERS TS.	22.20	130.4	4 29K	1	8 7	2		
BAGUIO CITY	23.62	340.9	4 40	-1				
RABAUL	23.70	86.7	4 42	0				
TRUK	26.93	60.4	5 11	0			6 6	
ADELAIDE	30.28	163.1	5 40K	-1	10 15	1	6 26	6 47 PP
MEDAN	31.22	287.1	5 49A	0	10 26	-3		
HONG KONG	31.43	334.0	5 49K	-2	10 30	-2		7 10 PP
BRISBANE	31.64	135.2	5 54K	2	10 32	-3		
RIVERVIEW	34.76	145.7	6 24A	5	11 25	2		
MELBOURNE	35.04	156.9	6 21	0	11 29	2	6 57	
ZO-SE	37.57	349.8	6 42K	0	12 4	-1		
NANKING	38.97	346.9	6 55K	1	12 26	0		12 11 SCP
KUNMING	39.78	322.0	7 2	1	12 40	2		
MATUSIRO	43.34	11.5	7 28K	-1	13 20	-10		15 27 *SS
CHITTAGONG	45.62	309.4	8 8	21				
TOCKLAI	46.10	316.5			14 10	1		
PEKING	47.21	347.1	7 59	0	14 23	-2		
SHILLONG	47.42	313.0	7 59A	-2				
LANCHOW	47.84	332.9	8 5K	1	14 33	0		
CHANGCHUN	49.71	357.0	8 17	-1				
LHASA	50.47	316.7	8 26	2	15 11	1		
CHATRA	51.61	311.2	8 39	6				
KARAPIRO	53.17	133.6	8 44A	0				9 47 PCP
GEBBIES PASS	53.92	141.3	8 48	-1				
BOMBAY	60.13	295.7	9 37	5				
IRKUTSK	61.61	343.4			17 40	5		
MIRNY	65.17	194.8	10 3	-2				10 33 PCP
WARSAK DAM	66.85	310.8	10 17A	1				
KARACHI	67.43	301.0	10 17A	-2				
FRUNSE	68.88	320.5	10 28A	0	19 4	1		
QUETTA	68.97	305.4	10 29A	0	19 2	-2	11 23	13 7 PP
STALINABAD	70.79	314.2	10 40	0				
CAPE HALLETT	70.98	167.5	10 40	-1				
SCOTT BASE	74.50	172.2	11 0K	-1	19 55	-11		
HONOLULU	76.91	66.6	11 15	0				12 38 *SP
TIKSI	77.50	0.1	11 17	-1	20 45	7		20 58 SKS
KIZYL-ARVAT	80.11	311.2	11 33A	1	21 6	0		
SVERDLOVSK	83.15	329.2	11 47	0				
BYRD STATION	87.84	170.7	12 0	-10				
KIROVOBAD	87.91	311.1	12 11	0				
COLLEGE	92.75	25.1	12 31	-2				
KSARA	95.44	303.3	12 47	2				
GRAHAMSTOWN	96.56	235.6	17 51	777				
ASTRIDA	98.38	266.5	16 52	777				17 14 PP
LWIRO	99.35	266.7	17 14A	777				
SODANKYLA	100.08	337.4	13 5	-1				
KIRUNA	102.31	338.3	13 15	-1				
RESOLUTE	107.03	11.0	17 43	777				
PRUHONICE	109.86	321.1	17 50	777				
HUNGRY HORSE	112.60	39.9	17 55	1				28 44 PKKP
PASADENA	112.69	55.6	17 56	2				
EUREKA	113.48	49.6	17 58	3				28 43 PKKP
STUTTGART	113.56	321.0	17 56	0				18 54
TUCSON TELE.	119.15	56.3	18 9	2				28 26 PKKP
RAPID CITY	121.14	41.3	18 11	1				28 16 PKKP
OTTAWA	135.51	24.3	18 38K	0				
SHAWINIGAN	135.68	20.9	18 39	1				21 38 PP
SEVEN FALLS	135.84	18.9	18 41	3				21 36 PP
MBOUR	145.01	286.4	18 58	3				20 32 *SPKP
HUANCAYO	150.31	127.2	19 7	4				19 13 PKP2
LA PAZ	152.25	144.0	19 13A	7				

NOVEMBER 6 22.H 58.M 8.S EPICENTRE 44.38 148.58 DEPTH= 32.KM

A=-0.61198 B= 0.37378 C= 0.69697 D= 0.5212 E= 0.8534
G=-0.5948 H= 0.3633 K=-0.7171 HT= -3.3

SE= 2.06

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	2.41	245.3	0	38K	0	1	2	-4				
ABASHIRI	3.12	264.9	0	52	4	1	27	3				
KUSIRO	3.34	246.7	0	53K	2	1	31	1				
OBIHIRO	4.17	251.4	1	6K	3	1	53	2				
HIROO	4.38	243.2	1	6	1	1	59	3				
ASAHIGAWA	4.52	264.6	1	12K	5	2	4	4				
URAKAWA	4.79	244.3	1	14K	3	2	4	-2				
Y.-SAKHLINSK	4.85	304.1	1	12K	0	2	4	-4				
WAKKANAI	5.02	284.4	1	25	10	2	23	11				
RUMOE	5.03	267.5	1	17	2	2	19	7				
SAPPORO	5.40	258.5	1	23K	3	2	23	1				
TOMAKOMAI	5.43	252.4	1	24K	4	2	27	5				
MURORAN	5.92	252.4	1	30	3	2	33	-2			1	48
SUTTSU	6.27	258.3	1	36K	4	2	46	2				
MORI	6.28	251.5	1	36K	4	2	44	0				
HAKODATE	6.32	248.5	1	33K	0	2	42	-3				
HATINOHE	6.48	236.0	1	34	-1	2	45	-4				
UGLEGORSK	6.49	318.7	1	38K	3							
AOMORI	6.77	241.0	1	40K	1	2	52	-4				
MIYAKO	6.82	228.5	1	40A	0	2	46	-11				
MORIOKA	7.23	232.3	1	44A	-2	3	0	-8				
MIZUSAWA	7.65	229.3	1	50	-1	3	18	0				
AKITA	7.84	236.5	1	55K	1	3	14	-9				
ISINOMAKI	8.07	225.1	1	55A	-2	3	21	-7				
SEVERO-KUR.	8.09	36.3	1	58	0							
SENDAI	8.40	226.1	2	0A	-2	3	29	-8				
SAKATA	8.54	233.1	2	5A	1	3	43	3				
YAMAGATA	8.71	228.2	2	7A	1	3	38	-6				
HUKUSIMA	9.02	225.5	2	9A	-1	3	46	-6				
ONAHAMA	9.44	220.8	2	14A	-2	3	55	-7			3	8
SHIRAKAWA	9.63	224.0	2	18A	-1	4	1	-6				
NIIGATA	9.66	231.4	2	25A	6	4	6	-2				
AIKAWA	10.04	234.3	2	24	-1	4	24	7			4	48
MITO	10.10	220.5	2	23	-2	4	10	-9				
UTUNOMIYA	10.25	223.3	2	25K	-2	4	13	-9				
KAKIOKA	10.36	221.1	2	24A	-5	4	13	-12				
TUKUBASAN	10.40	221.4	2	25A	-5	4	15	-11				
TYOSI	10.48	217.0	2	27	-4	4	18	-10				
TAKADA	10.69	230.7	2	34	1	4	28	-5				
MAEBASI	10.77	225.5	2	34A	-1	4	27	-8			3	7
KUMAGAYA	10.81	223.7	2	33	-2	4	25	-11				
HONGO	10.97	220.9	2	36	-1	4	28	-12				
PETROPAVLOVK	10.98	33.6	2	35A	-2	4	12	-28				
TOKYO C.M.O.	11.01	220.9	2	36A	-2	4	27	-14			2	54
NAGANO	11.03	229.3	2	38A	0	4	40	-1				
TITIBU	11.09	224.1	2	38A	-1	4	31	-12				
OIWAKE	11.09	227.0	2	43A	4	4	46	3				
MATUSIRO	11.10	228.8	2	37K	-2	4	41	-2			5	5
YOKOHAMA	11.26	220.5	2	40A	-1	4	24	-23				
WAZIMA	11.27	235.7	2	42	1	4	42	-5				
MATUMOTO	11.46	228.5	2	45	1	4	47	-5				
TOYAMA	11.56	232.3	2	44	-1	4	44	-10			3	21
MERA	11.60	218.5	2	42A	-4	4	50	-5			5	8
KOHU	11.62	224.7	2	45A	-1	4	53	-3				
HUNATU	11.63	223.6	2	45A	-1	4	51	-5				
AJIRO	11.83	221.3	2	48	-1	4	54	-7			3	51
MISIMA	11.84	222.0	2	48A	-1	4	46	-15				
TAKAYAMA	11.93	230.3	2	51	1							
OSIMA	11.93	219.6	2	48A	-2	5	1	-2				
KANAZAWA	11.99	233.3	2	53	2	5	1	-4				
IIDA	12.09	226.6	2	58	6	5	3	-4				
VLADIVOSTOK	12.14	269.9	2	54	1	4	44	-24			3	24 *SP
SHIZUOKA	12.23	223.3	2	53A	-1	4	56	-15				
NAGATURO	12.31	220.8	2	56	1	5	2	-11			5	31
HUKUI	12.55	232.7	3	0K	1	5	14	-4				
OMAESAKI	12.62	222.8	3	0	1	5	40	20			3	31
GIHU	12.74	229.3	3	0A	-1	5	25	2			4	9
HAMAMATU	12.77	224.6	3	2	0	5	34	11			4	45
NAGOYA	12.81	228.1	3	2	0	5	21	-3				
TSURUGA	12.95	232.0	3	4A	0	5	24	-4				
IBUKISAN	12.97	230.3	3	4K	0	5	40	12				
HIKONE	13.12	230.3	3	7A	1	5	38	6				
HATIDYOZIMA	13.16	214.1	3	12	5	5	30	-3				
KAMEYAMA	13.32	228.5	3	11A	2						6	3

TU	13.38	228.1	3	12A	2	5	28	-10			
MAIZURU	13.42	233.0	3	11	1	5	31	-8	3	57	
TOYOOKA	13.75	234.7	3	14A	0	5	41	-6			
NARA	13.79	229.7	3	14	-1	5	46	-2			
ABUYAMA	13.80	230.9	3	14A	-1	5	39	-9			
OSAKA	13.98	230.4	3	16A	-1	6	3	11			
OWASE	14.06	227.1	3	16A	-2	6	15	21			
TOTTORI	14.12	236.0	3	21	2	5	50	-6			
KOBE	14.15	231.4	3	20	0	5	51	-6			
SAIGO	14.21	240.1	3	22K	2	5	53	-5	3	47	
KLYUCHI	14.23	28.6	3	18	-3				3	48	*SP
WAKAYAMA	14.49	230.2	3	22A	-2	6	9	4	5	10	
SUMOTO	14.56	231.2	3	22A	-3	5	50	-16	3	58	
YONAGO	14.70	237.8	3	26	-1	6	12	3			
HIMEJI	14.72	232.8	3	22A	-5				5	3	
SIOMISAKI	14.76	226.7	3	27A	-1	6	33	22			
MATSUE	14.85	238.4	3	31A	2	6	15	2			
OKAYAMA	14.87	234.4	3	29	0	6	47	33			
TOKUSIMA	14.94	231.2	3	29A	-1	6	10	-5			
TAKAMATU	15.05	233.1	3	29	-3	6	6	-12	6	42	
MAGADAN	15.26	4.3	3	35	1				6	2	
SUIHWA	15.30	286.0	3	38	3						
TORISIMA	15.34	208.0	3	35	0	6	15	-10			
MUROTO	15.77	230.1	3	42	1	6	59	24			
HAMADA	15.83	238.9	3	45K	3	6	38	2			
KOTI	15.91	232.3	3	41	-2	6	58	20	7	18	
HIROSIMA	15.97	236.8	3	44A	1	6	33	-6			
MATUYAMA	16.16	234.7	3	46A	0	6	44	0	4	11	
UWAZIMA	16.70	233.7	3	52	-1	7	1	5			
CHANGCHUN	16.72	276.3	3	52K	-1						
SIMIDU	16.79	231.7	3	53A	-1	6	56	-2			
SIMONOSEKI	17.17	238.7	4	0	2	7	22	15			
OOITA	17.25	235.6	3	59A	0	7	20	11			
HUKUOKA	17.73	238.7	4	6A	1	7	31	11			
ASOSAN	17.81	235.9	4	12	6	7	42	21	5	27	
SAGA	18.03	238.2	4	12	3	7	30	4	6	42	
ITUHARA	18.03	242.3	4	9	0	7	22	-4	4	42	
KUMAMOTO	18.08	236.4	4	9A	-1	7	44	16			
MIYAZAKI	18.31	233.0	4	13A	0	7	46	13			
UNZENDAKE	18.42	237.1	4	13	-1	8	29	54			
NAGASAKI	18.64	237.7	4	18A	1	7	52	12			
KAGOSIMA	19.07	234.0	4	23A	1	7	39	-11			
TOMiE	19.40	239.5	4	30A	5	8	0	3			
YAKUSIMA	19.93	231.9	4	32A	1	8	16	7			
DAIREN	20.83	264.1	4	42	1						
PEKING	24.31	271.1	5	16K	1						
ZO-SE	25.27	247.7	5	26	2	9	48	3			
NANKING	26.29	252.3	5	34A	0	9	58	-4			
TATUNG	26.36	273.1	5	38	3						
PAOTOW	28.51	276.0	5	56	2						
ULAN-BATOR	28.84	292.0	5	56	-1						
TIKSI	28.95	347.2	5	55	-3						
TAIPEI	29.24	237.7	6	4	3	9	55	-55			
ILAN	29.30	237.0	6	3	2	11	22	31			
HSINCHU	29.75	238.1	6	9	4	11	37	39			
HWALIEN	29.98	236.1	6	15	8	11	9	7			
IRKUTSK	30.07	301.1	6	7A	-1	10	57	-6			
TAICHUNG	30.41	237.6	6	12	1						
YUSHAN	30.75	236.4	6	12	-2	10	42	-32			
HSINKONG	30.79	235.4	6	15	1	11	19	5			
ALISHAN	30.81	236.7	6	17	2	11	14	-1			
GUAM	30.98	187.3	5	53K	-23						
TAITUNG	31.18	235.2	6	18	0	11	20	0			
TAINAN	31.55	236.8	6	22	1	11	18	-8			
PENGHU	31.56	238.3	6	5	-16	11	6	-20			
TAWU	31.64	235.1	6	21	-1	11	26	-2			
KAOHSIUNG	31.80	236.3	6	32	9						
HENGCHUN	32.00	234.9	6	29	4	11	40	7			
YINCHUAN	32.00	274.3	6	27	2						
TIENSHUI	34.14	268.3	6	45	1	12	4	-3			
LANCHOW	34.81	272.0	6	51A	2	12	17	0			
WUWEI	34.82	275.6	6	51	2	12	15	-2			
HONG KONG	35.82	243.4	6	58A	0						
SINING	36.02	274.1	7	2	2	12	36	0			
BAGUIO CITY	36.54	229.2	7	5	1	12	38	-6			
TRUK	36.87	174.6	7	8K	1						
CHENGTU	37.46	264.0	7	13A	1						
YUMEN	37.82	282.3	7	17	2	13	2	-1			

MANILA	37.85	227.0	7	15	0							
KOROR	38.90	202.6	7	23A	-1							
COLLEGE	39.97	36.5	7	32K	-1							
KUNMING	41.75	258.0	7	47A	0							
PHU-LIEN	41.84	249.7	7	48	0						13	23
SEMIPALATNSK	45.17	303.0	8	14	-1							
TOCKLAI	46.32	266.3	7	30A	-54						8	23
LHASA	47.32	272.1	8	34A	2							
SITKA	47.32	46.2	8	33K	1	15	28	6			11	14 PPP
KHEYS	47.75	346.5	8	23	-12						10	13 PP
RABAUL	48.46	175.2	8	43	2						13	55 PCS
SHILLONG	49.11	267.1	8	44A	-2	15	40	-8			10	36 PP
KIPAPA	49.35	99.6	8	49A	1							
HONOLULU	49.37	99.8	8	49A	1	16	0	9			11	5 PP
CHITTAGONG	51.14	263.9	9	3	2	16	14	-2				
CHATRA	51.72	271.7	9	15	9	16	41	17				
FRUNSE	51.84	296.0	9	6	-1							
HAWAII V.OB.	52.59	99.4	9	14	2							
SVERDLOVSK	53.40	316.8				16	42	-5			16	54 *SS
NORD	54.03	357.3	9	20A	-3	16	47	-8				
RESOLUTE	54.07	17.1	9	21A	-2							
BOKARO	54.53	269.7	9	23	-4	15	55	-67				
ISFJORD	54.82	349.6	9	28	-1							
TASHKENT	56.04	296.8	9	39	1	17	19	-3			10	6 *SP
DEHRA DUN	56.17	281.1	9	39	1	17	25	1			10	32 PP
ALBERNI	56.32	51.8	9	43A	3				9	54		
HORSESHOE B.	57.13	51.1	9	44A	-1							
THULE	57.20	9.7	9	43A	-3	17	36	-1			11	47 PP
VICTORIA	57.50	52.0	9	47A	0	17	39	-3	10	5	19	12 SCS
PORT BLAIR	57.71	253.6	9	50	1	17	47	3				
STALINABAD	57.86	294.3	9	50	0	17	40	-6				
AGRA	58.08	278.0	9	52A	0	17	37	-12				
APATITY	58.23	335.9	9	50A	-3	17	46	-5			12	0 PP
WARSAK DAM	58.56	288.4	9	55	0							
CORVALLIS	59.71	55.8	10	4A	1							
MEDAN	59.72	242.1	10	3	0	18	9	-1				
VIZIANAGRAM	59.85	266.2	10	6A	2	18	15	3	10	22		
SODANKYLA	60.28	337.8	10	4	-3	18	15	-2				
BANFF	60.31	46.1	10	7A	0						39	33 PKPPKP
ARCATA	61.34	59.7	10	15	1	18	35	4				
KIRUNA	61.53	340.2	10	13A	-3	18	26	-7				
SHASTA	62.48	59.0	10	22A	0							
HUNGRY HORSE	62.76	48.1	10	24A	0							
DJAKARTA	62.78	228.1	10	21A	-3	18	45	-4				
UKIAH	62.89	60.8	10	22A	-3							
LEMBANG	62.91	227.0	10	26	1							
MINERAL	63.18	58.9	10	26A	-1							
HYDERABAD	63.89	269.2	10	28A	-3	18	52	-11			13	13 PP
QUETTA	63.96	287.5	10	32A	0	19	2	-2			12	54 PP
CHARTERS TS.	64.11	182.4	10	31A	-2				10	59		
SASKATOON	64.15	41.5	10	31	-2	19	3	-3			23	6
BERKELEY	64.25	61.5	10	33A	-1	19	8	0			39	15 PKPPKP
MOSCOW	64.55	324.2	10	34	-2	19	5	-6			14	42 PPP
PULKOVO	64.58	330.4	10	34	-2	19	5	-6			13	0 PP
RENO	64.76	58.7	10	37A	0	19	17	3				
ASHKABAD	64.88	299.2	10	37A	-1							
LICK	64.96	61.6	10	38A	0	19	18	2				
BUTTE	64.97	49.5	10	38K	0							
SCORESBY SD.	65.25	356.5	10	40	0						39	19 PKPPKP
MADRAS	65.60	264.3	10	42A	0	19	16	-8			13	11 PP
BOZEMAN	66.02	49.0	10	46A	1							
HELSINKI	66.10	332.9	10	44	-2	19	30	0			13	14 PP
POONA	66.47	273.3	10	46A	-2	19	27	-8			13	6 PP
FRESNO	66.47	61.1	10	47A	-1							
KARACHI	66.61	283.8	10	51A	2	19	46	10			20	10 *SS
SKALSTUGAN	66.96	340.4	10	49A	-2							
BOMBAY	66.96	274.3	10	50	-1	19	44	3			13	36 PP
EUREKA	67.13	56.7	10	52A	0							
SUVA	67.94	149.3	11	3K	6	19	53	1			24	7 SS
MAKHACH-KALA	68.15	309.1	10	58	0							
AFIAMALU	68.29	138.2	10	58A	-1	19	40	-17			15	35 PPP
NOUMEA	68.34	162.2	11	2A	2	20	0	3				
UPPSALA	68.63	335.8	10	59A	-2	19	58	-3				
SALT LAKE C.	68.72	53.5	11	3A	1							
PASADENA	69.16	62.4	11	4A	-1	20	3	-4			39	10 PKPPKP
KODAIKANAL	69.42	264.1	11	6A	0	20	0	-10			13	36 PP
AKUREYRI	69.80	354.2	11	11	2	20	20	6				
COLOMBO	70.02	259.9	11	6	-4	20	17	0				

KIROVOBAD	70.26	307.9	11	12	1						
SAN DIEGO	70.69	63.0	11	44	30						
RAPID CITY	71.24	46.3	11	17A	0						
BERGEN	71.36	341.7	11	17A	-1	20	27	-5		15	42 PPP
REYKJAVIK	71.58	355.6	11	21A	2	20	34	-1			
BRISBANE	71.62	175.8	11	20A	0	20	35	-1			
SIDA	71.67	353.8	11	22A	2	20	45	9			
SOTCHI	71.92	313.7	11	22A	1						
GOTEBORG	72.05	337.2	11	24	2						
VIK	72.10	354.2	11	24	2	20	49	8		25	56 SS
COPENHAGEN	73.65	335.9	11	30A	-2	20	53	-6		14	15 PP
WARSAW	73.70	329.5	11	31A	-1	20	56	-3		11	43 PCP
SIMFEROPOL	73.75	317.7	11	32A	0					21	37 PS
YALTA	74.08	317.3	11	34A	0	21	8	5			
LWOW	74.48	326.4	11	36	0						
TUCSON	75.02	59.6	11	40A	0	21	15	1		39	16 PKPPKP
TUCSON TELE.	75.03	59.4	11	40A	0						
IASI	75.06	322.8	11	40	0	21	11	-3		12	7
BACAU	75.84	322.7	11	45	1	21	20	-3		12	6
KRAKOW	75.87	328.7	11	43	-1	21	19	-4			
ABERDEEN	75.88	344.0	11	46K	2	21	20	-3		28	33 SS
POTSDAM	76.29	333.8	11	47	0	21	26	-2			
FOCSANI	76.38	322.0	11	47	0	21	29	0			
SKALNATE PL.	76.46	328.0	11	48A	0	21	32	2		14	43 PP
RACIBORZ	76.48	329.7	11	47	-1	21	33	3		34	28 PKKS
COLLMBERG	77.24	333.2	11	53	1	21	38	0		29	52 SSS
EDINBURGH	77.27	344.2	11	52	0	21	37	-2		14	39 PP
HALLE	77.40	333.9	11	52	-1	21	36	-4		15	4 PP
CAMPULUNG	77.67	323.0	11	57	2	21	44	1			
WITTEVEEN	77.80	337.5	11	51A	-4	21	43	-1			
PRAGUE	77.81	331.8	11	56A	1	21	46	2		14	52 PP
PRUHONICE	77.85	331.7	11	55	-1	21	44	-1		22	15
BUCHAREST	77.87	321.8	11	56A	0	21	48	3		14	53 PP
RIVERVIEW	77.87	177.8	11	57A	1	21	51	6			
JENA	78.01	333.8	11	56	0	21	42	-5		15	8 PP
DURHAM	78.02	342.9	11	54	-2	21	48	1		15	3 PP
KASTAMONU	78.05	317.1	11	50	-7	21	32	-15			
PLAUEN	78.20	333.3	11	55	-2	21	46	-3			
MUNSTER	78.29	336.6	11	57	-1						
BUDAPEST	78.31	327.7	11	59	1	21	34	-16		15	23 PP
HURBANOVO	78.32	328.4	12	3A	5	21	49	-1		16	57
BRATISLAVA	78.48	329.2	11	59A	0	21	51	0		15	22 PP
CHEB	78.49	332.9	11	57	-2	21	47	-5	12 21	15	3 PP
KECSKEMET	78.53	327.0	12	1	2	21	57	5		12	5 PCP
SONNEBERG	78.61	333.8	11	59	-1	21	48	-5			
VIENNA-H.	78.67	329.7	12	0	0	21	53	-1		15	1 PP
DE BILT	78.85	338.0	12	2	1	21	54	-1			
TIMISOARA	78.88	325.4	12	3	2	21	26	-30		15	33 *SPP
SZEGED	78.91	326.4	12	4	3	21	58	2		14	52 PP
ISTANBUL KA.	79.10	317.9	12	3A	1	22	0	2			
ADELAIDE	79.44	188.2	12	5A	1	22	6	4		15	18 PP
HEERLEN	79.73	337.0	12	15	9	22	10	5			
BELGRADE	79.95	325.4	12	8K	1	22	2	-5		15	10 PP
UCCLE	80.25	337.9	12	8A	-1	22	6	-4			
RATHFARNHAM	80.34	345.0	12	4A	-5	22	7	-4		27	27 SS *
SOFIA	80.46	322.4	12	10	0	22	13	1		15	13 PP
STUTTGART	80.65	334.1	12	10A	-1	22	12	-2		15	16 PP
KEW	80.81	340.9	12	12A	0	22	11	-5		15	10 PP
DOURBES	80.81	337.4	12	9A	-3	22	15	-1			
ZAGREB	80.87	328.6	12	12A	0	22	16	-1		15	14 PP
TUBINGEN	80.90	334.1	12	12A	0	22	13	-4			
KSARA	81.04	309.0	12	13	0	22	19	1			
EBINGEN	81.24	334.0	12	14A	0	22	19	-1			
STRASBOURG	81.26	334.9	12	14A	0	22	21	0		28	10 SS
RAVENSBURG	81.39	333.4	12	15A	0	22	22	0			
FLORISSANT	81.61	42.6	12	15A	-1	22	22	-2			
PERTH	81.63	207.7	12	16	0	22	22	-2		15	37 PP
FAYETTEVILLE	81.78	46.7	12	18	1						
ST. LOUIS 1	81.80	42.6	12	16A	-1						
TRIESTE	81.83	329.8	12	15A	-2	22	22	-4		15	23 PP
SKOPJE	81.88	323.1	12	18K	1	22	23	-4		12	55 PCP
MELBOURNE	81.89	182.9	12	18A	1	22	28	1	12 39	15	26 PP
CHUR	82.24	333.0	12	19A	0	22	28	-3			
BASLE	82.25	334.5	12	20	1	22	26	-5			
OTTAWA	82.35	29.8	12	19A	-1	22	22	-10		15	32 PP
SHAWINIGAN	82.36	27.4	12	19A	-1	22	28	-4		15	35 PP
SEVEN FALLS	82.49	25.9	12	20A	0	22	30	-3		15	29 PP
PARIS	82.56	338.2	12	22A	1	22	34	0		30	33 PKKP
DALLAS	82.84	50.5	12	22	0						

NEUCHATEL	82.92	334.7	12	23	1	22	35	-2				
JERUSALEM	82.93	308.0	12	16K	-6	22	39	1				
ONERAHI	83.14	159.1	12	28	4	22	46	6				
JERSEY	83.36	341.1	12	25K	0	22	39	-3				
CLEVELAND	83.43	35.5	12	26A	1	22	40	-3				
BOLOGNA	83.69	330.7	12	28A	2	22	46	1				
LITTLE ROCK	83.74	46.4	12	25A	-2	22	42	-4				
GARCHY	83.80	337.2	12	26A	-1	22	43	-3				
PAVIA	83.83	332.4	12	27A	0	22	46	-1				
OROPA	83.83	333.4	12	33	6	22	46	-1				
ATHENS	84.09	319.3	12	27A	-1	22	45	-4			22	49 SKS
MAZATLAN	84.16	63.3	12	28	-1	22	53	3			23	17 SCS
AUCKLAND	84.29	159.1				22	52	1			28	33 SS
PRATO	84.31	330.6	12	30	1	22	48	-3				
TARANTO	84.87	324.9	12	31	-2	22	59	1	12	55		
PITTSBURGH	84.96	35.0	12	33A	0	22	55	-3			15	51 PP
CLERMONT-FD.	85.17	336.5	12	34A	0	23	8	8	13	7	15	57 PP
KARAPIRO	85.47	158.9	12	36A	1							
PENNSYLVANIA	85.49	33.5	12	38	3	22	51	-12				
ROME	85.53	328.7	12	35A	-1	23	6	3			14	52 PP
MORGANTOWN	85.64	35.5	12	37A	1	23	3	-1				
MONACO	85.69	332.9	12	36A	0	23	4	-1				
HARVARD	86.34	28.5	12	40	0							
WESTON	86.53	28.4	12	41A	1	23	2	-11			17	58 PPP
HELWAN	86.55	309.3	12	42A	1	22	40	-33				
TONGARIRO	86.68	159.3	12	42	1						16	19 PP
TUAI	86.72	158.0	12	43	2							
MARSEILLES	86.72	334.0	12	47A	6	23	21	6			23	53 SCS
HALIFAX	86.88	22.4	12	40A	-2						24	10 PS
FORDHAM	86.97	30.9	12	42A	-1	23	9	-8			24	17
GEORGETOWN	87.43	34.0	12	45A	0							
WASHINGTON	87.43	34.0	12	46K	1							
MESSINA	87.50	324.8	12	44	-1	23	19	-3	13	10	16	12 PP
REGGIO CALA.	87.54	324.7	12	44A	-1	23	20	-3				
GUADALAJARA	87.93	63.0	12	49A	2	23	17	-9			16	14 PP
CUGLIERI	88.46	330.5				24	12	41			13	22
WELLINGTON	88.46	160.6	12	51	1	23	32	1			23	12 SKS
KAIMATA	88.89	163.3	12	55	3	23	40	5	13	33		
BARCELONA	89.44	335.4	12	55	1	23	38	-2			16	24 PP
COLUMBIA	89.89	39.3	12	57A	0							
GEBBIES PASS	90.28	162.8	13	0	2	23	57	9			23	23 SKS
TORTOSA	90.47	336.3	12	59	0	23	50	0				
ROXBURGH	91.41	165.6	13	7A	3	23	31	-27				
TACUBAYA	91.48	60.9	13	4A	0	24	4	5			16	44 PP
PUEBLA	92.38	60.5	13	24	16	24	14	8			26	6
SERRA PILAR	92.44	343.0	13	10A	2	24	7	0	13	20	16	52
TOLEDO	92.58	339.3	13	9A	0	24	6	-2	13	33	16	43 PP
ALICANTE	93.04	336.1	13	12	1	24	16	4			16	46 PP
SETIF	93.13	331.0	13	11K	-1	23	53	-20			17	5 PP
ALGIERS UNI.	93.40	332.9	13	11	-2	24	22	7			17	2 PP
VERA CRUZ	93.53	58.9	13	13A	0	23	52	-24			16	56 PP
OAXACA	94.78	60.8	13	19	0	24	31	4			17	7 PP
LISBON	94.87	342.7	13	19A	0	24	19	-9	14	48	17	10 PP
GRANADA	95.00	338.0	13	19A	-1	24	25	-4			16	55 PP
ALMERIA	95.00	337.1	13	23A	3	24	17	-12	13	44	17	10 PP
RELIZANE	95.13	334.4	13	20A	-1	24	27	-3			17	14 PP
MALAGA	95.65	338.5	13	21A	-2	24	29	-6			17	3 PP
MERIDA	96.05	53.0	13	25A	0	24	28	-10			17	16 PP
ANGRA DO HO.	97.27	356.7				24	50	2			27	25 PS
BERMUDA	97.81	27.9	13	31	-2							
PONTA DELGDA	98.11	355.4	13	34A	0						17	39 PP
COMITAN	98.23	57.8	13	36	1	24	44	-12			17	36 PP
SAN SALVADOR	101.94	57.2	14	28	37						27	7 SKP
SANTIAGO MA.	102.58	56.8	15	22	88						27	7 SKP
TAMANRASSET	105.11	324.9	14	5A	777	24	43	2			18	28 PP
SAN JUAN	109.96	35.1	14	30K	777						19	4 PP
TANANARIVE	110.77	263.6				25	8	2			19	10 PP
DUMONT	110.91	183.6	14	34	777						18	1
RUMANGABO	111.49	290.4	14	35	777						28	50 PS
LWIRO	112.53	290.1	14	39	777							
ST. CLAUDE	113.84	32.0									22	11
WILKES	114.08	195.9	19	27	51							
FORT FRANCE	115.24	32.0	18	41	3						19	42 PP
OASIS-BUNG.	116.19	199.6	18	43	3				19	12	14	55 P
ST. VINCENT	116.62	32.8	18	55	15						19	53 PP
CHINCHINA	116.88	51.2	14	57	777						19	47 PP
BARBADOS	117.30	31.2	18	47	5						20	0 PP
CAPE HALLETT	117.37	172.7	15	3	777						18	43 PKS

GRENADA	117.45	33.8	18	48	6					19	54	PP
FUQUENE	117.51	49.1	15	2	777					18	23	
BOGOTA	118.03	49.9	15	24	777					19	6	
MIRNY	118.46	202.1	18	44	0	25	31	-4		15	5	P
TRINIDAD	118.79	34.2	18	51	6					20	10	PP
MBOUR	120.06	343.8	15	16	777	26	0	19		20	14	PP
LOME	121.78	320.9	18	59	9	25	55	9		20	19	PP
SCOTT BASE	122.47	175.5	18	52	0	25	53	4	19 13	20	48	PP
LCO. MARQUES	125.90	267.4	19	3	5	25	54	-5		20	55	PP
LUANDA	127.63	298.7	19	4A	2	25	48	-16		21	5	PP
PIETERMZBURG	129.62	265.1	19	8	2							
HUANCAYO	130.53	63.2	19	11	4					21	28	PP
BYRD STATION	133.66	166.1	18	56	-17							
SOUTH POLE	134.18	180.0	19	0	-14					16	36	P
GRAHAMSTOWN	134.38	263.4	19	6	-8							
WINDHOEK	134.83	282.5	19	9	-6							
LA PAZ	138.43	59.8	19	16K	-6				19 32	22	14	PP
HERMANUS	140.18	266.6	19	10	-15					16	45	P
SANTA LUCIA	147.83	83.7	19	41	3					23	5	PPP
CONCEPCION	148.50	90.4	19	50	11					24	21	SPP
HALLEY BAY	148.69	182.3	19	38	-2	26	34	-9				
OHIGGINS	155.74	150.7	19	54	4					30	38	SKKS
LA PLATA	157.58	74.1	19	52	0					24	2	PP

NOVEMBER 7 0.H 36.M 17.S EPICENTRE 44.36 148.03 DEPTH= 0.KM

A=-0.60850 B= 0.37984 C= 0.69674 D= 0.5295 E= 0.8483
G=-0.5910 H= 0.3689 K=-0.7173 HT= -3.3

SE= 2.95

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
NEMURO	2.05	240.7	0	24	-11	0	50	-10					
ABASHIRI	2.72	264.1	0	48	4	1	20	3					
KUSIRO	2.97	243.6	0	47	-1	1	19	-5					
OBIHIRO	3.79	249.3	1	0	1	1	38	-7					
HIROO	4.01	240.4	1	1	-2	1	42	-8					
ASAHIGAWA	4.12	263.9	1	8	4								
URAKAWA	4.42	241.9	1	9	1	1	57	-4					
SAPPORO	5.01	257.4	1	20	3	2	15	0					
MURORAN	5.53	250.9	1	24K	0	2	25	-3					
SUTTSU	5.87	257.3	1	31	2	2	43	6					
MORI	5.90	250.1	1	31	2	2	34	-4					
HAKODATE	5.94	246.8	1	29	-1	2	45	6					
HATINOHE	6.14	233.7	1	31	-2	2	30	-14					
AOMORI	6.41	239.0	1	33	-3								
MIYAKO	6.52	225.9	1	38	0	2	37	-16					
MORIOKA	6.91	230.0	1	38	-5	2	50	-13					
MIZUSAWA	7.34	227.0									2	8	P*
AKITA	7.50	234.6									2	56	
ISINOMAKI	7.78	222.7	1	49	-7	3	3	-21					
SENDAI	8.11	223.8	1	54	-6	3	12	-21					
SAKATA	8.21	231.2				3	28	-10					
YAMAGATA	8.40	226.0	2	1	-3	3	24	-16					
HUKUSIMA	8.72	223.4	2	11	2	3	35	-13					
ONAHAMA	9.17	218.6									3	34	
SHIRAKAWA	9.34	222.0									3	44	
MITO	9.83	218.4									3	51	
UTUNOMIYA	9.97	221.3									5	38	
MAEBASI	10.48	223.7	2	26	-7	4	15	-16			2	52	
KUMAGAYA	10.52	221.8	2	57	23	4	18	-14					
NAGANO	10.71	227.6	2	41	5								
TOKYO C.M.O.	10.74	219.0				4	17	-21					
MATUSIRO	10.79	227.1	2	34	-3								
TITIBU	10.81	222.3				4	22	-17					
TOYAMA	11.24	230.8	2	46	3						3	28	
KOHU	11.33	222.9	2	45	0	4	38	-14					
HUNATU	11.34	221.9	2	33	-12	4	38	-14					
MISIMA	11.57	220.2	2	59	11	4	39	-19					
GIHU	12.43	227.8	2	53	-6						5	5	
NAGOYA	12.50	226.5				5	10	-11					
IBUKISAN	12.66	228.8	2	59	-3								
OSAKA	13.66	229.0	3	21	5						6	6	
TOKUSIMA	14.62	229.9	3	21	-7								
OOITA	16.91	234.5	4	2	4						7	7	

HUKUOKA	17.38	237.7	4	5	1	6	44	-31	
YAKUSIMA	19.61	230.8							5 10
HONG KONG	35.46	242.8	6	50	-8				
TRUK	36.90	173.7	7	20	10				
MANILA	37.55	226.3	7	25	10				
KOROR	38.74	201.8	7	30	5				
COLLEGE	40.22	36.5	7	38	0				
SHILLONG	48.71	266.8	8	44	-2				10 30
KIPAPA	49.74	99.2							10 21 PCP
CHATRA	51.32	271.4	9	13	7				
NORD	54.03	357.3	9	24	-2				10 30 PCP
RESOLUTE	54.21	17.0	9	26A	-1				
THULE	57.29	9.6	9	48	-2				
HORSESHOE B.	57.45	50.8	9	50	-1				
VICTORIA	57.83	51.7	9	53	0				
APATITY	58.09	335.7	9	53	-2				
CORVALLIS	60.05	55.5	10	0	-9				
SODANKYLA	60.14	337.6	10	8	-1				
BANFF	60.61	45.9	10	12A	-1				
KIRUNA	61.41	340.0	10	17K	-1				
SHASTA	62.84	58.7	10	27A	-1				
HUNGRY HORSE	63.07	47.8	10	29	0				12 13 PP
MINERAL	63.53	58.6	10	32A	0				
QUETTA	63.59	287.2	10	31	-1				
CHARTERS TS.	64.07	181.8	10	31A	-5				
MOSCOW	64.33	324.0							12 19 PP
PULKOVO	64.39	330.2	9	37	-61				
BERKELEY	64.61	61.2	10	39A	0				
RENO	65.11	58.4	10	43A	1				
SCORESBY SD.	65.24	356.3	10	44	1				
LICK	65.32	61.3	10	44A	0				
HELSINKI	65.93	332.7	10	47	-1				
KARACHI	66.22	283.4	10	51	2				
FRESNO	66.83	60.8	10	53A	0				
SKALSTUGAN	66.84	340.2	10	53	0				
EUREKA	67.47	56.4	10	57	0				
UPPSALA	68.48	335.6	11	3	-1				
PASADENA	69.52	62.0	11	9	-1		11	26	
RAPID CITY	71.54	46.0	11	22	0				13 9
REYKJAVIK	71.56	355.4	11	25	3				
BRISBANE	71.64	175.3	11	32	9				
SIDA	71.64	353.5	11	26	3				
GOTEBORG	71.91	336.9	11	26	1				11 47 PCP
LARAMIE	72.20	49.4	11	26	0				
BOULDER	73.24	50.2	11	33	1				
SIMFEROPOL	73.49	317.4	11	33	-1				
COPENHAGEN	73.50	335.6	11	34	0				
IASI	74.83	322.5	11	43	1				
TUCSON	75.37	59.2	11	45	0				16 16 PPP
TUCSON TELE.	75.38	59.1	11	46	1				
POTSDAM	76.13	333.5	11	50	1				13 37
SKALNATE PL.	76.27	327.7	10	51	-59				
RACIBORZ	76.30	329.4	11	51	1				12 0 PCP
COLLMBERG	77.07	332.9	11	54	0				
HALLE	77.24	333.6	11	56	1				13 34
BUCHAREST	77.63	321.5	11	57	0				
PRAGUE	77.64	331.5	11	59	2				
WITTEVEEN	77.66	337.2	11	53	-5				
PRUHONICE	77.68	331.3	11	59	1				13 37
JENA	77.85	333.5	11	58	-1				
PLAUEN	78.04	333.0	11	58	-2				13 33
BUDAPEST	78.11	327.4							13 38
MUNSTER	78.14	336.2	12	0	0				
BRATISLAVA	78.29	328.9	12	2	1				
CHEB	78.32	332.6	11	59	-2				13 50
SONNEBERG	78.45	333.4	12	3	1				
ISTANBUL UN.	78.91	317.6	12	15	11				22 2
BENSBERG	79.17	336.0	12	6A	0				
ADELAIDE	79.37	187.8	12	10	3				12 21 PCP
RATHFARNHAM	80.25	344.7	12	10A	-2				
STUTTGART	80.49	333.8	12	13A	0				12 30
ZAGREB	80.67	328.2							13 44
DOURBES	80.67	337.1	12	13	-1				
KEW	80.70	340.6	12	15A	1		12	32	
TUBINGEN	80.74	333.8	12	15A	1				
KSARA	80.74	308.6	12	14	0				14 0
EBINGEN	81.08	333.6	12	17A	1				
STRASBOURG	81.10	334.5	12	17	1				14 17

TRIESTE	81.64	329.5	12 17	-2	
CINE	82.01	316.0	12 21A	0	
BASLE	82.09	334.2	12 17	-4	
PARIS	82.43	337.8	12 24A	1	12 43 PCP
SHAWINIGAN	82.56	27.0	12 24A	0	
OTTAWA	82.57	29.4	12 23A	-1	
JERUSALEM	82.63	307.7	12 18	-6	
SEVEN FALLS	82.68	25.6	12 24	0	
NEUCHATEL	82.76	334.3	12 25	0	
BREBEUF	83.21	20.1	12 27A	0	14 15
ATHENS	83.84	319.0	12 29A	-1	
PITTSBURGH	85.20	34.7	12 39A	2	
MONACO	85.52	332.5	12 41	2	
KARAPIRO	85.60	158.5	12 38	-1	
MORGANTOWN	85.88	35.1	12 42	1	
HELWAN	86.25	309.0	12 43	1	
HARVARD	86.54	28.2	12 46	2	
WESTON	86.74	28.1	12 46A	1	
SCOTT BASE	122.48	175.4	18 53	-2	20 29 PP
HUANCAYO	130.90	62.7	19 14	3	24 6 PPP
LA PAZ	138.79	59.2	19 23	-3	

NOVEMBER 7 1.H 2.M 3.S EPICENTRE 44.49 148.75 DEPTH= 0.KM

A=-0.61194 B= 0.37129 C= 0.69834 D= 0.5187 E= 0.8549
G=-0.5970 H= 0.3622 K=-0.7158 HT= -3.4

SE= 2.11

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
MIZUSAWA	7.81	229.4	1 54	-2	3 19	-6		
MATUSIRO	11.27	228.9	2 40	-3				
COLLEGE	39.81	36.6	7 36	2				
SHILLONG	49.23	267.2	8 51	1				11 45
CHITTAGONG	51.27	264.0	9 7	2	16 25	3		
NORD	53.92	357.4	9 23	-2				
RESOLUTE	53.93	17.1	9 24A	-1				
APATITY	58.18	335.9	9 53	-3				
SODANKYLA	60.22	337.8	10 8	-2				
SHASTA	62.32	59.1	10 23A	-1				
HUNGRY HORSE	62.60	48.2	10 25	-1				
MINERAL	63.02	59.0	10 27A	-1				
QUETTA	64.04	287.6	10 36	1				
BERKELEY	64.09	61.6	10 49	13				
MOSCOW	64.54	324.2						12 45 PP
PULKOVO	64.54	330.5	10 39	1				
RENO	64.60	58.8	10 43	4				
LICK	64.81	61.7	10 40A	0				
SCORESBY SD.	65.15	356.6	10 43	1				
HELSINKI	66.06	333.0	10 48	0				11 1
KARACHI	66.70	283.8	10 56	4				
EUREKA	66.97	56.9	10 53	-1				
SAN DIEGO	70.54	63.1	12 29	73				
RAPID CITY	71.08	46.4	11 18	-1			11 32	
SIDA	71.57	353.9	11 25	3				
COPENHAGEN	73.60	335.9	11 35	1				
TUCSON	74.86	59.7	11 40	-2			11 55	
TUCSON TELE.	74.87	59.6	11 41	-1			11 57	
RACIBORZ	76.45	329.8	11 52	1				14 38 PP
COLLMBERG	77.19	333.3	11 55	0				
HALLE	77.35	334.0	11 55	-1				14 58 PP
WITTEVEEN	77.74	337.6	11 52	-6				
BRATISLAVA	78.44	329.3	12 3	1				
ISTANBUL KA.	79.10	318.0	12 7	2				
BENSBERG	79.26	336.4	12 7	1				
ADELAIDE	79.57	188.4	12 12	4				
RATHFARNHAM	80.26	345.1	12 8A	-4				
STUTTGART	80.60	334.2	12 14A	1				
KEW	80.75	341.0	12 16	2				
DOURBES	80.76	337.5	12 14	0				
TUBINGEN	80.85	334.2	12 16	1				
KSARA	81.07	309.1	12 18	2				
EBINGEN	81.20	334.1	12 18	2				
STRASBOURG	81.21	335.0	12 17	0				
BASLE	82.20	334.6	12 18	-4				

SHAWINIGAN	82.21	27.5	12 21	-1						
CINE	82.28	316.4	12 23A	1						
PARIS	82.50	338.3	12 25	2						
BREBEUF	82.85	28.5	12 24A	-1						
NEUCHATEL	82.87	334.8	12 26	1						
JERUSALEM	82.96	308.1	12 21	-5					15 16	PP
SCOTT BASE	122.57	175.5	18 54	-1	26 16	22			22 17	PKS
HUANCAYO	130.38	63.3	19 12	2					22 24	PP

NOVEMBER 7 1.H 14.M 0.S EPICENTRE 44.91 148.72 DEPTH= 101.KM

DEPTH OF FOCUS= 0.011R

A=-0.60726 B= 0.36894 C= 0.70365 D= 0.5192 E= 0.8546
G=-0.6014 H= 0.3654 K=-0.7105 HT= -3.5

SE= 3.77

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
NEMURO	2.76	236.1	0 37	-7				
ABASHIRI	3.30	255.9	0 56	5				
KUSIRO	3.67	239.7	0 45	-11	1 35	-4		
OBIHIRO	4.46	245.4	1 9	2	1 56	-2		
ASAHIGAWA	4.69	258.3	1 10	0				
HIROO	4.72	238.0	1 24	13				
URAKAWA	5.13	239.5	1 12	-4	2 8	-7		
MURORAN	6.19	248.0	1 27	-4	2 39	-2		
SUTTSU	6.49	254.0	1 45	10	3 0	12		
HAKODATE	6.62	244.6	1 32	-5	2 38	-13	3 0	
HATINOHE	6.87	232.9			2 46	-11		
AOMORI	7.12	237.7			3 3	0		
MIYAKO	7.26	225.9	1 48	2	2 49	-18		
MORIOKA	7.64	229.7	1 42	-9	3 3	-13		
MIZUSAWA	8.08	227.0	1 53	-4	3 12	-15		
AKITA	8.23	233.9			3 22	-7		
ISINOMAKI	8.52	223.1	2 3	0	3 20	-18		
SENDAI	8.85	224.1	2 10	3	3 24	-22		
YAMAGATA	9.14	226.2			3 30	-20		
HUKUSIMA	9.47	223.7	2 52	37				
ONAHAMA	9.91	219.3			3 47	-24		
SHIRAKAWA	10.09	222.4	2 31	7	3 59	-17		
KAKIOKA	10.83	219.7	3 30	56	5 15	42		
MAEBASI	11.22	224.0	3 26	47	5 9	26	4 33	
NAGANO	11.45	227.7	2 54	12				
TOKYO C.M.O.	11.48	219.6			4 32	-17		
MATUSIRO	11.53	227.2	2 33	-10				
TITIBU	11.55	222.7			4 34	-17		
TOYAMA	11.97	230.7	2 43	-6				
KOHU	12.08	223.3	2 48	-2	4 49	-14		
MISIMA	12.31	220.7	3 1	8				
NAGOYA	13.24	226.7			5 6	-25		
IBUKISAN	13.39	228.9	3 8	1				
HIKONE	13.55	229.0	3 6	-3				
MANILA	38.29	226.7	7 10	-2				
COLLEGE	39.48	36.9	7 20	-2				
SHILLONG	49.23	266.8	8 40	0				
KIPAPA	49.34	100.2	8 50	9				
RESOLUTE	53.53	17.2	9 10	-3				
THULE	56.66	9.8	9 32	-3				
VICTORIA	57.10	52.3	9 53	14				
CORVALLIS	59.33	56.1	10 7	13				
SODANKYLA	59.82	337.7	9 56	-1				
BANFF	59.87	46.4	9 53	-5				
KIRUNA	61.06	340.1	10 4	-2				
HUNGRY HORSE	62.33	48.3	10 14	0				
QUETTA	63.89	287.4	10 25	0				
BERKELEY	63.91	61.8	10 35A	10				
RENO	64.40	59.0	10 40A	12				
BUTTE	64.55	49.7	10 25	-4				
LICK	64.63	61.9	10 39K	10				
CHARTERS TS.	64.65	182.6	10 25	-5				
SCORESBY SD.	64.72	356.5	10 31	1				
HELSINKI	65.67	332.9	10 34	-2				
FRESNO	66.13	61.4	10 50A	11				
SKALSTUGAN	66.49	340.4	10 40	-1			11 17	
KARACHI	66.57	283.6	10 46	4				

EUREKA	66.75	57.0	10	41	-2					
UPPSALA	68.18	335.8	10	51A	-1					
PASADENA	68.83	62.6	11	6	10					
RAPID CITY	70.80	46.5	11	5	-3			11	18	
GOTEBORG	71.59	337.2	11	13	0					
BRISBANE	72.15	176.0	11	12	-4			11	27	
BOULDER	72.51	50.7	11	16	-2					
COPENHAGEN	73.20	335.9	11	23	1					
TUCSON	74.67	59.8	11	28	-3			11	43	
TUCSON TELE.	74.67	59.6	11	28	-3			11	43	
RACIBORZ	76.07	329.7	11	41	3					
COLLMBERG	76.80	333.2	11	40	-3					
HALLE	76.96	333.9	11	44	1					12 34
WITTEVEEN	77.34	337.5	11	42	-4					
PRUHONICE	77.42	331.7	11	49	3					12 13
JENA	77.57	333.8	11	48	1					
PLAUEN	77.76	333.3	11	46	-2					
MUNSTER	77.83	336.6	11	50	2					
CHEB	78.05	333.0	11	50	0					
BRATISLAVA	78.06	329.2	11	54	4					
LONNEBERG	78.17	333.8	11	57	7					
BENSBERG	78.86	336.4	11	55	1					
RATHFARNHAM	79.85	345.1	11	57A	-2					
ADELAIDE	79.99	188.3	12	1	1					
KEW	80.33	340.9	12	5	3					
DOURBES	80.35	337.5	12	2	0					
STRASBOURG	80.81	334.9	12	6	2					12 46
TRIESTE	81.42	329.9	12	6	-2					
BASLE	81.81	334.6	12	6	-4					
OTTAWA	81.84	29.9	12	7	-3					
SHAWINIGAN	81.84	27.5	12	11	1					
CINE	81.95	316.3	12	12	2					12 28 PCP
SEVEN FALLS	81.96	26.1	12	9	-1					
PARIS	82.10	338.2	12	14	3			12	30	
NEUCHATEL	82.47	334.7	12	14	1					
BREBEUF	82.48	28.5	12	11A	-2					
JERUSALEM	82.68	308.1	12	9	-5					
ATHENS	83.74	319.4	12	20	1					
MORGANTOWN	85.15	35.6	12	25K	-1					
HARVARD	85.82	28.6	12	30	0					
KARAPIRO	85.93	159.0	12	29	-1			12	42	
WESTON	86.02	28.5	12	30A	-1					
SCOTT BASE	122.99	175.5	18	43	-2					22 14 PKS
BYRD STATION	134.16	165.9	19	15	9					
SOUTH POLE	134.72	180.0	19	3	-4					

NOVEMBER 7 1.H 43.M 2.S EPICENTRE 44.52 149.44 DEPTH= 36.KM

DEPTH OF FOCUS= 0.000R

A=-0.61598 B= 0.36375 C= 0.69875 D= 0.5085 E= 0.8611
G=-0.6017 H= 0.3553 K=-0.7154 HT= -3.4

SE= 2.71

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	3.03	248.2	0	45A	-1							
KUSIRO	3.96	248.9	1	1	1	1	43	-3				
OBIHIRO	4.80	252.7	1	13	1	2	11	4			1	34
HIROO	4.99	245.5	1	15	1	2	8	-3				
ASAHIGAWA	5.14	264.2	1	20	4							
URAKAWA	5.40	246.3	1	20	0	2	20	-2				
RUMOE	5.65	266.9	1	35	12							
SAPPORO	6.03	258.9	1	29	0	2	35	-3				
MURORAN	6.54	253.4	1	37	1	3	11	21				
UGLEGORSK	6.81	314.7	1	42	2							
SUTTSU	6.90	258.8	1	46	5	3	24	25			2	40
MORI	6.91	252.6	1	41	0	3	17	18				
HAKODATE	6.94	249.8	1	40	-2	3	19	19			1	55
HATINOHE	7.07	238.4	1	39	-4	2	54	-10				
MIYAKO	7.38	231.3	1	44	-4	2	59	-12				
MORIOKA	7.81	234.8	1	50	-4	3	11	-11				
MIZUSAWA	8.21	231.9	1	57	-2	3	13	-19				
AKITA	8.43	238.6	1	59	-3	3	15	-22				
ISINOMAKI	8.61	227.8	1	59	-6	3	32	-10				
SENDAI	8.95	228.7	2	2	-8	3	38	-12				

SAKATA	9.12	235.3			3	51	-3			
YAMAGATA	9.26	230.6	2	13	-1	3	48	-10		
HUKUSIMA	9.56	228.1	2	14	-4	3	58	-7		
ONAHAMA	9.95	223.5	2	39	16				4	5
SHIRAKAWA	10.16	226.5	2	24	-2	4	8	-12		
UTUNOMIYA	10.78	225.7	2	52	17	4	23	-12		
KAKIOKA	10.88	223.6	2	28	-8	4	22	-16		
TAKADA	11.25	232.6	3	32	51					
MAEBASI	11.31	227.7	2	39	-3	4	30	-18	3	5
KUMAGAYA	11.34	226.0				4	38	-10		
TOKYO C.M.O.	11.52	223.3				4	39	-14		
NAGANO	11.59	231.3	2	51	5	5	4	9	7	13
TITIBU	11.63	226.4	3	3	17					
OIWAKE	11.64	229.1	3	5	19					
MATUSIRO	11.66	230.8	2	42	-5					
YOKOHAMA	11.77	222.9	2	53	5	5	47	48	7	2
MATUMOTO	12.02	230.5	3	6	15					
MERA	12.10	220.9				4	56	-12		
TOYAMA	12.13	234.1	2	54	1	5	21	13		
HUNATU	12.16	225.8	2	52	-1	4	59	-10		
KOHU	12.16	226.8	2	52	-1	4	56	-13		
MISIMA	12.36	224.2	2	53	-3					
SHIZUOKA	12.76	225.4	3	6	5	5	10	-13		
OMAESAKI	13.14	224.9				5	43	11	8	10
GIHU	13.30	231.1	3	4	-5	5	30	-6	5	8
NAGOYA	13.36	229.9	3	10	1	5	38	0		
IBUKISAN	13.54	232.1	3	7	-5	5	22	-20		
HIKONE	13.69	232.1	3	11	-3					
KAMEYAMA	13.87	230.3	3	22	6	6	14	24		
TOYOOKA	14.34	236.2	3	22	0	5	46	-15		
OSAKA	14.55	232.1	3	17	-8	6	14	8		
TOTTORI	14.71	237.4	3	26	-1					
KOBE	14.72	233.0	4	16	49	7	20	70	8	52
WAKAYAMA	15.05	231.8	3	38	6					
SUMOTO	15.13	232.8				6	37	18	7	41
YONAGO	15.29	239.1	3	41	6	6	12	-11	7	36
HIMEJI	15.30	234.3	3	32	-3					
SIOMISAKI	15.31	228.4	3	41	6	6	41	17		
TOKUSIMA	15.51	232.8	3	50	13					
TAKAMATU	15.63	234.6	3	43	4	6	38	7		
MUROTO	16.33	231.6	3	54	6				9	54
HAMADA	16.43	240.2	3	50	1	7	7	17		
KOTI	16.48	233.8	3	54	4	7	1	10		
HIROSIMA	16.56	238.1	3	50	-1	6	52	-1		
MATUYAMA	16.74	236.1	4	7	14	6	45	-12		
UWAZIMA	17.28	235.0	4	4	4	7	20	11		
SIMIDU	17.36	233.1	4	2	1	7	17	6		
OOITA	17.83	236.9	5	6	59					
HUKUOKA	18.33	239.9	4	11	-2	7	43	10		
SAGA	18.62	239.3	4	41	25					
ITUHARA	18.64	243.3	4	14	-3					
MIYAZAKI	18.89	234.3	4	19	-1	7	58	13		
KAGOSIMA	19.65	235.3	4	28	0	8	12	10		
TOMIE	19.99	240.6	4	36	4	8	2	-8		
YAKUSIMA	20.50	233.2	4	36	-1	8	18	-2		
HSINKONG	31.37	236.3	6	23	4	11	27	4		
TRUK	36.97	176.0	7	5	-2					
BAGUIO CITY	37.10	230.2	7	9	0					
KOROR	39.28	203.9	7	40	13					
COLLEGE	39.49	36.7	7	29	1					
RABAUL	48.56	176.4	8	43	2					
KIPAPA	48.77	100.4	8	42	-1					
HONOLULU	48.79	100.6	8	43	0					
SHILLONG	49.73	267.6	8	49A	-1					
CHITTAGONG	51.76	264.5	9	10	4	16	28	4		
RESOLUTE	53.76	17.3	9	19	-2				11	25 PP
NORD	53.91	357.5	9	21	-1					
THULE	56.96	9.9	9	42	-2					
WARSAK DAM	59.09	288.8	9	57	-2					
CORVALLIS	59.12	56.3	10	20	21					
MEDAN	60.33	242.8	10	5	-2					
SODANKYLA	60.38	338.0	10	6	-2				11	13
KIRUNA	61.60	340.4	10	15	-1					
SHASTA	61.89	59.5	10	21	3					
MINERAL	62.58	59.4	10	24	1					
DJAKARTA	63.33	228.9	10	29	1	18	59	3		
LEMBANG	63.46	227.7	10	26A	-2				23	7
BERKELEY	63.65	62.0	10	30	0					

RENO	64.16	59.2	10 34	1						
CHARTERS TS.	64.28	183.3	10 31	-3						
LICK	64.36	62.1	10 34	0						
BUTTE	64.41	49.9	10 34	-1						
QUETTA	64.50	288.0	10 35	0	19 12	2				
PULKOVO	64.75	330.7	10 36	-1						
MOSCOW	64.79	324.5	10 38	1						
SCORESBY SD.	65.14	356.8	10 40	1						
FRESNO	65.87	61.6	10 46	2					11	1
HELSINKI	66.25	333.2	10 45	-1						
EUREKA	66.54	57.2	10 48	0						
SKALSTUGAN	67.03	340.7	10 50	-1						
KARACHI	67.16	284.2	10 55	3						
PASADENA	68.55	62.9	11 3	2			11	16		
UPPSALA	68.75	336.2	11 0	-2						
RAPID CITY	70.70	46.8	11 14	0						
SIDA	71.59	354.2	11 22	3						
BRISBANE	71.72	176.6	11 23	3						
GOTEBORG	72.15	337.6	11 22A	-1						
COPENHAGEN	73.76	336.3	11 32	0						
SIMFEROPOL	74.05	318.1	11 34	0						
TUCSON	74.42	60.1	11 36	0					14	36 PP
TUCSON TELE.	74.43	60.0	11 36	0						
KRAKOW	76.07	329.2	11 45	0			12	9	24	23
POTSDAM	76.43	334.2	11 49	2						
SKALNATE PL.	76.66	328.5	11 48	-1						
RACIBORZ	76.67	330.1	11 50	1					12	2 PCP
COLLMBERG	77.38	333.7	11 49	-4						
HALLE	77.54	334.4	11 55	1					12	31 PCP
WITTEVEEN	77.90	337.9	11 51	-5						
PRUHONICE	78.01	332.1	11 56	0						
DURHAM	78.06	343.3	12 12A	16						
JENA	78.15	334.3	11 57	0						
PLAUEN	78.35	333.7	11 56	-2			12	10		
MUNSTER	78.40	337.0	11 59	1						
BUDAPEST	78.51	328.2	12 0	1	22 0	9				
CHEB	78.64	333.4	11 58	-2			12	12		
BRATISLAVA	78.66	329.7	12 0	0						
SONNEBERG	78.75	334.2	11 58	-2						
TIMISOARA	79.11	325.9	12 5	3	22 6	8				
SZEGED	79.13	326.9	12 43	41	22 19	21				
ISTANBUL KA.	79.41	318.4	12 4	0	22 9	8				
BENSBERG	79.43	336.8	12 4	0					12	29
ADELAIDE	79.67	188.9	12 7	2						
BELGRADE	80.18	325.8	12 10	2	22 28	19	12	23		
RATHFARNHAM	80.36	345.5	12 10	1						
STUTTGART	80.78	334.6	12 12A	1					12	56
KEW	80.87	341.4	12 12A	0					12	38
DOURBES	80.91	337.9	12 11	-1						
TUBINGEN	81.04	334.6	12 14A	1			12	27		
ZAGREB	81.06	329.1	12 28	15						
EBINGEN	81.38	334.5	12 15	1						
STRASBOURG	81.39	335.4	12 15	1					12	41
KSARA	81.43	309.5	12 17	2						
OTTAWA	81.93	30.3	12 17	0						
SHAWINIGAN	81.96	27.9	12 17	0						
TRIESTE	82.01	330.3	12 17	-1						
SEVEN FALLS	82.09	26.5	12 17	-1						
BASLE	82.38	335.0	12 16	-3						
BREBEUF	82.58	29.0	12 19	-2						
CINE	82.59	316.8	12 23	2	22 58	24				
PARIS	82.65	338.7	12 23A	2			12	38		
NEUCHATEL	83.05	335.2	12 24	1						
JERUSALEM	83.32	308.6	12 19K	-5						
ATHENS	84.37	319.9					12	29		
MORGANTOWN	85.17	36.0	12 35A	1						
KARAPIRO	85.38	159.6	12 35	0			12	54		
MONACO	85.84	333.4	12 38	1						
HARVARD	85.92	29.1	12 57	20						
HELWAN	86.93	309.9	12 42	0						
SETIF	93.29	331.6	13 8	-4					13	31
CAPE HALLETT	117.44	172.9	18 43	1						
SCOTT BASE	122.56	175.7	18 52	0			19	28	33	25 SS
HUANCAYO	129.92	63.9	19 9	3					22	27 PKS
BYRD STATION	133.65	166.1	19 13	0						
SOUTH POLE	134.33	180.0	19 11	-3					21	58 PP
LA PAZ	137.83	60.6	19 24	3						

NOVEMBER 7 1.H 55.M 48.S EPICENTRE 44.48 149.06 DEPTH= 97.KM

DEPTH OF FOCUS= 0.010R

A=-0.61405 B= 0.36806 C= 0.69820 D= 0.5141 E= 0.8577
G=-0.5989 H= 0.3590 K=-0.7159 HT= -3.4

SE= 3.40

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	2.76	246.7	0	45	2							
ABASHIRI	3.47	264.1	1	0	7	1	46	13				
KUSIRO	3.69	247.8	1	2	6	1	39	0				
OBIHIRO	4.53	251.9	1	15	7						1	57
ASAHIGAWA	4.87	264.1	1	14	2							
URAKAWA	5.14	245.3	1	10	-6	2	12	-2				
SAPPORO	5.76	258.6	1	23	-1	2	26	-4				
MURORAN	6.27	252.8	1	28	-3	2	38	-4				
SUTTSU	6.62	258.4	1	32	-4						3	10
MORI	6.64	252.0	1	35	-2	2	59	8				
HAKODATE	6.67	249.1	1	33	-4	3	0	8				
HATINOHE	6.82	237.3	1	52	13	2	46	-10				
MIYAKO	7.15	230.0	1	40	-4	2	50	-14				
MORIOKA	7.56	233.6	1	51	2	3	7	-7				
MIZUSAWA	7.97	230.7	1	50	-5	3	12	-12				
AKITA	8.18	237.6	2	24	26						3	26
ISINOMAKI	8.38	226.5	2	5	5	3	21	-13			6	22
SENDAI	8.72	227.5	2	3	-2	3	29	-13				
SAKATA	8.87	234.3				3	41	-5				
YAMAGATA	9.03	229.5				3	38	-12				
HUKUSIMA	9.33	226.9	2	7	-6	3	50	-7				
ONAHAMA	9.74	222.3				3	51	-16				
SHIRAKAWA	9.94	225.4	2	25	4	4	0	-12				
UTUNOMIYA	10.56	224.6									3	41
KAKIOKA	10.66	222.4	2	24	-7	4	27	-2				
MAEBASI	11.08	226.7	2	34	-3	4	34	-5			2	53
KUMAGAYA	11.12	224.9	2	36	-1	4	35	-5				
NAGANO	11.35	230.3	2	48	8							
OIWAKE	11.41	228.1									3	40
MATUSIRO	11.43	229.9	2	35	-6							
MATUMOTO	11.78	229.6									3	34
TOYAMA	11.89	233.3	3	2	15							
KOHU	11.93	225.8	2	59	11	4	51	-9				
MISIMA	12.15	223.2	2	50	-1							
GIHU	13.07	230.3	3	5	2						3	52
NAGOYA	13.13	229.1	2	58	-6							
IBUKISAN	13.30	231.3	3	1	-5							
HIKONE	13.45	231.3	3	10	2							
KAMEYAMA	13.64	229.5	3	18	8	5	38	-2				
OOITA	17.59	236.3	4	2	2							
MIYAZAKI	18.64	233.7	4	7	-5	7	58	25				
BAGUIO CITY	36.86	229.7	7	1	0							
COLLEGE	39.69	36.6	7	22	-2							
KIPAPA	49.03	100.1	8	37	-2							
SHILLONG	49.46	267.4	8	42A	0							
CHITTAGONG	51.49	264.2	8	58	0							
RESOLUTE	53.88	17.2	9	14A	-1							
NORD	53.94	357.4	9	12	-4							
NAMANGAN	54.94	295.5	9	24	1							
THULE	57.05	9.8	9	35	-3							
APATITY	58.28	336.0	9	43	-4							
CORVALLIS	59.37	56.1	10	3	9							
SODANKYLA	60.32	337.9	9	58	-3							
KIRUNA	61.55	340.3	10	7	-2						11	2
SHASTA	62.14	59.3	10	12	-1				10	26		
HUNGRY HORSE	62.44	48.3	10	9	-6							
MINERAL	62.83	59.2	10	16	-2							
BERKELEY	63.90	61.8	10	22	-3				10	37		
CHARTERS TS.	64.22	182.9	10	25	-2				10	42		
QUETTA	64.26	287.8	10	27	0							
RENO	64.42	59.0	10	31	3							
LICK	64.62	61.9	10	32	3							
PULKOVO	64.66	330.6	10	29	-1							
MOSCOW	64.67	324.4	10	28	-2							
SCORESBY SD.	65.17	356.7	10	34	1							

BOZEMAN	65.70	49.3	10 40	4			
FRESNO	66.13	61.4	10 38	-1			
HELSINKI	66.17	333.1	10 38	-1			10 52
EUREKA	66.79	57.0	10 41	-2			
KARACHI	66.91	284.0	10 48	4			
SKALSTUGAN	66.98	340.6	10 43	-1			
UPPSALA	68.68	336.0	10 53K	-2			
PASADENA	68.81	62.7	11 7	11			
RAPID CITY	70.92	46.6	11 7	-2			
SITA	71.61	354.0	11 19	6			
BRISBANE	71.70	176.3	11 14A	1			
GOTEBORG	72.09	337.4	11 15	-1			
BOULDER	72.60	50.8	11 18	0			
COPENHAGEN	73.70	336.1	11 30	5			
SIMFEROPOL	73.91	317.9	11 27	1			
LWOW	74.58	326.6	11 31	1			
TUCSON	74.67	59.9	11 30	-1			
TUCSON TELE.	74.68	59.7	11 32	1			
IASI	75.19	323.0	11 35	1			
POTSDAM	76.35	334.0	11 40	0			11 54
SKALNATE PL.	76.56	328.3	11 43	2			
RACIBORZ	76.57	329.9	11 42	1			11 56 PCP
COLLMBERG	77.30	333.5	11 44	-1			
HALLE	77.46	334.2	11 46	0			
WITTEVEEN	77.84	337.7	11 43A	-5			
PRAGUE	77.89	332.0	11 52	3			13 43
PRUHONICE	77.93	331.9	11 50	1	21 42	9	
BUCHAREST	78.00	322.1	11 50	1			
JENA	78.07	334.1	11 49	-1			
PLAUEN	78.27	333.5	11 42	-9		12 1	
MUNSTER	78.33	336.8	11 51	0			
BUDAPEST	78.41	328.0	11 54	3			
CHEB	78.56	333.2	11 51	-1			
BRATISLAVA	78.57	329.5	11 55	3			
SONNEBERG	78.67	334.0	11 53	0			
ISTANBUL KA.	79.26	318.2	12 2	6	21 57	10	
BENSBERG	79.36	336.6	11 57	0		12 11	
ADELAIDE	79.59	188.6	12 0	2			
RATHFARNHAM	80.33	345.3	11 59	-3			
STUTTGART	80.71	334.4	12 5	1		12 18	
KEW	80.83	341.2	12 4K	-1			
DOURBES	80.85	337.7	12 4	-1			
ZAGREB	80.96	328.9	12 8	3			
TUBINGEN	80.96	334.4	12 6A	1		12 20	
KSARA	81.25	309.3	12 9	2			
EBINGEN	81.30	334.3	12 8	1		12 22	
STRASBOURG	81.31	335.2	12 8	1		12 34	12 47 *SP
TRIESTE	81.92	330.1	13 10	60			
OTTAWA	82.10	30.1	12 10	-1			
SHAWINIGAN	82.12	27.7	12 11	0			
SEVEN FALLS	82.25	26.2	12 12	0			
BASLE	82.31	334.8	12 8	-4			
PARIS	82.59	338.5	12 16	2		12 30	
BREBEUF	82.75	28.7	12 13	-1			
NEUCHATEL	82.97	334.9	12 16	0			
JERUSALEM	83.14	308.3	12 11	-5			
ATHENS	84.23	319.6	12 22K	0			
MORGANTOWN	85.36	35.8	12 40K	12			
KARAPIRO	85.44	159.3	12 29	1		12 45	
MONACO	85.75	333.2	12 24	-5		12 44	
HARVARD	86.09	28.9	12 46	15			
WESTON	86.28	28.8	12 32K	0			
HELWAN	86.76	309.6	12 37	3			
CHAPEL HILL	88.87	37.2	12 59	15			
COLUMBIA	89.60	39.6	13 2	14			
GRANADA	95.04	338.4	12 36A	-37			
SCOTT BASE	122.54	175.6	18 44	0			
HUANCAYO	130.19	63.6	19 2	3			19 17 PKP2
LA PAZ	138.09	60.2	18 27	-47			

NOVEMBER 7 2.H 50.M 59.S EPICENTRE 44.42 149.48 DEPTH= 82.KM

DEPTH OF FOCUS= 0.008R

A=-0.61738 B= 0.36389 C= 0.69744 D= 0.5078 E= 0.8615
G=-0.6008 H= 0.3541 K=-0.7166 HT= -3.3

SE= 3.30

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
NEMURO	3.02	250.3	0 47	0	1 11	-11		
ABASHIRI	3.76	265.8	0 59	2				
KUSIRO	3.96	250.5	1 2	2				
OBIHIRO	4.80	254.0	1 40	28				
ASAHIGAWA	5.16	265.4	1 17	0				
URAKAWA	5.39	247.5	1 27	7	2 17	-4		
SAPPORO	6.04	260.0	1 21	-8				2 56
MURORAN	6.55	254.4	1 30	-6				3 11
SUTTSU	6.91	259.7	1 53	12				
HAKODATE	6.93	250.7	1 34	-7	2 55	-4		3 15
HATINOHE	7.05	239.3	1 38	-5	2 51	-11		
MIYAKO	7.34	232.2	2 0	13				
AOMORI	7.36	243.8	1 56	9	3 2	-7		
MIZUSAWA	8.17	232.6	2 5	7	3 17	-13		
AKITA	8.41	239.3			3 29	-5		
ISINOMAKI	8.56	228.5	1 55	-8	3 27	-12		
SENDAI	8.91	229.4	1 59	-9	3 24	-24		
YAMAGATA	9.22	231.2			3 39	-15		
HUKUSIMA	9.52	228.7	2 17	1	3 48	-14		
ONAHAMA	9.90	224.1			3 50	-21		
SHIRAKAWA	10.12	227.1	2 23	-1	4 2	-15		
UTUNOMIYA	10.73	226.2	3 30	57				4 19
KAKIOKA	10.82	224.1	2 27	-7	4 21	-13		
MAEBASI	11.27	228.3	2 29	-11				3 36
KUMAGAYA	11.29	226.5	2 40	0	4 32	-13		
NAGANO	11.55	231.8	2 57	13				
TITIBU	11.58	226.9			4 36	-16		
OIWAKE	11.60	229.6	3 23	39				
MATUSIRO	11.62	231.3	2 38	-7				
YOKOHAMA	11.72	223.4			5 44	49		3 56
MATUMOTO	11.98	231.0	3 24	35				
TOYAMA	12.10	234.7	3 4	13				
KOHU	12.11	227.3	3 13	22	4 55	-10		
MISIMA	12.31	224.7	2 39	-15				
GIHU	13.26	231.6	3 1	-5				
NAGOYA	13.32	230.4	3 11	4				
IBUKISAN	13.50	232.5	3 3	-6				
HIKONE	13.65	232.5	3 11	0				
KAMEYAMA	13.83	230.8	3 55	41				
HAMADA	16.41	240.6	4 2	16	7 3	18		
KOTI	16.45	234.2	3 35	-12	7 0	14		
HUKUOKA	18.30	240.3	4 22	12	8 2	34		
YAKUSIMA	20.47	233.5	4 33	0	8 18	5		
BAGUIO CITY	37.06	230.3	7 2	-2				
MANILA	38.35	228.1	7 14	-1				
KOROR	39.19	204.0	7 33	11				
COLLEGE	39.55	36.6	7 23	-2				
SHILLONG	49.76	267.8	8 44A	-2				
CHATRA	52.37	272.3	9 3	-3				
RESOLUTE	53.85	17.3	9 15A	-2				
NAMANGAN	55.24	295.7	9 27	0				
THULE	57.05	9.9	9 37	-3				9 52
APATITY	58.46	336.1	9 48A	-2				
SODANKYLA	60.49	338.1	10 2	-2				
KIRUNA	61.71	340.4	10 11A	-1				
SHASTA	61.91	59.5	10 13	0				10 30
HUNGRY HORSE	62.25	48.5	10 15	-1				10 31
MINERAL	62.60	59.4	10 40	22				
LEMBANG	63.41	227.8	10 22	-1				
CHARTERS TS.	64.18	183.4	10 26	-2				
RENO	64.19	59.2	10 28	0				
LICK	64.38	62.1	10 45	15				
BUTTE	64.46	49.9	10 29	-1				
QUETTA	64.57	288.1	10 30A	-1				
PULKOVO	64.86	330.8	10 32	-1				
MOSCOW	64.90	324.6	10 33	0				
SCORESBY SD.	65.25	356.8	10 35	0				
BOZEMAN	65.50	49.5	10 38	1				
FRESNO	65.89	61.6	10 38	-1				
HELSINKI	66.36	333.3	10 41	-1				
EUREKA	66.57	57.2	10 42	-2				
SKALSTUGAN	67.14	340.7	10 47	0				
KARACHI	67.22	284.3	10 50A	2				
PASADENA	68.57	62.9	11 1	5				
UPPSALA	68.86	336.2	10 57A	-1				

RAPID CITY	70.75	46.8	11 8	-1	11 26		
LARAMIE	71.37	50.2	11 12	-1			
BRISBANE	71.62	176.7	11 11	-4			
SIDA	71.70	354.2	11 17	2			
GOTEBORG	72.26	337.6	11 18	0			
BOULDER	72.40	51.0	11 20	1			
COPENHAGEN	73.87	336.3	11 28	0		11 41	PCP
SIMFEROPOL	74.15	318.2	11 33	4			
TUCSON	74.44	60.1	11 31	0	11 50	12 16	
TUCSON TELE.	74.45	60.0	11 31	0			
LWOW	74.80	326.9	11 34	1			
IASI	75.42	323.3	11 37	0			
KRAKOW	76.17	329.2	11 40	-1		11 53	PCP
POTSDAM	76.54	334.2	11 43	0			
SKALNATE PL.	76.77	328.5	11 42	-2			
RACIBORZ	76.78	330.2	11 45	1		11 58	PCP
COLLMBERG	77.49	333.7	11 45	-3			
HALLE	77.65	334.4	11 49	0	12 13		
PRAGUE	78.08	332.3	11 58	6		12 22	
PRUHONICE	78.12	332.2	11 51	-1	12 15		
BUCHAREST	78.24	322.3	11 57	5			
JENA	78.26	334.3	11 52	0			
PLAUEN	78.45	333.8	11 52	-2	12 16		
MUNSTER	78.51	337.1	11 56	2			
CHEB	78.75	333.4	12 1	6	12 23		
BRATISLAVA	78.77	329.7	11 56	1			
SONNEBERG	78.86	334.3	11 58	2			
ISTANBUL KA.	79.51	318.5	12 0	1		12 22	PCP
BENSBERG	79.54	336.8	12 0	1	12 15		
ADELAIDE	79.58	189.0	12 3	3			
RATHFARNHAM	80.47	345.5	12 1	-3			
STUTTGART	80.89	334.7	12 6	-1			
KEW	80.98	341.4	12 8	1	12 33		
DOURBES	81.02	338.0	12 7	0			
TUBINGEN	81.15	334.6	12 9	1			
EBINGEN	81.49	334.5	12 10	0			
STRASBOURG	81.50	335.4	12 10	0			
OTTAWA	82.00	30.3	12 16	4			
SHAWINIGAN	82.03	27.9	12 11	-2			
BASLE	82.49	335.1	12 12	-3			
BREBEUF	82.66	29.0	12 15	-1			
CINE	82.69	316.9	12 18A	2		12 33	PCP
PARIS	82.76	338.7	12 19	3			
NEUCHATEL	83.16	335.2	12 19	1			
JERUSALEM	83.41	308.6	12 14K	-6	12 28		
ATHENS	84.48	319.9			12 34		
HELWAN	87.03	309.9	12 39	1			
SCOTT BASE	122.46	175.7	18 47	1			
BYRD STATION	133.54	166.1	19 7	0			

NOVEMBER 7 4.H 59.M 59.S EPICENTRE 44.68 149.14 DEPTH= 43.KM

DEPTH OF FOCUS= 0.002R

A=-0.61242 B= 0.36588 C= 0.70077 D= 0.5129 E= 0.8585
G=-0.6016 H= 0.3594 K=-0.7134 HI= -3.4

SE= 3.11

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
GORNY	1.15	282.6	0 23	3				
NEMURO	2.91	243.5	0 44A	-1	1 14	-5		
ABASHIRI	3.55	261.0	0 56	2	1 50	14		
KUSIRO	3.83	245.3	0 58	0	1 41	-2		
OBIHIRO	4.65	249.8	1 10	0	2 1	-5		
HIROO	4.87	242.5	1 11	-2	2 3	-6		
ASAHIGAWA	4.95	261.9	1 16	2	2 25	14		
Y.-SAKHLINSK	5.03	299.1	1 14	-1	2 13	0		2 29
URAKAWA	5.28	243.6	1 19	0	2 17	-2		
WAKKANAI	5.34	280.6			2 36	15		1 41
SAPPORO	5.86	256.8	1 26	-1	2 36	2		
TOMAKOMAI	5.90	251.2			2 19	-16		1 36
MURORAN	6.39	251.3	1 33	-1	2 48	1		
SUTTSU	6.73	256.9	1 47	8	3 9	14		
MORI	6.76	250.5	1 41	2	3 1	5		

HAKODATE	6.80	247.7	1 35	-5	3 6 9	
HATINOHE	6.98	236.2	1 38	-5		
AOMORI	7.26	240.8	1 51	5	2 59 -10	
MIYAKO	7.32	229.1	1 45	-2	2 56 -14	
SEVERO-KUR.	7.61	35.6	1 52	1		
MORIOKA	7.73	232.7	1 48	-5	3 5 -15	
MIZUSAWA	8.15	229.9	1 54	-5	3 24 -7	
AKITA	8.34	236.7	2 9	8	3 30 -5	
ISINOMAKI	8.57	225.9	1 58	-6	3 29 -12	3 43
SENDAI	8.90	226.8	2 4	-5	3 34 -15	
SAKATA	9.04	233.5			3 44 -9	
YAMAGATA	9.21	228.8	2 22	9	3 44 -13	
HUKUSIMA	9.52	226.3	2 20	2	3 56 -8	
ONAHAMA	9.93	221.8	2 51	28		4 10
SHIRAKAWA	10.13	224.8	2 32	6	4 3 -16	
AIKAWA	10.55	234.6	2 24	-8		
UTUNOMIYA	10.75	224.1	2 51	17	4 34 0	
KAKIOKA	10.85	222.0	2 23	-13	4 21 -16	
TUKUBASAN	10.90	222.3	2 27K	-9	4 20 -18	
TAKADA	11.19	231.1	2 47	7		
MAEBASI	11.27	226.2	2 35	-7	4 37 -10	2 59
TOKYO C.M.O.	11.50	221.8			4 35 -18	
NAGANO	11.53	229.8	2 46	1		
TITIBU	11.59	224.9	2 48	2		
OIWAKE	11.59	227.6			4 23 -32	2 57
MATUSIRO	11.61	229.3	2 39	-7	4 44 -11	2 52
YOKOHAMA	11.75	221.4	3 0	12	4 45 -14	
WAZIMA	11.77	235.9	2 47	-1		
MATUMOTO	11.96	229.1	3 7	16		
TOYAMA	12.06	232.7	2 49	-3		
KOHU	12.12	225.4	3 1	8	5 0 -8	
HUNATU	12.12	224.4	2 55	2		4 58
MISIMA	12.34	222.8	3 7	11		
VLADIVOSTOK	12.54	268.9	2 56	-3		5 57
SHIZUOKA	12.73	224.0			4 44 -38	
HUKUI	13.05	233.1	3 7	2		
GIHU	13.25	229.8	2 59	-9		5 42
NAGOYA	13.31	228.6	3 18	9		
IBUKISAN	13.47	230.8	3 8	-3		
HIKONE	13.63	230.8	3 8	-5		
KLYUCHI	13.78	28.1	3 12	-3		
KAMEYAMA	13.82	229.1	3 18	3		6 14
ABUYAMA	14.30	231.4	3 17K	-5		
OSAKA	14.48	230.9				3 48
MAGADAN	14.93	3.3	3 31	1		
TOKUSIMA	15.44	231.6	3 38	1		
HAMADA	16.33	239.1	3 52	4	7 10 23	
KOTI	16.41	232.7	3 57	8	7 15 26	
HIROSIMA	16.47	237.0			6 47 -3	
CHANGCHUN	17.09	275.5	3 57A	0		
OOITA	17.75	235.9	4 14	8		
HUKUOKA	18.23	239.0	4 8	-4	7 55 25	
KUMAMOTO	18.58	236.7	4 11	-5		
MIYAZAKI	18.81	233.4	4 28	9	7 55 12	
NAGASAKI	19.14	238.0	4 22	0		
KAGOSIMA	19.57	234.3	4 37	10	8 2 2	
YAKUSIMA	20.43	232.3	4 37	1	8 25 7	
PEKING	24.70	270.8	5 19A	0	9 38 3	
ZO-SE	25.75	247.8	5 28A	0	9 51 -1	
NANKING	26.76	252.3	5 37	-1		
TIKSI	28.74	346.8	5 54	-2		6 56 PP
PAOTOW	28.88	275.7	5 57A	0	10 48 5	
IRKUTSK	30.26	300.7	6 7	-2		
SIAN	32.46	265.3	6 28	-1	11 35 -4	
LANCHOW	35.20	271.9	6 52A	0	12 24 2	
HONG KONG	36.32	243.7	7 12	10	12 45 6	
CANTON	36.34	245.6	7 0A	-2		
BAGUIO CITY	37.04	229.6	7 6	-2		
TRUK	37.14	175.6	7 12	3		
MANILA	38.35	227.4	7 17	-2		
COLLEGE	39.48	36.8	7 27	-1	13 26 -1	
KUNMING	42.20	258.2	7 48A	-2	14 7 0	9 27 PP
KHEYS	47.55	346.5	8 22	-11		9 57 PCP
LHASA	47.70	272.2	8 36A	2	15 35 9	10 29 PP
SHILLONG	49.52	267.3	8 47A	-2		
CHITTAGONG	51.57	264.1	9 4	0		
FRUNSE	52.07	296.1	9 8	0		16 33 PS
CHATRA	52.11	271.9	8 59	-9		
SVERDLOVSK	53.45	316.8	9 20	2		

RESOLUTE	53.66	17.3	9	18A	-2					
NORD	53.74	357.4	9	17	-3					
TASHKENT	56.26	296.9	9	36	-3				19	26 SCS
DEHRA DUN	56.51	281.2	9	41	1				17	34
THULE	56.83	9.9	9	31	-12			9	52	
STALINABAD	58.09	294.4	9	51	-1				17	55 PS
APATITY	58.12	336.0	9	50	-2					
CORVALLIS	59.21	56.2	10	5	6					
SODANKYLA	60.15	337.9	10	4	-2					
MEDAN	60.22	242.5	10	6	0					
KIRUNA	61.38	34C.3	10	12	-2					
SHASTA	61.98	59.4	10	18	0					
HUNGRY HORSE	62.26	48.5	10	19	-1			10	33	12 44 PP
MINERAL	62.68	59.3	10	23	0					
LEMBANG	63.41	227.4	10	25A	-3			10	39	
QUETTA	64.25	287.7	10	33A	0	19	7 1			
RENO	64.26	59.1	10	33	0			10	47	
CHARTERS TS.	64.43	183.0	10	30	-4					
LICK	64.47	62.0	10	35	1					
BUTTE	64.47	49.8	10	34	-1					
PULKOVO	64.51	330.6	10	35	0					
MOSCOW	64.54	324.3	10	36	1					
SCORESBY SD.	64.97	356.7	10	34	-4					
ASHKABAD	65.08	299.4	10	36	-2					
BOZEMAN	65.52	49.4	10	43	2				10	56
FRESNO	65.98	61.5	10	44	0				10	59
HELSINKI	66.01	333.1	10	43	-1					
EUREKA	66.63	57.1	10	49	1					
SKALSTUGAN	66.81	340.6	10	48	-1					
KARACHI	66.92	284.0	10	53A	3					
SALT LAKE C.	68.22	53.9	10	57	-1					
UPPSALA	68.52	336.0	10	59	-1					
PASADENA	68.66	62.8	11	0	-1				11	13
TIFLIS	70.59	309.7	11	14	1					
RAPID CITY	70.74	46.7	11	14	0				11	27
GORIS	71.24	307.2	11	19	2	20	35 5			
SIDA	71.41	354.0	11	21	3					
BRISBANE	71.90	176.4	11	19	-2					
GOTEBORG	71.92	337.4	11	19K	-2				11	34
BOULDER	72.42	50.9	11	25	1					
COPENHAGEN	73.53	336.1	11	31	1					
WARSAW	73.64	329.7	11	32	1					
SIMFEROPOL	73.79	317.9	11	33	1	21	29 30			
YALTA	74.13	317.6	11	35A	1					
LWOW	74.44	326.6	11	37	1					
TUCSON	74.52	60.0	11	36	0					
TUCSON TELE.	74.53	59.8	11	36	0					
IASI	75.06	323.0	11	41	2					
KRAKOW	75.82	329.0	11	45	2				12	25
BACAU	75.84	323.0	11	43	-1					
POTSDAM	76.19	334.0	11	47	1					
SKALNATE PL.	76.42	328.3	12	46	59					
RACIBORZ	76.42	330.0	11	47	0				12	11
COLLMBERG	77.14	333.5	11	48	-3					
HALLE	77.30	334.2	11	52	0					
CAMPULUNG	77.66	323.2	11	56	2					
PRAGUE	77.73	332.1	11	58	4				13	17
PRUHONICE	77.77	331.9	11	55	1	21	52 10		14	48
DURHAM	77.85	343.2	11	53K	-2	21	30 -13		14	15 PP
BUCHAREST	77.88	322.1	11	55	0	21	23 -20			
JENA	77.91	334.1	11	5	0					
RIVERVIEW	78.16	178.3				21	45 -1			
MUNSTER	78.17	336.8	11	57	0					
BUDAPEST	78.27	328.0	12	0	3					
SONNEBERG	78.51	334.0	11	59	0			12	17	
ISTANBUL KA.	79.15	318.2	12	3	1			12	17	
BENSBERG	79.20	336.6	12	3	1			12	23	
ADELAIDE	79.80	188.7	11	51	-15					
BELGRADE	79.93	325.7	12	12A	6	22	12 7			
RATHFARNHAM	80.15	345.3	12	4K	-3					
STUTTGART	80.55	334.4	12	9	0				13	23
KEW	80.65	341.2	12	11	1				27	56 SS
DOURBES	80.68	337.8	12	11	1					
TUBINGEN	80.80	334.4	12	12	1					
EBINGEN	81.14	334.3	12	13	0					
STRASBOURG	81.15	335.2	12	14A	1	22	32 14		12	44 PP
KSARA	81.16	309.3	12	16	3					
FAYETTEVILLE	81.28	+7.1	12	14	1			12	26	

TRIESTE	81.77	330.2			22 45	21			15	26	PP
OTTAWA	81.89	30.1	12 16	-1							
SHAWINIGAN	81.91	27.8	12 16	-1							
SEVEN FALLS	82.04	26.3	12 17	0							
BASLE	82.15	334.8	12 20	2			12 32				
MELBOURNE	82.22	183.3	12 17	-1							
CINE	82.33	316.6	12 20	1					12	35	PCP
PARIS	82.42	338.5	12 20	1			12 36				
BREBEUF	82.54	28.8	12 19	-1							
NEUCHATEL	82.81	335.0	12 22	1							
JERUSALEM	83.06	308.3	12 15	-7							
ATHENS	84.12	319.7	12 27A	-1							
MORGANTOWN	85.16	35.9	12 34K	1							
MONACO	85.60	333.2	12 36K	1							
KARAPIRO	85.61	159.4	12 35	0			12 50				
HARVARD	85.88	28.9	12 38	1							
WESTON	86.07	28.8	12 38A	0							
HELWAN	86.67	309.7	12 41	1							
COLUMBIA	89.40	39.6	12 54	0							
SETIF	93.05	331.4	13 1	-9					14	19	
SCOTT BASE	122.74	175.6	18 51	0					19	22	
HUANCAYO	130.04	63.5	19 8	2					22	27	PKS
BYRD STATION	133.86	166.0	19 11	-2					22	39	SKP
SOUTH POLE	134.49	180.0	19 10	-4					21	47	PP
LA PAZ	137.94	60.1	19 23	3							
HALLEY BAY	149.01	182.1	19 42	3					23	17	PP

NOVEMBER 7 7.H 40.M 45.S EPICENTRE 44.62 148.74 DEPTH= 56.KM

DEPTH OF FOCUS= 0.004R

A=-0.61050 B= 0.37055 C= 0.69999 D= 0.5189 E= 0.8549
G=-0.5984 H= 0.3632 K=-0.7142 HT= -3.4

SE= 3.01

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
GORNY	0.89	290.2	0	20	3							
NEMURO	2.62	241.7	0	39K	-2	1	6	-6				
ABASHIRI	3.26	261.0	0	52	2	1	30	2				
KUSIRO	3.55	244.0	0	52	-2	1	28	-7				
OBIHIRO	4.36	249.0	1	4	-1						1	19
HIROO	4.59	241.3	1	7	-1	1	53	-8				
ASAHIGAWA	4.66	261.9	1	11K	2						12	25
Y.-SAKHLINSK	4.82	301.1	1	11	0	2	7	0				
URAKAWA	5.00	242.5	1	13	-1	2	8	-3				
WAKKANAI	5.07	281.6	1	20	5	2	17	4			3	4
SAPPORO	5.57	256.4	1	22K	0	2	19	-6				
TOMAKOMAI	5.61	250.5	1	23	1	2	25	-2				
MURORAN	6.10	250.7	1	28	-1	2	32	-7				
UGLEGORSK	6.39	316.6									2	59
SUTTSU	6.43	256.5	1	39	5	2	49	2				
MORI	6.47	249.9	1	34	0	2	42	-6				
HAKODATE	6.51	247.0	1	31K	-4	2	38	-11			3	22
HATINOHE	6.71	235.0	1	34	-4	2	40	-14				
AOMORI	6.99	239.8	1	42	0	2	50	-11				
MIYAKO	7.07	227.7	1	36	-7	2	41	-22				
MORIOKA	7.47	231.5	1	43	-5	2	57	-16				
SEVERO-KUR.	7.83	36.7	1	52	-1	3	18	-3			2	15
MIZUSAWA	7.89	228.6	1	55	1	3	5	-18				
AKITA	8.07	235.7	2	0	3	3	15	-12				
ISINOMAKI	8.32	224.5	1	53	-7	3	16	-18			2	19
SENDAI	8.65	225.6	2	3	-2	3	23	-19			3	45
SAKATA	8.77	232.4				3	33	-12				
YAMAGATA	8.95	227.6	2	5	-4	3	34	-15				
HUKUSIMA	9.27	225.1	2	8	-5	3	41	-16				
ONAHAMA	9.69	220.5	2	6	-13	3	46	-21				
NIIGATA	9.90	230.8				4	38	26			4	14
AIKAWA	10.28	233.7	2	21	-6	4	9	-13				
MITO	10.36	220.2	2	25	-3	4	6	-18				
UTUNOMIYA	10.51	222.9	2	31	1	4	7	-20				
KAKIOKA	10.62	220.8	2	12	-20	4	10	-20				
TUKUBASAN	10.66	221.1	2	23	-9	4	10	-21				
TAKADA	10.93	230.2	2	32	-4	4	27	-10				
MAEBASI	11.02	225.2	2	36	-1	4	25	-15			3	22
KUMAGAYA	11.06	223.3	2	36	-2	4	32	-9				

TOKYO C.M.O.	11.27	220.7			4 28	-18		3 35
OIWAKE	11.34	226.6	2 48	7	4 33	-14		
TITIBU	11.35	223.8	2 45	4				
MATUSIRO	11.35	228.4	2 36K	-5	4 33	-15		5 4
WAZIMA	11.50	235.1	2 45	2	4 39	-12		
YOKOHAMA	11.52	220.3	2 45	1	4 36	-16		
MATUMOTO	11.71	228.1	2 57	11				
TOYAMA	11.80	231.9	2 58	11				
MERA	11.86	218.3						3 57
KOHU	11.88	224.4	2 50	2	4 47	-13		
HUNATU	11.88	223.4	2 52	3	4 49	-11		
AJIRO	12.09	221.0			4 48	-17		3 56
MISIMA	12.10	221.7	2 55	4	4 50	-16		
TAKAYAMA	12.17	229.9	2 53	1				
VLADIVOSTOK	12.25	268.9	2 51	-3	5 9	0		
IIDA	12.34	226.3			5 3	-8		4 17
SHIZUOKA	12.48	223.0			4 3	-72		5 0
HUKUI	12.79	232.3	3 19	18				
OMAESAKI	12.87	222.6			5 9	-15		
GIHU	12.99	229.0	2 59	-4	5 12	-15		4 31
NAGOYA	13.06	227.7	3 11	7	5 16	-13		
IBUKISAN	13.21	229.9	3 1	-5	5 23	-9		
HIKONE	13.37	230.0	3 15	7				
HATIDYOZIMA	13.43	214.1						5 20
KAMEYAMA	13.56	228.2	3 26	15	5 47	6		
TU	13.63	227.7			4 55	-47		
ABUYAMA	14.04	230.6	3 13A	-4				
OSAKA	14.22	230.1			4 47	-69		
MAGADAN	15.01	4.0	3 31	1				
TOKUSIMA	15.18	230.9	3 41	9				
KOTI	16.15	232.0	3 45	1				7 12
HIROSIMA	16.20	236.4	3 52	7	6 50	8		
CHANGCHUN	16.81	275.6	3 51	-1	6 49	-7		
HUKUOKA	17.95	238.4	4 7	0	7 29	7		
KUMAMOTO	18.31	236.1	4 27	16				
MIYAZAKI	18.55	232.8	4 28	14	7 48	13		
KAGOSIMA	19.30	233.7	4 17	-6	8 7	15		
YAKUSIMA	20.17	231.6	4 43	11	8 14	4		
PEKING	24.42	270.6	5 14	0	9 26	-1		
NANKING	26.47	252.0	5 34	1				
PAOTOW	28.60	275.6	5 54	1	10 32	-3		
TIKSI	28.74	347.0			10 39	1		
ULAN-BATOR	28.86	291.6	5 56	1				
SIAN	32.17	265.1	6 24	0	11 30	-2		
LANCHOW	34.91	271.7	6 49A	1	12 13	-1		
HONG KONG	36.03	243.3			12 11	-21		
BAGUIO CITY	36.79	229.2	7 7	3				
KOROR	39.17	202.8	7 26	2				
COLLEGE	39.71	36.7	7 29	1				
KUNMING	41.91	257.9	7 44	-2	13 57	-3		
LHASA	47.42	272.0	8 33	3	15 23	4		
KHEYS	47.54	346.5	8 20	-11	15 4	-17		8 49 *SP
RABAUL	48.70	175.4	8 38	-2				13 30 SCP
SHILLONG	49.24	267.1	8 42A	-2				
KIPAPA	49.28	100.0	9 6	21				
CHATRA	51.83	271.7	8 56	-8				
FRUNSE	51.84	295.9	9 5A	1			9 28	
NORD	53.79	357.4	9 17	-2				
RESOLUTE	53.81	17.2	9 18A	-1				
TASHKENT	56.03	296.8	9 34	-1	17 18	1		
ALBERNI	56.08	52.0	9 38K	3				
DEHRA DUN	56.24	281.0	9 37	1				
HORSESHOE B.	56.89	51.2	9 50	9				
THULE	56.94	9.8	9 40	-1				
VICTORIA	57.26	52.2	9 43	-1				
APATITY	58.06	335.8	9 48A	-1				
WARSAK DAM	58.59	288.3	9 53A	0				
CORVALLIS	59.48	56.0	9 59	0				
BANFF	60.06	46.3	10 1A	-2				
SODANKYLA	60.10	337.8	10 2	-1				12 18 PP
KIRUNA	61.34	340.2	10 10A	-2				
SHASTA	62.26	59.2	10 18A	0				
HUNGRY HORSE	62.51	48.2	10 20	0				10 58
MINERAL	62.95	59.1	10 17A	-6				
LEMBANG	63.16	227.0	10 17	-7				
QUETTA	64.00	287.5	10 29A	0	18 59	-1		12 48 PP
BERKELEY	64.04	61.7	10 29A	-1				
CHARTERS TS.	64.35	182.6	10 29	-3			10 49	

PULKOVO	64.42	330.4	10 31	-1	19	4	-1				
MOSCOW	64.42	324.2	10 31	-1							
RENO	64.54	58.9	10 32A	-1							
BUTTE	64.73	49.6	10 34	0							
LICK	64.75	61.8	10 34A	0							
ASHKABAD	64.86	299.2	10 29A	-6							
SCORESBY SD.	65.02	356.6	10 36	0							
BOZEMAN	65.77	49.2	10 42	1				10 57			
HELSINKI	65.94	332.9	10 41	-1							
FRESNO	66.26	61.3	10 43A	-1							
KARACHI	66.66	283.8	10 50A	4							
SKALSTUGAN	66.77	340.4	10 46	-1							
EUREKA	66.90	56.9	10 47	-1							
UPPSALA	68.46	335.9	10 57A	-1							
SALT LAKE C.	68.49	53.6	10 33	-25							
PASADENA	68.95	62.5	10 59	-2							
KIROVOBAD	70.20	307.9	11 9	1							
RAPID CITY	70.99	46.4	11 13	0						11 38	
SIDA	71.44	353.9	11 18	2							
LARAMIE	71.64	49.8	11 16	-1						15 19	
SOTCHI	71.84	313.7	11 19	1							
BRISBANE	71.86	176.0	11 30K	12						18 30	
GOTEBORG	71.87	337.2	11 18	0							
BOULDER	72.68	50.7	11 25	2							
COPENHAGEN	73.47	335.9	11 28A	0							
SIMFEROPOL	73.65	317.7	11 30A	1							
YALTA	73.98	317.4	11 31A	0							
LWOW	74.34	326.4	11 33	0	21	2	1				
TUCSON	74.80	59.7	11 36	0							
TUCSON TELE.	74.80	59.6	11 36	0							
IASI	74.93	322.8	11 36	0							
KRAKOW	75.73	328.8	11 41	0						12 4	PCP
POTSDAM	76.12	333.8	11 45	2							
SKALNATE PL.	76.32	328.1	11 44	0							
RACIBORZ	76.33	329.7	11 46	2							
HALLE	77.23	334.0	11 49	0	21	36	3			12 13	*SP
WITTEVEEN	77.62	337.5	11 44A	-7							
PRAGUE	77.66	331.8	11 54	2						13 49	
PRUHONICE	77.69	331.7	11 53	1	21	39	1				
BUCHAREST	77.75	321.9	11 52K	0							
DURHAM	77.82	342.9	11 53A	0							
JENA	77.84	333.9	11 53	0							
PLAUEN	78.04	333.3	11 52	-2							
RIVERVIEW	78.11	178.0	12 2K	8							
MUNSTER	78.11	336.6	11 54	0				12 10			
BRATISLAVA	78.33	329.3	11 29	-26	21	47	2				
SONNEBERG	78.44	333.8	11 56	0							
ISTANBUL KA.	79.00	318.0	11 57A	-2	21	55	3				
BENSBERG	79.14	336.4	11 58A	-2							
ADELAIDE	79.70	188.4	12 2	-1							
BELGRADE	79.82	325.4	12 5A	2							
UCCLE	80.07	338.0	12 4	-1							
RATHFARNHAM	80.14	345.1	12 14	9							
STUTTGART	80.48	334.2	12 8A	1						12 33	
KEW	80.62	341.0	12 8	0							
DOURBES	80.63	337.5	12 9	1							
TUBINGEN	80.73	334.2	12 9A	1						12 55	
KSARA	80.98	309.0	12 12	2							
EBINGEN	81.07	334.1	12 11A	1							
STRASBOURG	81.09	335.0	12 11A	1				12 36		13 4	
FAYETTEVILLE	81.53	46.8	12 15	2							
TRIESTE	81.68	329.9	12 10	-3							
BASLE	82.08	334.6	11 54	-21							
OTTAWA	82.09	29.9	12 14	-1							
SHAWINIGAN	82.10	27.5	12 16A	1							
MELBOURNE	82.14	183.0	12 16	0							
CINE	82.18	316.4	12 17A	1	22	25	0				
SEVEN FALLS	82.22	26.0	12 16	0							
PARIS	82.38	338.3	12 19	2							
BREBEUF	82.73	28.5	12 19A	0							
NEUCHATEL	82.75	334.7	12 19	0						12 42	
JERUSALEM	82.87	308.1	12 14	-5							
ATHENS	83.98	319.4	12 24A	-1							
MORGANTOWN	85.38	35.6	12 33A	1							
MONACO	85.52	333.0	12 36K	3							
HARVARD	86.07	28.6	12 36	1							
WESTON	86.27	28.5	12 37A	1							
HELWAN	86.49	309.4	12 38	1	23	12	4				

TOLEDO	92.39	339.4	13	5	0						
TAMANRASSET	104.98	325.1	14	3	1				18	13	PP
OASIS-BUNG.	116.46	199.7							19	54	PP
SCOTT BASE	122.70	175.5	18	48	-1						
HUANCAYO	130.32	63.2	19	6A	2						
BYRD STATION	133.87	166.0	19	11	0				22	33	SKP
SOUTH POLE	134.43	180.0	19	11	-1				22	34	SKP
LA PAZ	138.21	59.8	19	21	2						

NOVEMBER 7 10.H 29.M 19.S EPICENTRE 43.72 147.86 DEPTH= 0.KM

A=-0.61391 B= 0.38578 C= 0.68869 D= 0.5321 E= 0.8467
G=-0.5831 H= 0.3664 K=-0.7251 HT= -3.1

SE= 3.34

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
NEMURO	1.70	257.5	0	32	2	0	49	-2				
ABASHIRI	2.60	277.9	0	45	2	1	18	4				
KUSIRO	2.63	254.8	0	36	-7	1	13	-2				
URAKAWA	4.04	248.9	1	9	6						1	52
WAKKANAI	4.73	293.2	1	18	5							
SAPPORO	4.78	264.4	1	21	7							
MURORAN	5.23	257.0				2	19	-2				
MORI	5.59	255.7	1	23	-2	2	39	9				
SUTTSU	5.64	263.3	1	17	-9							
HATINOHE	5.68	238.0	0	58	-28	2	24	-8				
MIYAKO	5.99	229.3	1	6	-25	2	31	-9				
AOMORI	5.99	243.5	1	6	-25	2	34	-6				
MORIOKA	6.41	233.5				2	40	-11				
UGLEGORSK	6.69	325.3	1	46	6	3	6	9				
MIZUSAWA	6.82	230.1	1	29	-13	2	51	-10				
AKITA	7.04	238.1	1	37	-8	2	59	-7				
ISINOMAKI	7.23	225.3	1	35	-13	3	2	-9				
SENDAI	7.57	226.4	1	42	-11	3	5	-14				
SAKATA	7.72	234.2				3	19	-4				
YAMAGATA	7.88	228.6	1	50	-7	3	19	-8				
HUKUSIMA	8.18	225.7				3	27	-8				
ONAHAMA	8.59	220.5	2	12	5	3	34	-11			2	31
SHIRAKAWA	8.79	224.0	2	2	-8	3	36	-14				
MITO	9.26	220.1	2	21	5							
UTUNOMIYA	9.41	223.2	2	28	10						2	55
MAEBASI	9.93	225.6	2	23	-3	4	11	-7			2	45
KUMAGAYA	9.97	223.5	2	25	-1	4	9	-10				
TOKYO C.M.O.	10.17	220.6				4	13	-11			2	53
NAGANO	10.20	229.6	2	30	1	4	28	3				
OIWAKE	10.26	227.1	2	50	20							
MATUSIRO	10.27	229.1	2	29K	-1	4	21	-5			2	42
YOKOHAMA	10.42	220.1	2	35	3	4	22	-8				
MATUMOTO	10.63	228.8	2	52	17							
KOHU	10.79	224.6	2	41	4	4	29	-10				
HUNATU	10.79	223.5				4	33	-6				
SHIZUOKA	11.39	223.1				4	44	-10				
VLADIVOSTOK	11.62	272.6	2	48	-1							
GIHU	11.92	229.5	2	52	-1	4	55	-11				
NAGOYA	11.98	228.2				5	3	-5				
KAMEYAMA	12.49	228.7				5	19	-1				
MAGADAN	15.96	5.5	3	45	-1							
CHANGCHUN	16.28	278.2	3	47	-3							
PEKING	23.80	272.1	5	12	-1							
NANKING	25.59	252.7	5	32	2							
PAOTOW	28.06	276.8	5	55A	2	10	35	-1				
SIAN	31.46	265.9	6	27	4							
LANCHOW	34.31	272.4	6	49A	1	12	9	-5				
MANILA	37.02	226.6	7	15	4							
KOROR	38.10	201.8	7	36	16							
COLLEGE	40.81	36.1	7	44	1							
NAMANGAN	54.48	295.4	9	30	1	17	4	-2				
RESOLUTE	54.85	16.8	9	37K	5							
LAHORE	57.71	284.4	10	0	7	17	54	5				
THULE	57.94	9.5	9	51	-3							
VICTORIA	58.32	51.4	9	55	-2							
SODANKYLA	60.69	337.7	10	10	-3							
KIRUNA	61.97	340.0	10	20	-2							
LEMBANG	62.08	226.5	10	21	-2							
SHASTA	63.28	58.3	10	31A	1							

CHARTERS TS.	63.43	181.7	10	32	0				10	47
HUNGRY HORSE	63.59	47.5	10	33	0					
QUETTA	63.66	287.4	10	33	0	19	2	-3		
MINERAL	63.97	58.3	10	35	0					
MOSCOW	64.78	324.1	10	41	1					
PULKOVO	64.89	330.3	10	40	-1	19	9	-11		
BERKELEY	65.03	60.8	10	42A	0					
RENO	65.55	58.1	10	45K	0					
LICK	65.74	60.9	10	46A	0					
BUTTE	65.80	48.9	10	47	0					
KARACHI	56.25	283.6	10	54	4					
HELSINKI	66.45	332.7	10	49	-2					
BOZEMAN	66.85	48.4	10	45	-9					
FRESNO	67.25	60.5	10	57K	1					
SKALSTUGAN	67.40	340.2	10	57	0					
EUREKA	67.93	56.1	11	1	1					
UPPSALA	69.01	335.6	11	6	-1					
SALT LAKE C.	69.54	52.9	10	53	-17					
PASADENA	69.93	61.7	11	12	-1				11	29
BRISBANE	71.01	175.1	11	35	16					
RAPID CITY	72.08	45.8	11	25	-1					
SIDA	72.27	353.5	11	28	1					
GOTEBORG	72.45	336.9	11	26	-2					
LARAMIE	72.71	49.1	11	29	0					
BOULDER	73.75	50.0	11	37	2					
SIMFEROPOL	73.88	317.4	11	36	0					
LWOW	74.73	326.1	11	41	0	21	12	-4		
IASI	75.26	322.5	11	51	7	21	19	-3		
TUCSON	75.81	59.0	11	48	1					
TUCSON TELE.	75.81	58.9	11	48	1					
RACIBORZ	76.78	329.4	11	53	0					
HALLE	77.76	333.6	11	59	1				12	18
PRAGUE	78.14	331.4	12	22	22					
PRUHONICE	78.18	331.3	12	0	-1				12	13
WITTEVEEN	78.20	337.1	12	2	1					
JENA	78.37	333.5	12	0	-2					
PLAUEN	78.55	332.9	12	0	-3				12	18
MUNSTER	78.68	336.2	12	2	-1					
ADELAIDE	78.72	187.6	12	21	18					
BRATISLAVA	78.77	328.9	12	3	-1					
BENSBERG	79.71	336.0	12	9	0				12	21
RATHFARNHAM	80.84	344.6	12	10	-5					
STUTTGART	81.01	333.7	12	15A	-1				12	33
DOURBES	81.22	337.1	12	12	-5					
KEW	81.26	340.5	12	17	0					
TUBINGEN	81.26	333.7	12	17	0				12	31
EBINGEN	81.60	333.6	12	19	0				12	31
STRASBOURG	81.63	334.5	12	32	13					
CINE	82.38	315.9	12	23	0					
PARIS	82.97	337.8	12	27	1				12	40
OTTAWA	83.19	29.3	12	26	-1					
SHAWINIGAN	83.19	26.9	12	26	-1					
NEUCHATEL	83.28	334.2	12	27	-1					
SEVEN FALLS	83.31	25.5	12	28	0					
BREBEUF	83.83	27.9	12	29A	-1					
MORGANTOWN	86.48	35.0	12	45K	2					
HELWAN	86.56	308.9	12	58	14					
HARVARD	87.17	28.0	12	48	1					
WESTON	87.36	27.9	12	49K	1					
SCOTT BASE	121.85	175.4								
HUANCAYO	131.30	63.0	19	15	3					
BYRD STATION	133.15	166.2	19	15	-1					
SOUTH POLE	133.53	180.0	19	16	0					
LA PAZ	139.22	59.7	19	29	2					

									13	12
									12	36 PCP
									22	21 PKS

NOVEMBER 7 11.H 24.M 29.S EPICENTRE 44.42 148.80 DEPTH= 48.KM

DEPTH OF FOCUS= 0.002R

A=-0.61297 B= 0.37120 C= 0.69748 D= 0.5180 E= 0.8554
G=-0.5966 H= 0.3613 K=-0.7166 HT= -3.3

SE= 3.77

	DELTA	AZ.	P		O-C	S		O-C	*PP		SUPP.	
	DEG.	DEG.	M	S	S	M	S	S	M	S	M	S

GORNY	1.01	300.1	0	13	-6						
NEMURO	2.57	246.1	0	39	-2	0	58	-13			
ABASHIRI	3.28	264.6	0	54	3	1	25	-4			
KUSIRO	3.50	247.3	0	56	2	1	36	2	2	26	
HIROO	4.53	243.8	1	7	-1						
ASAHIGAWA	4.68	264.4	1	13	3						
URAKAWA	4.95	244.8	1	14	0	2	9	-2			
Y.-SAKHLINSK	4.96	302.8	1	15	1	2	3	-8	2	40	
WAKKANAI	5.16	283.7	1	48	31						
SAPPORO	5.56	258.6	1	25A	2						
TOMAKOMAI	5.59	252.7	1	26	3						
MURORAN	6.08	252.6	1	31	1	2	41	2	3	7	
SUTTSU	6.43	258.4	1	51	16						
MORI	6.44	251.8	1	38	3	3	10	22			
HAKODATE	6.48	248.8	1	35	0				3	26	
UGLEGORSK	6.57	317.6	1	38	1						
HATINOHE	6.63	236.7	1	34	-4	2	45	-8			
AOMORI	6.92	241.5	1	39	-3	2	55	-5			
MIYAKO	6.97	229.2	1	50	8	2	50	-11			
MORIOKA	7.38	232.9	1	43	-5	3	2	-9			
MIZUSAWA	7.79	230.0	1	49	-5	3	13	-9			
AKITA	7.99	237.0	2	7	10				3	12	
ISINOMAKI	8.21	225.8	1	54	-5	3	21	-11	2	21	
SENDAI	8.54	226.7	1	57	-7	3	22	-18			
YAMAGATA	8.85	228.8	2	6	-2	3	39	-9			
HUKUSIMA	9.16	226.2	2	7	-6	3	45	-10			
ONAHAMA	9.57	221.5	2	46	28	5	12	66	3	48	
SHIRAKAWA	9.77	224.7	2	19	-2	3	58	-12			
NIIGATA	9.80	231.9							4	42	
AIKAWA	10.20	234.8	2	25	-2	4	1'	-10			
MITO	10.23	221.2	2	35	8						
UTUNOMIYA	10.39	223.9	2	43	14	4	23	-3			
KAKIOKA	10.49	221.7	2	25	-6	4	13	-15			
TUKUBASAN	10.54	222.0	2	24	-8	4	14	-15			
TAKADA	10.83	231.2	2	49	13						
MAEBASI	10.91	226.1	2	31	-6	4	30	-8	3	13	
KUMAGAYA	10.95	224.2	2	27	-10	4	29	-10			
TOKYO C.M.O.	11.14	221.5				4	29	-15			
NAGANO	11.17	229.8	2	46	6	5	17	32			
TITIBU	11.23	224.7	2	58	17						
OIWAKE	11.24	227.5	2	51	10						
MATUSIRO	11.25	229.3	2	36	-5	4	40	-6			
YOKOHAMA	11.39	221.1							4	4	
WAZIMA	11.42	236.1	2	44	1						
MATUMOTO	11.61	229.0	2	44	-2						
TOYAMA	11.71	232.8	2	40	-7						
MERA	11.73	219.1							3	52	
KOHU	11.76	225.2	2	44	-4	4	52	-7			
HUNATU	11.76	224.2	2	48	0	4	49	-10			
MISIMA	11.98	222.5	2	58	7	4	58	-6			
VLADIVOSTOK	12.29	269.8	2	56	1	5	14	2	5	43	
SHIZUOKA	12.37	223.8	2	48	-8						
GIHU	12.89	229.8	2	59	-4				6	17	
NAGOYA	12.95	228.5	3	12	8						
IBUKISAN	13.12	230.8	3	3	-3						
HIKONE	13.27	230.8	3	16	8						
KAMEYAMA	13.46	229.0	3	49	38						
TOYOOKA	13.90	235.1	3	8	-8						
ABUYAMA	13.94	231.4	3	13K	-4						
OSAKA	14.13	230.8	3	32	13	6	6	1'			
KOBE	14.30	231.8	3	48	26						
SUMOTO	14.71	231.6	3	44	17						
TOKUSIMA	15.08	231.6	3	32	0						
MAGADAN	15.20	3.9				6	43	22			
HAMADA	15.99	239.2	3	48	5	6	31	-8			
KOTI	16.06	232.7	3	45	1	6	54	13	8	38	
HIROSIMA	16.12	237.1	3	38	-7	6	51	9			
MATUYAMA	16.31	235.1	3	47	0	6	38	-8			
CHANGCHUN	16.87	276.2	3	53A	-1						
SIMIDU	16.94	232.1	3	51	-4	7	16	15			
OOITA	17.40	235.9							4	50	
HUKUOKA	17.88	239.0	4	2	-5	7	32	10			
SAGA	18.18	238.5	4	17	6						
KUMAMOTO	18.24	236.7	4	11	0						
MIYAZAKI	18.46	233.4	4	14	0	7	49	14			
NAGASAKI	18.79	238.0	4	19	1						
KAGOSIMA	19.22	234.3	4	28	5	7	41	-11			
YAKUSIMA	20.08	232.2	4	31	-1	8	15	5	5	25	
PEKING	24.46	271.1	5	17A	1	9	36	6			

ZO-SE	25.43	247.9	5	26A	1	9	50	4				
NANKING	26.45	252.4	5	35A	0							
PAOTOW	28.66	276.0	5	56A	1							
TIKSI	28.94	347.1	5	53	-4						9	15 PCP
ULAN-BATOR	28.97	292.0	5	58	1	10	54	10				
IRKUTSK	30.18	301.1	6	8	0							
SIAN	32.19	265.5	6	27A	1	11	39	5				
LANCHOW	34.96	272.1	6	52	2	12	24	7				
HONG KONG	35.98	243.6	6	49	-9	12	39	6				
CANTON	36.00	245.5	6	58A	-1							
BAGUIO CITY	36.69	229.4	7	2	-2							
CHENGTU	37.62	264.1	7	13A	1	13	4	6				
MANILA	37.99	227.2	7	13	-2							
KOROR	39.00	202.9	7	32	8							
COLLEGE	39.84	36.6	7	26	-5						13	13
KUNMING	41.91	258.2	7	48A	0	14	7	5			9	28 PP
PHU-LIEN	42.00	249.8	7	47	-1							
LHASA	47.47	272.2	8	35A	3	15	33	11				
KHEYS	47.75	346.5	8	21	-13							
RABAUL	48.49	175.5	8	35	-5							
SHILLONG	49.27	267.3	8	45	-1							
CHITTAGONG	51.30	264.1	9	1	-1							
CHATRA	51.88	271.9	8	58	-8							
FRUNSE	51.97	296.1	9	8	1	16	36	11				
SVERDLOVSK	53.47	316.9	9	20	2							
RESOLUTE	53.99	17.1	9	17A	-5							
TASHKENT	56.16	296.9	9	35	-2						17	26 PS
DEHRA DUN	56.32	281.2	9	39	0	17	30	6				
THULE	57.13	9.8	9	41	-3				9	53		
STALINABAD	57.99	294.4	9	51	1						17	54 PS
APATITY	58.26	335.9	9	49	-3							
WARSAK DAM	58.70	288.5	9	55	0							
MEDAN	59.88	242.3	10	3K	-1							
SODANKYLA	60.30	337.8	10	3	-3				10	16		
KIRUNA	61.55	340.2	10	12	-3				10	25	10	59 PCP
SHASTA	62.33	59.1	10	16	-4							
HUNGRY HORSE	62.61	48.2	10	18	-4				10	31		
MINERAL	63.02	59.0	10	20K	-5							
LEMBANG	63.05	227.2	10	22	-3							
QUETTA	64.10	287.7	10	31A	-1	19	10	7			12	55 PP
CHARTERS TS.	64.15	182.7	10	26	-6				10	38		
RENO	64.61	58.8	10	38	3							
PULKOVO	64.62	330.5	10	33	-2						23	25 SS
LICK	64.81	61.7	10	46K	10							
BUTTE	64.83	49.6	10	43	7							
ASHKABAD	65.00	299.3	10	35A	-3						27	1 SSS
SCORESBY SD.	65.22	356.6	10	37	-2							
BOZEMAN	65.87	49.1	10	51	8							
HELSINKI	66.13	333.0	10	43	-2				10	55		
FRESNO	66.32	61.2	10	57	11							
KARACHI	66.75	283.9	10	52A	3							
SKALSTUGAN	66.97	340.5	10	48	-2				11	0		
EUREKA	66.97	56.9	10	47	-3							
SALT LAKE C.	68.57	53.6	9	43	-77							
UPPSALA	68.66	335.9	10	59	-2				11	11		
PASADENA	69.00	62.5	10	57	-6				11	10		
TIFLIS	70.57	309.6	11	14	2							
RAPID CITY	71.10	46.4	11	24	9							
GORIS	71.21	307.1	11	15	-1	20	34	6				
SIDA	71.65	353.9	11	20	1							
BRISBANE	71.65	176.0	11	27	8	20	43	10				
GOTEBORG	72.07	337.3	11	19	-2				11	32		
COPENHAGEN	73.67	336.0	11	30	-1						11	44 PCP
SIMFEROPOL	73.82	317.8	11	32	0							
LWOW	74.53	326.5	11	35	-1						11	49 PCP
TUCSON	74.86	59.7	11	35	-3				11	51		
TUCSON TELE.	74.87	59.6	11	35	-3				11	52		
IASI	75.12	322.9	11	40	1	21	18	5				
BACAU	75.90	322.9	11	44	0							
KRAKOW	75.92	328.8	11	44	0	21	27	6			11	54 PCP
POTSDAM	76.32	333.9	11	48	2				12	2		
SKALNATE PL.	76.51	328.1	11	46	-1				12	0		
RACIBORZ	76.53	329.8	11	48	1						11	54 PCP
HALLE	77.43	334.0	11	51	-1	21	41	3	12	4		
CAMPULUNG	77.73	323.1	11	57	3							
WITTEVEEN	77.82	337.6	11	55	1							
PRAGUE	77.85	331.9	11	57	3						15	14 PP
PRUHONICE	77.89	331.8	11	54	-1	21	48	5				

RIVERVIEW	77.91	178.0	10	53	-62						12	19	
BUCHAREST	77.93	321.9	11	56A	1				12	8			
DURHAM	78.03	343.0	11	53K	-2								
JENA	78.04	333.9	11	54	-1				12	8			
PLAUEN	78.23	333.4	11	55	-2				12	6			
MUNSTER	78.31	336.7	11	57	0								
BRATISLAVA	78.52	329.3	11	58	0				12	9			
SONNEBERG	78.64	333.9	11	59	0				12	10			
BENSBERG	79.34	336.5	12	3	0								
ADELAIDE	79.50	188.4	12	5	2								
UCCLE	80.27	338.0	12	6	-2								
RATHFARNHAM	80.34	345.1	12	3	-5								
STUTTGART	80.68	334.2	12	9A	-1						13	53	
KEW	80.82	341.0	12	12	1	22	24	10					
DOURBES	80.83	337.6	12	10	-1								
TUBINGEN	80.93	334.2	12	11	0				12	25	12	37	
KSARA	81.14	309.1	12	15	3						17	8	PPP
EBINGEN	81.27	334.1	12	13	0				12	30			
STRASBOURG	81.29	335.0	12	15	2	22	7	-11			13	23	
MELBOURNE	81.94	183.1	12	34	18								
OTTAWA	82.24	29.9	12	27	9								
SHAWINIGAN	82.26	27.5	12	30	12								
BASLE	82.28	334.6	12	17A	-1								
CINE	82.35	316.4	12	20A	2						12	33	PCP
SEVEN FALLS	82.38	26.1	12	31	12								
PARIS	82.58	338.3	12	20	0				12	35			
BREBEUF	82.89	28.6	12	19	-2								
NEUCHATEL	82.95	334.8	12	20	-2								
ATHENS	84.16	319.4	12	26	-2								
KARAPIRO	85.45	159.1	12	31	-3								
MORGANTOWN	85.51	35.6	12	41	7								
HARVARD	86.23	28.7	14	53	135								
HELWAN	86.65	309.5	12	40	0	23	19	7					
TOLEDO	92.59	339.4	13	3	-5								
SETIF	93.17	331.1	12	56	-15				13	8			
TAMANRASSET	105.17	325.1	13	49	-13						18	7	PP
ASTRIDA	112.29	289.3	14	31	777						19	29	
SCOTT BASE	122.50	175.6	18	48	-3								
HUANCAYO	130.38	63.4	19	15	9								
SOUTH POLE	134.23	180.0	19	9	-4						22	0	PP
LA PAZ	138.28	60.0	18	7K	-73								

NOVEMBER 7 17.H 32.M 52.S EPICENTRE 44.04 148.05 DEPTH= 73.KM

DEPTH OF FOCUS= 0.006R

A=-0.61195 B= 0.38161 C= 0.69274 D= 0.5291 E= 0.8485
G=-0.5878 H= 0.3666 K=-0.7212 HT= -3.2

SE= 3.16

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
GORNY	0.94	338.7	0 18	-1	0 30	-3		
NEMURO	1.93	249.2	0 28	-4	0 50	-5		
ABASHIRI	2.72	270.9	0 43	0	1 14	-1		
KUSIRO	2.86	249.5	0 44	-1	1 16	-2		
OBIHIRO	3.70	254.1	0 55	-2	1 38	-1		1 15
HIROO	3.88	244.7	0 57	-2	1 42	-2		
ASAHIGAWA	4.11	268.3	1 2	0	1 52	2		
URAKAWA	4.30	245.7	1 3	-2	1 56	2		
Y.-SAKHLINSK	4.74	309.7	1 11	0	2 3	-2		
WAKKANAI	4.75	289.1						4 21
WAKKANAI	4.75	289.1	1 14	3	2 11	6		
TOMAKOMAI	4.96	254.4	1 21	7	2 13	2		
SAPPORO	4.97	261.1	1 13	-1	2 10	-1		
MURORAN	5.45	254.2	1 19	-2	2 26	3		
MORI	5.81	253.1	1 27	1	2 38	6		
SUTTSU	5.83	260.4	1 36	10				
HAKODATE	5.84	249.8	1 24	-2	1 34	-59		
HATINOHE	5.97	236.3	1 25	-3	2 25	-11		
AOMORI	6.27	241.6	1 34	2	2 40	-3		
UGLEGORSK	6.51	322.8	1 38	3				
MORIOKA	6.72	232.2	1 34	-4	2 42	-12		
AKITA	7.34	236.7	1 52	5				
ISINOMAKI	7.56	224.4	1 44	-6	3 1	-14		
SENDAI	7.89	225.5	1 47	-8	3 6	-17		

SAKATA	8.03	233.0			3	19	-7			
YAMAGATA	8.20	227.7	2	5	6					
HUKUSIMA	8.51	225.0	1	56	-7				3	49
ONAHAMA	8.93	220.0				3	35 -14		2	29
SHIRAKAWA	9.12	223.4	2	9	-2	3	40 -13			
NIIGATA	9.15	231.1				4	26 32			
AIKAWA	9.54	234.2	2	22	5	3	51 -12			
MITO	9.60	219.7	2	26	8					
UTUNOMIYA	9.74	222.6	2	23	3	3	50 -18			
KAKIOKA	9.85	220.3	2	16	-5	3	55 -16			
TUKUBASAN	9.90	220.6	2	14	-8	3	55 -17			
MAEBASI	10.26	225.0	2	23	-4	4	10 -11		2	49
KUMAGAYA	10.30	223.0	2	43	16	4	8 -14			
TOKYO C.M.O.	10.50	220.2	2	40	10	4	11 -16			
NAGANO	10.52	228.9	2	35	5	4	47 20			
OIWAKE	10.58	226.5	2	55	24					
MATUSIRO	10.59	228.4	2	25	-6	4	17 -12		3	11
YOKOHAMA	10.75	219.8	2	49	16	4	19 -14			
MATUMOTO	10.95	228.1	3	19	43					
TOYAMA	11.05	232.1	3	9	32					
KOHU	11.11	224.1	2	48	10	4	32 -10			
HUNATU	11.12	223.0	2	35	-3	4	33 -9			
MISIMA	11.34	221.3	2	52	11	4	34 -13			
PETROPAVLOVK	11.48	33.9	2	46	3				5	32
SHIZUOKA	11.72	222.7				4	17 -39			
VLADIVOSTOK	11.76	271.1	2	46	-1	5	6 9			
NAGOYA	12.30	227.7	3	11	17	5	6 -4			
KAMEYAMA	12.81	228.1				5	14 -8			
ABUYAMA	13.29	230.7	3	2K	-5					
MAGADAN	15.62	5.2	3	36	-1					
CHANGCHUN	16.38	277.2	3	45	-2					
MIYAZAKI	17.80	232.8	3	56	-8	7	31 13			
NAGASAKI	18.14	237.6	4	9	0					
PEKING	23.93	271.5	5	7	-1	9	22 5			
ZO-SE	24.79	247.7	5	17A	0	9	40 9			
NANKING	25.82	252.3	5	29A	3	10	1 13			
PAOTOW	28.16	276.3	5	47A	-1	10	27 1			
ULAN-BATOR	28.61	292.4	5	51	-1					
TIKSI	29.19	347.7	5	52	-5	10	41 -2		6	47 PP
IRKUTSK	29.92	301.6							7	3 PP
SIAN	31.63	265.5	6	18	0					
LANCHOW	34.43	272.1	6	43A	0	12	8 3			
BAGUIO CITY	36.03	228.8	6	55	-1					
TRUK	36.58	173.7	7	0	-1					
CHENGTU	37.04	264.0	7	6A	1					
MANILA	37.34	226.6	7	7	0					
KOROR	38.45	202.0	7	14	-2					
COLLEGE	40.47	36.3	7	33	0	13	39 3			
KUNMING	41.30	258.0	7	39A	-1					
SEMIPALATNSK	45.04	303.1	8	8	-2					
RABAUL	48.16	174.5	8	34	-1					
SHILLONG	48.71	267.1	8	37A	-2					
CHITTAGONG	50.72	263.8	8	59	4					
FRUNSE	51.65	296.0	9	2A	0	16	22 6			
SVERDLOVSK	53.38	316.8	9	14	-1					
RESOLUTE	54.51	16.9	9	21K	-2					
TASHKENT	55.85	296.8	9	30	-2	17	16 4			
DEHRA DUN	55.86	281.0	9	38	5	17	20 7			
THULE	57.60	9.5	9	42	-3					
STALINABAD	57.65	294.2	9	42	-3	17	42 6			
APATITY	58.39	335.8	9	49	-1					
SODANKYLA	60.44	337.7	10	2	-3				10	29
KIRUNA	61.72	340.0	10	14	1					
LEMBANG	62.40	226.6	10	14K	-4				20	13
HUNGRY HORSE	63.27	47.7	10	23	-1			10	37	
QUETTA	63.70	287.4	10	26A	0	18	59 6		12	46 PP
CHARTERS TS.	63.75	181.9	10	25K	-2			10	39	
MOSCOW	64.60	324.1	10	32	0					
PULKOVO	64.68	330.3	10	32	-1	19	8 3			
ASHKABAD	64.71	299.0	10	26	-7					
HELSINKI	66.23	332.8	10	41	-2			10	55	
KARACHI	66.31	283.6	10	46A	3					
BOZEMAN	66.53	48.6	10	46	2					
EUREKA	67.63	56.3	10	51	0					
UPPSALA	68.78	335.7	10	58	-1					
PASADENA	69.65	62.0	11	3	-1			11	18	
KIROVOBAD	70.17	307.7	11	10	3	20	18 7			
TIFLIS	70.40	309.3	11	10	2	20	21 7		21	5 SCS

BOULDER CITY	70.57	58.6	11	10	1							
GORIS	71.00	306.8	11	12	0	20	31	10				
BRISBANE	71.32	175.3	11	12	-2							
RAPID CITY	71.75	45.9	11	15	-1							
GOTEBORG	72.21	337.0	11	17	-2							
SIMFEROPOL	73.74	317.5	11	29	1							
LWOW	74.55	326.2	11	34	1	21	7	6			11	49 PCP
IASI	75.09	322.5	11	36	0							
TUCSON	75.52	59.2	11	52	14							
TUCSON TELE.	75.53	59.0	11	39	1							
POTSDAM	76.42	333.5	11	43	-1							
SKALNATE PL.	76.55	327.8	11	43	-1							
RACIBORZ	76.58	329.4	11	45	1							
HALLE	77.53	333.6	11	50	0				12	6		
WITTEVEEN	77.96	337.2	11	55	3							
PRUHONICE	77.96	331.4	11	53	1	21	43	5				
JENA	78.14	333.6	11	53	0							
PLAUEN	78.33	333.0	11	56	2							
MUNSTER	78.44	336.3	11	56	1							
BRATISLAVA	78.57	328.9	11	56	1				12	12		
SONNEBERG	78.74	333.5	11	58	2							
ADELAIDE	79.05	187.8	12	1	3							
UCCLE	80.41	337.6	12	6	1							
RATHFARNHAM	80.56	344.7	12	4	-2							
STUTTGART	80.78	333.8	12	7A	0				12	23		
KSARA	80.96	308.7	12	11	3							
DOURBES	80.98	337.2	12	8	0							
KEW	81.00	340.6	12	9	0							
TUBINGEN	81.04	333.8	12	10	1				12	24		
EBINGEN	81.37	333.7	12	12	2				12	28		
STRASBOURG	81.40	334.6	12	10	-1						12	46
MELBOURNE	81.54	182.5	12	11	0							
CINE	82.25	316.0	12	17A	2						12	31 PCP
FAYETTEVILLE	82.29	46.3	12	15K	0							
JERUSALEM	82.83	307.7	12	11K	-7							
OTTAWA	82.84	29.4	12	26	8							
SHAWINIGAN	82.84	27.0	12	30	12							
BREBEUF	83.48	28.1	12	22A	1							
BREBEUF	83.48	28.1	12	0	-21							
MORGANTOWN	86.13	35.1	12	36	2							
CAPE HALLETT	117.09	172.5									20	13 PP
BYRD STATION	133.43	166.1	19	9	1							
SOUTH POLE	133.85	180.0	19	10	1						21	35 PP
LA PAZ	138.93	59.6	19	32	14							

NOVEMBER 7 19.H 14.M 41.S EPICENTRE 44.69 149.23 DEPTH= 61.KM

DEPTH OF FOCUS= 0.004R

A=-0.61283 B= 0.36493 C= 0.70090 D= 0.5116 E= 0.8592
G=-0.6022 H= 0.3586 K=-0.7133 HT= -3.4

SE= 3.05

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	2.96	243.9	0	35	-11	1	12	-8				
ABASHIRI	3.61	261.0	0	59	4							
KUSIRO	3.89	245.6				1	40	-4				
OBIHIRO	4.71	250.0	1	8	-2	1	47	-17			1	26
HIROO	4.93	242.8	1	9	-4	2	2	-8				
ASAHIGAWA	5.01	261.9	1	17	3							
Y.-SAKHLINSK	5.08	298.7	1	14	-1	2	20	7				
URAKAWA	5.34	243.8	1	15	-4	2	15	-5				
WAKKANAI	5.40	280.4									1	58
SAPPORO	5.92	256.9	1	25	-2	2	43	9				
TOMAKOMAI	5.96	251.3	1	31	4	2	38	3				
MURORAN	6.45	251.4	1	32	-2	2	41	-6			3	1
UGLEGORSK	6.58	314.4	1	39	3	3	2	11				
SUTTSU	6.79	257.0	1	39	0							
MORI	6.82	250.7	1	47	8	3	1	5				
HAKODATE	6.86	247.9	1	34	-6	2	59	1			2	1
HATINOHE	7.04	236.4	1	46	3	2	49	-13				
AOMORI	7.32	241.0	1	50	4	3	3	-6				
MIYAKO	7.38	229.4									2	52
MORIOKA	7.79	233.0	1	46	-7	3	6	-14				

AKITA	8.40	236.9	2	8	7						
ISINOMAKI	8.62	226.2	1	58	-6	3	25	-16			
SENDAI	8.95	227.1	2	14	5	3	30	-19			
YAMAGATA	9.26	229.0	2	15	2						
HUKUSIMA	9.57	226.6	2	15	-2						
ONAHAMA	9.98	222.0				4	11	-3		3	52
SHIRAKAWA	10.18	225.1	2	31	5	4	0	-19			
PETROPAVLOVK	10.47	32.9				4	30	4			
MITO	10.64	221.7				3	48	-42			
KAKIOKA	10.90	222.3	2	28	-7						
MAEBASI	11.32	226.5	2	43	2	4	43	-4			
KUMAGAYA	11.36	224.7	2	46	4	4	40	-8			
OIWAKE	11.64	227.8								3	10
MATUSIRO	11.66	229.5	2	37A	-9					4	52
TOYAMA	12.12	232.9	3	7	15						
KOHU	12.17	225.6	3	3	11	5	19	12			
VLADIVOSTOK	12.60	268.9	2	56	-2						
CHANGCHUN	17.14	275.6	3	54	-2						
PEKING	24.76	270.8	5	15A	-2	9	35	3			
ZO-SE	25.81	247.9	5	29	2						
NANKING	26.82	252.4	5	36	0						
TIKSI	28.75	346.7	5	50	-4						
PAOTOW	28.93	275.7	5	54	-1						
ULAN-BATOR	29.15	291.6	5	57	0						
SIAN	32.52	265.4	6	25	-2						
LANCHOW	35.25	271.9	6	50A	0						
BAGUIO CITY	37.09	229.7	7	10	4						
MANILA	38.40	227.5	7	15	-2						
KOROR	39.37	203.5	7	29	4						
COLLEGE	39.44	36.8	7	26	1						
KUNMING	42.26	258.3	7	46	-3						
SHILLONG	49.58	267.3	8	43A	-4						
CHITTAGONG	51.03	264.2	9	1	-1						
FRUNSE	52.12	296.1	9	6A	0						
RESOLUTE	53.64	17.3	9	16K	-1						
TASHKENT	56.30	296.9	9	32	-5						
THULE	56.81	9.9	9	40	0						
APATITY	58.13	336.0	9	46	-3						
STALINABAD	58.15	294.4	9	50	0	17	52	8			
SODANKYLA	60.16	337.9	10	0	-3						
KIRUNA	61.39	340.3	10	10	-2						
SHASTA	61.93	59.5	10	14A	-1						
HUNGRY HORSE	62.21	48.5	10	15	-2				10	31	
MINERAL	62.62	59.4	10	18A	-2						
LEMBANG	63.46	227.5	10	22A	-4				10	36	
RENO	64.21	59.2	10	30K	0						
QUETTA	64.30	287.8	10	30	-1	19	1	-2			
LICK	64.41	62.1	10	30A	-2						
BUTTE	64.42	49.9	10	32	0						
CHARTERS TS.	64.44	183.1	10	35	3				10	44	
MOSCOW	64.57	324.4	10	31	-2					26	13 SSS
SCORESBY SD.	64.96	356.7	10	37	2						
BOZEMAN	65.46	49.4	10	39	0						
FRESNO	65.92	61.6	10	39A	-2						
HELSINKI	66.03	333.1	10	41	-1						
EUREKA	66.57	57.2	10	43	-3						
SKALSTUGAN	66.82	340.6	10	46	-1						
KARACHI	66.98	284.0	10	50	2						
UPPSALA	68.53	336.1	10	56	-2				11	10	
PASADENA	68.61	62.8	10	57	-1						
BOULDER CITY	69.51	59.5	11	3	-1						
TIFLIS	70.63	309.8	11	12	1						
RAPID CITY	70.69	46.7	11	10	-1						
GORIS	71.28	307.2	11	15	0	20	34	8			
BRISBANE	71.91	176.4	11	16	-2						
SIMFEROPOL	73.82	318.0	11	29	-1						
TUCSON	74.46	60.0	11	33	0						
LWOW	74.47	326.7	11	34	1						
TUCSON TELE.	74.47	59.9	11	33	0						
POTSDAM	76.21	334.1	11	44	1				11	56	
SKALNATE PL.	76.44	328.3	11	46	1						
RACIBORZ	76.44	330.0	11	45	0						
HALLE	77.32	334.2	11	49	0						
PRUHONICE	77.79	332.0	11	52	0						
JENA	77.93	334.2	11	52	-1						
PLAUEN	78.12	333.6	11	52	-2				12	3	
MUNSTER	78.18	336.9	11	45	-9						
BRATISLAVA	78.44	329.6	11	57	1						
SONNEBERG	78.53	334.1	11	56	0						

DE BILT	78.73	338.3	11 55	-2			
ADELAIDE	79.82	188.8	12 2	-1			
UCCLE	80.13	338.2	12 13	8			
RATHFARNHAM	80.15	345.4	12 35	30			
STUTTGART	80.56	334.5	12 8	1	12 21		
KEW	80.66	341.3	12 9	1	12 20		
DOURBES	80.70	337.8	12 9	1			
TUBINGEN	80.82	334.4	12 13	5	12 21		
EBINGEN	81.16	334.3	12 13	3			
STRASBOURG	81.17	335.2	12 11	1	12 27	12 44 *SP	
FAYETTEVILLE	81.23	47.1	12 10K	-1			
OTTAWA	81.85	30.2	12 19	5			
SHAWINIGAN	81.87	27.8	12 20	6			
SEVEN FALLS	82.00	26.3	12 22	7			
BASLE	82.16	334.9	12 19	4			
MELBOURNE	82.23	183.4	12 15	-1			
PARIS	82.44	338.5	12 19	2		12 25 PCP	
NEUCHATEL	82.83	335.0	12 21	2			
KARAPIRO	85.60	159.4	12 31	-2			

NOVEMBER 8 9.H 23.M 0.S EPICENTRE 51.89 159.38 DEPTH= 56.KM

DEPTH OF FOCUS= 0.004R

A=-0.58005 B= 0.21831 C= 0.78478 D= 0.3522 E= 0.9359
G=-0.7345 H= 0.2764 K=-0.6198 HT= -6.1

SE= 2.30

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
PETROPAVLOVK	1.32	340.7	0 24	1	0 44	3		
SEVERO-KUR.	2.39	240.6	0 38	0				
KLYUCHI	4.52	9.9	1 8	0				
MAGADAN	9.07	331.2	2 12	1				
UGLEGORSK	11.38	262.5	2 46	3				
Y.-SAKHLINSK	11.91	252.0	2 50	0	5 2	0		
NEMURO	12.63	232.7	2 58	-1				
ABASHIRI	12.80	238.0	3 4	2				
WAKKANAI	13.35	248.0	3 10	1	6 6	30		
KUSIRO	13.47	234.5	3 20	10	6 14	35		
OBIHIRO	14.13	236.9	3 25	6				
URAKAWA	14.90	235.7	3 24	-5	6 25	12		
SAPPORO	15.01	241.1	3 30	0	6 32	16	4 31 PP	
TOMAKOMAI	15.26	239.1	3 39	5				
SUTTSU	15.80	242.4	3 42	1				
MORI	16.09	239.9	3 43	-1				
HAKODATE	16.24	238.8	3 45	-1				
HATINOHE	16.73	234.2	3 50	-2	7 12	17		
AOMORI	16.90	236.4	3 57	3				
MIYAKO	17.18	231.4	3 59A	1				
MORIOKA	17.54	233.1	4 3	1	7 21	7		
MIZUSAWA	18.00	232.0	4 10	2	7 37	13		
AKITA	18.06	235.2	4 8	-1	7 42	17	6 48	
SENDAI	18.78	230.8	4 16A	-1	7 49	8	8 9	
SAKATA	18.82	234.0	4 18	0				
YAMAGATA	19.07	231.8	4 20	-1				
HUKUSIMA	19.40	230.6	4 24	0	7 59	4		
ONAHAMA	19.84	228.4	4 28K	-1	8 13	9	5 20	
NIIGATA	19.96	233.6	4 31	1			5 25	
SHIRAKAWA	20.02	230.0	4 31	0	8 16	8		
AIKAWA	20.29	235.2	4 34	0	8 26	13		
VLADIVOSTOK	20.43	255.4	4 32	-3	8 15	-1	4 49 PP	
MITO	20.51	228.3	4 36	0				
KAKIOKA	20.76	228.6	4 37	-2				
TUKUBASAN	20.81	228.7	4 38A	-1	8 24	1	8 45 PCP	
TAKADA	21.00	233.5	4 41	0				
MAEBASI	21.15	230.9	4 42A	-1	8 39	9	5 49	
KUMAGAYA	21.21	229.9	4 43	0	8 43	12		
NAGANO	21.36	232.9	4 47K	2	8 46	12		
TOKYO C.M.O.	21.41	228.5	4 46	1	8 51	16	6 9	
MATUSIRO	21.45	232.6	4 45A	-1	8 39	4		
OIWAKE	21.46	231.7	4 46	0				
WAZIMA	21.47	236.3	4 47	1	8 49	13		
TITIBU	21.49	230.2	4 46	0				
YOKOHAMA	21.67	228.3	4 38	-10			5 5	

MATUMOTO	21.81	232.6	4	50	1						
TOYAMA	21.84	234.6	4	51	1	8	48	6			
MERA	22.00	227.2	5	1	10	9	10	24			
KOHU	22.01	230.5	4	50	-1	8	53	7			
HUNATU	22.02	230.0	4	52	1	8	57	11			
MISIMA	22.25	229.1	4	53A	-1						
OSIMA	22.34	227.8	4	56	2						
SHIZUOKA	22.63	229.8	4	51	-6	9	3	6			
HUKUI	22.81	235.1	5	2	3						
OMAESAKI	23.02	229.6	5	3	2	9	23	19			
GIHU	23.07	233.3	5	2A	0	9	18	13	5	25	
NAGOYA	23.16	232.6	5	3	0						
IBUKISAN	23.28	233.9	5	8	4						
HIKONE	23.44	233.9	5	2	-3				5	24	
KAMEYAMA	23.66	232.9	5	9	2	9	30	15			
TU	23.73	232.6	5	10	2						
TOYOOKA	23.96	236.6	5	10A	0				7	18	
TIKSI	23.99	336.7	5	10	-1				8	45	PCP
CHANGCHUN	24.06	264.0	5	9A	-2	9	23	1	5	43	PP
ABUYAMA	24.09	234.4	5	12A	0	9	34	12			
NARA	24.11	233.7	5	14	2						
SAIGO	24.24	239.9	5	15	2						
OSAKA	24.29	234.1	5	17	4	9	43	17	6	6	
OWASE	24.42	232.2	5	16	1	9	38	10			
KOBE	24.44	234.7	5	15	0	9	49	21	13	12	
WAKAYAMA	24.80	234.1	5	19	1						
SUMOTO	24.85	234.7	5	18	-1	9	43	8	7	37	
SIOMISAKI	25.13	232.0	5	22	0	9	49	9			
TOKUSIMA	25.22	234.8	5	23A	1						
TAKAMATU	25.30	235.9	5	23	0						
HAMADA	25.89	239.7	5	29	0				9	5	
MUROTO	26.08	234.2	5	32	2						
HIROSIMA	26.10	238.4	5	33	2	9	41	-15	9	19	
KOTI	26.17	235.6	5	32A	1	10	7	10	6	54	PP
MATUYAMA	26.35	237.2	5	36	3	10	9	9			
SIMIDU	27.06	235.4	5	38	-2	10	38	26			
OOITA	27.41	238.0	5	44	1						
HUKUOKA	27.78	240.1	5	47	1				9	54	
SAGA	28.10	239.8	5	43	-6						
KUMAMOTO	28.21	238.7	5	49	-1						
MIYAZAKI	28.54	236.5	5	57	4				9	20	
NAGASAKI	28.72	239.7	5	54	0						
KAGOSIMA	29.27	237.3	5	57	-2				9	11	
COLLEGE	29.58	43.6	6	1	-1	10	53	1	38	2	PKPPKP
PEKING	31.83	265.4	6	20	-2	11	29	2			
IRKUTSK	33.15	292.9	6	33A	0				7	50	PP
ULAN-BATOR	33.42	284.4	6	36	0	12	0	8			
ZO-SE	34.80	248.4	6	48A	0	12	20	7	8	5	PP
PAOTOW	35.31	271.2	6	52A	0						
NANKING	35.49	252.1	6	53A	-1				8	11	PP
SITKA	36.99	55.6	7	14	8						
SIAN	39.96	264.0	7	30A	-1	13	37	5			
LANCHOW	41.92	270.3	7	48A	1	14	9	8	9	26	PP
KHEYS	42.19	345.7	7	41	-8	13	46	-19	9	21	PP
RESOLUTE	44.61	21.4	8	9A	0	14	40	0			
TRUK	44.71	190.6	8	20	10						
KIPAPA	44.77	116.4	8	8	-2						
HONOLULU	44.82	116.6	8	11	1						
CHENGTU	45.43	264.4	8	18A	3				10	5	PP
HONG KONG	45.53	247.1	8	17A	1	15	4	11			
ALBERNI	46.17	61.7	8	22	1						
NORD	46.74	359.2	8	25	-1	15	30	19			
BAGUIO CITY	46.84	235.5	8	26	0						
HORSESHOE B.	46.94	60.8	8	25	-2						
SEMIPALATNSK	47.32	301.3	8	28	-2	15	20	1			
VICTORIA	47.35	61.8	8	29	-2						
MANILA	48.19	233.8	8	27	-10	15	26	-5			
THULE	48.40	13.5	8	38	-1	15	40	6			
ISFJORD	48.63	351.0	8	32	-8						
KOROR	48.92	213.6	8	42	-1				10	6	
CORVALLIS	49.75	66.0	8	56	7						
BANFF	49.97	55.0	8	49	-2						
KUNMING	50.27	260.3	8	53A	0	16	5	5	10	51	PP
PHU-LIEN	51.09	253.1	8	59	0						
HUNGRY HORSE	52.47	57.1	9	8	-2						
SHASTA	52.71	69.3	9	10A	-1						
SVERDLOVSK	52.86	317.0	9	12	-1						
UKIAH	53.25	71.3	9	15	0				11	25	PP
MINERAL	53.39	69.2	9	15A	-2						

LHASA	54.17	273.7	9	24A	2	17	3	10	11	31 PP
APATITY	54.21	337.5	9	22A	0	17	0	6	9	29 *SP
BERKELEY	54.64	71.9	9	23A	-3					
BUTTE	54.72	58.5	9	25	-1					
RENO	54.96	68.8	9	27K	-1					
FRUNSE	55.01	296.7	9	28A	0					
LICK	55.36	72.0	9	30A	-1					
BOZEMAN	55.75	58.0	9	33	-1					
SODANKYLA	55.89	339.9	9	34	-1	17	22	6		
RABAUL	56.21	188.7	9	36	-1				10	33 PCP
SHILLONG	56.56	269.6	9	39	-1	17	29	4	14	55
KIRUNA	56.72	342.7	9	40A	-1	17	24	-3		
FRESNO	56.83	71.3	9	40	-1					
EUREKA	57.20	66.4	9	43	-1				38	57 PKPPKP
SCORESBY SD.	57.94	0.5	9	48	-1					
CHATRA	58.56	274.3	9	46	-8					
SALT LAKE C.	58.63	62.8	9	53	-1				10	24
CHITTAGONG	58.94	267.1	10	0	4	18	4	8	12	13 PP
TASHKENT	58.97	298.5	9	54	-2				21	54 SS
PASADENA	59.60	72.4	9	58	-3	18	11	6		
BOULDER CITY	60.27	68.7	9	45	-20				39	35 PKPPKP
RAPID CITY	60.90	54.9	10	7	-3					
STALINABAD	61.19	296.5	10	12	0					
PULKOVO	61.36	333.4	10	12	-1	18	35	8	12	37 PP
DEHRA DUN	61.64	283.7	10	14	-1	18	37	6		
SKALSTUGAN	62.02	344.0	10	16	-1					
HELSINKI	62.43	336.2	10	20	0				12	33 PP
MOSCOW	62.44	327.1	10	19	-1	18	47	6		
WARSAK DAM	62.85	291.1	10	17	-6					
LAHORE	62.98	287.3	10	23	-1	18	51	3	10	59 PCP
AGRA	63.96	281.3	10	29A	-1					
REYKJAVIK	64.32	0.6	10	34K	2					
UPPSALA	64.42	339.7	10	32A	-1	19	12	6		
SIDA	64.66	358.7	10	36	2					
TUCSON TELE.	65.25	68.8	10	38	0				39	22 PKPPKP
TUCSON	65.25	68.9	10	38	0				39	30 PKPPKP
ASHKABAD	67.24	302.7	10	51A	0				11	40
GOTEBORG	67.56	341.8	10	53	0					
QUETTA	68.30	291.4	10	57A	-1	19	51	-2	13	27 PP
COPENHAGEN	69.35	340.7	11	5A	1	20	13	8	13	33 PP
MEDAN	69.42	248.4	11	5	1	20	14	8		
AFIAMALU	70.14	150.1	11	14	5					
WARSAW	70.49	334.3	11	11A	0	20	18	-1		
TIFLIS	70.89	313.9	11	14	1				21	15 SCS
HYDERABAD	70.92	274.0	11	12A	-2	20	27	4	21	15 PS
FAYETTEVILLE	71.44	55.0	11	16	-1					
KARACHI	71.50	288.3	11	23A	6	20	45	15		
SUVA	71.70	160.9	11	28	10	20	50	18	14	7 PP
LWOW	71.79	331.4	11	20	1	20	41	7	13	59 PP
OTTAWA	72.12	37.4	11	19A	-2				14	1 PP
SHAWINIGAN	72.22	34.9	11	22A	1					
POTSDAM	72.31	339.1	11	24	2	20	44	5		
SEVEN FALLS	72.40	33.4	11	22A	0					
CHARTERS TS.	72.50	192.9	11	22A	-1				15	52
DURHAM	72.53	348.6	12	9K	46	21	38	56	13	6
KRAKOW	72.76	334.0	11	25	1				21	33 PPS
BREBEUF	72.81	36.0	11	23	-2				14	14 PP
IASI	73.00	327.9	11	26	0	20	54	7		
CLEVELAND	73.06	43.3	11	25	-1					
DJAKARTA	73.09	235.6	11	24A	-2	20	51	3		
WITTEVEEN	73.17	343.1	11	28	1					
RACIBORZ	73.19	335.0	11	28	1				14	1 PP
BOMBAY	73.27	279.3	11	28	1	21	6	16	16	24 PPP
COLLMBERG	73.33	338.7	11	30	2					
SKALNATE PL.	73.46	333.4	11	28	-1					
BACAU	73.78	328.0	11	31	1					
MUNSTER	73.81	342.3	11	35	4					
JENA	73.99	339.5	11	32	0	21	3	5		
DE BILT	74.13	343.8	11	34	2					
PRAGUE	74.15	337.4	11	34A	1	21	24	24	14	36 PP
PRUHONICE	74.20	337.3	11	33	0	21	24	23	14	12 PP
PLAUEN	74.27	339.0	11	32	-1					
FOCSANI	74.44	327.4	11	24	-10					
RATHFARNHAM	74.50	351.1	11	21K	-14					
SONNEBERG	74.59	339.5	11	36	1				12	18
CHEB	74.61	338.7	11	34	-1				14	20 PP
BENSBERG	74.86	342.2	11	38A	1				12	30
PENNSYLVANIA	75.15	41.3	11	37	-1					

HURBANOVO	75.22	334.1	11 35	-4				14 21	PP
BRATISLAVA	75.24	334.9	11 39	0				14 27	PP
MORGANTOWN	75.26	43.4	11 39A	0					
BUDAPEST	75.34	333.4	11 40	1					
VIENNA-H.	75.35	335.4	11 42A	2				11 54	PCP
UCCLE	75.52	343.9	11 42	2					
CAMPULUNG	75.54	328.6	11 43	2					
KEW	75.60	347.1	11 41A	0	21 14	-2			
BUCHAREST	75.94	327.5	11 43A	0				14 53	PP
HARVARD	76.14	36.3	11 43	-1					
DOURBES	76.15	343.6	11 46A	2	20 34	-48			
TIMISOARA	76.29	331.3	11 47	2	22 9	45		12 43	
WESTON	76.34	36.2	11 45A	0					
STUTTGART	76.54	340.2	11 48A	2	21 34	7		14 33	PP
TUBINGEN	76.80	340.2	11 48A	0					
STRASBOURG	77.02	341.1	11 51A	2	21 43	11		14 43	PP
KODAIKANAL	77.03	270.0			22 7	35			
EBINGEN	77.15	340.2	11 51A	1					
BELGRADE	77.36	331.4	11 52A	1	22 1	26		14 49	PP
RAVENSBURG	77.39	339.6	11 53	2					
ZAGREB	77.70	334.7	11 55A	2					
PARIS	77.76	344.6	11 56A	3	21 47	7		14 51	PP
BASLE	78.06	340.9	11 56	1					
CHUR	78.29	339.4	11 58A	2					
SOFIA	78.38	328.5	11 57	1				14 53	
TRIESTE	78.43	336.2	11 57	0	22 0	13		20 58	
NEUCHATEL	78.69	341.1	12 0	2	22 1	11			
COLUMBIA	79.48	47.3	12 1	-1					
OROPA	79.80	340.0	12 6	2	23 7	66			
PAVIA	79.96	339.1	12 8A	3				23 5	PS
CLERMONT-FD.	80.60	343.4	12 11	3	22 26	16		22 20	SKS
PRATO	80.74	337.3	12 9	0	22 23	12			
CINE	81.26	322.9	12 16A	4				15 20	PP
KSARA	81.37	315.4	12 14	1	22 26	8	12 45	15 21	PP
TACUBAYA	81.76	69.2	12 30	15					
ROME	82.27	335.7	12 17A	0	22 43	16		23 29	
ATHENS	82.50	326.1	12 18A	0	22 37	8			
JERUSALEM	83.40	314.8	12 15K	-8			12 42		
MESSINA	84.89	332.2	12 28	-2	23 5	12		15 42	PP
REGGIO CALA.	84.95	332.1	12 30	-1					
RIVERVIEW	85.66	186.9	12 36K	2	23 6	6			
TORTOSA	85.86	344.1	12 45	10	23 5	3			
HELWAN	86.73	316.8	12 41A	2	23 30	19			
TOLEDO	87.47	347.3	12 44A	1	23 29	11		16 9	PP
BERMUDA	87.63	36.1						23 10	
ADELAIDE	88.33	196.9	12 47K	0					
ALICANTE	88.43	344.3	12 48	0	23 30	3		16 16	PP
SETIF	89.37	339.2	12 52	0				16 21	PP
GRANADA	90.06	346.5	13 0K	5	23 59	17		16 33	PP
ALMERIA	90.22	345.5	12 55	-1				16 31	PP
MELBOURNE	90.23	191.4	12 56A	0				13 8	PCP
KARAPIRO	90.54	167.3	12 57	-1					
MALAGA	90.63	347.0	12 52	-6				16 14	PP
RELIZANE	90.78	342.9	12 59	0				16 34	PP
TAMANRASSET	102.20	335.4	13 51A	0	25 32	7		18 4	PP
MBOUR	113.94	356.1						29 18	PS
ASTRIDA	115.49	301.5	18 36	0					
HUANCAYO	120.87	68.5	18 49	3					
CAPE HALLETT	124.13	176.0	18 51	-2				20 50	PP
OASIS-BUNG.	125.88	205.4	18 55	-1					
MIRNY	128.30	207.9	19 0	-1				22 22	SKP
LA PAZ	128.55	64.7	19 4A	3				38 30	SS
SCOTT BASE	129.55	178.0	19 2A	-1				22 22	PKS
WINDHOEK	138.82	300.8	19 14	-6					
BYRD STATION	139.12	164.7	19 12	-9				22 29	PP
KIMBERLEY	139.25	286.7	19 20	-1					
GRAHAMSTOWN	141.42	279.9	19 28	3					
SOUTH POLE	141.70	180.0	19 18	-8				22 46	PP

NOVEMBER 8 12.H 8.M 41.S EPICENTRE 44.54 148.78 DEPTH= 83.KM

DEPTH OF FOCUS= 0.008R

A=-0.61160 B= 0.37070 C= 0.69895 D= 0.5183 E= 0.8552
G=-0.5977 H= 0.3623 K=-0.7152 HT= -3.4

SE= 2.65

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	2.61	243.6	0	38	-4	1	5	-7				
ABASHIRI	3.27	262.5	0	51	0	1	28	-1				
KUSIRO	3.53	245.4	0	51	-3	1	27	-8				
OBIHIRO	4.35	250.2	1	3	-3	1	45	-11				
HIROO	4.57	242.3	1	6	-3	1	54	-7				
ASAHIGAWA	4.67	262.9	1	11	1							
Y.-SAKHLINSK	4.88	301.8	1	14	1	2	15	6				
URAKAWA	4.98	243.5	1	12	-2	2	9	-2				
WAKKANAI	5.11	282.4	1	19	3	2	16	1				
SAPPORO	5.57	257.3	1	22	0	2	23	-3			2	59
TOMAKOMAI	5.61	251.4	1	24	1	2	22	-5				
MURORAN	6.10	251.5	1	28	-2	2	32	-7				
SUTTSU	6.44	257.3	1	36	2							
MORI	6.46	250.7	1	32	-3	2	41	-7				
UGLEGORSK	6.47	317.0	1	39	4	3	1	13				
HAKODATE	6.51	247.7	1	31A	-4	2	38	-11				
HATINOHE	6.68	235.7	1	33	-5	2	39	-14				
AOMORI	6.97	240.6	1	41	-1	2	50	-10				
MIYAKO	7.03	228.4	1	46	3	2	46	-16				
MORIOKA	7.44	232.1	1	42	-6	2	59	-13				
MIZUSAWA	7.86	229.2	2	0	6	3	10	-12				
AKITA	8.05	236.3	2	12	15	3	15	-12				
ISINOMAKI	8.28	225.1	2	7	7	3	18	-14				
SENDAI	8.61	226.1	2	10	6	3	23	-18				
SAKATA	8.74	233.0				3	33	-11				
YAMAGATA	8.92	228.1	2	4	-4	3	35	-13				
HUKUSIMA	9.23	225.6	2	12	-1	3	41	-15				
ONAHAMA	9.65	220.9	3	3	45	3	49	-17				
SHIRAKAWA	9.84	224.1	2	38	17	3	55	-15				
NIIGATA	9.86	231.3				4	23	12				
MITO	10.31	220.7				4	5	-17				
UTUNOMIYA	10.46	223.4	2	48	19	4	8	-17				
KAKIOKA	10.57	221.2	2	30	-1	4	12	-16				
TUKUBASAN	10.62	221.5	2	23	-8	4	13	-16				
MAEBASI	10.98	225.6	2	37	1	4	24	-14				
KUMAGAYA	11.02	223.7	2	50	13	4	25	-14				
TOKYO C.M.O.	11.22	221.0				4	28	-16				
NAGANO	11.23	229.3	2	48	8							
ITIBU	11.30	224.2				4	30	-16				
MATUSIRO	11.31	228.8	2	33K	-8	4	32	-14			6	8
YOKOHAMA	11.47	220.7	2	43	0	4	35	-15			3	53
WAZIMA	11.47	235.5	2	48	5	4	39	-11				
MATUMOTO	11.67	228.5				4	44	-10				
MERA	11.81	218.6				4	44	-14				
KOHU	11.83	224.8	2	52	4	4	46	-12				
HUNATU	11.84	223.7				3	55	-63			4	48
MISIMA	12.05	222.1				4	48	-16			4	25
GIHU	12.95	229.3									5	59
NAGOYA	13.02	228.1				5	6	-21				
HIKONE	13.33	230.3	3	5	-2							
CHANGCHUN	16.84	275.8	3	50	-2							
YAKUTSK	20.75	334.2	4	35	-1	8	21	3				
PEKING	24.45	270.8	5	13	0	9	31	7				
PAOTOW	28.63	275.8	5	53	2							
SIAN	32.19	265.3	6	22	0							
LANCHOW	34.94	271.9	6	47	1	12	12	1				
COLLEGE	39.76	36.7	7	28	2							
SHILLONG	49.26	267.1	8	41A	-2							
CHATRA	51.86	271.8	8	54	-8							
NORD	53.87	357.4	9	16	-1							
RESOLUTE	53.88	17.2	9	17A	0							
NAMANGAN	54.73	295.3	9	25	1	17	1	5				
THULE	57.02	9.8	9	39	-1							
APATITY	58.15	335.9	9	47	-1							
WARSAK DAM	58.64	288.4	9	51	0							
CORVALLIS	59.51	56.0	9	58	1							
SODANKYLA	60.18	337.8	10	2	0							
KIRUNA	61.43	340.2	10	9	-1							
SHASTA	62.28	59.2	10	16A	0							
HUNGRY HORSE	62.55	48.2	10	15	-3						10	53
MINERAL	62.97	59.1	10	20A	-1							
QUETTA	64.05	287.6	10	28	0							
BERKELEY	64.05	61.6	10	27A	-1							
CHARTERS TS.	64.27	182.6	10	28	-1						11	2
PULKOVO	64.51	330.5	10	31	0							

MOSCOW	64.51	324.2	10	31	0						
RENO	64.56	58.9	10	31A	0						
BUTTE	64.76	49.6	10	31	-1						
LICK	64.77	61.8	10	32A	0						
SCORESBY SD.	65.10	356.6	10	34	0						
BOZEMAN	65.81	49.2	10	40	1						
HELSINKI	66.02	333.0	10	42	2						
FRESNO	66.28	61.3	10	41A	-1						
KARACHI	66.70	283.8	10	48	3						
SKALSTUGAN	66.86	340.4	10	45A	-1						
EUREKA	66.92	56.9	10	46	0						
SALT LAKE C.	68.52	53.6	10	56	0						
UPPSALA	68.54	335.9	10	55	-1					11	20 PCP
PASADENA	68.96	62.5	10	58	-1						
BOULDER CITY	69.86	59.2	11	5	1						
RAPID CITY	71.03	46.4	11	11	0					11	34
GOTEBORG	71.96	337.3	11	16A	-1						
TUCSON	74.82	59.7	11	34	1						
TUCSON TELE.	74.83	59.6	11	34	1						
COLLMBERG	77.16	333.3	11	45	-2						
HALLE	77.32	334.0	11	47	-1						
PRUHONICE	77.78	331.7	11	52	2					12	33
JENA	77.93	333.9	11	51	0						
PLAUEN	78.12	333.4	11	51	-1						
STUTTGART	80.57	334.2	12	6	1						
KEW	80.71	341.0	12	7	1						
DOURBES	80.72	337.5	12	7	1						
STRASBOURG	81.17	335.0	12	9	1						
TRIESTE	81.76	329.9	12	8	-3	22	13	-3			
OTTAWA	82.15	29.9	12	13K	0						
SHAWINIGAN	82.16	27.5	12	14	0						
CINE	82.26	316.4	12	18A	4						
SEVEN FALLS	82.28	26.1	12	15	1						
PARIS	82.46	338.3	12	18	3						
BREBEUF	82.79	28.6	12	17K	0						
JERUSALEM	82.94	308.1	12	10K	-7						
KARAPIRO	85.56	159.1	12	32	1				12	55	
HARVARD	86.13	28.7	12	35	2						
TAMANRASSET	105.06	325.1	14	2	777					17	44 PP
HUANCAYO	130.34	63.3	19	4	3						
BYRD STATION	133.78	166.0	19	10	2						
SOUTH POLE	134.34	180.0	19	7	-2						

NOVEMBER 8 19.H 36.M 50.S EPICENTRE 11.37 92.33 DEPTH= 0.KM

A=-0.03995 B= 0.97982 C= 0.19586 D= 0.9992 E= 0.0407
G=-0.0080 H= 0.1957 K=-0.9806 HT= 6.4

SE= 3.49

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
PORT BLAIR	0.48	51.6	0	16	2								
MEDAN	9.97	140.4	2	26A	-2	4	26	4					
CHITTAGONG	10.94	357.5	2	38	-3	4	40	-6			2	45	PP
MADRAS	11.99	279.0	2	52	-3	5	19	8			3	1	PP
COLOMBO	13.08	251.2				5	10	-28					
SHILLONG	14.13	358.3	3	21	-3	6	25	22					
KODAIKANAL	14.65	267.0	3	20	-11								
TOCKLAI	15.47	8.2	3	48	7								
CHATRA	16.13	343.2	3	48	-2	7	12	22					
PHU-LIEN	16.62	53.9	3	58	2								
KUNMING	16.77	34.4	4	1A	3	7	19	15					
LHASA	18.22	356.4	4	18	2	7	41	3					
BOMBAY	20.26	294.0	4	42	2	8	40	17			9	25	
AGRA	20.66	321.4	4	44	0	8	34	3					
CHENGTU	22.04	27.7	5	2	4	9	10	13			5	28	PP
DEHRA DUN	23.06	327.0	5	17	9	9	28	12					
CANTON	23.11	57.0	5	11	2								
HONG KONG	23.52	59.7	5	14	1	9	40	16					
LANCHOW	26.71	21.0	5	45	2	10	23	5					
SIAN	27.35	31.0	5	48	-1								
KARACHI	27.88	304.6	6	0A	6								
WARSAK DAM	29.46	323.2	6	9	1								
QUETTA	30.10	312.3	6	15A	1	11	15	3			12	57	SS
PAOTOW	33.02	25.1	6	38	-1	12	56	58					

NAMANGAN	34.65	332.0	6	55	2	12	24	1			
PEKING	35.49	32.3	7	2	1						
CHANGCHUN	43.07	35.2	8	3	-1						
MATUSIRO	48.26	50.8	8	42	-3				10	11	
TIFLIS	51.28	314.9	9	17	9						
SVERDLOVSK	51.52	338.3	9	10	0						
TANANARIVE	53.43	236.1	9	31A	7						
JERUSALEM	56.21	300.6	9	34	-10						
YAKUTSK	57.30	19.9							15	14	
TRUK	58.76	88.1	10	1	-1						
HELWAN	59.34	298.0	9	57	-9						
MOSCOW	61.18	328.2	10	18	-1						
CINE	62.78	306.4	10	30	0						
ADELAIDE	63.63	138.4	10	32A	-3						
ASTRIDA	63.77	261.4	10	42	6						
TIKSI	64.18	12.1	10	36	-3						
LWIRO	64.59	262.0	9	50	-52				10	21	
PULKOVO	66.31	330.8	10	52	-1	19	38	-4			
LWOW	67.42	319.3	10	58	-2						
APATITY	67.95	339.2	11	2A	-1	19	57	-5			
HELSINKI	69.00	330.4	11	9	-1						
SODANKYLA	70.32	338.0	11	16	-2						
BRISBANE	70.33	124.6	11	14A	-4				13	40	
UPPSALA	72.56	329.3	11	29	-2						
KIRUNA	72.73	337.8	11	31A	-1						
PRUHONICE	73.53	318.9	11	37	0						
COLLMBERG	74.55	320.2	11	34	-9						
PLAUEN	75.08	319.4	11	46	0						
JENA	75.44	319.8	11	46	-2						
SKALSTUGAN	75.47	332.9	11	46	-2						
KIMBERLEY	76.41	236.6	11	52	-1						
GRAHAMSTOWN	76.71	231.7	12	1	6						
STUTTGART	77.03	317.6	11	58	1						
OASIS-BUNG.	77.57	176.5	11	57	-3						
MIRNY	77.71	179.7	11	58	-2				18	4	
STRASBOURG	77.99	317.5	12	0	-2				12	7	PCP
WINDHOEK	81.01	244.8	12	26	8						
PARIS	81.45	318.0	12	21	0						
TAMANRASSET	82.78	291.7	12	27	-1				15	47	PP
GRANADA	87.89	307.3	12	43K	-10						
KARAPIRO	91.60	128.2	13	11	1						
COLLEGE	91.79	21.8	13	9	-2						
RESOLUTE	94.00	1.9	13	20	-1						
SOUTH POLE	101.30	180.0	14	2	7				18	4	PP
EUREKA	122.97	25.9	19	10	11						
TUCSON TELE.	131.27	26.2	19	17	2				22	40	PP
TUCSON	131.29	26.3	19	18	3				22	42	PP
SAN JUAN	143.59	324.0	19	34	-3						
ST. VINCENT	144.22	312.2	19	33	-5						
TRINIDAD	146.02	309.2	19	44	3						
HUANCAYO	167.90	265.6							21	27	PKP2

NOVEMBER 9 3.H 14.M 53.S EPICENTRE 44.02 148.73 DEPTH= 33.KM

DEPTH OF FOCUS= 0.000R

A=-0.61656 B= 0.37449 C= 0.69254 D= 0.5191 E= 0.8547
G=-0.5919 H= 0.3595 K=-0.7214 HT= -3.2

SE= 2.71

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
GORNY	1.22	317.6	0	20	-1							
REIDOVOE	1.34	338.5	0	22	0							
NEMURO	2.39	254.2	0	35	-2	0	56	-10				
ABASHIRI	3.21	271.5	0	51	2	1	27	0				
KUSIRO	3.32	253.1	0	49	-2	1	30	1			2	14
OBIHIRO	4.17	256.6	1	4	1	1	47	-4				
HIROO	4.32	248.1	1	4	-1	1	51	-4				
ASAHIGAWA	4.60	269.2	1	10	1							
URAKAWA	4.74	248.8	1	12	1	2	5	0				
Y.-SAKHLINSK	5.14	306.8	1	14	-2	2	16	1			2	28
TOMAKOMAI	5.43	256.4	1	27	7							
SAPPORO	5.45	262.5	1	21	0	2	33	10				
MURORAN	5.92	256.0	1	23	-4	2	31	-4				

MORI	6.28	255.0	1	37	5	2	51	7				
HAKODATE	6.29	251.9	1	29	-4	2	36	-8				
HATINOHE	6.38	239.3	1	35	1	2	40	-6				
MIYAKO	6.67	231.4	1	35	-3	2	41	-13				
AOMORI	6.69	244.2	1	40	2	2	54	0				
UGLEGORSK	6.83	320.1	1	43	3	2	59	1				
MORIOKA	7.10	235.1	1	41	-3	2	54	-10				
MIZUSAWA	7.50	231.9	1	53	3	3	2	-12				
AKITA	7.74	239.2	2	10	17	3	17	-3			3	28
ISINOMAKI	7.90	227.5	1	50	-5	3	12	-12				
SENDAI	8.24	228.4	1	53	-7	3	22	-11			2	22
SAKATA	8.41	235.6				3	29	-8				
YAMAGATA	8.55	230.5	2	2	-2	3	29	-12				
HUKUSIMA	8.85	227.7	2	3	-5	3	44	-4				
ONAHAMA	9.24	222.8	2	51	37						3	50
SHIRAKAWA	9.45	226.0	2	17	0	3	59	-4				
NIIGATA	9.52	233.5	2	46	28	4	12	7				
MITO	9.90	222.4	2	25	2						4	1
UTUNOMIYA	10.07	225.2	2	25	0							
KAKIOKA	10.16	222.9	2	21	-5	4	11	-9				
TUKUBASAN	10.21	223.2	2	21	-6	4	6	-16	2	34		
MAEBASI	10.60	227.4	2	19	-13	4	23	-8				
KUMAGAYA	10.63	225.4	2	31	-2	4	42	10				
TOKYO C.M.O.	10.81	222.6				4	18	-18				
NAGANO	10.88	231.1	2	39	3							
TITIBU	10.91	225.9				4	27	-12				
OIWAKE	10.93	228.8									3	16
MATUSIRO	10.95	230.6	2	33A	-4	4	13	-27			3	26
YOKOHAMA	11.06	222.2	2	43	4	4	22	-20				
HUNATU	11.45	225.3				4	46	-6				
KOHU	11.45	226.4	2	44	0	4	45	-7				
MISIMA	11.65	223.6	2	56	9	5	1	4				
VLADIVOSTOK	12.24	271.6	2	56	1							
HIKONE	12.98	231.9	3	4	-1							
ABUYAMA	13.66	232.4	3	9K	-4							
MAGADAN	15.60	3.9	3	39	0							
PEKING	24.42	271.9	5	15	-1	9	30	-1				
ZO-SE	25.23	248.5	5	32	8	9	38	-7				
NANKING	26.28	253.1	5	36	2							
PAOTOW	28.65	276.7	6	4	9	10	49	9				
LANCHOW	34.92	272.6	6	50	0	12	21	2				
CHENGTU	37.52	264.5	7	14	2	13	0	1				
MANILA	37.69	227.5	7	11	-3							
KOROR	38.62	203.0	7	10	-11							
COLLEGE	40.19	36.3	7	35	0							
KUNMING	41.78	258.6				14	1	-1				
LHASA	47.43	272.5	8	40	7							
KHEYS	48.12	346.6									10	0 PCP
SHILLONG	49.19	267.6	8	45	-2							
CHITTAGONG	51.20	264.3	9	3	1	16	23	6				
SVERDLOVSK	53.72	317.0	9	20	-1							
RESOLUTE	54.38	17.0	9	24K	-2							
VICTORIA	57.64	51.9	9	47	-2							
WARSAK DAM	58.77	288.7	9	55	-2							
BANFF	60.48	46.0	10	7	-2							
SODANKYLA	60.64	337.9	10	8	-2							
KIRUNA	61.90	340.3	10	16	-2							
SHASTA	62.58	58.9	10	24K	1							
HUNGRY HORSE	62.92	48.0	10	26	1							
MINERAL	63.27	58.8	10	28K	1							
CHARTERS TS.	63.76	182.6	10	31	0				10	48		
QUETTA	64.17	287.8	10	32	-1	19	7	1				
BERKELEY	64.33	61.4	10	35K	1							
RENO	64.86	58.6	10	39K	1							
PULKOVO	64.93	330.6									19	31
LICK	65.04	61.5	10	40K	1							
BUTTE	65.12	49.4	10	41	2							
HELSINKI	66.46	333.0	10	46	-2							
FRESNO	66.56	61.0	10	49K	0							
KARACHI	66.79	284.0	10	53	3							
EUREKA	67.24	56.7	10	54	1							
SKALSTUGAN	67.33	340.5	10	51	-2							
SALT LAKE C.	68.85	53.5	11	4	1							
UPPSALA	68.99	336.0	11	1	-3							
PASADENA	69.23	62.3	11	6	1				11	20		
BOULDER CITY	70.16	59.0	11	12	1							
TIFLIS	70.78	309.7	11	15	0						20	44 PS
RAPID CITY	71.41	46.3	11	19	1							

SIDA	72.03	353.9	11	23	1					
GOTEBORG	72.41	337.3	11	22	-2					
COPENHAGEN	74.01	336.0	11	33	-1					
SIMFEROPOL	74.08	317.8	11	34	0					
LWOW	74.83	326.5	11	37	-2					
TUCSON	75.11	59.6	11	42	2			11	52	
TUCSON TELE.	75.12	59.4	11	42	2			11	56	
RACIBORZ	76.84	329.8	11	50	0					
COLLMBERG	77.60	333.3	11	51	-3					
HALLE	77.76	334.0	11	54	-1					
PRUHONICE	78.21	331.8	11	58	0					12 58
JENA	78.37	333.9	11	57	-1					
PLAUEN	78.56	333.4	11	58	-2					
BRATISLAVA	78.83	329.3	12	0	-1					
UCCLE	80.61	338.0	11	33	-38					
STUTTGART	81.01	334.2	12	12	-1					
KEW	81.18	341.0	12	13	-1					
TUBINGEN	81.26	334.2	12	13	-1					
KSARA	81.34	309.1	12	18	4					
EBINGEN	81.60	334.1	12	15	-1					
STRASBOURG	81.62	335.0	12	13	-3					
FAYETTEVILLE	81.95	46.7	12	18	0					
CINE	82.60	316.4	12	23K	2					12 27 PCP
OTTAWA	82.61	29.8	12	21A	0					
SHAWINIGAN	82.63	27.5	12	21	0					
SEVEN FALLS	82.76	26.0	12	23	1					
PARIS	82.92	338.3	12	24	1					
JERUSALEM	83.23	308.1	12	15A	-9					
BREBEUF	83.26	28.5	12	24A	0					
ATHENS	84.42	319.4	12	39	9					
MORGANTOWN	85.87	35.6	12	39K	2					
HUANCAYO	130.60	63.6	19	11	4					
SOUTH POLE	133.83	180.0	19	14	0					

NOVEMBER 9 14.H 33.M 26.S EPICENTRE 44.16 147.86 DEPTH= 49.KM

DEPTH OF FOCUS= 0.003R

A=-0.60942 B= 0.38289 C= 0.69426 D= 0.5320 E= 0.8467
G=-0.5879 H= 0.3693 K=-0.7197 HT= -3.2

SE= 2.87

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	1.85	244.1	0	21	-9	0	48	-4				
ABASHIRI	2.58	268.1	0	43	3	1	21	10				
KUSIRO	2.78	246.0	0	42	-1	1	15	-1				
OBIHIRO	3.61	251.5	1	14	19	2	1	24				
HIROO	3.81	242.0	0	56	-2	1	41	-1				
ASAHIGAWA	3.98	266.4	1	0	0							
URAKAWA	4.22	243.3	1	5	2							
SAPPORO	4.85	259.3	1	13	1	2	11	3				
TOMAKOMAI	4.86	252.5	1	33	21	2	11	3				
MURORAN	5.35	252.4	1	18	-1							
MORI	5.72	251.4	1	27	3	2	31	2				
HAKODATE	5.75	248.0	1	22	-3	2	28	-2				
HATINOHE	5.93	234.4	1	26	-1	2	24	-11				
AOMORI	6.21	239.9	1	33	2	2	35	-7				
MORIOKA	6.69	230.5	1	35	-3	2	44	-10				
ISINOMAKI	7.55	222.9				3	2	-13				
SENDAI	7.88	224.1				3	9	-14				
HUKUSIMA	8.50	223.6	2	8	5	3	28	-10				
ONAHAMA	8.94	218.7				3	30	-19				
MITO	9.60	218.5				3	50	-16				
UTUNOMIYA	9.74	221.4									2	59
KAKIOKA	9.86	219.1	2	22	0	3	52	-20				
MAEBASI	10.25	223.9				4	12	-9				
KUMAGAYA	10.30	221.9				4	11	-12			3	49
TOKYO C.M.O.	10.51	219.0				4	12	-16				
MATUSIRO	10.57	227.3	2	26K	-5	4	28	-1				
MANILA	37.32	226.2	6	13	-56							
COLLEGE	40.45	36.4	7	34	-1				7	45		
SHILLONG	48.58	266.8	9	38A	58							
CHITTAGONG	50.60	263.6	9	50A	54							
RESOLUTE	54.43	16.9	9	22K	-2							
THULE	57.50	9.5	9	42	-4							

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

SODANKYLA	60.28	337.6	10 4	-1			
KIRUNA	61.56	340.0	10 11	-3			
SHASTA	63.04	58.5	10 23	-1			
HUNGRY HORSE	63.29	47.7	10 23	-3	10 34		
QUETTA	63.53	287.2	10 26A	-1			
MINERAL	63.73	58.5	10 26	-3			
CHARTERS TS.	63.87	181.7	10 26	-3	10 40		
LICK	65.53	61.1	10 43	3			
HELSINKI	66.05	332.7	10 43	-1			
KARACHI	66.15	283.4	10 50A	6			
FRESNO	67.03	60.6	10 59	9			
EUREKA	67.68	56.3	10 52	-2			
UPPSALA	68.61	335.5	10 58	-2			
SIDA	71.83	353.5	11 20	1			
RAPID CITY	71.77	45.9	11 29	10			
LWOW	74.37	326.0	11 33	-1			
TUCSON	75.58	59.1	11 41	0	11 52		
TUCSON TELE.	75.58	59.0	11 41	0	11 52		
KRAKOW	75.79	328.4	11 42	0		12 4 PCP	
RACIBORZ	76.41	329.3	11 46	0			
COLLMBERG	77.19	332.8	11 50	0			
PRUHONICE	77.79	331.3	11 54	1		12 50	
JENA	77.97	333.4	11 54	0			
PLAUEN	78.16	332.9	11 55	0			
RATHFARNHAM	80.41	344.6	12 7	-1			
STUTTGART	80.61	333.7	12 8K	-1			
DOURBES	80.81	337.0	12 7	-3			
KEW	80.84	340.5	12 10	0			
TUBINGEN	80.87	333.7	12 10	0			
EBINGEN	81.20	333.6	12 12	0			
PARIS	82.56	337.7	12 20K	1			
SHAWINIGAN	82.79	26.9	12 30	10			
OTTAWA	82.80	29.3	12 29	9			
CAPE HALLETT	117.23	172.5	17 46	-54			
BYRD STATION	133.58	166.1	19 11	0			
SOUTH POLE	133.97	180.0	19 9	-3			

NOVEMBER 9 17.H 52.M 56.S EPICENTRE 43.81 148.40 DEPTH= 17.KM

A=-0.61658 B= 0.37931 C= 0.68990 D= 0.5240 E= 0.8517
G=-0.5876 H= 0.3615 K=-0.7239 HT= -3.1

SE= 2.75

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
NEMURO	2.11	257.7	0 34A	-1	0 58	-2		
ABASHIRI	2.98	275.4	0 50	3	1 22	-1		
KUSIRO	3.03	255.4	0 48	0	1 24	0		
HIROO	4.03	249.4	1 4	2	1 54	5		
ASAHIGAWA	4.37	271.6	1 9	2	1 54	-4		
URAKAWA	4.45	250.0	1 10	2	2 0	0		
Y.-SAKHLINSK	5.08	310.1	1 19	2	2 18	2		
TOMAKOMAI	5.15	257.8	1 30	12	2 26	8		
SAPPORO	5.19	264.2	1 19A	1	2 20	2		
MURORAN	5.64	257.3	1 26	1	2 30	0		
MORI	6.00	256.1	1 32	2				2 55
HAKODATE	6.01	252.8	1 31K	1	2 21	-18		2 56
SUTTSU	6.05	263.2	1 32	1	2 49	9		
HATINOHE	6.07	239.6	1 32	1	2 35	-6		
MIYAKO	6.36	231.3	1 33	-2	2 39	-9		
AOMORI	6.39	244.7	1 34	-1	2 45	-4		
MORIOKA	6.79	235.2	1 40A	-1	2 52	-7		
UGLEGORSK	6.84	322.5	1 44	2	3 0	0		
MIZUSAWA	7.19	231.9	1 46	-1	3 0	-9		
AKITA	7.43	239.4	2 0	10				
ISINOMAKI	7.58	227.2	1 50	-2	3 8	-10		
SENDAI	7.92	228.2	1 53	-4	3 16	-11		
SAKATA	8.10	235.6	2 18	19				
YAMAGATA	8.24	230.3	2 0	-1	3 26	-9		
HUKUSIMA	8.54	227.5	2 1	-4	3 39	-3		
ONAHAMA	8.93	222.4	2 10	-1	3 42	-10		2 59
SHIRAKAWA	9.14	225.7	2 11	-3	3 50	-7		
NIIGATA	9.21	233.4	2 38	23	4 17	18		
MITO	9.59	221.9	2 19	-1	3 56	-12		
AIKAWA	9.62	236.4	2 19	-1	4 3	-6		

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

UTUNOMIYA	9.76	224.8	2	19	-3					2	58
KAKIOKA	9.85	222.5	2	20	-4	4	3	-12			
TUKUBASAN	9.90	222.8	2	20K	-4	4	3	-13			
TAKADA	10.23	232.5	2	19	-10						
MAEBASI	10.29	227.1	2	22	-8	4	16	-9		4	53
KUMAGAYA	10.31	225.1	2	30	0	4	19	-7			
TOKYO C.M.O.	10.50	222.2	2	30	-2	4	20	-10			
NAGANO	10.56	231.0	2	33	0					5	16
TITIBU	10.60	225.6	2	38	4						
OIWAKE	10.62	228.6	2	45	11						
MATUSIRO	10.64	230.4	2	31K	-3	4	41	7			
YOKOHAMA	10.75	221.8	2	47	11	4	31	-6			
WAZIMA	10.85	237.6	2	36	-1						
MATUMOTO	10.99	230.1	2	48	9						
TOYAMA	11.12	234.1	2	51	10						
HUNATU	11.13	225.0	2	45	4	4	44	-2			
KOHU	11.13	226.1	2	40	-1	4	44	-2			
MISIMA	11.34	223.2	2	48	4	4	50	-1			
VLADIVOSTOK	12.01	272.4	2	53	0						
HUKUI	12.11	234.3	2	54	0						
GIHU	12.28	230.7	2	55	-2					5	29
NAGOYA	12.34	229.5	2	58	1						
HIKONE	12.67	231.8	3	1	-1						
KAMEYAMA	12.85	229.9	3	30	26						
TOYOOKA	13.32	236.2	3	8	-2	5	46	7		8	17
ABUYAMA	13.34	232.3	3	8A	-3						
OSAKA	13.52	231.8	3	9	-4						
TOKUSIMA	14.48	232.4	3	20	-6						
MUROTO	15.31	231.2	3	45	9						
HAMADA	15.43	240.3	3	37	-1	6	28	-1			
KOTI	15.47	233.5	3	45	7					9	21
MAGADAN	15.83	4.5	3	32	-11						
CHANGCHUN	16.66	278.1	3	52A	-2						
OOITA	16.82	236.7	3	59	3	7	20	19			
HUKUOKA	17.33	239.9	4	0	-2	7	23	10			
KUMAMOTO	17.67	237.5	4	9	3						
MIYAZAKI	17.87	234.0	4	12	3	7	41	16			
NAGASAKI	18.23	238.8	4	15	2					5	2
KAGOSIMA	18.63	235.0	4	22	4					6	56
YAKUTSK	21.29	335.4	4	42	-5	8	29	-8			
PEKING	24.19	272.2	5	15A	-1	9	30	0			
ZO-SE	24.93	248.5	5	25	2	9	46	4			
NANKING	26.00	253.1	5	34A	1						
PAOTOW	28.44	276.9	5	55	0	10	40	0			
ULAN-BATOR	28.93	292.9	6	3	3						
SIAN	31.86	266.1	6	26	0						
LANCHOW	34.70	272.7	6	52	2	12	16	-2			
HONG KONG	35.46	243.9				12	40	10			
CANTON	35.49	245.9	6	58	1						
BAGUIO CITY	36.07	229.5	7	3	1						
CHENGTU	37.27	264.6	7	15A	3	12	58	1			
MANILA	37.37	227.3	7	13	0					8	53
KOROR	38.33	202.6	7	14	-7						
COLLEGE	40.50	36.1	7	40	1						
KUNMING	41.50	258.5	7	45	-2	13	58	-3			
LHASA	47.21	272.5	8	36	3	15	25	2			
SHILLONG	48.95	267.5	8	46	-1						
SVERDLOVSK	53.72	317.0	9	15	-8						
RESOLUTE	54.65	16.9	9	28A	-1						
NAMANGAN	54.80	295.6	9	30	0	17	4	-4			
THULE	57.78	9.6	9	49	-3						
WARSAK DAM	58.61	288.6	9	56	-2						
APATITY	58.69	336.0	9	57	-1						
SODANKYLA	60.75	337.8	10	10	-2					10	55 PCP
KIRUNA	62.02	340.2	10	16	-5						
SHASTA	62.89	58.7	10	28K	1						
HUNGRY HORSE	63.23	47.8	10	29	0						
CHARTERS TS.	63.54	182.2	10	32	1				10	47	
MINERAL	63.58	58.6	10	31K	0						
QUETTA	64.01	287.7	10	33	-1	19	5	-2		20	23 SCS
BERKELEY	64.64	61.1	10	38K	0						
MOSCOW	64.93	324.3	10	37	-3						
PULKOVO	65.00	330.5	10	40	0						
RENO	65.17	58.4	10	42K	0						
LICK	65.35	61.3	10	43K	0						
BUTTE	65.44	49.2	10	44	1						
BOZEMAN	66.49	48.7	10	51	1						
HELSINKI	66.54	332.9	10	50	0						
KARACHI	66.61	283.9	10	54	3	19	46	7			

FRESNO	66.86	60.8	10	53	1							
SKALSTUGAN	67.44	340.4	10	57	1						11	31
EUREKA	67.55	56.4	10	58	1							
UPPSALA	69.09	335.8	11	5	-1							
SALT LAKE C.	69.17	53.2	11	7	0							
PASADENA	69.54	62.1	11	9	0							
BOULDER CITY	70.47	58.7	11	16	1							
TIFLIS	70.73	309.6	11	18	2	20	29	1				
RAPID CITY	71.72	46.1	11	22	0							
SIDA	72.21	353.7	11	26	1							
SOTCHI	72.22	313.7	11	25	0							
GOTEBORG	72.52	337.2	11	28	1							
SIMFEROPOL	74.08	317.7	11	36	0	21	6	0				
LWOW	74.87	326.4	11	40	-1							
TUCSON	75.42	59.3	11	46	2				11	59		
TUCSON TELE.	75.43	59.2	11	45	1							
KRAKOW	76.29	328.7	11	49	0						12	24
SKALNATE PL.	76.87	328.0	11	52	0							
RACIBORZ	76.90	329.7	11	53	1							
COLLMBERG	77.68	333.2	11	56	-1							
HALLE	77.85	333.9	11	53	-4							
WITTEVEEN	78.27	337.4	12	2	2							
PRUHONICE	78.28	331.6	12	0	0							
JENA	78.46	333.8	12	0	-1				12	12		
PLAUEN	78.64	333.2	11	59	-3				12	12		
BENSBERG	79.78	336.3	12	8	0							
RATHFARNHAM	80.85	344.9	12	14	0							
STUTTGART	81.10	334.1	12	15	0							
DOURBES	81.28	337.4	12	19	3							
KEW	81.30	340.8	12	18	2							
TUBINGEN	81.35	334.0	12	16	0							
EBINGEN	81.69	333.9	12	18	0							
STRASBOURG	81.71	334.8	12	15	-3							
CINE	82.59	316.3	12	25	2							
OTTAWA	82.91	29.6	12	24K	0							
SHAWINIGAN	82.93	27.2	12	25K	1							
PARIS	83.03	338.1	12	26	1							
SEVEN FALLS	83.05	25.8	12	25	0							
JERUSALEM	83.17	308.0	12	28	2						12	39 PCP
BREBEUF	83.56	28.3	12	29K	1							
BYRD STATION	133.15	166.2	18	59	-15							
SOUTH POLE	133.62	180.0	19	12	-3						21	51 PP

NOVEMBER 9 21.H 4.M 54.S EPICENTRE 43.87 148.02 DEPTH= 52.KM

DEPTH OF FOCUS= 0.003R

A=-0.61344 B= 0.38306 C= 0.69062 D= 0.5297 E= 0.8482
G=-0.5858 H= 0.3658 K=-0.7232 HT= -3.1

SE= 3.13

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	1.85	253.8	0	28	-2	0	50	-3				
ABASHIRI	2.70	274.4	0	43	1	1	15	1				
KUSIRO	2.78	252.5	0	43	0	1	16	0				
OBIHIRO	3.64	256.5	0	55	0	1	38	1			1	8
HIROO	3.79	246.8	0	59	2							
ASAHIGAWA	4.09	270.7	1	2	1							
URAKAWA	4.21	247.7	1	4	1	1	53	1				
Y.-SAKHLINSK	4.84	311.4	1	14	2	2	19	12				
TOMAKOMAI	4.90	256.2	1	23	10	2	13	4				
SAPPORO	4.92	262.9	1	13	0	2	13	4			2	31
MURORAN	5.38	255.8	1	20	0	2	26	5				
MORI	5.74	254.6	1	26	2	2	34	4				
HAKODATE	5.76	251.2	1	24	-1						2	50
SUTTSU	5.78	262.0	1	42	17							
HATINOHE	5.86	237.5	1	25	-1	2	29	-4				
AOMORI	6.17	242.8	1	28	-2	2	38	-3				
MIYAKO	6.18	229.0	1	30	-1	2	32	-9				
MORIOKA	6.60	233.2	1	35	-1	2	44	-7				
UGLEGORSK	6.63	323.8	1	37	0	3	1	9				
AKITA	7.22	237.7	2	22	37							
ISINOMAKI	7.42	225.2	1	43	-5	3	2	-10				
SENDAI	7.76	226.3	1	48	-5	3	9	-11				

HUKUSIMA	8.37	225.6	1	55	-6	3	29	-6		
ONAHAMA	8.79	220.5	2	27	20				3	34
SHIRAKAWA	8.98	224.0	2	8	-1	3	40	-10		
NIIGATA	9.02	231.8				4	8	17		
UTUNOMIYA	9.60	223.2	2	26	8	3	56	-10		
KAKIOKA	9.71	220.8	2	14	-5	3	58	-10		
TUKUBASAN	9.76	221.1	2	14	-6	3	54	-15		
MAEBASI	10.12	225.5	2	20	-5	4	10	-8		
KUMAGAYA	10.16	223.5	2	30	4	4	12	-7		
TOKYO C.M.O.	10.36	220.6				4	12	-12		
NAGANO	10.39	229.5	2	38	9					
OIWAKE	10.45	227.1	2	48	18	4	31	5		
MATUSIRO	10.46	229.0	2	25A	-5	4	21	-5		
YOKOHAMA	10.61	220.2				4	18	-12		
MERA	10.95	218.0	2	31	-5					
KOHU	10.98	224.6	2	45	8	4	31	-8		
VLADIVOSTOK	11.73	271.9	2	46	-1	5	5	8		
NAGOYA	12.17	228.1							5	41
MAGADAN	15.79	5.2	3	40	0					
YAKUTSK	21.12	335.7	4	34	-8					
PEKING	23.91	271.8	5	9	-1					
ZO-SE	24.70	247.9	5	18A	1					
NANKING	25.75	252.6	5	27	0					
PAOTOW	28.16	276.6	5	45	-4	10	41	12		
ULAN-BATOR	28.65	292.7	5	46	-8					
SIAN	31.59	265.8	6	20	0					
LANCHOW	34.42	272.3	6	44	0					
CHENGTU	37.00	264.2	7	9A	3	12	54	7		
COLLEGE	40.62	36.2	7	35	-1					
KUNMING	41.24	258.1	7	42A	1	13	55	4		
LHASA	46.93	272.2	8	29	2					
SHILLONG	48.68	267.2	8	40A	-1					
CHITTAGONG	50.68	263.9	8	59	3	16	22	16		
NAMANGAN	54.52	295.4	9	24	-1					
RESOLUTE	54.67	16.9	9	24A	-2					
WARSAK DAM	58.33	288.4	9	50	-2					
SODANKYLA	60.59	337.7	10	23	16					
SHASTA	63.10	58.5	10	23	-1					
HUNGRY HORSE	63.40	47.6	10	23	-3					
QUETTA	63.72	287.4	10	27	-1	19	3	6		
MINERAL	63.79	58.4	10	32	3					
MOSCOW	64.72	324.1	10	36	1					
LICK	65.57	61.1	10	46	6					
KARACHI	66.33	283.6	10	48A	3					
FRESNO	67.08	60.6	10	57	7					
EUREKA	67.75	56.3	10	53	-1					
UPPSALA	68.92	335.7	11	0	-1					
PASADENA	69.76	61.9	11	5	-1					
TIFLIS	70.48	309.4	11	12	1					
BOULDER CITY	70.68	58.5	11	11	-1					
RAPID CITY	71.88	45.9	11	18	-1					
SOTCHI	71.98	313.5	11	20	0					
SIDA	72.13	353.6	11	22	2					
TUCSON	75.63	59.1	11	41	0					
TUCSON TELE.	75.64	59.0	11	41	0					
KRAKOW	76.09	328.5	11	43	0				12	5 PCP
COLLMBERG	77.50	333.0	11	52	1					
HALLE	77.67	333.6	11	52	0					
PRUHONICE	78.10	331.4	11	54	-1					
JENA	78.28	333.6	11	55	-1	12	10			
PLAUEN	78.47	333.0	11	54	-3	12	6			
BENSBERG	79.61	336.0	12	2	-1					
RATHFARNHAM	80.72	344.7							13	10
STUTTGART	80.92	333.8	12	9K	-1					
KEW	81.15	340.6	12	11	0					
TUBINGEN	81.18	333.8	12	10	-1					
EBINGEN	81.51	333.7	12	13	0					
STRASBOURG	81.54	334.6	12	24	11					
CINE	82.36	316.0	12	19	2					
PARIS	82.87	337.8	12	22	2					
JERUSALEM	82.92	307.7	12	21	1				12	36 PCP
BREBEUF	83.64	28.0	12	21	-3					
BYRD STATION	133.27	166.2	19	10	0					
SOUTH POLE	133.68	180.0	19	11	0					

NOVEMBER 10 11.H 13.M 6.S EPICENTRE -9.17-109.85 DEPTH= 0.KM

A=-0.33533 B=-0.92869 C=-0.15837 D=-0.9406 E= 0.3396
G= 0.0538 H= 0.1490 K=-0.9874 HT= 6.6

SE= 3.14

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
OAXACA	29.06	26.5				1	9	14					
TACUBAYA	30.27	20.3	6	12K	-3	11	12	-3			6	58	
VERA CRUZ	31.27	25.6				11	38	8					
HUANCAYO	34.04	97.9	6	47K	-1						7	58	PP
MERIDA	35.94	33.4				11	39	-64			12	39	
CHINCHINA	36.90	69.0	7	17	5	12	57	-1			8	21	PP
CHIHUAHUA	37.76	5.4									14	54	
BOGOTA	38.21	70.4	7	29	6	13	21	4			15	26	SS
GALERAZAMBA	39.71	60.8				13	47	7					
TUCSON	41.20	358.7	7	49	1								
LA PAZ	41.26	104.5	7	48A	0	14	5	2			9	26	PP
TUCSON TELE.	41.29	358.9	7	50	1								
SANTA LUCIA	43.37	129.7	8	7	1	14	37	3					
PASADENA	43.80	350.0	8	9	0	14	44	3					
BOULDER CITY	45.15	354.3	8	21	1								
FRESNO	46.64	349.0	8	34	2								
LICK	47.57	347.3	8	41	2								
EUREKA	48.73	353.7	8	48	0								
RENO	49.34	349.8	9	5	12								
MINERAL	50.46	348.4	9	8	7								
SHASTA	50.95	347.7	9	4	-1								
SAN JUAN	51.11	57.5	9	10	4								
RAPID CITY	53.34	6.0	9	23	0								
BUTTE	54.99	357.7	9	34	-1								
BERMUDA	59.70	44.0				18	27	8					
OTTAWA	62.39	26.5	10	24	-3								
BREBEUF	63.41	27.7	10	31	-3								
SHAWINIGAN	64.59	27.4	10	34	-7								
BYRD STATION	70.99	181.8	11	22	1								
KARAPIRO	72.30	233.2	11	29	0								
CAPE HALLETT	78.23	197.9	12	4	1	22	9	11			27	10	SS
COLLEGE	79.09	344.5	12	6	-2								
SOUTH POLE	80.89	180.0	12	17	0								
RESOLUTE	84.21	4.0	12	32	-3	22	58	-1			28	24	SS
RIVERVIEW	92.34	235.4	13	14K	1								
MBOUR	95.00	76.3	13	18	-8								
TAMANRASSET	116.84	69.2	18	41	-6						19	53	PP
KSARA	140.09	46.9	19	33	2						22	27	PP
TANANARIVE	144.28	141.5	19	39K	1								
MEDAN	151.12	260.8	20	0A	11								
WARSAK DAM	155.26	357.2	19	55	0								
QUETTA	158.89	7.7	20	1	1								

NOVEMBER 12 6.H 9.M 9.S EPICENTRE 9.27 -69.73 DEPTH= 0.KM

A= 0.34198 B=-0.92599 C= 0.15997 D=-0.9381 E=-0.3464
G= 0.0554 H=-0.1501 K=-0.9871 HT= 6.6

SE= 1.76

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
FUQUENE	5.47	226.7	1	27	2	2	51	21				
GALERAZAMBA	5.66	285.9	1	30	2	2	35	1				
BOGOTA	6.31	223.3	1	38	1	2	53	2			2	9
CHINCHINA	7.24	234.3	1	49	-2	3	9	-5				
TRINIDAD	8.21	79.5	2	4	0	3	40	2				
GRENADA	8.34	69.9	2	6	1							
ST. VINCENT	9.16	64.2	2	15A	-2							
BALBOA HTS.	9.71	269.0	2	18	-6	4	5	-10				
SAN JUAN	9.71	20.8	2	22	-2	4	5	-10				
FORT FRANCE	9.99	56.3	2	28	0	4	13	-9				
ST. CLAUDE	10.32	48.6	2	32	-1	4	25	-5				
BARBADOS	10.65	68.0	2	38	1							
HUANCAYO	21.90	194.8	4	57	0	9	14	19				
BERMUDA	23.47	10.8				9	51	28				
LA PAZ	25.65	176.5	5	35	2	10	16	16				
COLUMBIA	26.72	338.8	5	44	1							

CHAPEL HILL	27.86	343.7	5 57	3		6 42
HARVARD	33.15	357.5	6 41	0		
OTTAWA	36.37	352.9	7 7	-1		
SHAWINIGAN	37.24	356.5	7 16K	1		
TUCSON TELE.	44.28	307.3	8 15	2		
TUCSON	44.34	307.2	8 15	1		
LARAMIE	44.93	321.3	8 20	1		
RAPID CITY	45.22	325.9	8 19	-2		10 9 PCP
SALT LAKE C.	48.69	317.3	8 49	1		
BOZEMAN	50.66	323.2	9 4	1		
EUREKA	50.97	314.0	9 5	-1		
BUTTE	51.75	322.9	9 14	2		
RENO	53.75	312.7	9 26	-1		
HUNGRY HORSE	53.81	324.7	9 27	0		
LICK	54.41	309.5	9 33	2		
MINERAL	55.32	313.0	9 36	-2		
SHASTA	56.00	313.2	9 43	0		
CORVALLIS	57.94	317.3	9 59	2		
RESOLUTE	66.94	352.9	10 53	-4		
THULE	67.13	0.4	10 58	0		
TAMANRASSET	72.93	69.0	11 35K	2		14 13 PP
NORD	75.79	7.0	11 48	-2		
STUTTGART	75.80	42.0	11 49K	-1		
COLLEGE	76.61	334.6	11 55	1		
JENA	77.39	39.9	11 59	0		
PLAUEN	77.75	40.3	11 59	-2		
SKALSTUGAN	78.20	26.9	12 4	1		
PRUHONICE	79.30	40.8	12 11	2		12 33
BRATISLAVA	81.06	42.6	12 20	1		
KIRUNA	81.55	22.6	12 22	1		
BYRD STATION	92.66	187.7	13 13	-2		
SOUTH POLE	99.21	180.0	13 44	-1		
CAPE HALLETT	107.65	196.1				29 35 PKKP
SHILLONG	141.01	26.9	19 33	0		
CHARTERS TS.	143.66	248.8	19 34	-3		

NOVEMBER 12 10.H 39.M 48.S EPICENTRE -6.76 155.32 DEPTH= 72.KM
DEPTH OF FOCUS= 0.006R
A=-0.90239 B= 0.41476 C=-0.11685 D= 0.4176 E= 0.9086
G= 0.1062 H=-0.0488 K=-0.9931 HT= 6.9

SE= 2.04

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
RABAUL	4.03	308.9	1 3	2				
TRUK	14.55	346.2	3 21	-2	5 57	-6		
CHARTERS TS.	15.84	212.8	3 41	1	6 46	13		
NOUMEA	18.82	146.3	4 16K	0				
BRISBANE	20.73	185.7	4 35	-2	8 26	7		
KOROR	25.05	303.6	5 18	-1				
SUVA	25.21	118.8	5 17	-4	9 28	-10	5 35	6 13 PP
RIVERVIEW	27.22	187.6	5 39A	0	10 10	-1		
CANBERRA	29.01	190.7	5 54A	-1				
ADELAIDE	31.94	206.3	6 20A	-1				
MELBOURNE	32.33	195.4	6 23	-1				
AFIAMALU	33.12	105.0	6 30K	-1				
ONERAHI	33.76	151.5	6 42	5				
KARAPIRO	36.04	152.3	6 55	-1			7 15	9 22 PCP
COBB RIVER	37.54	158.2	7 12	3				
WELLINGTON	38.50	156.2	7 20	3				
GEBBIES PASS	39.82	160.3	7 26	-2				
BAGUIO CITY	41.37	304.2	7 41	0				
MATUSIRO	45.96	340.8	8 16	-2	14 55	-1		9 54 PCP
HONOLULU	53.54	57.4	9 15	-1				
KIPAPA	53.66	57.3	9 16	0				
MEDAN	57.46	278.6	9 48	4				
CAPE HALLETT	66.13	175.0	10 41K	-1	19 18	-5		10 54 PCP
WILKES	66.88	198.1						19 34 PPS
CHITTAGONG	68.53	297.1	10 55	-2				
SHILLONG	69.46	300.4	11 2	-1				
SCOTT BASE	71.31	177.5	11 14	0	21 3	39		
MIRNY	73.04	201.7	11 23	-1	20 47	3		
CHATRA	73.87	300.3	11 28	-1				
BYRD STATION	82.55	169.9	12 15	-1			12 28	

COLLEGE	82.75	21.1	12 16	-1				12 42				
SOUTH POLE	83.29	180.0	12 19	-1				12 32		30	34	PKKP
SHASTA	88.55	48.9	12 47	1								
LICK	88.55	52.3	12 52	6								
WARSAK DAM	88.59	304.3	12 45	-1								
MINERAL	89.08	49.4	12 49	1								
PASADENA	90.87	55.9	13 0	3	25	3	78					
QUETTA	91.94	300.0	13 3	1								
EUREKA	93.25	50.8	13 7	-1				13 37				
HUNGRY HORSE	95.43	42.1	13 17	-1								
RESOLUTE	101.66	14.8	13 46	0						18	7	PP
KIRUNA	111.97	343.1	18 28	1								
HELSINKI	115.00	335.1	18 34	1								
KSARA	118.10	304.7								20	4	
UPPSALA	118.14	337.3	18 39	0								
OTTAWA	121.53	40.0	18 46	1								
BREBEUF	122.81	39.1	18 49	1								
SHAWINIGAN	122.85	37.7	18 49	1								
SEVEN FALLS	123.73	36.3	18 51	1								
PRUHONICE	125.86	329.7	18 56	2				19 11				
HUANCAYO	126.29	110.2	18 59	4								
STUTTGART	129.28	331.5	19 2	2								
GRENADA	143.10	79.0	19 21	-5								
ST. VINCENT	143.44	77.1	19 23	-3								
TAMANRASSET	146.84	301.9	19 37	5				20 7		22	31	

NOVEMBER 12 20.H 23.M 29.S EPICENTRE 44.15 148.82 DEPTH= 0.KM

A=-0.61583 B= 0.37271 C= 0.69415 F= 0.5178 E= 0.8555
G=-0.5939 H= 0.3594 K=-0.7198 HT= 3.2

SE= 2.36

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	PP S	SUPP. M	SUPP. S
GORNY	1.18	311.1	0	21	-1							
REIDOVOE	1.25	333.6	0	21	-2							
LESOZAVODSK	1.32	298.3	0	23	-1							
NEMURO	2.49	251.8	0	41	1	1	7	-4				
ABASHIRI	3.27	269.3	0	54K	2	1	33	2				
KUSIRO	3.42	251.5	0	56A	2	1	34	-1				
OBIHIRO	4.27	255.2	1	9	3	1	55	-1				
HIROO	4.43	246.9	1	9A	1	2	2	2				
ASAHIGAWA	4.67	267.7	1	16K	5	2	23	17				
URAKAWA	4.85	247.7	1	16A	2	2	11	0				
Y.-SAKHLINSK	5.11	305.3	1	17	-1	2	20	3				
RUMOE	5.19	270.3	1	24	5	2	21	2				
WAKKANAI	5.24	286.5	1	23	4	2	30	10				
TOMAKOMAI	5.52	255.3	1	28	5	2	34	6				
SAPPORO	5.53	261.3	1	26K	2	2	27	-1				
MURORAN	6.01	255.1	1	33	3	2	41	1				
HAKODATE	6.40	251.0	1	36A	0	2	47	-3				
HATINOHE	6.50	238.7	1	35A	-2	2	44	-8				
UGLEGORSK	6.77	319.1	1	42	1							
AOMORI	6.81	243.5	1	41A	-1	2	53	-7				
MIZUSAWA	7.63	231.5	1	53	0	3	12	-8				
SEVERO-KUR.	8.18	34.6	2	0	-1							
SAKATA	8.54	235.2	2	6	0	3	33	-10				
YAMAGATA	8.69	230.1	2	7A	-1	3	41	-6				
HUKUSIMA	8.98	227.5	2	9A	-3	3	50	-4				
ONAHAMA	9.38	222.6	2	13	-4	3	54	-10			2	34
SHIRAKAWA	9.59	225.8	2	19	-1	4	2	-7				
NIIGATA	9.65	233.2	2	21A	0	4	10	-1				
MITO	10.04	222.2	2	24	-2	4	11	-9				
AIKAWA	10.05	236.1	2	27	0	4	16	-4			5	34
UTUNOMIYA	10.21	225.0	2	26	-3	4	8	-16			3	32
KAKIOKA	10.30	222.8	2	27	-3	4	15	-12				
TUKUBASAN	10.35	223.0	2	27A	-4	4	16	-12				
TYOSI	10.40	218.7	2	29	-2	4	21	-6				
TAKADA	10.68	232.3	2	33A	-2	4	31	-5				
MAEBASI	10.74	227.2	2	35	-1	4	30	-7				
KUMAGAYA	10.77	225.3	2	36	0	4	32	-6				
HONGO	10.92	222.5	2	35	-3	4	34	-8				
TOKYO C.M.O.	10.95	222.5	2	35	-4	4	35	-7			2	57
NAGANO	11.01	230.9	2	40	0	4	39	-5			4	3

TITIBU	11.05	225.7	2	39	-1	4	36	-9			
OIWAKE	11.07	228.6	2	41	0				5	36	
PETROPAVLOVK	11.08	32.4	2	38	-3	4	54	8			
MATUSIRO	11.09	230.4	2	38A	-3	4	42	-4			
YOKOHAMA	11.20	222.1	2	40	-2	4	41	-7			
WAZIMA	11.28	237.2	2	43A	0	4	50	0			
MATUMOTO	11.44	230.1	2	45	-1	4	52	-2			
MERA	11.53	220.0	2	41	-6				3	7	
TOYAMA	11.56	233.9	2	45	-2				3	53	
HUNATU	11.58	225.2	2	45	-3	4	48	-10			
KOHU	11.58	226.2	2	45A	-3	4	55	-3			
AJIRO	11.77	222.7	2	50	0	4	53	-9	5	27	
MISIMA	11.79	223.4	2	51	1	4	54	-9			
OSIMA	11.86	221.0	2	38	-13	4	50	-15	5	29	
TAKAYAMA	11.92	231.8	2	53	1						
KANAZAWA	12.00	234.8	2	58	5						
IIDA	12.06	228.1	2	54	0	5	16	7			
SHIZUOKA	12.18	224.7	2	53	-3	5	11	-1			
HUKUI	12.55	234.1	3	0	-1						
OMAESAKI	12.57	224.2	2	57	-4	5	31	9	3	51	
GIHU	12.73	230.7	3	3A	0	5	30	4	4	4	
HAMAMATU	12.73	226.0	3	25	22	5	36	10			
NAGOYA	12.79	229.5	3	2A	-2				5	2	
TSURUGA	12.94	233.3	3	4	-2	5	26	-5	6	53	
IBUKISAN	12.96	231.7	3	7	1	5	39	8			
HATIDYOZIMA	13.07	215.4	3	8	0	5	53	19	5	24	
HIKONE	13.11	231.7	3	7A	-1	5	34	-1			
KAMEYAMA	13.30	229.9	3	10	0	5	49	10	5	7	
TU	13.36	229.4	3	13	2						
MAIZURU	13.42	234.3	3	13A	1	5	37	-5			
TOYOOKA	13.76	236.0	3	15A	-2	5	44	-6	4	44	
NARA	13.78	231.0	3	18	1						
ARIYAMA	13.79	232.2	3	14A	-3	5	44	-7			
OSAKA	13.97	231.7	3	17A	-2	6	3	8	3	41	
OWASE	14.03	228.4	3	17	-3	6	9	12			
KOBE	14.15	232.7	3	21	-1	6	1	2	3	44	
SAIGO	14.24	241.4	3	24	1	6	9	7	3	52	
WAKAYAMA	14.48	231.4	3	25	-1						
SUMOTO	14.56	232.5	3	24A	-3	5	59	-10	3	44	
YONAGO	14.72	239.0	3	29	0	6	11	-2			
HIMEJI	14.72	234.0	3	26	-3				5	10	
SIOMISAKI	14.73	227.9	3	25	-4	6	29	16	3	53	
OKAYAMA	14.88	235.6	3	34	3	6	21	4			
MATSUE	14.88	239.6	3	32	1	6	25	8			
TOKUSIMA	14.93	232.4	3	30A	-2	6	9	-9	6	34	
TAKAMATU	15.06	234.3	3	31	-3	6	38	17			
TORISIMA	15.22	209.1	3	37	1	6	21	-4			
SUIHWA	15.53	286.8	3	48	8						
MUROTO	15.76	231.2	3	44	1	6	51	14			
HAMADA	15.86	240.1	3	46K	2	6	35	-5			
KOTI	15.91	233.5	3	42	-3	6	50	9	4	39	
HIROSIMA	15.99	237.9	3	43	-3	6	50	7	4	35	
MATUYAMA	16.17	235.8	3	48	0	6	51	4			
SIMIDU	16.79	232.8	3	54	-2	7	13	12	5	41	
CHANGCHUN	16.91	277.1	3	56	-1						
SIMONOSEKI	17.19	239.7	3	59	-2	7	24	13			
OOITA	17.26	236.6	4	0A	-2	7	20	8			
HUKUOKA	17.76	239.8	4	8A	0	7	29	6	6	0	
ASOSAN	17.82	236.9	4	14	5	7	38	13			
SAGA	18.05	239.2	4	15A	3	7	36	6			
ITUHARA	18.08	243.3	4	11	-1	7	26	-5			
KUMAMOTO	18.10	237.4	4	12	0	7	43	12			
MIYAZAKI	18.31	234.0	4	15A	0	7	47	11			
UNZENDAKE	18.44	238.1	4	17	1	7	35	-4			
NAGASAKI	18.66	238.7	4	19	0	7	55	11			
KAGOSIMA	19.07	235.0	4	26A	2	8	5	12			
TOMIE	19.43	240.4	4	29A	1	8	5	4			
YAKUSIMA	19.92	232.8	4	34A	0	8	16	4			
DAIREN	20.97	264.9	4	46	1						
PEKING	24.48	271.7	5	19A	0	9	32	-4			
ZO-SE	25.34	248.4	5	28A	1	9	54	3			
NANKING	26.38	253.0	5	37A	0	10	6	-2			
TATUNG	26.54	273.7	5	41	2						
PAOTOW	28.70	276.5	5	58A	0	10	40	-5			
ULAN-BATOR	29.08	292.4	6	1	-1						
TIKSI	29.21	347.2	5	58	-5				6	51	PP
TAIPEI	29.27	238.3	6	4	1	11	17	23			
ILAN	29.32	237.7	6	31	27	11	30	35			
HSINCHU	29.77	238.8	6	35	27	11	48	46			

HWALIEN	29.99	236.8	6	18	8	11	20	14			
IRKUTSK	30.33	301.5	6	14A	1				7	14	PP
TAICHUNG	30.43	238.3	6	38	24						
GUAM	30.77	187.8	6	12K	-5						
HSINKONG	30.80	236.0	6	18	1	11	18	-1			
TAITUNG	31.19	235.9	6	20	0	11	22	-3			
TAINAN	31.56	237.4	7	1	37						
TAWU	31.65	235.7	6	50	26	11	54	22			
HENGCHUN	32.00	235.5	6	39	11	12	15	38			
YINCHUAN	32.19	274.8	6	33	4	11	44	4			
SIAN	32.19	265.9	6	29A	0						
TIENSHUI	34.30	268.8	6	49	2	12	12	-1			
LANCHOW	34.98	272.4	6	53A	0	12	19	-5			
WUWEI	35.01	276.1	6	55	1						
HONG KONG	35.87	244.0	7	2A	1	12	30	-8			
CANTON	35.90	245.9	7	1A	0	12	37	-1	8	32	PP
SINING	36.20	274.6	7	6	2						
BAGUIO CITY	36.52	229.7	7	8	2	12	48	1			
MANILA	37.82	227.5	7	18	1	12	48	-19			
YUMEN	38.03	282.7	7	21	2						
KOROR	38.76	203.1	7	25A	0	13	9	-13	9	34	PCP
COLLEGE	40.05	36.4	7	35A	-1	13	45	4	9	7	PP
KUNMING	41.87	258.5	7	50A	-1	14	2	-6			
PHU-LIEN	41.92	250.1	7	51	0						
SEMIPALATNSK	45.44	303.3	8	17	-3						
TOCKLAI	46.48	266.7	8	34A	6						
LHASA	47.49	272.5	8	35A	-1	15	28	-1			
KHEYS	48.01	346.6	8	29	-11				10	23	PP
RABAUL	48.23	175.5	8	42	0	16	4	25	11	1	PP
KIPAPA	49.15	99.6	8	52K	3						
HONOLULU	49.17	99.8	8	53A	4	15	55	2			
SHILLONG	49.27	267.5	8	50A	0	15	53	-1			
CHITTAGONG	51.28	264.3	9	5	0	16	19	-3	11	2	PP
CHATRA	51.90	272.1	9	8	-2	17	27	57			
FRUNSE	52.09	296.3	9	10	-1	16	30	-3			
HAWAII V.OB.	52.39	99.4	9	16	3	16	44	7			
SVERDLOVSK	53.67	317.0	9	21	-2	16	48	-7	11	20	PP
RESOLUTE	54.24	17.1	9	24A	-3	16	55	-7			
BOKARO	54.69	270.1	9	16	-14						
TASHKENT	56.29	297.1	9	40	-2	17	26	-4	14	35	SCP
DEHRA DUN	56.38	281.3	9	42	-1	17	28	-3	11	33	PP
HORSESHOE B.	57.14	51.0	9	47	-1	17	40	-1			
THULE	57.39	9.7	9	45K	-5				11	56	PP
VICTORIA	57.51	52.0	9	49A	-2	17	40	-6			
PORT BLAIR	57.80	253.9	9	51	-2	17	51	1	11	53	PP
STALINABAD	58.11	294.5	9	53	-2	17	45	-9			
AGRA	58.27	278.3	9	54A	-2	17	43	-13			
LAHORE	58.28	284.7	9	55	-1	17	53	-3			
APATITY	58.51	336.0	9	55A	-3	17	46	-13	10	1	12 4 PP
SEATTLE	58.61	52.4	10	2	4	18	5	5			
CORVALLIS	59.70	55.8	10	7	1						
MEDAN	59.77	242.5	10	7A	1	18	20	5			
VIZIANAGRAM	60.01	266.5	10	37A	29						
SODANKYLA	60.55	337.9	10	9	-3	18	23	-2	20	1	SCS
KIRUNA	61.80	340.3	10	18	-2	18	32	-9	39	30	PKPPKP
SHASTA	62.46	59.0	10	24A	-1	18	55	6	39	10	PKPPKP
DJAKARTA	62.76	228.4	10	23A	-4	18	47	-6			
HUNGRY HORSE	62.78	48.1	10	26A	-1				39	33	PKPPKP
UKIAH	62.86	60.9	10	28A	1						
MINERAL	63.15	58.9	10	28A	-1						
CHARTERS TS.	63.89	182.7	10	34	0	19	10	3			
HYDERABAD	64.05	269.5	10	33A	-2	19	8	-1	13	2	PP
QUETTA	64.19	287.8	10	35A	-1	19	11	0	12	57	PP
SASKATOON	64.21	41.5	10	35	-1	19	14	3			
BERKELEY	64.21	61.5	10	35	-1	19	13	2			
RENO	64.74	58.7	10	39A	0				39	30	PKPPKP
MOSCOW	64.83	324.4	10	37	-3	19	11	-8	12	58	PP
PULKOVO	64.85	330.6	10	41	1				12	58	PP
LICK	64.92	61.6	10	40A	-1				10	52	
BUTTE	64.99	49.5	10	40A	-1						
ASHKABAD	65.14	299.4	10	45A	3	19	26	3			
SCORESBY SD.	65.49	356.6	10	41	-3	19	26	-1			
MADRAS	65.75	264.6	10	46A	0	19	28	-2	13	16	PP
BOZEMAN	66.04	49.1	10	46K	-2				39	18	PKPPKP
HELSINKI	66.38	333.1	10	48	-2	19	33	-5	20	37	SCS
FRESNO	66.44	61.1	10	50A	0				39	21	PKPPKP
POONA	66.65	273.5	10	51A	-1	19	41	0	13	23	PP
KARACHI	66.82	284.0	10	56A	3	19	51	8	39	19	PKPPKP

EUREKA	67.11	56.8	10	54A	-1						13	46 PP
BOMBAY	67.15	274.5	10	54	-1	19	46	-1			13	19 PP
SKALSTUGAN	67.23	340.5	10	53	-2						39	22 PKPPKP
SUVA	67.66	149.5	11	1	3						13	24 PP
AFIAMALU	68.02	138.3	11	1A	1	20	6	8			11	27 PCP
NOUMEA	68.07	162.4	11	3A	2	20	5	7			13	49 PP
SALT LAKE C.	68.72	53.5	11	5A	0						39	17 PKPPKP
UPPSALA	68.90	336.0	11	4A	-2	19	59	-9			20	52 SCS
PASADENA	69.12	62.4	11	7	0	20	6	-5	11	18	24	50 SS
KODAIKANAL	69.57	264.4	11	5K	-5	20	17	1			13	41 PP
BOULDER CITY	70.04	59.1	11	13A	0	20	25	3				
COLOMBO	70.15	260.1	11	16	3	20	21	-2				
TIFLIS	70.75	309.7	11	18	1	20	29	-1			13	48 PP
RAPID CITY	71.27	46.4	11	19A	-1	20	34	-2				
GORIS	71.38	307.1	11	21	0	21	17	40			11	40 PCP
BRISBANE	71.39	176.1	11	23	2	20	40	3				
BERGEN	71.63	341.9	11	23A	1	20	41	1			11	53
REYKJAVIK	71.81	355.7	11	25	2							
LARAMIE	71.90	49.8	11	9	-15							
SIDA	71.91	353.9	11	27	3							
GOTEBORG	72.32	337.3	11	24	-3							
COPENHAGEN	73.92	336.0	11	35	-1	21	1	-5			21	48 SCS
WARSAW	73.98	329.6	11	41	5	20	51	-16			16	2 PPP
SIMFEROPOL	74.03	317.9	11	34	-3	21	2	-5			25	49 SS
LWOW	74.76	326.6	11	39	-2	21	10	-5			26	25 SS
TUCSON	74.99	59.7	11	42A	0	21	15	-3			14	47 PP
TUCSON TELE.	75.00	59.5	11	42	0							
IASI	75.34	322.9	11	43	-1	21	17	-5			12	34
BACAU	76.12	322.9	11	49	0	21	30	0			12	33
ABERDEEN	76.15	344.2	11	41	-8	21	25	-6			26	24 SS
KRAKOW	76.15	328.9	11	48	-1	21	27	-4			16	0 PPP
POTSDAM	76.56	333.9	11	51	0	21	31	-4			12	40
FOCSANI	76.66	322.2	11	56	4	21	40	4			12	43
SKALNATE PL.	76.74	328.2	11	54A	2	21	37	0			27	13 SS
RACIBORZ	76.76	329.8	11	52	0	21	46	9			14	49 PP
COLLMBERG	77.51	333.4	11	55	-1	21	45	-1			27	19 SS
EDINBURGH	77.53	344.3				21	59	13			22	20 PS
RIVERVIEW	77.64	178.0	12	0A	3	21	54	7				
HALLE	77.67	334.1	11	56	-1	21	41	-6			21	57 SCS
CAMPULUNG	77.95	323.1	12	0	1	21	50	0			18	6
WITTEVEEN	78.07	337.6	12	0	1							
PRAGUE	78.09	331.9	11	53A	-7	21	49	-3			14	52 PP
PRUHONICE	78.13	331.8	11	59	-1	21	48	-4			22	29 PS
BUCHAREST	78.15	322.0	12	1K	1	21	50	-2			22	9 PS
DURHAM	78.28	343.0	12	0A	-1	21	48	-6			22	28 SKS
JENA	78.29	334.0	12	0	-1	21	47	-7			27	31 SS
PLAUEN	78.48	333.4	12	0	-2	21	43	-13			14	48
MUNSTER	78.56	336.7	12	1	-1							
BUDAPEST	78.59	327.9	12	4	2	21	57	0			12	15 PCP
HURBANOVO	78.60	328.6	12	8	6	22	1	4			14	42 PP
BRATISLAVA	78.75	329.4	12	3	0	21	57	-2			26	51 SS
CHEB	78.76	333.1	12	1	-2	21	53	-6			27	11 SS
KECSKEMET	78.81	327.2	11	59	-4	22	3	4			15	8 PP
SONNEBERG	78.88	333.9	12	4	0	21	46	-14			12	31
VIENNA-H.	78.95	329.8	12	5A	1	21	58	-3			12	19 PCP
CANBERRA	79.10	179.8	12	7K	2	22	5	3			12	21 PCP
DE BILT	79.12	338.1	11	57	-8	22	1	-2			22	21 PS
TIMISOARA	79.16	325.6	12	9	4	22	4	1				
SZEGED	79.19	326.5	12	9	3	22	3	0			22	18 SKS
ADELAIDE	79.24	188.4	12	8A	2	22	11	7			12	19 PCP
ISTANBUL KA.	79.38	318.1	12	7	0	22	5	0				
BENSBERG	79.59	336.5	12	7	-1	22	8	0				
BELGRADE	80.23	325.5	12	11A	0	22	11	-3			14	43
CHIHUAHUA	80.44	59.4	13	11	59	22	17	0			23	21 PPS
UCCLE	80.52	338.0	12	15A	2	22	13	-4				
RATHFARNHAM	80.60	345.2	12	8A	-5	22	13	-5			13	43
SOFIA	80.74	322.5	12	15	1	22	19	-1			22	46 SCS
STUTTGART	80.92	334.3	12	14	-1	22	20	-2			15	27 PP
KEW	81.08	341.0	12	16A	0	22	20	-3			15	11 PP
DOURBES	81.08	337.6	12	13	-3							
ZAGREB	81.15	328.7	12	15A	-1	22	21	-3			22	41 SCS
TUBINGEN	81.18	334.2	12	15	-1	22	22	-2				
KSARA	81.31	309.1	12	18	1	22	26	0			15	22 PP
PERTH	81.50	207.9	12	22	4	22	52	24			15	30 PP
EBINGEN	81.52	334.1	12	18	0	22	24	-4			23	10 PS
STRASBOURG	81.53	335.0	12	17A	-1	22	24	-4			15	16 PP
FLORISSANT	81.66	42.7	12	18A	-1	22	26	-3				
RAVENSBURG	81.66	333.5	12	20	1	22	26	-3				

MELBOURNE	81.68	183.1	12	21A	2	22	16	-13		12	29 PCP
FAYETTEVILLE	81.81	46.8	12	18A	-1	22	28	-3			
ST. LOUIS 1	81.85	42.7	12	18A	-2	22	27	-4			
TRIESTE	82.11	330.0	12	21A	0	22	28	-6		17	24 PPP
SKOPJE	82.16	323.3	12	25A	4	22	46	12		12	57 PCP
OTTAWA	82.47	29.9	12	21	-2	22	33	-4		28	39 SS
SHAWINIGAN	82.49	27.5	12	22	-1	22	34	-4		15	35 PP
CHUR	82.51	333.2	12	24A	1	22	39	1			
BASLE	82.53	334.7	12	23	0	22	38	0			
CINE	82.55	316.5	12	23A	0	22	40	2			
SEVEN FALLS	82.61	26.1	12	19	-5	22	37	-2		15	33 PP
PARIS	82.83	338.3	12	24	-1	22	39	-2		15	31 PP
ONERAHI	82.87	159.3	12	30	5	22	55	14			
BREBEUF	83.12	28.6	12	25	-1						
NEUCHATEL	83.19	334.8	12	26	-1	22	41	-4		16	1
JERUSALEM	83.20	308.2	12	28	1	22	49	4			
CLEVELAND	83.52	35.6	12	27A	-1	22	47	-1			
JERSEY	83.63	341.3	12	43	14	22	51	2			
LITTLE ROCK	83.78	46.5	12	31	1	22	50	-1			
BOLOGNA	83.96	330.9	12	35K	5	22	56	4		31	45 SSS
AUCKLAND	84.02	159.3	12	32	1	23	2	9			
GARCHY	84.07	337.3	12	30	-1						
PAVIA	84.10	332.6	12	34K	3	22	57	3		15	50 PP
OROPA	84.10	333.5	12	35	4	22	56	2		31	52
ATHENS	84.37	319.5	12	31A	-1	22	47	-9		22	53 SKS
PITTSBURGH	85.04	35.2	12	34K	-2	22	53	-10			
TARANTO	85.16	325.1	12	5	-31	23	1	-3			
KARAPIRO	85.20	159.1	12	39A	2					13	40
CLERMONT-FD.	85.44	336.7	12	39	1	23	8	1		24	17 PS
PENNSYLVANIA	85.59	33.6	12	41	2	23	5	-3		16	26 PP
MORGANTOWN	85.72	35.6	12	39K	0	23	11	1			
ROME	85.81	328.9	12	40	0	23	3	-8		16	6 PP
MONACO	85.96	333.0	12	41K	1						
HARVARD	86.45	28.7	12	43	C						
WESTON	86.65	28.6	12	44A	0	23	7	-12			
HELWAN	86.83	309.5	12	46	1	23	11	-9			
HALIFAX	87.02	22.5	12	45	-1	23	8	-14		16	26 PP
FORDHAM	87.08	31.0	12	46	0	23	11	-12			
C.C.N.Y.	87.08	31.1	12	31	-15	24	1	38			
GEORGETOWN	87.53	34.1	12	49A	1						
COBB RIVER	87.53	162.1	12	49	1						
MESSINA	87.78	325.0	12	49	0					23	30 PS
REGGIO CALA.	87.82	324.8	12	50	1					23	27 PS
GUADALAJARA	87.88	63.1	12	51	1	23	23	-7		24	1
WELLINGTON	88.19	160.7	12	52	1	23	36	3		16	35 PP
MANZANILLO	88.41	64.9				23	23	-12		23	43
KAIMATA	88.63	163.5	12	56	3						
CHAPEL HILL	89.23	37.0	12	58	2					13	50
BARCELONA	89.71	335.6	12	59	1	23	49	2			
COLUMBIA	89.96	39.4	13	0	0						
GEBBIES PASS	90.02	163.0	13	1	1						
TORTOSA	90.74	336.5	13	9	6	23	57	1			
ROXBURGH	91.15	165.7	13	8A	3	24	19	19		17	3 PP
TACUBAYA	91.44	61.1	13	9K	3	23	54	-9		16	36 PP
SERRA PILAR	92.71	343.1	13	12K	0	24	13	-1		16	54 PP
TOLEDO	92.85	339.4	13	13A	0	24	18	3		17	8 PP
ALICANTE	93.31	336.3	13	37	22	24	30	11		17	19 PP
SETIF	93.40	331.1	13	15K	0	24	35	15		17	8 PP
VERA CRUZ	93.51	59.1	13	23	7	23	55	-26		17	7 PP
ALGIERS UNI.	93.68	333.1	13	17	0	24	26	4			
OAXACA	94.74	61.0				25	3	32		17	27 PP
LISBON	95.14	342.9	13	37K	14	23	57	-38		17	26 PP
GRANADA	95.27	338.2	13	15A	-9	24	36	0		26	18 PPS
ALMERIA	95.27	337.2	13	22	-2	24	2	-34		19	12 PPP
MALAGA	95.92	338.7	13	26A	-1	24	48	7	13 39	17	8 PP
MERIDA	96.05	53.2	13	47	19	24	1	-42		17	31 PP
ANGRA DO HO.	97.50	356.9				25	13	18			
BERMUDA	97.93	28.1	13	42	6	24	5	-53		17	31 PP
COMITAN	98.21	58.0				23	41	-80		42	31
TAMANRASSET	105.39	325.1	14	12	777	25	56	0		18	17 PP
DUMONT	110.70	183.7	18	51	19	25	18	8			
TANANARIVE	110.91	263.6	14	49	777					19	27 PP
BALBOA HTS.	111.41	52.5	17	41	-52						
RUMANGABO	111.73	290.5								19	21 PP
GALERAZAMBA	112.27	47.6								19	10 PP
ASTRIDA	112.39	289.2	18	24	-11					34	51 SS
LWIRO	112.76	290.2	14	41	777						
WILKES	113.91	196.0								19	35 PP
ST. CLAUDE	113.94	32.3								19	32 PP

FORT FRANCE	115.34	32.3							19 39	PP
CHINCHINA	116.89	51.5	18 47	3					15 17	P
CAPE HALLETT	117.13	172.8	18 46	2	25 46	11			15 7	P
FUQUENE	117.53	49.4							19 43	PP
GRENADA	117.55	34.1							16 38	
BOGOTA	118.05	50.2							19 52	PP
MIRNY	118.31	202.1	18 50	4					20 5	PP
TRINIDAD	118.88	34.5							16 57	
MBOUR	120.33	344.0	18 54	4	25 54	8			20 24	PP
SCOTT BASE	122.23	175.6	18 56	2					22 56	PKS
LUANDA	127.88	298.8							20 21	
PIETERMZBURG	129.76	265.1	19 10	1						
HUANCAYO	130.49	63.6	19 10	0					21 53	PP
KIMBERLEY	133.31	269.7	19 12	-3						
BYRD STATION	133.40	166.1	19 16	1					21 40	PP
SOUTH POLE	133.96	180.0	19 10	-6					16 35	P
GRAHAMSTOWN	134.52	263.3	19 20	2						
WINDHOEK	135.04	282.4	19 22	3						
LA PAZ	138.40	60.3	19 19	-6	26 43	11			22 19	PP
HERMANUS	140.33	266.5	19 24	-4					22 33	PP
SANTA LUCIA	147.69	84.3	19 43	2					42 23	SS
CONCEPCION	148.33	90.9	19 42	0	26 17	-30			22 38	PP
BUENOS AIRES	156.93	74.9	19 54	0						
LA PLATA	157.48	74.9	20 1	6	26 51	-6			22 51	PKS

NOVEMBER 12 22.H 59.M 44.S EPICENTRE 45.47 149.50 DEPTH= 29.KM

A=-0.60629 B= 0.35718 C= 0.71051 D= 0.5076 E= 0.8616
G=-0.6122 H= 0.3606 K=-0.7037 HT= -3.7

SE= 3.42

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	3.53	234.1	0	48	-6	1	28	-7				
ABASHIRI	3.99	250.5	1	9	9							
KUSIRO	4.43	237.6	1	4	-2	1	53	-5				
OBIHIRO	5.20	242.8	1	16	-1	2	20	3				
ASAHIGAWA	5.36	254.1	1	23	3							
HIROO	5.49	236.6	1	14	-7	2	16	-8				
URAKAWA	5.88	238.0	1	25	-2	2	32	-2				
SAPPORO	6.32	250.6	1	34	1	3	1	16				
MURORAN	6.91	246.0	1	39	-2	3	12	12				
SUTTSU	7.18	251.5				3	28	21				
MORI	7.28	245.6	1	56	9	3	25	16				
HAKODATE	7.36	243.0	1	43	-5	3	6	-5			3	25
HATINOHE	7.64	232.6	1	51	-1	3	5	-13				
AOMORI	7.89	237.0	2	8	13	3	16	-8				
MIYAKO	8.04	226.3									3	8
MORIOKA	8.42	229.7	1	56	-6	3	22	-16				
AKITA	9.00	233.6				3	43	-9				
ISINOMAKI	9.30	223.7	2	18	3	3	15	-44				
SENDAI	9.63	224.7	2	4	-15	3	46	-22				
YAMAGATA	9.92	226.6	2	38	15	4	0	-15				
HUKUSIMA	10.25	224.3	2	32	4	4	8	-15				
ONAHAMA	10.69	220.2	3	9	35						4	18
SHIRAKAWA	10.87	223.1	2	41	5	4	17	-21				
MITO	11.35	220.0				4	28	-22				
UTUNOMIYA	11.49	222.5	2	51	6	4	28	-25				
TUKUBASAN	11.65	220.8	2	18	-29						2	55
MAEBASI	12.00	224.6				4	50	-15				
KUMAGAYA	12.05	222.9	2	51	-1	4	50	-16				
NAGANO	12.23	228.0	2	59	4							
MATUSIRO	12.32	227.6	2	46	-10	4	59	-14				
OIWAKE	12.32	226.0	3	17	21							
TITIBU	12.33	223.4				4	51	-22				
KOHU	12.86	223.9	2	58	-5						5	8
BAGUIO CITY	37.74	229.3	7	9	-5							
COLLEGE	38.71	37.4	7	21	-1							
KHEYS	46.84	346.3	8	18	-11							
CHITTAGONG	51.90	263.8	9	5	-2							
RESOLUTE	52.84	17.5	9	13K	-1							
SVERDLOVSK	53.05	316.5	9	17	1							
NAMANGAN	54.79	295.1	9	30	1							
THULE	56.01	10.1	9	36	-2							
APATITY	57.50	335.9	9	47	-1							

LAHORE	58.42	284.3	9	55A	0						
SODANKYLA	59.51	337.8	10	2	0						
KIRUNA	60.72	340.3	10	9	-2						
HUNGRY HORSE	61.55	48.9	10	16	0						
SCORESBY SD.	64.20	356.8	10	33	-1						
QUETTA	64.25	287.6	10	34A	0	19	13	5			
HELSINKI	65.42	333.1	10	41	-1						
EUREKA	65.99	57.6	10	42	-3						
KARACHI	66.97	283.9	10	55A	4						
UPPSALA	67.90	336.1	10	56	-1						
BOULDER CITY	68.95	59.9	11	14	10						
RAPID CITY	70.02	47.1	11	7	-3						
TIFLIS	70.28	309.7	11	25	13					20	45
LARAMIE	70.69	50.5	11	20	6						
TUCSON TELE.	73.92	60.2	11	44	11						
KRAKOW	75.27	329.1	11	43	2					11	55 PCP
POTSDAM	75.59	334.1	11	42	-1						
RACIBORZ	75.86	330.1	11	46	1					11	59 PCP
COLLMBERG	76.55	333.6	11	49	0						
PRUHONICE	77.19	332.1	11	53A	1						
JENA	77.31	334.2	11	53	0					12	5
PLAUEN	77.51	333.7	11	53	-1						
BRATISLAVA	77.86	329.6	11	57	1						
BENSBERG	78.57	336.8	12	0	0						
STUTTGART	79.94	334.6	12	7	0					14	3
KEW	79.99	341.4	12	9	2						
DOURBES	80.05	337.9	12	6	-2						
TUBINGEN	80.20	334.5	12	10	1						
EBINGEN	80.54	334.4	12	12	2						
STRASBOURG	80.54	335.4	12	9	-1			12	39		
KSARA	80.86	309.4	12	15	3						
BREBEUF	81.73	29.1	11	58	-19						
PARIS	81.78	338.7	12	18	1					14	11
CINE	81.93	316.8	11	20	-58					11	40
COLUMBIA	88.63	39.9	13	3	12						
SOUTH POLE	135.28	180.0	19	9	-7						

NOVEMBER 13 2.H 56.M 34.S EPICENTRE 44.27 148.46 DEPTH= 44.KM

DEPTH OF FOCUS= 0.002R

A=-0.61226 B= 0.37572 C= 0.69568 D= 0.5230 E= 0.8523
G=-0.5929 H= 0.3639 K=-0.7183 HT= -3.3

SE= 2.76

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
GORNY	0.91	315.6	0	16	-1	0	32	2				
REIDOVOE	1.04	342.9	0	20	1							
LESOZAVODSK	1.04	298.8	0	19	0	0	36	3				
NEMURO	2.29	246.7	0	34	-2	0	59	-4				
ABASHIRI	3.02	266.6	0	49	3	1	25	3				
KUSIRO	3.22	247.7	0	48	-1	1	24	-3				
OBIHIRO	4.06	252.3	1	2	1	1	52	4				
HIROO	4.25	243.8	1	2	-2	1	47	-6				
ASAHIGAWA	4.42	265.7	1	8	2	2	8	11				
URAKAWA	4.67	244.9	1	8	-2	2	2	-1				
Y.-SAKHLINSK	4.84	305.6	1	15	3	2	16	8				
WAKKANAI	4.96	285.7	1	39	25							
SAPPORO	5.30	259.3	1	19K	0	2	20	1				
TOMAKOMAI	5.31	253.1	1	29	10	2	16	-4				
MURORAN	5.80	253.0	1	26	0	2	31	-1				
SUTTSU	6.16	259.0	1	46	15	2	51	10				
MORI	6.17	252.1	1	31	0	2	37	-4				
HAKODATE	6.20	249.0	1	28	-3	2	36	-6			1	48
HATINOHE	6.35	236.3	1	30	-3	2	35	-10				
AOMORI	6.64	241.3	1	38	1	2	48	-5				
MIYAKO	6.69	228.5	1	34	-4	2	39	-15				
MORIOKA	7.10	232.4	1	39	-5	2	50	-14				
MIZUSAWA	7.52	229.4	1	42	-8	3	0	-14				
AKITA	7.71	236.7	2	0	8	3	11	-8				
ISINOMAKI	7.93	225.1	1	55	0	3	9	-16			3	35
SEVERO-KUR.	8.22	36.2	1	59	0						2	17
SENDAI	8.27	226.1	1	57	-3	3	19	-14				
SAKATA	8.41	233.3	2	1	-1	3	31	-5				
YAMAGATA	8.57	228.2	1	55	-9	3	29	-12				

HUKUSIMA	8.88	225.5	1	58	-10	3	30	-18			
ONAHAMA	9.30	220.7				3	41	-18			
NIIGATA	9.52	231.4				4	7	3			
MITO	9.97	220.4							3	32	
UTUNOMIYA	10.12	223.2	2	33	8	4	6	-13			
KAKIOKA	10.22	221.0	2	21	-6	4	0	-21			
TUKUBASAN	10.27	221.3	2	18	-9	4	3	-19			
TAKADA	10.55	230.7				4	16	-13			
MAEBASI	10.64	225.5	2	32	0	4	13	-18			
KUMAGAYA	10.68	223.6	2	37	4	4	15	-17			
TOKYO C.M.O.	10.87	220.8	2	48	12	4	22	-15			
NAGANO	10.89	229.3	2	38	2						
TITIBU	10.96	224.1	2	58	21						
OIWAKE	10.96	227.0	3	2	25						
MATUSIRO	10.97	228.8	2	28	-9	4	22	-17			
YOKOHAMA	11.12	220.4				4	30	-13			
MATUMOTO	11.33	228.5	3	6	24						
MERA	11.47	218.4				4	37	-14			
KOHU	11.49	224.6	2	46	2	4	48	-4			
MISIMA	11.71	221.9	2	57	10						
VLADIVOSTOK	12.05	270.3	2	52	0	5	4	-2			
SHIZUOKA	12.10	223.2				4	52	-15			
OMAESAKI	12.48	222.8				5	11	-5			
GIHU	12.61	229.3	3	16	17	5	24	5			
NAGOYA	12.68	228.1	3	33	33						
IBUKISAN	12.84	230.3	3	2	0						
HIKONE	12.99	230.4	3	9	5						
KAMEYAMA	13.19	228.5				5	56	23			
ABUYAMA	13.66	231.0	3	8A	-5						
KOBE	14.02	231.4				6	8	15			
SUMOTO	14.43	231.2				5	22	-40			
HAMADA	15.70	239.0	3	57	18	6	48	16			
KOTI	15.78	232.3	3	44	4	6	28	-6			
CHANGCHUN	16.65	276.6	3	48	-3						
SIMIDU	16.66	231.7				7	5	11			
OOITA	17.12	235.6	4	6	9	7	15	10			
HUKUOKA	17.60	238.8				7	38	22			
MIYAZAKI	18.18	233.0	3	44	-26	7	39	10			
YAKUSIMA	19.80	231.8	4	30	1	8	7	3			
PEKING	24.22	271.2	5	12A	-1	9	25	-1			
ZO-SE	25.15	247.7	5	21	-1						
NANKING	26.18	252.3	5	32	0	10	0	2			
PAOTOW	28.43	276.1	5	50	-2	10	32	-3			
ULAN-BATOR	28.80	292.1	5	55	-1						
TIKSI	29.03	347.3	5	57	-1				6	54	PP
SIAN	31.94	265.5	6	23	-1	11	32	2			
LANCHOW	34.72	272.0	6	47A	-1	12	15	1			
CANTON	35.72	245.3	6	56	0	12	30	1			
CHENGTU	37.36	264.0	7	12A	2	12	56	2			
MANILA	37.72	226.9	7	9	-4						
COLLEGE	40.10	36.5	7	33	0						
KUNMING	41.64	258.1	7	44A	-1	13	56	-2			
LHASA	47.23	272.1	8	31	1	15	21	2			
KHEYS	47.83	346.5	8	23	-12				10	11	PP
RABAUL	48.37	175.1	8	36	-3						
SHILLONG	49.02	267.1	8	43A	-1						
CHITTAGONG	51.04	263.9	9	0	0	16	22	10			
FRUNSE	51.81	296.0	9	5	0						
SVERDLOVSK	53.41	316.8	9	17	0						
RESOLUTE	54.20	17.0	9	22A	-1	17	6	11			
TASHKENT	56.00	296.8	9	34	-2	17	23	3			
DEHRA DUN	56.11	281.1	9	42	5	17	22	1			
THULE	57.32	9.7	9	43	-3						
STALINABAD	57.82	294.3	9	47	-2						
AGRA	58.01	278.0	9	49A	-1	17	47	1			
APATITY	58.29	335.9	9	53	1	17	43	-7			
CORVALLIS	59.84	55.7	10	6	3						
SODANKYLA	60.34	337.8	10	5	-2						
KIRUNA	61.60	340.1	10	16	1						
SHASTA	62.61	58.9	10	21	-1						
HUNGRY HORSE	62.89	48.0	10	20	-4				39	27	PKPPKP
MINERAL	63.30	58.8	10	25	-1						
QUETTA	63.91	287.5	10	29	-1	19	5	4	20	15	SCS
CHARTERS TS.	64.00	182.3	10	26	-5						
BERKELEY	64.38	61.4	10	34	1						
MOSCOW	64.59	324.2	10	34	-1						
PULKOVO	64.62	330.4	10	36	1				23	38	SS
ASHKABAD	64.86	299.2	10	36	0						

RENO	64.89	58.6	10 36	-1						
LICK	65.09	61.5	10 38	0						
BUTTE	65.11	49.4	10 38	0						
SCORESBY SD.	65.35	356.5	10 41	1						
BOZEMAN	66.15	48.9	10 44	-1			10 57			
HELSINKI	66.15	332.9	10 45	0						
POONA	66.39	273.2	10 45	-1						
KARACHI	66.55	283.7	10 51	4						
FRESNO	66.60	61.0	10 46	-2						
BOMBAY	66.88	274.2	10 48	-1	19 58 21					
SKALSTUGAN	67.03	340.3	10 50	0						
EUREKA	67.26	56.6	10 51	-1			11 4			
UPPSALA	68.69	335.8	10 59	-2						
PASADENA	69.28	62.3	11 3	-1						
BOULDER CITY	70.19	58.9	11 10	0						
RAPID CITY	71.37	46.2	11 16	-1			11 30			
LARAMIE	72.02	49.6	11 20	-1						
GOTEBORG	72.11	337.1	11 20	-1						
BOULDER	73.05	50.4	11 28	1						
LWOW	74.52	326.3	11 26	-9					11 50	
TUCSON	75.15	59.5	11 39	0						
TUCSON TELE.	75.15	59.3	11 38	-1						
KRAKOW	75.92	328.7	11 44	0					11 55	PCP
POTSDAM	76.34	333.7	11 46	0						
RACIBORZ	76.53	329.6	11 49	2					12 0	PCP
COLLMBERG	77.29	333.2	11 51	0						
HALLE	77.45	333.9	11 52	0						
PRUHONICE	77.90	331.6	11 54A	-1						
JENA	78.06	333.8	11 55	-1						
PLAUEN	78.25	333.2	12 6	9						
BRATISLAVA	78.52	329.2	11 58	0						
BENSBERG	79.38	336.3	12 4	1						
RATHFARNHAM	80.42	344.9	12 6	-2						
STUTTGART	80.70	334.1	12 10	0						
DOURBES	80.87	337.4	12 10	-1						
KEW	80.88	340.8	12 11	0						
TUBINGEN	80.96	334.0	12 12	1						
KSARA	81.04	308.9	12 14	2	22 29 13				15 21	PP
EBINGEN	81.30	333.9	12 14	1						
STRASBOURG	81.31	334.8	12 16	3						
FAYETTEVILLE	81.91	46.6	12 15A	-1						
CINE	82.29	316.3	12 19A	1			12 28			
OTTAWA	82.49	29.7	12 19	0						
SHAWINIGAN	82.50	27.3	12 22	3						
PARIS	82.62	338.1	12 21	1					12 29	PCP
JERUSALEM	82.93	308.0	12 22	1						
BREBEUF	83.13	28.3	12 24K	2						
CLEVELAND	83.57	35.4	12 27K	2	22 27 -15					
KARAPIRO	85.40	158.8	12 43	9					13 16	
MORGANTOWN	85.77	35.4	12 34	-2						
HARVARD	86.47	28.5	12 42	3						
HELWAN	86.55	309.2	12 41	2	23 18 7					
CAPE HALLETT	117.28	172.6	18 41	1					29 41	PPS
SCOTT BASE	122.37	175.5	18 51	1						
BYRD STATION	133.58	166.1	19 10	-2						
SOUTH POLE	134.08	180.0	20 10	57						

NOVEMBER 13 4.H 4.M 42.S EPICENTRE 44.13 148.25 DEPTH= 37.KM

DEPTH OF FOCUS= 0.001R

A=-0.61239 B= 0.37891 C= 0.69383 D= 0.5262 E= 0.8504
G=-0.5900 H= 0.3651 K=-0.7201 HT= -3.2

SE= 2.31

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
GORNY	0.93	328.6	0 18	1	0 31	1		
LESOZAVODSK	1.00	310.3	0 19	1				
REIDOVOE	1.15	352.2	0 21	1				
NEMURO	2.10	248.6	0 34K	0	0 58	-1		
ABASHIRI	2.87	269.2	0 48K	3	1 20	2		
KUSIRO	3.03	249.1	0 49A	2	1 23	1		
OBIHIRO	3.87	253.6	1 2	3	1 50	6		1 22
HIROO	4.05	244.6	1 3	2	1 50	2		
ASAHIGAWA	4.26	267.4	1 9	5	2 7	13		

URAKAWA	4.47	245.6	1	8	1	2	2	3			
RUMOE	4.79	270.2	1	14	2						
Y.-SAKHLINSK	4.80	307.9	1	14	2	2	9	2			
WAKKANAI	4.86	287.7	1	4	-9	2	21	12			
SAPPORO	5.12	260.5	1	20A	3	2	20	5			
TOMAKOMAI	5.13	254.0	1	22	5	2	21	6			
MURORAN	5.62	253.9	1	25	1	2	28	0			
MORI	5.98	252.8	1	32K	3	2	41	4			
SUTTSU	5.99	260.0	1	30	1	2	44	7			
HAKODATE	6.00	249.6	1	30	1	2	40	3			
HATINOHE	6.14	236.5	1	30	-1	2	37	-4			
AOMORI	6.44	241.7	1	34A	-1	2	50	2			
MIYAKO	6.48	228.5	1	33A	-3	2	40	-9			
UGLEGORSK	6.53	321.5	1	40	4						
MORIOKA	6.89	232.5	1	39A	-2	2	54	-5			
MIZUSAWA	7.31	229.3	1	44	-3	3	1	-9			
AKITA	7.50	236.9	1	49A	-1	3	12	-3			
ISINOMAKI	7.72	224.9	1	50	-3	3	10	-10			4 7
SENDAI	8.06	225.9	1	59	1	3	20	-9			
SAKATA	8.20	233.3	2	1	1	3	28	-4			
YAMAGATA	8.36	228.1	2	1	-1	3	30	-6			
SEVERO-KUR.	8.43	36.3	2	2	-1						
HUKUSIMA	8.67	225.4	2	4	-2	3	36	-8			
ONAHAMA	9.09	220.5	2	2	-10	3	43	-11			3 13
SHIRAKAWA	9.28	223.8	2	11	4	3	52	-7			
NIIGATA	9.31	231.4	2	33	18						4 11
AIKAWA	9.70	234.5	2	20	0						
MITO	9.76	220.2	2	21	0	4	2	-9			
UTUNOMIYA	9.91	223.0	2	20	-3	4	3	-11			3 9
KAKIOKA	10.01	220.8	2	22	-3	4	5	-12			
TUKUBASAN	10.06	221.0	2	21K	4	4	9	-9			
TYOSI	10.14	216.6	2	20	-6	4	11	-9			
TAKADA	10.34	230.7	2	27	-2						
MAEBASI	10.42	225.4	2	29	-1	4	23	4			3 22
KUMAGAYA	10.46	223.4	2	31	0	4	22	-6			
TOKYO C.M.O.	10.66	220.6	2	32	-2	4	23	-10			
NAGANO	10.68	229.2	2	32	-2						5 10
TITIBU	10.75	223.9	2	32	-3						
OIWAKE	10.75	226.9	2	41	6						
MATUSIRO	10.76	228.7	2	33A	-2	4	38	3			4 22
YOKOHAMA	10.91	220.2	2	34	-3	4	32	-7			5 0
WAZIMA	10.93	235.8	2	38	1	4	37	-2			
MATUMOTO	11.12	228.5	2	38	-2						
MERA	11.26	218.1	2	53	11	4	43	4			
KOHU	11.28	224.5	2	39	-3	4	44	-4			
HUNATU	11.28	223.4	2	41	-1	4	40	-8			
MISIMA	11.50	221.7	2	49	4	4	47	-6			
OSIMA	11.58	219.2				5	7	12			
SHIZUOKA	11.88	223.0	2	57	7	4	53	-9			
VLADIVOSTOK	11.90	270.8	2	50	0	5	4	1			
OMAESAKI	12.27	222.6	3	0	5						5 41
GIHU	12.40	229.2	2	55A	-2						5 53
NAGOYA	12.46	228.0	2	59	1	5	13	-3			
IBUKISAN	12.63	230.3	2	59	-1						
HIKONE	12.78	230.3	3	3	1						
KAMEYAMA	12.97	228.4	3	3	-2	5	18	-11			
TU	13.04	227.9	3	3	-3						
MAIZURU	13.08	233.0	3	7	1						
TOYOOKA	13.41	234.8	3	11	1	5	31	-8			4 29
ABUYAMA	13.45	230.9	3	8K	-3	6	15	35			
OSAKA	13.64	230.4	3	13	0	5	38	-7			6 38
TOTTORI	13.78	236.1	3	15A	0	5	44	-4			
KOBE	13.81	231.3	3	15	-1	6	4	15			7 5
SUMOTO	14.22	231.2	3	26	5	5	44	-14			4 16
YONAGO	14.36	237.9	3	22	-1	6	10	8			7 23
SIOMISAKI	14.42	226.5	3	13	-11						6 21
MUROTO	15.43	230.0	3	44	7						
HAMADA	15.50	239.0	3	40	2	6	34	6			
KOTI	15.57	232.3	3	33	-6	6	44	14			
HIROSIMA	15.63	236.8	3	36	-3	6	37	5			
MATUYAMA	15.82	234.7	3	41	-1	6	35	-1			
UWAZIMA	16.36	233.6	3	49	0	7	8	20			
SIMIDU	16.45	231.6	3	47	-3						
CHANGCHUN	16.51	277.0	3	49A	-2						
OOITA	16.91	235.6	4	1	5	7	14	13			
HUKUOKA	17.39	238.8	4	4	2	7	25	13			
SAGA	17.69	238.2	4	5	0						
KUMAMOTO	17.75	236.4	4	7	1						

MIYAZAKI	17.97	233.0	4	12	3	7	55	30				
NAGASAKI	18.30	237.8							5	11		
KAGOSIMA	18.73	233.9	4	23	5	8	14	32				
YAKUSIMA	19.59	231.8	4	28A	0	8	6	5				
PEKING	24.08	271.4	5	13A	0	9	26	1				
ZO-SE	24.95	247.7	5	23A	1	9	39	-1	5	59	PP	
NANKING	25.99	252.4	5	31A	0	9	55	-2	6	12	PP	
PAOTOW	28.30	276.2	5	53A	1	10	30	-5				
ULAN-BATOR	28.71	292.3	5	55	-1							
TAIPEI	28.91	237.6	6	14	16	11	8	24				
TIKSI	29.14	347.5	5	56	-4				7	0	PPP	
IRKUTSK	30.00	301.5	6	3	-5				7	5	PP	
GUAM	30.70	186.7	6	24	10							
SIAN	31.78	265.5	6	23A	0							
YINCHUAN	31.78	274.5	6	23	0							
TIENSHUI	33.90	268.4	6	43	1							
LANCHOW	34.58	272.1	6	49A	2	12	12	-1	8	0	PP	
WUWEI	34.61	275.8	6	49	1							
HONG KONG	35.50	243.3	6	57A	2	12	52	25				
CANTON	35.52	245.3	6	57A	1	12	29	1	8	15	PP	
SINING	35.80	274.2	6	58	0							
BAGUIO CITY	36.20	229.0	7	2	1							
TRUK	36.65	174.0	7	2	-3							
CHENGTU	37.19	264.0	7	14	4	12	55	2	8	38	PP	
MANILA	37.51	226.8	7	11	-1	13	26	28				
KOROR	38.58	202.3	7	22	1				9	20	PCP	
COLLEGE	40.31	36.4	7	35	-1	13	40	0	16	46		
KUNMING	41.46	258.0	7	45A	0	13	56	-2	9	22	PP	
PHU-LIEN	41.53	249.6	7	47	1							
SEMIPALATNSK	45.11	303.1	8	12	-3							
TOCKLAI	46.07	266.3	8	27	5							
LHASA	47.09	272.1	8	33A	3	15	19	0	10	24	PP	
KHEYS	47.94	346.5	8	24	-13				10	0	PCP	
RABAUL	48.24	174.8	8	40	1							
SHILLONG	48.86	267.1	8	45A	1				10	39		
CHITTAGONG	50.87	263.9	9	1	1	16	12	0	10	20	PCP	
FRUNSE	51.74	296.1	9	5	-1	16	23	-1	10	18	PCP	
SVERDLOVSK	53.42	316.8	9	17	-2							
BOKARO	54.29	269.7	9	12	-13	16	45	-13				
RESOLUTE	54.38	17.0	9	23A	-3	16	53	-7				
TASHKENT	55.94	296.8	9	36	-1	17	19	-1	19	8	SCS	
DEHRA DUN	55.99	281.0	9	38	1							
PORT BLAIR	57.41	253.5	9	47	0							
THULE	57.49	9.6	9	44	-4							
STALINABAD	57.75	294.3	9	48	-2	17	44	0				
AGRA	57.88	278.0	9	49A	-2	17	45	-1	11	53	PP	
LAHORE	57.89	284.4	9	50	-1	17	47	1				
APATITY	58.37	335.8	9	52K	-2				10	42	PCP	
MEDAN	59.39	242.0	10	3K	2							
CORVALLIS	60.05	55.5	10	21	15							
SODANKYLA	60.42	337.7	10	6	-2							
KIRUNA	61.69	340.1	10	13	-4							
DJAKARTA	62.44	227.9	10	32	10							
LEMBANG	62.57	226.8	10	23A	0				20	31		
SHASTA	62.82	58.7	10	25	1							
HUNGRY HORSE	63.10	47.8	10	27	1				39	27	PKPPKP	
MINERAL	63.51	58.6	10	29	0				10	39		
QUETTA	63.81	287.5	10	31A	0	19	1	-1	11	5	PCP	
CHARTERS TS.	63.85	182.1	10	31A	0							
BERKELEY	64.58	61.2	10	36	0				13	26		
MOSCOW	64.62	324.1	10	35	-1							
PULKOVO	64.68	330.4	10	34	-3				14	37	PPP	
ASHKABAD	64.79	299.1	10	38A	1	19	16	2				
RENO	65.10	58.4	10	40	1				10	52		
LICK	65.29	61.3	10	40	-1							
BUTTE	65.32	49.2	10	41	0							
MADRAS	65.34	264.2	10	41A	0				13	0		
SCORESBY SD.	65.49	356.4	10	41K	-1							
HELSINKI	66.21	332.8	10	45	-1							
POONA	66.24	273.2	10	46	-1	19	33	1				
KARACHI	66.43	283.7	10	51A	3							
BOMBAY	66.74	274.2	10	49	-1	19	52	14	13	11	PP	
FRESNO	66.80	60.8	10	51	1							
SKALSTUGAN	67.11	340.3	10	50A	-2				11	19	PCP	
EUREKA	67.46	56.5	10	54	0				38	25	PKPPKP	
UPPSALA	68.76	335.7	11	1	-1	19	57	-5	20	53	SCS	
SALT LAKE C.	69.06	53.2	11	6	2							
PASADENA	69.49	62.1	11	7	0	20	9	-1	11	20	25	18 SS

BOULDER CITY	70.40	58.7	11	14	2						
TIFLIS	70.45	309.4	11	14	1	20	25	3			
GORIS	71.07	306.8	11	16	0	20	32	3		21	9
RAPID CITY	71.58	46.1	11	20	0					39	18 PKPPKP
GOTEBORG	72.19	337.1	11	22	-1						
LARAMIE	72.23	49.4	11	23	0						
BOULDER	73.27	50.3	11	31	2						
SIMFEROPOL	73.77	317.6	11	33A	1						
COPENHAGEN	73.78	335.7	11	32	0						
LWOW	74.55	326.3	11	37	0	21	8	0		21	30 SKS
IASI	75.11	322.6	11	39	-1				11	52	
TUCSON	75.35	59.3	11	42	0						
TUCSON TELE.	75.36	59.2	11	42	0						
BACAU	75.89	322.6	11	44	-1						
KRAKOW	75.96	328.6	11	45	0	21	23	-1		11	58 PCP
POTSDAM	76.41	333.6	11	47	-1						
RACIBORZ	76.58	329.5	11	48	-1					12	1 PCP
HALLE	77.52	333.7	11	50	-4	21	39	-2		12	18 PCP
RIVERVIEW	77.63	177.5	11	57	3	21	48	6			
PRAGUE	77.92	331.6	11	56A	0	21	30	-15		13	22
PRUHONICE	77.96	331.5	11	56A	0					12	52
JENA	78.13	333.7	11	57	0						
DURHAM	78.19	342.7	11	57K	0						
PLAUEN	78.32	333.1	11	55	-3					12	31
HURBANOVO	78.41	328.3	12	2	3					12	33
MUNSTER	78.42	336.4	11	57	-2						
BRATISLAVA	78.57	329.1	12	0A	0						
CHEB	78.60	332.8	11	58	-2						
SONNEBERG	78.73	333.6	12	0	0				12	11	12 32
CANBERRA	79.07	179.4	12	4K	2						12 18 PCP
ISTANBUL KA.	79.13	317.8	12	7A	4						
ADELAIDE	79.16	188.0	12	16	13						
BENSBERG	79.45	336.2	12	4A	0						
UCCLE	80.39	337.7	12	10A	1						
SOFIA	80.51	322.2	12	12	2						
RATHFARNHAM	80.52	344.8	12	7K	-3						
STUTTGART	80.77	333.9	12	11	0						22 30 SCS
DOURBES	80.95	337.3	12	12	0						
KEW	80.97	340.7	12	12	0	22	17	0			
KSARA	81.01	308.8	12	9	-4	22	21	3			15 21 PP
TUBINGEN	81.02	333.9	12	12	-1						12 36
EBINGEN	81.36	333.8	12	15	0						
STRASBOURG	81.38	334.7	12	15	0						15 54
RAVENSBURG	81.50	333.2	12	17	2						
FAYETTEVILLE	82.12	46.5	12	19A	1						
CINE	82.29	316.1	12	21	2	22	34	3			
BASLE	82.37	334.3	12	21	1				12	37	
OTTAWA	82.69	29.6	12	21	0						
SHAWINIGAN	82.70	27.2	12	22A	1						
PARIS	82.70	338.0	12	22	1						13 42
SEVEN FALLS	82.81	25.7	12	22	0						
JERUSALEM	82.90	307.8	12	24K	2						
NEUCHATEL	83.04	334.5	12	23	0	22	38	0			
BREBEUF	83.33	28.2	11	24A	-61						
CLEVELAND	83.77	35.3	12	28A	1						12 40 PCP
GARCHY	83.94	337.0	12	28A	0						
ATHENS	84.12	319.1	12	28A	-1						
CLERMONT-FD.	85.30	336.3	12	35	0						
KARAPIRO	85.32	158.7	12	37	2						
MONACO	85.80	332.7	12	37A	0						
MORGANTOWN	85.98	35.3	12	39	1						
HELWAN	86.53	309.1	12	41K	0	23	15	2			
HARVARD	86.67	28.3	12	43	2						
WESTON	86.87	28.2	12	44K	2						
CHAPEL HILL	89.49	36.6	12	57	2						
COLUMBIA	90.23	39.0	12	59	1						
ROXBURGH	91.23	165.4				24	12	16			
MALAGA	95.79	338.2	13	26A	2						16 50 PP
BERMUDA	98.14	27.7				24	11	3			26 15 PS
TAMANRASSET	105.18	324.6	14	6	1						18 22 PP
TANANARIVE	110.50	263.2	18	32	3						
ASTRIDA	112.01	288.8	19	8	37						19 18 PP
LWIRO	112.39	289.8	19	13	41						
CAPE HALLETT	117.15	172.6	18	44K	2						19 57 PP
SCOTT BASE	122.24	175.4	18	52A	1						20 35 PP
HUANCAYO	130.86	63.1	19	12	4						22 31 PKS
KIMBERLEY	132.90	269.3	19	8	-4						
BYRD STATION	133.48	166.1	19	14	1						22 39 PP
SOUTH POLE	133.93	180.0	18	59	-15						21 44 PP

GRAHAMSTOWN	134.11	262.9	19	8	-6							
LA PAZ	138.77	59.7	17	42A	-101				18	10	22	58 PKS
SANTA LUCIA	148.09	83.9									43	43 SS

NOVEMBER 13 5.H 59.M 56.S EPICENTRE 43.36 137.93 DEPTH= 25.KM

A=-0.54146 B= 0.48870 C= 0.68410 D= 0.6700 E= 0.7423
G=-0.5078 H= 0.4584 K=-0.7294 HT= -2.9

SE= 3.25

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SUTTSU	1.77	107.5	0	23	-6	0	46	-5				
MORI	2.31	122.0	0	33	-4	1	8	4				
SAPPORO	2.52	95.4	0	36	-4	1	9	-1				
HAKODATE	2.59	126.5	0	37A	-4	1	17	5				
TOMAKOMAI	2.81	106.1	0	46	2							
ASAHIGAWA	3.25	81.0	0	57	7							
AOMORI	3.30	139.1	0	47	-4	1	18	-12				
WAKKANAI	3.39	51.2				1	29	-2				
URAKAWA	3.77	107.0	1	2	5							
OBIHIRO	3.88	94.7				1	36	-8			1	8
HATINOHE	3.90	135.3	0	52	-7						1	59
AKITA	3.98	155.2	0	58	-2	1	42	-5				
HIROO	4.11	103.4	1	3	1							
MORIOKA	4.39	145.3	1	0	-6	1	47	-10				
VLADIVOSTOK	4.41	269.0	1	0	-7	1	52	-6				
ABASHIRI	4.65	79.6	1	31	21							
SAKATA	4.68	161.5	1	24	14						1	53
KUSIRO	4.75	92.3	1	8	-3	2	10	4				
MIYAKO	4.79	139.3	1	13	1						1	47
Y.-SAKHLINSK	4.94	41.6	1	21	7	2	31	20				
AIKAWA	5.34	177.3	1	29	9						3	6
YAMAGATA	5.42	159.4	1	21	0							
NIIGATA	5.50	170.7				2	19	-6				
ISINOMAKI	5.55	151.3	1	19	-4	2	6	-20				
SENDAI	5.56	155.1	1	21	-2	2	21	-5				
NEMURO	5.58	87.7	1	41	18							
HUKUSIMA	5.93	160.1	1	34	6	2	34	-2				
WAZIMA	6.02	187.9									2	22
TAKADA	6.26	177.7				3	20	36				
SHIRAKAWA	6.47	163.6	1	32	-4	2	52	3				
TOYAMA	6.67	185.1				2	54	0				
NAGANO	6.68	178.1	1	44	6						4	20
ONAHAMA	6.79	159.5	1	56	16						4	12
MATUSIRO	6.80	178.0	1	34	-6	3	16	18			2	43
UTUNOMIYA	6.96	167.0	1	57	15						3	2
MAEBASI	7.00	172.4	1	39	-4	3	9	6				
OIWAKE	7.03	175.9	1	50	7							
MATUMOTO	7.10	179.8	1	48	4							
MITO	7.24	163.5				3	3	-5				
KUMAGAYA	7.28	170.7	1	47	0							
TUKUBASAN	7.32	166.1	1	43	-4						4	33
KAKIOKA	7.33	165.6	1	50	3							
KOHU	7.73	176.1	1	54	1							
TOKYO C.M.O.	7.79	169.0	1	56	2	3	7	-15			4	24
GIHU	8.00	186.8	2	27	30							
YOKOHAMA	8.03	169.9				3	16	-12			2	50
NAGOYA	8.21	185.5	2	2	2							
MISIMA	8.26	174.2	2	1	0							
SHIZUOKA	8.38	177.4				3	41	4				
MERA	8.55	169.5	2	3	-2							
KAMEYAMA	8.57	188.1				4	15	33				
ABUYAMA	8.67	193.0	1	58A	-8							
OMAESAKI	8.75	178.4	2	12	5							
KOBE	8.92	194.8				3	58	8				
CHANGCHUN	9.17	277.3	2	10	-3	4	1	4				
HAMADA	9.59	210.3	2	22	3						5	12
PEKING	16.58	265.9	3	49K	-3							
ZO-SE	18.06	232.9	4	6	-4	7	34	6				
NANKING	18.84	239.5	4	16K	-4	7	51	6				
YAKUTSK	19.32	348.2	4	26	1	8	7	11				
PAOTOW	20.89	272.0	4	39	-3	8	32	3				
ULAN-BATOR	22.09	292.8	4	57	3	8	59	8				
TAIPEI	22.70	221.6	4	14	-46	9	3	1				

SIAN	24.27	257.8	5	15	0	9	36	6		
LANCHOW	27.09	266.1	5	42	0	10	21	5	6	33 PP
HONG KONG	28.80	230.8				10	42	-2		
CHENGTU	29.70	256.1	6	10	5	11	16	18		
LHASA	39.60	265.7	7	31	1					
SHILLONG	41.34	259.9	7	41	-4					
CHITTAGONG	43.38	256.3	8	20	19					
COLLEGE	45.32	35.3	8	16	-1					
NAMANGAN	47.99	291.1	8	37	-1					
SVERDLOVSK	48.73	314.5	8	43	-1					
QUETTA	56.77	281.9	9	39	-4					
RESOLUTE	57.16	14.6	9	44	-2					
SODANKYLA	58.11	334.9	9	52	-1					
MOSCOW	60.64	320.3	10	8	-2					
HELSINKI	63.24	329.0	10	27	-1					
TIFLIS	64.93	304.4	10	38	-1	19	19	2		
HUNGRY HORSE	68.96	42.8	11	5	1					
SHASTA	69.44	53.2	11	9	2					
MINERAL	70.13	53.0	11	16	5					
FRESNO	73.54	54.9	11	34	2					
EUREKA	73.94	50.7	11	33	-1					
PRUHONICE	74.73	326.0	11	40A	1					
JENA	75.16	328.2	11	40	-1					
PLAUEN	75.28	327.6	11	40	-2					
SALT LAKE C.	75.31	47.5	11	44	2					
KSARA	75.39	302.7	11	43	1					
PASADENA	76.29	56.0	11	48	0					
BOULDER CITY	77.01	52.7	11	52	0					
RAPID CITY	77.26	40.3	11	54	1					
STUTTGART	77.82	328.1	11	56	0					
TUBINGEN	78.06	328.1	11	57	0					
EBINGEN	78.39	327.9	11	58	-1					
DOURBES	78.40	331.4	11	59	0					
KEW	78.85	334.9	12	3	1					
BOULDER	79.28	44.2	12	6	2					
TUCSON TELE.	81.99	52.8	12	19	1				15	36 PP
TUCSON	81.99	52.9	12	19	1					
FAYETTEVILLE	87.80	39.8	12	48A	1					
KARAPIRO	87.80	151.1	12	46	-1					
SOUTH POLE	133.16	180.0	19	11	-2					
BYRD STATION	134.53	166.2	19	13	-2					
LA PAZ	145.25	47.7	19	38	3					

NOVEMBER 13 9.H 6.M 18.S EPICENTRE 9.02 -69.73 DEPTH= 0.KM

A= 0.34217 B=-0.92665 C= 0.15570 D=-0.9381 E=-0.3464
G= 0.0539 H=-0.1461 K=-0.9878 HT= 6.7

SE= 2.05

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
FUQUENE	5.30	228.6	1	22	0						1	47
GALERAZAMBA	5.73	288.3	1	29	1	2	43	7				
BOGOTA	6.13	224.9	1	29	-5	2	40	-6			2	0
CHINCHINA	7.09	235.9	1	47	0	3	5	-5				
TRINIDAD	8.26	77.9	2	4	0	3	39	0				
GRENADA	8.43	68.4	2	4	-2							
BALBOA HTS.	9.71	270.4	2	24	0							
SAN JUAN	9.95	20.3	2	24	-3	4	6	-15				
FORT FRANCE	10.14	55.1	2	27	-3	4	15	-10				
BARBADOS	10.75	66.8	2	39	1							
HUANCAYO	21.66	195.0	4	56A	2	9	6	17			11	37
LA PAZ	25.40	176.4	5	33K	3	10	18	23			6	14 PP
COLUMBIA	26.95	339.0	5	48	3							
FAYETTEVILLE	34.95	324.2	6	53	-2							
BREBEUF	36.50	355.4	7	10	1							
OTTAWA	36.62	352.9	7	10	0							
SHAWINIGAN	37.49	356.6	7	20	3							
BOULDER	44.22	320.2	8	11	-1							
TUCSON TELE.	44.43	307.5	8	14	0							
TUCSON	44.48	307.4	8	14	0							
LARAMIE	45.12	321.5	8	17	-3							
RAPID CITY	45.43	326.1	8	20	-2						10	9 PCP
SALT LAKE C.	48.87	317.4	8	50	1							
BOULDER CITY	48.95	310.4	8	51	1							

BOZEMAN	50.86	323.4	9	7	3
PASADENA	50.91	306.9	9	9	4
EUREKA	51.14	314.1	9	5	-1
RENO	53.92	312.8	9	26	-1
HUNGRY HORSE	54.01	324.8	9	28	0
LICK	54.57	309.7	9	34	2
MINERAL	55.49	313.2	9	35	-4
SHASTA	56.17	313.3	9	44	0
RESOLUTE	67.18	353.0	10	56	-2
TAMANRASSET	73.02	68.9	11	35	2
NORD	76.04	7.0	11	48	-3
COLLEGE	76.83	334.6	11	55	0
GOTEBORG	78.01	32.9	12	1	-1
SKALSTUGAN	78.42	26.9	12	4	0
PRUHONICE	79.49	40.8	12	9	-1
KIRUNA	81.78	22.5	12	25	3
SODANKYLA	84.19	22.7	12	38	4
BYRD STATION	92.41	187.7	13	12	-2
SOUTH POLE	98.96	180.0	13	43	0

NOVEMBER 13 16.H 16.M 25.S EPICENTRE 8.74 93.30 DEPTH= 0.KM

A=-0.05697 B= 0.98690 C= 0.15092 D= 0.9983 E= 0.0576
G=-0.0087 H= 0.1507 K=-0.9885 HT= 6.7

SE= 2.64

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PORT BLAIR	2.97	348.9	0	56	6	1	36	9			1	7	PG
MEDAN	7.40	133.5	1	57	5	3	22	4					
VIZIANAGRAM	13.37	315.2	4	16	62						6	34	
MADRAS	13.57	289.3	3	20A	3	6	1	12			3	29	PP
CHITTAGONG	13.62	354.2	3	27	10	6	8	17			3	39	PP
KODAIKANAL	15.69	276.7	3	49	5								
BOKARO	16.64	335.3	3	45	-12	6	46	-16					
SHILLONG	16.80	355.5	3	58A	-1	7	6	1					
HYDERABAD	16.84	302.4	3	59A	0	7	9	3					
PHU-LIEN	17.58	45.5	4	11	2						5	37	
TOCKLAI	17.97	4.3	4	14	1								
KUNMING	18.52	27.7	4	24	4	7	45	0					
CHATRA	18.91	342.9	4	25	0	7	54	1					
LHASA	20.90	354.5	4	47	0	8	30	-6			16	8	SCS
LEMBANG	21.04	136.9	4	56A	8								
POONA	21.24	299.3	4	52	2						9	25	
BOMBAY	22.28	299.1	5	4	3	9	10	8			10	3	SS
AGRA	23.32	323.6	5	12K	1	9	7	-14					
CANTON	23.88	51.0	5	17	1								
CHENGTU	23.99	23.2	5	21	3						16	21	SCS
HONG KONG	24.16	53.7	5	21A	2	9	52	17					
DEHRA DUN	25.78	328.5	5	37	2								
LAHORE	28.75	324.8	6	0	-2								
LANCHOW	28.86	17.8	6	3A	0								
SIAN	29.17	27.2	6	4A	-2	10	45	-12					
KARACHI	30.19	307.5	6	13K	-2						9	9	PCP
WARSAK DAM	32.14	324.6	6	33K	1								
QUETTA	32.59	314.5	6	38K	2	11	49	-2			7	48	PP
PAOTOW	35.03	22.5	6	56A	-1								
PEKING	37.24	29.5	7	15	-1								
NAMANGAN	37.41	332.6	7	18	1								
ULAN-BATOR	40.71	14.0	7	44	0								
CHANGCHUN	44.70	33.0	8	16A	-1								
MATUSIRO	49.22	48.7	8	51K	-1	15	44	-14			10	41	PP
SVERDLOVSK	54.30	338.6	9	29	-2								
TRUK	57.93	86.6	9	58	1								
JERUSALEM	58.39	301.9	9	59A	-1						10	27	
CHARTERS TS.	59.42	119.3	10	5	-2						14	45	
RABAUL	60.08	99.9	10	11	-1						10	57	PCP
ADELAIDE	61.04	138.0	10	17K	-1								
HELWAN	61.43	299.2	10	20	-1						10	48	
SIMFEROPOL	62.23	316.4	10	24	-2								
ASTRIDA	64.36	262.9	10	42	2								
CINE	65.11	307.4	10	42	-3								
LWIRO	65.21	263.5	10	48	2								
TIKSI	66.54	11.6	10	50	-4								
CANBERRA	68.36	133.4	11	3K	-3								

ATHENS	68.59	307.3	10 57	-10	
LWOW	70.03	319.9	10 13	-63	
APATITY	70.74	339.4	11 16K	-4	
HELSINKI	71.75	330.7	11 24	-2	
SODANKYLA	73.10	338.2	11 33	-1	
KHEYS	73.86	353.2	10 35	-64	
UPPSALA	75.30	329.6	11 45K	-2	
KIRUNA	75.52	338.0	11 47	-1	
KIMBERLEY	75.78	237.5	10 51A	-59	
GRAHAMSTOWN	75.85	232.5	10 50K	-60	
PRUHONICE	76.13	319.3	11 51	-1	15 9
COLLMBERG	77.17	320.6	11 56	-2	
PLAUEN	77.69	319.8	12 23	22	
GOTEBORG	78.03	327.1	11 55	-3	
JENA	78.06	320.2	12 2	-1	
SKALSTUGAN	78.23	333.2	12 1	-3	
STUTTGART	79.61	318.0	12 10	-1	
WINDHOEK	80.78	245.4	11 19K	-58	
NEUCHATEL	81.20	316.3	12 38	18	
DOURBES	82.54	319.5	12 49	23	
NORD	84.28	352.0	12 32K	-3	
TAMANRASSET	84.64	292.1	12 38	1	12 44 PCP
ONERAHI	87.88	126.5	12 50	-3	
KARAPIRO	89.23	128.4	13 29	29	
SCORESBY SD.	89.98	342.3	13 3	0	
COLLEGE	93.86	22.0	13 19	-2	17 7 PP
SCOTT BASE	95.04	168.2	13 25A	-1	
RESOLUTE	96.58	2.2	13 32K	-1	
SOUTH POLE	98.68	180.0	13 45	2	17 46 PP
SHAWINIGAN	123.57	348.5	19 0	0	
EUREKA	124.88	27.5	19 3	0	20 53 PP
RAPID CITY	125.34	14.5	19 3	-1	
TUCSON TELE.	133.16	28.2	19 20	2	22 39 PP
TUCSON	133.18	28.4			22 39 PP
FORT FRANCE	145.57	312.4	19 41	0	
SAN JUAN	146.26	323.1	19 43	1	
ST. VINCENT	146.66	310.5			19 46 PKP2
GRENADA	147.71	309.4			19 48 PKP2
TACUBAYA	149.45	23.7	19 36	-11	
LA PAZ	160.32	245.1	20 45A	43	
HUANCAYO	168.35	252.6	20 12	3	21 21 PKP2

NOVEMBER 13 18.H 34.M 31.S EPICENTRE 44.29 148.30 DEPTH= 63.KM

DEPTH OF FOCUS= 0.005R

A=-0.61105 B= 0.37740 C= 0.69583 D= 0.5255 E= 0.8508
G=-0.5920 H= 0.3656 K=-0.7182 HT= -3.3

SE= 3.07

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
NEMURO	2.19	245.0	0 31K	-4	0 55	-6		
ABASHIRI	2.91	266.1	0 47	2	1 27	8		
KUSIRO	3.12	246.6	0 45	-3	1 19	-5		
OBIHIRO	3.95	251.5	0 58	-2	1 45	0		1 16
HIROO	4.15	242.8	1 0	-2	1 47	-3		
ASAHIGAWA	4.31	265.3	1 6	1				
URAKAWA	4.56	244.0	1 8	0	1 59	-2		
Y.-SAKHLINSK	4.73	306.2	1 11	0	2 14	9		
SAPPORO	5.19	258.8	1 17	0	2 18	2		
TOMAKOMAI	5.20	252.5	1 22	5	2 13	-4		
MURORAN	5.69	252.5	1 22	-2	2 24	-5		2 43
SUTTSU	6.05	258.6	1 36	7				
MORI	6.06	251.5	1 32	3	2 40	2		
HAKODATE	6.09	248.3	1 29	0	2 48	9		2 24
HATINOHE	6.26	235.5	1 29	-3	2 33	-10		
AOMORI	6.54	240.6	1 41	5	2 48	-2		
MIYAKO	6.61	227.7						2 36
MORIOKA	7.01	231.6	1 38	-4	2 55	-6		
AKITA	7.62	236.0	1 56	5	3 11	-5		
ISINOMAKI	7.86	224.3	1 49	-5	3 8	-14		
SENDAI	8.19	225.3			3 17	-13		
SAKATA	8.32	232.6	2 6	6	3 33	-1		
HUKUSIMA	8.81	224.8	2 7	0	3 36	-10		
SHIRAKAWA	9.42	223.3			3 48	-13		

MITO	9.90	219.8				3	56	-16				
UTUNOMIYA	10.05	222.6				4	1	-15				
KAKIOKA	10.16	220.4	2	14	-11	3	58	-21				
TUKUBASAN	10.20	220.6	3	20	54	4	6	-14				
MAEBASI	10.56	224.9				4	20	-8				
KUMAGAYA	10.60	223.0	2	31	0	4	18	-11				
TOKYO C.M.O.	10.81	220.2				4	20	-14				
OIWAKE	10.88	226.4				4	27	-9				
MATUSIRO	10.89	228.2	2	30A	-5	4	23	-13				
YOKOHAMA	11.06	219.8				4	30	-10				
MATUMOTO	11.25	228.0	3	12	32							
KOHU	11.41	224.1	2	47	5	4	41	-8				
MISIMA	11.64	221.3				4	35	-19				
VLADIVOSTOK	11.93	270.1	2	47	-2							
YAKUTSK	20.83	335.0	4	37	-1	8	24	2				
ULAN-BATOR	28.69	292.1	6	53	60							
COLLEGE	40.16	36.5	7	33	2							
KHEYS	47.79	346.5	8	24	-9							
SHILLONG	48.90	267.0	8	42A	1							
RESOLUTE	54.22	17.0	9	20	-1							
NAMANGAN	54.53	295.2	9	24	0							
THULE	57.32	9.6	9	40	-4							
LAHORE	57.88	284.3	9	45	-3	17	41	0				
WARSAK DAM	58.39	288.3	9	50	-1							
SODANKYLA	60.28	337.7	10	4	0							
SHASTA	62.71	58.8	10	21	1							
HUNGRY HORSE	62.97	47.9	10	23	1							
QUETTA	63.79	287.4	10	27	-1							
CHARTERS TS.	64.01	182.1	10	27	-2							
EUREKA	67.35	56.6	10	51	1							
PASADENA	69.38	62.2	11	4	1						11	27
BOULDER CITY	70.29	58.8	11	10	2							
RAPID CITY	71.45	46.1	11	17	2							
TUCSON TELE.	75.25	59.2	11	38	0				11	52		
COLLMBERG	77.23	333.1	11	49	0							
PRUHONICE	77.83	331.5	11	53A	1						13	9
JENA	78.00	333.7	11	53	0							
BENSBERG	79.32	336.2	12	1	1							
STUTTGART	80.64	334.0	12	9	2							
KEW	80.83	340.7	12	10	2							
TUBINGEN	80.89	333.9	11	59	-10							
KSARA	80.94	308.8	12	16	7							
EBINGEN	81.23	333.8	12	11	1							
BREBEUF	83.18	28.2	12	20	0							
SCOTT BASE	122.39	175.4									21	8 PP
BYRD STATION	133.62	166.1	19	11	2							
SOUTH POLE	134.09	180.0	19	2	-8				19	25	21	33 PP

NOVEMBER 14 5.H 4.M 25.S EPICENTRE -36.10-102.64 DEPTH= 0.KM

A=-0.17715 B=-0.79024 C=-0.58663 D=-0.9758 E= 0.2187
G= 0.1283 H= 0.5724 K=-0.8099 HT= -0.3

SE= 2.07

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
CONCEPCION	24.56	100.8				9	23	-18				
SANTA LUCIA	26.33	93.6				10	18	7				
HUANCAYO	34.35	52.7	6	51A	1	12	26	8			8	13 PP
LA PAZ	36.31	66.6	7	9A	2	12	57	9			15	45 SS
BYRD STATION	44.54	184.1	8	16	1	14	13	-38				
CHINCHINA	48.06	37.5	8	39	-4	15	52	11				
BOGOTA	48.54	39.5	8	48	1	15	56	8			10	39 PP
FUQUENE	49.44	39.3	8	51	-3	16	13	12				
SOUTH POLE	54.08	180.0	9	28	0							
SCOTT BASE	55.15	195.0	9	39	3						10	22 PCP
CAPE HALLETT	55.17	201.9	9	37K	1	17	28	9			10	57 PCP
TACUBAYA	55.29	3.9	9	39	2	17	24	3			26	45
KARAPIRO	63.26	241.2	10	30	-2							
ROXBURGH	64.09	231.3				19	43	29				
ONERAHI	65.06	242.9	10	43	-1							
TUCSON	68.43	352.5	11	3	-3							
TUCSON TELE.	68.50	352.6	11	5	-1							
SUVA	70.77	261.2				20	31	-3				
PASADENA	71.38	346.4	11	25	1	20	42	0				

FAYETTEVILLE	72.25	7.2	11	27	-2						
COLUMBIA	72.60	18.7	11	48	17						
BOULDER CITY	72.61	349.7	11	32	1						
FRESNO	74.23	345.7	11	42	2						
WILKES	74.86	193.3	11	43	-1	21	22	1			
LICK	75.17	344.4	11	48	2						
BERKELEY	75.81	344.1	11	51	1						
EUREKA	76.21	349.4	11	53	1						
BERMUDA	76.84	32.3	11	51	-4	21	35	-8			
RENO	76.92	346.4	11	58	2						
MIRNY	76.97	186.4				21	52	8			
MINERAL	78.05	345.3	12	3	1						
SHASTA	78.55	344.8	12	2	-3						
RAPID CITY	79.81	359.6	12	14	2						
BUTTE	82.23	353.0	12	22	-2						
CANBERRA	82.59	231.5	12	25	-1						
HUNGRY HORSE	84.69	352.4	12	35	-2						
OTTAWA	84.69	18.7	12	42	5						
BRISBANE	84.77	239.8	12	37K	0					28	49 SS
BREBEUF	85.35	20.0	12	40K	0						
SHAWINIGAN	86.55	20.1	12	46	0						
RESOLUTE	110.62	2.2				26	52	97		34	5 SS
TAMANRASSET	117.31	80.7	18	51	4						
STUTTGART	129.73	53.0	19	15	4						
SODANKYLA	137.67	26.4	19	33	7						
JERUSALEM	144.97	84.6	19	39K	0						
KSARA	146.11	81.5	19	45	4						
QUETTA	169.46	121.1	20	15	6					21	25 PKP2
WARSAK DAM	174.79	112.0	20	11	0						

NOVEMBER 14 5.H 34.M 58.S EPICENTRE 44.28 148.91 DEPTH= 35.KM

DEPTH OF FOCUS= 0.000R

A=-0.61511 B= 0.37093 C= 0.69574 D= 0.5164 E= 0.8563
G=-0.5958 H= 0.3593 K=-0.7183 HT= -3.3

SE= 2.78

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
GORNY	1.15	304.3	0	20	0	0	35	0				
REIDOVOE	1.17	328.0	0	20	0							
NEMURO	2.59	249.7	0	38K	-3	1	4	-7				
ABASHIRI	3.34	267.2	0	52	1	1	32	2				
KUSIRO	3.52	249.9	0	53K	-1	1	31	-4				
OBIHIRO	4.36	253.8	1	5K	-1	1	52	-4				
HIROO	4.54	245.8	1	7A	-1	1	59	-2				
ASAHIGAWA	4.74	266.2	1	18	7	2	13	7			1	35
URAKAWA	4.96	246.7	1	13	-1	2	10	-1				
Y.-SAKHLINSK	5.10	303.8	1	14	-2						2	16
RUMOE	5.26	268.9	1	17	-1							
WAKKANAI	5.27	285.0	1	23	5							
SAPPORO	5.61	260.2	1	23K	0	2	26	-2				
TOMAKOMAI	5.62	254.3	1	26	3							
MURORAN	6.11	254.2	1	30	0	2	36	-4				
MORI	6.47	253.2	1	37	2	2	48	-1				
SUTTSU	6.48	259.8	1	37	1	3	1	12				
HAKODATE	6.50	250.2	1	32K	-4	2	41	-9			3	4
HATINOHE	6.62	238.1	1	34	-4	2	45	-8				
UGLEGORSK	6.72	318.0	1	44	5	3	6	11				
AOMORI	6.93	242.9	1	40	-2	2	57	-3				
MIYAKO	6.94	230.6	1	36	-6	2	50	-11				
MORIOKA	7.36	234.2	1	43	-5	3	0	-11				
MIZUSAWA	7.77	231.2	1	51	-2	3	9	-12				
AKITA	7.98	238.2	1	55	-2	3	10	-17				
SEVERO-KUR.	8.03	34.7	1	57	0	3	30	2				
ISINOMAKI	8.17	226.9	1	54	-5	3	18	-13				
SENDAI	8.51	227.9	1	58	-6	3	26	-14				
SAKATA	8.67	234.8	2	4	-2	3	39	-5				
YAMAGATA	8.82	229.9	2	6	-2	3	37	-10				
HUKUSIMA	9.12	227.2	2	10	-2	3	48	-7				
ONAHAMA	9.52	222.5	2	10	-8	3	51	-14			2	32
SHIRAKAWA	9.73	225.6	2	23	2	4	4	-6				
NIIGATA	9.78	232.9	3	2	41						4	16
AIKAWA	10.18	235.8	2	24	-3	4	8	-13				

MITO	10.18	222.1	2	26	-1	4	8	-13			
UTUNOMIYA	10.34	224.8	2	29	0	4	11	-14			
TUKUBASAN	10.49	222.9	2	24	-7	4	13	-15			
TYOSI	10.54	218.6	2	26	-6						
TAKADA	10.81	232.1	2	34	-1						
MAEBASI	10.87	227.0	2	31	-5	4	34	-4			
KUMAGAYA	10.90	225.1	2	34	-3	4	26	-13			
PETROPAVLOVK	10.94	32.5	2	43	6						
TOKYO C.M.O.	11.09	222.4				4	30	-13		3	18
TITIBU	11.19	225.5	2	48	7						
OIWAKE	11.20	228.4	2	45	4						
MATUSIRO	11.22	230.2	2	36K	-5	4	34	-12			
YOKOHAMA	11.34	221.9	2	52	9	4	40	-9			
MATUMOTO	11.57	229.9	2	46	0						
MERA	11.67	219.9	2	55	8						
TOYAMA	11.69	233.6	2	52	5						
HUNATU	11.72	225.0	2	56	8	4	47	-11			
KOHU	11.72	226.0	2	46	-2	4	46	-12			
MISIMA	11.93	223.3	2	53	2	4	51	-13			
SHIZUOKA	12.32	224.6				5	5	-8		5	41
VLADIVOSTOK	12.37	270.5	2	55	-2					5	11
HUKUI	12.68	233.9	3	4	3						
OMAESAKI	12.70	224.1	3	16	15	5	20	-2			
GIHU	12.86	230.5	3	1	-2					5	29
NAGOYA	12.92	229.3	3	14	10	5	22	-5			
IBUKISAN	13.09	231.5	3	5	-1						
HIKONE	13.24	231.5	3	7	-1						
KAMEYAMA	13.43	229.7	3	21	10						
ABUYAMA	13.92	232.1	3	13A	-4						
KOBE	14.28	232.5				5	18	-42			
SUMOTO	14.68	232.3	3	32	5	5	59	-10		3	55
TOKUSIMA	15.06	232.3	3	36	4						
MAGADAN	15.34	3.6	3	40	4						
MUROTO	15.89	231.1	3	45	2						
HAMADA	15.98	239.9	3	50	6	6	46	6			
KOTI	16.04	233.3	3	46	1	6	49	8			
HIROSIMA	16.11	237.7	3	44	-2					6	56
SIMIDU	16.92	232.7	4	0	4	7	11	10			
CHANGCHUN	16.96	276.7	3	54	-2	6	58	-4			
OOITA	17.39	236.5	4	7	6	7	26	14			
HUKUOKA	17.88	239.6	4	13	5	7	36	13			
SAGA	18.17	239.0	4	31	20						
NAGASAKI	18.79	238.6	4	22	3						
YAKUSIMA	20.05	232.7	4	35	2	8	19	8			
PEKING	24.54	271.5	5	17A	-1	9	31	-2		5	52 PP
ZO-SE	25.45	248.3	5	29	3	9	53	5			
NANKING	26.48	252.8				10	11	6			
PAOTOW	28.75	276.3	5	57A	1	10	41	-1			
ULAN-BATOR	29.09	292.2	6	37	37						
TIKSI	29.10	347.1	5	55	-5	10	38	-10			
SIAN	32.26	265.8	6	27	-1	11	33	-4			
LANCHOW	35.04	272.3	6	52A	0	12	19	-2			
HONG KONG	35.99	243.9	7	3	3	12	37	2			
BAGUIO CITY	36.65	229.7	7	5	0						
TRUK	36.76	175.1	7	7	1						
CHENGTU	37.68	264.3	7	17	3	13	2	1			
MANILA	37.96	227.5	7	15	-1	13	4	-1			
KOROR	38.90	203.2								10	23
COLLEGE	39.91	36.5	7	32	0	13	37	2			
KUNMING	41.96	258.4	7	49	0	14	3	-2			
LHASA	47.55	272.4	8	36	2	15	29	3			
KHEYS	47.90	346.5								10	5 PCP
RABAUL	48.35	175.6	8	40	0						
SHILLONG	49.34	267.5	8	45	-3						
CHITTAGONG	51.36	264.2	9	3	0	16	21	2			
FRUNSE	52.10	296.2	9	7	-2						
SVERDLOVSK	53.63	317.0	9	17	-3						
RESOLUTE	54.10	17.1	9	21	-3						
TASHKENT	56.29	297.0	9	39	-1	17	27	2			
DEHRA DUN	56.42	281.3	9	52	12	17	27	0			
THULE	57.26	9.8	9	44	-2						
LAHORE	58.31	284.7	9	53	-1	17	50	-2			
AGRA	58.32	278.3	9	52A	-2	17	51	-1			
APATITY	58.42	336.0	9	35K	-20					28	40
WARSAK DAM	58.81	288.6	9	56	-1						
MEDAN	59.88	242.5	9	35	-30						
SODANKYLA	60.46	337.9	10	7	-2				10	20	
KIRUNA	61.70	340.3	10	14	-3						
SHASTA	62.33	59.1	10	22K	1				10	34	

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

HUNGRY HORSE	62.65	48.2	10 24	1					39 37 PKPPKP
MINERAL	63.03	59.0	10 25K	-1			10 37		
CHARTERS TS.	64.02	182.8	10 31	-1					
BERKELEY	64.09	61.6	10 33	0			10 44		
QUETTA	64.21	287.8	10 33	-1	19 8	1			12 52 PP
RENO	64.61	58.8	10 36K	0			10 48		
PULKOVO	64.78	330.6	10 35	-2					
LICK	64.81	61.7	10 38K	1			10 49		
BUTTE	64.86	49.6	10 37	-1					
ASHKABAD	65.13	299.4	10 38A	-2					
HELSINKI	66.29	333.1	10 46	-1					
FRESNO	66.32	61.2	10 47K	0			10 59		
KARACHI	66.86	284.0	10 52	1					
EUREKA	66.99	56.9	10 51	0					
SKALSTUGAN	67.13	340.5	10 50	-2					
BOMBAY	67.20	274.5	10 53	0	19 46	3			19 59 PS
AFIAMALU	68.07	138.4	10 59	1					
SALT LAKE C.	68.59	53.6	11 2	1					
UPPSALA	68.82	336.0	11 0	-3					16 39
PASADENA	69.00	62.5	11 3	-1			11 15		
BOULDER CITY	69.92	59.1	11 10	0					
TIFLIS	70.72	309.7	11 15	1					
RAPID CITY	71.14	46.5	11 17	0					
GORIS	71.35	307.2	11 18	0					20 36 PS
BRISBANE	71.51	176.1	11 19	0					13 17
LARAMIE	71.77	49.8	11 20	-1					
SIDA	71.79	353.9	11 23	2					
GOTEBORG	72.23	337.4	11 23K	0					12 4
COPENHAGEN	73.83	336.0	11 33	0					
WARSAW	73.90	329.7	11 23	-10	20 37	-24			
SIMFEROPOL	73.98	317.9	11 32A	-2					
LWOW	74.69	326.6	11 38	0					12 1
TUCSON	74.87	59.7	11 40	1					
TUCSON TELE.	74.87	59.6	11 39	0					
IASI	75.28	323.0	11 41	0					
KRAKOW	76.08	328.9	11 45	-1	21 23	-2			12 21
POTSDAM	76.48	333.9	11 48	0					
SKALNATE PL.	76.67	328.2	10 47	-62					
COLLMBERG	77.43	333.4	11 53	0			12 4		
HALLE	77.59	334.1	11 51	-3					12 12
PRAGUE	78.01	332.0	12 2	5					13 7
PRUHONICE	78.05	331.8	11 59	2					
BUCHAREST	78.09	322.0	10 59	-58					
DURHAM	78.18	343.0	11 57K	-1					
JENA	78.20	334.0	11 57	-1					
BRATISLAVA	78.68	329.4	12 1	1					22 22
CANBERRA	79.22	179.9	12 3K	0					
ADELAIDE	79.38	188.5	12 4K	0					
BENSBERG	79.50	336.5	12 4	-1					
UCCLE	80.42	338.1	12 11	1	22 14	2			
RATHFARNHAM	80.49	345.2	12 6K	-4			12 25		
STUTTGART	80.84	334.3	12 12K	0					13 27
KEW	80.98	341.1	12 13K	0	22 20	2			
TUBINGEN	81.09	334.3	12 13	0			12 27		
KSARA	81.29	309.2	12 16	2	22 24	3	12 48		15 26 PP
EBINGEN	81.43	334.2	12 15	0					
STRASBOURG	81.45	335.1	12 14	-1			12 28		13 40
FAYETTEVILLE	81.68	46.9	12 16	0					
MELBOURNE	81.81	183.2	12 18	1					
OTTAWA	82.32	30.0	12 19K	-1					
SHAWINIGAN	82.34	27.6	12 20	0					
BASLE	82.44	334.7	12 21	1					
SEVEN FALLS	82.47	26.1	12 21	1					
PARIS	82.74	338.4	12 24K	2					13 30
BREBEUF	82.98	28.6	11 22	-61					
NEUCHATEL	83.11	334.9	12 23	-1					
JERUSALEM	83.17	308.2	12 22	-2					
KARAPIRO	85.29	159.2	12 36	1			12 49		
MORGANTOWN	85.58	35.7	12 37K	1					17 23 PPP
WESTON	86.51	28.6	12 42K	1					
HELWAN	86.80	309.5	12 43K	1	23 19	4			
COLUMBIA	89.82	39.5	12 57	1					
GEBBIES PASS	90.12	163.0	12 58	0					
TAMANRASSET	105.32	325.2	14 14	777					16 59
SAN JUAN	109.91	35.4	17 19	777					
SCOTT BASE	122.35	175.6	18 52	0					
BYRD STATION	133.51	166.1	19 13	0					22 42 PP
SOUTH POLE	134.09	180.0	19 12	-2					21 39 PP

NOVEMBER 14 5.H 46.M 30.S EPICENTRE 14.41 -91.59 DEPTH= 76.KM

DEPTH OF FOCUS= 0.007R

A=-0.02680 B=-0.96856 C= 0.24732 D=-0.9996 E= 0.0277
G=-0.0068 H=-0.2472 K=-0.9689 HT= 5.9

SE= 1.99

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
COMITAN	1.90	344.0	0 31	-1	0 53	-2		
SAN SALVADOR	2.38	106.2	0 38A	0	1 7	0		
SANTIAGO MA.	3.16	106.5	0 49	0	1 33	7		
OAXACA	5.63	298.1	1 20	-3	2 30	3		
VERA CRUZ	6.45	318.2	1 35	0	2 55	7		2 26
MERIDA	6.77	15.8	1 42A	3	3 12	17		3 43
PUEBLA	7.83	306.8	1 55	1	3 29	7		
TACUBAYA	8.81	305.3	2 6K	-1	3 48	2		
GUADALAJARA	12.81	300.8						6 9 SS
BALBOA HTS.	12.96	113.4	2 40	-23				
MANZANILLO	13.05	292.4			5 32	4		
CHINCHINA	18.31	119.3	4 10	0	7 41	12		
CHIHUAHUA	19.52	318.8						4 58
FUQUENE	19.69	115.0	4 32	6				
BOGOTA	19.81	117.7	4 26	-1	8 15	14		
FAYETTEVILLE	21.71	354.3	4 49	2				
COLUMBIA	21.72	24.3	4 48	1			4 53	5 39
TUCSON TELE.	24.97	318.9	5 19	1				12 28 SCP
TUCSON	24.98	318.6	5 19	1	10 0	26	5 45	12 29 SCP
BOULDER	28.21	337.3	5 49	1				
CLEVELAND	28.35	16.0	5 49K	0				
PENNSYLVANIA	28.89	21.9	6 8	14				7 7 PP
LARAMIE	29.43	338.2	6 1	2				13 15
BOULDER CITY	29.91	320.1	6 4	1				9 18 PCP
BERMUDA	30.35	49.3	5 59	-8				
HUANCAYO	30.83	147.7	6 10	-1				7 23 PP
PASADENA	31.04	314.0	6 13	0				
RAPID CITY	31.19	343.7	6 16	2			6 42	
SALT LAKE C.	31.65	329.9	6 14	-4				
EUREKA	32.90	324.0	6 31	2				12 53 SCP
FRESNO	33.59	316.7	6 35K	0				
OTTAWA	33.68	20.3	6 35K	-1				
BREBEUF	34.51	22.5	6 42A	-1			6 59	
LICK	35.14	316.1	6 50K	2			7 6	9 18 PCP
RENO	35.22	320.6	6 50K	1			7 7	
SHAWNIGAN	35.73	22.4	6 54	1			7 10	
BERKELEY	35.83	316.4	6 54	0			7 11	9 20 PCP
BUTTE	36.12	335.0	6 58	1				
MINERAL	36.80	320.3	7 3K	0				
SEVEN FALLS	36.92	23.8	7 2	-2				
SHASTA	37.50	320.2	7 7K	-1				9 25 PCP
LA PAZ	38.47	142.1	7 16	0			7 41	16 10 SS
HUNGRY HORSE	38.59	335.9	7 18	1				9 28 PCP
VICTORIA	42.94	329.0	7 52K	-1				
HORSESHOE B.	43.45	330.0	7 58A	1				
ALBERNI	44.13	329.0	8 4	1				
RESOLUTE	60.29	359.0	10 0	-3				10 47 PCP
COLLEGE	63.02	336.5	10 20	-2			10 57	10 37 PCP
THULE	63.22	6.0	10 22	-1				
SKALSTUGAN	83.26	25.9	12 19	-1			12 35	
KIRUNA	84.78	20.7	12 44	17				
STRASBOURG	85.39	41.1	12 46	15			12 59	
STUTTGART	86.24	40.6					12 51	
SODANKYLA	87.09	20.0	12 37	-2			12 54	
TAMANRASSET	90.88	66.3	12 55	-2			13 30	13 44 *SP
SOUTH POLE	104.32	180.0	14 3	6				18 41 PP
CHARTERS TS.	124.68	255.5	18 52	1			19 10	
QUETTA	131.08	24.9	19 5	1				22 25 PKS
SHILLONG	140.12	355.1	19 15	-5				
TANANARIVE	140.66	102.3						19 41 PKP2

NOVEMBER 14 13.H 48.M 31.S EPICENTRE -6.38 131.31 DEPTH= 73.KM

DEPTH OF FOCUS= 0.006R

A=-0.65610 B= 0.74657 C=-0.11032 D= 0.7512 E= 0.6601
G= 0.0728 H=-0.0829 K=-0.9939 HT= 6.9

SE= 2.40

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KOROR	13.98	13.1	3	14	-1								
CHARTERS TS.	19.86	134.4	4	25K	-2	8	1	-1					
RABAUL	20.88	85.1	4	36	-2	8	29	8					
MANILA	23.20	333.9	5	2	1	9	11	8					
LEMBANG	23.54	267.5	5	0	-4	9	0	-9					
GUAM	23.81	34.1	5	4	-2								
DJAKARTA	24.33	269.1	5	7K	-5	9	18	-5					
TRUK	24.68	56.4	5	13	-2	9	30	1					
BAGUIO CITY	25.01	335.0	5	17	-1	9	31	-3					
ADELAIDE	29.23	167.5	5	57K	0	10	49	6	6	19			
PERTH	29.27	207.7	6	0	3	10	46	3			6	55	PP
BRISBANE	29.43	138.0	5	56	-2	10	43	-3					
TAWU	30.31	340.6	6	12	6								
HWALIEN	31.61	342.9	6	36	18								
RIVERVIEW	32.93	148.7	6	31	2	11	41	0					
HONG KONG	33.08	330.0	6	30	0	11	39	-4					
CANBERRA	33.09	152.9	6	29	-1	13	11	88			8	36	
MELBOURNE	33.68	160.3	6	35	-1	11	53	1			7	41	PP
MEDAN	34.05	286.0	6	38	-1	12	7	9					
CANTON	34.17	329.5	6	38	-2	11	55	-5			7	15	*SP
PHU-LIEN	36.29	318.7	6	57	-1	12	28	-5					
YAKUSIMA	36.62	358.8	7	1	0								
NOUMEA	37.41	118.7	7	7A	0	12	49	-1			7	45	
KAGOSIMA	37.74	358.9	7	17	7						10	10	
ZO-SE	38.50	346.0	7	15K	-1	13	3	-3	7	39	8	46	PP
NAGASAKI	38.91	358.1	7	18	-2								
SIMIDU	38.97	2.2	8	4	44						13	12	
HUKUOKA	39.74	358.8				13	19	-6			16	27	
KOTI	39.76	2.9	7	27	0	13	24	-1			7	58	
NANKING	40.03	343.4	7	29K	0	13	27	-2			9	7	PP
TOKUSIMA	40.34	4.2	7	31	-1								
OWASE	40.49	6.3	7	33	0	13	33	-3					
HIROSIMA	40.54	1.4	7	31	-2	13	33	-4					
TAKAMATU	40.56	3.5	7	35	2								
KOBE	41.00	4.9				13	41	-2			8	21	
NARA	41.06	5.7	7	40	3								
HAMADA	41.06	1.0	7	39	2	13	44	0					
ABUYAMA	41.22	5.3	7	37K	-2	13	44	-3					
KAMEYAMA	41.29	6.4	7	40	1	14	7	19			10	0	
NAGOYA	41.67	7.0	7	44	2						9	4	
HIKONE	41.68	6.1	7	44	1								
IBUKISAN	41.81	6.2	7	46	2	13	54	-1					
KUNMING	41.86	319.4	7	46K	2	13	55	-1			9	29	PP
GIHU	41.87	6.7	7	46	2	13	52	-4					
HUNATU	42.24	9.1	7	48	1								
KOHU	42.34	8.8	7	48	0								
PORT BLAIR	42.37	294.9	7	50	2	14	3	-1			9	58	PPP
TOKYO C.M.O.	42.58	10.2	7	52	2	13	55	-12					
MATUMOTO	42.86	7.9	7	53	1								
KUMAGAYA	42.97	9.6	7	57	4								
OIWAKE	43.02	8.6	8	0	7								
TUKUBASAN	43.17	10.4	7	50	-5	14	3	-12					
MAEBASI	43.17	9.2	7	58	3								
MATUSIRO	43.19	8.1	7	52K	-3	14	9	-7			10	26	PPP
TOYAMA	43.20	6.9									8	23	
KAKIOKA	43.20	10.5	7	56	1								
NAGANO	43.30	8.1	7	53	-3	14	3	-14			9	37	PP
MITO	43.39	10.8	7	56	0								
UTUNOMIYA	43.45	10.0	7	57	0								
ONAHAMA	44.02	11.1	8	12	10								
SHIRAKAWA	44.06	10.3	8	3	1								
HUKUSIMA	44.72	10.3	8	9	2	14	34	-4					
CHENGTU	45.16	326.1	8	14K	3	14	42	-2			9	56	PP
SENDAI	45.30	10.6	8	11	-1	14	43	-3			8	47	
ISINOMAKI	45.54	11.0	8	13	-1								
SIAN	45.62	333.8	8	13K	-1	14	47	-4	8	34	18	2	SS
MIZUSAWA	46.18	10.6	8	19	0	14	55	-4					
AKITA	46.58	9.3	8	21	-1	15	2	-2					
MORIOKA	46.74	10.5	8	22	-1	15	2	-5					

TIENSHUI	47.35	331.1	8	28	0							
SUVA	47.37	108.7	8	43	15	15	12	-4			10	52 PPP
CHITTAGONG	48.06	307.7	8	15	-19	15	0	-25			10	3 PP
PEKING	48.24	344.4	8	34K	-1	15	25	-3	9	1	10	22 PP
TOCKLAI	48.34	314.6	8	38	2	15	31	2				
HAKODATE	48.69	9.4	8	35	-3							
MORI	48.98	9.1	8	46	5							
ONERAHI	49.10	132.7	8	41	-1							
VLADIVOSTOK	49.26	0.6	8	41	-2	15	40	-2			9	15
LANCHOW	49.49	330.5	8	44K	-1	15	44	-1	9	6	16	8 PS
TOMAKOMAI	49.55	10.0	8	59	14							
SHILLONG	49.77	311.3	8	46A	-1	15	40	-9			10	46 PP
SAPPORO	50.05	9.6	8	49	0							
CHANGCHUN	50.26	354.4	8	48K	-2	15	53	-3	9	16	10	9 PCP
YINCHUAN	50.32	334.4	8	53	2							
KAIMATA	50.49	141.9	9	19	27							
KUSIRO	50.54	12.4	8	53	0							
PAOTOW	50.66	339.1	8	53	0	16	0	-1				
KARAPIRO	50.89	134.7	8	54	-1				9	12		
SINING	50.93	329.3	8	57	1							
ROXBURGH	51.05	146.2				16	7	0				
NEMURO	51.14	13.4	8	54	-3							
TONGARIRO	51.47	136.2	9	3	3				9	24		
WUWEI	51.53	331.0	9	1	1							
GEBBIES PASS	51.89	142.5	9	2	-1				9	24		
WELLINGTON	51.96	138.8	9	7	4	16	11	-8				
TUAI	52.42	135.0	9	23	16							
LHASA	52.70	315.0	9	10K	1	16	29	0	9	32	11	14 PP
COLOMBO	52.99	283.5	8	59	-12	16	29	-4				
BOKARO	53.59	305.7	8	59	-16	16	19	-22				
CHATRA	54.00	309.7	9	14	-4	16	37	-10				
Y.-SAKHLINSK	54.05	9.6	9	16	-3	16	44	-4				
MADRAS	54.32	290.9	9	23	2	16	51	0			11	6 PP
KODAIKANAL	56.10	286.8	9	32K	-2	17	14	-1				
YUMEN	56.15	328.7	9	35	1							
AFIAMALU	56.42	102.4	9	39	3				9	59		
HYDERABAD	57.31	295.3	9	42A	0	17	29	-2			11	54 PP
ULAN-BATOR	58.19	340.9	9	46	-2	17	41	-1				
AGRA	61.35	305.5	10	9A	-1	18	31	8			12	31 PP
WILKES	61.46	189.4	10	5	-6	18	28	3			14	7 PPP
DEHRA DUN	62.70	308.8	10	20	1	18	36	-4			14	9 PPP
IRKUTSK	62.79	341.7	10	19	-1	18	44	3	10	42		
BOMBAY	62.85	294.9	10	21	1	18	40	-2			13	21
PETROPAVLOVK	63.64	18.0	10	22	-3	18	50	-2				
MIRNY	65.59	195.8	10	39	1	19	17	1	10	59	20	19 SCS
LAHORE	66.11	308.5	10	40	-1	19	16	-6				
MAGADAN	67.53	10.6	10	50	0	19	39	0				
WARSAK DAM	69.24	309.9	11	3A	2							
CAPE HALLETT	70.04	168.2	11	9	3	20	15	6			11	34 PCP
KARACHI	70.06	300.3	11	5A	-1	20	6	-3				
FRUNSE	70.97	319.5	11	11K	0	20	20	0				
QUETTA	71.50	304.6	11	15A	1	20	25	-1			13	47 PP
SEMIPALATNSK	71.64	328.4	11	14	-1	20	26	-2			21	7 PS
SCOTT BASE	73.78	172.7	11	30A	2	20	57	5			14	21 PP
TASHKENT	73.83	316.2	11	30	2	20	53	1			21	47 PS
HONOLULU	74.45	65.9	11	30	-2							
KIPAPA	74.55	65.8	11	32	0				12	6		
TIKSI	77.86	359.2	11	48	-3	21	30	-7			14	48 PP
ASHKABAD	80.64	310.0	12	8A	2	22	8	2			27	29 SS
TANANARIVE	82.08	251.8	12	14	1				12	43		
SOUTH POLE	83.67	180.0	12	21	0	22	24	-13			30	38 PKKP
BYRD STATION	87.04	170.5	12	38	0	22	52	-17			30	31 PKKP
GORIS	90.15	309.6	12	53	0	23	40	2			16	27 PP
TIFLIS	91.60	311.6	13	2	2	23	54	3			23	26 SKS
COLLEGE	91.86	25.0	12	59	-2	24	1	8			24	47 PS
KHEYS	94.37	350.1	13	6	-6						16	52 PP
MOSCOW	97.30	325.3	13	24	-2				13	56		
KSARA	98.01	303.2	13	31	2	24	39	-7	14	14	17	33 PP
JERUSALEM	98.49	301.1	13	33	2						19	44
APATITY	98.87	337.4	13	31A	-2	24	47	-6			23	57 SKS
SIMFEROPOL	99.56	314.4	13	36	0	25	0	1			23	57 SKS
PULKOVO	101.01	329.6	13	42	0							
ASTRIDA	101.21	266.1	13	43	0							
SODANKYLA	101.49	337.5	13	43	-2						14	20
HELWAN	101.79	299.1	13	49	3						26	55 PS
LWIRO	102.17	266.3	13	51	3							
ISTANBUL UN.	103.45	310.5	13	50	-3						18	11 PP
NORD	103.48	355.4	13	51	-2							

KIRUNA	103.68	338.6	13	53A	-1	25	26	-7			24	21	SKS
IASI	103.98	317.0									18	15	PP
HERMANUS	104.29	232.2				24	34	6			18	20	PP
CINE	104.33	307.1	13	50	-7						18	11	PP
BUCHAREST	105.30	314.2				25	48	2					
LWOW	105.98	320.0	14	5	777						18	34	
RESOLUTE	106.81	11.6	14	7A	777	26	3	5			18	21	PP
UPPSALA	107.26	331.0	14	9	777	25	58	-4	14	46			
WARSAW	107.40	322.8	20	17	777	26	3	-8			25	7	
SKALSTUGAN	108.33	335.7	14	16	777								
KRAKOW	108.54	320.7	17	48	777						18	53	PP
FRESNO	108.91	53.4									18	21	PP
PASADENA	110.52	56.0	14	18	777						14	59	
GOTEBORG	110.76	330.0	14	24	777								
HUNGRY HORSE	111.03	40.5	14	29	777						18	26	PP
COPENHAGEN	111.26	327.8									19	4	PP
EUREKA	111.53	50.1	14	31	777						18	28	PP
PRUHONICE	111.91	321.6	18	37	11	24	57	-4			14	33	P
POTSDAM	112.05	324.4	19	14	48								
BUTTE	112.58	42.7	18	17	-10								
BOULDER CITY	112.99	53.7	18	33	5								
HALLE	113.00	323.7	18	16	-12						19	21	PP
JENA	113.41	323.2	18	31	2						20	21	
BOZEMAN	113.70	42.7	18	34	4								
SCORESBY SD.	113.72	350.5	18	32	2						19	23	PP
MESSINA	114.10	309.0	18	25	-5	25	18	8			19	12	PP
STUTTGART	115.61	321.6	18	35	2	27	17	121			19	43	PP
TUBINGEN	115.78	321.4	18	35	1								
EBINGEN	115.96	321.0	18	35	1								
BENSBERG	115.99	324.4	18	37	3						20	1	
STRASBOURG	116.56	321.8	18	39	4						19	52	PP
DE BILT	116.64	326.1	19	7	32						29	9	PS
PAVIA	116.87	317.8									19	54	PP
TUCSON	116.88	57.1	18	40	4				19	9	20	10	PP
TUCSON TELE.	116.96	57.0	18	39	3				19	9	20	10	PP
NEUCHATEL	117.67	320.4	18	39	2								
UCCLE	117.68	325.1	18	19	-18						27	15	
LARAMIE	118.79	46.1	18	41	1								
DURHAM	118.81	331.0	18	41	1						36	9	SS
RAPID CITY	119.49	42.4	18	42	1						29	26	
KEW	119.94	327.3									20	7	PP
CLERMONT-FD.	120.59	320.3	19	14	31								
RATHFARNHAM	121.92	331.5	18	44A	-2						20	21	
SETIF	122.44	309.1	18	47	0						20	14	PP
TAMANRASSET	125.37	293.3	18	55A	3	25	57	9			20	47	PP
TOLEDO	127.93	316.7	18	58	1						20	56	PP
CLEVELAND	134.45	34.8									21	41	PP
OTTAWA	134.59	26.7	19	0	-10						22	32	SKP
SHAWINIGAN	134.92	23.4	19	3	-7						22	34	SKP
SEVEN FALLS	135.18	21.4	19	2	-9						22	35	SKP
BREBEUF	135.42	25.0	19	6	-5								
MORGANTOWN	136.57	35.7	18	55	-18								
WESTON	138.92	25.7	19	7K	-11								
COLUMBIA	139.38	43.0	19	14	-5								
HALIFAX	139.74	16.5	19	14A	-5						40	41	SS
HUANCAYO	147.80	124.6	19	40	7						20	11	PKP2
MBOUR	147.83	286.9	19	40A	7						23	6	PP
BALBOA HTS.	149.30	83.2	19	39	3						21	44	PP
BERMUDA	150.14	27.9	19	35	-2						19	52	PKP2
LA PAZ	150.23	140.0	19	40	3						23	1	PKS
CHINCHINA	153.17	91.6	19	39	-2								
BOGOTA	154.68	92.7	19	51	8						20	51	
FUQUENE	155.08	90.7	19	52	8								
SAN JUAN	159.24	53.4	19	53	4						20	29	
ST. VINCENT	165.89	60.5									20	56	PKP2

NOVEMBER 14 15.H 22.M 17.S EPICENTRE 12.36 -86.37 DEPTH= 72.KM

DEPTH OF FOCUS= 0.006R

A= 0.06193 B=-0.97517 C= 0.21264 D=-0.9980 E=-0.0634
G= 0.0135 H=-0.2122 K=-0.9771 HT= 6.2

SE= 3.08

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S

SAN SALVADOR	3.11	296.4	0	39	-9	0	27	-57			
COMITAN	6.80	305.4	1	45	6					2	58
BALBOA HTS.	7.49	116.1	1	43	-6	3	15	2			
MERIDA	9.09	340.4	1	58	-13					2	49
OAXACA	11.08	296.0	2	49	11	5	13	32		5	34 SS
CHINCHINA	12.91	123.7	2	56	-6						
TACUBAYA	14.19	301.2	3	18	-1	6	9	14		6	48 SS
FUQUENE	14.23	117.6	3	23	4						
BOGOTA	14.38	121.3	3	25	4	5	45	-14			
SAN JUAN	20.41	70.4	4	34	1						
COLUMBIA	22.09	11.9	4	50	0						
GRENADA	24.08	88.1	5	8	-2						
ST. VINCENT	24.49	85.3	5	20	7						
FORT FRANCE	24.62	81.6	5	13	-2					9	55
FAYETTEVILLE	24.66	344.7	5	13	-2						
BARBADOS	26.11	85.4	5	30	1						
HUANCAYO	26.61	155.3	5	34	1	10	25	24		16	14 SCS
MORGANTOWN	27.75	10.7	5	47K	3						
TUCSON TELE.	29.92	315.6	6	2	-1				6 16		
TUCSON	29.94	315.3	6	4	1						
BOULDER	32.23	332.2	6	21	-2						
OTTAWA	34.16	13.4	6	38	-2						
RAPID CITY	34.77	338.5	6	45	0						
BREBEUF	34.77	15.8	6	44K	-1				7 4		
BOULDER CITY	34.80	317.4	6	44	-2						
SHAWINIGAN	35.97	16.0	6	55	-1						
SALT LAKE C.	36.07	326.3	6	55	-1						
PASADENA	36.15	312.2	7	13	16				7 25		
SEVEN FALLS	37.04	17.7	7	7	2						
EUREKA	37.61	321.2	7	9	0						
BOZEMAN	39.27	332.4	7	24	1						
LICK	40.16	314.5	7	29	-1						
BUTTE	40.23	331.5	7	30	-1						
MINERAL	41.66	318.4	8	12	29						
HUNGRY HORSE	42.63	332.8	7	49	-2						
RESOLUTE	62.49	357.5	10	14	-4				10 30		
THULE	64.78	4.6	10	33	0						
COLLEGE	66.94	335.9	10	44	-3						
SKALSTUGAN	82.85	26.5	12	24	6						
STUTTGART	84.45	41.4	12	24	-2						
KIRUNA	84.86	21.4	12	30A	2						
JENA	85.46	39.0	12	30	-1						
TAMANRASSET	87.01	67.5	12	38	0					15	27
PRUHONICE	87.54	39.4	12	47	6				13 7		
CAPE HALLETT	105.75	198.0				25	38	-1			
SHILLONG	142.26	2.6	19	18	-6						

NOVEMBER 15 5.H 42.M 40.S EPICENTRE 37.70 22.02 DEPTH= 0.KM

A= 0.73532 B= 0.29738 C= 0.60899 D= 0.3749 E=-0.9271
G= 0.5646 H= 0.2283 K=-0.7932 HT= -0.8

SE= 3.00

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
ATHENS	1.37	78.3	0	35A	8	0	53	7					
SKOPJE	4.30	353.8	1	10K	2	2	11	11			2	33	SG
TARANTO	4.63	308.1	1	14	1	1	39	-30					
REGGIO CALA.	5.05	276.4	1	18	-1	2	10	-9					
SOFIA	5.09	11.0	1	24	4								
MESSINA	5.14	277.5	1	20K	0	2	12	-9			1	36	PG
ISTANBUL UN.	6.34	56.2	1	41	4								
BELGRADE	7.21	351.1	1	48A	-1	3	13	0			3	50	SG
BUCHAREST	7.38	23.4	1	57	5	3	15	-2			2	10	PG
CAMPULUNG	7.89	15.7	2	9	10	3	38	8					
TIMISOARA	8.06	356.0	2	3	2	3	45	11					
ROME	8.45	302.7	2	7	0	2	59	-45					
SZEGED	8.65	351.3	2	36	26	4	8	19			2	52	P*
ZAGREB	9.28	332.8	2	16K	-2	3	46	-19			5	21	SS
TRIESTE	10.06	324.7	2	26K	-3	4	20	-4			3	44	
IASI	10.33	21.6	2	35	2	3	55	-36			2	43	PG
HURBANOVO	10.54	345.8	2	48	12	4	45	9			6	0	SG
HELWAN	11.00	132.5	2	41A	-1	4	34	-13					
BRATISLAVA	11.06	342.6	2	41	-2	4	46	-2			3	17	
VIENNA-H.	11.32	340.4	2	40	-6	4	45	-10			3	50	

SKALNATE PL.	11.54	354.2	2	51	2	4 56	-4	5 56
SIMFEROPOL	11.62	47.7	2	54	4			
KSARA	1'.91	104.8	2	59	5	5 24	15	3 17 PPP
LWOW	12.21	6.1	3	0	2	5 8	-8	
JERUSALEM	12.36	114.7	2	58	-2	5 12	-8	
MONACO	12.59	303.1	3	5	2			3 40
RACIBORZ	12.67	348.7	3	4	-1	5 29	1	3 39
CHUR	12.99	318.7	3	10K	1	5 25	-10	
SETIF	13.38	268.6	3	12	-2	5 51	6	3 23 PP
PRUHONICE	13.39	338.8	3	12	-2	5 44	-1	
PRAGUE	13.51	338.6	3	47	31	5 59	11	
RAVENSBURG	13.56	321.9	3	17	1	5 46	-3	3 41
EBINGEN	14.15	321.8	3	22	-2	5 50	-13	3 47
CHEB	14.17	333.9	3	22	-2			5 22
TUBINGEN	14.35	323.1	3	25	-2	5 56	-12	3 45
BASLE	14.45	317.4	3	28	0			6 43
STUTTGART	14.46	324.0	3	25A	-3	5 56	-14	4 26
NEUCHATEL	14.48	314.6	3	28	0	5 59	-12	3 50
WARSAW	14.54	357.6	3	34	5	6 22	10	3 54 PPP
PLAUEN	14.61	334.3	3	27	-3	6 26	12	3 35 PP
SOTCHI	14.66	60.9	3	35	4			
SONNEBERG	14.85	332.0	3	30	-3	6 26	6	3 39 PP
STRASBOURG	15.02	320.9	3	36	1	6 34	10	4 21
ALGIERS UNI.	15.14	272.3	3	36	-1			3 50 PP
JENA	15.17	334.0	3	38	1	6 36	9	3 44 PP
HALLE	15.52	335.9	3	42	0	6 34	-1	8 49 PCP
POTSDAM	15.96	339.7	3	47	-1	6 53	7	3 53 PP
CLERMONT-FD.	16.22	305.7	3	51	0			4 6 PP
RENSBERG	16.94	326.2	4	2K	2	7 1	-7	
RELIZANE	17.32	270.1	4	9	4			4 25 PP
MUNSTER	17.49	329.2	4	8	1			
DOURBES	17.58	320.3	4	7	-1	7 49	26	
ALICANTE	17.74	279.0	4	15	5	7 34	7	4 39 PPP
TIFLIS	17.97	70.0	4	11	-2			
PARIS	17.99	314.3	4	12	-1	7 31	-1	4 26 PP
UCCLE	18.15	321.8	4	16K	1	8 1	25	
WITTEVEEN	18.52	329.6						4 22
DE BILT	18.63	326.0	3	22	-59			7 50
COPENHAGEN	19.11	343.3	4	26	-1	7 57	-1	
ALMERIA	19.50	275.0	4	45	14			
GRANADA	20.34	276.4	4	57A	16			5 59 PP
TOLEDO	20.42	284.2	4	39	-3	8 51	25	4 54 PP
TAMANRASSET	20.55	228.3	4	42	-1	8 35	6	
JERSEY	20.84	311.1	5	10	24			
MOSCOW	20.88	25.3	4	44	-2	8 29	-6	
KEW	20.93	318.3	4	45	-2	8 38	2	5 41
MALAGA	21.05	275.4	4	54A	6			5 16 PP
GOTEBORG	21.07	344.9	4	43K	-5			
UPPSALA	22.34	354.2	4	59K	-2	8 57	-6	
HELSINKI	22.56	3.8	5	2	-1	9 1	-6	
PULKOVO	22.72	10.9	5	3	-2	9 3	-6	
DURHAM	23.44	324.3	5	15K	3	9 33	11	5 57 PP
SERRA PILAR	23.84	287.8	5	20K	4			5 54
LISBON	24.46	282.1	5	45K	23			
RATHFARNHAM	25.00	317.7	5	13	-14			5 39
SKALSTUGAN	26.57	350.3	5	39	-3			
SODANKYLA	29.83	3.6	6	10	-1	11 36	28	
KIRUNA	30.19	358.8	6	13	-1			
APATITY	30.58	8.6	6	15	-3	11 11	-9	
SVERDLOVSK	31.85	40.5	6	28	-1			
SIDA	35.39	330.4	6	59	-1			
QUETTA	37.73	87.8	7	18	-1			
NAMANGAN	38.13	69.2	7	21	-2			
KARACHI	39.72	94.0	7	40	4			
WARSAK DAM	39.95	79.9	7	35	-3			
LWIRO	40.25	169.5	7	41	1			
ISFJORD	40.62	357.3	9	43	120			
ASTRIDA	40.73	168.1	7	43	-1			9 39 PP
MBOUR	41.61	246.7	7	51	0			
LAHORE	43.02	82.0	7	48	-15			
KHEYS	44.02	7.2	8	18	7			
NORD	46.10	352.7	8	26	-2			
BOMBAY	47.88	98.5	8	41	-1			
THULE	53.79	343.0	9	25	-2			
CHATRA	55.16	81.1	9	34	-3			
SHILLONG	59.46	79.9	10	4A	-3			
TIKSI	59.69	20.6	10	5	-4	18 9	-10	
WINDHOEK	60.13	185.2	10	11	-1			

RESOLUTE	60.55	344.2	10	12A	-3	18	27	-3				
CHITTAGONG	61.06	83.1	10	9	-9							
TANANARIVE	61.23	152.3	10	18	-1						10	53
HALIFAX	61.99	306.2	10	22K	11							
SEVEN FALLS	65.30	311.3	10	44	-2							
SHAWINIGAN	66.73	311.5	11	0	5							
BREBEUF	67.78	310.9	11	11	9							
WESTON	67.99	307.1	11	2A	-1							
OTTAWA	69.09	311.6	11	8A	-2						11	28 PCP
MORGANTOWN	74.94	308.5	11	44A	-1							
ST. VINCENT	76.81	276.5	12	15	20							
COLLEGE	77.45	355.6	11	57	-2							
COLUMBIA	79.04	304.5	12	6	-2							
RAPID CITY	84.69	323.7	12	37	0							
MATUSIRO	85.46	46.5	12	40	-1						13	13
FAYETTEVILLE	85.79	313.2	12	42A	-1							
HUNGRY HORSE	85.83	332.3	12	41	-2							
BAGUIO CITY	86.69	71.9	12	46	-1							
BOZEMAN	86.88	329.1	12	49	1							
EUREKA	94.04	328.7	13	22	0						16	54 PP
TUCSON TELE.	97.55	321.2	13	39	1						17	37 PP
TUCSON	97.68	321.2	13	45	7							
SOUTH POLE	127.52	180.0	19	5	-2						21	12 PP
CHARTERS TS.	128.82	86.1	19	9	-1							
BYRD STATION	135.07	188.8	18	20	-62							
NOUMEA	145.82	73.5	19	42	1							

NOVEMBER 15 9.H 0.M 53.S EPICENTRE 44.33 148.72 DEPTH= 50.KM

DEPTH OF FOCUS= 0.003R

A=-0.61337 B= 0.37257 C= 0.69639 D= 0.5192 E= 0.8547
G=-0.5952 H= 0.3615 K=-0.7177 HT= -3.3

SE= 2.72

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
GORNY	1.01	305.9	0	21	3						0	36
KURILSK	1.09	326.2	0	24	5							
LESOZAVODSK	1.19	292.2	0	23	2							
NEMURO	2.49	247.3	0	37K	-2	1	1	-7				
ABASHIRI	3.21	266.0	0	52	3	1	28	1				
KUSIRO	3.42	248.2	0	52A	0	1	28	-4				
OBIHIRO	4.25	252.5	1	5K	1	1	51	-2				
HIROO	4.45	244.4	1	6A	0	1	53	-5				
ASAHIGAWA	4.61	265.3	1	11	2						2	15
URAKAWA	4.86	245.4	1	12K	0	2	3	-5				
Y.-SAKHLINSK	4.96	304.0	1	16	2	2	6	-4				
WAKKANAI	5.12	284.7	1	21	5						1	56
SAPPORO	5.49	259.3	1	23K	2	2	18	-6				
TOMAKOMAI	5.51	253.3	1	19	-2	2	23	-1				
MURORAN	6.00	253.2	1	28A	0	2	31	-5				
SUTTSU	6.36	259.0	1	34	1	2	41	-4			2	17
MORI	6.36	252.3	1	34	1	2	43	-2				
HAKODATE	6.39	249.3	1	33	-1	2	38	-8				
UGLEGORSK	6.59	318.4	1	40	4						2	12
AOMORI	6.83	241.8	1	38	-2	2	48	-9				
MIYAKO	6.87	229.4	1	38	-2	2	45	-13				
MORIOKA	7.28	233.1	1	42	-4	2	56	-12				
MIZUSAWA	7.70	230.1	1	49	-3	3	5	-14				
AKITA	7.90	237.3	1	54	-1	3	15	-9			2	42
ISINOMAKI	8.11	225.9	1	53	-4	3	16	-13			2	59
SENDAI	8.44	226.9	1	58	-4	3	23	-14				
SAKATA	8.59	233.9	2	3	-1	3	31	-10				
YAMAGATA	8.75	228.9	2	1	-5	3	32	-13				
HUKUSIMA	9.06	226.3	2	9	-2	3	40	-12				
ONAHAMA	9.47	221.5	2	16	0	3	49	-13			2	39
SHIRAKAWA	9.67	224.7	2	16	-3	3	53	-14				
NIIGATA	9.71	232.0				3	56	-13				
MITO	10.13	221.2	2	27	2	4	14	-5				
UTUNOMIYA	10.29	224.0	2	24	-3	4	10	-12			3	18
KAKIOKA	10.39	221.8	2	24	-5	4	14	-11				
TUKUBASAN	10.44	222.0	2	22A	-7	4	7	-19				
TYOSI	10.50	217.7	2	27	-3	4	18	-10				
TAKADA	10.73	231.3	2	29	-4	4	22	-11				
MAEBASI	10.81	226.2	2	33	-2							

KUMAGAYA	10.85	224.3	2	33	-2	4	24	-12			
PETROPAVLOVK	10.97	33.1	2	35	-2						
HONGO	11.01	221.6	2	37	0	4	28	-12			
TOKYO C.M.O.	11.04	221.5	2	35	-3	4	25	-16			
NAGANO	11.07	229.9	2	37	-1	4	30	-11			
TITIBU	11.13	224.7	2	39	0						
OIWAKE	11.14	227.6	2	44	5	4	29	-14			
MATUSIRO	11.15	229.4	2	35A	-4	4	34	-9			
YOKOHAMA	11.29	221.1	2	35	-6	4	36	-11			
WAZIMA	11.32	236.2	2	41	0						4 56
MATUMOTO	11.51	229.1	2	41	-3	4	45	-7			
TOYAMA	11.61	232.9	2	42	-3	4	44	-10			
MERA	11.63	219.1	3	2	16	4	39	-16			
KOHU	11.66	22[illegible].3	2	47	1	4	42	-14			
HUNATU	11.66	224.3	2	51	5	4	34	-22			
AJIRO	11.86	221.9	3	0	11	4	49	-11			
MISIMA	11.88	222.6	2	51	2	4	49	-12			
IIDA	12.13	227.2	3	3	11	4	56	-11			
VLADIVOSTOK	12.24	270.2	2	52	-2						4 7
SHIZUOKA	12.27	223.9	3	5	11	5	0	-10			
HUKUI	12.60	233.2	2	56	-3	5	10	-8			
GIHU	12.79	229.9	2	59K	-2	5	11	-12			
NAGOYA	12.85	228.6	3	10	8	5	13	-11			
IBUKISAN	13.02	230.8	3	2	-2	5	19	-9			
HIKONE	13.17	230.9	3	4	-2	5	18	-14			
KAMEYAMA	13.36	229.1	3	33	24	5	23	-13			
TU	13.43	228.6									3 55
TOYOOKA	13.81	235.2				5	38	-9			
NARA	13.84	230.2	3	14	-1						
ABUYAMA	13.85	231.4	3	12K	-3						
OSAKA	14.03	230.9	3	21	4	6	1	9			
KOBE	14.20	231.9				6	13	17			6 30
KLYUCHI	14.23	28.2	3	19	-1						
SUMOTO	14.61	231.7	3	22	-3	5	57	-9			3 42
SIOMISAKI	14.81	227.2	3	43	16	6	45	34			
TOKUSIMA	14.99	231.7	3	29	-1	6	8	-7			
MAGADAN	15.29	4.0	3	33	-1						
MUROTO	15.82	230.5	3	51	11						
HAMADA	15.89	239.3	3	42	1	6	28	-8			
KOTI	15.96	232.7				5	33	-64			4 0
HIROSIMA	16.03	237.2	3	43	0	6	37	-2			7 12
MATUYAMA	16.21	235.1	4	5	20	7	1	18			6 27
CHANGCHUN	16.83	276.5	3	49K	-4						
OOITA	17.30	236.0	4	1	2	7	18	10			
HUKUOKA	17.79	239.1	4	4	-1	7	24	5			
SAGA	18.09	238.5	4	28	19						
KUMAMOTO	18.14	236.8	4	9	0						
MIYAZAKI	18.36	233.4	4	12	0	7	41	9			4 35
NAGASAKI	18.70	238.1	4	19	3						
KAGOSIMA	19.12	234.4	4	34	13	8	0	11			
YAKUSIMA	19.98	232.2	4	31	1	8	14	7			
PEKING	24.41	271.3	5	14K	-1	9	25	-3	5 28		5 45 PP
ZO-SE	25.34	247.9	5	25K	2	9	42	-2	5 39		
NANKING	26.37	252.5	5	35K	2	9	59	-2	5 51		
PAOTOW	28.61	276.1	5	54	1	10	36	-1			
ULAN-BATOR	28.95	292.1	5	55	-1						
TIKSI	29.02	347.2	5	52	-5						
IRKUTSK	30.18	301.2	6	7	0						
SIAN	32.13	265.6	6	24	-1	11	29	-3			
LANCHOW	34.91	272.1	6	48	0	12	11	-4			
HONG KONG	35.89	243.6	7	23	26	12	30	-1			
BAGUIO CITY	36.59	229.4	7	3	0	13	9	28			
CHENGTU	37.55	264.1	7	10	-1	12	49	-7	7 24		8 36 PP
MANILA	37.89	227.2	7	17	3	13	26	25			
COLLEGE	39.95	36.5	7	32	1	13	31	-1			14 2
KUNMING	41.84	258.2	7	50	4	14	1	1	8 6		
SEMIPALATNSK	45.28	303.1	8	11	-3						
LHASA	47.42	272.3	8	34	3	15	19	-2	8 49		10 27 PP
KHEYS	47.82	346.5	8	23	-11	15	11	-15			10 26 PP
RABAUL	48.41	175.4	8	38	-1				8 59		
SHILLONG	49.21	267.3	8	44	-1	15	40	-6			10 58
KIPAPA	49.24	99.7	9	10	25						
HONOLULU	49.26	99.9	9	12	27						
CHITTAGONG	51.23	264.1	9	3	3	16	12	-2			
FRUNSE	51.96	296.1	9	4	-2	16	23	-1			
SVERDLOVSK	53.50	316.9	9	17	0						
NORD	54.08	357.4	9	18	-3						
RESOLUTE	54.09	17.1	9	20A	-2	16	49	-4			

TASHKENT	56.15	296.9	9	36	0						
ALBERNI	56.27	51.8	9	36	-1						
DEHRA DUN	56.28	281.2	9	38	1	17	20	-2			
HORSESHOE B.	57.08	51.1	9	43	0						
THULE	57.23	9.7	9	41	-3					11	52 PP
VICTORIA	57.45	52.0	9	44	-2						
PORT BLAIR	57.79	253.7				17	40	-2			
STALINABAD	57.97	294.4	9	50	1	17	43	-1			
LAHORE	58.17	284.6	9	48	-3	17	44	-3			
AGRA	58.18	278.1	9	49A	-2	17	43	-4		12	27 PP
APATITY	58.32	335.9	9	49	-3	17	41	-8		17	55 PS
WARSAK DAM	58.67	288.5	9	52	-2						
CORVALLIS	59.65	55.9	10	3	2						
MEDAN	59.79	242.3	10	22	20						
SODANKYLA	60.36	337.8	10	4	-2						
KIRUNA	61.61	340.2	10	13	-1	18	28	-3		20	28
SHASTA	62.42	59.0	10	20K	0						
HUNGRY HORSE	62.71	48.1	10	21	-1					39	25 PKPPKP
DJAKARTA	62.83	228.3	10	33	10						
LEMBANG	62.95	227.1	10	22	-1	18	52	4			
MINERAL	63.11	59.0	10	24K	0						
CHARTERS TS.	64.06	182.6	10	29	-2				10	51	
QUETTA	64.07	287.7	10	29	-2	18	59	-3		12	49 PP
BERKELEY	64.19	61.5	10	31	0					10	54
MOSCOW	64.65	324.3	10	32	-2						
PULKOVO	64.66	330.5	10	35	0						
RENO	64.70	58.8	10	35K	0						
LICK	64.90	61.7	10	36K	0						
BUTTE	64.93	49.5	10	36	0				11	0	
ASHKABAD	64.99	299.3	10	36	-1	19	13	0		19	49 PS
SCORESBY SD.	65.30	356.6	10	38	-1						
BOZEMAN	65.97	49.1	10	44	1				10	36	
HELSINKI	66.19	333.0	10	43	-1						
FRESNO	66.41	61.2	10	47K	1						
KARACHI	66.72	283.9	10	50	2						
SKALSTUGAN	67.04	340.4	10	48	-2						
BOMBAY	67.07	274.4	10	50	0	19	35	-3		13	34 PP
EUREKA	67.07	56.8	10	49	-1						
SUVA	67.85	149.4	10	53	-2	19	31	-17		20	47 SCS
SALT LAKE C.	68.67	53.5	11	1	1				11	22	
UPPSALA	68.71	335.9	10	58	-2	19	49	-9			
PASADENA	69.09	62.4	11	3	1	19	59	-4	11	13	21 7 SCS
KODAIKANAL	69.52	264.3				20	3	-5			
BOULDER CITY	70.00	59.1	11	9	1				11	37	
TIFLIS	70.58	309.6	11	11	-1	20	20	0			
RAPID CITY	71.20	46.4	11	14	-1				11	37	
GORIS	71.22	307.0	11	16	1	20	28	1		21	12 SCS
BRISBANE	71.57	176.0	11	28A	11	20	31	0			
REYKJAVIK	71.63	355.7	11	19	1						
SIDA	71.73	353.9	11	20	2						
GOTEBORG	72.13	337.3	11	17	-4						
COPENHAGEN	73.73	335.9	11	30A	0	20	56	0			
WARSAW	73.79	329.6	11	32	1	20	55	-2		21	34 PS
SIMFEROPOL	73.85	317.8	11	31A	0	20	57	0		11	38 PCP
LWOW	74.57	326.5	11	34	-1	21	30	25		21	47 PS
TUCSON	74.96	59.6	11	38	1						
TUCSON TELE.	74.96	59.5	11	37	0				12	0	12 31
IASI	75.16	322.9	11	39	1	21	11	-1			
BACAU	75.93	322.8				21	20	0			
KRAKOW	75.97	328.8	11	43	0	21	18	-3			12 15
POTSDAM	76.37	333.8	11	44	-1	21	23	-2	12	15	12 49
FOCSANI	76.48	322.1				21	28	2			
RACIBORZ	76.57	329.8	11	46	0						11 54 PCP
COLLMBERG	77.32	333.3	11	49	-2	21	33	-3			
HALLE	77.49	334.0	11	50	-2	21	35	-2			14 29 PP
CAMPULUNG	77.76	323.0	11	57	4	21	47	7			
RIVERVIEW	77.82	177.9	12	10K	17	21	51	10			
WITTEVEEN	77.88	337.6	11	54	0						
PRAGUE	77.90	331.9	11	56	2	21	38	-4			14 29 PP
PRUHONICE	77.94	331.7	11	54	0	21	43	1			22 29 PS
BUCHAREST	77.97	321.9	11	55	1	21	43	1	12	26	22 28
DURHAM	78.09	342.9	11	55K	0	21	43	-1			
JENA	78.10	333.9	11	54	-1	21	40	-4			12 28
PLAUEN	78.29	333.4	11	53	-3	21	41	-5			12 28
MUNSTER	78.37	336.6	12	21	25						
SONNEBERG	78.69	333.8	11	59	1	21	49	-1			
DE BILT	78.93	338.1	11	59	0	21	49	-4			
TIMISOARA	78.97	325.5	12	7	7	22	7	14			

	DELTA	AZ.	P	O-C	S	O-C	*PP	SUPP.
	DEG.	DEG.	M S	S	M S	S	M S	M S
ISTANBUL KA.	79.21	318.0	12 2K	1	21 56	0		
BENSBERG	79.40	336.4	12 1	-1	21 56	-2		
ADELAIDE	79.41	188.4	12 3K	1			12 24	
UCCLE	80.33	338.0	12 7	0	22 4	-3		
RATHFARNHAM	80.41	345.1	12 0K	-7				
SOFIA	80.55	322.5	12 9	1	22 11	1	12 31	
STUTTGART	80.73	334.2	12 9	0	22 8	-4		13 9
KEW	80.89	341.0	12 10	0				
DOURBES	80.89	337.5	12 8	-2	22 8	-5		
ZAGREB	80.96	328.7	12 8	-2	22 6	-8		
TUBINGEN	80.99	334.2	12 9	-2			12 35	
KSARA	81.15	309.1	12 12	1	22 15	-1	12 32	22 40 SCS
EBINGEN	81.33	334.1	12 13	1			12 37	
STRASBOURG	81.34	335.0	12 13	1	22 14	-4		13 8
FLORISSANT	81.57	42.7	12 14A	0	22 19	-1		
FAYETTEVILLE	81.74	46.8	12 15A	1			12 35	
ST. LOUIS 1	81.77	42.7	12 14A	-1				
MELBOURNE	81.85	183.0	12 14	-1				
TRIESTE	81.92	329.9	12 14K	-1	22 21	-3	12 34	23 2 *SS
CHUR	82.32	333.1	12 18A	1				
BASLE	82.34	334.6	12 15	-2	22 27	-1		
OTTAWA	82.34	29.9	12 16	-2				
SHAWINIGAN	82.36	27.5	12 17	-1				
SEVEN FALLS	82.48	26.0	12 19	1				
PARIS	82.64	338.3	12 20	1	22 33	2	12 35	12 29 PCP
BREBEUF	82.99	28.5	12 20K	-1				
NEUCHATEL	83.00	334.7	12 20	-1	22 32	-3		
JERUSALEM	83.04	308.1	12 22	1	22 17	-18		
CLEVELAND	83.41	35.6	12 24A	1				
PAVIA	83.91	332.5	12 26A	0	22 42	-2		
ATHENS	84.19	319.4	12 27	0				
CLERMONT-FD.	85.25	336.6	12 34	2	22 59	2		
KARAPIRO	85.39	159.0	12 36	3				12 57
PENNSYLVANIA	85.47	33.6	12 37	4	22 51	-8		15 57 PP
MORGANTOWN	85.62	35.6	12 34	0	22 13	-48		
ROME	85.62	328.8			22 56	-5		37 56 SSS
MONACO	85.77	333.0	12 35K	0				
WESTON	86.53	28.5	12 38A	0				
HELWAN	86.66	309.4	12 40	1	23 7	-4		
HALIFAX	86.88	22.5	12 41K	1	22 54	-19		
FORDHAM	86.96	30.9	12 41	0				
MESSINA	87.59	324.9	12 42	-2	23 22	3		23 9 SKS
COLUMBIA	89.86	39.4	12 55	1				
ROXBURG.	91.34	165.7			24 6	12		
TACUBAYA	91.41	61.0	13 2	0				
TOLEDO	92.66	339.4	13 8	1	24 14	9		
BERMUDA	97.80	28.0			23 59	-50		17 24 PP
ASTRIDA	112.27	289.2	18 52	22				31 5
LWIRO	112.64	290.2	18 51	21				
CAPE HALLETT	117.31	172.7			25 30	3		26 8 SKKS
BOGOTA	117.98	50.1						19 49 SKKS
SCOTT BASE	122.41	175.5	18 49	0			19 9	
HUANCAYO	130.47	63.4	19 8	3				19 32 PKP2
BYRD STATION	133.59	166.1	19 11	0				22 35 SKP
SOUTH POLE	134.14	180.0	18 57	-15				21 45 PP
LA PAZ	138.37	60.0	19 15	-5				22 19 PP

NOVEMBER 16 4.H 47.M 38.S EPICENTRE 44.39 148.89 DEPTH= 45.KM

DEPTH OF FOCUS= 0.002R

A=-0.61382 B= 0.37038 C= 0.69717 D= 0.5166 E= 0.8562
G=-0.5969 H= 0.3602 K=-0.7169 HT= -3.3

SE= 3.17

	DELTA	AZ.	P	O-C	S	O-C	*PP	SUPP.
	DEG.	DEG.	M S	S	M S	S	M S	M S
REIDOVOE	1.07	325.3	0 20	1				
GORNY	1.08	299.6	0 20	0	0 38	4		
KURILSK	1.11	319.3	0 21	1	0 36	1		
LESOZAVODSK	1.28	287.7	0 22	0				
NEMURO	2.62	247.2	0 38	-3	1 5	-7		
ABASHIRI	3.34	265.2	0 51	0	1 45	15		
KUSIRO	3.55	248.1	0 50	-4	1 34	-2		
OBIHIRO	4.39	252.4	1 8	2	1 54	-3		
HIROO	4.58	244.5	1 6	-3				

ASAHIGAWA	4.74	264.8	1	13	2					
URAKAWA	5.00	245.4	1	12	-3	2	3	-9		
Y.-SAKHLINSK	5.03	302.7	1	12	-3	2	11	-2		
WAKKANAI	5.23	283.8				3	12	54		
SAPPORO	5.62	259.0	1	26	3	2	39	11		
TOMAKOMAI	5.64	253.2	1	29	5					
MURORAN	6.13	253.1	1	39	8	2	40	0		
MORI	6.50	252.2	1	43	7	2	56	7		
HAKODATE	6.53	249.3	1	33	-3	2	54	4	3	11
HATINOHE	6.67	237.2	1	40	2	2	42	-12		
AOMORI	6.97	242.0				2	51	-10		
MiYAKO	7.00	229.8	1	31	-12	2	47	-15		
MORIOKA	7.42	233.4	1	44	-5	2	57	-15		
MIZUSAWA	7.83	230.5	1	55	1	3	7	-15		
SEVERO-KUR.	7.95	35.3	1	54	-2	3	35	10		
AKITA	8.04	237.5	2	25	28					
ISINOMAKI	8.24	226.3	2	30	30	3	18	-15		
SENDAI	8.58	227.2	2	10	5	3	25	-16		
HUKUSIMA	9.19	226.6	2	10	-3	3	44	-12		
MITO	10.26	221.6				4	2	-20		
UTUNOMIYA	10.42	224.3				4	4	-22		
KAKIOKA	10.52	222.1	2	35	4	4	10	-19		
TUKUBASAN	10.56	222.4	2	22	-10	4	12	-18		
MAEBASI	10.94	226.5	2	31	-6	4	25	-14		
KUMAGAYA	10.97	224.6				4	26	-14		
TOKYO C.M.O.	11.17	221.9				4	27	-17		
NAGANO	11.21	230.2							3	2
OIWAKE	11.27	227.9				4	45	-2		
MATUSIRO	11.28	229.7	2	34	-8	4	38	-9		
VLADIVOSTOK	12.36	270.0	2	57	1					
ABUYAMA	13.98	231.7	3	14A	-3					
MAGADAN	15.22	3.7	3	33	-1	7	6	45		
CHANGCHUN	16.94	276.4	3	52	-3					
PEKING	24.53	271.2	5	14	-3					
ZO-SE	25.48	248.0	5	27	1					
PAOTOW	28.73	276.1	5	58	3					
TIKSI	28.98	347.1	5	54	-4					
ULAN-BATOR	29.04	292.0	6	8	10					
LANCHOW	35.03	272.1	6	49	-1					
HONG KONG	36.03	243.7				12	24	-10		
COLLEGE	39.82	36.6	7	30	-1					
CHITTAGONG	51.36	264.1	9	2	0	16	17	0		
RESOLUTE	53.99	17.2	9	20	-2	16	46	-7	19	22 SCS
STALINABAD	58.06	294.4	9	49	-2					
APATITY	58.31	336.0	9	49	-4					
WARSAK DAM	58.77	288.6	9	54	-2					
SODANKYLA	60.35	337.9	10	5	-2					
SHASTA	62.29	59.2	10	19	-1					
HUNGRY HORSE	62.58	48.2	9	20	-62					
MINERAL	62.98	59.1	10	29	4					
QUETTA	64.17	287.7	10	30	-2					
LICK	64.76	61.8	10	52	16					
BUTTE	64.79	49.6	10	52	16					
BOZEMAN	65.84	49.2	10	44	1					
HELSINKI	66.19	333.0	10	44	-1					
EUREKA	66.93	56.9	10	48	-2					
UPPSALA	68.71	336.0	10	58	-3					
BOULDER CITY	69.87	59.2	11	7	-1					
TIFLIS	70.64	309.7	11	14	1					
RAPID CITY	71.07	46.5	11	16	1				15	22
GOTEBORG	72.12	337.3	11	32	10					
COPENHAGEN	73.72	336.0	11	30	-1					
SIMFEROPOL	73.89	317.8	11	32	0					
TUCSON	74.82	59.8	11	36	-2					
KRAKOW	75.98	328.9	11	44	0				1	57 PCP
RACIBORZ	76.58	329.9	11	47	-1				12	1 PCP
HALLE	77.48	334.1	11	51	-2				12	50
WITTEVEEN	77.87	337.6	11	53	-2					
PRAGUE	77.91	331.9							12	12 PCP
PRUHONICE	77.94	331.8	11	56	1				12	8 PCP
JENA	78.09	334.0	11	55	-1					
PLAUEN	78.29	333.5	11	54	-3					
MUNSTER	78.36	336.7	11	55	-2					
SONNEBERG	78.69	333.9	12	10	11					
BENSBERG	79.39	336.5	12	2	-1					
RATHFARNHAM	80.38	345.2	12	6	-2					
KEW	80.87	341.1	12	12	1					
TUBINGEN	80.98	334.3	12	12	0					

KSARA	81.21	309.2	12	18	5					
EBINGEN	81.32	334.2	12	14	1					
STRASBOURG	81.34	335.1	12	15	2				13	7
RAVENSBURG	81.47	333.6	12	15	1					
FAYETTEVILLE	81.61	46.9	12	14	-1					
BASLE	82.33	334.7	12	26	7					
PARIS	82.63	338.4	12	22	2					
BREBEUF	82.88	28.6	12	22	1					
NEUCHATEL	83.00	334.8	12	20	-2					
JERUSALEM	83.09	308.2	12	21	-1					
CLERMONT-FD.	85.24	336.7	12	44	1'					
MORGANTOWN	85.50	35.7	12	34	0					
WESTON	86.41	28.6	12	46A	7					
COLUMBIA	89.74	39.5	13	2	7					
SCOTT BASE	122.47	175.6	18	49	-2					
BYRD STATION	133.63	166.1	19	11	-1					
SOUTH POLE	134.20	180.0	19	12	-1					

NOVEMBER 16 6.H 15.M 36.S EPICENTRE 44.27 148.74 DEPTH= 54.KM

DEPTH OF FOCUS= 0.003R

A=-0.61411 B= 0.37287 C= 0.69559 D= 0.5190 E= 0.8548
G=-0.5946 H= 0.3610 K=-0.7184 HT= -3.3

SE= 2.51

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
NEMURO	2.47	248.8	0	36	-3	1	1	-7				
ABASHIRI	3.22	267.1	0	50	0	1	40	13				
KUSIRO	3.40	249.3	0	49	-3	1	28	-4				
OBIHIRO	4.24	253.4	1	4	0	1	53	0				
HIROO	4.42	245.2	1	4	-3							
ASAHIGAWA	4.62	266.2	1	12	3							
URAKAWA	4.84	246.1	1	12	0	2	5	-3				
Y.-SAKHLINSK	5.00	304.6	1	16	1	2	18	6				
SAPPORO	5.49	260.0	1	27	6	2	37	13			2	15
TOMAKOMAI	5.50	254.0	1	16	-6							
MURORAN	5.99	253.8	1	26	-2	2	44	7				
MORI	6.35	252.9	1	34	1	2	48	3				
HAKODATE	6.38	249.8	1	31	-3						1	55
HATINOHE	6.51	237.5				2	42	-7				
UGLEGORSK	6.65	318.8	1	40	2							
AOMORI	6.81	242.4	1	56	16	3	6	9				
MORIOKA	7.25	233.6	1	44	-2	2	56	-12				
MIZUSAWA	7.66	230.5	1	54	2	3	8	-10				
AKITA	7.87	237.7	2	16	21						3	19
ISINOMAKI	8.07	226.2	2	1	4	3	19	-9				
SENDAI	3.41	227.2	2	0	-2	3	22	-14				
HUKUSIMA	9.02	226.6	2	16	6	3	42	-10				
MITO	10.09	221.5				4	4	-14				
UTUNOMIYA	10.25	224.2				4	25	3				
KAKIOKA	10.35	222.0	2	27	-2	4	9	-15				
KUMAGAYA	10.81	224.6				4	26	-9			5	8
TOKYO C.M.O.	11.00	221.8				4	23	-17				
PETROPAVLOVK	11.02	32.9	3	1	23							
NAGANO	11.04	230.2									3	14
OIWAKE	11.10	227.9				4	49	7				
MATUSIRO	11.11	229.7	2	32K	-7	4	42	-1			5	36
KOHU	11.62	225.5									4	0
VLADIVOSTOK	12.24	270.5	2	56	2							
MAGADAN	15.36	4.0	3	35	0							
YAKUTSK	20.98	334.6	4	38	-3	8	25	-2				
PEKING	24.42	271.4	5	14	-1							
ZO-SE	25.33	248.1	5	25	2							
NANKING	26.36	252.6	5	35	2							
PAOTOW	28.63	276.2	5	53	-1							
TIKSI	29.08	347.2	5	55	-3							
SIAN	32.14	265.7	6	24	-1							
LANCHOW	34.92	272.2	6	49A	0							
CHENGTU	37.55	264.2	7	12	1							
COLLEGE	39.99	36.5	7	30	-1				7	44		
KUNMING	41.83	258.3	7	46	0							
KHEYS	47.89	346.5	8	22	-13							
SHILLONG	49.21	267.3	8	44A	-1							
RESOLUTE	54.15	17.1	9	20A	-2	16	57	4			20	36 SS

NAMANGAN	54.82	295.5	9 28	1				
LAHORE	58.19	284.6	9 49	-2				
APATITY	58.38	335.9	9 52	0				
WARSAK DAM	58.70	288.5	9 54	-1				
SODANKYLA	60.42	337.9	10 2	-4				
SHASTA	62.45	59.0	10 19	-1				
HUNGRY HORSE	62.75	48.1	10 21	-1				
QUETTA	64.10	287.7	10 30	-1				
BUTTE	64.96	49.5	10 46	10				
BOZEMAN	66.01	49.1	10 43	0				
HELSINKI	66.25	333.0	10 43	-2	10 56			
EUREKA	67.10	56.8	10 49	-1				
SALT LAKE C.	68.70	53.5	11 4	4				
UPPSALA	68.78	335.9	10 59A	-1	11 12			
BOULDER CITY	70.03	59.0	11 7	-1				
TIFLIS	70.63	309.6	11 13	1				
RAPID CITY	71.24	46.4	11 14	-1	11 27			
LARAMIE	71.87	49.7	11 18	-1				
GOTEBORG	72.19	337.3	11 20	-1	11 33			
COPENHAGEN	73.79	335.9	11 31	0		12 2		
SIMFEROPOL	73.90	317.8	11 31	0				
TUCSON	74.98	59.6	11 37	0	11 52			
KRAKOW	76.02	328.7	11 44	0		11 57	PCP	
RACIBORZ	76.63	329.8	11 47	0		12 1	PCP	
WITTEVEEN	77.94	337.6	11 55	1	12 8			
PRUHONICE	78.00	331.8	11 55	1		12 9	PCP	
JENA	78.16	333.9	11 54	-1	12 7			
DURHAM	78.16	343.0	12 7K	12				
PLAUEN	78.35	333.4	11 54	-2	12 7			
MUNSTER	78.43	336.6	12 0	3				
BRATISLAVA	78.63	329.3	11 58	0	12 10			
SONNEBERG	78.75	333.9	11 58	-1	12 11			
BENSBERG	79.46	336.4	12 2	0		12 16	PCP	
RATHFARNHAM	80.47	345.1	12 5	-3				
STUTTGART	80.79	334.2	12 10	1	12 23			
KEW	80.95	341.0	12 12	2	12 23			
TUBINGEN	81.05	334.2	12 11	0	12 24			
KSARA	31.20	309.1	12 9	-3				
EBINGEN	81.39	334.1	12 13	0	12 26			
STRASBOURG	81.40	335.0	12 13	0		12 56		
RAVENSBURG	81.53	333.5	12 15	2				
FAYETTEVILLE	81.77	46.8	12 13	-2				
OTTAWA	82.40	29.9	12 16	-2				
BASLE	82.40	334.6	12 19	1				
SHAWINIGAN	82.41	27.5	12 16	-2				
SEVEN FALLS	82.54	26.0	12 27	8				
PARIS	82.70	338.3	12 22	3		12 34		
BREBEUF	83.05	28.5	12 20	-1				
JERUSALEM	83.08	308.1	12 20K	-1		12 33		
CLERMONT-FD.	85.31	336.6	12 48	16				
MORGANTOWN	85.67	35.6	12 35K	1				
WESTON	86.58	28.5	12 52A	13				

NOVEMBER 16 17.H 44.M 48.S EPICENTRE -15.78-171.82 DEPTH= 0.KM

A=-0.95297 B=-0.13698 C=-0.27033 D=-0.1423 E= 0.9898
G= 0.2676 H= 0.0385 K=-0.9628 HT= 5.6

SE= 2.18

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
AFIAMALU	1.87	1.5	0	36K	2	1	7	8				
SUVA	9.62	254.5	2	25A	2	4	14	1				
NOUMEA	21.53	249.1	4	49	-4	8	55	7				
ONERAHI	23.42	209.2	5	13	1	9	36	14				
AUCKLAND	24.13	207.0				9	47	13				
KARAPIRO	24.72	204.5	5	24	0							
TUAI	24.89	200.8				9	57	10				
TONGARIRO	25.83	203.0	5	53	18							
WELLINGTON	27.93	201.9	5	53	-1	10	55	18				
COBB RIVER	28.54	204.9	6	6	6							
GEBBIES PASS	30.81	202.3	6	33	13							
BRISBANE	34.57	244.4	6	50	-3	13	20	58				
RABAUL	37.21	284.2	7	14	-1							
RIVERVIEW	37.85	234.8	7	5A	-16	13	12	0				

CANBERRA	40.01	233.5	7	39A	0				9	16 PP
CHARTERS TS.	40.04	257.6	7	37	-2	13	32	-13		
MELBOURNE	43.88	231.5	8	9A	-1	14	38	-4		
ADELAIDE	48.07	237.1	8	43	0	15	42	0	10	36 PP
DUMONT	59.75	200.1	10	16	7	18	18	-2		
SCOTT BASE	63.00	185.0	10	30K	-1	19	4	3	11	21 PCP
PERTH	67.01	241.6				19	59	9		
BYRD STATION	68.35	171.5	11	4	-2	20	6	0		
TUKUBASAN	68.83	319.8	11	6K	-3	20	13	1		
MATUSIRO	70.22	319.1	11	18	1	20	29	0	25	2 SS
WILKES	70.70	204.8	11	19	-1	20	33	-1		
BERKELEY	70.79	39.6	11	20	-1					
LICK	70.85	40.4	11	21A	0					
ABUYAMA	70.92	316.3	11	29A	8					
UKIAH	71.02	38.1	11	25	3					
PASADENA	71.20	44.9	11	23	0	20	56	16	21	30 SCS
FRESNO	71.66	41.8	11	25	-1					
SHASTA	72.51	37.3	11	31A	0					
MINERAL	72.76	38.0	11	32A	0					
PETROPAVLOVK	73.20	341.9	11	37	2					
RENO	73.33	39.5	11	37A	1					
SOUTH POLE	74.32	180.0	11	40	-1	21	13	-2	11	35 PP
BOULDER CITY	74.50	44.9	11	41	-1					
Y.-SAKHLINSK	74.59	329.6	11	43	0					
TUCSON	75.40	50.0	11	48	0					
TUCSON TELE.	75.53	49.9	11	49	1					
EUREKA	75.69	41.4	11	49	0				13	2
SEATTLE	77.09	31.8	11	57	0					
MIRNY	77.70	204.1	11	59	-2				22	7 SCS
VLADIVOSTOK	78.04	321.5				21	58	2		
SALT LAKE C.	79.04	42.0	12	8	0					
LEMBANG	79.12	265.9	12	8K	0	22	7	-1		
ZO-SE	79.41	306.6				22	13	2		
TACUBAYA	79.50	66.4	12	7	-3					
MAGADAN	80.97	341.8	12	17	-1	22	23	-4		
BUTTE	81.42	37.3	12	20	-1				12	44
NANKING	81.65	306.6				22	39	5		
HUNGRY HORSE	81.90	34.8	12	21	-2					
BOZEMAN	82.13	38.2	12	24	0					
CHANGCHUN	82.46	319.5	12	26	0					
COLLEGE	82.46	10.1	12	25	-1					
LARAMIE	83.43	44.0	12	31	0					
RAPID CITY	86.24	42.3	12	44	-1					
PEKING	86.84	313.0				23	30	5		
FAYETTEVILLE	89.51	52.3	13	1	0					
SANTA LUCIA	90.42	124.9	13	4	-1	24	20	21	23	36 SKS
HUANCAYO	92.89	103.3	13	19	3	24	50	30	23	57 SKS
CHENGTU	93.03	300.9				24	29	7	23	34 SKS
FLORISSANT	93.26	50.7				24	14	-10		
ST. LOUIS 1	93.32	50.9	13	17A	-1					
TIKSI	95.77	344.1	13	29	-1					
LA PAZ	98.18	109.7	13	43	3	25	22	16	17	52 PP
BOGOTA	98.69	87.6				24	22	-48	17	27 PP
RESOLUTE	101.69	15.3	13	56	0	25	37	2	27	28 PS
LHASA	103.72	297.2				24	45	-67		
FORDHAM	106.08	51.4							26	24
BERMUDA	112.59	61.1							19	12 PP
HALIFAX	113.84	47.9							29	21 SSS
AGRA	124.73	292.9	19	41K	58				29	27
QUETTA	124.57	295.9	19	4	2					
WITTEVEEN	143.03	1.5	19	35	-1					
COLLMBERG	144.36	354.8	19	34	-4					
JENA	144.84	356.3	19	38	-1				22	46 PP
RACIBORZ	144.84	348.8	19	39	0				20	12
BENSBERG	144.90	1.1	19	39	0					
UCCLE	144.94	4.2	19	38	-1					
PLAUEN	145.23	355.6	19	37	-3					
SKALNATE PL.	145.26	346.1	19	40	0					
SONNEBERG	145.41	356.6	19	40	0					
PRAGUE	145.43	352.9	19	44	4				20	52
PRUHONICE	145.50	352.7	19	42	2				20	37
CHEB	145.62	355.2	19	40	-1				20	11
DOURBES	145.65	4.1	19	41	0					
PARIS	146.74	6.9	19	46	3				20	0 PKP2
BRATISLAVA	146.88	349.0	19	46	3				20	28
STUTTGART	147.10	358.8	19	45	2				20	30
STRASBOURG	147.29	0.5	19	48	5				23	12 PP
TUBINGEN	147.34	358.9	19	46	2					

EBINGEN	147.69	359.0	19 48	4	20 8	
RAVENSBURG	148.07	358.2	19 50	5		
BASLE	148.34	0.8	19 47	2	21 20	
NEUCHATEL	148.86	1.6	19 52	6		
ISTANBUL UN.	149.05	328.5	19 52	6		
ZAGREB	149.35	349.3	19 54K	7		
CLERMONT-FD.	149.81	7.1	19 54	7		
TRIESTE	149.86	352.2	19 54K	6	20 6	PKP2
SOFIA	150.20	337.2	19 55	7		
JERUSALEM	150.69	307.7	19 57A	8		
SERRA PILAR	150.86	26.6	19 49K	0		
CINE	152.03	324.8	19 52	1		
MONACO	152.14	1.2	20 0	9	20 8	PKP2
LISBON	152.54	30.4	20 11K	19		
LWIRO	152.86	230.5	20 2	10		
TOLEDO	153.73	21.6	19 55	2	20 14	PKP2
HELWAN	154.54	307.4	20 6	12	24 4	PP
MBOUR	155.68	89.9	20 0	4	20 24	PKP2
ALICANTE	156.26	17.1	19 55	-2	20 23	PKP2
GRANADA	156.27	23.9	20 30A	33	24 6	PP
MALAGA	156.34	25.9			20 28	PKP2
ALMERIA	156.98	22.3	19 59	1	20 27	PKP2
ALGIERS UNI.	158.61	11.4	20 0	0	20 34	PKP2
SETIF	159.52	6.4	20 2	1	20 34	PKP2
TAMANRASSET	172.60	19.4	20 12	1	21 32	PKP2

NOVEMBER 16 18.H 2.M 28.S EPICENTRE -20.11 168.80 DEPTH= 0.KM

A=-0.92187 B= 0.18248 C=-0.34184 D= 0.1942 E= 0.9810
G= 0.3353 H=-0.0664 K=-0.9398 HT= 4.6

SE= 2.97

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
NOUMEA	3.09	224.8	0 49K	-2	1 36	7		
SUVA	9.31	79.5	2 26	8	4 17	12		
BRISBANE	16.18	240.1	3 51	1	7 2	11		
KARAPIRO	18.68	163.2	4 22	0				
AFIAMALU	19.57	74.6	4 33	1				
TONGARIRO	19.89	164.5	4 52	16				
RIVERVIEW	20.79	225.3			8 47	14		
CHARTERS TS.	21.18	266.4	4 49	0	8 47	6		
RABAUL	22.64	312.1	5 7	3				
CANBERRA	23.10	224.9	5 12A	4				
MELBOURNE	27.20	224.4	5 52	5				
ADELAIDE	30.35	234.6	6 16	0				
SCOTT BASE	57.79	180.5	9 53	-2	17 56	2	10 54	PCP
LEMBANG	60.65	273.5	10 15	0	18 31	0		
MATUSIRO	63.33	332.7	10 30	-3				
MIRNY	66.08	205.1	10 49	-2	19 36	-3		
BYRD STATION	67.16	169.6	10 55	-3				
SOUTH POLE	70.01	180.0	11 13	-2			39 15	PKPPKP
LICK	86.84	48.4	12 47	-1				
FRESNO	87.88	49.6	12 59	6				
SHASTA	87.92	45.2	12 51	-2				
MINERAL	88.29	45.8	12 52	-3				
COLLEGE	91.00	17.1	12 54	-13				
EUREKA	91.78	48.5	13 8	-3				
TUCSON	92.77	56.8	13 14	-1				
COLLMBERG	143.54	334.3	19 4	-33				
PRUHONICE	143.86	331.6	19 35	-2				
JENA	144.39	335.1	19 35	-3				
PLAUEN	144.50	334.2	19 32	-6			19 56	
WITTEVEEN	144.54	341.3	19 37	-1				
DURHAM	144.64	350.4	19 37A	-2				
CHEB	144.72	333.5	19 36	-3				
ATHENS	144.93	308.1	19 35	-4				
MUNSTER	144.97	339.7	19 33	-6				
DE BILT	145.61	342.1	19 39	-1				
BENSBERG	145.98	339.1	19 40	-1				
ZAGREB	146.00	325.2	19 42A	1				
UCCLE	147.01	341.8	19 42	-1				
STUTTGART	147.04	334.9	19 43	0				
TRIESTE	147.28	326.8	19 45	2				
TUBINGEN	147.29	334.8	19 44	1			20 9	

DOURBES	147.55	340.9	19	44	1						
KEW	147.56	347.3	19	45	1						
EBINGEN	147.61	334.5	19	45	1						
STRASBOURG	147.75	336.1	19	40	-4					20	38
BASLE	148.69	335.2	19	49	4						
PARIS	149.33	342.1	19	50	4					20	14
NEUCHATEL	149.37	335.3	19	50	4						
ROME	150.45	322.6								19	52 PKP2
MESSINA	150.66	313.6				27	2	7		19	52 PKP2
CLERMONT-FD.	151.82	338.5	19	58	8						
TAMANRASSET	164.21	282.7	20	1	-4					20	56 PKP2

NOVEMBER 16 21.H 46.M 5.S EPICENTRE 27.81 139.57 DEPTH= 525.KM

DEPTH OF FOCUS= 0.078R

A=-0.67428 B= 0.57440 C= 0.46413 D= 0.6485 E= 0.7612
G=-0.3533 H= 0.3010 K=-0.8858 HT= 2.5

SE= 2.10

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	2.73	13.3	1	13	1	1	57	-12				
HATIDYOZIMA	5.27	2.3				2	41	-3				
SIOMISAKI	6.50	330.7	1	41	-2	3	6	1				
OMAESAKI	6.86	350.6	1	49	3	3	10	-1				
OWASE	6.88	335.9	1	46	0	3	9	-2				
OSIMA	6.94	358.7				3	8	-4				
MERA	7.09	1.7	1	49	1	3	12	-3				
SHIZUOKA	7.20	352.3				3	13	-4				
AJIRO	7.23	356.9	1	43	-7	3	14	-3				
MISIMA	7.30	356.0	1	50	-1	3	14	-5				
TU	7.37	340.0	1	52	1							
KAMEYAMA	7.50	340.1	1	55	2	3	22	0				
YOKOHAMA	7.59	0.5	1	54	0	3	21	-3				
OSAKA	7.64	334.1	1	55A	1							
SUMOTO	7.66	329.5	1	55	1	3	24	-1			2	36
NAGOYA	7.66	343.8	1	56	2	3	25	0				
HUNATU	7.69	355.1	1	52	-3	3	21	-5				
KOTI	7.73	319.2	1	56	1	3	23	-4				
KOBE	7.81	332.3				3	28	0				
ARUYAMA	7.82	335.1	1	56A	0	3	21	-7				
KOHU	7.84	354.0	1	56	0	3	25	-4				
TOKYO C.M.O.	7.84	1.1	1	55A	-1	3	23	-6				
GIHU	7.93	343.2	1	57	0	3	28	-2				
HIKONE	7.96	340.0	1	58	1	3	25	-6				
IBUKISAN	8.02	341.0	1	59	1							
TITIBU	8.15	357.2	2	0	1							
MIYAZAKI	8.18	302.0	2	0	1	3	37	2				
KUMAGAYA	8.31	358.9	2	1	0							
MATUYAMA	8.39	317.3	2	3	1	3	35	-4				
TUKUBASAN	8.39	2.9	1	59A	-3	3	34	-5				
KAKIOKA	8.41	3.4	2	1	-1	3	33	-6				
MATUMOTO	8.52	351.2	2	4	1	3	39	-2				
OIWAKE	8.54	354.4	2	8	5							
MAEBASI	8.57	357.3	1	58	-5	3	38	-4				
MITO	8.58	4.9	2	2	-2	3	40	-2				
HUKUI	8.68	342.0	2	8	3							
KAGOSIMA	8.69	297.7				3	43	-1				
UTUNOMIYA	8.71	1.6	2	3	-2	3	38	-7				
OOITA	8.73	310.2	2	6	1	3	48	3				
MATUSIRO	8.79	352.8	2	3A	-3	3	34	-12				
NAGANO	8.91	352.9	2	5	-2	3	45	-3				
TOYAMA	9.09	347.8	2	6	-3	3	53	1				
KUMAMOTO	9.15	305.2	2	13	4							
ONAHAMA	9.18	6.7	2	8	-2	3	48	-5			4	54
SHIRAKAWA	9.30	3.2	2	9	-2	3	51	-5				
MATSUE	9.41	325.6	2	12	0	3	55	-3				
HAMADA	9.54	319.6	2	13	0	4	1	1				
SAGA	9.66	306.4	2	17	2	4	4	2				
NAGASAKI	9.71	302.7				4	4	1				
HUKUOKA	9.75	308.4				4	5	1			2	33
HUKUSIMA	9.94	4.1	2	16A	-2	4	5	-3				
NIIGATA	10.09	357.6				3	15	-56				
YAMAGATA	10.43	3.4	2	24	1	4	14	-3				
SENDAI	10.49	5.7	2	23	0	4	9	-9				

ISINOMAKI	10.69	7.4	2	25	0	4	19	-3				
SAKATA	11.06	1.0	2	31	2	4	31	2				
MIZUSAWA	11.36	6.2	2	33	1	4	36	1				
AKITA	11.88	2.0	2	37	-1	4	45	0				
MORIOKA	11.93	6.0	2	37	-1	4	49	4			5	8
MIYAKO	11.97	9.0	2	39	1	4	45	-1				
HATINOHE	12.79	6.8				5	0	-1				
AOMORI	13.01	4.1	2	50	1							
MORI	14.28	3.0	3	5	3	5	32	3				
URAKAWA	14.54	9.5	3	7	2	5	39	5				
GUAM	15.07	160.3	3	4	-6	5	49	5			7	35 PCP
OBIHIRO	15.36	10.1	3	22	9	6	1	12				
ZO-SE	16.35	286.0	3	22	-1	6	5	-2				
NANKING	18.49	288.2	3	43	0	6	44	0				
CHANGCHUN	19.68	328.0	3	53	-2						5	58 *SP
HONG KONG	23.64	262.2	4	31	0							
SIAN	26.97	291.4	5	0	0	8	56	-5				
LANCHOW	31.30	294.4	5	37	-1							
MAGADAN	32.66	10.6	5	48	-1							
KUNMING	33.07	273.8	5	53	0	10	42	6				
RABAUL	34.07	157.2	6	3	2				7	40		
YAKUTSK	34.83	351.9	6	7	0							
LHASA	42.35	284.5				12	53	1				
SHILLONG	42.47	278.4	7	9K	0							
CHITTAGONG	43.38	273.9	7	12	-5	13	3	-4	8	44	9	0 PP
TIKSI	44.26	355.2	7	22	-1							
LEMBANG	46.25	226.7	7	41K	2	13	48	1				
CHATRA	46.27	281.5	7	40	1							
CHARTERS TS.	47.98	171.5	7	53	1	14	17	6				
LAHORE	56.06	290.8	8	47	-3						17	40 SCS
WARSAK DAM	57.74	294.4	9	2	0							
COLLEGE	57.81	28.8	9	2	0				10	45		
POONA	60.52	276.5	9	21	1							
KHEYS	62.36	348.7	8	56	-36							
ADELAIDE	62.41	180.8	9	35	2							
QUETTA	62.53	291.3	9	33	0	17	19	-1			18	24 SCS
APATITY	70.49	337.0	10	22	0							
RESOLUTE	71.91	13.2	10	31K	0				12	21		
SODANKYLA	72.88	338.1	10	37	1							
KIRUNA	74.59	339.9	10	46	0							
HELSINKI	77.43	332.2	11	2	1							
SHASTA	78.03	50.3							12	57		
MINERAL	78.73	50.4	11	11	3				13	7		
HUNGRY HORSE	79.69	40.6	11	15	2				13	6		
LICK	80.07	53.1							13	15		
RENO	80.32	50.4							13	16		
UPPSALA	80.56	334.3	11	17	-1							
BUTTE	81.74	42.1	13	19	115							
EUREKA	82.95	49.0	11	32	2				13	23		
GOTEBORG	84.18	334.7	11	33	-3							
CAPE HALLETT	102.06	170.8				22	57	11				
SOUTH POLE	117.65	180.0	17	47	1				19	12		
BYRD STATION	119.09	168.7	18	50	62							
HUANCAYO	143.79	71.4	18	38	3							

NOVEMBER 17 9.H 46.M 31.S EPICENTRE -10.46 161.92 DEPTH= 0.KM

A=-0.93506 B= 0.30518 C=-0.18038 D= 0.3103 E= 0.9506
G= 0.1715 H=-0.0560 K=-0.9836 HT= 6.5

SE= 2.49

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S	
RABAUL	11.50	302.0	2	50	2	5	5	6					
NOUMEA	12.55	160.3	2	55A	-7	5	32	8					
SUVA	17.72	117.4	4	10A	0	7	38	12			5	42	
CHARTERS TS.	17.83	236.0	4	15	4	7	53	25					
BRISBANE	18.89	205.1	4	26K	2	8	5	13					
TRUK	20.44	330.2	4	41	0								
RIVERVIEW	25.27	201.4	5	30	1	9	59	6					
AFIAMALU	25.93	100.2	5	34	-1						11	17	SS
CANBERRA	27.40	203.4	5	51A	2	10	45	17			6	44	PP
GUAM	29.25	324.0	6	4	-2								
KARAPIRO	29.95	158.1	6	11	-1								
MELBOURNE	31.22	206.5	6	24	1								

ADELAIDE	32.26	217.3	6	33A	1					
GEBBIES PASS	34.40	166.2	6	49	-2					
FORT NELSON	34.76	198.9	6	51	-3				12	35
PERTH	47.56	236.1	8	45	6				10	37 PP
BAGUIO CITY	48.85	302.7	8	27	-22					
TUKUBASAN	50.78	337.2	9	3K	-1	16	28	9	9	44 PCP
ABUYAMA	51.53	332.2	9	9A	-1					
MATUSIRO	51.81	335.7	9	9A	-3	16	37	4	11	17 PP
SENDAI	52.31	339.1	9	19	4					
NAGASAKI	52.72	325.8	9	17	-1	16	46	0		
LEMBANG	53.76	269.2	9	24K	-2	16	58	-2		
ZO-SE	56.87	318.0	9	47	-2					
DUMONT	58.07	190.1	9	56	-1	17	57	0		
NANKING	59.04	317.4	10	3	-1					
Y.-SAKHLINSK	59.67	344.9	10	12	4	18	27	9		
VLADIVOSTOK	59.95	335.0	10	8	-2	18	31	9		
UGLEGORSK	61.81	345.3	10	23	0	18	57	11		
CHANGCHUN	63.45	331.1	10	31A	-3					
MEDAN	64.48	279.1	10	38	-2					
WILKES	65.56	200.4	10	46	-1	19	32	0		
PEKING	65.71	322.9	10	46	-2					
SIAN	67.09	314.1	10	57	0					
SCOTT BASE	67.42	178.9	10	59K	0	20	2	7	11	27 PCP
KUNMING	67.65	302.6	11	0	-1					
CHENGTU	68.98	308.5	11	8	-1					
PAOTOW	69.79	320.3	11	14A	0					
MAGADAN	70.35	354.0	11	16	-1					
LANCHOW	71.62	313.6	11	24	-1					
MIRNY	72.13	203.1	11	35	7	20	48	-2		
YAKUTSK	76.50	345.0	11	52	-1	23	16	97		
SHILLONG	76.96	299.4	11	55A	-1					
BYRD STATION	77.78	169.9	11	59	-1					
LHASA	78.95	303.1	12	8	1					
SOUTH POLE	79.61	180.0	12	9	-1					
CHATRA	81.37	299.3	12	20	0					
COLLEGE	83.95	19.3	12	31	-2					
BERKELEY	85.38	50.3	12	40A	0					
LICK	85.70	51.0	12	43A	1					
SHASTA	86.12	47.6	12	45A	1					
MINERAL	86.59	48.1	12	46A	0					
FRESNO	86.96	51.9	12	48A	0					
PASADENA	87.58	54.8	12	51	0	23	38	6	29	17 SS
RENO	87.69	49.3	12	52A	0					
EUREKA	90.55	50.1	13	5	0					
BOULDER CITY	90.67	53.7	13	7	1					
TUCSON	93.19	58.0	13	18	1					
TUCSON TELE.	93.30	57.9	13	19	1					
HUNGRY HORSE	93.80	41.7	13	20	0					
SALT LAKE C.	93.91	49.4	13	23	2					
HALLEY BAY	94.03	177.9	13	19	-2				17	10 PP
BUTTE	94.34	44.2	13	22	-1					
BOZEMAN	95.33	44.7	13	29	2					
WARSAK DAM	96.07	303.3	13	28	-2					
LARAMIE	98.68	49.6	13	52	10					
RAPID CITY	100.68	46.9	14	0	9					
RESOLUTE	103.50	15.4				25	53	3	18	20 PP
OTTAWA	119.93	43.4	18	52	0					
SHAWINIGAN	121.52	41.4	18	55	-1					
SEVEN FALLS	122.57	40.2	18	58	0					
KSARA	125.57	304.1							21	55
HALIFAX	128.20	40.4	19	8	0					
BERMUDA	131.91	55.7							22	37 PKS
BRATISLAVA	132.24	328.6	19	1;	1				20	14
SETIF	146.70	324.1	19	39	-3				19	48 PKP2
ALGIERS UNI.	147.59	327.3	19	45	2					
ALICANTE	148.06	333.3	19	44	0	26	51	0		
RELIZANE	149.67	329.0	19	44	-3				19	53 PKP2
GRANADA	150.37	336.2	19	52K	4					
MALAGA	151.08	336.9	19	55A	6				23	31 PKS
TAMANRASSET	154.33	301.5	19	58	5				22	21 PKP2

NOVEMBER 17 15.H 34.M 28.S EPICENTRE 43.98 149.08 DEPTH= 39.KM

DEPTH OF FOCUS= 0.001R

A=-0.61937 B= 0.37095 C= 0.69193 D= 0.5138 E= 0.8579

G=-0.5936 H= 0.3555 K=-0.7220 HT= -3.2

SE= 2.47

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
NEMURO	2.62	256.9	0 39	-2	1 9	-3		
ABASHIRI	3.47	272.4	0 54	1	1 51	18		
KUSIRO	3.55	255.3	0 54	0	1 34	-1		
OBIHIRO	4.41	258.2	1 7	1	2 4	7		
HIROO	4.55	250.1	1 9	1				
ASAHIGAWA	4.86	270.0	1 13	1				
URAKAWA	4.96	250.6	1 14	0	2 11	0		
Y.-SAKHLINSK	5.37	305.8	1 18	-1	2 18	-3		
TOMAKOMAI	5.67	257.7	1 29	5				
SAPPORO	5.69	263.5	1 25A	1	2 42	13		
MORI	6.51	256.2	1 36	1	3 0	11		
HAKODATE	6.52	253.2	1 39	3	3 1	11		
HATINOHE	6.58	241.0			2 44	-7		
MIYAKO	6.85	233.3			2 44	-14		
AOMORI	6.91	245.7	1 44	3	2 58	-1		
UGLEGORSK	7.03	319.0	1 45	2	3 10	8		
MORIOKA	7.29	236.8	1 45K	-1	2 59	-10		
ISINOMAKI	8.06	229.2	2 2	5	3 20	-8		
SENDAI	8.40	230.1	1 56	-6	3 25	-11		
YAMAGATA	8.72	232.0			3 36	-8		
HUKUSIMA	9.01	229.3	2 8	-2	3 42	-9		
ONAHAMA	9.38	224.4			3 31	-30		
MITO	10.04	223.9			4 6	-11		
KAKIOKA	10.31	224.4	2 20	-8	4 11	-12		
TUKUBASAN	10.35	224.6	2 25	-4	4 12	-12		
MAEBASI	10.76	228.7			4 29	-5		
KUMAGAYA	10.78	226.8			4 16	-19		
NAGANO	11.05	232.4						2 59
OIWAKE	11.10	230.1						4 3
MATUSIRO	11.12	231.9	2 36A	-3	4 42	-1		
KOHU	11.60	227.6			4 47	-8		
VLADIVOSTOK	12.50	272.0	2 57	-1				
CHANGCHUN	17.12	277.8	3 54	-3				
YAKUTSK	21.35	334.6	4 40	-5	8 30	-5		
PEKING	24.68	272.3	5 18	0				
ZO-SE	25.45	249.1	5 27	2				
NANKING	26.51	253.6	5 37	2				
PAOTOW	28.91	277.0	5 58	1				
ULAN-BATOR	29.32	292.7	4 50	-71				
TIKSI	29.42	347.1	5 56	-6				
LANCHOW	35.18	272.9	6 54A	2				
CHENGTU	37.77	264.9	7 15A	1				
COLLEGE	40.08	36.3	7 34	1				
KUNMING	42.02	258.9	7 49A	0				
SHILLONG	49.45	267.8	8 48A	0				
CHATRA	52.09	272.4	9 9	1				
RESOLUTE	54.35	17.1	9 23A	-2				
NAMANGAN	55.17	295.8	9 31	0				
THULE	57.54	9.8	9 45	-2				
LAHORE	58.51	285.0	9 55	1				10 47 PCP
APATITY	58.75	336.1	9 40	-16				
WARSAK DAM	59.03	288.9	9 58	0				
SODANKYLA	60.78	338.0	10 7	-3			10 20	
SHASTA	62.38	59.1	10 22	1				
HUNGRY HORSE	62.76	48.1	10 24	1				10 52
MINERAL	63.08	59.0	10 26	1				
QUETTA	64.43	288.0	10 34	0				
LICK	64.84	61.7	10 37	0				
BUTTE	64.96	49.5	10 39	1				
PULKOVO	65.10	330.7	10 36	-2				
BOZEMAN	66.01	49.1	10 45	1				
HELSINKI	66.62	333.2	10 48	0			11 1	
EUREKA	67.05	56.9	10 52	1				
UPPSALA	69.14	336.1	11 2	-2			11 15	
RAPID CITY	71.26	46.5	11 17	0				
LARAMIE	71.87	49.9	11 21	1				
SIDA	72.11	354.0	11 37	15				
GOTEBORG	72.56	337.5	11 23	-1			11 35	
COPENHAGEN	74.16	336.2	11 34	0				
TUCSON	74.91	59.8	11 40	2				
TUCSON TELE.	74.92	59.6	11 40	2				
SKALNATE PL.	76.99	328.4	11 54	4				
RACIBORZ	77.01	330.0	11 51	1				

COLLMBERG	77.76	333.5	11	50	-4				12	14	
HALLE	77.92	334.2	11	57	2				12	9	PCP
PRUHONICE	78.37	332.0	11	58	0				12	11	PCP
JENA	78.53	334.1	11	56	-2						
PLAUEN	78.72	333.6	11	57	-3				12	10	PCP
MUNSTER	78.80	336.9	12	0	0						
BRATISLAVA	79.00	329.5	12	2	1						
BENSBERG	79.83	336.6	12	18	12						
RATHFARNHAM	80.82	345.3	12	1	-10						
STUTTGART	81.17	334.4	12	14	1				12	40	
DOURBES	81.32	337.8	12	24	11						
TUBINGEN	81.42	334.4	12	15	1						
STRASBOURG	81.77	335.2	12	30	14						
OTTAWA	82.52	30.0	12	20	0						
BREBEUF	83.18	28.7	12	23	0						
NEUCHATEL	83.43	335.0	12	26	2						
JERUSALEM	83.46	308.4	12	26A	2						
CAPE HALLETT	116.93	172.9	19	10	30						
BYRD STATION	133.19	166.2	19	15	4						
SOUTH POLE	133.78	180.0	19	3	-9						

NOVEMBER 18 7.H 45.M 22.S EPICENTRE 51.66 179.37 DEPTH= 0.KM

A=-0.62284 B= 0.00683 C= 0.78232 D= 0.0110 E= 0.9999
G=-0.7823 H= 0.0086 K=-0.6229 HT= -6.0

SE= 2.18

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	12.74	284.8	3	7	2								
MAGADAN	17.85	307.4	4	6	-5								
COLLEGE	21.41	39.3	4	53	2	8	58	13			9	53	
UGLEGORSK	23.76	278.6	5	13	-2								
Y.-SAKHLINSK	24.18	273.3	5	20	1								
YAKUTSK	28.35	310.8	5	58	0	10	43	-1					
TIKSI	29.82	330.5	6	12	1								
MATUSIRO	32.70	258.8	5	13A	-83						6	3	PP
VLADIVOSTOK	32.74	273.9	6	37	1						7	24	
VICTORIA	36.04	71.8	7	4	-1								
CHANGCHUN	36.44	279.5	7	8	0								
RESOLUTE	39.96	24.4	7	39A	1	13	48	4					
SHASTA	40.76	81.9	7	44	0								
UKIAH	41.18	84.4	7	56	8						9	5	
MINERAL	41.45	81.8	7	50	0								
HUNGRY HORSE	41.60	67.2	7	50	-1	14	5	-3					
BERKELEY	42.54	85.2	7	59	0	14	49	27					
RENO	43.04	81.6	8	2	-1								
LICK	43.26	85.4	8	3	-2								
BUTTE	43.67	69.4	8	7	-1								
PEKING	44.21	280.6	8	13	1								
IRKUTSK	44.28	301.7	8	14	1								
BOZEMAN	44.75	69.0	8	16	-1								
FRESNO	44.76	84.7	8	16	-1								
ULAN-BATOR	45.16	295.2	8	21A	1								
KHEYS	45.18	348.7	8	13	-7								
THULE	45.23	17.9	8	20	-1						9	8	
EUREKA	45.43	79.1	8	21	-1						9	29	
ZO-SE	46.87	267.4	8	33A	-1	15	27	3					
SALT LAKE C.	47.15	75.0	8	36	0								
PASADENA	47.47	86.3	8	36	-2	15	27	-6			18	26	SCS
PAOTOW	47.60	285.2	8	41A	2								
NANKING	47.70	270.2	8	39	-1								
RAPID CITY	50.20	66.3	8	59	0						9	47	
ISFJORD	50.25	356.2	9	2	2						9	51	
SIAN	52.35	279.6	9	15A	-1								
TUCSON	53.29	82.7	9	21	-2						10	10	PCP
TUCSON TELE.	53.30	82.5	9	21	-2						10	9	PCP
LANCHOW	54.23	284.8	9	29A	-1								
SEMIPALATNSK	57.46	311.4	9	54	1								
CHENGTU	57.82	279.9	10	3	8								
APATITY	58.39	345.4	9	55	-4								
SODANKYLA	59.53	348.1	10	8	1						10	55	PCP
KIRUNA	59.79	350.9	10	9	0								
FAYETTEVILLE	60.65	68.0	10	1A	-14								
SVERDLOVSK	60.73	326.5	10	18	2								

OTTAWA	63.75	49.4	10	36	0					
SHAWINIGAN	64.26	46.8	10	36	-3					
BREBEUF	64.66	48.1	10	43	1					
SEVEN FALLS	64.70	45.3	10	44	2					
PULKOVO	66.14	343.5							13	34 PP
LHASA	66.38	288.2	10	53	0					
HELSINKI	66.63	346.4	10	55	1					
UPPSALA	67.87	350.2	11	2	0					
WESTON	68.11	48.9	11	6A	2					
NAMANGAN	68.43	309.1	11	7	1					
SHILLONG	68.88	284.7	11	7A	-1				11	56
COLUMBIA	69.56	60.9	11	11	-2					
GOTEBORG	70.51	352.9	11	17	-1					
CHATRA	70.74	288.9	11	21	1				12	21
CHITTAGONG	71.31	282.5	11	17	-6	20	33	-8	13	57 PP
WARSAK DAM	73.92	304.6	11	39	0					
RATHFARNHAM	75.30	3.5	11	46	-1				12	32
WITTEVEEN	75.71	355.4	11	51	2					
AGRA	75.78	295.7	11	47A	-2				12	33
MUNSTER	76.51	354.8	11	55	2					
HALLE	76.67	352.0	11	54	0					
CHARTERS TS.	77.03	211.8	12	1	5				12	39
KEW	77.24	359.8							26	38 SS
JENA	77.26	352.1	11	58	0					
PLAUEN	77.64	351.7	11	57	-3					
UCCLE	77.83	356.8	11	43	-18					
PRUHONICE	77.92	350.0	12	2	1				12	50
TIFLIS	78.96	327.1	12	7	0					
BERMUDA	79.26	50.8							22	8
QUETTA	79.31	305.5	12	10A	1	22	13	4	15	8 PP
BRATISLAVA	79.40	348.0	12	12	3				12	52
STUTTGART	79.60	353.4	12	11	1				12	59
TUBINGEN	79.84	353.5	12	12	0					
STRASBOURG	79.88	354.3	12	13	1				13	0
EBINGEN	80.20	353.5	12	15	1					
BOMBAY	85.19	294.4	13	27	48	23	10	1		
KSARA	89.05	330.3	13	3	5					
SAN JUAN	90.01	59.8	13	2	-1				14	5
CANBERRA	90.62	204.4	13	4	-1					
TAMANRASSET	105.69	354.1	18	23	-2					
LWIRO	124.93	323.2	19	4	2					
SCOTT BASE	129.48	183.4	19	8	-3					
BYRD STATION	135.88	167.3	19	19	-4					
SOUTH POLE	141.47	180.0	19	27	-6					
KIMBERLEY	150.27	310.6	19	53	5					

NOVEMBER 18 18.H 33.M 15.S EPICENTRE 44.20 148.49 DEPTH= 86.KM

DEPTH OF FOCUS= 0.008R

A=-0.61313 B= 0.37595 C= 0.69479 D= 0.5227 E= 0.8525
G=-0.5923 H= 0.3632 K=-0.7192 HT= -3.3

SE= 3.34

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
GORNY	0.97	317.9	0	19	-1	0	31	-4			0	57
LESOZAVODSK	1.09	301.7	0	18	-3							
KURILSK	1.12	337.1	0	17	-4							
NEMURO	2.28	248.5	0	40	3	1	2	-2				
ABASHIRI	3.03	268.0	0	48	1	1	45	22				
KUSIRO	3.21	249.0	0	49	-1	1	38	11				
OBIHIRO	4.05	253.4	1	16	15	2	11	23			1	43
HIROO	4.23	244.8	1	0	-4							
URAKAWA	4.65	245.8	1	11	2	2	4	1				
Y.-SAKHLINSK	4.89	306.2	1	18	5							
SAPPORO	5.30	260.1	1	21	3						2	44
TOMAKOMAI	5.31	253.9	1	24	6							
MURORAN	5.80	253.8	1	25	0	2	34	3			2	0
MORI	6.16	252.8	1	35	5	2	46	6				
HAKODATE	6.19	249.6	1	25	-6							
HATINOHE	6.32	236.9				2	36	-8				
UGLEGORSK	6.58	320.1	1	38	2							
AOMORI	6.62	241.9	1	36	-1							
MORIOKA	7.07	233.0	1	36	-7	2	53	-9				
MIZUSAWA	7.48	229.9	1	49	1	3	3	-9				

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

ISINOMAKI	7.89	225.5	1	58	4	3	15	-8			
SENDAI	8.23	226.5				3	18	-13			
YAMAGATA	8.54	228.6				3	29	-9			
HUKUSIMA	8.85	226.0	2	2	-5						
ONAHAMA	9.26	221.1				3	50	-6			
SHIRAKAWA	9.46	224.4				3	50	-11			
MITO	9.92	220.8				3	57	-15			
UTUNOMIYA	10.08	223.6	2	32	8						
KAKIOKA	10.18	221.4	2	14	-11	4	5	-13			
TUKUBASAN	10.23	221.6	2	17	-9	4	4	-15			
MATUSIRO	10.94	229.2	2	29A	-6	4	35	-1			3 47
PETROPAVLOVK	11.17	33.3	2	39	1	4	50	8			
VLADIVOSTOK	12.06	270.6	2	47	-3						
CHANGCHUN	16.67	276.8	3	49	0						
PEKING	24.24	271.4	5	11A	1						
ZO-SE	25.14	247.9	5	20	2						
NANKING	26.17	252.5	5	31	3						
PAOTOW	28.46	276.2	5	48	-1						
ULAN-BATOR	28.84	292.2	5	52	0						
LANCHOW	34.74	272.2	6	45	1	12	26	19			
CHENGTU	37.37	264.1	7	1A	-5						
COLLEGE	40.15	36.4	7	23	-6						
KUNMING	41.64	258.1	7	42	1	14	3	12			
SEMIPALATNSK	45.21	303.1	8	10	0						
LHASA	47.25	272.2	8	29	3						
SHILLONG	49.03	267.2	8	38	-2						
CHITTAGONG	51.05	264.0	8	54	-1	16	14	9			
FRUNSE	51.86	296.1	9	1	-1						
SVERDLOVSK	53.47	316.9	9	13	-1						
RESOLUTE	54.26	17.0	9	14	-5						
THULE	57.38	9.7	9	35	-7						
STALINABAD	57.87	294.3	9	45	0						
LAHORE	58.03	284.5	9	48	2	18	0	22			
WARSAK DAM	58.55	288.4	9	50	0						
SODANKYLA	60.41	337.8	10	1	-2						
KIRUNA	61.67	340.2	10	8	-3						
HUNGRY HORSE	62.93	48.0	10	22	2						
QUETTA	63.95	287.6	10	26	0	19	7	13			
PULKOVO	64.69	330.4	10	29	-2						15 37
BOZEMAN	66.19	48.9	10	54	13						
HELSINKI	66.22	332.9	10	40	-1						
SKALSTUGAN	67.10	340.4	10	44	-2						
EUREKA	67.28	56.6	10	42	-6						
UPPSALA	68.76	335.8	10	55	-2				11	7	
TIFLIS	70.53	309.5	11	8	0						
GORIS	71.16	306.9	11	12	1						
RAPID CITY	71.41	46.2	11	14	1						
LARAMIE	72.05	49.6	11	25	8						
GOTEBORG	72.18	337.2	11	15	-2						
SIMFEROPOL	73.83	317.7	11	27	0						
LWOW	74.58	326.4	11	31	0						
TUCSON	75.17	59.5	11	33	-2						
TUCSON TELE.	75.18	59.3	11	43	8						
COLLMBERG	77.36	333.2	11	45	-2						
PRUHONICE	77.97	331.6	11	51	1						12 3 PCP
JENA	78.13	333.8	11	49	-2				12	4	
PLAUEN	78.32	333.2	11	49	-3				12	3	
MUNSTER	78.42	336.5	11	53	0						
BRATISLAVA	78.59	329.2	11	53	-1						12 23
BENSBERG	79.45	336.3	11	59	1						
UCCLE	80.38	337.8	11	51	-12						
STUTTGART	80.77	334.1	12	5	-1				12	18	13 1
TUBINGEN	81.03	334.0	12	6	-1						
KSARA	81.10	308.9	12	11	4						
EBINGEN	81.37	333.9	12	7	-2				12	24	
STRASBOURG	81.39	334.8	12	8	-1						12 51
CINE	82.35	316.3	12	16	2						
PARIS	82.69	338.1	12	18	3				12	30	
JERUSALEM	82.98	308.0	12	16A	-1						12 53
BREBEUF	83.19	28.4	12	31K	13						
ROME	85.64	328.7				23	22	28			
MORGANTOWN	85.82	35.4	12	46K	15						
SCOTT BASE	122.30	175.5	19	0	15						

NOVEMBER 19 1.H 35.M 7.S EPICENTRE -27.56 -63.38 DEPTH= 570.KM

DEPTH OF FOCUS= 0.085R

A= 0.39784 B=-0.79368 C=-0.46021 D=-0.8940 E=-0.4481
G=-0.2062 H= 0.4114 K=-0.8878 HT= 2.6

SE= 1.71

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SANTA LUCIA	8.60	225.3	2	1	-4	3	49	4				
LA PLATA	8.68	148.8	2	8A	2	3	47	1				
LA PAZ	11.85	337.2	2	39K	2	4	45	1	2	55	3	11 *SP
HUANCAYO	19.07	321.7	3	50K	2	6	55	4				
BOGOTA	33.62	340.5	5	55	0	10	36	-4				
FUQUENE	34.32	341.5	6	1	0	10	51	1				
CHINCHINA	34.43	338.1	5	33	-29	10	20	-32				
TRINIDAD	38.04	3.0	6	32	0						8	34
GRENADA	39.40	2.5	6	41	-2							
ST. VINCENT	40.54	3.2	6	45K	-7						8	35
BARBADOS	40.60	5.7	6	57	5							
FORT FRANCE	42.09	3.2	7	7K	3							
ST. CLAUDE	43.36	2.3	7	13	-1							
SAN JUAN	45.74	356.4	7	29	-3				8	57		
HALLEY BAY	51.37	168.9	8	13	-1						10	16 PP
BYRD STATION	57.35	139.9	8	58	2				10	46	9	43 PCP
TACUBAYA	58.16	319.4	9	3	1							
MBOUR	61.34	53.1	9	23	0	17	1	1			9	59 PCP
COLUMBIA	63.47	343.6	9	36	0							
CHAPEL HILL	64.85	346.0	9	46	1							
MORGANTOWN	68.60	346.3	10	8K	0							
FAYETTEVILLE	69.65	333.7	10	13	-1	18	38	0				
WESTON	69.97	353.7	10	16K	0							
CLEVELAND	70.72	345.6	10	20	-1							
SCOTT BASE	70.78	189.9	10	21A	0						10	54 PCP
HALIFAX	71.83	359.8	10	27K	0							
WINDHOEK	71.86	106.4	10	26K	-1							
BREBEUF	73.30	352.5	10	35K	0				12	34		
OTTAWA	73.47	351.0	10	36K	0							
CAPE HALLETT	73.90	194.9	10	40K	1	19	29	4			19	55 SP
SEVEN FALLS	74.63	354.7	10	42K	-1							
TUCSON	74.67	319.7	10	44	1							
TUCSON TELE.	74.68	319.8	10	44	1							
GRAHAMSTOWN	75.39	120.1	10	47K	0							
BOULDER	77.74	328.3	11	0	0							
LARAMIE	78.88	329.0	11	7	1							
BOULDER CITY	79.66	319.8	11	11	1							
PIETERMZBURG	79.90	118.1	11	12	1							
RAPID CITY	80.07	332.1	11	12	0							
PASADENA	80.37	316.6	11	14	0							
SALT LAKE C.	81.51	324.9	11	20	1							
EUREKA	82.76	321.7	11	27	1				13	29	29	45 PKKP
FRESNO	83.11	317.6	11	27K	0							
TAMANRASSET	83.23	60.1	11	28K	0	20	56	-5	13	34	13	40 *PPCP
MIRNY	84.48	170.7	11	33	-1	21	10	-3				
LICK	84.59	317.1	11	36K	1							
MALAGA	84.63	43.8	11	36	1							
BOZEMAN	84.77	328.6	11	37	1							
RENO	84.96	319.7	11	32K	-5							
SERRA PILAR	85.11	38.3	11	34A	-3							
BERKELEY	85.31	317.2	11	39K	1							
GRANADA	85.41	43.8	11	42K	3							
BUTTE	85.74	328.1	11	41	1							
ALMERIA	85.90	44.6	11	40	-1							
MINERAL	86.53	319.4	11	43K	-1							
RELIZANE	87.15	47.0	11	47K	0				13	39	12	15
HUNGRY HORSE	88.13	328.9	11	52	0							
ALGIERS UNI.	89.38	47.4	11	58K	1				14	3		
CORVALLIS	90.23	321.8	12	1	0							
SETIF	90.61	48.9	12	2A	-1							
LWIRO	90.90	93.0	12	5	1						23	22
ASTRIDA	91.57	93.7	12	9	2				14	18		
CLERMONT-FD.	94.64	40.1	12	21	0							
PARIS	96.05	37.3	12	28	0							
DOURBES	97.91	37.1	13	45	69							
EBINGEN	99.31	40.3	12	42	-1							
STUTTGART	99.74	39.8	12	43	-1							
PRUHONICE	103.39	40.5	13	1	0							
RESOLUTE	104.03	351.8	13	3	0						17	31 PP
COLLEGE	112.30	332.7	17	31	-2						18	27 PP

HELSINKI	112.69	32.8	17 33	0			
KIRUNA	112.92	24.2	17 33	0			
SODANKYLA	115.11	25.3	17 37	0			
APATITY	117.73	25.5	17 42K	0			
KHEYS	121.31	10.6	17 49	0			
CHARTERS TS.	124.69	214.4	17 56	1			
QUETTA	136.69	74.3	18 8	-10	20 33	22 0	*PPP
NAMANGAN	140.93	58.1	18 20	-7			
WARSAK DAM	140.99	69.1	18 20	-7			
LAHORE	143.16	73.4	18 29	-1		22 11	PKS
SEMIPALATNSK	144.20	40.5	18 33	1			
YAKUTSK	144.45	349.4	18 32	0			
LEMBANG	144.72	164.4	18 35	2		18 53	PKP2
DEHRA DUN	146.24	76.0	18 37	2			
ULAN-BATOR	158.30	17.9	18 53	1			
MATUSIRO	159.65	301.5	18 54A	1		19 38	PKP2

NOVEMBER 19 3.H 53.M 59.S EPICENTRE -30.57-178.75 DEPTH= 0.KM

A=-0.86226 B=-0.01880 C=-0.50612 D=-0.0218 E= 0.9998
G= 0.5060 H= 0.0110 K=-0.8625 HT= 1.6

SE= 4.94

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
ONERAHI	7.75	226.2	2 16	19	3 38	12		
KARAPIRO	8.72	211.3	2 28	18	4 3	13		
TUAI	8.87	201.2	2 27	15	3 58	4		
TONGARIRO	9.80	207.1	2 37	12				
WELLINGTON	11.90	204.4	3 1	7	4 55	-13		
COBB RIVER	12.55	211.0	3 7	5	5 7	-17		
SUVA	12.63	347.7	3 35A	31	5 59	33		5 11
GERBIES PASS	14.77	205.2	3 33	1	5 54	-23		
NOUMEA	15.60	298.4	3 57	14				
AFIAMALU	17.80	22.7	4 33	23	7 49	22		
BRISBANE	24.84	270.0	5 22A	-3	9 14	-32		
RIVERVIEW	25.63	254.8	5 27	-6	9 25	-34		
CANBERRA	27.40	251.5	5 43A	-6				6 39 PP
MELBOURNE	30.72	246.5	6 10	-9				
CHARTERS TS.	33.22	280.2	6 34	-6	11 24	-36		
ADELAIDE	35.84	251.6	6 56K	-7	12 28	-13		8 19 PP
CAPE HALLETT	42.19	185.0	7 6K	-50	13 41	-36		17 13 SSS
SCOTT BASE	47.82	184.1	8 33	-8				13 17 PCS
BYRD STATION	54.88	169.4	9 27	-7				
MIRNY	61.68	207.0	10 9	-13	17 51	-53		
MATUSIRO	78.02	325.8	11 56	-6				16 24 PPP
LICK	86.12	42.1	12 45	1				
BERKELEY	86.13	41.4	12 46	2				
FRESNO	86.82	43.6	12 48	1				
SHASTA	88.02	39.3	12 56	3				
MINERAL	88.22	40.0	12 51	-3				
TUCSON	89.66	51.7	13 3	2				14 28
TUCSON TELE.	89.79	51.7	13 4	3				
EUREKA	90.87	43.5	13 6	0				
COLLEGE	98.15	12.8	13 38	-2				
RESOLUTE	117.60	17.4	18 40	-8				26 35 SKKS
TRINIDAD	118.75	94.5	18 47	-3				
ASTRIDA	137.27	224.6						22 13
LWIRO	138.10	223.8						22 17
SODANKYLA	140.20	345.0	19 18	-13				
KIRUNA	141.02	348.6	19 20	-12				
SKALSTUGAN	146.24	351.1	19 36	-5				
HELSINKI	146.42	338.7	19 37	-4				
UPPSALA	148.72	344.1	19 41	-4				
JERUSALEM	150.98	281.2	19 42K	-7				
GOTEBORG	151.88	347.8	19 52	2				
HELWAN	154.03	276.2	19 51	-2				
COLLMBERG	157.53	340.5	20 24	26				
PRUHONICE	158.18	336.4	20 29K	30				
JENA	158.25	342.2	20 30	31				
STUTTGART	160.85	343.8	19 52	-9				20 41 PKP2
STRASBOURG	161.34	346.4	20 34	32				
PARIS	161.76	357.4	20 47	45				
MONACO	165.98	341.2	21 1	55				
TAMANRASSET	171.35	207.2	20 2	-8				

NOVEMBER 19 9.H 23.M 52.S EPICENTRE 44.21 148.91 DEPTH= 38.KM

DEPTH OF FOCUS= 0.001R

A=-0.61581 B= 0.37137 C= 0.69488 D= 0.5164 E= 0.8563
G=-0.5950 H= 0.3589 K=-0.7191 HT= -3.3

SE= 2.66

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
GORNY	1.19	307.0	0	23	2	0	40	4				
REIDOVOE	1.23	329.8	0	24	3							
KURILSK	1.26	324.4	0	25	3	0	39	1				
LESOZAVODSK	1.36	294.9	0	22	-1	0	37	-3				
NEMURO	2.57	251.1	0	39A	-1	1	8	-3				
ABASHIRI	3.34	268.3	0	54	3	1	29	-1				
KUSIRO	3.50	251.0	0	53A	0	1	34	0				
OBIHIRO	4.34	254.7	1	5	0	1	49	-7			2	16
HIROO	4.51	246.6	1	7	-1						2	27
ASAHIGAWA	4.74	267.1	1	14	3	2	14	9				
URAKAWA	4.93	247.4	1	15	1	2	6	-4				
Y.-SAKHLINSK	5.13	304.4	1	17	0						2	33
RUMOE	5.26	269.7				2	26	7				
WAKKANAI	5.28	285.8				2	29	10			1	53
SAPPORO	5.60	260.9	1	24A	1	2	25	-2				
TOMAKOMAI	5.60	255.0	1	28	5							
MURORAN	6.09	254.8	1	29K	-1	2	35	-4				
MORI	6.45	253.8	1	35	0	2	57	9				
SUTTSU	6.47	260.4	1	46	11	2	58	9			2	9
HAKODATE	6.48	250.8	1	31A	-4	2	49	0				
HATINOHE	6.59	238.6	1	34	-3	2	44	-8				
MIYAKO	6.89	231.0	1	38	-3	2	48	-11				
AOMORI	6.89	243.4	1	38	-3	2	53	-6				
MORIOKA	7.32	234.6	1	44A	-3	2	59	-11				
MIZUSAWA	7.72	231.6	1	50	-3	3	9	-11				
AKITA	7.95	238.7	2	8	12						3	20
SEVERO-KUR.	8.09	34.5	1	56	-2							
ISINOMAKI	8.12	227.3	1	52	-6	3	19	-11				
SENDAI	8.46	228.2	2	2	-1	3	28	-10				
YAMAGATA	8.77	230.2				3	35	-11				
HUKUSIMA	9.07	227.5	2	6	-6	3	42	-12				
ONAHAMA	9.47	222.7				3	51	-12			2	34
SHIRAKAWA	9.68	225.9	2	17	-3	3	56	-12				
UTUNOMIYA	10.29	225.1	2	22	-6	4	10	-14				
KAKIOKA	10.39	222.9	2	24	-6	4	12	-14				
TUKUBASAN	10.44	223.1	2	24	-6	4	8	-19				
TYOSI	10.49	218.8				4	16	-12				
MAEBASI	10.82	227.2	2	28	-8	4	27	-9			3	11
KUMAGAYA	10.85	225.4	2	38	2							
PETROPAVLOVK	11.00	32.3	2	41	3	4	45	4			3	2
TOKYO C.M.O.	11.04	222.6				4	29	-13			5	18
NAGANO	11.10	230.9	2	47	8	4	48	5				
TITIBU	11.14	225.8									3	3
OIWAKE	11.15	228.6	2	51	11							
MATUSIRO	11.17	230.4	2	35A	-5	4	30	-15				
YOKOHAMA	11.29	222.2	2	43	1	4	40	-8				
MATUMOTO	11.53	230.1									3	7
HUNATU	11.67	225.2									4	14
KOHU	11.67	226.3	2	55	8	4	54	-3				
SHIZUOKA	12.27	224.8				4	59	-13				
VLADIVOSTOK	12.37	270.9	2	55	-1							
GIHU	12.81	230.8	3	7	5							
NAGOYA	12.87	229.5	3	24	21							
IBUKISAN	13.05	231.7	3	4	-1						4	18
ABUYAMA	13.87	232.3	3	13K	-3							
KOBE	14.23	232.7				6	30	32			8	33
KLYUCHI	14.27	27.7	3	18	-3						3	57
MAGADAN	15.41	3.6	3	36	0							
HAMADA	15.95	240.1	3	49	6	6	30	-9				
KOTI	15.99	233.5	3	26	-18						7	4
SIMIDU	16.88	232.8	3	29	-26						7	13
CHANGCHUN	16.97	277.0	3	52	-4	6	55	-7				
OOITA	17.35	236.7	4	15	14	7	20	9				
HUKUOKA	17.84	239.8	4	15	8	7	41	19				

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KUMAMOTO	18.19	237.5	3 53	-18				
MIYAZAKI	18.40	234.1	4 16	2	7 49	15		
NAGASAKI	18.75	238.8	4 26	8				
KAGOSIMA	19.16	235.0	4 24	1	7 46	-5		5 50
YAKUSIMA	20.01	232.8	4 35K	3	8 17	7		
PEKING	24.55	271.6	5 17A	0	9 34	1		
ZO-SE	25.42	248.4	5 27A	1	9 53	6		
NANKING	26.46	252.9	5 39	4	10 11	7		
PAOTOW	28.76	276.4	5 57A	1	10 45	3		
ULAN-BATOR	29.12	292.3	6 0A	1				
TIKSI	29.16	347.1	5 55	-5	10 45	-3		6 56 PP
IRKUTSK	30.35	301.4	6 10	0	11 4	-3		7 0 PP
SIAN	32.25	265.9	6 27A	0	11 42	5		
LANCHOW	35.04	272.4	6 52A	1	12 24	4		
HONG KONG	35.96	244.0	7 8	9				
CANTON	35.99	245.9	7 0	1	12 38	3		
TRUK	36.69	175.1	7 5	0				
CHENGTU	37.67	264.4	7 12A	-1	12 59	-1		
MANILA	37.91	227.6	7 14	-1				
COLLEGE	39.96	36.4	7 33	1	13 38	3	7 45	
KUNMING	41.94	258.5	7 49A	0	14 7	3		
SEMIPALATNSK	45.46	303.2	8 17	0				
SITKA	47.27	46.1	8 33	2				
LHASA	47.55	272.5	8 35A	1	15 30	5		
KHEYS	47.97	346.6	8 26	-11				10 13
RABAUL	48.28	175.6	8 38	-1			9 3	
KIPAPA	49.09	99.7	8 47	1			9 0	
SHILLONG	49.33	267.5	8 45A	-2				10 42 PP
CHATRA	51.96	272.1	9 7	0				
FRUNSE	52.13	296.3	9 9A	0				16 34
SVERDLOVSK	53.68	317.0	9 18	-2				20 56 SS
RESOLUTE	54.16	17.1	9 23A	-1				
NORD	54.20	357.4	9 22	-2				
TASHKENT	56.32	297.1	9 36	-3	17 25	0		17 46 PS
DEHRA DUN	56.43	281.4	9 41	1	17 29	2		
HORSESHOE B.	57.05	51.1	9 44	-1			9 57	
THULE	57.33	9.8	9 43	-4			10 11	11 49 PP
VICTORIA	57.42	52.0	9 45	-2			9 59	
STALINABAD	58.14	294.6	9 52	0	17 53	4		
LAHORE	58.33	284.7	9 53A	-1	17 53	1		
AGRA	58.33	278.3	9 52A	-2	17 52	0	10 8	10 18 PCP
APATITY	58.48	336.0	9 53K	-2				
SEATTLE	58.52	52.4	10 1	6				
WARSAK DAM	58.83	288.7	9 56A	-1				
CORVALLIS	59.61	55.9	10 16A	13				
MEDAN	59.85	242.5	10 5K	1				
SODANKYLA	60.52	337.9	10 6	-3				
KIRUNA	61.77	340.3	10 15	-2			10 31	12 29 PP
SHASTA	62.37	59.1	10 22A	1			10 36	
HUNGRY HORSE	62.70	48.2	10 24	1			10 37	
UKIAH	62.77	60.9	10 37	13				
LEMBANG	62.97	227.4	10 24A	-1			10 34	
MINERAL	63.06	59.0	10 26A	0			10 39	
CHARTERS TS.	63.95	182.8	10 31K	-1				
BERKELEY	64.13	61.6	10 34A	1			10 46	
QUETTA	64.23	287.8	10 33A	0	19 8	1		12 48 PP
RENO	64.65	58.8	10 36A	0			10 49	
PULKOVO	64.83	330.6	10 35	-2				19 28 PS
LICK	64.84	61.7	10 37A	0			10 51	
BUTTE	64.90	49.5	10 38	0				
ASHKABAD	65.16	299.4	10 41A	2	19 24	6		
SCORESBY SD.	65.43	356.6	10 42	1				
BOZEMAN	65.95	49.1	10 45	1			10 59	
FRESNO	66.35	61.2	10 44	-3			11 0	
HELSINKI	66.35	333.1	10 46	-1			10 59	
POONA	66.71	273.6	10 49	0			11 2	
KARACHI	66.87	284.0	10 56A	6				
EUREKA	67.02	56.9	10 51	0			11 11	
SKALSTUGAN	67.19	340.5	10 51A	-1			11 4	
BOMBAY	67.21	274.6	10 52	0	19 45	2		25 25
SUVA	67.67	149.6			20 0	12		
SALT LAKE C.	68.64	53.6	11 2	1			11 15	
UPPSALA	68.88	336.0	11 1	-2			11 16	
PASADENA	69.03	62.5	11 3	-1	20 2	-3	11 17	
BOULDER CITY	69.95	59.1	11 10	1			11 23	
TIFLIS	70.76	309.7	11 15	1	20 26	1		11 29 PCP
RAPID CITY	71.19	46.4	10 17	-60			10 31	
GORIS	71.39	307.2	11 19	1	20 39	7		21 19 SCS

LARAMIE	71.82	49.8	11	21	0			11	35		
SIDA	71.86	353.9	11	23	2			11	37		
GOTEBORG	72.29	337.4	11	24	1					12	14
BOULDER	72.85	50.6	11	28	1			11	42		
COPENHAGEN	73.89	336.0	11	33	0			11	46	21	21
WARSAW	73.96	329.7	11	16	-17	21	2 1				
SIMFEROPOL	74.03	317.9	11	34A	0	21	6 4			21	22 SKS
LWOW	74.74	326.6	11	37	-1	21	14 4			21	28 SKS
TUCSON	74.90	59.7	11	39	0			11	53		
TUCSON TELE.	74.91	59.6	11	39	0			11	53	12	30
IASI	75.33	323.0	11	31	-10			11	42		
KRAKOW	76.14	328.9	11	46	0	21	42 17			12	1 PCP
POTSDAM	76.54	334.0	11	49	1			12	2		
SKALNATE PL.	76.73	328.2	11	48	-1	21	33 1				
RACIBORZ	76.75	329.9	11	50	1					12	1 PCP
RIVERVIEW	77.70	178.1	11	55	1	21	50 8				
WITTEVEEN	78.04	337.7	11	55	-1						
PRAGUE	78.07	332.0	11	58	1					12	54
PRUHONICE	78.11	331.9	11	58A	1	21	49 2			12	12 PCP
DURHAM	78.25	343.0	11	59	1					17	14
JENA	78.26	334.0	11	58	0	21	52 4			13	43
PLAUEN	78.45	333.5	11	56	-3			12	11		
MUNSTER	78.53	336.7	11	57	-2						
BRATISLAVA	78.74	329.4	12	0	0	22	0 7			12	16 PCP
DE BILT	79.09	338.2	12	20	18						
TIMISOARA	79.15	325.7	12	16	14	22	21 23				
CANBERRA	79.16	179.9	12	4A	2						
ADELAIDE	79.31	188.5	12	4K	1						
BENSBERG	79.56	336.5	12	5A	0			12	19		
BELGRADE	80.22	325.6	12	22A	14	22	14 5			13	58
RATHFARNHAM	80.56	345.2	12	7A	-3						
SOFIA	80.73	322.6	12	12	1						
STUTTGART	80.90	334.3	12	13	1	22	11 -5			12	27 PCP
KEW	81.04	341.1				22	26 8				
DOURBES	81.06	337.6	12	12	-1						
ZAGREB	81.13	328.8	12	9	-4						
TUBINGEN	81.15	334.3	12	14	1					12	28 PCP
KSARA	81.33	309.2	12	16	2	22	27 6			15	19 PP
EBINGEN	81.49	334.2	12	16	1					12	30 PCP
STRASBOURG	81.51	335.1	12	16A	1	22	34 12	12	30	13	52
RAVENSBURG	81.64	333.6	12	17	1						
FAYETTEVILLE	81.72	46.9	12	15	-1						
MELBOURNE	81.74	183.1	12	17	1						
TRIESTE	82.09	330.0	12	18	0	22	44 16	12	31		
OTTAWA	82.38	30.0	12	19A	-1						
CHUR	82.49	333.2	12	21A	1						
BASLE	82.50	334.7	12	21A	1			12	36		
SEVEN FALLS	82.53	26.1	12	21	1						
PARIS	82.80	338.4	12	24A	2					12	29 PCP
BREBEUF	83.04	28.6	12	24	1			12	37		
NEUCHATEL	83.17	334.9	12	24	0						
JERUSALEM	83.22	308.2	12	21K	-3	22	40 0				
ATHENS	84.36	319.5	12	29K	-1						
PRATO	84.57	330.8	12	42	11	23	34 41				
KARAPIRO	85.23	159.2	12	38	4					12	59
CLERMONT-FD.	85.41	336.7	12	32	-3					23	52 PS
PENNSYLVANIA	85.50	33.7	12	48	13						
MORGANTOWN	85.64	35.7	12	38A	2			12	51		
ROME	85.79	328.9	12	36	-1	23	9 4			16	3 PP
MONACO	85.94	333.1	12	38	1			12	51		
WESTON	86.57	28.6	12	42A	2						
HELWAN	86.84	309.5	12	42	0	23	20 5				
HALIFAX	86.94	22.6	12	43A	1	23	5 -11			24	13 PS
MESSINA	87.77	325.0	12	17	-29	23	17 -7			24	17 PS
COLUMBIA	89.87	39.5	12	57	1			13	10		
TOLEDO	92.81	339.5	13	9	-1	24	35 26				
ALICANTE	93.28	336.4	13	8	-4	24	11 -3			16	52 PP
SETIF	93.38	331.2	13	11	-1			13	26		
BERMUDA	97.85	28.2								17	36 PP
TAMANRASSET	105.38	325.2	14	8	777	25	10 2	14	24	18	23 PP
CAPE HALLETT	117.18	172.8	18	43	2					27	40 SKKS
BOGOTA	117.96	50.3								20	7 PP
SCOTT BASE	122.28	175.6	18	52K	1			19	6	20	39 PP
HUANCAYO	130.40	63.7	19	10A	3					22	30 PP
BYRD STATION	133.45	166.1	19	14	1			19	30	22	41 SKP
LA PAZ	138.32	60.3	19	16	-5					19	24 PKP2
SANTA LUCIA	147.62	84.3	19	38	0					43	38 SS

NOVEMBER 19 15.H 2.M 16.S EPICENTRE 60.53-150.71 DEPTH= 55.KM

DEPTH OF FOCUS= 0.004R

A=-0.43127 B=-0.24195 C= 0.86918 D=-0.4893 E= 0.8721
G=-0.7580 H=-0.4253 K=-0.4945 HT= -9.1

SE= 1.89

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
COLLEGE	4.56	15.7	1 11	2	1 53	-8		
SEATTLE	20.86	115.4	4 42	2				
CORVALLIS	22.82	122.0	5 14	15				
HUNGRY HORSE	24.20	103.6	5 15	2				
RESOLUTE	24.25	32.4	5 15K	2	9 33	8		
SHASTA	26.42	125.8	5 35A	1			5 49	
BUTTE	26.56	105.8	5 37	2				
MINERAL	27.03	125.1	5 39K	0			5 53	8 59 PCP
BOZEMAN	27.55	104.6	5 45	1			5 58	
MAGADAN	28.40	294.1	5 46	-6				
RENO	28.45	123.5	5 53	1				
BERKELEY	28.91	128.7	5 57A	1			6 11	9 4 PCP
LICK	29.61	128.4	6 3A	1			6 17	9 6 PCP
EUREKA	30.13	118.5	6 8	1			6 23	
THULE	30.68	27.3	6 12	0				7 20 PF
FRESNO	30.83	126.4	6 14	1				
SALT LAKE C.	30.92	112.0	6 15	1				
TIKSI	31.74	323.5	6 20	-1				
RAPID CITY	32.51	98.6	5 29	-59			5 43	
LARAMIE	33.44	104.4	6 31	-5				9 6
BOULDER CITY	33.55	120.7	6 38	1				
PASADENA	33.76	126.6	6 39	0	12 4	7	6 53	
BOULDER	34.57	105.5	6 47	1				
NORD	35.98	10.4	6 58	0				
YAKUTSK	36.04	308.0	6 58	0	12 32	0		
TUCSON TELE.	38.42	118.9	7 20	2			7 34	9 32 PCP
TUCSON	38.45	119.1	7 20	2				
KHEYS	39.04	353.8	7 17	-6				
FAYETTEVILLE	43.05	98.3	7 54K	-2				
SCORESBY SD.	44.39	22.0	8 9	2				
OTTAWA	45.00	74.2	8 12K	0				
BREBEUF	45.92	72.6	8 18K	-1			8 43	
SEVEN FALLS	46.03	69.1	8 20K	0				9 55 PCP
MORGANTOWN	47.31	82.7	8 30K	0				
WESTON	49.37	73.7	8 46K	0				
MATUSIRO	49.87	275.0	8 50	0				10 8 PCP
CHAPEL HILL	50.66	85.0	8 56	0				
COLUMBIA	51.21	88.2	9 0	0				
KIRUNA	51.78	4.3	9 4	0			9 23	10 17 PCP
APATITY	52.19	358.0	9 7	-1				
SODANKYLA	52.39	1.3	9 9	0			9 28	10 19 PCP
TACUBAYA	54.72	115.2	9 31	5				15 3
ULAN-BATOR	55.13	306.8			17 13	7		
SKALSTUGAN	55.54	9.1	9 32K	0				10 31 PCP
HELSINKI	59.59	2.5	10 1	0			10 20	10 47 PCP
UPPSALA	59.61	6.8	10 0K	-1			10 19	10 47 PCP
PULKOVO	60.03	359.4	10 3	-1				
SVERDLOVSK	60.40	340.8	10 5	-1				
GOTEBORG	61.33	10.5	10 11K	-2			10 31	10 53 PCP
RATHFARNHAM	63.01	23.1	10 37	13				
KEW	65.84	19.8	10 41	-1				
MUNSTER	66.51	14.4	10 46	0				
BENSBERG	67.44	14.9	10 53	1			11 13	
COLLMBERG	67.76	11.0	10 54	0				
DOURBES	67.94	16.9	10 54	-1				
JENA	67.98	12.0	10 56	0			11 13	11 37
PLAUEN	68.47	11.7	10 56	-3				
PARIS	68.88	18.6	11 2	1			11 18	11 25 PCP
PRUHONICE	69.20	10.1	11 4K	1			11 24	12 55
RACIBORZ	69.38	7.6	11 5	1				
STUTTGART	69.85	14.0	11 8K	1			11 28	12 9
STRASBOURG	69.86	15.0	11 8	1				
TUBINGEN	70.07	14.1	11 8	0				
EBINGEN	70.40	14.3	11 11	1				
SKALNATE PL.	70.40	6.3	11 11	1			11 33	
BRATISLAVA	71.21	8.6	11 18	3			11 38	

SAN JUAN	71.54	85.3	11 15	-2				
NAMANGAN	73.07	327.8	11 27	1				
SIMFEROPOL	74.81	356.5	11 37	1				
KOROR	76.19	260.3	11 44	0				
LISBON	76.20	30.1	11 46K	2				
TIFLIS	77.32	348.2	11 52	1				
RABAUL	78.20	238.8	11 54	-1			12 15	PCP
ST. VINCENT	78.37	83.9	11 58	2				
GRANADA	78.97	26.2	12 5A	5				
MALAGA	79.23	27.0	12 5K	4				
WARSAK DAM	79.65	325.4	12 2K	-1				
SHILLONG	80.36	305.6	12 4K	-3				
ALGIERS UNI.	80.68	21.1	12 10	1	12 30			
CHATRA	81.07	310.0	12 14	3				
LAHORE	81.13	322.3	12 10K	-1	12 29			
RELIZANE	81.21	23.3	12 13	1			13 13	
ATHENS	81.75	4.4	12 15A	1				
QUETTA	84.51	327.9	12 28K	0	12 44			
JERUSALEM	87.90	355.0	12 43	-2	13 3			
HELWAN	89.92	358.2	12 57	2	13 17			
HUANCAYO	93.33	108.5	13 12	2				
TAMANRASSET	94.76	21.9	13 18	1	13 35		17 8	PP
CHARTERS TS.	94.86	237.3	13 19A	2				
LWIRO	121.87	0.6	18 51	3				
ASTRIDA	122.22	359.5	18 51	2				
CAPE HALLETT	135.23	195.9	19 12	-2				
SCOTT BASE	140.56	193.0	19 16	-8	19 27		22 0	PP
BYRD STATION	141.45	171.7	19 41	16				
KIMBERLEY	148.08	7.5	19 42A	5				
PIETERMZBURG	149.08	358.1	19 44K	6				
MIRNY	152.15	230.2	19 50	7			20 44	
GRAHAMSTOWN	152.72	5.0	19 52	9				

NOVEMBER 20 5.H 36.M 35.S EPICENTRE 52.19 158.77 DEPTH= 0.KM

A=-0.57381 B= 0.22295 C= 0.78805 D= 0.3622 E= 0.9321
G=-0.7346 H= 0.2854 K=-0.6156 HT= -6.2

SE= 2.77

	DELTA	AZ.	P	O-C	S	O-C	*PP		SUPP.	
	DEG.	DEG.	M	S	S	M	S	S	M	S	M	S	
PETROPAVLOVK	0.94	355.7	0	27	7	0	46	12					
SEVERO-KUR.	2.26	228.7	0	41	2	1	11	3					
KLYUCHI	4.30	15.1	1	13	5						1	37	
MAGADAN	8.62	331.9	2	21	12								
KURILSK	10.01	230.2	2	33	5	4	30	8					
UGLEGORSK	11.05	260.2	2	51	9	5	3	15					
Y.-SAKHLINSK	11.66	249.6	2	57	7						4	37	
SENDAI	18.69	228.9	4	21	-1								
VLADIVOSTOK	20.15	253.9	4	36	-2								
TUKUBASAN	20.74	227.0	4	39	-5	7	49	-43					
MATUSIRO	21.34	231.0	4	49A	-2	8	53	9			6	31	
TIKSI	23.56	336.7	5	15	2						5	47	PP
CHANGCHUN	23.72	262.7	5	15	1								
ABUYAMA	23.97	232.9	5	16	-1	9	39	8					
NAGASAKI	28.55	238.4	6	1	2	10	52	5					
COLLEGE	29.63	43.9	6	4	-5	10	58	-6			12	29	
PEKING	31.48	264.4	6	25	0								
IRKUTSK	32.68	292.2	6	37	1								
ULAN-BATOR	32.98	283.6	6	40	2								
ZO-SE	34.56	247.3	6	54	2	12	31	10					
PADTOW	34.93	270.3	6	55	0								
NANKING	35.23	251.0	6	59	1								
SIAN	39.62	263.1	7	35	0								
LANCHOW	41.54	269.5	7	51	0								
KHEYS	41.81	345.5	7	44	-9						17	25	SSS
RESOLUTE	44.47	21.4	8	13K	-1	14	51	1			10	3	PP
CHENGTU	45.09	263.6	8	22	3								
HONG KONG	45.31	246.2	8	50	29	15	25	23					
NORD	46.43	359.1	8	30	0								
THULE	48.19	13.4	8	41	-3								
KUNMING	49.96	259.5	8	58	1								
HUNGRY HORSE	52.62	57.0	9	16	-2								
SHASTA	52.95	69.2	9	20	0								
MINERAL	53.64	69.0	9	33	8								
LHASA	53.78	273.0	9	27	1								

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained thanks to funding provided by the US National Science Foundation through grant EAR-9725140 (Villaseñor et al., 1997) and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of the EUROSEISMOS project.

APATITY	53.78	337.1	9	25A	-1	17	1	1		
FRUNSE	54.54	296.1	9	31	-1					
BUTTE	54.88	58.4	9	33	-1					
BERKELEY	54.91	71.7	9	40	5					
RENO	55.20	68.6	9	43	6					
SODANKYLA	55.47	339.6	9	38	-1				11	19
LICK	55.63	71.8	9	43	3					
BOZEMAN	55.91	57.9	9	40	-2					
SHILLONG	56.19	269.0	9	41A	-3					
KIRUNA	56.32	342.4	9	44A	-1					
RABAUL	56.46	187.9	9	46	0					
FRESNO	57.09	71.0	9	56	6					
EUREKA	57.43	66.2	9	48	-5					
CHATRA	58.17	273.6	9	58	0					
CHITTAGONG	58.59	266.5	10	9	8					
SALT LAKE C.	58.82	62.6	10	2	0					
PASADENA	59.87	72.2	10	8	-2	18	15	-6		
BOULDER CITY	60.51	68.4	10	12	-2					
STALINABAD	60.72	296.0	10	16	1					
PULKOVO	60.92	333.0	10	16	-1				12	31 PP
RAPID CITY	61.03	54.7	10	15	-3					
SKALSTUGAN	61.63	343.7	10	21	-1					
LARAMIE	61.80	58.3	10	20	-3					
MOSCOW	61.98	326.7	10	24	0				14	25 PPP
HELSINKI	62.00	335.9	10	24	0				12	6
UPPSALA	64.00	339.4	10	37A	0					
TUCSON TELE.	65.49	68.5	10	52	5					
TUCSON	65.49	68.6	10	52	5					
ASHKABAD	66.76	302.2	10	56	1					
GOTEBORG	67.15	341.4	10	55	-3					
QUETTA	67.84	290.8	11	3	1	20	7	7	24	35 SS
COPENHAGEN	68.94	340.3	11	9A	0					
TIFLIS	70.41	313.4	11	18	0					
LWOW	71.35	331.0	11	23	0				13	5
GORIS	71.49	311.0	11	25	1					
FAYETTEVILLE	71.58	54.7	11	20	-5					
POTSDAM	71.89	338.7	11	26	-1				13	8
OTTAWA	72.10	37.1	11	25	-3					
SIMFEROPOL	72.16	322.1	11	28	0					
SHAWINIGAN	72.18	34.6	11	26	-2					
KRAKOW	72.32	333.6	11	29	0				12	13
SEVEN FALLS	72.35	33.1	11	29	0					
IASI	72.55	327.5	11	32	1					
CHARTERS TS.	72.72	192.3	11	28	-4					
RACIBORZ	72.76	334.6	11	32	0					
WITTEVEEN	72.77	342.7	11	32	0					
BREBEUF	72.78	35.7	11	28	-4					
HALLE	72.96	339.0	11	33	0				15	12 PPP
SKALNATE PL.	73.02	333.0	11	31	-2				17	7
MUNSTER	73.41	341.8	11	34	-2					
JENA	73.57	339.1	11	36	-1				12	31
PRUHONICE	73.78	336.8	11	38A	0				11	53 PCP
RATHFARNHAM	74.14	350.7	11	41A	1					
SONNEBERG	74.17	339.1	11	40	0					
BENSBERG	74.46	341.8	11	41	-1					
BRATISLAVA	74.80	334.5	11	45	1				12	11
CAMPULUNG	75.08	328.1	11	50	5					
UCCLE	75.13	343.5	11	47	1	21	46	22		
KEW	75.22	346.6	11	46	0					
MORGANTOWN	75.30	43.0	11	44A	-3					
DOURBES	75.76	343.2	11	50	1					
STUTTGART	76.13	339.8	11	51	0				13	33
WESTON	76.32	35.8	11	49K	-3					
TUBINGEN	76.38	339.8	11	53	0					
STRASBOURG	76.61	340.7	11	54A	0	22	1	21	13	36
EBINGEN	76.74	339.8	11	55	0				13	37
HALIFAX	76.89	29.6				21	49	6		
BELGRADE	76.92	330.9	11	56A	0				15	23 PP
PARIS	77.37	344.2	11	59	1				12	13 PCP
BASLE	77.65	340.5	12	1	1					
SOFIA	77.93	328.1	12	1	0					
TRIESTE	78.00	335.7	12	1	-1					
NEUCHATEL	78.28	340.7	12	3	0					
BRISBANE	79.49	185.2				22	7	-4		
COLUMBIA	79.55	46.9	12	5	-5					
CLERMONT-FD.	80.20	343.0							22	55 PS
PRARO	80.32	336.9	12	31	17				23	46
KSARA	80.89	314.9	12	18	1					

MONACO	81.30	339.4	12	21	2						
ROME	81.83	335.3	12	22A	0					23	30 PS
JERUSALEM	82.92	314.3	12	23K	-5						
HELWAN	86.25	316.3	12	45	0					13	11
TOLEDO	87.09	346.8	12	47	-2						
CANBERRA	87.56	188.0				23	27	-5			
BERMUDA	87.60	35.6	12	53	2	23	32	0			
KARAPIRO	90.92	166.8	13	3	-4						
TAMANRASSET	101.77	334.9	14	1	5					17	51 PP
BOGOTA	107.92	56.6				24	52	4		28	0 PS
CAPE HALLETT	124.46	175.7	18	45	-16					30	55 PKKS
LA PAZ	128.75	63.9	19	9	0						
KIMBERLEY	138.81	286.4	19	22	-6						
BYRD STATION	139.51	164.6	19	11	-18						
SOUTH POLE	142.00	180.0	19	23	-11					22	52 PP

NOVEMBER 20 14.H 18.M 8.S EPICENTRE 45.19 149.50 DEPTH= 61.KM

DEPTH OF FOCUS= 0.004R

A=-0.60930 B= 0.35891 C= 0.70707 D= 0.5075 E= 0.8616
G=-0.6092 H= 0.3589 K=-0.7071 HT= -3.6

SE= 3.06

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
REIDOVOE	1.04	274.9	0	18	-1	0	34	0				
KURILSK	1.15	272.6	0	19	-2	0	36	0				
GORNY	1.39	259.5	0	22	-2	0	37	-5				
NEMURO	3.37	237.9	0	46	-5	1	23	-8				
ABASHIRI	3.91	254.4	1	2	3	1	44	0				
KUSIRO	4.29	240.8	0	58	-6	1	46	-7				
Y.-SAKHLINSK	5.04	292.9	1	15	0						2	26
OBIHIRO	5.08	245.7	1	17	2	2	3	-10				
ASAHIGAWA	5.29	257.1	1	19	1	2	28	9				
WAKKANAI	5.52	275.2				2	28	3				
URAKAWA	5.74	240.4	1	22	-2	2	23	-7				
SAPPORO	6.24	253.0	1	30	-1	2	40	-2				
TOMAKOMAI	6.32	247.8	1	36	4							
UGLEGORSK	6.39	310.2	1	39	6						3	4
MURORAN	6.80	248.2	1	37	-2	2	54	-2				
SUTTSU	7.10	253.6	1	46	3	3	19	16				
MORI	7.18	247.6	1	43	-1	3	17	12				
HAKODATE	7.24	245.0	1	40	-5	3	8	1				
HATINOHE	7.48	234.3	1	44	-4	3	0	-13				
AOMORI	7.74	238.7	1	48	-4	3	24	5				
MIYAKO	7.85	227.8	1	42	-12	3	5	-17				
MORIOKA	8.25	231.2	1	53	-6	3	17	-15			2	16
MIZUSAWA	8.67	228.6	2	7	2	3	31	-11				
AKITA	8.84	235.1				3	50	4				
ISINOMAKI	9.10	224.9	2	13	2	3	33	-20				
SENDAI	9.44	225.9	2	22	7	3	43	-18				
YAMAGATA	9.73	227.8	2	27	8	3	48	-20				
PETROPAVLOVK	9.95	33.7	2	29	7	4	29	16				
HUKUSIMA	10.05	225.5	2	19	-5	4	5	-11				
ONAHAMA	10.48	221.2	2	55	25	4	23	-3				
SHIRAKAWA	10.67	224.1	2	42	10	4	14	-17				
UTUNOMIYA	11.29	223.5	2	48	8							
KAKIOKA	11.40	221.5	2	43	1	4	26	-23				
TUKUBASAN	11.44	221.7	2	32	-11	4	29	-21				
MAEBASI	11.80	225.6	2	50	3	5	0	2			5	39
KUMAGAYA	11.85	223.8	2	51	3	4	43	-16				
TOKYO C.M.O.	12.05	221.3	2	58	7	4	52	-12				
NAGANO	12.05	229.0	3	8	17							
OIWAKE	12.12	226.9	3	6	14							
TITIBU	12.13	224.3	2	58	6							
MATUSIRO	12.13	228.6	2	44K	-8	4	41	-25				
YOKOHAMA	12.30	221.0	3	3	9	4	58	-12			6	8
MATUMOTO	12.49	228.3	3	5	8							
TOYAMA	12.57	231.9	3	13	15							
MERA	12.64	219.1				5	8	-10				
KOHU	12.66	224.8	3	4	5	5	20	1				
HUNATU	12.66	223.9				4	59	-20				
VLADIVOSTOK	12.81	266.9	2	57	-4							
MISIMA	12.88	222.3	2	49	-13							
HUKUI	13.56	232.3	3	15	4							

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GIHU	13.77	229.2	3	7	-6					
NAGOYA	13.84	228.0	3	32	18					
IBUKISAN	13.99	230.1	3	18	2					
HIKONE	14.14	230.1	3	13	-5					
KAMEYAMA	14.34	228.5	3	44	23					
MAGADAN	14.41	2.7	3	24	2					
ABUYAMA	14.81	230.7	3	19K	-8					
OSAKA	15.00	230.3	3	34	5					3 56
HAMADA	16.81	238.4	3	53	1	6	40	-16		
CHANGCHUN	17.30	274.1	3	54	-4	6	59	-8		
SIMIDU	17.81	231.6	4	9	4	7	17	-1		
HUKUOKA	18.71	238.3	4	9	-6	6	43	-56		
NAGASAKI	19.63	237.4								5 32
YAKUSIMA	20.94	231.9	4	39	0	8	46	22		
PEKING	24.95	269.9	5	18A	-1	9	37	2		
ZO-SE	26.18	247.3	5	32	2	10	1	5		
NANKING	27.16	251.8	5	38	-1	10	13	1		
TIKSI	28.31	346.4	5	47	-3	10	32	2		6 55 PPP
PAOTOW	29.08	275.0	5	57A	1	10	47	5		
ULAN-BATOR	29.15	290.8	5	58	1					
SIAN	32.75	264.8	6	28A	-1					
LANCHOW	35.43	271.4	6	53A	1	12	22	0		
HONG KONG	36.77	243.5	7	16	13	13	3	21		
BAGUIO CITY	37.56	229.6	7	7	-3					
CHENGTU	38.19	263.7	7	15A	0	13	4	0		
MANILA	38.88	227.4	7	15	-6					
COLLEGE	38.93	37.1	7	22	1	13	16	1		13 36
KUNMING	42.55	258.0	7	49A	-2	14	9	0		
KHEYS	47.12	346.4	8	18	-9					9 55 PCP
LHASA	47.94	272.0	8	35A	1					10 29 PP
RABAUL	49.23	176.5	8	42	-2					
SHILLONG	49.80	267.1	8	44A	-4					
CHATRA	52.35	271.7	9	9	1					
RESOLUTE	53.10	17.4	9	12A	-1	16	38	1		
SVERDLOVSK	53.25	316.7	9	14	0					20 52 SS
HORSESHOE B.	56.11	51.8	9	35	0					
TASHKENT	56.25	296.8	9	36	0	17	26	7		
THULE	56.29	10.0	9	35	-1					10 17 PCP
VICTORIA	56.49	52.8	9	35	-3					
DEHRA DUN	56.65	281.1	9	37	-2	17	28	3		
LAHORE	58.49	284.5	9	51A	-1				10 7	
WARSAK DAM	58.92	288.4	9	55	0					
SODANKYLA	59.77	337.9	10	0	-1					10 45 PCP
KIRUNA	60.99	340.3	10	6	-3					
SHASTA	61.51	59.8	10	11A	-1				10 25	
HUNGRY HORSE	61.73	48.8	10	13	-1				10 26	
UKIAH	61.93	61.7	10	14	-1				10 27	
MINERAL	62.20	59.7	10	15A	-2				10 28	
BERKELEY	63.29	62.3	10	23A	-1				10 36	
RENO	63.79	59.5	10	27A	-1				10 39	
LEMBANG	63.94	227.6	10	23A	-6					
BUTTE	63.95	50.2	10	28	-1					
LICK	64.01	62.4	10	27A	-2				10 40	
PULKOVO	64.19	330.6								11 5 PCP
QUETTA	64.34	287.7	10	31A	0	19	9	6	10 41	
SCORESBY SD.	64.48	356.8	10	33	1					
CHARTERS TS.	64.95	183.4	10	31	-4					
BOZEMAN	64.99	49.7	10	34	-1				10 48	
FRESNO	65.51	61.9	10	37A	-2				10 50	
HELSINKI	65.67	333.1	10	40	0					
EUREKA	66.14	57.5	10	41	-2				10 54	
KARACHI	67.04	284.0	10	52A	4				11 2	
SALT LAKE C.	67.72	54.2	10	52	-1				11 4	
UPPSALA	68.15	336.1	10	56	1					11 52
PASADENA	68.21	63.2	10	54	-2	19	54	4	11 7	
BOULDER CITY	69.09	59.8	11	1	0				11 14	
RAPID CITY	70.21	47.0	10	7	-61				10 20	
TIFLIS	70.46	309.8	11	12	2					
LARAMIE	70.86	50.4	11	11	-1					
GORIS	71.14	307.2	11	16	2					20 33
GOTEBORG	71.55	337.5	11	15K	-1					
BOULDER	71.90	51.2	11	18	0					
BRISBANE	72.39	176.7	11	33A	12	20	42	3		
COPENHAGEN	73.17	336.2	11	27	1					
SIMFEROPOL	73.58	318.0	11	29A	1					11 45 PCP
TUCSON	74.05	60.3	11	30	-1				11 43	14 24 SCP
TUCSON TELE.	74.05	60.2	11	30	-1				11 43	14 29 SCP
LWOW	74.16	326.8	11	32	1					

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KRAKOW	75.51	329.1	11	40	1						11	54 PCP
POTSDAM	75.84	334.2	11	40	-1							
RACIBORZ	76.11	330.1	11	45	2							
SKALNATE PL.	76.12	328.4	11	47	4				12	0		
COLLMBERG	76.80	333.6	11	48	2							
WITTEVEEN	77.29	337.9	11	49	0							
DURHAM	77.43	343.3	11	49A	-1	21	41	7				
PRUHONICE	77.44	332.1	11	52A	2				12	2	14	31 PP
JENA	77.56	334.3	11	51	0						13	10
PLAUEN	77.76	333.7	11	49	-3							
MUNSTER	77.80	337.0	11	54	2							
BRATISLAVA	78.11	329.7	11	56	2						12	21
DE BILT	78.34	338.4	11	52	-3	21	22	-22				
TIMISOARA	78.58	325.9	12	28	32							
RIVERVIEW	78.66	178.6				21	47	-1			22	24 PS
BENSBERG	78.83	336.8	11	58	0							
RATHFARNHAM	79.72	345.5	12	1K	-1				12	17		
UCCLE	79.74	338.4	12	4K	1	21	26	-33				
CANBERRA	80.14	180.4	12	3A	-2				12	17		
STUTTGART	80.20	334.6	12	6	1						15	20 PP
SOFIA	80.21	322.8	12	7	2							
KEW	80.25	341.4	12	6A	1				12	22		
DOURBES	80.31	337.9	12	6	0	22	12	7				
ADELAIDE	80.34	189.0	12	5K	-1				12	19		
TUBINGEN	80.45	334.6	12	8	2							
FAYETTEVILLE	80.75	47.4	12	7A	-1				12	20		
EBINGEN	80.79	334.5	12	10	2				12	24		
STRASBOURG	80.80	335.4	12	10A	2	22	34	24			13	34
KSARA	81.03	309.4	12	10	1							
OTTAWA	81.33	30.4	12	10A	-1							
SHAWINIGAN	81.34	28.0	12	11A	0							
TRIESTE	81.45	330.3	12	13	1							
SEVEN FALLS	81.47	26.5	12	13	1							
BASLE	81.79	335.0	12	13	0							
BREBEUF	81.97	29.0	12	14A	0							
PARIS	82.04	338.7	12	17	2							
CLEVELAND	82.39	36.1									12	18 PCP
NEUCHATEL	82.46	335.2	12	18	1							
JERUSALEM	82.94	308.5	12	15	-4							
PRATO	83.92	331.1	12	27	3						23	52 PS
MORGANTOWN	84.60	36.1	12	28A	0							
CLERMONT-FD.	84.67	337.1	12	31	3							
ROME	85.17	349.3	12	30A	0						23	56 PS
MONACO	85.26	333.4	12	44	13							
WESTON	85.51	29.1	12	34A	2							
KARAPIRO	86.00	159.6	12	33	-2				12	47		
HELWAN	86.54	309.9	12	38	1							
CHAPEL HILL	88.11	37.5	12	46	1							
SETIF	92.73	331.7	13	4	-2				13	22		
BERMUDA	96.79	28.6				24	17	-21			17	16 PP
TAMANRASSET	104.81	325.8	14	3	2						18	6 PP
CAPE HALLETT	118.10	172.9	18	40	0						29	38 PS
SCOTT BASE	123.23	175.7	18	56	6							
HUANCAYO	129.59	63.5	19	4	2							
BYRD STATION	134.29	165.9	19	9	-2						22	36 SKP
SOUTH POLE	135.00	180.0	19	5	-7							
LA PAZ	137.46	60.0	19	18	1							

NOVEMBER 22 0.H 4.M 23.S EPICENTRE -10.64 112.49 DEPTH= 0.KM

A=-0.37609 B= 0.90825 C=-0.18340 D= 0.9239 E= 0.3826
G= 0.0702 H=-0.1694 K=-0.9830 HT= 6.5

SE= 2.32

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
LEMBANG	6.12	307.7	1	24	-8	2	30	-13				
DJAKARTA	7.14	307.9	2	49	62						5	37
MEDAN	19.71	315.0	4	31A	-1	8	1	-7				
PERTH	21.43	172.2	4	48	-1	8	51	9			<	9 PP
MANILA	26.43	18.7	5	42	4	10	54	45				
BAGUIO CITY	28.05	16.7	5	51	-2							
KOROR	28.24	51.7	5	52	-2							
PORT BLAIR	29.62	317.9	5	31	-36							
PHU-LIEN	31.77	349.5	6	26	0	11	29	-5				

HONG KONG	32.77	2.9	6	36	2	11	19	-31				
CANTON	33.52	1.3	6	42	1	12	3	2				
CHARTERS TS.	33.81	110.1	6	44K	1	11	58	-8				
ADELAIDE	33.99	139.5	6	44	-1	12	11	2				
KUNMING	36.74	345.0	7	11K	3	12	58	7				
COLOMBO	36.86	296.8	7	12	3	12	57	4				
CHITTAGONG	38.55	328.4	7	23	-1	13	19	0			8	53 PP
MELBOURNE	39.76	138.3	7	34A	0	13	43	6			16	43
RABAUL	39.83	83.8	7	35	1	13	42	4				
GUAM	39.98	53.9	7	34	-1							
KODAIKANAL	40.53	299.6	7	48	8							
TOCKLAI	40.96	335.5	7	45	1							
SHILLONG	41.21	331.1	7	46K	0	13	56	-3	8	8	9	30 PP
CANBERRA	41.26	132.5	7	46A	0	14	2	3			9	25 PP
BRISBANE	41.59	119.6	7	48	-1	14	3	-1				
RIVERVIEW	42.21	129.3	7	56K	2	14	16	3				
ZO-SE	42.33	11.1	7	56K	1	14	17	2			9	37 PP
NANKING	42.87	7.9	8	1K	2							
TRUK	43.11	66.9	8	2	1							
CHATRA	44.63	327.0	8	16	3						12	40
SIAN	44.77	355.8	8	15K	0							
LHASA	45.07	333.3	8	20K	3	14	55	0				
POONA	47.89	307.0	8	39	0	15	53	18				
BOMBAY	48.91	306.7	8	49	2	15	53	4				
ABUYAMA	50.26	24.8	8	58A	0	16	7	-1				
AGRA	50.28	319.0	8	56K	-2	16	15	7				
PEKING	50.52	3.7	8	58	-2	16	12	0				
PAOTOW	51.01	357.6	9	3K	0							
DEHRA DUN	52.49	321.9	9	13	-1	16	35	-4				
MATUSIRO	52.82	26.0	9	15	-2	16	52	9			20	58 SS
TUKUBASAN	53.38	27.8	9	18A	-3						10	29
CHANGCHUN	55.45	11.2	9	34K	-2	17	14	-5				
WILKES	55.52	181.0				17	13	-7				
LAHORE	55.64	320.3	9	35K	-3	17	22	1				
VLADIVOSTOK	56.36	17.0	9	42	-1	17	30	-1				
KARACHI	57.18	310.2	9	45K	-4							
MIRNY	57.39	189.1	9	48	-2	17	44	0				
ULAN-BATOR	58.51	355.6	9	58	0							
DUMONT	58.97	167.6	9	56	-5							
WARSAK DAM	59.02	320.6	10	0	-1							
ROXBURGH	59.45	136.9				18	9	-2			18	42
QUETTA	59.71	314.3	10	5K	-1	18	13	-2			12	18 PP
COBB RIVER	60.73	131.2	10	14	1							
GEBBIES PASS	61.24	134.1	10	21	4							
KARAPIRO	62.31	127.2	10	24	0							
IRKUTSK	63.05	354.4	10	28	-1	18	58	1				
TANANARIVE	63.05	254.2	10	30K	1						10	59
NAMANGAN	63.68	326.5	10	33	0							
UGLEGORSK	64.91	21.0	10	42	1							
SEMIPALATNSK	66.97	338.2	10	54	0							
CAPE HALLETT	70.44	164.1	11	16	1	20	32	6			14	1 PP
SCOTT BASE	72.49	169.6	11	27	-1	20	55	5			11	31 PCP
YAKUTSK	73.67	8.4	11	33	-2							
MAGADAN	76.40	19.0	11	50	0							
SOUTH POLE	79.43	180.0	12	6	-1	22	2	-4			14	53 PP
SVERDLOVSK	79.60	333.9	12	9	1	22	12	4				
MAKHACH-KALA	79.60	317.4	12	9	1	22	9	1				
TIFLIS	80.92	315.5	12	17	2	22	29	7				
ASTRIDA	82.42	268.8	12	25	2							
TIKSI	82.81	5.2	12	24	-1	22	37	-4				
UVIRA	82.86	267.8	12	27	2							
KIMBERLEY	82.98	242.1	12	28A	2							
LWIRO	83.39	268.9	12	30	2							
JERUSALEM	84.93	303.5	12	28	-8							
KSARA	84.96	305.6	12	38	2	22	42	-21	13	6	15	53 PP
HELWAN	87.69	300.8	12	52	3							
SIMFEROPOL	89.34	315.9	12	58	1							
MOSCOW	90.35	326.9	13	1	-1							
HALLEY BAY	90.54	189.5	13	2	-1						18	30 PPP
KISHINEV	93.41	317.1	13	6	-10	23	57	-23				
PULKOVO	95.19	329.8	13	26	2							
KHEYS	95.51	351.3	13	24	-1							
APATITY	95.61	337.7	13	29	3	23	59	-40				
SODANKYLA	98.14	332.1	13	36	-1							
KIRUNA	100.55	337.3	13	47	-1							
BRATISLAVA	101.43	317.2									17	57 PP
PRUHONICE	103.17	319.0									18	15 PP
STUTTGART	106.68	317.8									18	40 PPP

STRASBOURG	107.64	317.6	18	29	3						
DOURBES	109.56	319.4								21	36 PP
DURHAM	112.45	325.1				25	18	0			
RESOLUTE	114.13	7.7	18	40A	1						
THULE	114.23	0.2	18	40	1						
SHASTA	123.30	48.1	18	59	3						
MINERAL	123.98	48.3	19	1	3						
LICK	124.74	51.8	19	3	4					20	48 PP
RENO	125.53	48.8	19	4	3						
HUNGRY HORSE	126.00	36.8	19	5	3					20	56 PP
BUTTE	127.98	38.7	19	8	3						
PASADENA	128.26	54.8	19	10	4					21	10
EUREKA	128.36	47.6	19	9	3					21	4 PP
BOZEMAN	129.08	38.5	19	11	3						
BOULDER CITY	130.37	51.5	19	13	3						
SALT LAKE C.	130.79	44.5	19	14	3						
RAPID CITY	134.63	36.2								21	50 PP
TUCSON	134.70	54.9	19	24	6					22	1 PP
LARAMIE	134.72	40.8	19	21	3					21	49 PP
TUCSON TELE.	134.76	54.7	19	13	-5					21	53 PP
CHIHUAHUA	139.73	58.0								21	25
SEVEN FALLS	143.53	3.8	19	33	-1						
SHAWINIGAN	143.93	6.2	19	36A	1						
OTTAWA	144.65	10.0	19	37	1						
BREBEUF	144.87	7.5	19	37K	1					22	54 PP
FAYETTEVILLE	144.98	39.3	19	37	0						
HALIFAX	145.97	355.0	19	43A	5					23	3 PP
WESTON	148.20	5.4	19	48A	6						
TACUBAYA	148.22	70.3	19	43	1						
MORGANTOWN	149.08	18.9	19	51A	8						
CHAPEL HILL	152.74	20.8	19	53	4						
LA PAZ	153.03	178.7	20	2A	13					23	47 PP
COLUMBIA	153.65	26.0	19	54	4						
COMITAN	155.42	74.2	19	57	5						
HUANCAYO	156.16	160.8	19	57	4					20	27 PKP2
HUANCAYO	156.16	160.8	19	57	4					20	27 PKP2
BERMUDA	158.21	353.5	20	1	5					24	11 PP
CHINCHINA	170.19	124.4	19	51	-16						
BOGOTA	171.17	132.1	20	18	11					21	44 PSKS
FUQUENE	171.98	129.3	20	8	0						

NOVEMBER 22 1.H 57.M 0.S EPICENTRE -4.69 131.59 DEPTH= 0.KM

A=-0.66158 B= 0.74547 C=-0.08123 D= 0.7479 E= 0.6638
G= 0.0539 H=-0.0608 K=-0.9967 HT= 7.0

SE= 2.68

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KOROR	12.28	13.6	2	56	-2							
RABAUL	20.53	89.5	4	41	0	8	31	6				
CHARTERS TS.	20.88	138.1	4	45K	1	8	35	3				
MANILA	21.84	331.4	5	3	9	9	3	13				
GUAM	22.28	35.8	4	56	-2							
TRUK	23.55	59.3	5	10	-1	9	25	4				
BAGUIO CITY	23.63	332.8	5	11	-1	9	22	0				
LEMBANG	23.94	263.8	5	13	-2	9	31	3				
DJAKARTA	24.69	265.4	5	18K	-4	9	44	4				
BRISBANE	30.51	140.2	6	13	-2	11	5	-10				
ADELAIDE	30.81	168.5	6	18K	0	11	28	9	7	20 PP		
MEDAN	33.89	283.5	6	45	0				12	58		
RIVERVIEW	34.23	150.3	6	48	0	12	8	-5				
CANBERRA	34.47	154.4	6	50K	0	12	16	0				
MELBOURNE	35.18	161.5	6	57K	1				16	46		
PHU-LIEN	35.24	316.8	6	58	2	12	24	-4				
ZO-SE	36.95	345.1				13	9	14				
ABUYAMA	39.53	5.1	7	43A	11	13	38	4				
KUNMING	40.78	317.8	7	23A	-20	13	46	-7	9	20 PP		
TUKUBASAN	41.47	10.4	7	45	-3							
MATUSIRO	41.49	8.1	7	44K	-4	13	48	-15	8	24		
CHENGTU	43.94	324.9	8	9	1	14	33	-6				
SIAN	44.25	332.8				14	39	-4				
CHITTAGONG	47.28	306.3	8	31	-4	15	22	-5	10	24 PP		
LANCHOW	48.18	329.6	8	42	0	15	35	-5				
CHANGCHUN	48.63	353.9	8	47	2	15	43	-3				

SHILLONG	48.89	310.0	8	46	-1							
PAOTOW	49.20	338.3	8	49	-1	15	50	-4				
LHASA	51.73	313.9	9	10A	1	16	26	-3				
KARAPIRO	51.88	135.8	9	9K	-1				9	24		
TONGARIRO	52.50	137.2	9	14	-1				9	28		
ULAN-BATOR	56.70	340.4	9	45	-1	17	33	-3				
POONA	61.37	293.9	10	17	-1							
DEHRA DUN	61.88	308.0	10	22	1	18	39	-4				
DUMONT	62.15	176.2	10	21	-2	18	46	0				
BOMBAY	62.41	294.0	10	56	31	18	45	-5			12	44
LAHORE	65.30	307.8	10	44	0	19	22	-3				
MAGADAN	65.83	10.6	10	53	6							
YAKUTSK	66.53	359.0	10	49	-3	19	35	-6				
MIRNY	67.28	195.7	10	56	0	19	50	0				
WARSAK DAM	68.39	309.3	11	3	0							
KARACHI	69.46	299.7	11	8	-2	20	12	-4			13	44 PP
QUETTA	70.79	304.0	11	17	-1	20	28	-3			13	50 PP
NAMANGAN	71.02	316.1	11	19	-1							
CAPE HALLETT	71.62	168.4	11	24K	1	20	42	1			11	39 PCP
SCOTT BASE	75.40	172.8	11	46A	1						14	45 PP
TIKSI	76.19	359.1	11	48	-2							
TANANARIVE	82.87	251.6	12	27A	1						13	22
SVERDLOVSK	83.63	328.5	12	27	-3	22	45	-5				
SOUTH POLE	85.34	180.0	12	39	1	22	58	-9			15	51 PP
BYRD STATION	88.64	170.5	12	55	1	23	8	-30			16	28 PP
MAKHACH-KALA	88.82	313.1	13	5	10	23	59	19				
COLLEGE	90.22	24.9	13	3	1							
TIFLIS	90.69	311.6	13	4	0	23	58	1				
KHEYS	92.77	350.1	13	22	9							
MOSCOW	96.08	325.4									17	32 PP
KSARA	97.33	303.4	13	31	-3	24	44	-10			17	22 PP
APATITY	97.43	337.5	13	41	6							
HALLEY BAY	98.87	185.4	13	41	0						17	47 PP
ASTRIDA	101.59	266.4	13	59	6						18	3 PP
UVIRA	102.12	265.4									18	7 PP
LWIRO	102.55	266.7									18	10 PP
RESOLUTE	105.11	11.5	14	10	777						18	6 PP
FRESNO	107.69	53.0									18	41 PP
HUNGRY HORSE	109.57	40.2									19	7 PP
EUREKA	110.24	49.7	18	25	-6						14	46 P
PRUHONICE	110.77	322.0									19	10 PP
JENA	112.23	323.7									19	17 PP
STUTTGART	114.46	322.1	18	56	16							
TUCSON TELE.	115.81	56.4	19	8	26							
RAPID CITY	118.07	41.9	18	57	10						20	11 PP
MBOUR	147.57	289.5	19	46	5						19	57 PKP2
HUANCAYO	148.49	122.1	19	51	8						20	7 PKP2
BERMUDA	148.53	27.0	19	12	-31							
LA PAZ	151.30	137.6	19	58K	11						20	15 PKP2

NOVEMBER 23 20.H 15.M 48.S EPICENTRE 28.79 86.94 DEPTH= 0.KM

A= 0.04688 B= 0.87650 C= 0.47912 D= 0.9986 E=-0.0534
G= 0.0256 H= 0.4784 K=-0.8778 HT= 2.2

SE= 2.14

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
CHATRA	1.96	174.0	0	41	6	1	12	11					
LHASA	3.68	75.7	1	4	4	1	49	4					
BOKARO	5.04	191.9	1	16	-3	2	44	25			1	29	PP
SHILLONG	5.44	125.0	1	23A	-1	2	45	16					
HOWRAH	6.34	168.4	1	35	-2	2	59	8					
TOCKLAI	7.23	104.5	1	50	0						4	45	
CHITTAGONG	7.77	144.4	1	55	-2	3	22	-5			2	2	PP
DEHRA DUN	7.89	283.3	2	2	3	3	31	1			4	7	
AGRA	8.06	260.3	2	2A	1	3	8	-26			2	36	
VIZIANAGRAM	11.09	197.5	2	54	11								
LAHORE	11.25	287.2	2	43	-2	4	45	-8					
WARSAK DAM	14.13	295.4	3	23	-1								
KUNMING	14.53	101.2	3	33	4								
CHENGTU	14.95	78.7	3	34	0								
POONA	15.74	232.4	3	42	-3	6	25	-15			8	3	
LANCHOW	15.99	58.7	3	47	-1								
MADRAS	16.92	203.2	3	28	-32	7	13	5			3	56	PP

NAMANGAN	17.43	318.3	4	5	-1	7	25	6			
QUETTA	17.46	279.4	4	5	-2	7	8	-12	7	29	SS
KARACHI	17.93	265.2	4	14	2	7	35	4			
KODAIKANAL	20.49	207.6				8	34	7			
SEMIPALATNSK	22.17	348.6	4	59	0						
PAOTOW	22.26	52.0	4	59	-1						
WUHAN	24.04	79.1	5	17	-1						
ULAN-BATOR	24.57	33.5	5	26	3						
PEKING	26.48	57.2	5	40	-1						
CHANGCHUN	34.04	53.4	6	46	-2						
YAKUTSK	43.42	27.8	8	5	-1						
MATUSIRO	43.43	66.0	8	4A	-2	14	30	-5	12	51	
KSARA	43.55	290.0	8	12	5	14	48	11	9	56	PP
MOSCOW	44.04	321.9	8	12	1						
TIKSI	48.59	16.4	8	46	-1						
PULKOVO	48.88	325.9	8	50	0						
APATITY	49.99	336.2	8	58	0						
HELSINKI	51.60	325.7	9	10	0						
SODANKYLA	52.41	334.9	9	16	0						
KHEYS	53.33	352.9	9	22	-1						
KIRUNA	54.83	334.8	9	33	-1						
UPPSALA	55.24	324.9	9	36K	-1						
PRUHONICE	57.50	313.1	9	53	0						
SKALSTUGAN	57.83	329.4	9	55	-1						
COPENHAGEN	58.14	320.0	9	58	0						
GOTEBORG	58.23	322.4	9	58	-1						
COLLMBERG	58.31	314.8	10	6	7						
JENA	59.24	314.6	10	5	-1						
STUTTGART	61.14	312.4	10	18	-1						
STRASBOURG	62.11	312.4	10	25	0				10	55	
PARIS	65.44	313.7	10	48	1						
KEW	66.42	317.0	10	53	0						
RATHFARNHAM	69.29	320.2	11	54	43				12	26	
TAMANRASSET	72.22	286.6	11	30	1				14	12	PP
COLLEGE	77.47	20.9	11	58	-1				14	55	PP

NOVEMBER 24 6.H 48.M 58.S EPICENTRE -57.64 -65.35 DEPTH= 0.KM

A= 0.22425 B=-0.48878 C=-0.84309 D=-0.9089 E=-0.4170
G=-0.3516 H= 0.7663 K=-0.5378 HT= -8.1

SE= 2.39

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
HALLEY BAY	22.86	156.1	5	9	4						5	36	PP
LA PLATA	23.29	15.6	5	2	-8	9	27	8			5	52	PPP
BUENOS AIRES	23.51	14.3	5	15	3								
SANTA LUCIA	24.49	349.2	5	21	0	9	41	1					
BYRD STATION	27.74	197.7	5	52	0								
SOUTH POLE	32.53	180.0	6	34	0	12	6	17			7	34	PP
SCOTT BASE	41.06	194.7	7	47K	1	14	0	0			9	38	PCP
LA PAZ	41.13	355.9	7	44	-3	14	2	1			9	34	PP
CAPE HALLETT	44.78	201.0	8	17	0	15	0	6			10	7	PP
HUANCAYO	46.13	346.4	8	27A	0								
DUMONT	54.56	192.1	9	30	-2	17	15	5					
MIRNY	55.07	169.6	9	34	-1	17	17	0					
WILKES	56.43	178.0	9	42A	-3						13	6	PP
HERMANUS	58.91	106.1									25	2	
BOGOTA	62.46	350.2	10	26	-1	18	54	1					
CHINCHINA	62.96	348.5	10	57	27								
FUQUENE	63.27	350.7	10	31	-1								
GRAHAMSTOWN	63.52	110.8	10	33A	-1								
KIMBERLEY	66.28	106.4	10	51K	-1								
WINDHOEK	67.23	96.4	10	58	0								
TRINIDAD	68.14	4.1	11	7	4								
KARAPIRO	72.00	226.6	11	24	-3						39	6	PKPPKP
SAN JUAN	75.74	359.2	11	49	0								
TACUBAYA	81.77	327.9	12	22	1								
MBOUR	82.07	47.0	12	18	-5	22	48	11			12	30	PCP
CANBERRA	82.98	207.7	12	27A	-1								
ADELAIDE	85.58	199.6	12	40	-1								
TANANARIVE	85.78	119.0	12	44K	2						18	17	
BRISBANE	89.29	213.5				23	46	-1					
LWIRO	90.35	94.7	13	6A	2								
ASTRIDA	90.55	95.7	13	8	3								

COLUMBIA	92.24	347.0	13 15	2		
TUCSON	97.36	322.5	13 39	3		
TUCSON TELE.	97.41	322.6	13 39	3	17 17	PP
TAMANRASSET	99.32	62.1	13 46	1	17 53	PP
EUREKA	105.65	321.6	14 19	777		
STUTTGART	122.51	49.1	18 56	-1		
PRUHONICE	125.66	51.5	19 2	-1		
COLLMBERG	126.02	49.5	19 18	14		
LWOW	129.69	57.3	19 10	-1		
RESOLUTE	133.50	349.6	19 19	1	39 32	SS
THULE	133.81	359.0	19 16	-3		
UPPSALA	134.00	44.1	19 21	2		
TIFLIS	134.24	78.8	19 16	-3		
COLLEGE	137.07	321.6	19 18	-7		
QUETTA	137.32	109.1	19 16	-9	22 51	PKS
MOSCOW	139.78	58.6	19 34	4		
KIRUNA	139.91	36.0	19 33	3		
NORD	141.42	10.2	19 32	-1		
SODANKYLA	141.68	38.6	19 26	-7		
WARSAK DAM	142.70	110.5	19 29	-6		
CHATRA	143.59	136.0	19 33	-3		
APATITY	144.09	40.3	19 34	-3		
CANTON	145.46	177.8	19 40A	0		
KUNMING	146.32	160.2	19 42	1		
LHASA	147.55	139.5	19 47	4		
NAMANGAN	148.07	107.6	19 48	4	20 17	PKP2
KHEYS	150.86	18.5			20 46	
SVERDLOVSK	151.40	68.3	19 54	5		
CHENGTU	152.03	160.2	19 58	8		
ZO-SE	153.08	192.5	19 59	8		
MATUSIRO	153.74	226.7	19 50	-2	23 38	PP
ULAN-BATOR	169.20	151.1			20 10	

NOVEMBER 25 2.H 23.M 57.S EPICENTRE 43.03 -0.43 DEPTH= 0.KM

A= 0.73322 B=-0.00554 C= 0.67997 D=-0.0076 E=-1.0000
G= 0.6800 H=-0.0051 K=-0.7332 HT= -2.8

SE= 4.24

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
TORTOSA	2.32	162.2									0	30	PG
BARCELONA	2.50	129.4	0	39	-3	1	4	-10					
CLERMONT-FD.	3.74	41.7	0	53	-7	1	38	-8			1	0	PG
TOLEDO	4.16	222.0	1	8A	2	1	59	3			1	28	PG
ALICANTE	4.68	180.5	1	12	-1	2	4	-5					
MONACO	5.77	80.4	1	33	4	2	21	-15			1	43	PG
PARIS	6.13	18.4	1	31	-2	2	38	-7			2	1	PG
JERSEY	6.26	349.9									3	19	SG
GRANADA	6.33	203.6	1	38K	2						3	29	SG
SERRA PILAR	6.37	255.4	1	36K	-1	2	51	0			2	6	PG
ALMERIA	6.37	194.9	1	39	2	2	53	2					
OROPA	6.56	63.9				3	0	3					
NEUCHATEL	6.56	50.3	1	35	-5						3	8	
ALGIERS UNI.	6.80	155.7	1	40	-3	3	2	0					
MALAGA	7.00	207.1	1	52A	6	3	16	9			3	56	SG
BASLE	7.22	48.7	1	59	10						3	21	
RELIZANE	7.31	173.7	1	48	-2	3	11	-4					
LISBON	7.88	239.8	2	4K	6	3	45	16			2	15	PP
STRASBOURG	7.97	43.1									2	25	PG
CHUR	8.03	58.2	1	56	-4						4	6	
SETIF	8.17	144.7	1	57	-5								
EBINGEN	8.36	48.8				3	40	-1			2	41	PG
UCCLE	8.43	21.2	3	0	54	4	36	53					
KEW	8.44	0.5	2	13	7	3	54	11			4	48	SG
RAVENSBURG	8.51	52.7	2	13	6	3	52	7			2	44	PG
TUBINGEN	8.62	47.1				3	51	4			2	33	PG
STUTTGART	8.83	46.2	2	11	0	3	45	-8			2	51	PG
BENSBERG	9.47	30.6	2	58	38						5	9	SG
MUNSTER	10.46	28.5	2	31	-3								
TRIESTE	10.49	70.7									5	32	
SONNEBERG	10.84	43.3	2	37	-2						5	56	SG
RATHFARNHAM	10.98	341.3	2	37	-4	5	3	17			3	18	
CHEB	11.28	46.9				5	35	42			4	3	
JENA	11.38	41.9	2	43	-3	4	48	-7			3	38	PG
DURHAM	11.77	356.7	2	46	-6	4	59	-6			6	24	

HALLE	11.92	40.5							5	16	SS
COLLMBERG	12.31	43.2	2	53	-6	5	27	9	3	48	PG
PRAGUE	12.40	50.3	3	13	13	5	35	15	3	46	
PRUHONICE	12.43	50.8	2	58	-3						
BRATISLAVA	13.30	61.2				5	12	-30	6	42	
HURBANOVO	13.94	63.3				5	51	-6			
RACIBORZ	14.61	54.7							6	35	
KRAKOW	15.64	56.3							7	32	
TAMANRASSET	20.80	164.4	4	41	-4						
HELSINKI	23.07	33.2	5	18	10						
SODANKYLA	28.40	21.7	6	1	3						
SEVEN FALLS	48.34	300.6	8	42	-3						
RESOLUTE	50.18	339.8	8	54	-5						
RAPID CITY	69.23	311.3	11	10	0						
COLLEGE	69.44	345.8	11	9	-3						
HUNGRY HORSE	71.89	320.0	11	24	-2						
EUREKA	79.28	314.7	12	9	1						
MINERAL	81.46	318.6	12	20A	0						
TUCSON TELE.	81.56	306.6	12	21	1						
TUCSON	81.69	306.6	12	22	1						
LICK	83.81	316.7	12	33A	1						
SOUTH POLE	132.84	180.0	19	13	-4						
CAPE HALLETT	150.31	174.3	19	51	4						

NOVEMBER 25 9.H 12.M 52.S EPICENTRE 36.06 141.63 DEPTH= 0.KM

A=-0.63531 B= 0.50296 C= 0.58601 D= 0.6207 E= 0.7840
G=-0.4595 H= 0.3637 K=-0.8103 HT= -0.3

SE= 3.56

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TYOSI	0.72	242.2	0	14K	-3	0	22	-7				
MITO	0.99	289.2	0	20	-1	0	32	-4				
ONAHAMA	1.07	326.7	0	21K	-1	0	34	-4				
KAKIOKA	1.19	278.7	0	21K	-2	0	29	-12				
TUKUBASAN	1.25	277.9	0	19	-5	0	39	-3				
UTUNOMIYA	1.51	289.5	0	26K	-2	0	34	-15				
HONGO	1.55	257.6	0	27	-2	0	41	-9				
SHIRAKAWA	1.55	313.4	0	28K	-1	0	47	-3				
TOKYO C.M.O.	1.57	256.7	0	26K	-3	0	43	-7				
YOKOHAMA	1.73	249.3	0	31	0	0	52	-2				
KUMAGAYA	1.83	273.5	0	31	-2	0	51	-6				
MERA	1.86	232.8	0	31	-2	1	4	6				
HUKUSIMA	1.93	331.5	0	34K	0	0	59	0				
TITIBU	2.07	268.6	0	34	-2							
MAEBASI	2.10	280.1	0	34K	-3	1	0	-4				
OSIMA	2.24	235.7	0	38	-1							
SENDAI	2.28	345.4	0	39K	0	1	7	-1				
AJIRO	2.30	244.8	0	37	-2	1	10	1				
MISIMA	2.38	247.6	0	39	-2	1	1	-10				
ISINOMAKI	2.38	354.1	0	42A	1	1	10	-1			1	59
HUNATU	2.39	257.4	0	40	-1	1	15	4				
YAMAGATA	2.42	335.3	0	42	1	1	11	-1				
OIWAKE	2.51	277.1	0	42	0						1	6
KOHU	2.52	261.1	0	41	-2	1	25	10				
NIIGATA	2.78	312.7	0	47	1	1	18	-3				
MATUSIRO	2.80	281.1	0	44K	-3	1	18	-4				
NAGANO	2.84	283.4	0	46	-1	1	28	6				
SHIZUOKA	2.85	248.6	0	46	-1	1	23	0				
TAKADA	2.91	291.9	0	48	0	1	24	0				
MATUMOTO	2.97	274.8	0	48	-1	1	27	1				
MIZUSAWA	3.09	352.7	0	54	3	1	35	6				
IIDA	3.14	261.3	0	54	3	1	41	11				
OMAESAKI	3.15	243.4	0	57	6	1	47	17				
SAKATA	3.18	333.7	0	55	3	1	32	1				
AIKAWA	3.34	306.9	0	55	1	1	25	-10				
HAMAMATU	3.46	248.5	1	6	10	2	3	24				
TAKAYAMA	3.55	272.8	0	59	2							
MIYAKO	3.60	4.2	0	59	1	1	34	-8				
TOYAMA	3.63	281.5	1	0	2	1	44	1				
MORIOKA	3.65	354.4	1	0	1	1	41	-3				
AKITA	3.85	342.1	1	3	2	1	56	7			1	27
NAGOYA	3.90	258.2	1	4	2	2	13	23				
GIHU	4.01	262.0	1	4	0	2	5	12			1	32

WAZIMA	4.02	290.5	1	6	2					
KANAZAWA	4.05	278.1							2	7
IBUKI SAN	4.33	262.5	1	9	1	2	14	13		
HUKUI	4.34	271.5	1	8	0					
TU	4.38	253.9	1	16	7					
KAMEYAMA	4.38	255.5	1	9	0	2	9	7		
HIKONE	4.45	261.4	1	10	0	2	12	8		
HATINOHE	4.47	359.0	1	15	5	2	12	8		
AOMORI	4.80	352.2	1	6	-9	2	12	0		
OWASE	4.88	247.6	1	27	11	2	35	21		
NARA	4.94	255.5	1	29	12	2	35	19		
MAIZURU	5.05	265.1	1	25	7	2	27	9		
ABUYAMA	5.09	258.3	1	17K	-2	2	27	8		
OSAKA	5.18	256.0	1	22	2	2	34	12		
KOBE	5.45	257.3	1	40	16	2	53	25		
SIOMISAKI	5.48	243.4	1	42	17	2	48	19		
TOYOOKA	5.56	266.6	1	28	2	2	36	5	2	15
HAKODATE	5.76	353.2	1	29	1	2	52	16	2	36
SUMOTO	5.78	254.8							2	9
TOTTORI	6.04	266.9	1	40	7	2	51	8		
MORI	6.09	352.5	1	35	2	2	57	12		
TOKUSIMA	6.11	253.1	1	36	2	3	12	27	3	32
HIMEJI	6.12	257.4							2	10 PG
URAKAWA	6.15	8.0	1	41	7	2	46	0		
MURORAN	6.28	355.5	1	46	10	3	0	11	3	15
HIROO	6.35	11.4	1	44	7					
TAKAMATU	6.45	256.6	1	52	14	3	14	21	2	56
OKAYAMA	6.45	259.9	1	52	14					
TOMAKOMAI	6.45	359.7							2	4 PG
YONAGO	6.76	267.1							3	35 SG
SUTTSU	6.82	351.3	1	54	11					
OBIHIRO	6.96	9.5	1	45	0	3	22	16	3	41
SAPPORO	7.01	358.3	1	47	1	3	3	-4		
KOTI	7.12	251.8							3	59 SG
KUSIRO	7.24	16.3	1	54	5	3	6	-7		
MATUYAMA	7.62	255.6	2	19	24				3	37
HIROSIMA	7.72	260.1				3	47	22		
ASAHIGAWA	7.73	4.0	1	56	0	3	43	17		
SIMIDU	7.87	247.9				3	26	-3		
NEMURO	7.87	21.5	1	55	-3	3	20	-9		
HAMADA	7.89	264.4	2	4	6	4	6	37		
ABASHIRI	8.21	13.5				3	30	-7		
HUKUOKA	9.54	258.2							4	39
SAGA	9.75	256.6							5	12
NAGASAKI	10.26	254.5	2	34	3					
VLADIVOSTOK	10.30	316.2	2	31	-1	4	34	5		
Y.-SAKHLINSK	10.91	3.9				4	40	-4		
CHANGCHUN	14.72	306.8	3	29	-2					
PEKING	20.42	288.9	4	34	-7					
MAGADAN	24.25	11.4	5	19	0					
SIAN	26.74	275.8	5	38	-5					
YAKUTSK	27.04	347.6	5	43	-2	10	19	-3		
ULAN-BATOR	28.17	305.7	5	53	-3					
KOROR	29.33	194.6	6	0	-6					
LANCHOW	30.44	281.4	6	11	-5					
SHILLONG	43.59	270.5	8	2A	-5					
COLLEGE	49.82	31.8	8	56	0					
LEMBANG	53.29	223.9	9	17A	-6					
NAMANGAN	53.63	297.9	9	22	-3					
LAHORE	55.11	286.2	9	31	-5					
SVERDLOVSK	56.00	319.1	9	40	-2					
QUETTA	61.41	288.0	10	16	-4					
RESOLUTE	63.51	14.3	10	32A	-2	19	12	5		
APATITY	63.65	336.0	10	32A	-3					
SODANKYLA	65.93	337.4	10	47	-3				13	13 PP
KIRUNA	67.49	339.4	10	57	-3					
HELSINKI	70.99	331.8	11	18	-3					
SHASTA	71.55	52.9	11	25	1					
TIFLIS	71.56	308.4	11	22	-3					
MINERAL	72.24	52.8	11	29	0					
HUNGRY HORSE	72.38	42.7	11	30	1					
SKALSTUGAN	72.89	338.8	11	29	-3					
BERKELEY	73.14	55.3	11	47	13					
RENO	73.84	52.8	11	38	0					
LICK	73.84	55.5	11	39	1					
UPPSALA	73.91	334.2	11	45A	7					
BUTTE	74.54	44.1	11	41	-1					
BOZEMAN	75.60	43.7	11	49	1					

EUREKA	76.32	51.1	11 52	0			
LWOW	78.27	324.1	12 0	-3			
BOULDER CITY	79.11	53.4	12 8	0			
KARAPIRO	80.02	153.4	12 12	-1			
COLLMBERG	82.04	330.3	12 21	-2			
PRUHONICE	82.41	328.7	12 23	-2		13 18	
JENA	82.89	330.8	12 26	-2			
TUCSON	84.01	54.3	12 35	2			
TUCSON TELE.	84.03	54.2	12 34	1			
STUTTGART	85.54	330.7	12 39	-2		13 1	
TUBINGEN	85.79	330.6	12 40	-2			
EBINGEN	86.11	330.4	12 42	-2			
TAMANRASSET	108.26	317.6	18 44	14		18 51	PP
SOUTH POLE	125.87	180.0	19 2	-2			
LA PAZ	147.16	61.4	19 47	4			

NOVEMBER 26 9.H 13.M 45.S EPICENTRE 44.77 148.84 DEPTH= 67.KM

DEPTH OF FOCUS= 0.005R

A=-0.60959 B= 0.36855 C= 0.70184 D= 0.5174 E= 0.8558
G=-0.6006 H= 0.3631 K=-0.7123 HT= -3.5

SE= 2.75

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
NEMURO	2.76	239.7	0 41	-2	1 12	-4		
ABASHIRI	3.36	258.7	0 49	-3				
KUSIRO	3.68	242.5	0 53	-3	1 35	-4		
OBIHIRO	4.48	247.6	1 9	1	1 54	-5		
HIROO	4.72	240.2	1 10	-1				
URAKAWA	5.13	241.5	1 27	10	2 15	0		
SAPPORO	5.67	255.2	1 25	1	2 32	3		
TOMAKOMAI	5.73	249.4	1 44	19	2 44	14		
MURORAN	6.22	249.7	1 31	-1	2 41	-1		2 58
UGLEGORSK	6.33	315.3	1 6	-27				
HAKODATE	6.64	246.1	1 37	0				2 58
HATINOHE	6.85	234.4	1 50	9	2 51	-7		
AOMORI	7.12	239.2	2 18	34	3 23	19		
AKITA	8.21	235.2			3 29	-3		
ISINOMAKI	8.47	224.3			3 24	-14		2 55
HUKUSIMA	9.42	224.8	2 14	-2				3 52
SHIRAKAWA	10.04	223.4			4 3	-13		
UTUNOMIYA	10.66	222.8			4 20	-11		
TUKUBASAN	10.82	220.9	2 28K	-7	4 20	-15		
KUMAGAYA	11.22	223.2			4 32	-13		
OIWAKE	11.50	226.4			5 3	12		
MATUSIRO	11.50	228.1	2 38K	-6	4 28	-23		
KOHU	12.03	224.2			4 52	-12		
OSAKA	14.37	229.9						7 12
YAKUTSK	20.56	333.9	4 36	0	8 22	5		
COLLEGE	39.54	36.8	7 26	0				
KHEYS	47.42	346.4						9 54 PP
SHILLONG	49.31	267.0	8 44A	-1				
RESOLUTE	53.64	17.2	9 15A	-2				
NAMANGAN	54.67	295.2	9 25	0				
THULE	56.79	9.8	9 36	-4				
LAHORE	58.14	284.4	9 49	0				
SODANKYLA	59.99	337.8	10 2	0				
SHASTA	62.12	59.3	10 16	-1				
HUNGRY HORSE	62.36	48.3	10 17	-1				
MINERAL	62.82	59.2	10 21	0				
QUETTA	64.02	287.5	10 29	0				
RENO	64.40	59.0	10 42	10				
BUTTE	64.58	49.7	10 33	0				
LICK	64.62	61.9	10 34	1				
BOZEMAN	65.62	49.3	10 41	1				
FRESNO	66.12	61.4	10 43	0				
EUREKA	66.76	57.0	10 47	0				
SALT LAKE C.	68.34	53.7	10 57	0				
BOULDER CITY	69.71	59.3	11 5	0				
TIFLIS	70.37	309.6	11 10	1				
BOULDER	72.53	50.7	11 23	1				
LWOW	74.26	326.5	11 32	0				
TUCSON	74.66	59.8	11 35	1				
TUCSON TELE.	74.67	59.7	11 34	0				

PRUHONICE	77.59	331.8	11	52A	1	12	26
JENA	77.74	333.9	11	52	0		
MUNSTER	78.00	336.7	11	55	2		
BRATISLAVA	78.24	329.3	11	43	-11		
RATHFARNHAM	80.01	345.1	12	2	-2		
STUTTGART	80.38	334.2	12	7A	1		
KEW	80.50	341.0	12	8	1		
TUBINGEN	80.63	334.2	12	7	0		
EBINGEN	80.97	334.1	12	10	1		
PARIS	82.27	338.3	12	18	2		
BYRD STATION	134.00	166.0	19	12	2		
SOUTH POLE	134.57	180.0	19	3	-8	22	37 SKP

NOVEMBER 30 1.H 32.M 48.S EPICENTRE 32.42 142.62 DEPTH= 41.KM

DEPTH OF FOCUS= 0.001R

A=-0.67209 B= 0.51345 C= 0.53354 D= 0.6071 E= 0.7946
G=-0.4240 H= 0.3239 K=-0.8458 HT= 1.0

SE= 2.35

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
HATIDYOZIMA	2.45	286.8	0	40	2	1	6	-1				
TORISIMA	2.77	226.4	0	40	-3	1	12	-4				
MERA	3.41	317.7	0	54	2	1	30	-2				
OSIMA	3.58	311.8	0	50	-4	1	33	-3			3	8
TYOSI	3.61	336.4	0	55	0	1	35	-2				
YOKOHAMA	3.89	321.4	1	2	3	1	49	5			2	44
AJIRO	3.94	312.8	1	3	4	1	42	-3				
TOKYO C.M.O.	4.03	324.5	1	0K	-1	1	45	-2			2	43
MISIMA	4.08	312.4	1	0	-1	1	50	1			1	28
OMAESAKI	4.27	301.8	1	5	1	1	54	1			1	28
KAKIOKA	4.30	332.7	1	7K	2	1	56	2				
TUKUBASAN	4.33	331.9	1	5K	0	2	58	63				
MITO	4.33	336.4	1	5	0	1	53	-2				
SHIZUOKA	4.34	307.0	1	6	1	1	54	-1				
HUNATU	4.44	314.9	1	8	2						1	42
KUMAGAYA	4.59	325.1	1	9A	0	1	58	-3				
TITIBU	4.61	321.4	1	10	1							
KOHU	4.64	314.7	1	10	1	2	3	0				
HAMAMATU	4.69	300.6				2	8	4				
UTUNOMIYA	4.71	331.9	1	10K	0	2	2	-2				
ONAHAMA	4.74	343.1	1	9K	-2	1	59	-6			1	30
MAEBASI	4.94	324.5	1	13K	-1	2	8	-2				
IIDA	5.04	309.1	1	20	5	2	15	2				
SHIRAKAWA	5.09	337.8	1	14	-2	2	9	-5				
OIWAKE	5.15	320.3	1	18	1	2	16	0				
MATUMOTO	5.42	316.1	1	21	1	2	22	0				
NAGOYA	5.45	301.8	1	22	1	2	20	-3				
MATUSIRO	5.49	319.8	1	20K	-1	2	20	-4				
TU	5.59	296.0	1	21	-2							
NAGANO	5.59	320.5	1	24	1	2	26	-1			2	7
HUKUSIMA	5.60	342.3	1	21	-2	2	23	-4				
KAMEYAMA	5.67	297.0	1	28	4	2	28	-1				
GIHU	5.70	303.0	1	25A	1	2	28	-1				
TAKAYAMA	5.80	311.4	1	26	0							
SIOMISAKI	5.85	282.0	1	26	0	2	27	-6				
TAKADA	5.89	323.6	1	29	2							
IBUKISAN	5.97	301.3	1	30	2	2	59	23				
SENDAI	6.00	346.9	1	26K	-2	2	41	4				
HIKONE	6.02	299.9	1	30	1	2	40	3				
ISINOMAKI	6.09	350.3	1	27	-3	2	32	-7			3	1
NARA	6.10	293.5	1	30	0	2	41	2				
YAMAGATA	6.11	342.9	1	27	-3	2	36	-3				
TOYAMA	6.18	315.2	1	29	-2	2	50	9				
NIIGATA	6.22	332.9	1	36	5	2	42	0				
OSAKA	6.33	292.5	1	37	4	2	54	9				
ABUYAMA	6.37	294.5	1	32A	-2	2	43	-3				
HUKUI	6.39	306.3	1	36	2							
WAKAYAMA	6.49	288.2	1	36	1	2	46	-3				
KOBE	6.61	292.0	1	41	4	3	9	17				
AIKAWA	6.63	328.6	1	37	0	2	48	-5				
SUMOTO	6.76	288.7	1	38	-1	2	50	-6			3	46
MIZUSAWA	6.80	350.2	1	40	0	2	51	-6				

WAZIMA	6.82	318.1	1	39	-1						
SAKATA	6.85	341.4	1	39	-1	2	56	-2			
TOKUSIMA	6.94	285.9	1	44	2	3	1	1			
MUROTO	7.15	278.9	1	45	0				4	12	
TOYOOKA	7.18	297.7	1	44	-1	3	11	5			
MIYAKO	7.23	356.0	1	43	-3	2	57	-10			
MORIOKA	7.36	351.2	1	44	-3	3	4	-7			
TAKAMATU	7.42	287.1	1	50	2	3	7	-5			
AKITA	7.57	345.1	1	49	-1	3	12	-4	2	34	
TOTTORI	7.62	296.1	1	56	5	3	20	3			
KOTI	7.72	280.8	1	53	1	3	16	-4			
HATINOHE	8.14	354.1	2	0	2	3	20	-10			
SIMIDU	8.15	275.1	1	57	-1	3	29	-1			
YONAGO	8.27	293.8	1	58	-2	3	31	-2	3	53	
MATUYAMA	8.40	282.3	2	2	0	3	30	-6	3	50	
AOMORI	8.51	350.5	2	5	2	3	35	-4			
SAIGO	8.56	298.7				3	42	2			
HIROSIMA	8.74	285.6	2	6	-1	3	47	2			
HAMADA	9.14	288.6	2	11	-1	3	57	2			
OOITA	9.29	277.9	2	16	2						
HAKODATE	9.47	351.3	2	22	5	4	10	7			
MIYAZAKI	9.51	270.0	2	18	1	4	2	-2			
URAKAWA	9.71	0.7	2	18	-2	4	0	-9			
MORI	9.80	351.0	2	21	0	4	5	-6			
HIROO	9.86	3.0	2	19	-3						
MURORAN	9.98	352.9	2	24	0						
KUMAMOTO	10.06	275.5	2	25	0	4	19	1			
TOMAKOMAI	10.12	355.6	2	44	18	4	13	-6			
KAGOSIMA	10.29	268.5	2	32	4	4	41	18			
HUKUOKA	10.31	279.7	2	28	0	4	30	6			
SAGA	10.40	277.9	2	32	3						
OBIHIRO	10.49	2.3	2	24	-7	4	16	-12			
SUTTSU	10.53	350.3	2	35	4				2	53	
YAKUSIMA	10.54	262.5	2	30	-1	4	24	-5			
KUSIRO	10.64	7.1	2	28	-5	4	22	-9			
SAPPORO	10.68	355.0	2	31	-2	4	25	-8	4	50	
NAGASAKI	10.76	275.1	2	32	-2	4	32	-2			
NEMURO	11.14	11.2	2	38	-1	4	30	-14			
ASAHIGAWA	11.34	359.1							3	27	
ABASHIRI	11.65	5.9	2	44	-2	4	47	-9			
TOMIE	11.70	274.7	2	53	6						
WAKKANAI	13.00	357.1							7	52	
KURILSK	13.43	16.2	3	7	-3						
VLADIVOSTOK	13.63	324.7	3	10	-3	5	42	-1			
Y.-SAKHLINSK	14.51	0.3	3	20	-4						
UGLEGORSK	16.65	358.7	3	54	2	7	4	10			
CHANGCHUN	17.72	315.0	4	3K	-2	7	15	-4			
ZO-SE	18.28	271.6	4	11K	-1	7	31	0			
GUAM	18.96	173.6	4	17	-3						
TAIPEI	19.90	253.7	4	37	7	8	11	4			
NANKING	20.15	275.4	4	23	-10						
HWALIEN	20.31	250.8	4	39	4						
HSINKONG	20.94	249.0	4	41	0	8	24	-3			
ALISHAN	21.18	250.8	4	41	-3						
PEKING	22.60	297.1	4	55	-3	8	55	-3			
PETROPAVLOVS	23.70	24.4	5	10	1	9	25	8			
BAGUIO CITY	25.54	236.7	5	22	-4	9	40	-9			
KOROR	26.09	198.6	5	29	-2						
TRUK	26.27	158.9	5	33	0						
HONG KONG	27.13	255.3	4	35	-66	8	25	-110			
PAOTOW	27.32	296.6	5	42K	-1	10	19	1			6 29 PP
CANTON	27.51	257.7	5	47	3						
SIAN	28.15	283.0	5	49K	-1	10	31	0			
YAKUTSK	30.76	348.1	5	13	0	11	15	3			
CHENGTU	32.84	277.4	6	30K	-2	11	41	-4			
IRKUTSK	34.03	317.1	6	43	1	12	10	7			
PHU-LIEN	34.04	259.2	6	40	-2						
KUNMING	35.63	268.5	6	54	-2	12	21	-7			
RABAUL	37.53	164.2	7	10	-2						
TIKSI	39.96	353.3	7	38	6						
LHASA	43.94	280.6	8	5K	1	14	31	-2			
SHILLONG	44.58	274.8	8	8K	-2	14	36	-6			
CHITTAGONG	45.84	270.6	8	14	-6	14	56	-4			9 55 PCP
CHATRA	48.08	278.4	8	38	1						
MEDAN	50.14	244.5	8	52	-1	16	0	0			
PORT BLAIR	50.14	257.5	8	53	0	15	57	-3			10 39 PP
DJAKARTA	51.31	228.2	8	57	-5	16	12	-5			
COLLEGE	52.51	30.3	9	11	0	16	41	8			21 42

DEHRA DUN	54.41	286.2	9	27	2	16	58	-1						
AGRA	55.58	282.6	9	26K	-7	17	6	-8				11	32	PP
NAMANGAN	56.11	300.4	9	36	-1	17	26	4						
LAHORE	56.98	288.[illegible]	9	42K	-2	17	35.	2						
WARSAK DAM	58.34	292.6	9	53K	0									
KHEYS	58.39	348.2	9	47	-6	17	43	-8						
SVERDLOVSK	59.31	320.7	9	58	-2	18	6	3						
SUVA	60.86	140.4	10	11	1	18	32	9				10	49	PCP
POONA	62.67	275.4	10	22	-1	18	47	1				12	33	PP
BOMBAY	63.37	276.3	10	28	1	18	58	3				14	27	PPP
COLOMBO	63.38	260.9	10	27	0	18	57	2						
QUETTA	63.38	290.2	10	26K	-1	18	58	3				12	42	PP
KODAIKANAL	63.64	265.4	10	30	1							12	51	
KARACHI	65.10	285.8	10	41K	3	19	28	12						
NORD	65.71	356.7	10	42	0									
RIVERVIEW	66.38	172.3	10	48	1	19	36	4						
RESOLUTE	66.82	14.1	10	49K	0	19	42	5				24	24	SS
ADELAIDE	67.09	183.5	10	50A	-1	19	43	2						
APATITY	67.31	336.8	10	52	0	19	49	6						
CANBERRA	67.65	174.4	10	53	-2				11	2				
PERTH	68.85	204.3	11	1	-1	20	6	4				24	35	
VICTORIA	68.92	45.3	11	5K	3									
SODANKYLA	69.60	338.2	11	7	0									
THULE	69.70	7.4	11	5	-2									
MELBOURNE	69.92	178.0	11	8K	-1	20	16	2				11	31	
CORVALLIS	70.72	49.0	11	16	3									
KIRUNA	71.18	340.2	11	16K	0							13	53	PP
MOSCOW	71.57	324.8	11	19	1									
PULKOVO	72.68	330.6	11	25	0	20	52	6						
SHASTA	73.10	52.3	11	29K	1									
UKIAH	73.28	54.1	11	31	2									
TIFLIS	74.48	309.7	11	35	-1	21	12	6						
HUNGRY HORSE	74.50	42.3	11	37	1									
BERKELEY	74.55	54.9	11	37K	1									
HELSINKI	74.58	332.7	11	37	1				11	50				
LICK	75.24	55.1	11	41K	1									
RENO	75.39	52.4	11	42K	1									
KARAPIRO	76.40	153.8	11	46K	-1				12	1				
SKALSTUGAN	76.57	339.5	11	48	0							14	38	PP
BUTTE	76.58	43.8	11	49	1									
SOTCHI	76.75	313.3	11	48	-1	21	37	6						
SCORESBY SD.	76.80	354.7	11	50K	1									
FRESNO	76.80	54.8	11	50K	1									
UPPSALA	77.54	334.9	11	43	-10							14	45	PP
BOZEMAN	77.66	43.5	11	57	3									
EUREKA	77.97	50.9	11	56	1							14	50	PP
COBB RIVER	78.24	157.2	11	58	1									
WELLINGTON	79.10	155.9	12	2	0									
KAIMATA	79.12	158.7	12	6	4									
PASADENA	79.29	56.4	12	3	0	22	5	7				15	3	PP
SIMFEROPOL	79.33	316.7	12	3	0	22	3	4						
SALT LAKE C.	79.92	48.0	12	7	1									
GEBBIES PASS	80.57	158.4	12	12	3									
BOULDER CITY	80.62	53.4	12	11	1							12	50	
KISHINEV	81.05	320.7	12	13	1	22	20	3						
GOTEBORG	81.12	335.6	12	13	1							12	36	
WARSAW	81.48	328.0	12	5	-9									
IASI	81.60	321.4	12	16	1									
LWOW	81.70	324.9	12	16	1	22	32	9						
COPENHAGEN	82.49	334.1	12	19	0									
SIDA	82.91	351.5	12	25K	3									
RAPID CITY	83.10	41.5	12	24	1							14	28	
KRAKOW	83.49	326.9	12	26	1	22	48	6				13	46	
BUCHAREST	84.17	319.9	12	30	2							15	56	
RACIBORZ	84.26	327.7	12	29	1									
BOULDER	84.39	45.6	12	31	2									
KSARA	84.68	306.8	12	32	2	23	6	13				15	54	PP
POTSDAM	84.76	331.7	12	31	0									
TUCSON	85.46	54.6	12	35	1									
TUCSON TELE.	85.48	54.4	12	36	2									
COLLMBERG	85.60	331.0	12	36	1									
HALLE	85.88	331.6	12	36	0							15	56	PP
PRAGUE	85.93	329.5	12	42	5							14	28	
PRUHONICE	85.94	329.4	12	38K	1							15	56	PP
JENA	86.46	331.4	12	39	0	23	25	14				16	0	PP
CHEB	86.79	330.5	12	40	-1							13	31	
WITTEVEEN	86.84	335.0	12	43	2									
BELGRADE	86.89	322.9	12	41K	0	23	14	-1				18	37	PPP
SONNEBERG	87.04	331.3	12	41	-1									

MUNSTER	87.18	334.0	12	43	0				16	10
DURHAM	87.86	340.2	12	46K	0					
DE BILT	87.96	335.3	12	50	3	23	47	22		
BENSBERG	88.16	333.6	12	48	1				16	15 PP
STUTTGART	89.11	331.3	12	52K	0	23	30	-6	16	3 PP
UCCLE	89.32	335.0	12	54	1					
TUBINGEN	89.36	331.2	12	53	0					
TRIESTE	89.55	326.9	12	47	-7	23	23	-17		
EBINGEN	89.67	331.0	12	54	-1					
DOURBES	89.81	334.5	12	53K	-2	22	49	-53		
STRASBOURG	89.84	331.9	12	54	-1	23	40	-2	16	24 PP
HELWAN	90.14	306.0	12	27	-30				23	50 PPS
KEW	90.34	337.9	13	0	2	23	32	-15		
RATHFARNHAM	90.46	341.9	12	57A	-1					
BASLE	90.76	331.4	12	59	-1					
NEUCHATEL	91.44	331.4	13	3	0				16	39
PARIS	91.65	334.9	13	5	1				16	52 PP
ROME	92.99	325.1	13	12A	2	24	22	12	16	55 PP
FAYETTEVILLE	93.56	42.8	13	12	-1					
MONACO	93.87	329.2	13	14	0					
CLERMONT-FD.	93.96	332.9	13	16	2				17	8 PP
OTTAWA	95.09	26.0	13	21	1					
SHAWINIGAN	95.15	23.7	13	21	1					
BREBEUF	95.77	24.7	13	23K	0					
SETIF	100.86	326.0	13	41	-5					
WILKES	101.36	192.7				24	24	1	32	26 SS
ALICANTE	101.66	331.2	13	40	-9	25	11	-12	17	47 PP
TOLEDO	101.72	334.4							18	0
CAPE HALLETT	106.19	171.5	13	12	777	24	52	0	18	32 PP
ASTRIDA	110.65	280.4							19	4 PP
SCOTT BASE	110.97	174.7	18	10	-18				18	15 PP
TAMANRASSET	111.50	317.5	18	33	4				19	2 PP
SOUTH POLE	122.24	180.0	18	50	0				20	21 PP
BYRD STATION	123.06	168.1	18	53	1				20	31 PP
KIMBERLEY	127.02	256.5	19	1	1					
CHINCHINA	128.02	51.5							22	59 SKP
FUQUENE	128.87	49.3	19	6	3				21	14 PP
BOGOTA	129.30	50.3	18	56	-8				22	30 SKP
MBOUR	129.53	334.0							21	15 PP
HALLEY BAY	136.51	183.9	19	16	-1				21	54 PP
HUANCAYO	139.74	68.6	19	20	-3				22	50 PP
LA PAZ	147.98	67.7	19	42K	4				23	42 PKS

NOVEMBER 30 1.H 55.M 40.S EPICENTRE 32.67 142.48 DEPTH= 71.KM

DEPTH OF FOCUS= 0.006R

A=-0.66903 B= 0.51368 C= 0.53716 D= 0.6090 E= 0.7932
G=-0.4261 H= 0.3271 K=-0.8435 HT= 0.9

SE= 2.20

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MERA	3.15	316.2	1	1	13							
TYOSI	3.33	336.5	0	52	1	1	31	1				
YOKOHAMA	3.62	320.3	0	59	4	1	40	3				
AJIRO	3.68	311.1	0	56	0	1	38	0				
TOKYO C.M.O.	3.76	323.8	0	59	2	1	41	1				
MISIMA	3.82	310.8	1	1	3	1	32	-10				
KAKIOKA	4.03	332.5	1	2	1	1	50	3				
OMAESAKI	4.05	299.6				1	38	-11				
TUKUBASAN	4.06	331.6	0	59	-2	1	49	1				
MITO	4.06	336.4	1	0	-1							
SHIZUOKA	4.10	305.2				1	54	6				
HUNATU	4.18	313.6	1	3	0							
KUMAGAYA	4.32	324.4	1	5	1	1	55	1				
TITIBU	4.34	320.5	1	10	5							
KOHU	4.39	313.4	1	7	2	1	57	1				
UTUNOMIYA	4.43	331.6	1	4	-2	1	56	-1				
ONAHAMA	4.47	343.5	1	9	2	1	55	-3				
MAEBASI	4.67	323.8	1	8	-1	2	3	0				
SHIRAKAWA	4.82	337.9	1	10	-1	2	4	-3				
OIWAKE	4.89	319.5	1	15	3	2	11	3				
MATUMOTO	5.17	315.0	1	16	0	2	18	3				
NAGOYA	5.22	300.1									1	46

MATUSIRO	5.23	319.0	1	15K	-2	2	17	0			
NAGANO	5.33	319.7	1	19	1	2	26	7			
HUKUSIMA	5.33	342.6	1	16	-3	2	17	-2			
GIHU	5.47	301.5	1	19	-1	2	23	0			
SENDAI	5.74	347.4	1	21	-3	2	26	-3			
IBUKISAN	5.74	299.8	1	25	1						
HIKONE	5.79	298.3							2	2	
ISINOMAKI	5.83	351.0	1	22	-3						
YAMAGATA	5.84	343.3	1	24	-1	2	32	0			
AIKAWA	6.36	328.3	2	42	69						
MIZUSAWA	6.54	350.7	1	46	11	2	46	-3			
SAKATA	6.58	341.6	1	36	0	2	53	3			
MIYAKO	6.98	356.7	1	37	-4	2	53	-7			
MORIOKA	7.10	351.8	1	40	-3	2	58	-5			
AKITA	7.30	345.4	1	43	-3	2	56	-12			
AOMORI	8.25	351.0				3	31	0			
URAKAWA	9.47	1.3	2	12	-3	3	56	-5			
HIROO	9.62	3.7							3	20	
OBIHIRO	10.25	3.0	2	29	3	4	11	-9			
KUSIRO	10.41	7.8	2	28	0	4	17	-7			
NEMURO	10.92	12.0							3	26	
ASAHIGAWA	11.10	359.6							3	35	
Y.-SAKHLINSK	14.27	0.7	3	9	-10						
KOROR	26.28	198.2	5	30	0						
TRUK	26.54	158.8	5	29	-4						
SHILLONG	44.44	274.4	8	3	-2						
CHITTAGONG	45.72	270.3	8	13	-2						
COLLEGE	52.36	30.4	9	6	-1						
LAHORE	56.79	288.7	9	37	-2	17	30	5			
KHEYS	58.12	348.2	9	42	-6						
WARSAK DAM	58.14	292.4	9	46	-2						
POONA	62.53	275.2	10	17	-1						
QUETTA	63.18	290.0	10	22	-1						
KARACHI	64.92	285.6	10	36	2						
RESOLUTE	66.61	14.1	10	45K	0						
APATITY	67.03	336.8	10	46	-1						
ADELAIDE	67.33	183.4	10	50A	1						
CANBERRA	67.90	174.3	10	54A	1						
SODANKYLA	69.33	338.1	11	1	-1						
THULE	69.47	7.4	11	1	-1						
KIRUNA	70.91	340.1	11	12	1						
PULKOVO	72.40	330.6	11	20	0						
SHASTA	73.05	52.3	11	24	0						
UKIAH	73.23	54.1	11	27	2						
MINERAL	73.74	52.4	11	28	0						
HUNGRY HORSE	74.40	42.3	11	33	1						
BERKELEY	74.50	54.9	11	32	0						
LICK	75.19	55.1	11	36	0						
RENO	75.34	52.4	11	38	1						
BUTTE	76.49	43.8	11	44	0						
SCORESBY SD.	76.54	354.7	11	46	2						
KARAPIRO	76.68	153.7	11	42	-3				11	56	
FRESNO	76.75	54.8	11	46	1						
UPPSALA	77.27	334.9	11	48	0						
EUREKA	77.91	50.8	11	51	0						12 26
PASADENA	79.25	56.4	11	59	0						
SALT LAKE C.	79.84	48.0	12	3	1						
BOULDER CITY	80.56	53.3	12	7	1						
LWOW	81.43	324.8	12	12	2						
RAPID CITY	82.99	41.4	12	19	1						
RACIBORZ	83.99	327.6	12	14	-9						
BOULDER	84.30	45.6	12	27	2						
KSARA	84.44	306.7	12	28	2						
COLLMBERG	85.33	330.9	12	30	0						
TUCSON	85.41	54.5	12	31	1						
TUCSON TELE.	85.43	54.4	12	32	1						
HALLE	85.60	331.5	12	32	1						
ABERDEEN	85.64	341.5							25	20	
PRUHONICE	85.67	329.3	12	34A	2				15	52	PP
JENA	86.19	331.4	12	35	1				13	10	
MUNSTER	86.91	334.0	12	39	1				13	1	
STUTTGART	88.84	331.2	12	48	1						
DOURBES	89.54	334.4	12	22	-28						
PARIS	91.38	334.8	12	57	-2						
TAMANRASSET	111.24	317.5							18	28	PP
SOUTH POLE	122.49	180.0	18	46	-1						
BYRD STATION	123.33	168.1	18	49	0						
LA PAZ	148.00	67.2	19	40K	6						

DECEMBER 1 3.H 21.M 17.S EPICENTRE 32.18-115.82 DEPTH= 0.KM

A=-0.36931 B=-0.76334 C= 0.53002 D=-0.9002 E= 0.4355
G=-0.2308 H=-0.4771 K=-0.8480 HT= 1.1

SE= 2.76

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
EL CENTRO	0.66	20.1	0	14	-3	0	25	-3					
BARRETT	0.88	304.9	0	17	-3	0	29	-4					
PALOMAR	1.46	323.3	0	27	-1								
HAYFIELD	1.53	5.9	0	27	-2								
PASADENA	2.78	315.5	0	45	-2	1	25	3					
BOULDER CITY	3.88	11.9	1	1	-2								
TUCSON	4.23	87.7	1	2	-6	1	45	-14					
TUCSON TELE.	4.32	86.5	1	3	-6								
FRESNO	5.64	325.4	1	25K	-2						1	47	
LICK	7.03	318.7	1	45K	-2								
EUREKA	7.28	359.1	1	48	-3								
BRANNER	7.39	316.7	1	51K	-1								
BERKELEY	7.75	318.8	1	55	-2						3	47	
SAN FRANCSCO	7.79	317.5	1	58	0						4	7	
RENO	8.03	337.3	2	4A	3						4	19	
CHIHUAHUA	9.12	110.3	2	22	6	3	56	-5			2	58	
SALT LAKE C.	9.15	19.3	2	17	0								
UKIAH	9.18	321.1	2	54	37								
MINERAL	9.39	331.8	2	21A	1						3	29	
SHASTA	10.01	330.0	2	31	2						5	15	
CORVALLIS	13.69	336.8	3	22	4								
BOZEMAN	13.97	14.0	3	27	5								
BUTTE	14.05	9.4	3	24	1						3	57	
RAPID CITY	15.46	36.2	3	44	3	6	37	3			4	34	
HUNGRY HORSE	16.21	4.3	3	52	1								
SEATTLE	16.22	344.1	3	56	5						9	27	
MANZANILLO	16.66	138.9									4	19	PPP
VICTORIA	17.30	342.8	4	6	1								
FAYETTEVILLE	18.32	71.8	4	15	-2								
TACUBAYA	19.61	126.5	4	35K	2	8	13	4			4	53	PPP
COLUMBIA	29.12	76.9	6	4	-1								
OTTAWA	33.58	55.1	6	46	2								
SEVEN FALLS	37.18	53.0	7	15	0								
COLLEGE	38.15	338.5	7	23	0								
RESOLUTE	43.82	7.9	8	9	-1								
BOGOTA	47.70	116.2	8	41	0	15	40	3					
THULE	49.43	13.3	8	57	3								
SCORESBY SD.	61.32	22.5	9	48	-32								
LA PAZ	66.55	129.3	10	53	-1								
MATUSIRO	82.73	308.7	12	45	18								
COLLMBERG	85.48	29.4	12	49	8								
CAPE HALLETT	115.63	199.0									22	22	PP
RUMANGABO	135.07	54.0									25	27	
LWIRO	135.36	55.4									25	16	
ASTRIDA	136.25	54.8									25	8	

DECEMBER 2 1.H 12.M 36.S EPICENTRE 44.52 148.81 DEPTH= 93.KM

DEPTH OF FOCUS= 0.009R

A=-0.61202 B= 0.37047 C= 0.69871 D= 0.5178 E= 0.8555
G=-0.5977 H= 0.3618 K=-0.7154 HT= -3.4

SE= 3.29

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KURILSK	0.98	317.1	0	17	-3	0	37	2				
NEMURO	2.62	244.2	0	44	3	1	4	-8				
ABASHIRI	3.29	262.9	0	49	-2							
KUSIRO	3.55	245.9	0	52	-2	1	38	3			2	20
OBIHIRO	4.37	250.5	1	18	13	2	18	22				
ASAHIGAWA	4.69	263.2	1	9	-1							
Y.-SAKHLINSK	4.91	301.8	1	12	-1	2	17	8				

URAKAWA	5.00	243.8	1 8	-6	2 7	-4		
SAPPORO	5.59	257.6	1 25	3				2 46
TOMAKOMAI	5.62	251.7	1 28	5				
MORI	6.48	251.0	1 39	5	3 0	12		
UGLEGORSK	6.50	317.0	1 36	1				
HAKODATE	6.52	248.0	1 43	8	2 43	-6		3 11
HATINOHE	6.69	236.0	1 36	-1	2 39	-14		
AOMORI	6.98	240.8	1 46	5				
ISINOMAKI	8.28	225.3	1 45	-14	3 11	-21		
HUKUSIMA	9.23	225.8	1 58	-14	3 41	-14		
KUMAGAYA	11.02	223.9						3 23
NAGANO	11.24	229.4						3 0
MATUSIRO	11.32	229.0	2 28	-12	4 30	-15		
KOHU	11.84	224.9			4 39	-18		
ABUYAMA	14.01	231.1	3 6A	-9				
MAGADAN	15.11	3.9	3 27	-2				
CHANGCHUN	16.87	275.9	3 49	-2				
PEKING	24.47	270.9	5 11A	0				
ZO-SE	25.47	247.7	5 18	-3				
NANKING	26.49	252.2	5 31	1				
PAOTOW	28.66	275.8	5 49	-1				
ULAN-BATOR	28.94	291.8	5 53	1				
SIAN	32.21	265.3	6 21	0				
LANCHOW	34.96	271.9	6 45A	0	12 20	11		
CHENGTU	37.63	264.0	7 7A	0				
COLLEGE	39.76	36.6	7 23	-2				
KUNMING	41.94	258.1	7 42	-1				
KHEYS	47.66	346.5	8 21	-8				
SHILLONG	49.28	267.2						10 11 PP
FRUNSE	51.93	296.0	9 2A	1				
SVERDLOVSK	53.41	316.8	9 12	0				
RESOLUTE	53.89	17.2	9 14A	-2				19 5 SCS
THULE	57.04	9.8	9 35	-4				10 22 PCP
APATITY	58.17	335.9	9 46	0				
LAHORE	58.18	284.5	9 46	-1				
WARSAK DAM	58.67	288.4	9 49A	-1				
SODANKYLA	60.21	337.8	9 59	-2				
KIRUNA	61.46	340.2	10 8	-1				
HUNGRY HORSE	62.54	48.2	10 14	-2				
MINERAL	62.96	59.1	10 34	15				
BERKELEY	64.04	61.6	10 42	16				
QUETTA	64.08	287.6	10 26A	0				12 49 PP
PULKOVO	64.53	330.5	10 29	0				
MOSCOW	64.54	324.3	10 31	2				
RENO	64.55	58.9	10 44	15				
LICK	64.75	61.8	10 46	15				
BUTTE	64.76	49.6	10 37	6				
SCORESBY SD.	65.12	356.6	10 31	-2				
BOZEMAN	65.80	49.2	10 49	12				
HELSINKI	66.05	333.0	10 39	0				
FRESNO	66.26	61.3	10 56	16				
POONA	66.62	273.4	10 42	-1				
SKALSTUGAN	66.88	340.5	10 44K	0				
EUREKA	66.91	56.9	10 42	-2				
SALT LAKE C.	68.51	53.7	10 48	-6				
UPPSALA	68.57	335.9	10 54A	-1				
PASADENA	68.95	62.5	11 2	5				
BOULDER CITY	69.85	59.2	11 0	-3				
TIFLIS	70.52	309.6	11 9	2				
BARRETT	70.86	62.9	11 2	-7				
RAPID CITY	71.03	46.5	11 6	-4				
GOTEBORG	71.98	337.3	11 15	0				
LWOW	74.45	326.5	11 30	0				
TUCSON	74.81	59.7	11 30	-2				
TUCSON TELE.	74.81	59.6	11 30	-2				
COLLMBERG	77.19	333.3	11 46	1				
HALLE	77.35	334.0	11 44	-2				12 39
WITTEVEEN	77.73	337.6	11 50	2				
PRUHONICE	77.81	331.8	11 49A	0				11 58 PCP
JENA	77.96	333.9	11 49	0				15 2 PP
BENSBERG	79.25	336.5	11 57	0				
STUTTGART	80.59	334.2	12 4	0			12 40	
KEW	80.73	341.0	12 7	3				
TUBINGEN	80.85	334.2	12 6	1				
KSARA	81.08	309.1	12 7	1				
EBINGEN	81.19	334.1	12 8	1				
PARIS	82.49	338.3	12 15	1				12 20 PCP
MORGANTOWN	85.43	35.6	12 40	12				

TAMANRASSET	105.09	325.2								17	59 PP
BYRD STATION	133.76	166.0	19	14	8						
SOUTH POLE	134.32	180.0	19	2	-5						

DECEMBER 3 9.H 48.M 26.S EPICENTRE 19.05 121.14 DEPTH= 0.KM

A=-0.48920 B= 0.80958 C= 0.32443 D= 0.8559 E= 0.5172
G=-0.1678 H= 0.2777 K=-0.9459 HT= 4.9

SE= 2.81

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
BAGUIO CITY	2.67	191.7									0	49 PG
HENGCHUN	2.96	352.9	0	50	1	1	20	-5				
TAWU	3.29	356.1	0	52K	-1	1	24	-10				
KAOHSIUNG	3.64	347.2				1	39	-4				
TAINAN	4.02	347.8	1	35	31	2	9	16				
HSINKONG	4.04	3.0	1	5	1	1	46	-7				
YUSHAN	4.41	357.7	1	8	-1	2	0	-3				
MANILA	4.45	182.0	1	28	18	2	12	8				
ALISHAN	4.46	355.9	1	11	1	2	22	18				
HWALIEN	4.92	5.1	1	18	1	2	3	-12				
TAICHUNG	5.09	355.2	1	18	-1							
ILAN	5.72	5.5	1	31	3	2	35	0				
HSINCHU	5.72	358.4	0	54	-34	1	51	-44				
TAIPEI	5.96	3.3	1	45	14	2	36	-5				
HONG KONG	7.28	297.5	1	47K	-3	3	30	16			3	6
CANTON	8.36	300.0	2	0K	-5	3	40	-1				
ZO-SE	12.00	0.2	2	52	-3	5	10	-1				
WUHAN	12.89	333.7	3	3K	-4							
NANKING	13.12	351.2	3	8K	-2							
PHU-LIEN	13.76	279.7	3	16	-2						3	5E
KAGOSIMA	15.08	32.4	3	43	7	6	40	16				
NAGASAKI	15.72	28.2	3	45	1	6	48	9				
KUMAMOTO	16.17	30.1	3	53	3	7	0	10				
SAGA	16.34	28.3	4	8	16						7	31
HUKUOKA	16.68	28.0	3	46	-10	7	16	14				
KOROR	17.43	130.2	4	2	-4							
KUNMING	18.12	292.5	4	14K	0	7	33	-2				
KOTI	18.19	35.0	4	17	2	7	30	-6				
SIAN	18.64	326.7	4	21K	0							
TOKUSIMA	19.16	36.0	4	29	2							
CHENGTU	19.34	310.0	4	29"	0	8	7	5				
SIOMISAKI	19.40	39.5				8	2	-1				
SUMOTO	19.53	36.0	4	32	1	8	12	6				
KOBE	19.94	35.9	4	31	-5							
OSAKA	20.12	36.6	4	3?	1	8	20	1			7	40
ABUYAMA	20.30	36.2	4	40A	0	8	25	2				
NARA	20.31	37.0	4	42	2							
TU	20.74	38.1	4	46	2							
KAMEYAMA	20.80	37.8	4	47	2	8	36	3				
HIKONE	20.97	36.6	4	48	1							
IBUKISAN	21.13	36.6	4	50	2							
NAGOYA	21.31	37.9	4	52	2							
PEKING	21.34	349.5	4	50K	-1	8	44	1				
GIHU	21.36	37.2	4	51A	0	8	45	1				
HUKUI	21.55	35.1	4	53	0							
IIDA	22.06	38.6	4	57	-1	9	0	3				
MISIMA	22.47	41.0	5	2	0							
TOYAMA	22.54	35.4	4	53	-9	9	11	5				
KOHU	22.58	39.5	5	4	1	9	12	6				
HUNATU	22.61	40.0	5	3	0							
MATUMOTO	22.65	37.4	5	5	1							
LANCHOW	22.82	321.5	5	6K	1	9	14	3				
MATUSIRO	23.00	37.2	5	5	-2	9	13	-1				
NAGANO	23.08	37.0	5	8	0	9	26	11				
YOKOHAMA	23.11	41.3	5	8	0	9	22	6			5	44
TITIBU	23.12	39.5	5	9	1							
YINCHUAN	23.27	329.3	5	14	4							
GUAM	23.32	100.2	5	9	-1							
TOKYO C.M.O.	23.33	41.0	5	15	5	9	46	26				
MAEBASI	23.40	38.7	5	9	-2						5	38
KUMAGAYA	23.41	39.6	5	18	7	9	51	30				
PAOTOW	23.48	338.4	5	12K	0	9	27	5				
UTUNOMIYA	23.97	39.5	5	14	-2							
SINING	24.40	319.8	5	22	1							

SHIRAKAWA	24.56	38.9	5	20	-2	9	36	-5		
WUWEI	24.78	323.2	5	26	2					
CHANGCHUN	24.95	7.2	5	24	-2					
HUKUSIMA	25.13	38.1	5	31	3					
YAMAGATA	25.40	37.1	5	28	-2					
VLADIVOSTOK	25.66	18.4	5	29	-4					
SENDAI	25.73	37.8	5	31	-2	9	58	-3		
MIZUSAWA	26.45	36.6	5	32	-8				8	5
MEDAN	26.80	237.8	5	44	1	10	19	1		
CHITTAGONG	27.61	281.9	5	51	0	10	28	-3	6	38 PP
SHILLONG	27.81	288.8	5	52K	0	10	32	-3		
PORT BLAIR	28.34	259.1	6	40	43	10	17	-26	7	5 PPP
DJAKARTA	28.77	210.7	5	57	-4					
LEMBANG	28.96	208.7	6	1	-2	10	57	4		
LHASA	29.30	296.9	6	7K	1	11	0	1	16	55 SCS
ULAN-BATOR	31.04	341.3	6	21	0					
CHATRA	32.16	290.3	6	31	0	11	43	-1		
BOKARO	33.18	284.6	7	7	27				11	55
IRKUTSK	35.67	342.2	6	59	-2					
PORT MORESBY	38.17	135.6	7	19	-3				8	50 PP
RABAUL	38.30	123.9	7	23	-1					
MADRAS	39.76	267.5	7	36	0	13	38	-3	9	11 PP
AGRA	40.32	289.7	7	38K	-2	13	40	-9	9	18 PP
DEHRA DUN	40.51	294.6	7	46	4	13	47	-5		
COLOMBO	41.88	258.8	7	59	6	14	4	-8		
KODAIKANAL	43.06	264.6				14	29	0		
YAKUTSK	43.35	5.9	8	3	-2	14	23	-11		
LAHORE	43.81	296.0	8	10	1	14	32	-8		
POONA	44.67	277.4	8	16	0				9	58
BOMBAY	45.58	278.1	8	23	0	15	3	-3	10	12 PP
CHARTERS TS.	45.97	146.3	8	26	0					
WARSAK DAM	46.37	299.1	8	30	1					
NAMANGAN	47.37	308.5	8	39	2	15	32	1		
QUETTA	50.10	293.7	8	59	1	16	4	-6		
KARACHI	50.18	288.1	9	0	1					
PERTH	50.96	185.8	9	6	1					
TIKSI	52.78	3.1	9	16	-3					
BRISBANE	55.62	145.3	9	39K	-1	17	1	-24		
ADELAIDE	56.22	162.6	9	44	0					
SVERDLOVSK	58.20	325.7	9	56	-2					
CANBERRA	60.19	153.9	9	36	-36					
NOUMEA	60.42	130.8	10	13	0					
GORIS	66.59	305.5	11	0	6	19	45	0		
SUVA	67.32	119.9	11	15	17	20	39	46		
TIFLIS	67.52	308.1	11	5	5	19	55	-1		
KHEYS	67.77	349.9	10	54	-7					
MOSCOW	70.85	323.5	11	16	-4	20	24	-11		
APATITY	71.70	336.2	11	23	-2	20	39	-6	11	34 PCP
COLLEGE	73.38	26.5	11	32	-3					
PULKOVO	74.16	328.3	11	38	-2	20	59	-14		
SODANKYLA	74.32	336.4	11	40	-1					
SIMFEROPOL	74.73	312.7	11	48	5	21	16	-3		
KSARA	75.83	301.2	11	57	8				14	41 PP
KARAPIRO	76.29	138.6	11	53A	1				12	12
KIRUNA	76.50	337.4	11	52	-1	21	33	-6		
HELSINKI	76.70	329.3	11	53	-1					
KISHINEV	77.85	315.6	11	57	-4					
GEBBIES PASS	78.25	144.6	12	6	3					
LWOW	80.14	319.3	12	12	-1				12	55
UPPSALA	80.30	330.1	12	12	-2	22	10	-9		
HELWAN	80.59	298.3	12	15	0	22	20	-2		
SKALSTUGAN	81.18	334.6	12	11	-6					
TANANARIVE	81.47	246.7	12	21K	1				12	41
KRAKOW	82.56	320.4	12	23	-3				12	32 PCP
RACIBORZ	83.59	320.8	12	32	1					
RESOLUTE	83.72	9.1	12	30A	-2	22	47	-7	28	9 SS
HURBANOVO	84.42	318.8	12	39	4					
THULE	84.56	2.2	12	34	-2				15	47 PP
BRATISLAVA	84.99	319.3	12	39	1					
WILKES	85.38	184.3	12	42A	2	23	18	7	16	4 PP
PRUHONICE	85.79	321.7	12	42	0				16	3 PP
HALLE	86.63	323.7	12	42	-4				13	13
TERRE ADELIE	86.94	172.1	12	46	-2	23	22	-4		
JENA	87.09	323.3	12	55	7				13	40
MIRNY	87.91	190.9	12	52	0				16	19 PP
STUTTGART	89.46	322.1	13	10	10					
DOURBES	91.38	324.8	13	6	-3					
SHASTA	96.30	43.2	13	30	-1					

HUNGRY HORSE	96.82	33.5	13	34	0					
CAPE HALLETT	96.87	166.5	13	37	3				17	34 PP
MINERAL	97.00	43.2	13	34	0					
LICK	98.56	45.8	13	42	1					
RENO	98.59	43.1	13	41	-1					
EUREKA	101.07	41.5	13	53	0				17	2 PP
TAMANRASSET	104.63	300.7	14	17	8	24	50	2	18	22 PP
BYRD STATION	113.60	170.4	18	42	2	25	40	14	19	25 PP
HALLEY BAY	121.02	189.0	18	54	0				22	28 PKS
ST. VINCENT	147.90	4.4	19	47	3					
TRINIDAD	150.35	5.3	19	49	1					
HUANCAYO	162.68	68.7	20	8	5				20	55 PKP2
LA PAZ	170.81	75.4	20	14A	5				25	20 PP

DECEMBER 3 16.H 1.M 1.5 EPICENTRE 28.85 138.10 DEPTH= 545.KM

DEPTH OF FOCUS= 0.081R

A=-0.65299 B= 0.58584 C= 0.47998 D= 0.6678 E= 0.7443
G=-0.3573 H= 0.3205 K=-0.8773 HT= 2.2

SE= 1.97

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	2.51	49.1	1	13	1	2	7	-3				
SIOMISAKI	5.00	337.0	1	28	-2	2	37	-5				
OWASE	5.45	343.1	1	33	-1	2	49	0				
TOKUSIMA	6.01	330.9				3	1	4				
TU	6.02	347.5	1	39	0							
KOTI	6.11	321.3				3	0	1			2	6
SUMOTO	6.14	334.2				3	2	2				
KAMEYAMA	6.14	347.4	1	44	4	3	2	2				
OSAKA	6.19	339.9	2	18	37	3	3	2				
MERA	6.23	13.2	1	39	-2	2	57	-5				
MISIMA	6.30	6.3	1	40	-2	2	48	-15				
NAGOYA	6.38	351.6	1	44	2	3	4	0				
ABUYAMA	6.38	340.9	1	48K	6	3	3	-1				
TAKAMATU	6.46	328.7	1	44	1	3	7	2				
MIYAZAKI	6.53	299.6	1	49	5	3	10	3				
HIKONE	6.59	346.7	1	51	6	3	11	3				
GIHU	6.63	350.5	1	58	13	3	9	1				
HUNATU	6.66	4.7	1	44	-1	3	8	-1				
IBUKISAN	6.68	347.8				3	11	2				
YOKOHAMA	6.69	10.9	1	43	-2	3	6	-3				
KOHU	6.77	3.2	1	49	3	3	17	6				
TOKYO C.M.O.	6.95	11.1	1	46	-2	3	10	-4				
OOITA	7.07	309.8				3	18	2				
KAGOSIMA	7.08	294.4	1	49	0	3	20	4				
TITIBU	7.16	6.4	1	47	-3							
TOYOOKA	7.22	338.2				3	20	1				
HUKUI	7.35	348.3				3	22	1				
KUMAGAYA	7.36	8.1	1	51	-1	3	19	-2				
MATUMOTO	7.38	359.2	1	51	-1	3	20	-2				
OIWAKE	7.47	2.8	1	51	-2	3	22	-1				
KUMAMOTO	7.50	303.7	1	53	0	3	26	2				
KAKIOKA	7.57	12.9	1	51	-3	3	19	-6				
MAEBASI	7.58	5.9	1	55	1	3	22	-3			3	51
MATUSIRO	7.68	0.7	1	53K	-2	3	22	-5				
MITO	7.77	14.3	1	57	1	3	23	-5				
NAGANO	7.80	0.6	1	56	0	3	27	-2				
UTUNOMIYA	7.82	10.5	1	54	-2	3	23	-6				
TOYAMA	7.87	354.7				3	30	0				
HAMADA	7.92	321.2				3	33	2			2	35
SAGA	8.00	305.2	1	59	1	3	35	2				
NAGASAKI	8.06	300.7				3	31	-3				
HUKUOKA	8.09	307.6				3	25	-9				
ONAHAMA	8.41	15.5	2	19	17	3	35	-5				
SHIRAKAWA	8.44	11.6	2	1	-2	3	36	-5				
HUKUSIMA	9.10	12.0	2	9	0	3	49	-4				
YAMAGATA	9.56	10.7				4	0	-1				
SENDAI	9.68	13.2	2	14K	-1	3	57	-6				
ISINOMAKI	9.93	14.8	2	17	-1	4	7	-1				
MIZUSAWA	10.56	13.0	2	26	2	4	21	1				
AKITA	10.97	8.1				3	29	-58				
MORIOKA	11.12	12.4	2	31	1	4	31	1				

MIYAKO	11.24	15.5	2	30	-1	4	31	-1			
HATINOHE	11.99	12.7	2	39	0	4	49	3			
MORI	13.37	8.0				5	16	4			
URAKAWA	13.81	14.7				5	30	10			
TOMAKOMAI	13.93	10.7				5	27	5			
SAPPORO	14.43	9.6				6	3	32			
OBIHIRO	14.63	15.0				5	39	4			
ZO-SE	14.84	282.9	3	7	0	5	38	-1			
KUSIRO	14.99	18.1				5	56	15			
NEMURO	15.65	20.6				6	15	22			
GUAM	16.50	156.6	3	25	1	6	14	6			
NANKING	16.95	285.6	3	28	0	6	19	3			
CHANGCHUN	18.13	329.0	3	41A	2	6	45	9			
WUHAN	20.52	280.5	4	1	-1						
PEKING	21.20	307.5	4	7	-1						
KOROR	21.67	189.8	4	11	-1						
SIAN	25.40	289.7	4	46A	0						
PAOTOW	25.76	304.4	4	39	-10						
CHENGTU	29.59	282.0	5	22	0	9	37	-3			
LANCHOW	29.70	292.9	5	23A	0	9	39	-3			
ULAN-BATOR	30.69	316.9	5	31	-1						
KUNMING	31.73	271.6	5	40	0	10	11	-2			
YAKUTSK	33.64	352.9	5	55	-1						
RABAUL	35.53	155.3	6	11	-1						
SHILLONG	41.05	276.7	6	40A	-17						
TIKSI	43.13	355.7	7	18	4						
LEMBANG	46.05	224.4	7	34K	-2	13	40	-2			
CHARTERS TS.	49.21	169.8	7	59K	-1						8 16
NAMANGAN	54.61	301.7	8	40	1	15	40	3			
WARSAK DAM	56.14	293.4	8	49A	0						
COLLEGE	57.53	29.1	8	57	-2						
QUETTA	60.96	290.4	9	21A	-1						
KHEYS	61.09	348.6	9	17	-6						
ADELAIDE	63.44	179.4	9	38	0						
CANBERRA	64.65	170.1	9	45K	0						11 22
APATITY	69.03	336.6	10	12	0						
RESOLUTE	71.20	13.0	10	25A	0						
SODANKYLA	71.44	337.7	10	26	-1						
KIRUNA	73.18	339.4	10	36A	0						
THULE	73.70	6.3	10	38	-1						
HELSINKI	75.91	331.7	10	51	-1						
SHASTA	78.37	50.0	11	6	1						
SKALSTUGAN	78.49	338.3	11	5A	-1						
UPPSALA	79.06	333.7	11	7A	-2						
MINERAL	79.06	50.0	11	10	1						
HUNGRY HORSE	79.74	40.2	11	14	2				13	9	
BERKELEY	79.79	52.4	11	14	2						
LICK	80.48	52.7	11	17	1						
GOTEBORG	82.69	334.1	11	27A	0						
EUREKA	83.24	48.5	11	31	1				13	28	
PASADENA	84.52	54.0	11	38	2						
RAPID CITY	88.33	39.2	11	57	3						
LARAMIE	88.70	42.5	11	57	1						
TUCSON TELE.	90.73	52.1	12	8	3						
STRASBOURG	91.04	329.6	12	7	0						12 50
RATHFARNHAM	92.53	339.5	11	49	-25						
TAMANRASSET	111.29	313.2	17	35	2						18 24
SOUTH POLE	118.68	180.0	17	46	0						
BYRD STATION	120.36	168.6	17	48	-1						27 59 PKKP
HALLEY BAY	132.65	185.2									20 49 PP
HUANCAYO	144.66	68.7	18	38A	3						

DECEMBER 4 19.H 19.M 26.S EPICENTRE 11.69 -86.39 DEPTH= 70.KM

DEPTH OF FOCUS= 0.006R

A= 0.06168 B=-0.97757 C= 0.20139 D=-0.9980 E=-0.0630
G= 0.0127 H=-0.2010 K=-0.9795 HT= 6.3

SE= 2.31

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
SANTIAGO MA.	2.70	311.5	0	45	2	0	58	-17				
SAN SALVADOR	3.43	306.4	0	49	-4	1	29	-4				
COMITAN	7.18	309.8	2	2	17	3	6	0				
BALBOA HTS.	7.25	111.4	1	46	0	3	17	10				

MERIDA	9.71	341.8	2	16	-3	4	16	8		5	4	
OAXACA	11.36	299.0	2	40	-2					6	16	
VERA CRUZ	11.99	309.7	2	51	1					6	10	
CHINCHINA	12.57	121.2	2	59	1	5	44	27				
FUQUENE	13.96	115.2	3	18	2	6	2	12				
BOGOTA	14.07	119.0	3	21	3	6	9	17		3	53	
TACUBAYA	14.52	303.4	3	24	1	6	15	12		5	14	
SAN JUAN	20.66	68.8	4	36	-1							
COLUMBIA	22.74	11.6	5	2	5							
ST. VINCENT	24.57	83.9	5	8	-7							
FORT FRANCE	24.75	80.2	5	18	1	9	50	19				
FAYETTEVILLE	25.29	345.1	5	21	-1							
HUANCAYO	26.02	154.7	5	29	0	10	2	10				
MORGANTOWN	28.40	10.5	5	51	1							
BERMUDA	28.68	40.7	5	50	-3	10	44	9				
TUCSON TELE.	30.37	316.4	6	9	1							
TUCSON	30.39	316.1	6	10	2							
LA PAZ	33.33	146.8	6	28	-6	11	58	10				
LARAMIE	33.97	333.7	6	39	0							
OTTAWA	34.80	13.2	6	45	-1							
RAPID CITY	35.37	338.9	6	50	-1							
PASADENA	36.58	312.9	7	2	1	12	47	9		9	25	PCP
SHAWINIGAN	36.61	15.8	7	3	1							
SALT LAKE C.	36.61	326.8	6	2	-60					7	1	
SEVEN FALLS	37.67	17.4	7	12	2							
EUREKA	38.11	321.8	6	44	-30				7 14	9	29	PCP
FRESNO	39.05	315.4								8	57	
BOZEMAN	39.85	332.8	7	30	2							
RENO	40.55	319.1	7	35	1							
LICK	40.61	315.0	7	37	2							
BUTTE	40.80	331.9	7	35	-1							
MINERAL	42.14	318.9	7	50	3							
HUNGRY HORSE	43.21	333.1	7	56	0					9	46	PCP
SANTA LUCIA	47.30	162.1				15	40	24				
RESOLUTE	63.15	357.5	10	21	-2	18	50	3		14	41	*PPPP
COLLEGE	67.53	336.1	10	49	-2							
TAMANRASSET	87.28	67.4	12	41	1				13 4	15	55	PP
BYRD STATION	93.17	185.5	13	8	0							
CAPE HALLETT	105.11	198.0								27	46	PPS
MATUSIRO	116.24	320.9								35	55	SS
BRISBANE	122.36	244.9								20	49	
QUETTA	131.09	31.0	19	6	2							
SHILLONG	142.92	2.6	19	11	-15							
CHITTAGONG	146.11	3.0	19	44	12							
LEMBANG	165.35	288.0	19	58K	2							

DECEMBER 6 9.H 33.M 51.5 EPICENTRE 6.53 -82.69 DEPTH= 30.KM

A= 0.12647 B=-0.98551 C= 0.11299 D=-0.9919 E=-0.1273
G= 0.0144 H=-0.1121 K=-0.9936 HT= 6.9

SE= 2.10

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
BALBOA HTS.	3.93	51.9	0	57	-2	1	42	-3					
CHINCHINA	7.20	102.1	1	40	-5	3	16	9					
GALERAZAMBA	8.46	59.6	2	15	12	3	59	21					
BOGOTA	8.78	102.0	2	6	-1	3	46	0					
SANTIAGO MA.	8.96	321.0	2	10	0								
FUQUENE	8.97	96.3	2	12	2	3	54	3					
SAN SALVADOR	9.62	318.5	2	16	-3	4	4	-3					
MERIDA	15.83	335.6	3	39K	-3	6	39	3			7	6	SS
OAXACA	17.27	308.4	4	1	1						7	35	
VERA CRUZ	18.15	315.2	4	12	1	7	37	8					
PUEBLA	19.55	310.9	4	31	4								
HUANCAYO	19.86	158.4	4	30A	-1	8	20	13					
SAN JUAN	19.99	52.4	4	31	-1								
TACUBAYA	20.53	310.1	4	40	2	8	31	10			9	2	
GRENADA	21.39	73.6	4	46	-1								
ST. VINCENT	22.10	71.0	4	53	-1								
ST. CLAUDE	22.62	63.6	5	0	1	9	29	29					
FORT FRANCE	22.66	67.2	5	0	1	9	15	14					
BARBADOS	23.66	72.2	5	4	-5								
GUADALAJARA	24.45	307.1									5	36	
MANZANILLO	24.46	302.6									6	29	

LA PAZ	27.04	148.0	5	41K	0	10	24	9			6	25 PP
COLUMBIA	27.38	3.0	5	43	-1	10	27	7				
BERMUDA	30.71	30.8	6	13	-1	11	5	-8			7	17 PPP
FAYETTEVILLE	31.25	341.9	6	14	-5							
MORGANTOWN	33.04	3.9	6	34	0							
PENNSYLVANIA	34.39	6.5	6	46	0	12	9	-2				
CLEVELAND	34.82	1.5	6	51	1	12	19	2				
TUCSON TELE.	36.62	318.2	7	6	1						8	34 PP
TUCSON	36.64	318.0	7	6	1	12	53	8			9	29 PCP
OTTAWA	39.19	7.8	7	25	-1	13	27	3			8	57 PP
SHAWINIGAN	40.78	10.5	7	39	0							
SANTA LUCIA	41.34	164.7	7	45	1	14	1	5			9	37 PP
HALIFAX	41.44	20.7				14	1	3			17	6 SS
RAPID CITY	41.49	337.6	7	45	0							
BOULDER CITY	41.54	319.4	7	48	2							
SEVEN FALLS	41.70	12.2	7	47	0	14	8	6				
PASADENA	42.77	314.9	7	56	0	14	32	15			8	50
SALT LAKE C.	42.90	327.1	7	58	1						8	32
EUREKA	44.41	322.6	8	9	0							
FRESNO	45.29	317.0	8	15A	-1							
BOZEMAN	46.08	332.5	8	23	1						8	51
RENO	46.82	320.2	8	29A	1							
LICK	46.84	316.6	8	29A	1						10	16 PP
BUTTE	47.05	331.7	8	29	-1						9	18
BERKELEY	47.53	316.9	8	34A	0	15	35	9				
MINERAL	48.41	320.1	8	40A	-1						10	34 PP
UKIAH	48.82	317.8	8	44	0						9	1
SHASTA	49.11	320.0	8	44A	-2							
HUNGRY HORSE	49.44	332.8	8	49	0							
VICTORIA	54.20	327.7	9	24A	0	17	5	7				
HORSESHOE B.	54.65	328.6	9	26A	-2							
ALBERNI	55.39	327.7	9	34A	1							
MBOUR	64.92	77.2				19	30	14			20	46 SCS
RESOLUTE	68.46	356.5	10	58	-3	20	0	1			20	57 SCS
THULE	70.29	3.6	11	11	-1				11	44	13	49 PP
COLLEGE	73.70	336.2	11	30	-2	21	5	6			14	15 PP
SCORESBY SD.	74.36	17.7	11	38	2							
RATHFARNHAM	76.67	36.8	12	9	20						19	35
MALAGA	76.74	53.9	11	51K	1						12	5 PCP
TOLEDO	77.13	50.7	11	54K	2						12	14
GRANADA	77.40	53.5	11	56A	3							
DURHAM	79.57	35.6	12	5K	0							
ALICANTE	79.88	52.3	12	7	0	22	45	38			22	21 SKS
NORD	80.15	7.8	12	9	1							
KEW	80.17	39.0	12	14	6							
PARIS	81.95	41.7	12	19	1						15	24 PP
CLERMONT-FD.	82.44	44.8	12	19	-1							
SETIF	84.65	54.3	12	27	-4						15	46 PP
BENSBERG	84.89	39.4	12	34A	1							
NEUCHATEL	85.03	43.4	12	34	1							
MUNSTER	85.10	38.4									13	52
BASLE	85.41	42.8	12	38	3							
STRASBOURG	85.46	41.8	12	37	2	22	53	-10			28	27 SS
MONACO	85.62	46.6	12	37	1							
TAMANRASSET	85.86	67.7	12	39	2	23	18	11			15	59 PP
EBINGEN	86.29	42.1	12	41	2							
TUBINGEN	86.32	41.7	12	41	1							
STUTTGART	86.38	41.5	12	39	-1	23	9	-3			15	56 PP
SKALSTUGAN	86.41	26.5	12	40A	0							
GOTEBORG	87.02	32.4	12	38	-5							
JENA	87.67	39.2	12	46	0						13	32
HALLE	87.82	38.6	12	40	-7						15	41
PLAUEN	88.08	39.5	12	46	-2							
BYRD STATION	88.43	186.0	12	50	0	23	4	-27				
COLLMBERG	88.50	38.7	12	51	1							
KIRUNA	88.91	21.7	12	54	2							
UPPSALA	89.56	29.8	12	50	-5							
PRUHONICE	89.69	39.8	12	59	3						16	19 PP
TRIESTE	89.86	44.2	12	58	1	23	52	8			13	29
SODANKYLA	91.32	21.4	13	3	0							
BRATISLAVA	91.67	41.3	13	7	2							
SOUTH POLE	96.49	180.0	13	27	0						17	34 PP
CAPE HALLETT	101.33	197.4									24	37 SKKS
KSARA	109.45	50.8	14	16	777	24	53	18			18	48 PP
MATUSIRO	122.53	321.3	18	53A	1						27	40 SKKS
WARSAK DAM	132.88	29.5	19	14	2							
QUETTA	133.30	37.0	19	17	4						22	49 PKS
BOMBAY	145.05	43.2	19	37	3						37	6
POONA	146.01	42.5	19	39	4							

HONG KONG	146.93	330.5	19	44	7							
SHILLONG	147.66	9.2	19	27A	-11							
MANILA	148.52	311.9	19	50	10							
CHITTAGONG	150.79	10.5	19	51	8	26	58	12			24	5 PP

DECEMBER 7 2.H 45.M 51.S EPICENTRE 3.84 126.56 DEPTH= 0.KM

A=-0.59430 B= 0.80148 C= 0.06656 D= 0.8033 E= 0.5956
G=-0.0396 H= 0.0535 K=-0.9978 HT= 7.1

SE= 2.27

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KOROR	8.61	65.9	2	6	-3	3	36	-12				
MANILA	12.00	333.1	2	3	-52							
BAGUIO CITY	13.81	335.2	3	30	10	5	14	-41				
GUAM	20.35	60.8	4	39	-2							
LEMBANG	21.67	240.8	4	55K	1	8	51	1				
HONG KONG	21.93	327.9	4	58	1	8	55	0				
DJAKARTA	22.07	243.3									5	38
CANTON	23.04	327.3	5	9	1	9	15	0				
PORT MORESBY	24.38	122.8	5	20A	-1	9	37	-1			5	53 PP
PHU-LIEN	25.69	312.6	5	44	11							
RABAUL	26.81	107.1	5	42	-2						6	22
ZO-SE	27.58	350.0	5	52	1	10	31	-1				
MEDAN	27.82	270.4	5	53A	0	10	42	7				
WUHAN	28.86	338.2	6	2	0							
NANKING	28.99	346.3	6	5	1							
CHARTERS TS.	30.60	141.5	6	18	0	11	15	-5				
KUNMING	31.16	314.8	6	25	2	11	27	-2				
MATUSIRO	34.27	16.8	6	49A	-1						9	22 PCP
PEKING	37.23	346.8	7	14	-1	12	56	-7				
LANCHOW	38.33	329.7	7	25A	1	13	14	-5				
VLADIVOSTOK	39.40	6.2	7	35	2	13	32	-4				
SHILLONG	39.68	306.4	7	19A	-17	13	18	-22				
CHANGCHUN	39.84	358.6	7	40	3							
ADELAIDE	40.23	164.5	7	41	1	13	45	-3				
BRISBANE	40.27	142.2	7	39	-1	13	42	-7				
LHASA	42.29	311.3	7	59A	2	14	14	-5			17	56 SCS
RIVERVIEW	44.08	150.1	8	13	1	14	43	-2				
CANBERRA	44.29	153.4	8	15A	2						9	56 PP
MELBOURNE	44.85	159.2	8	19A	1							
NOUMEA	46.85	125.5	8	34A	0							
ULAN-BATOR	47.05	342.0	8	37	2							
IRKUTSK	51.68	342.8	9	11	0	16	17	-15				
LAHORE	56.19	305.7	9	42A	-2	17	25	-8			19	28 SCS
YAKUTSK	58.09	1.8	9	57	-1							
MAGADAN	58.62	14.2	10	0	-1							
WARSAK DAM	59.17	307.6	10	3	-2							
KARACHI	60.99	297.4	10	16A	-2	18	32	-3				
COBB RIVER	61.39	141.6	10	19	-1							
KAIMATA	61.44	143.6	10	26	5							
NAMANGAN	61.44	315.2	10	20	-1	18	36	-5				
KARAPIRO	61.49	137.2	10	20K	-1							
QUETTA	61.94	302.2	10	22A	-2	18	40	-7			11	5 PCP
GEBBIES PASS	62.87	144.0	10	30	0							
TUAI	63.04	137.4	10	33	2							
AFIAMALU	63.65	107.5	10	37	2							
TIKSI	67.71	0.8	11	0	-1						23	33 SS
TERRE ADELIE	71.30	173.9	11	19	-4							
MIRNY	74.23	193.3	11	40	-1							
HONOLULU	74.96	69.1	11	46	1							
KIPAPA	75.04	69.0	11	47	2							
CAPE HALLETT	80.96	167.6	12	19	1	22	9	-18				
KHEYS	83.56	350.3	12	27	-4							
COLLEGE	84.68	25.3	12	34	-3						31	47 PKKP
MOSCOW	86.25	325.5	12	44	-1	23	13	-7				
APATITY	87.68	337.4	12	52	0							
KSARA	88.45	303.6	12	55	-1	23	22	-18			16	29 PP
PULKOVO	89.85	329.8	13	0	-2	23	12	-41				
SODANKYLA	90.30	337.6	13	4	0							
HELSINKI	92.44	330.6	13	5	-9							
KIRUNA	92.50	338.6	13	13	-1							
NURMIJARVI	92.52	331.0	13	15	1							
NORD	92.96	354.9	13	16	0							

SOUTH POLE	93.82	180.0	13	20	0	23	51	-37			17	0 PP
CINE	94.37	308.0	12	21	-62							
UPPSALA	96.08	331.3	13	30	-1							
SKALSTUGAN	97.12	335.7	13	34	-2							
RESOLUTE	97.74	10.2	13	38K	0	24	55	-7			24	11 SKS
PRUHONICE	100.99	322.4	13	53	0							
COLLMBERG	101.45	324.0	14	10	15							
SHASTA	103.25	46.8	14	6	3							
MINERAL	103.93	47.0	14	13	7							
LICK	104.78	49.9	14	12	2							
HUNGRY HORSE	106.10	37.2									18	40 PP
HALLEY BAY	106.76	186.8									18	45 PP
BANGUI	107.54	275.8									25	0
EUREKA	108.31	46.3	14	22	777						29	44 PKKP
BAGNERES	112.87	320.2				25	0	-24			25	26
TAMANRASSET	116.69	297.7	18	49	3						19	51 PP
SEVEN FALLS	126.99	14.8	19	5	-1							
SAN JUAN	154.63	29.1	20	19	25						20	43
HUANCAYO	156.86	111.9	20	3	6							

DECEMBER 7 17.H 58.M 12.S EPICENTRE 18.31-105.24 DEPTH= 82.KM

DEPTH OF FOCUS= 0.008R

A=-0.24979 B=-0.91657 C= 0.31227 D=-0.9648 E= 0.2629
G=-0.0821 H=-0.3013 K=-0.9500 HT= 5.1

SE= 2.22

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
MANZANILLO	1.14	49.6									0	16 PG
GUADALAJARA	2.97	37.3	0	44	-2						1	5
TACUBAYA	5.83	78.3	1	20A	-5							
PUEBLA	6.72	82.8									3	22
OAXACA	8.18	97.7	2	2	4						3	45
VERA CRUZ	8.68	82.7	2	6	1							
CHIHUAHUA	10.30	355.9	2	28	1						4	42
TUCSON	14.76	341.1	3	25	0	6	28	21				
TUCSON TELE.	14.82	341.6	3	25	-1							
MERIDA	14.95	77.3	3	33	5	6	18	6			3	43 PP
SAN SALVADOR	16.05	104.2	3	44	2							
BOULDER CITY	19.54	336.2	4	12	-11						4	57
PASADENA	19.55	326.3	4	24	1						5	5
FRESNO	22.41	328.0	4	52A	0							
EUREKA	23.05	338.4	5	1	3							
SALT LAKE C.	23.09	347.1	5	0	1						5	55
LICK	23.80	326.1	5	6A	0							
BERKELEY	24.52	326.1	5	13	0	9	50	26				
RENO	24.63	332.2	5	14	0							
RAPID CITY	25.75	3.4	5	24	0							
UKIAH	25.96	326.7	5	30	4							
MINERAL	26.10	330.7	5	27A	-1							
COLUMBIA	26.67	49.4	5	32	-1	10	8	8				
SHASTA	26.74	330.1	5	31A	-2							
BOZEMAN	27.70	351.2	5	44	2							
BUTTE	28.29	349.2	5	47	-1							
MORGANTOWN	30.49	40.6	6	8	1							
CLEVELAND	30.73	36.3				11	16	11				
HUNGRY HORSE	30.80	348.5	6	10	0						7	26 PP
CHINCHINA	31.83	111.0	5	51	-28	11	8	-14				
WASHINGTON	31.92	44.2	6	19	-1							
PENNSYLVANIA	32.47	40.6	6	24	0	11	47	15				
FUQUENE	33.30	108.6	6	28	-4	11	58	13				
BOGOTA	33.36	110.2	6	34	2	11	57	11			7	36 PP
OTTAWA	36.49	35.7	6	59	0	12	44	10			9	29 PCP
SHAWINIGAN	38.82	36.2	7	18	0							
BERMUDA	39.01	61.0	7	16	-4	13	16	4			8	28 PP
SEVEN FALLS	40.24	36.7	7	32	2	13	40	9			16	40 SS
HUANCAYO	42.20	133.4	7	44	-2	14	11	11			17	52 SCS
HALIFAX	43.48	43.6				14	35	17			17	50 SS
LA PAZ	50.31	131.2	9	48	58	16	2	7	10	4		
COLLEGE	54.47	339.2	9	19	-2						10	3
RESOLUTE	56.67	3.3	9	34	-3	17	28	7			21	22 SS
SANTA LUCIA	61.12	147.2				18	28	9			22	18 SS
THULE	61.13	9.3	10	6	-2							

NORD	71.80	8.9	11	16	1						
RATHFARNHAM	80.74	36.9								14	21
DURHAM	82.85	34.6	12	19A	3						
KEW	84.80	37.4				23	5	19			
KIRUNA	85.49	18.0				23	10	17			
BENSBERG	89.27	35.8								12	58
MATUSIRO	99.01	313.2				23	40	-72		31	58 SS
BRISBANE	108.35	246.4								34	15
RIVERVIEW	111.04	240.1				25	22	26			
QUETTA	131.21	9.0	19	1	-1						
KARACHI	135.49	9.9	19	26	16						
LEMBANG	146.02	285.4	19	30	1						
KODAIKANAL	151.51	354.4	19	34	-4						

DECEMBER 8 12.H 8.M 30.5 EPICENTRE 44.64 149.20 DEPTH= 54.KM

DEPTH OF FOCUS= 0.003R

A=-0.61325 B= 0.36551 C= 0.70024 D= 0.5120 E= 0.8590
G=-0.6015 H= 0.3585 K=-0.7139 HT= -3.4

SE= 2.24

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KURILSK	1.12	302.4	0	21	1	0	35	0				
LESOZAVODSK	1.45	275.9	0	25	0	0	44	1				
SHIKOTAN	1.88	246.7	0	30	-1	0	52	-2				
NEMURO	2.92	244.7	0	43A	-3	1	17	-3				
ABASHIRI	3.59	261.8	0	57	2	1	39	2				
KUSIRO	3.85	246.2	0	59	0	1	41	-2				
OBIHIRO	4.67	250.5	1	11	1	2	11	7			1	28
HIROO	4.89	243.2	1	13A	0	2	5	-4				
ASAHIGAWA	4.99	262.5	1	17	3	2	19	6				
Y.-SAKHLINSK	5.09	299.3	1	16	0							
UEAKAWA	5.30	244.2	1	19	0	2	18	-1				
WAKKANAI	5.39	281.0	1	28	8	2	35	13				
SAPPORO	5.89	257.3	1	29A	2	2	33	-1				
TOMAKOMAI	5.93	251.7	1	30	2	2	27	-8				
MURORAN	6.42	251.8	1	35K	1	2	45	-2			4	25
UGLEGORSK	6.61	314.8	1	39	2	2	56	4				
SUTTSU	6.76	257.3	1	44	5	3	2	6				
MORI	6.78	251.0	1	41	1	2	53	-3				
HAKODATE	6.83	248.2	1	38	-2	2	49	-8			3	12
HATINOHE	6.99	236.7	1	38	-4	2	52	-9				
AOMORI	7.28	241.3	1	48	2	3	4	-5				
MIYAKO	7.33	229.6	1	44	-3	2	59	-11				
SEVERO-KUR.	7.62	35.2	1	52	1							
MORIOKA	7.74	233.2	1	49	-4	3	12	-8				
MIZUSAWA	8.16	230.4	1	54	-5	3	27	-3				
AKITA	8.36	237.1	2	0	-1	3	27	-8			3	58
ISINOMAKI	8.57	226.3	2	0	-4	3	30	-10			2	50
SENDAI	8.90	227.3	2	7	-2	3	37	-12				
SAKATA	9.05	233.9	2	9	-2	3	48	-4				
YAMAGATA	9.21	229.2	2	11	-2	3	47	-9				
HUKUSIMA	9.52	226.7	2	14	-3	3	54	-10				
OKHA	9.82	337.5	2	21	0	4	19	8				
ONAHAMA	9.93	222.2	2	29	6	3	58	-16				
SHIRAKAWA	10.13	225.2	2	26	0	4	8	-11				
NIIGATA	10.17	232.2				4	8	-12				
MITO	10.59	221.8	2	35	3	4	16	-14				
UTUNOMIYA	10.75	224.5				4	20	-14			2	44
KAKIOKA	10.85	222.4	2	32	-3						5	22
TAKADA	11.19	231.5	2	43	3							
MAEBASI	11.27	226.6	2	38	-3	4	36	-10				
KUMAGAYA	11.31	224.8	2	42	0	4	38	-9				
TOKYO C.M.O.	11.50	222.1	2	47	3	4	40	-12				
NAGANO	11.53	230.1	2	49	4						5	16
TITIBU	11.59	225.2				4	36	-18				
MATUSIRO	11.61	229.7	2	41A	-5	4	46	-7			5	11
YOKOHAMA	11.75	221.7				4	49	-9			4	16
WAZIMA	11.78	236.3	2	47	-1							
MATUMOTO	11.97	229.4	2	57	7							
KOHU	12.12	225.7	2	57	5	4	58	-9				
HUNATU	12.12	224.7	3	2	10	5	0	-7				
MISIMA	12.33	223.1	2	57	2	4	59	-13				
VLADIVOSTOK	12.58	269.1	2	58	-1						3	22

IIDA	12.59	227.6				4	56	-22		
GIHU	13.25	230.1	3	4	-3					
NAGOYA	13.31	228.9				5	24	-11		
IBUKISAN	13.48	231.1	3	6	-4					
HIKONE	13.63	231.1	3	11	-1	5	37	-6		
ABUYAMA	14.31	231.7	3	17A	-4					
KOBE	14.66	232.1							6	30
MAGADAN	14.97	3.1	3	31	1	6	21	6		
TOKUSIMA	15.45	231.9	3	38	2					
KOTI	16.42	233.0							4	36
HIROSIMA	16.48	237.3	4	5	16	7	6	16		
CHANGCHUN	17.13	275.7	3	59	2					
PEKING	24.75	270.9	5	18A	0	9	38	4		
ZO-SE	25.78	247.9	5	28A	0	9	55	4		
NANKING	26.79	252.5	5	37A	0	10	10	3		
TIKSI	28.79	346.8							6	51 PP
PAOTOW	28.92	275.8	5	57A	1	10	46	4		
ULAN-BATOR	29.16	291.7	5	58	0					
IRKUTSK	30.32	300.8	6	9	0	11	0	-4	7	12 PP
WUHAN	30.60	254.5	6	11A	0	11	9	1		
SIAN	32.50	265.5	6	28A	0	11	41	3		
LANCHOW	35.24	272.0	6	52A	1	12	23	3		
HONG KONG	36.34	243.8	7	2	1	12	34	-3		
CANTON	36.36	245.7	7	0	-1					
CHENGTU	37.92	264.1	7	15A	1					
MANILA	38.35	227.6	7	18	0					
KOROR	39.32	203.4	7	28	2				7	49
COLLEGE	39.49	36.7	7	27	0	13	24	-1		
KUNMING	42.24	258.3	7	50A	0					
SEMIPALATNSK	45.40	303.0	8	15	0					
LHASA	47.75	272.3	8	36A	2	15	30	5	10	29 PP
SHILLONG	49.56	267.4							10	19 PCP
CHITTAGONG	51.61	264.2	9	4	1	16	23	4	11	4 PP
FRUNSE	52.13	296.1	9	8A	1	16	29	3	18	56 SCS
CHATRA	52.16	272.0	9	6	-1					
SVERDLOVSK	53.51	316.9	9	16	-1					
RESOLUTE	53.69	17.3	9	18A	-1	16	47	0	19	18 SCS
NORD	53.79	357.5	9	16	-3					
PORT MORESBY	53.82	182.5	9	20	0	16	52	3		
TASHKENT	56.31	297.0	9	35	-3	17	25	3		
DEHRA DUN	56.56	281.3	9	40	1	17	23	-2		
THULE	56.87	9.9	9	37	-5					
STALINABAD	58.16	294.5	9	50	-1	17	50	4		
APATITY	58.18	336.0	9	48	-3					
WARSAK DAM	58.90	288.6	9	55A	-1					
SODANKYLA	60.20	337.9	10	2	-3					
KIRUNA	61.44	340.3	10	11	-2					
SHASTA	61.97	59.4	10	16	-1					
MINERAL	62.66	59.3	10	21	0					
LEMBANG	63.41	227.5	10	24A	-2				10	36
BERKELEY	63.74	61.9	10	29	0					
RENO	64.25	59.1	10	31	-1					
QUETTA	64.31	287.8	10	32A	0	19	6	2	12	55 PP
CHARTERS TS.	64.39	183.1	10	32	-1					
LICK	64.45	62.0	10	34	1					
BUTTE	64.47	49.8	10	33	0					
PULKOVO	64.57	330.6	10	32	-2	19	10	2	23	36 SS
MOSCOW	64.60	324.4	10	34	0				19	38 PS
ASHKABAD	65.14	299.4	10	37A	-1	19	20	5		
BOZEMAN	65.51	49.4	10	41	1					
FRESNO	65.96	61.5	10	43	0					
HELSINKI	66.07	333.1	10	2	-42					
EUREKA	66.61	57.2	10	47	0			11 3		
SKALSTUGAN	66.86	340.6	10	47	-2					
POONA	66.89	273.6	11	49	60					
KARACHI	66.97	284.0	10	53A	4					
BOMBAY	67.38	274.6	11	52	60	20	45	63	14	22 PPP
SUVA	67.94	149.9				20	13	24		
SALT LAKE C.	68.21	53.9	10	57	0					
UPPSALA	68.57	336.1	10	57	-2					
PASADENA	68.64	62.8	11	1	1	19	59	2		
BOULDER CITY	69.55	59.4	11	5	0					
TIFLIS	70.65	309.8	11	13	1	20	27	6		
RAPID CITY	70.74	46.7	11	12	0					
GORIS	71.30	307.2	11	17	1	20	34	6		
SIDA	71.46	354.1	11	19	2					
BRISBANE	71.85	176.4	11	21K	2	20	44	10		
GOTEBORG	71.98	337.5	11	19K	-1					

SIMFEROPOL	73.85	318.0	11	31A	0	20	58	1			21	20 SKS
LWOW	74.50	326.7	11	35	0						11	54 PCP
TUCSON	74.50	60.0	11	35	0							
TUCSON TELE.	74.51	59.9	11	34	-1							
IASI	75.12	323.1	11	40	2							
KRAKOW	75.88	329.0	11	43	0						13	3
SKALNATE PL.	76.48	328.3	11	46	0						21	3
RACIBORZ	76.48	330.0	11	45	-1							
COLLMBERG	77.20	333.5	11	50	0							
HALLE	77.36	334.2	11	46	-5							
WITTEVEEN	77.72	337.8	11	54K	1							
PRAGUE	77.79	332.1	11	56	3						12	7 PCP
PRUHONICE	77.83	332.0	11	53	0	21	27	-14				
DURHAM	77.90	343.2	11	54K	0						12	24
BUCHAREST	77.94	322.1	11	55K	1	21	47	5			13	6
JENA	77.97	334.1	11	54	0						12	42
RIVERVIEW	78.12	178.3	12	11	16	21	53	9				
PLAUEN	78.16	333.6	11	58	3							
MUNSTER	78.22	336.9	11	49	-7							
BRATISLAVA	78.48	329.5	11	59	2							
BENSBERG	79.25	336.7	12	2A	1							
CANBERRA	79.58	180.2	12	5K	2				12	19		
ADELAIDE	79.77	188.7	12	7	3							
BELGRADE	79.99	325.7	12	6K	1	22	8	4			12	50
RATHFARNHAM	80.20	345.4	12	6A	0						20	40
SOFIA	80.52	322.7	12	9	1							
STUTTGART	80.61	334.5	12	9A	0						22	24 SCS
KEW	80.71	341.2	12	10A	1							
TUBINGEN	80.86	334.4	12	10	0							
EBINGEN	81.20	334.3	12	13	1							
STRASBOURG	81.21	335.2	12	12	0	22	26	10			12	57
FAYETTEVILLE	81.28	47.1	12	12	0							
TRIESTE	81.83	330.2	12	14	-1						21	38
OTTAWA	81.91	30.2	12	15	0							
SHAWINIGAN	81.93	27.8	12	15	0							
MELBOURNE	82.18	183.4	12	19	2						12	33
BASLE	82.20	334.9	12	18	1							
PARIS	82.48	338.5	12	20	2						12	24 PCP
NEUCHATEL	82.87	335.0	12	21	1							
ATHENS	84.18	319.7	12	26K	-1							
MORGANTOWN	85.17	35.9	12	33K	1							
ROME	85.53	329.1	12	35	1	23	3	4			32	23 SSS
KARAPIRO	85.55	159.4	12	35A	1							
MONACO	85.65	333.3	12	33	-1							
WESTON	86.09	28.9	12	38A	2							
HELWAN	86.73	309.7	12	41	2	23	15	4				
CUGLIERI	88.45	330.9	14	40	112	25	20	113				
ROXBURGH	91.56	166.0				24	4	8				
TOLEDO	92.49	339.7	13	6	-1							
ALICANTE	92.97	336.6	13	8	-1	24	11	3				
ALMERIA	94.93	337.5	13	8A	-10							
TAMANRASSET	105.15	325.5	14	4	0						17	54
LWIRO	112.85	290.7									19	20 PP
BANGUI	114.20	303.9									17	25
HUANCAYO	130.02	63.6	19	7	3						19	21 PKP2
BYRD STATION	133.81	166.0	19	9	-2						22	39 SKP
SOUTH POLE	134.45	180.0	19	10	-2						21	47 PP

DECEMBER 10 3.H 43.M 43.S EPICENTRE 36.35 71.28 DEPTH= 111.KM

DEPTH OF FOCUS= 0.012R

A= 0.25907 B= 0.76464 C= 0.59009 D= 0.9471 E=-0.3209
G= 0.1894 H= 0.5589 K=-0.8073 HT= -0.4

SE= 1.86

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KHOROG	1.16	12.6	0	24	1	0	40	-1				
KULYAB	1.96	322.7	0	33	0	0	56	-2				
WARSAK DAM	2.35	174.6	0	37K	-1	1	2	-5				
NUREK	2.57	323.4	0	45	4	1	13	1				
OBI-GARM	2.66	332.3	0	42	0	1	9	-5				
GARM	2.76	343.9	0	45	1	1	16	-1				
KARA-SU	2.81	319.9	0	44	0	1	16	-2				
DZHERGETAL	2.87	359.0	0	47	2							

MURGAB	2.92	45.5	0	48	2	1	22	1				
STALINABAD	2.97	318.5	0	45	-2	1	15	-7				
ZIMCHURUD	3.12	321.5	0	47	-2	1	21	-4				
FERGANA	4.04	5.4	1	2	1	1	46	-2				
ANDIJAN	4.48	10.6	1	7	0	1	57	-1	2	13		
NAMANGAN	4.63	3.6	1	9	0	1	59	-3				
SAMARKAND	4.75	315.6	1	8	-3							
LUNACHARSKOE	5.20	343.6	1	17	0	2	1	-15	1	29		
TASHKENT	5.20	343.1	1	17	0	2	16	0	1	59		
LAHORE	5.41	151.3	1	20K	0				1	57	*SP	
TCHIMKENT	6.09	348.1	1	28	-1	2	34	-4	2	7		
NARYN	6.27	34.5	1	30	-1	2	38	-4				
FRUNSE	7.00	20.3	1	41	0	2	56	-4	2	11		
RYBACHE	7.13	29.9	1	45	2	3	2	-1	1	59		
QUETTA	7.14	211.8	1	42K	-1	2	59	-4	2	15	*SP	
FABRICHNAYA	7.88	28.4	1	53	0							
ALMATA	8.17	30.5	1	57	0	3	27	-1	3	3		
PRZHEVALSK	8.23	39.8	1	58	0							
DEHRA DUN	8.26	134.8	1	58	0	3	24	-7	2	5	PP	
ALMATA-2	8.35	32.2	1	59	-1	3	30	-3	2	30		
KURMENTY	8.59	36.7	2	1	-2							
ILI	8.79	28.5	2	4	-2							
ASHKABAD	10.45	282.7				4	17	-6				
AGRA	10.83	146.2	2	31A	-2	4	24	-8	3	5		
KARACHI	11.10	200.3	2	46	10	4	51	12	3	18	*SP	
KIZYL-ARVAT	12.19	287.2	2	46	-5	4	54	-11				
SEMIPALATNSK	15.47	22.0				6	28	7				
CHATRA	16.51	120.6	3	40	-6	6	37	-9				
BOMBAY	17.43	175.1	3	58	1	7	17	11	4	12	PP	
BOKARO	17.68	130.9	4	0	0	7	5	-6				
LHASA	17.86	106.3	4	4K	2	7	9	-6				
POONA	17.89	172.1	4	2K	-1	7	31	15	5	2	PPP	
MAKHACH-KALA	19.43	297.2	4	16	-4				4	46	8 17	sS
HYDERABAD	19.88	159.5	4	25	0	7	50	-7				
GORIS	19.92	286.6	4	25	0				4	58		
KIROVOBAD	19.95	290.2	4	25	0				5	8		
SHILLONG	20.63	115.6	4	18K	-14	8	0	-11				
TIFLIS	21.22	292.7	4	40	2				5	14	PP	
SVERDLOVSK	21.71	344.1	4	44	1	8	35	4	5	18	PP	
TOCKLAI	22.14	109.0	4	46	-1							
CHITTAGONG	22.62	122.4	4	52	0	8	56	9	5	23	5 36	PP
MADRAS	24.59	158.8	5	46	35	9	47	26			6 23	PPP
SOTCHI	25.14	296.4	5	18K	2						5 54	
LANCHOW	26.19	80.8	5	27	1							
CHENGTU	27.79	92.2	5	44	4							
ULAN-BATOR	28.58	55.0	5	44	-4							
KSARA	28.98	275.5	5	52	1	10	48	15			6 48	PP
SIMFEROPOL	29.27	298.7	5	54	0						6 35	
MOSCOW	29.92	321.1	5	59	0						6 39	
SIAN	30.67	82.7	6	33	27							
CINE	34.31	285.3	6	35	-3						7 51	
PULKOVO	35.17	324.8	6	44	-1	12	8	-1			7 42	
LWOW	36.44	306.8	6	57	1						7 37	
ATHENS	37.62	287.1	7	7	2				7	45		
HELSINKI	37.83	323.9	7	25	18							
APATITY	37.85	337.4	7	8	1	12	51	1			15 30	SS
NURMIJARVI	38.08	324.3	7	9	0				7	43	8 35	PP
SKALNATE PL.	38.88	305.6	7	18	2						9 2	PP
KRAKOW	39.09	307.0	7	19	1						8 45	PP
SODANKYLA	39.97	335.0	7	25	0	13	29	7	7	56	8 59	PP
RACIBORZ	40.21	307.1	7	29	2						9 6	PP
BRATISLAVA	41.01	304.2	7	34	1						9 15	PP
UPPSALA	41.33	322.0	7	35A	-1						9 17	PP
ZAGREB	42.00	300.8	7	42K	0							
KIRUNA	42.32	334.1	7	44A	0							
PRUHONICE	42.56	307.1	7	48	2						9 25	PP
PRAGUE	42.63	307.2	7	49	2				8	17	9 31	PP
POTSDAM	43.37	310.6	7	54	1						9 34	PP
COLLMBERG	43.47	309.1	7	53	-1						9 38	
TRIESTE	43.57	300.8	7	55	1						9 36	PP
CHEB	43.95	307.4	7	57	0						8 21	
GOTEBORG	44.02	318.4	7	55A	-3						9 43	PP
PLAUEN	44.06	308.0	7	59	1				8	31	9 41	PP
HALLE	44.11	309.4	7	55	-4				8	47	9 38	PP
JENA	44.39	308.6	8	0	-1	14	20	-6	8	39	9 44	PP
SKALSTUGAN	44.46	326.8	8	1A	-1						9 46	PP
KHEYS	44.46	355.3	8	4	2				8	34	9 54	PP
SONNEBERG	44.48	307.9	8	3	0						9 43	PP

PRATO	45.74	298.8	8 11	-1						
TIKSI	45.82	21.9	8 10	-2	13	43	-64	8 34	9 54	PP
STUTTGART	46.17	305.9	8 16K	1				8 53	10 3	PP
TUBINGEN	46.29	305.6	8 17K	1						
EBINGEN	46.41	305.1	8 19	2						
MUNSTER	46.75	310.4	8 25	5						
STRASBOURG	47.13	305.8	8 24	1					10 12	PP
BENSBERG	47.16	309.1	8 24K	1					9 15	
WITTEVEEN	47.23	31'.7	8 24	1						
BASLE	47.44	304.4	8 26	1						
NEUCHATEL	47.97	303.8	8 29	0						
MONACO	48.37	299.5	8 33	1						
MANILA	49.22	102.8	9 7	28						
PARIS	50.52	307.0	8 50K	1				9 28	10 45	PP
KEW	51.70	310.9	7 59A	-59						
DURHAM	51.77	315.2	8 57K	-1	16	9	-1		10 48	PP
SETIF	52.13	290.7	9 0	-1					9 17	
MATUSIRO	52.80	68.5	9 4K	-2					9 35	
NORD	53.99	349.5	9 13A	-2						
RUMANGABO	54.08	235.6	9 16	1					9 59	
ASTRIDA	54.76	234.2	9 21	1						
LWIRO	55.12	235.4	9 23	0						
ALICANTE	55.72	295.3	9 21	-6						
UVIRA	55.82	234.1	9 26	-2				9 52		
SCORESBY SD.	57.29	336.5	9 39	1						
TOLEDO	57.71	298.3	9 43	2						
ALMERIA	57.75	294.4	9 38	-4					11 40	PP
TAMANRASSET	57.79	275.9	9 40	-2					11 51	PP
BANGUI	57.79	249.6	9 41	-1	17	28	-3		11 56	PP
SIDA	57.81	328.3	9 44	2						
THULE	64.65	350.2	10 25	-3					12 49	PP
RESOLUTE	68.87	356.1	10 53A	-2	19	51	3		27 47	
COLLEGE	74.57	16.2	11 27	-1						
PIETERMZBURG	76.04	216.0	11 37	0						
KIMBERLEY	78.14	220.6	11 49	1						
GRAHAMSTOWN	80.92	216.6	12 3	0						
PORT MORESBY	84.33	105.9	12 51	30						
CHARTERS TS.	90.23	114.7	12 48	-1					13 19	
SEVEN FALLS	90.23	335.2	12 53	4						
SHAWINIGAN	91.38	336.1	12 55	1						
HORSESHOE B.	93.67	9.5	13 4	-1						
HUNGRY HORSE	95.55	3.6	13 14	1					17 3	PP
EUREKA	104.25	5.8	13 55	2					17 12	PP
TUCSON TELE.	111.64	1.8	17 53	-28					19 5	PP
TUCSON	111.73	1.9							18 58	PP
SOUTH POLE	126.16	180.0	18 48	-1				19 23	32 14	SKKP
BYRD STATION	136.00	177.3	19 1	-7					22 28	SKP
HUANCAYO	141.43	300.3	19 17	-1						

DECEMBER 10 7.H 3.M 1.S EPICENTRE -36.92 177.02 DEPTH= 274.KM

DEPTH OF FOCUS= 0.038R

A=-0.80031 B= 0.04169 C=-0.59813 D= 0.0520 E= 0.9986
G= 0.5973 H=-0.0311 K=-0.8014 HT= -0.6

SE= 1.75

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
KARAPIRO	1.55	229.5	0 44	2					
AUCKLAND	1.78	271.0	0 44	0	1 17	0		37 59	SCS
TUAI	1.88	176.9	0 46	2	1 17	-2		14 30	SCS
ONERAHI	2.43	297.5	0 52	3	1 35	8			
TONGARIRO	2.56	206.9	0 50A	-1					
WELLINGTON	4.69	201.2	1 13A	-1	2 11	0		14 28	SCS
COBB RIVER	5.33	217.5	1 19	-3	2 23	-2		14 28	SCS
KAIMATA	7.06	215.9	1 41	-2	2 59	-4		11 30	PCS
GEBBIES PASS	7.55	204.9	1 47	-2	3 8	-6			
ROXBURGH	10.38	211.5	2 21A	-3	4 7	-11		7 47	PCP
NOUMEA	17.21	325.0	3 46A	1	6 53	7		5 32	
SUVA	18.74	4.2	3 59	-2	7 14	-1		15 5	SCS
RIVERVIEW	21.30	270.6	4 31	5	8 9	8			
MACQUARIE I.	21.53	209.5	4 41	13			5 21	8 33	SS
BRISBANE	22.33	288.0	4 39	3	8 26	7			
CANBERRA	22.66	265.6	4 42A	3	8 47	23	5 35	6 10	PPP
FORT NELSON	23.46	246.0	4 49	2	8 41	3			

AFIAMALU	25.02	26.5	4	58A	-3					9	16	PCP
MELBOURNE	25.42	258.2	5	6A	1	9	15	5	6 6	10	2	
ADELAIDE	30.94	262.1	5	55A	1	10	39	2		7	13	PP
CHARTERS TS.	31.67	293.7	6	0	0	10	44	-5				
CAPE HALLETT	35.62	183.5	6	37K	3	11	58	9		7	33	PP
TERRE ADELIE	36.18	203.0	6	40	1					16	18	SCS
PORT MORESBY	38.48	307.8	6	59A	1	12	34	1	8 1	8	34	PP
RABAUL	39.75	319.1	7	8	0	12	52	1	8 19	9	9	PCP
SCOTT BASE	41.27	183.3	7	23K	2	13	19	5	8 20	9	13	PCP
WILKES	47.44	210.3	8	8A	-1	14	35	-7	9 5	16	19	*SS
BYRD STATION	49.35	168.1	8	23K	-1	15	14	6	9 27	10	22	PP
PERTH	49.96	256.6	8	29	0	15	18	1		11	18	
TRUK	50.06	326.6	8	27K	-2				9 9	17	50	SCS
SOUTH POLE	53.26	180.0	8	54A	1	16	4	2	9 56	18	7	SCS
MIRNY	54.44	209.3	9	0	-1				10 0	11	5	PP
GUAM	58.61	322.5	9	30A	-1	17	8	-4	10 43	18	54	*SS
KOROR	59.34	308.8	9	34A	-2	17	23	2	10 15	13	45	SCP
HAWAII V.OB.	61.85	29.9	9	55	2							
HONOLULU	62.49	26.3	9	54K	-3	19	0	59	11 5	10	34	PCP
LEMBANG	69.47	277.0	10	39	-2	19	23	-2				
DJAKARTA	70.49	277.1	10	45A	-2	19	33	-4				
MANILA	73.51	303.1	11	5	0	20	11	0				
BAGUIO CITY	75.10	304.2	11	12	-2	20	26	-2				
OMAESAKI	79.80	328.3	11	41	1							
SIOMISAKI	79.89	325.9	11	39	-1							
MISIMA	79.94	329.1	11	40A	0					14	48	PP
SHIZUOKA	80.04	328.6	11	40	-1							
OWASE	80.22	326.6	11	42	0							
HUNATU	80.34	329.2	11	43	1							
KAKIOKA	80.41	330.6	11	43	0							
KOHU	80.54	329.1	11	44	1					14	49	PP
SIMIDU	80.62	323.6	11	44	0	21	7	-20				
TITIBU	80.63	329.6	11	45	1							
TU	80.64	327.2	11	41	-3							
KUMAGAYA	80.66	329.9	11	47	3							
MIYAZAKI	80.67	322.0	11	40	-4	21	26	-1				
IIDA	80.75	328.5	11	45	0							
KAMEYAMA	80.76	327.2	11	47	2							
UTUNOMIYA	80.81	330.5	11	47	2					14	53	PP
NAGOYA	80.81	327.7	11	46	1							
KAGOSIMA	80.82	321.2	11	45A	0					13	29	
NARA	80.89	326.7	11	47	2							
TOKUSIMA	80.94	325.4	11	47	1							
KOTI	80.99	324.4	11	47K	1	21	31	1		14	56	PP
MAEBASI	81.00	329.8	11	47	1							
SUMOTO	81.04	325.8	11	47	1					12	28	
GIHU	81.10	327.7	11	47	1							
SHIRAKAWA	81.17	331.0	11	48	1							
ABUYAMA	81.17	326.6	11	45A	-2							
KOBE	81.18	326.2	11	48	1							
HIKONE	81.21	327.3	11	50	3							
IBUKISAN	81.25	327.4	11	48	1							
MATUMOTO	81.32	329.0	11	48	0					14	59	PP
TAKAMATU	81.39	325.2	11	49	1							
MATUSIRO	81.47	329.3	11	46A	-2					14	57	PP
NAGANO	81.58	329.4	11	49	0					15	33	
HUKUSIMA	81.62	331.5	11	50	1							
OOITA	81.64	322.9	11	47A	-2							
KUMAMOTO	81.75	322.0	11	51	1					20	37	
ISINOMAKI	81.90	332.4	11	51	0							
SENDAI	81.92	332.1	11	49	-2					14	54	PP
TOYOOKA	82.06	326.4	11	52	1							
NAGASAKI	82.09	321.4	11	53	1	21	37	-4				
YAMAGATA	82.11	331.7	11	54	2							
HIROSIMA	82.18	324.1	11	51A	-1					14	3	
SAGA	82.30	322.0	11	58	5							
MIZUSAWA	82.59	332.6	11	54	0					15	43	
MEDAN	82.84	279.9	11	55K	0					15	7	PP
HONG KONG	83.51	304.0	11	59A	0	21	56	0	13 10	15	7	PP
CANTON	84.64	304.0	12	5A	1	22	9	2	13 15	15	29	PP
NEMURO	84.84	337.5	12	5	0							
HAKODATE	85.06	333.6	12	6	0							
OBIHIRO	85.22	335.8	12	9	2							
MURORAN	85.46	334.0	12	5	-3							
ZO-SE	85.49	314.6	12	8A	-1	22	14	-1	13 18	15	36	PP
SANTA LUCIA	85.78	129.1	12	10	0	22	6	-12		13	22	*SP
SAPPORO	85.98	334.6	12	11A	0					14	44	
ASAHIGAWA	86.26	335.6	12	14	2							

NANKING	87.56	313.7	12	19A	0	22	37	3	13	28	28	29 SS
PHU-LIEN	87.68	298.1	12	19	0							
Y.-SAKHLINSK	88.98	337.3	12	25	0							
WUHAN	89.00	310.1	12	24A	-1	22	49	1	13	33	14	4 *SP
VLADIVOSTOK	89.62	328.7	12	27	-1	22	27	-26			16	5 PP
PETROPAVLOVK	91.09	349.1	12	32	-3	22	33	-33	13	45	16	14 PP
LA PLATA	92.16	137.7				23	19	3			22	39 SKKS
PORT BLAIR	92.42	282.7									22	40
PASADENA	92.94	48.7	12	42A	-2	23	30	8	14	0	16	30 PP
CHANGCHUN	93.06	325.3	12	44A	0	23	28	5			14	22 *SP
LICK	93.15	44.5	12	43A	-2				13	59		
BERKELEY	93.18	43.7	12	43A	-2	23	29	5	13	59	16	23 PP
KUNMING	93.19	299.0	12	45A	0	23	29	5	13	57	16	33 PP
UKIAH	93.56	42.3	12	46A	0						16	37 PP
FRESNO	93.79	45.9	12	48	1							
GUADALAJARA	94.32	67.5				23	5	-29				
PEKING	94.79	317.7	12	51A	-1	23	38	0	14	2	16	42 PP
SIAN	95.02	309.5	12	54A	1	23	46	6				
SHASTA	95.13	41.7	12	51A	-3							
MINERAL	95.30	42.4	12	54A	0				14	9		
RENO	95.71	43.9	12	55A	-1						16	53
BOULDER CITY	96.20	49.2	12	59A	1						16	55 PP
TUCSON	96.29	54.2	12	58A	-1	24	2	11	14	13	16	54 PP
TUCSON TELE.	96.42	54.2	12	59A	0	24	3	11			16	55 PP
HUANCAYO	96.53	110.2	13	3A	3	23	12	3	14	14	17	2 PP
TACUBAYA	96.64	70.9	13	5K	5	23	10	0			17	1 PP
OAXACA	97.09	74.2				23	23	11				
CHIHUAHUA	97.21	59.7									15	59
EUREKA	97.85	46.0	13	5A	-1				14	8	17	13 PP
MAGADAN	98.54	346.8	13	6	-3	23	15	-4	14	16		
PAOTOW	98.57	314.8	13	9A	0	24	15	5			17	13 PP
VERA CRUZ	98.86	72.7				23	31	10			16	2
LA PAZ	98.88	118.2	13	13A	2	23	19	-2	14	21	17	20 PP
LANCHOW	99.38	308.2	13	13A	0	24	23	6			17	15 PP
CHITTAGONG	99.45	290.7	13	1	-12							
COLOMBO	99.81	271.3				24	34	14			16	49
SALT LAKE C.	101.08	47.1	13	21	0						17	32 PKP
SHILLONG	101.28	293.4	13	5	-16						17	11 PP
MADRAS	103.10	276.5									17	44
KODAIKANAL	103.67	272.6									17	54
BUTTE	103.99	42.6	13	33K	0						17	47 PP
LHASA	104.20	296.4	13	35A	1	24	57	0	14	47		
BOZEMAN	104.61	43.5	13	37K	1						17	56 PP
HUNGRY HORSE	104.69	40.1	13	38	2	24	29	-32			17	50 PKP
BOKARO	104.83	288.7	13	37	0						18	0 PP
MERIDA	104.86	74.9				24	32	-30			21	8
ULAN-BATOR	105.03	319.1	13	37	777							
COLLEGE	105.13	14.8	13	35A	777	23	39	-11			17	49 PP
CHATRA	105.46	292.0	13	39	777							
BALBOA HTS.	106.04	90.8									24	45 SKKS
HERMANUS	106.07	199.0	19	8	777	23	53	-1			24	42 SKKS
TANANARIVE	106.82	229.8									18	5 PP
CHINCHINA	106.84	96.5	13	17	777	25	56	-2			17	23 PP
HYDERABAD	106.98	279.2				25	18	20			16	51
BOGOTA	107.86	97.8	17	56	777	24	1	-2			24	56 SKKS
RAPID CITY	108.19	48.3	13	53	777						17	56 PKP
FUQUENE	108.64	97.3	18	5	777	24	37	31				
IRKUTSK	108.99	321.6	13	53A	777	23	59	8			18	21 PP
KIMBERLEY	109.66	205.7	12	59A	777							
FAYETTEVILLE	109.70	59.3	13	59	777						18	16
LITTLE ROCK	110.30	61.4				24	8	-4			18	34 PP
POONA	111.23	277.6									17	18
BOMBAY	112.25	277.4									17	19
AGRA	112.52	287.7	14	9	777						15	22
TIKSI	113.44	345.1	14	12	777						32	59 SS
ST. LOUIS 1	113.71	58.7	18	5	-1	24	18	-8			19	7 PP
DEHRA DUN	114.11	290.7									19	6
LAHORE	117.50	290.1	18	13	-1							
WINDHOEK	117.87	201.0	18	15	1							
COLUMBIA	118.09	67.1	18	14K	-1						19	35 PP
KARACHI	120.39	280.9	18	19	0							
CHAPEL HILL	120.40	66.0	18	19	0						18	52
WARSAK DAM	120.70	291.4	18	15	-5							
CLEVELAND	120.95	59.2	18	18K	-2						19	55 PP
MORGANTOWN	121.30	61.7	18	20K	-1				19	55		
GRENADA	122.06	99.3	18	20	-2							
SAN JUAN	122.09	90.4	18	21	-1				19	36		
FRUNSE	122.17	302.0	18	20	-3						20	1 PP
QUETTA	122.50	285.3	18	22	-1	25	4	7	19	40	19	59 PP

GEORGETOWN	123.06	63.6	18	18	-6					20	5 PP
WASHINGTON	123.06	63.6	17	59	-25				19 47		
ST. VINCENT	123.07	98.6	18	23	-1						
PENNSYLVANIA	123.23	61.2	18	25	0					20	11 PP
FORT FRANCE	124.06	97.1	18	26	0					26	44
BARBADOS	124.37	99.8	18	34	7						
STALINABAD	124.61	295.2	18	27	0					20	8 PP
RESOLUTE	124.71	18.9	18	24A	-4	24	57	-6		20	15 PP
TASHKENT	125.26	298.5	18	26	-3					20	19 PP
FORDHAM	126.06	62.5	18	38	8					37	18
OTTAWA	126.30	56.6	18	16	-15	28	14	186	19 43	20	29 PP
WESTON	128.38	61.5	18	34A	-1						
SHAWINIGAN	128.60	56.0	18	19	-16				19 50	20	45 PP
BERMUDA	129.81	75.9	18	31	-6					20	47 PP
UVIRA	129.91	223.8	18	36	-1					21	30 SKP
SEVEN FALLS	130.04	55.7	18	20	-18				19 54	20	53 PP
ASTRIDA	130.29	225.1	18	30	-8					21	30 SKP
LWIRO	131.10	224.3	18	30	-10					22	11
THULE	131.32	16.6	18	25	-15					21	1 PP
RUMANGABO	131.55	225.6	18	28	-13					22	3 PKS
KHEYS	131.97	348.9	19	12	31					24	15 PPP
ASHKABAD	132.08	290.8	18	36	-6				19 54	22	7 PKS
SVERDLOVSK	134.06	316.7	18	42	-3				20 2	38	29 SS
HALIFAX	134.39	60.5	18	46K	0				20 2	21	22 PP
NORD	134.92	2.8	18	27	-20					21	21 PP
GORIS	141.55	289.3	18	53	-6					40	11 SS
BANGUI	142.03	216.6	18	56	-4					22	2 PP
COLLMBURG	161.67	326.7	19	26	-2				20 14	23	55 PP
TIFLIS	143.10	292.6	18	59A	-3					22	12 PP
APATITY	143.13	337.7	18	57	-5	25	36	-6		22	8 PP
SCORESBY SD.	144.89	11.0	19	2	-3				20 14	20	31 *SPKP
SODANKYLA	145.20	340.4	19	3	-3						
KIRUNA	146.36	344.2	19	5	-2				20 21	22	31 PP
MOSCOW	146.86	317.7	19	2	-6				20 21	22	34 PKS
KSARA	148.31	276.1	19	10	0	25	39	-11	20 30	22	52 PP
PULKOVO	148.74	327.6	19	8	-3	25	43	-7	20 24	22	41 PP
AKUREYRI	149.87	12.4	19	19	6						
REYKJAVIK	150.47	16.8	19	17	3						
NURMIJARVI	150.58	332.1	19	12	-2						
HELWAN	150.61	266.3	19	12	-2					22	56 PP
HELSINKI	150.68	331.4	19	3	-11						
SIMFEROPOL	151.05	297.8	19	13	-1				20 33	23	1 PP
SIDA	151.60	14.1	19	16	1						
VIK	151.72	15.2	19	23	8						
SKALSTUGAN	151.74	345.6	19	15	0					19	30 PKP2
UPPSALA	153.51	336.5	19	16	-2					23	4 PP
MBOUR	154.31	147.3	19	21A	2					23	21 PP
ISTANBUL UN.	154.89	289.3	19	29	9					23	30 PP
IASI	155.25	304.1	19	29	9					20	5
CINE	155.31	281.0	19	18A	-2					19	49 PKP2
BACAU	155.84	302.9								19	51
LWOW	156.66	312.1	19	20	-2					23	31 PP
BUCHAREST	156.79	297.9	19	21K	-1				19 56	22	5
GOTEBORG	156.97	339.2	19	21	-2					19	54 PKP2
WARSAW	157.21	319.8	19	19A	-4					27	5 PPP
CAMPULUNG	157.39	300.4	19	23	0				19 59	20	28
COPENHAGEN	158.51	335.7	19	23A	-2					23	40 PP
ATHENS	158.79	280.9	19	23K	-2				20 3		
KRAKOW	158.93	315.7	19	24	-1					20	4 PKP2
SOFIA	159.02	294.1	19	25	0	26	13	11		23	44 PP
SKALNATE PL.	159.16	313.3	20	5	40					23	43 PP
ABERDEEN	159.73	358.6								22	34
TIMISOARA	159.86	303.5	19	41	15						
RACIBORZ	159.86	317.4	19	26	0					23	48 PP
BUDAPEST	160.62	309.9								20	12 PKP2
BELGRADE	160.65	301.3	19	26A	-1					23	58 PP
POTSDAM	160.85	328.9	19	25	-2				20 10	23	53 PP
HURBANOVO	160.97	311.7	19	26	-1					20	18 PKP2
BRATISLAVA	161.48	313.7	19	26	-2				20 32	23	56 PP
COLLMBERG	161.67	326.7	19	26	-2	30	12	248	20 14	23	55 PP
PRUHONICE	161.83	321.4	19	25A	-3				20 50	23	58 PP
PRAGUE	161.83	321.8	19	27K	-1					23	59 PP
VIENNA-H.	161.86	314.7	19	28	0	26	45	41	20 37	23	43 PP
PONTA DELGDA	161.93	80.6	19	31K	3					24	5 PP
HALLE	161.97	328.6	19	20	-8					24	15 PP
DURHAM	162.12	357.4	19	29K	1				21 3	23	51 PP
JENA	162.55	328.0	19	26	-3				20 19	24	1 PP
PLAUEN	162.62	326.1	19	25	-4				20 16	21	4 *SPKP

WITTEVEEN	162.72	340.0	20	21K	52					24 3	PP
CHEB	162.81	324.7	19	32	3					24 2	PP
SONNEBERG	163.12	327.3						20	23	22 33	PP
MUNSTER	163.19	336.8								24 6	
ZAGREB	163.25	308.0	19	27A	-2					24 8	PP
RATHFARNHAM	163.46	7.0	19	29K	-1			20	22	24 6	PP
DE BILT	163.76	341.7	19	28A	-2					24 7	PP
TAMANRASSET	164.11	209.9	19	30A	0			20	46	24 14	PP
BENSBERG	164.20	335.8	19	29	-1					20 27	PKP2
TRIESTE	164.72	310.0	19	27A	-4	26	29 23	20	52	24 15	PP
REGGIO CALA.	165.16	280.2	19	32	1					24 21	
STUTTGART	165.19	326.9	19	29	-2			20	29	24 18	PP
MESSINA	165.24	280.6	19	29K	-2			20	31	39 16	PPS
KEW	165.33	353.4	19	30A	-1			20	51	24 15	PP
TUBINGEN	165.43	326.5	19	29	-3			20	30	24 20	PP
EBINGEN	165.73	325.8	19	29	-3			20	35	24 21	PP
STRASBOURG	165.94	329.3	19	31	-1					24 25	PP
CHUR	166.41	320.8	19	31A	-1						
BASLE	166.84	326.9	19	32	-1					31 32	
ROME	167.05	297.3	19	29	-4					25 39	
PRATO	167.22	307.3	19	37	4					24 36	PP
PARIS	167.46	343.1	19	30A	-3			20	42	24 29	PP
PAVIA	167.67	315.8	19	32A	-1			20	42	24 35	PP
MONACO	169.55	313.8	19	34	0			20	51	24 42	PP
CLERMONT-FD.	170.04	334.5	19	34	-1			20	53	24 50	PP
SETIF	173.22	266.4	19	37K	1			20	57	24 57	PP
SERRA PILAR	173.94	44.4	19	34A	-2	26	7 -4			25 2	PP
LISBON	174.80	68.0	19	38A	1			21	30	25 7	PP
ALGIERS UNI.	175.16	270.0	19	37	0			20	53	25 6	PP
RELIZANE	176.92	248.8	19	41A	4			20	59	25 17	PP
TOLEDO	176.93	15.5	19	38A	1	25	55 -16	20	50	25 8	PP
ALICANTE	177.56	306.4	19	35	-2	26	33 22			25 19	PP
MALAGA	178.84	99.6	19	36A	-1	26	26 15			25 24	PP
GRANADA	179.44	62.3	19	40A	3	25	52 -19			25 25	PP
ALMERIA	179.58	260.2	19	37A	0	26	3 -8	20	53	25 26	PP

DECEMBER 10 14.H 39.M 10.5 EPICENTRE 5.19 125.81 DEPTH= 260.KM

DEPTH OF FOCUS= 0.036R

A=-0.58279 B= 0.80764 C= 0.08982 D= 0.8109 E= 0.5852
G=-0.0526 H= 0.0728 K=-0.9960 HT= 7.0

SE= 1.71

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
KOROR	8.87	75.7	2	0	-5	3	37	-6					
MANILA	10.48	333.3	2	30	5	4	7	-12					
BAGUIO CITY	12.29	335.7	2	50	2								
GUAM	20.40	64.9	4	17	-1				4	56			
HONG KONG	20.40	327.6	4	30	12	7	55	9					
CANTON	21.51	327.0	4	29	0	8	11	5					
LEMBANG	21.73	236.9	4	31	0	8	17	7					
DJAKARTA	22.06	239.4	4	30A	-4								
PORT MORESBY	25.73	124.2	5	7A	-1	9	22	6	5	48	6	17	*S°
TRUK	25.97	83.6	5	10	0								
MEDAN	27.10	267.7	5	20A	-1						5	39	
NANKING	27.52	347.0	5	24	0								
RABAUL	27.93	109.0	5	30	2				6	16			
KUNMING	29.71	314.0	5	43	-1	10	24	4			12	7	SCP
CHARTERS TS.	32.11	141.8	6	5	0	11	4	7					
CHENGTU	32.60	323.6	6	8	-1	11	5	0			12	15	SCP
SIAN	32.89	333.7	6	10A	-1								
MATUSIRO	33.22	18.4	6	14K	0	11	13	-1			7	29	PP
PEKING	35.76	347.3	6	35	-1	11	57	4			9	0	PCP
TOCKLAI	36.56	309.3				12	13	8					
CHITTAGONG	37.02	300.7	6	45A	-1	12	15	3	7	29	8	16	PP
PAOTOW	37.98	340.3	6	55	1								
SHILLONG	38.30	305.5	6	39A	-18	12	18	-13					
CHANGCHUN	38.49	359.4	6	59	1								
LHASA	40.85	310.6	7	19	1	13	15	6			12	48	SCP
ADELAIDE	41.71	164.0	7	26	1	13	29	7					
BRISBANE	41.78	142.4	7	26	1	13	27	4					
CHATRA	42.66	304.6	7	30	-2								
CANBERRA	45.81	153.3	7	59A	2				9	0	9	33	
MELBOURNE	46.36	159.0	7	58A	-4								

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NOUMEA	48.24	126.0	8	18	2					9	42 PCP
POONA	52.37	289.3	8	46	-1						
LAHORE	54.81	305.2	9	4	-1						
WARSAK DAM	57.77	307.1	9	27	1						
KARACHI	59.72	296.8	9	37A	-2	17	33	5	10 24		
QUETTA	60.60	301.7	9	44A	-1	17	45	6	10 34	19	2 SCS
KARAPIRO	62.98	137.4	10	2A	1					10	39
WELLINGTON	64.29	140.9	10	10	1						
GEBBIES PASS	64.39	144.1	10	10	0						
TANANARIVE	80.63	249.9	11	44A	-1				12 32		
COLLEGE	83.79	25.4	12	2	1				12 50	22	4
SCOTT BASE	85.89	172.0	12	13	1						
APATITY	86.16	337.4	12	13	0						
KSARA	87.09	303.5	12	19	2						
SODANKYLA	88.78	337.5	12	24	-1				13 18	16	9 PP
HELSINKI	90.91	330.6	12	24	-11						
KIRUNA	90.98	338.5	12	35	0						
NURMIJARVI	90.99	331.0	12	34	-1						
NORD	91.57	354.9	12	39A	1						
UPPSALA	94.55	331.2	12	52K	0						
SOUTH POLE	95.15	180.0	12	56	1	23	6	-37		16	44 PP
SKALSTUGAN	95.60	335.7	12	56	-1						
RESOLUTE	96.55	10.1	13	2A	1	23	20	-35		30	54 SS
THULE	98.10	3.3	13	8	0						
BYRD STATION	99.26	170.8	13	14	1					17	1 PP
SHASTA	102.87	46.4	13	32	3						
HUNGRY HORSE	105.48	36.8								19	38
EUREKA	107.91	45.8	13	56	777					29	14 PKKP
RATHFARNHAM	109.20	331.9								14	59
RAPID CITY	114.11	36.6								28	59 PKKP
TUCSON	114.60	51.1								28	58 PKKP
TUCSON TELE.	114.65	51.0								28	57 PKKP
TAMANRASSET	115.41	298.1	18	16	6					19	14 PP
SEVEN FALLS	125.88	14.0	18	34K	3					20	38 PP
SHAWINIGAN	125.91	15.8	18	36	5						
OTTAWA	126.08	18.7	18	34	3						
HUANCAYO	158.02	109.5	19	32	7					20	8
LA PAZ	162.30	130.5	19	43	14						

DECEMBER 10 21.H 49.M 24.5 EPICENTRE 24.70-109.03 DEPTH= 0.KM

A=-0.29653 B=-0.85988 C= 0.41554 D=-0.9454 E= 0.3260
G=-0.1355 H=-0.3928 K=-0.9096 HT= 3.4

SE= 3.04

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
MAZATLAN	2.84	121.7	0	46	-1								
CHIHUAHUA	4.72	33.3	1	16	2								
GUADALAJARA	6.62	126.1									3	26	S*
TUCSON	7.69	348.5	1	53	-3								
TUCSON TELE.	7.76	349.3	1	53	-4								
TACUBAYA	10.53	118.1	2	38	3						5	4	SS
BOULDER CITY	12.30	337.4	3	2	3						3	48	
PASADENA	12.33	321.9	3	0	0								
VERA CRUZ	13.16	112.1	3	10	-1	5	46	7			6	50	
FRESNO	15.17	325.0	3	37A	0								
EUREKA	15.86	340.0	3	49	3	7	15	32					
SALT LAKE C.	16.20	352.3	3	54	4								
LICK	16.58	322.4	3	58A	3								
LARAMIE	16.81	9.0	4	1	3								
FAYETTEVILLE	17.09	44.9	3	59	-3								
BERKELEY	17.30	322.5	4	4A	0	7	26	10					
RENO	17.37	331.0	4	7	2								
COMITAN	17.91	114.8	4	36	24						3	36	
MERIDA	18.27	97.9	4	13	-3	7	42	4			4	36	
UKIAH	18.73	323.6	4	22	0								
MINERAL	18.83	329.0	4	24A	1								
SHASTA	19.48	328.2	4	29A	-2								
RAPID CITY	19.91	12.4	4	39	3	7	39	-36					
BOZEMAN	20.99	356.0	4	49	2								
BUTTE	21.46	353.2	4	53	1								
HUNGRY HORSE	23.93	351.8	5	17	1								
SEATTLE	25.21	338.6	5	30	1								
COLUMBIA	26.04	62.7	5	40	4								

VICTORIA	26.34	338.1	5	41	2	10	18	7		
HORSESHOE B.	27.04	339.3	5	45	-1					
SASKATOON	27.45	3.2				10	36	7		
CHAPEL HILL	28.09	59.5	5	56	1					
CLEVELAND	28.30	47.0				10	46	3		
MORGANTOWN	28.61	51.6	5	56	-4					
WASHINGTON	30.45	54.6	5	58	-18	10	52	-25		
PENNSYLVANIA	30.53	50.6				11	54	36		
FORDHAM	33.39	52.5				12	11	8		
OTTAWA	33.85	44.0	6	48A	2	12	26	16	8 0	PP
GALERAZAMBA	34.89	107.3	6	46	-9					
SHAWINIGAN	36.20	43.7	7	4	-2				8 25	PP
CHINCHINA	37.60	116.0	7	6	-12	13	4	-4		
SEVEN FALLS	37.65	43.7	7	28	10	13	23	14	17 30	SCS
FUQUENE	38.89	113.6	7	36	7	13	40	12		
BOGOTA	39.07	115.0	7	35	5	13	38	8		
BERMUDA	39.48	68.5				13	51	14	9 1	PP
SAN JUAN	40.28	90.4	7	38	-2					
HALIFAX	41.69	49.9				14	15	5	17 14	SS
FORT FRANCE	45.95	93.2							18 40	SS
COLLEGE	47.28	338.6	8	35	-2				10 16	PCP
HUANCAYO	49.15	134.2	8	53	2	16	24	27		
RESOLUTE	50.57	4.8	9	1	-1	16	14	-2	10 28	PCP
LA PAZ	57.16	131.6	10	4	13	17	54	9		
SCORESBY SD.	65.99	21.6	10	48	-2					
NORD	66.08	9.2	10	49	-2					
KHEYS	74.96	3.3	11	40	-5					
TIKSI	76.06	343.9	11	48	-3					
DURHAM	79.59	34.2	13	42K	92					
KIRUNA	80.50	17.3	12	16	1	22	26	4	26 29	
YAKUTSK	81.73	336.0	12	19	-3					
KEW	81.85	36.8							27 48	SS
SODANKYLA	82.45	15.8	12	26	1					
APATITY	83.88	13.6							28 36.	
PARIS	84.76	38.1	12	33	-4					
UPPSALA	85.15	24.0	12	48	9					
TOLEDO	85.15	48.2	12	39	0					
MBOUR	85.93	76.1				23	27	11	29 12	SS
MALAGA	86.40	51.2	12	46A	1					
GRANADA	86.74	50.5	13	4K	17					
HELSINKI	87.48	21.1	12	26	-25					
ALICANTE	88.32	48.2	12	50	-5	23	33	-6		
PULKOVO	89.47	19.2	13	10	10					
MATUSIRO	92.11	312.0	13	11	-1				23 48	
TRIESTE	92.82	36.2	13	7	-9				25 22	
TAMANRASSET	100.88	58.7							23 48	
PORT MORESBY	106.37	267.0				24	58	1	34 4	SS
CAPE HALLETT	110.52	198.8							42 6	SSS

DECEMBER 11 15.H 33.M 26.S EPICENTRE 30.20 140.56 DEPTH= 0.KM

A=-0.66865 B= 0.54994 C= 0.50047 D= 0.6352 E= 0.7723
G=-0.3865 H= 0.3179 K=-0.8658 HT= 1.8

SE= 3.91

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	0.36	320.9	0	8	-4	0	9	-11				
HATIDYOZIMA	2.96	348.0	1	6	16	1	37	11				
OSIMA	4.67	347.9	1	17	3							
MERA	4.75	352.7	1	13	-2	1	59	-13				
OMAESAKI	4.82	336.3	1	22	6						3	34
MISIMA	5.09	344.9	1	19	-1						2	37
SHIZUOKA	5.10	339.6	1	28	8							
SIOMISAKI	5.21	309.7									2	3
YOKOHAMA	5.27	351.9	1	25	3	2	16	-9			3	43
HUNATU	5.50	344.5	1	29	3							
TOKYO C.M.O.	5.51	353.1	1	26	0	2	17	-14				
KOHU	5.67	343.3	1	28	0	2	36	1				
IIDA	5.78	337.3	1	33	3							
NAGOYA	5.81	329.5	1	43	13							
TITIBU	5.90	348.2	1	32	1							
KUMAGAYA	6.02	350.8	1	31	-2	2	49	6				
KAKIOKA	6.02	357.0	1	32	-1	2	25	-19				
GIHU	6.09	329.4	1	43	9							

MITO	6.17	359.3	1	42	7						
HIKONE	6.23	325.4	1	46	10						
IBUKISAN	6.25	326.8	1	44	8						
ABUYAMA	6.28	319.1	1	26A	-11	2	29	-21			
MAEBASI	6.31	349.0	1	36	-1	2	50	-1	2	12	
OIWAKE	6.34	345.1	1	36	-1						
SUMOTO	6.35	312.2	1	56	18	3	15	23	2	19	
UTUNOMIYA	6.36	354.9				2	35	-17	1	44	
KOBE	6.38	315.9				3	4	12	4	17	
MATUMOTO	6.41	340.9	1	40	2	3	22	29			
MATUSIRO	6.63	343.4	1	38A	-4	2	52	-7	3	54	
ONAHAMA	6.74	2.3				2	36	-26	3	19	
NAGANO	6.75	343.6	1	50	7						
KOTI	6.85	301.0				3	32	28	4	33	
HUKUSIMA	7.53	359.4	1	44	-10	3	11	-10			
SENDAI	8.06	1.9	2	16	14	3	21	-13			
ISINOMAKI	8.23	4.1	2	1	-3	3	32	-7			
VLADIVOSTOK	14.64	334.1	3	28	-3						
GUAM	17.09	166.0	4	11	9						
CHANGCHUN	18.22	322.5	4	14	-2						
NANKING	18.72	281.2	4	20	-3	7	47	-2			
PEKING	22.17	302.8	4	56	-4	8	54	-6			
WUHAN	22.43	277.5	5	2	0	9	4	0			
KOROR	23.46	195.3	5	16	4						
HONG KONG	24.90	257.9				10	2	14			
TRUK	24.97	152.6	5	31	4						
YAKUTSK	32.61	350.5	6	30	-6						
TIKSI	41.97	354.5	7	50	-5						
CHITTAGONG	44.13	271.8	8	9	-3						
LEMBANG	48.52	226.1	8	46K	-1						
CHARTERS TS.	50.22	173.0	9	1	1						
COLLEGE	55.31	29.5	9	36	-2						
KHEYS	60.20	348.4	9	58	-15						
QUETTA	62.50	290.5	10	24	-4						
APATITY	68.65	336.8	10	9	-9						
RESOLUTE	69.39	13.5	11	8K	--						
SODANKYLA	71.00	338.0	11	17	-5						
THULE	72.11	6.9	11	24	-5						
KIRUNA	72.66	339.9	11	28	-4						
HELSINKI	75.73	332.3							12	16	
SHASTA	75.86	51.1	11	51	1						
MINERAL	76.55	51.1	11	54	0						
BERKELEY	77.27	53.6	11	58	0						
HUNGRY HORSE	77.33	41.2	11	58	-1						
LICK	77.96	53.8	12	2	0						
RENO	78.15	51.2	12	3	0						
BUTTE	79.40	42.7	12	8	-2						
EUREKA	80.74	49.7	12	17	0						
RAPID CITY	85.92	40.4	12	43	-1						
SOUTH POLE	120.03	180.0	18	53	0						
BYRD STATION	121.25	168.4	18	55	-1						

DECEMBER 11 18.H 38.M 14.S EPICENTRE 30.25 140.44 DEPTH= 0.KM

A=-0.66716 B= 0.55108 C= 0.50121 D= 0.6368 E= 0.7710
G=-0.3864 H= 0.3192 K=-0.8653 HT= 1.7

SE= 3.60

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
TORISIMA	0.26	331.9	0	7	-3	0	8	-9				
HATIDYOZIMA	2.89	349.7	0	56	8	1	30	6				
OSIMA	4.60	349.0	1	9	-3							
MERA	4.69	353.8	1	10	-3	1	56	-13				
OMAESAKI	4.73	337.2	1	26	12	2	34	24			2	58
AJIRO	4.92	347.0				2	5	-10				
SHIZUOKA	5.01	340.4	1	23	5	2	22	5				
MISIMA	5.02	345.9	1	17	-1	2	13	-5				
SIOMISAKI	5.10	310.0	1	18	-1	2	13	-7				
YOKOHAMA	5.21	352.9	1	26	5	2	17	-5			2	48
OWASE	5.24	317.7	1	15	-6							
HUNATU	5.42	345.4	1	22	-2						2	59
TOKYO C.M.O.	5.45	354.0	1	31	7	2	26	-2				
TU	5.56	324.5	1	27	1							
KOHU	5.59	344.1	1	25	-1	2	37	5				

KAMEYAMA	5.68	324.9	1 40	13	2 48	14
IIDA	5.70	338.0	1 31	4		
NAGOYA	5.71	330.1	1 37	9	2 46	11
TITIBU	5.83	349.1	1 33	4		
NAHA	5.89	319.8	1 19	-11		
KUMAGAYA	5.95	351.7	1 29	-2	2 38	-3
KAKIOKA	5.97	358.0	1 25	-6	2 40	-1
GIHU	6.00	329.9	1 38	6		
MITO	6.12	0.2	1 31	-2		
HIKONE	6.13	325.9	1 50	16		
IBUKISAN	6.15	327.3	1 47	13		
ABUYAMA	6.18	319.5	1 34K	0		
SUMOTO	6.24	312.4	1 30	-5	2 29 -19	2 1
MAEBASI	6.24	349.8	1 36	1	3 2 14	2 8
TOKUSIMA	6.26	309.0	1 38	3		
KOBE	6.27	316.2				3 7 S*
OIWAKE	6.27	345.9	1 54	18		
UTUNOMIYA	6.30	355.8	1 45	9		2 36
MATUMOTO	6.33	341.6	1 36	0	2 58 8	
MATUSIRO	6.55	344.1	1 36A	-4	2 49 -7	
NAGANO	6.67	344.3	1 44	3		
ONAHAMA	6.70	3.1			2 43 -17	3 6
KOTI	6.74	301.0			3 0 -1	
TAKAMATU	6.77	308.5	1 44	1	3 19 18	
SHIRAKAWA	6.86	358.5	1 54	10	2 49 -15	
SIMIDU	6.86	293.5			1 42 -87	
TOYAMA	6.98	338.0	1 52	6		
HUKUSIMA	7.48	0.7	1 47	-6		
MIYAZAKI	7.92	284.4			3 39 9	
SENDAI	8.01	2.6	2 1	1	3 18 -14	
ISINOMAKI	8.19	4.8	1 55	-8	3 20 -17	
HAMADA	8.45	305.5	3 34	98	5 14 91	
KAGOSIMA	8.60	281.3	2 20	12		4 58
HUKUOKA	9.14	293.9				2 48 o*
NEMURO	13.69	16.0			5 28 -23	
VLADIVOSTOK	14.55	334.3	3 31	2		
ZO-SE	16.60	277.8	3 55	0		
GUAM	17.16	165.7	4 8	6		
CHANGCHUN	18.12	322.6	4 15	1	7 43 9	
NANKING	18.61	281.1	4 19A	-1	7 52 6	
PEKING	22.06	302.8	4 55	-3	8 56 -1	
WUHAN	22.32	277.3	5 0	0	9 6 4	
KOROR	23.48	195.0	5 15	3		
MANILA	23.75	233.2	5 16	2		
HONG KONG	24.81	257.6			10 0 15	
TRUK	25.06	152.4	5 29	2		
PAOTOW	26.73	301.0	5 43	1		
MAGADAN	30.13	10.5				12 50 SS
LANCHOW	31.08	290.6	6 18	-4		
RABAUL	36.04	159.8	7 5	0		
PORT MORESBY	39.94	169.7	7 39	2	13 46 3	
SHILLONG	42.92	276.1	7 42A	-20		
CHITTAGONG	44.02	271.7	8 1	-10		
CHATRA	46.58	279.6	8 29	-7		
LEMBANG	48.48	226.0	8 46K	0		9 6
CHARTERS TS.	50.28	172.9	8 59K	-1		
COLLEGE	55.32	29.5	9 36	-1		
WARSAK DAM	57.46	293.2	9 48	-5		
NOUMEA	57.92	151.4	9 58	2		
KHEYS	60.13	348.4	9 58	-13		
QUETTA	62.38	290.4	10 27	1		
ADELAIDE	64.85	181.6	10 44	1		
APATITY	68.56	336.8	11 5	-1		
RESOLUTE	69.37	13.5	11 7K	-4		
SODANKYLA	70.92	338.0	11 15	-6		
THULE	72.08	6.9	11 23	-4		
MOSCOW	72.26	324.6	11 34	5		
KIRUNA	72.58	339.9	11 27	-3		
HELSINKI	75.64	332.2	11 15	-33		
SHASTA	75.91	51.1	11 49	-1		
MINERAL	76.60	51.1	11 53	-1		
BERKELEY	77.33	53.6	11 56	-2		
HUNGRY HORSE	77.36	41.2	11 57	-1		
LICK	78.01	53.8	12 1	0		
RENO	78.20	51.1	12 2	0		
FRESNO	79.57	53.6	12 11	1		
EUREKA	80.79	49.7	12 16	0		
PASADENA	82.05	55.2	12 23	0		
KSARA	84.46	305.9	12 34	-1		

RAPID CITY	85.95	40.3	12 42	-1				
LARAMIE	86.29	43.6	12 43	-1				
COLLMBERG	86.57	330.0	12 41	-5				
PRUHONICE	86.83	328.4	12 44	-3			13 22	
TUCSON TELE.	88.26	53.3	12 54	0				
SOUTH POLE	120.08	180.0	18 51	-1			20 27	PP
BYRD STATION	121.32	168.4	18 54	-1			19 8	
HUANCAYO	142.26	69.1	19 31	-3				
LA PAZ	150.52	68.8	19 57	9				

DECEMBER 13 9.H 7.M 34.5 EPICENTRE -56.63 -23.54 DEPTH= 0.KM

A= 0.50657 B=-0.22070 C=-0.83347 D=-0.3994 E=-0.9168
G=-0.7641 H= 0.3329 K=-0.5526 HT= -7.8

SE= 1.58

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
SOUTH POLE	33.54	180.0	6 43	-1				9 23	PCP
HERMANUS	36.46	70.9						12 59	PCS
GRAHAMSTOWN	41.20	77.2	7 33	-15					
KIMBERLEY	43.83	71.3	8 11A	1					
WINDHOEK	45.12	58.2	8 22	2					
SCOTT BASE	45.62	183.0	8 24	0				8 50	
MIRNY	48.32	151.4	8 44	-2					
CAPE HALLETT	50.99	185.4	9 6K	0				11 1	PP
LA PAZ	52.21	301.5	9 14	-1	16 38	-2		9 46	
HUANCAYO	59.52	296.9	10 8K	0					
TANANARIVE	64.02	85.0	10 41	3				13 10	
LWIRO	68.29	58.4	11 7	2					
ASTRIDA	68.43	59.4	11 8	2				13 39	
RUMANGABO	69.35	58.4	11 14	2					
BANGUI	69.81	45.5	11 13	-2					
BOGOTA	73.53	306.6	11 37	0	21 9	2			
CHINCHINA	74.54	305.4	11 40	-3					
GRENADA	75.41	321.3	11 47	-1					
COBB RIVER	81.69	192.4	12 25	3					
SAN JUAN	82.81	319.6	12 25	-3					
TAMANRASSET	82.83	26.9	12 29K	1				15 34	PP
TONGARIRO	83.17	194.8	12 29	-1					
KARAPIRO	84.43	195.0	12 35K	-1					
ONERAHI	86.71	194.5	12 48	1					
ADELAIDE	87.56	165.5	12 52K	0					
CANBERRA	88.19	173.9	12 55K	0					
CHARTERS TS.	103.17	170.2						18 16	PP
TUBINGEN	108.26	22.2						24 21	
STUTTGART	108.51	22.2						24 0	
TUCSON	114.86	291.1	18 43	0					
TUCSON TELE.	114.88	291.3	18 44	1				19 43	PP
QUETTA	114.90	72.7	18 45	2					
PASADENA	120.18	287.0	18 53	-1					
RAPID CITY	120.42	304.7	18 52	-2					
UPPSALA	120.63	22.7	18 53	-1					
HELSINKI	122.60	26.4	19 9	11					
FRESNO	123.03	287.8	19 0	1					
EUREKA	123.09	292.6	18 59	0				20 36	PP
LICK	124.43	286.9	19 3	1					
RENO	125.11	290.0	19 4	1					
BERKELEY	125.15	286.9	19 3	0					
BUTTE	126.25	300.2	19 6	1					
MINERAL	126.64	289.4	19 6	0					
LHASA	127.60	92.2	19 10	2					
KIRUNA	128.33	19.6	19 8	-1					
HUNGRY HORSE	128.61	301.4	19 8	-2					
SODANKYLA	129.17	22.5	19 9	-2					
KUNMING	130.32	106.3	19 14	1					
CANTON	134.10	118.7	19 23	3					
RESOLUTE	139.16	337.3	19 19	-10					
NANKING	144.25	117.4	19 37K	-1					
ZO-SE	144.62	121.2	19 39K	0					
PEKING	149.05	105.1	20 1	15					
ULAN-BATOR	149.07	85.0	19 51	5					
COLLEGE	152.44	310.3	19 47	-4					
MATUSIRO	156.46	140.9	20 7	10				20 27	
CHANGCHUN	156.55	109.8	20 27	30					

DECEMBER 14 7.H 11.M 30.S EPICENTRE -34.87-108.75 DEPTH= 0.KM

A=-0.26438 B=-0.77964 C=-0.56905 D=-0.9469 E= 0.3215
G= 0.1830 H= 0.5388 K=-0.8223 HT= 0.2

SE= 1.66

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SANTA LUCIA	31.42	98.4	6	20	-2	11	3	-25			7	25	PP
HUANCAYO	37.87	61.4	7	20A	2	13	19	11			9	3	PPP
LA PAZ	40.59	73.7	7	42	2	13	56	7			9	18	PP
BYRD STATION	45.47	182.6	8	19	-1	15	9	9					
CHINCHINA	50.43	45.0	8	55	-4	16	14	4					
BOGOTA	51.06	46.8	9	4	1	16	28	9					
BALBOA HTS.	51.60	37.9	9	8	1	16	35	9					
FUQUENE	51.94	46.5	9	10	0	16	36	5					
CAPE HALLETT	54.45	201.8	9	28K	-1	17	18	13			21	15	SS
TACUBAYA	54.72	11.1	9	31	0								
SCOTT BASE	55.05	194.9	9	32A	-1	17	12	-1			18	54	
MERIDA	58.41	21.1									20	39	SS
WELLINGTON	58.74	239.0				18	8	7					
KARAPIRO	59.42	242.9	10	4	0								
ROXBURGH	60.91	232.8				18	41	11					
SUVA	65.97	264.0	10	33	-14	19	46	13			22	29	SS
SAN JUAN	66.66	44.5	10	54	2								
TUCSON	66.79	358.1	10	52	-1						11	14	
PASADENA	69.22	351.7	11	7	-1	20	19	7			20	47	SCS
BOULDER CITY	70.71	354.8	11	16	-1								
FAYETTEVILLE	71.89	12.4	11	22	-2								
FRESNO	72.01	350.7	11	24A	-1								
LICK	72.83	349.3	11	30A	0								
COLUMBIA	73.26	23.8	11	31	-1	20	54	-5					
BERKELEY	73.45	348.9	11	34	1	21	9	8					
EUREKA	74.27	354.2	11	39	1								
RENO	74.74	351.2	11	40A	-1								
MINERAL	75.78	349.9	11	46	-1								
LARAMIE	75.86	2.5	11	47	0								
SHASTA	76.24	349.4	11	48A	-1								
BERMUDA	78.66	36.9				21	55	-3					
RAPID CITY	78.73	4.1	12	2	-1								
RIVERVIEW	78.74	236.7				22	4	5					
MORGANTOWN	78.76	22.3	12	3K	0								
CANBERRA	79.35	234.4	12	8A	2				12	15			
BOZEMAN	80.19	358.4	12	12	1								
BUTTE	80.58	357.3	12	13	0								
BRISBANE	80.98	242.9	12	16A	1	22	26	4					
HUNGRY HORSE	82.98	356.5	12	25	0								
ADELAIDE	86.24	229.5	12	44K	2								
SHAWINIGAN	87.28	24.0	12	53	6								
SEVEN FALLS	88.44	24.8	12	51	-1								
CHARTERS TS.	90.37	245.3	13	1	-1								
HERMANUS	95.63	139.1									31	30	SS
PORT MORESBY	96.04	254.2				25	2	19			38	34	SSS
MBOUR	99.51	79.1									32	26	SS
RESOLUTE	109.65	3.9									28	30	PS
TAMANRASSET	122.08	83.2	18	54	0						20	32	PP
LWIRO	125.74	123.8	19	0	-1								
MATUSIRO	126.61	292.6	19	1	-2						32	47	PPS
YAKUTSK	134.80	325.5	19	24	6								
HELWAN	146.08	87.1	19	42	4								
KISHINEV	146.14	55.9	19	40	2								
MOSCOW	148.94	37.4	19	47	4								
ULAN-BATOR	150.52	307.2	19	52	7								
KSARA	150.87	81.8	20	5	19						24	24	PP
SVERDLOVSK	156.88	14.9	20	16	22								
CHITTAGONG	158.11	240.8	18	57	-59								
NAMANGAN	173.89	357.0	20	19	11								
QUETTA	174.09	141.0	20	11	3								
WARSAK DAM	179.10	196.3	20	5	-4								

DECEMBER 15 11.H 46.M 27.S EPICENTRE 44.13 148.92 DEPTH= 45.KM

DEPTH OF FOCUS= 0.002R

A=-0.61672 B= 0.37172 C= 0.69389 D= 0.5162 E= 0.8565
G=-0.5943 H= 0.3582 K=-0.7201 HT= -3.2

SE= 3.04

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S
GORNY	1.25	309.7	0	23	1						0	35
REIDOVOE	1.30	331.1	0	23	1						0	35
KURILSK	1.33	326.0	0	23	0	0	43	3				
LESOZAVODSK	1.40	297.7	0	25	1						0	37
NEMURO	2.55	252.8	0	38	-2	1	7	-3				
ABASHIRI	3.35	269.7	0	53	2	1	34	4				
KUSIRO	3.48	252.3	0	51	-2	1	33	-1				
OBIHIRO	4.33	255.7	1	8	3						1	37
HIROO	4.49	247.6	1	6A	-1	2	6	7				
ASAHIGAWA	4.74	268.0	1	14	3							
URAKAWA	4.91	248.3	1	13	0	2	11	1				
WAKKANAI	5.31	286.5				3	25	65			2	53
TOMAKOMAI	5.59	255.8	1	34	11							
SAPPORO	5.60	261.7	1	24	1	2	43	16			4	23
MORI	6.44	254.5	1	39	4	2	51	3				
HAKODATE	6.46	251.5	1	32	-3						3	13
HATINOHE	6.55	239.2	1	36	0	2	41	-10				
UGLEGORSK	6.84	318.8	1	43	3							
MIYAKO	6.85	231.6	1	41	1	2	46	-12				
AOMORI	6.87	244.0				2	47	-11				
MORIOKA	7.28	235.2	1	42	-4	2	56	-13				
MIZUSAWA	7.68	232.1	1	48	-4	3	8	-11				
AKITA	7.92	239.2				3	21	-3				
ISINOMAKI	8.07	227.7	1	52	-5	3	17	-11				
SENDAI	8.41	228.6	1	57	-5	3	25	-12				
YAMAGATA	8.73	230.6				3	29	-16				
HUKUSIMA	9.03	228.0	2	5	-6	3	45	-7				
ONAHAMA	9.42	223.1	2	55	39							
SHIRAKAWA	9.63	226.3				3	55	-12			2	29
MITO	10.08	222.7				4	3	-16				
OKHA	10.21	339.4	2	25	-2							
KAKIOKA	10.34	223.2	2	15	-14	4	10	-14				
MAEBASI	10.78	227.6	2	15	-20						4	24
KUMAGAYA	10.80	225.7	2	34	-1	4	24	-11				
TOKYO C.M.O.	10.99	222.9				4	25	-15			7	57
NAGANO	11.05	231.3	2	54	16							
OIWAKE	11.11	229.0	3	0	21							
MATUSIRO	11.13	230.8	2	35K	-4	4	59	16			3	56
YOKOHAMA	11.24	222.5				4	26	-20			5	32
HUNATU	11.62	225.6	3	29	43						4	48
KOHU	11.62	226.6	3	9	23							
VLADIVOSTOK	12.38	271.2	2	55	-1							
NAGOYA	12.83	229.8	3	13	11							
ABUYAMA	13.83	232.6	3	10A	-5							
MAGADAN	15.48	3.6	3	35	-2							
KOTI	15.96	233.7	3	50	7							
CHANGCHUN	16.99	277.2	3	53	-3							
NAGASAKI	18.72	239.0	4	15	-2							
PEKING	24.56	271.8	5	17A	0	9	36	4			5	52 PP
ZO-SE	25.40	248.6	5	25	0							
NANKING	26.45	253.1	5	38	4							
PAOTOW	28.78	276.6	5	56A	0	10	52	11				
ULAN-BATOR	29.16	292.5	6	0	1							
WUHAN	30.27	255.0	6	16	7							
IRKUTSK	30.40	301.5	6	9	-1							
SIAN	32.26	266.0	6	26	0							
CHENGTU	37.67	264.5	7	13A	0	13	2	3				
COLLEGE	40.02	36.4	7	31	-1							
KUNMING	41.94	258.6	7	48	0	14	7	4				
SEMIPALATNSK	45.51	303.3	8	15	-2							
LHASA	47.57	272.6	8	35	2							
CHITTAGONG	51.35	264.4	9	3	1	16	24	7			11	2 PP
CHATRA	51.97	272.2	8	6	-61							
FRUNSE	52.17	296.3	9	8	0							
PORT MORESBY	53.30	182.2	9	19	2	16	51	8				
SVERDLOVSK	53.74	317.0	9	19	-1							
RESOLUTE	54.24	17.1	9	21A	-2	16	58	2			20	33 SS
TASHKENT	56.36	297.1	9	36	-3							
THULE	57.40	9.8	9	42	-4							
LAHORE	58.36	284.8	9	52	-1	17	49	-1				

APATITY	58.56	336.0	9 53	-1				
WARSAK DAM	58.87	288.7	9 54	-2				
SODANKYLA	60.60	337.9	10 6	-2				
KIRUNA	61.84	340.3	10 15	-2				
SHASTA	62.40	59.1	10 20	0				
HUNGRY HORSE	62.74	48.1	10 21	-2		10 38		
MINERAL	63.10	59.0	10 41	16				
QUETTA	64.27	287.9	10 34	1	19 13 7		12 53 PP	
RENO	64.68	58.8	10 44	9				
MOSCOW	64.89	324.4	10 37	0				
PULKOVO	64.91	330.6	10 35	-2				
BUTTE	64.95	49.5	10 34	-3		10 52		
SCORESBY SD.	65.51	356.6	10 39	-2				
BOZEMAN	66.00	49.1	10 44	0				
NURMIJARVI	66.27	333.5	10 42	-4			11 7	
HELSINKI	66.43	333.1	10 6	-41				
POONA	66.72	273.6	10 48	0				
EUREKA	67.06	56.8	10 48	-3		11 5		
SKALSTUGAN	67.27	340.5	10 50	-2				
SALT LAKE C.	68.67	53.6	11 0	-1		11 16		
UPPSALA	68.95	336.0	11 1A	-1		11 14		
PASADENA	69.06	62.5	11 13	10				
BOULDER CITY	69.98	59.1	11 7	-7		11 25		
TIFLIS	70.82	309.8	11 15	1	20 31 7			
RAPID CITY	71.23	46.4	11 15	-1		11 31		
LARAMIE	71.86	49.8	11 19	-1				
SIMFEROPOL	74.09	317.9	11 34	1				
LWOW	74.82	326.6	11 38	1			11 53 PCP	
TUCSON	74.93	59.7	11 42	4		11 56		
TUCSON TELE.	74.94	59.6	11 49	11		11 55		
KRAKOW	76.21	328.9	11 45	0			11 55 PCP	
RACIBORZ	76.82	329.9	11 50	1				
COLLMBERG	77.56	333.4	11 52	-1				
HALLE	77.73	334.1	11 49	-5		12 3		
PRUHONICE	78.18	331.9	11 57A	1				
JENA	78.34	334.0	11 59	2		12 13		
PLAUEN	78.53	333.5	11 57	-1		12 10		
MUNSTER	78.61	336.8	11 58	-1		12 13		
BENSBERG	79.64	336.5					13 3	
STUTTGART	80.97	334.3	12 11	0				
TUBINGEN	81.23	334.3	12 13	0				
KSARA	81.39	309.2	12 16	3				
EBINGEN	81.57	334.2	12 15	1				
OTTAWA	82.45	30.0	12 34	15				
CINE	82.62	316.5	12 23	3		12 36		
TAMANRASSET	105.45	325.2					18 3	
BYRD STATION	133.37	166.1	19 10	-1		19 31		
SOUTH POLE	133.94	180.0	19 13	1		19 31		

DECEMBER 17 8.H 57.M 15.S EPICENTRE 32.85 137.12 DEPTH= 414.KM

DEPTH OF FOCUS= 0.060R

A=-0.61688 B= 0.57276 C= 0.53982 D= 0.6804 E= 0.7328
G=-0.3956 H= 0.3673 K=-0.8418 HT= 0.9

SE= 1.69

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SIOMISAKI	1.28	298.2	0 53A	-1	1 32	-5		
OWASE	1.44	327.9	0 54A	-1	1 37	-1		
TU	1.94	345.2	0 58	1	1 45	3		
OMAESAKI	1.97	27.3	0 59	1	1 45	2		
KAMEYAMA	2.07	344.9	0 59	1	1 44	0		
NARA	2.12	329.8	1 0	1	1 45	0		
WAKAYAMA	2.14	310.7			1 34	-11		
OSAKA	2.23	324.0	1 1A	2	1 47	1		
HATIDYOZIMA	2.29	83.0	1 3	3	1 44	-3		
NAGOYA	2.32	356.9	1 1A	1	1 48	1		
SHIZUOKA	2.37	26.3	1 0K	0	1 48	0		
ABUYAMA	2.40	327.8	1 0A	0	1 47	-1		
SUMOTO	2.40	309.3	1 0	0	1 47	-1		
KOBE	2.44	319.0	1 1	0	1 49	0		
TOKUSIMA	2.45	300.5	0 59A	-2	1 46	-3		
MUROTO	2.50	280.0	1 3	2	1 50	1		

HIKONE	2.52	343.5	1	2	1	1	52	2			
GIHU	2.56	353.5	1	2	0	1	49	-1			
IBUKISAN	2.60	346.5	1	4	2	1	51	0			
OSIMA	2.68	43.8	1	2K	0	1	49	-3			
MISIMA	2.73	33.3	1	2A	-1	1	51	-1			
IIDA	2.73	12.2	1	5	2	1	56	4			
AJIRO	2.74	36.2	1	2	-1	1	52	0			
TSURUGA	2.93	343.0	1	5	1	1	55	0	2	45	
TAKAMATU	2.96	300.6	1	5	1	1	51	-4			
HUNATU	2.98	26.8	1	7	2	1	56	1			
KOHU	3.02	22.9	1	6	1	1	59	3			
MERA	3.06	46.7	1	4	-1	1	53	-4			
KOTI	3.09	284.1	1	7A	1	1	55	-2			
OKAYAMA	3.23	305.3	1	7	0	2	0	1			
HUKUI	3.27	347.8	1	10	3	2	2	2			
TOYOOKA	3.29	325.1	1	7	0	2	0	0	2	26	
TAKAYAMA	3.30	1.8	1	9	2	2	2	2			
YOKOHAMA	3.32	38.4	1	7A	-1	2	0	-1			
MATUMOTO	3.47	11.4	1	10	1	2	2	-1			
SIMIOU	3.50	270.0	1	9A	0	1	59	-4			
TITIBU	3.52	26.8	1	10	1	2	4	0			
TOKYO C.M.O.	3.57	36.9	1	9A	-1	2	1	-3			
TOTTORI	3.57	318.6				2	6	1			
TORISIMA	3.59	130.2	1	8	-2						
OIWAKE	3.67	18.3	1	12	1	2	7	1			
KANAZAWA	3.69	354.1							1	54	
KUMAGAYA	3.78	28.9	1	10	-2	2	6	-2			
MATUYAMA	3.79	286.2	1	11	-1	2	1	-7			
MATUSIRO	3.80	13.4	1	11A	-1	2	6	-2			
TOYAMA	3.84	0.9	1	12	0	2	7	-2			
MAEBASI	3.89	23.8	1	11	-2	2	8	-2			
NAGANO	3.91	12.8	1	13	0	2	9	-1			
YONAGO	4.05	310.5	1	16	2	2	12	0			
TUKUBASAN	4.17	35.3	1	12	-3	1	59	-15			
HIROSIMA	4.20	292.5	1	16	1	2	15	0			
TYOSI	4.21	46.1	1	14	-2	2	12	-3			
KAKIOKA	4.21	35.9	1	14A	-2	2	12	-3			
MATSUE	4.25	308.8				2	17	2			
UTUNOMIYA	4.33	30.7	1	15	-2	2	12	-5			
MITO	4.48	37.1	1	17	-1	2	15	-5			
WAZIMA	4.53	357.7	1	19	0	2	20	0			
OOITA	4.64	276.2	1	22K	2	2	26	4			
HAMADA	4.68	297.3	1	20	0	2	13	-10			
MIYAZAKI	4.91	260.7	1	23	0	2	30	3			
SHIRAKAWA	4.96	29.9	1	22	-1	2	23	-5			
ONAHAMA	5.14	36.1	1	22	-3	2	27	-4			
AIKAWA	5.24	9.8	1	25	-1	2	29	-4			
NIIGATA	5.30	16.7	1	27	1	2	36	2			
KUMAMOTO	5.41	271.4	1	27	-1	2	38	2			
HUKUSIMA	5.60	28.3	1	28	-2	2	36	-4			
HUKUOKA	5.67	279.2	1	30	0	2	45	4			
KAGOSIMA	5.72	258.9	1	31A	0	2	46	4			
SAGA	5.74	275.9	1	35	4	2	45	2			
YAMAGATA	6.00	25.1	1	32	-2	2	44	-3			
NAGASAKI	6.10	270.9	1	35	0	2	52	2			
YAKUSIMA	6.13	248.8	1	35A	0	2	52	2			
SENDAI	6.22	28.6	1	34	-2	2	46	-6	2	11	
SAKATA	6.43	19.2	1	40	2	2	56	0			
ISINOMAKI	6.53	30.3	1	39	-1	2	53	-5			
MIZUSAWA	7.06	26.2	1	45	-1	3	4	-5			
AKITA	7.27	18.5				3	11	-2	2	42	
MORIOKA	7.58	24.4	1	50K	-1	3	13	-6			
MIYAKO	7.83	28.6	1	46	-8	3	18	-6			
HATINOHE	8.44	23.5	2	7	6	3	34	-3			
AOMORI	8.48	19.2	2	2	0	3	35	-3			
HAKODATE	9.36	16.8	2	11	-1	3	56	0			
MORI	9.63	15.5	2	17	2	4	3	2			
MURORAN	9.94	16.7	2	19	1	4	6	-2	3	0	
SUTTSU	10.23	13.0	2	20	-2	4	13	-1			
TOMAKOMAI	10.28	18.8				4	17	2			
URAKAWA	10.31	24.2	2	23	0	4	15	-1			
HIROO	10.62	25.8	2	25	-1	4	20	-2			
SAPPORO	10.73	16.9	2	25A	-3	4	20	-4			
VLADIVOSTOK	11.05	339.6	2	30	-1	4	35	4			
OBIHIRO	11.14	23.7	2	32	0	4	35	2			
KUSIRO	11.63	27.5	2	33	-5	4	40	-3			
ASAHIGAWA	11.66	19.1	2	38	0	4	41	-3			
NEMURO	12.40	30.0				4	53	-6			
?SHIRI	12.48	24.6				5	2	1			

ZO-SE	13.65	266.9	2	57K	-3	5	21	-3				
CHANGCHUN	14.34	323.3	3	5K	-2	5	39	2				
NANKING	15.49	272.0	3	17K	-2	5	58	-1				
PEKING	18.30	299.0	3	47K	0	6	55	4				
GUAM	20.51	158.4	4	8	-1	7	29	0			6	7 *SP
OKHA	21.11	9.7	4	15	1	7	46	6				
PAOTOW	22.99	297.3	4	32K	0	8	14	3				
SIAN	23.52	281.2	4	36K	-1							
KOROR	25.51	186.1	4	53	-2							
ULAN-BATOR	27.29	312.4	5	12	1	9	25	5				
LANCHOW	27.57	286.1	5	12K	-1							
CHENGTU	28.18	274.6	5	16K	-2	9	29	-5				
MAGADAN	28.22	14.8	5	19	0							
TRUK	28.71	148.4	5	22	-1				6	46		
PHU-LIEN	29.63	253.8									8	47 PCP
IRKUTSK	30.61	319.2	5	40	1	10	12	1			7	0 PP
KUNMING	31.02	264.5	5	42	-1	10	16	-2				
TIKSI	39.09	355.9	6	51	0	12	20	0			15	15 SS
LHASA	39.29	278.0	6	54	2	12	26	3				
SHILLONG	39.92	271.6	6	55K	-2							
PORT MORESBY	43.08	165.4	7	23	0				8	41	15	39 *SS
CHATRA	43.42	275.6	6	23	-63							
CHARTERS TS.	53.28	169.3	8	39	-1						10	6
WARSAK DAM	53.87	290.5	8	44K	-1							
COLLEGE	54.49	30.5	8	48	-1						9	47 PCP
SVERDLOVSK	56.01	319.9	8	58	-2							
POONA	58.01	272.4	9	6	-7							
HONOLULU	58.03	83.9	9	14	1							
KIPAPA	58.05	83.8	9	14	0							
QUETTA	58.85	287.9	9	18K	-1							
KARACHI	60.50	283.2	9	31K	1							
APATITY	65.05	335.7	10	0A	1	18	2	-6				
SODANKYLA	67.44	336.9	10	14	0							
RESOLUTE	67.50	13.1	10	14A	-1	18	40	3			26	20 SSS
MOSCOW	68.49	323.2	10	21	0	18	48	-1	11	49		
KIRUNA	69.15	338.7	10	25	0							
THULE	69.83	6.2	10	27	-2							
ALBERNI	70.69	43.4	10	39A	5							
HORSESHOE B.	71.53	42.8	10	38A	-1							
VICTORIA	71.86	43.6	10	43A	2							
NURMIJARVI	71.94	331.3	10	40	-1							
SKALSTUGAN	74.48	337.6	10	56	0						13	47 PP
UPPSALA	75.12	333.0	10	59A	0							
SIMFEROPOL	75.78	314.5	11	2	-1							
SHASTA	76.46	50.3	11	8A	1							
MINERAL	77.15	50.2	11	11A	0							
HUNGRY HORSE	77.25	40.3	11	13	2							
BERKELEY	78.04	52.7	11	17A	2							
LWOW	78.61	322.6	11	19	0							
LICK	78.74	52.9	11	20A	1							
GOTEBORG	78.74	333.4	11	22	3							
RENO	78.75	50.2	11	20A	1							
KARAPIRO	78.97	150.0	11	21A	1							
BUTTE	79.42	41.7	11	24	1							
FRESNO	80.28	52.5	11	28A	1							
KSARA	80.65	304.2	11	30	1							
EUREKA	81.23	48.5	11	33	1						14	4 *SP
PASADENA	82.85	53.9	11	41	0							
SALT LAKE C.	83.01	45.6	11	43	2							
PRUHONICE	83.13	326.8	11	43	1						12	7
BOULDER CITY	84.02	50.8	11	47	1							
RAPID CITY	85.76	38.9	11	56	1							
LARAMIE	86.32	42.1	12	12	15						14	31 *SP
TUCSON	88.91	51.8	12	12	2						14	31 *SP
TUCSON TELE.	88.93	51.6	12	12	2							
TAMANRASSET	107.94	313.5									18	1 PP
SOUTH POLE	122.67	180.0	18	3	-4						28	38 PKKP
BYRD STATION	124.43	168.1	18	11	0				19	55	21	5 PP
HUANCAYO	143.79	62.7	18	49A	2						21	50 SKP

DECEMBER 17 15.H 34.M 18.S EPICENTRE 28.74 127.25 DEPTH= 0.KM

A=-0.53151 B= 0.69907 C= 0.47834 D= 0.7960 E= 0.6052
G=-0.2895 H= 0.3808 K=-0.8782 HT= 2.2

SE= 3.33

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
YAKUSIMA	3.31	58.2									0	40
KAGOSIMA	4.02	44.6	1	6	2	2	19	26			1	54
TOMIE	4.08	18.6	1	11	6						2	31 SG
MIYAZAKI	4.80	47.7	1	18	3	2	19	6				
KUMAMOTO	5.04	35.3	1	20	1						1	51
ISIGAKIZIMA	5.18	212.8	1	26A	5							
SAGA	5.20	29.5	1	26	5	2	14	-9				
HUKUOKA	5.54	28.6	1	30	4	3	19	48			2	6
ITUHARA	5.71	17.2	1	49	21	3	9	34				
ZO-SE	5.77	295.6	1	29	0	2	42	5				
ODITA	5.84	38.9	1	32	2							
ILAN	6.31	232.4	1	57	20							
TAIPEI	6.31	235.5	2	2	25	3	49	59				
SIMIDU	6.36	49.3	1	45	8							
HSINCHU	6.84	236.5	2	12	28							
MATUYAMA	6.92	41.5	1	49	4	3	22	16				
HWALIEN	6.93	228.0	1	56	11	3	53	47				
HIROSIMA	7.15	36.9	2	13	25							
KOTI	7.21	46.7	1	57	8	4	1	48				
HAMADA	7.39	32.5	1	50	-2	3	50	33			4	15
TAICHUNG	7.45	233.7	2	12	19							
HSINKONG	7.71	224.6	2	2	6							
NANKING	8.01	296.4	1	58	-2							
TAKAMATU	8.04	44.5	1	58	-3	4	27	53				
TOKUSIMA	8.22	47.9	1	59	-4							
YONAGO	8.44	36.3				4	21	37				
TAWU	8.56	223.4	2	12	4							
SUMOTO	8.58	47.4	2	7	-1	4	9	22			4	59
SIOMISAKI	8.69	55.2	2	25	15	4	17	27				
TOTTORI	8.97	39.5	2	14	0	4	55	58				
KOBE	8.98	46.8	2	14	0	4	46	49				
OSAKA	9.19	48.0	2	18	1	4	36	34				
OWASE	9.31	53.0	2	15	-4						6	0
TOYOOKA	9.33	41.6	2	15	-4	4	38	32				
ABUYAMA	9.35	47.1	2	16K	-3							
NARA	9.41	48.8	2	23	3							
KAMEYAMA	9.93	49.8	2	35	8							
HIKONE	10.04	47.3	2	28	-1							
IBUKISAN	10.19	47.2	2	30	-1							
NAGOYA	10.45	49.7	2	33	-1							
GIHU	10.45	48.2	2	34	0							
HUKUI	10.55	44.0	2	37	1							
OMAESAKI	11.02	55.2									6	34
WUHAN	11.18	282.3	2	46	2	4	57	6				
IIDA	11.23	50.3	2	58	13							
TOYAMA	11.54	44.0	2	53	4							
KOHU	11.79	51.5	3	6	13							
MISIMA	11.80	54.4	2	49	-4							
MATUSIRO	12.08	47.1	2	55A	-1	5	42	29			5	9
NAGANO	12.14	46.6	3	5	8							
OIWAKE	12.17	48.7	3	1	3							
YOKOHAMA	12.45	54.5	3	9	8						6	25
MAEBASI	12.55	49.5	3	4	1							
KUMAGAYA	12.63	51.1	2	54	-10							
TOKYO C.M.O.	12.64	53.6									6	7
UTUNOMIYA	13.17	50.5	3	2	-9							
NIIGATA	13.45	44.1									6	55
MITO	13.50	52.3	3	17	2							
BAGUIO CITY	13.71	208.0	3	20	2							
CANTON	13.77	249.0	3	26	7	6	4	10				
HUKUSIMA	14.24	47.5	3	27	2							
PEKING	14.49	323.9	3	31	3	6	20	9				
VLADIVOSTOK	14.83	13.4	3	38	5							
CHANGCHUN	15.14	354.6	3	40	3							
SIAN	16.56	294.0	3	57	2	7	13	14				
PAOTOW	18.40	314.4	4	20K	2	7	57	16				
CHENGTU	20.27	281.1	4	37	-3	8	26	3				
PHU-LIEN	20.30	251.7	4	43	3	8	36	13				
LANCHOW	21.06	296.3	4	48K	0	8	50	11				
Y.-SAKHLINSK	21.83	29.4	4	58	2							
KUNMING	22.20	266.2	4	59	-1	9	6	6				
GUAM	22.26	129.4	4	58	-2	9	15	14			5	29 PP
KOROR	22.36	160.8	4	59	-2							
ULAN-BATOR	24.80	326.1	5	25	0	9	49	4				
IRKUTSK	29.03	330.4	6	4	0							

LHASA	31.54	280.6	6	27	1					
SHILLONG	31.57	272.7	6	23A	-3					
CHITTAGONG	32.50	266.9	6	36	1	11	57	8		
PETROPAVLOVK	33.55	34.6							7	53 PP
MAGADAN	34.75	20.9	6	52	-2					
CHATRA	35.39	276.7	5	56	-63					
PORT BLAIR	36.40	249.3							10	51
MEDAN	36.92	232.6	7	14	2				7	40
LEMBANG	40.11	211.2	7	41A	2	13	55	9		
RABAUL	40.58	139.8	7	41	-2					
SEMIPALATNSK	41.33	314.9	7	48	-1	14	7	3		
PORT MORESBY	42.51	150.2	7	55	-4	14	18	-4	17	28 SS
DEHRA DUN	42.57	284.6				14	3	-20		
TIKSI	42.95	0.8	8	1	-1	14	26	-2	17	51 SCS
FRUNSE	44.29	303.2	8	13	0					
LAHORE	45.48	287.2	8	21A	-2					
WARSAK DAM	47.36	291.1	8	36	-2					
STALINABAD	48.94	297.6							23	4
POONA	49.61	270.5							8	3
BOMBAY	50.38	271.4	9	1	0	16	17	3		
QUETTA	51.97	287.3	9	12A	-1	16	44	8		
KARACHI	53.09	282.0	9	23A	2					
SVERDLOVSK	53.76	321.3	9	24	-2					
ASHKABAD	57.12	298.6	9	52	1					
KHEYS	59.32	348.7	9	56	-10				10	46 PCP
BRISBANE	61.12	153.8	10	14A	-4	18	50	13		
COLLEGE	62.25	28.7	10	22	-4					
ADELAIDE	64.25	169.5	10	36	-3					
APATITY	65.22	335.0	10	44A	-1					
TIFLIS	66.20	305.8	10	51	-1					
RIVERVIEW	66.22	158.4	11	24	32					
MOSCOW	66.56	321.9	10	52	-2					
SODANKYLA	67.76	335.7	10	59	-3					
PULKOVO	68.96	327.4							20	53 SCS
KIRUNA	69.75	337.2	11	11	-3					
NURMIJARVI	71.28	329.3	11	25	2					
SIMFEROPOL	72.37	311.9	11	27	-3					
THULE	74.64	3.8	11	38	-5					
UPPSALA	74.69	330.5	11	41	-2					
KSARA	75.67	300.8	11	51	2					
LWOW	76.45	319.6	11	52	-1					
KRAKOW	78.63	321.1	12	4	-1					
SCORESBY SD.	78.64	349.9	12	3	-2					
HELWAN	80.89	299.0	12	15	-2					
PRUHONICE	81.57	323.0	12	21	0				12	45
COLLMBERG	81.61	324.6	12	19	-2				15	28
JENA	82.55	324.9	12	25	-1				12	53
MUNSTER	83.84	327.3	12	31	-2					
BENSBERG	84.71	326.7	12	29	-8					
STUTTGART	85.09	324.1	12	38	-1					
SHASTA	85.51	45.6	12	39A	-2					
HUNGRY HORSE	85.71	35.9	12	40	-2					
STRASBOURG	85.95	324.6	12	39	-4					
MINERAL	86.20	45.6	12	42A	-3					
BERKELEY	87.19	47.9	12	47A	-2					
RENO	87.79	45.4	12	50A	-2					
LICK	87.89	48.1	12	51	-2					
BUTTE	87.97	37.1	12	51	-2					
BOZEMAN	89.00	36.6	12	57	-1					
FRESNO	89.42	47.7	12	58	-2					
EUREKA	90.19	43.7	13	2	-2					
SALT LAKE C.	91.80	40.7	13	10	-1					
PASADENA	92.05	49.0	13	9	-3					
BOULDER CITY	93.08	45.9	13	15	-2					
RAPID CITY	94.10	33.9	13	20	-2					
TAMANRASSET	104.01	306.0							18	26 PP
SOUTH POLE	118.58	180.0	18	47	-3				20	2 PP
BYRD STATION	122.10	169.1	18	54	-3					
HUANCAYO	153.18	56.4	19	56	4					

DECEMBER 18 7.H 26.M 14.5 EPICENTRE 17.91 120.24 DEPTH= 0.KM

A=-0.47956 B= 0.82254 C= 0.30569 D= 0.8639 E= 0.5037
G=-0.1540 H= 0.2641 K=-0.9521 HT= 5.2

SE= 2.46

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
BAGUIO CITY	1.52	167.7									0	34	P*
MANILA	3.39	167.8	1	1	6	1	33	-4					
HONG KONG	7.18	308.4	1	47K	-2	3	26	14					
CANTON	8.31	309.4	2	1K	-4								
ZO-SE	13.16	3.5	3	18	7								
WUHAN	13.58	338.7	3	16	-1								
NANKING	14.14	355.0	3	24	0								
KOROR	17.41	125.4	4	1	-5						4	22	
KUNMING	17.81	296.5	4	12K	1	7	38	10					
SIAN	19.16	330.3	4	29K	1	8	8	9					
CHENGTU	19.46	313.7	4	31K	0	8	9	4					
PEKING	22.32	351.7	5	2	1								
LANCHOW	23.21	324.5	5	11K	1	9	25	7					
GUAM	23.99	97.1	5	18	1								
PAOTOW	24.25	340.8	5	23	3								
MATUSIRO	24.42	37.0	5	20A	-1	9	42	3			6	20	PP
CHANGCHUN	26.19	8.3	5	38	0								
SHILLONG	27.39	291.1	5	49K	0	10	27	-2			9	9	
LEMBANG	27.56	208.0	6	7	16								
LHASA	29.08	299.1	6	7K	3								
ULAN-BATOR	31.86	342.9	6	39	10								
PORT MORESBY	37.98	133.5	7	21	0								
LAHORE	43.55	297.1	8	8	1								
POONA	43.98	278.3	7	59	-12								
BOMBAY	44.90	279.0									11	37	
CHARTERS TS.	45.52	144.7	8	24	1								
WARSAK DAM	46.19	300.1	8	30	2								
QUETTA	49.78	294.6	8	58	2								
ADELAIDE	55.41	161.6	9	38A	0								
CANBERRA	59.56	152.8	9	48K	-20								
APATITY	72.39	336.3	11	28K	-2								
COLLEGE	74.77	26.3	11	43	-1						12	43	
SODANKYLA	75.01	336.4	11	44	-1								
KSARA	75.69	301.2	11	10	-39						14	38	PP
KARAPIRO	76.01	137.9	11	53A	2						12	29	
KIRUNA	77.22	337.4	11	57A	-1								
NURMIJARVI	77.30	329.7	11	56	-2								
ISTANBUL UN.	79.39	309.7	12	36	26						17	36	
TANANARIVE	80.23	246.5	12	14A	0						15	41	
UPPSALA	80.86	330.1	12	16	-1								
SKALSTUGAN	81.83	334.5	12	21	-2								
KRAKOW	82.89	320.3	12	28	0						14	3	
GOTEBORG	84.39	329.2	12	35	-1								
RESOLUTE	84.97	8.8	12	38A	-1								
THULE	85.73	2.0	12	40	-2								
PRUHONICE	86.15	321.5	12	44	0								
COLLMBERG	86.52	323.1	12	44	-2						14	41	
MIRNY	86.64	190.6	12	46	-1								
HALLE	87.03	323.5	12	43	-6						16	27	PP
SCORESBY SD.	87.99	348.1									17	20	
STUTTGART	89.83	321.9									14	53	
RUMANGABO	91.27	269.0									14	24	
LWIRO	92.06	268.3	14	32	80						14	47	
KEW	93.69	327.3									15	45	
RATHFARNHAM	95.49	331.0									19	36	
CAPE HALLETT	95.97	166.4	13	31K	1								
BAGNERES	98.15	320.2									21	45	SKP
HUNGRY HORSE	98.23	33.2	13	41	0								
SETIF	98.27	312.1	13	43	2						14	0	
BANGUI	99.68	277.8									14	48	
EUREKA	102.49	41.2	14	1	1								
KIMBERLEY	103.05	243.8									18	32	PP
TAMANRASSET	104.47	300.0									21	58	SKP
SOUTH POLE	107.80	180.0	18	26	3								
BYRD STATION	112.62	170.6	17	48	-51						18	39	
TRINIDAD	151.55	3.6	19	58	8								
HUANCAYO	163.87	71.0	20	10	5						26	26	PP
LA PAZ	171.88	81.3	20	14	4								

DECEMBER 18 19.H 24.M 7.S EPICENTRE -15.97-173.11 DEPTH= 104.KM

DEPTH OF FOCUS= 0.011R

A=-0.95495 B=-0.11547 C=-0.27339 D=-0.1200 E= 0.9928

G= 0.2714 H= 0.0328 K=-0.9619 HT= 5.6

SE= 2.28

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	8.38	253.8	1	59	-1								
NOUMEA	20.31	248.8	3	53	-36								
ONERAHI	22.67	207.2	4	52	-1	9	4	15			5	3	
KARAPIRO	24.06	202.5	5	4A	-2	9	40	27					
TUAI	24.30	198.7	5	8	0	9	29	12					
TONGARIRO	25.20	201.1	5	22	5								
WELLINGTON	27.32	200.2	5	43	6								
COBB RIVER	27.87	203.3	5	43	1								
KAIMATA	29.60	203.5	5	58	1								
GEBBIES PASS	30.18	200.8	6	6	4								
ROXBURGH	32.97	202.9									17	7	SCS
BRISBANE	33.37	244.2	6	28K	-2	11	41	-1					
CHARTERS TS.	38.79	257.8	7	13	-3						17	30	
CANBERRA	38.91	233.1	7	14	-3				7	25	8	54	PP
PORT MORESBY	39.27	274.7	7	20	0	13	22	10			9	28	PCP
MELBOURNE	42.80	231.1	7	45	-4								
ADELAIDE	46.93	236.9	8	19	-3								
GUAM	50.91	302.7	8	51	-1								
KOROR	56.82	290.1	9	37	2								
CAPE HALLETT	57.16	186.0	9	38A	0	17	43	20			11	45	PP
TERRE ADELIE	58.80	199.3	9	54	5								
SCOTT BASE	62.71	184.7	10	14A	-2	19	1	27	10	27	10	53	PCP
BYRD STATION	68.36	171.3	10	49	-3	19	43	0					
MATUSIRO	69.55	319.8	11	1K	2	20	8	11			12	5	
BERKELEY	71.73	40.3	11	12	0								
LICK	71.79	41.0	11	13	0								
UKIAH	71.93	38.7	11	15	2								
PASADENA	72.21	45.5	11	14	-1	20	22	-6					
FRESNO	72.63	42.4	11	16K	-2								
SHASTA	73.41	37.9	11	22K	0								
MINERAL	73.66	38.6	11	23K	-1								
SOUTH POLE	74.13	180.0	11	23	-3	21	8	19					
RENO	74.26	40.1	11	27K	0								
BOULDER CITY	75.50	45.4	11	34	0								
TUCSON	76.47	50.5	11	40	0						12	21	
TUCSON TELE.	76.59	50.5	11	41	1						14	37	PP
EUREKA	76.65	41.9	11	41	0								
MIRNY	77.03	204.2	11	41	-2	21	30	9					
LEMBANG	77.87	266.3	11	52A	5						12	2	PCP
SEATTLE	77.90	32.4	11	50A	2								
VICTORIA	77.90	31.2	11	50A	2								
HORSESHOE B.	78.54	30.6	11	51A	0								
SALT LAKE C.	80.01	42.5	12	0	1								
HONG KONG	80.71	296.4				22	29	29					
BUTTE	82.32	37.7	12	11	0								
HUNGRY HORSE	82.76	35.2	12	13	0								
COLLEGE	82.87	10.6	12	14	0								
BOULDER	84.04	45.6	12	21	1								
LARAMIE	84.42	44.4	12	22	0								
RAPID CITY	87.21	42.7	12	35	0								
SANTA LUCIA	91.33	125.2				23	41	-1			30	17	PKKP
LA PAZ	99.28	110.1	13	25	-6								
CHITTAGONG	100.50	290.3									16	10	
RESOLUTE	102.20	15.4	13	44	0	25	30	16			32	23	SS
QUETTA	123.54	295.8	18	48	3								
NURMIJARVI	133.70	347.9	19	6	2								
LWOW	143.48	341.3	19	22	0								
HALLE	144.32	354.6	19	22	-1						20	16	
KRAKOW	144.40	345.5	19	25	1								
COLLMBERG	144.42	353.4	19	24	0								
RACIBORZ	144.76	347.4	19	27	3								
JENA	144.92	354.8	19	26	1						22	11	PP
BENSBERG	145.09	359.7	19	27	2								
SKALNATE PL.	145.13	344.6	19	28	3								
PLAUEN	145.30	354.1	19	27	2								
PRAGUE	145.44	351.4	19	31	6						20	14	
SONNEBERG	145.50	355.1	19	28	2								
PRUHONICE	145.51	351.3	19	28	2						20	46	
BRATISLAVA	146.81	347.5	19	32	4								
STUTTGART	147.23	357.2	19	33	5						21	17	
STRASBOURG	147.47	358.9	19	34	5						20	30	
TUBINGEN	147.48	357.3	19	35	6								
EBINGEN	147.83	357.4	19	36	7								

KSARA	148.42	309.6	19	38	8						
SOFIA	149.87	335.5	19	21	-11					23	9 PP
UVIRA	150.73	230.6	19	41	7						
ASTRIDA	150.84	232.7	19	38	4					22	35
LWIRO	151.78	232.0	19	47	12						
RUMANGABO	151.95	234.2	19	46	10					21	22
HELWAN	153.66	305.9	19	43	5					20	14
TAMANRASSET	173.10	10.6	20	1A	5					25	15 PP

DECEMBER 19 3.H 27.M 26.S EPICENTRE 37.78 29.61 DEPTH= 0.KM

A= 0.68893 B= 0.39148 C= 0.61002 D= 0.4940 E=-0.8694
G= 0.5304 H= 0.3014 K=-0.7924 HT= -0.9

SE= 2.58

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
CINE	1.22	262.1									0	22	PG
ISTANBUL UN.	3.29	351.8	0	52	-1						1	49	SG
ATHENS	4.66	274.2	1	12A	-1						1	33	PG
KSARA	6.45	125.9	1	40	2	2	57	4			2	13	PG
SOFIA	6.87	317.6	1	54	10						4	44	
BUCHAREST	7.14	339.4	1	57	9	3	33	22			2	28	PG
SKOPJE	7.58	306.2				3	27	5			3	48	S*
SIMFEROPOL	7.93	23.9	1	58	-1								
HELWAN	8.02	169.2	2	0	0	3	25	-8					
KISHINEV	9.25	356.7	2	14	-3								
IASI	9.54	351.6	2	21	0	5	11	61					
BELGRADE	9.84	318.5				4	26	8			5	28	SG
TIMISOARA	10.13	324.5				4	12	-13					
TIFLIS	12.34	66.7	3	5	6								
PRUHONICE	15.29	323.3	3	51	0								
COLLMBERG	17.91	324.3	4	14	2								
EBINGEN	18.28	31*.2	4	16	0								
TUBINGEN	18.38	312.3	4	21	4								
STUTTGART	18.42	313.1	4	20	2								
HALLE	18.54	323.4	4	17	-2						5	3	
MOSCOW	18.76	14.2	4	21	-1								
STRASBOURG	19.17	311.2	4	27	0	7	59	1			4	54	
SETIF	19.39	272.7	4	34	4						5	41	
BENSBERG	20.65	316.8	4	42	-1								
MUNSTER	20.96	319.6	4	48	1						5	11	
ALGIERS UNI.	21.14	275.4	4	46	-2								
COPENHAGEN	21.32	332.6	4	50	0								
PULKOVO	22.02	1.0	4	57	0	8	59	3					
PARIS	22.49	308.0	5	2	0						5	17	PP
NURMIJARVI	22.97	353.7	5	6	-1								
GOTEBORG	23.06	335.5	5	10	2								
RELIZANE	23.33	273.9	5	8	-2						5	34	PP
UPPSALA	23.38	344.7	5	12	1	9	28	7					
TAMANRASSET	25.51	241.0	5	31	0						6	12	PP
SVERDLOVSK	28.01	37.1	5	52	-2								
SODANKYLA	29.69	357.7	6	9	0								
APATITY	29.90	2.9	6	56	45								
KIRUNA	30.54	353.2	6	15	-2								
QUETTA	31.72	92.6	6	26	-1								
NAMANGAN	32.45	71.0	6	35	1								
LWIRO	39.83	181.3	7	37	1								
ASTRIDA	40.17	179.8	7	41	2								
UVIRA	41.05	180.7	7	44	-2								
KHEYS	43.28	5.6	8	10	5								
THULE	55.46	343.5	9	31	-7								
RESOLUTE	62.05	345.6	10	21	-3								
SEVEN FALLS	69.66	314.3	11	11A	-2								
SHAWINIGAN	71.08	314.6	11	19A	-3								
WESTON	72.64	310.3	11	30A	-1								
OTTAWA	73.42	314.8	11	34	-1								
COLLEGE	77.67	358.9	11	59	-1								
HUNGRY HORSE	88.35	336.7	12	55	1								
EUREKA	96.87	333.9	13	32	-2								
CHARTERS TS.	122.80	90.8	18	58A	0								

DECEMBER 19 11.H 13.M 57.S EPICENTRE 6.87 60.19 DEPTH= 0.KM

A= 0.49367 B= 0.86150 C= 0.11878 D= 0.8676 E=-0.4972
G= 0.0591 H= 0.1031 K=-0.9929 HT= 6.9

SE= 2.73

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
BOMBAY	17.15	44.6	4 0	-3	7 10	-3		4 22 PPP
KODAIKANAL	17.41	77.7	4 6	0				
POONA	17.65	47.7	4 6	-3				
COLOMBO	19.54	88.7	4 28	-4				
KARACHI	19.96	18.4	4 28	-9				
MADRAS	20.61	71.2	4 43	0	8 43	14		
HYDERABAD	20.69	57.9	4 46	2	8 43	12		
QUETTA	24.05	14.5	5 20	2	9 45	12		5 58 PP
LAHORE	27.89	26.5	5 56	3				
DEHRA DUN	28.74	33.5	6 22	21				
WARSAK DAM	28.97	19.8	6 5	2				
PORT BLAIR	32.45	79.1			12 3	14		
LWIRO	32.61	254.9	6 35	0				12 1
UVIRA	32.67	252.6	6 35	-1				10 35
CHITTAGONG	34.16	59.9	6 51	2	12 21	6		
KSARA	35.00	323.3	6 51	-5				
NAMANGAN	35.48	15.1	7 0	0				
HELWAN	35.49	313.8	7 1	1				7 10
LHASA	36.82	48.2	7 13	2	13 1	5		
TIFLIS	37.30	340.9	7 17	1				
MEDAN	38.46	92.9	7 30	5				
BANGUI	41.43	268.8	6 56	-54				7 47
KUNMING	44.43	61.1	8 16	2	14 54	4		
LEMBANG	49.24	105.1	8 50	-2				9 24
SVERDLOVSK	49.83	0.3						19 33
MOSCOW	51.93	344.0	9 11	-2				
TAMANRASSET	54.85	293.0	9 33	-1				12 24 PPP
PRUHONICE	57.39	326.8	10 0	7				
PULKOVO	57.44	342.6						19 56
COLLMBERG	58.93	327.5	10 3	0				14 41
PEKING	59.83	47.4	10 7	-3				
VLADIVOSTOK	72.00	47.0			20 19	-30		
KHEYS	73.26	358.5						19 16
YAKUTSK	74.43	27.3						19 51
PORT MORESBY	88.13	99.6	12 54	0				
CHARTERS TS.	88.65	110.2	12 53	-3				

DECEMBER 19 11.H 14.M 42.S EPICENTRE -16.32 -72.98 DEPTH= 68.KM

DEPTH OF FOCUS= 0.006R

A= 0.28101 B=-0.91816 C=-0.27930 D=-0.9562 E=-0.2927
G=-0.0817 H= 0.2671 K=-0.9602 HT= 5.5

SE= 2.14

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
LA PAZ	4.66	92.9	1 12K	3	2 6	3	1 26	2 30 *SS
HUANCAYO	4.82	331.5	1 12K	0	2 13	6		
SANTA LUCIA	17.16	173.5	3 54	-2	7 8	5		6 0
BOGOTA	20.84	357.0	4 39	1	8 29	8		5 2 PP
CHINCHINA	21.32	352.8	4 42	-1	8 40	10		
FUQUENE	21.66	358.0	4 38	-8	8 44	7		
LA PLATA	22.89	146.7	4 58	0	8 58	-1		
BALBOA HTS.	25.95	345.0	5 29	1				
GALERAZAMBA	27.02	355.0	5 48	11	10 24	16		
BARBADOS	32.11	25.1	6 22	-1				
FORT FRANCE	32.99	21.4			12 29	46		
SAN JUAN	35.14	11.4	6 46	-3				8 34 PP
OAXACA	40.59	323.6						14 22
TACUBAYA	43.87	323.0	8 4	3	14 30	3		
COLUMBIA	50.62	351.3	8 43	-11	16 4	2	9 8	
FAYETTEVILLE	55.86	339.3	9 32	-1				
MORGANTOWN	56.04	353.5	9 34A	0				
PENNSYLVANIA	57.01	355.6	9 40	-1				17 33
CLEVELAND	58.05	352.4	9 48	0	17 42	0		
WESTON	58.43	1.4	9 50K	-1				
TUCSON	60.39	323.3	10 4	0				
TUCSON TELE.	60.39	323.4	10 4	0				
HALIFAX	61.25	7.6	10 10K	0			10 26	
OTTAWA	61.48	357.8	10 10	-2				

SHAWINIGAN	62.58	0.2	10 18	-1				
SEVEN FALLS	63.18	1.6	10 22K	-1				
MBOUR	63.18	64.2	10 23	0			10 37	10 46 *SP
BOULDER CITY	65.37	323.5	10 37	0			11 7	
PASADENA	66.10	319.9	10 42	0	19 31	8		
RAPID CITY	66.15	336.6	10 42	0			10 57	
BYRD STATION	67.03	187.9	10 47	-1	19 41	7	11 4	13 7 PP
SALT LAKE C.	67.29	326.9	10 50	1				
EUREKA	68.48	325.4	10 58	1			11 22	11 35 *SP
FRESNO	68.83	321.1	11 1	2				
LICK	70.32	320.5	11 9A	1			11 25	
RENO	70.67	323.3	11 11A	1				
BERKELEY	71.03	320.6	11 13	1			11 29	
BUTTE	71.62	332.1	11 18	2				
MINERAL	72.24	323.0	11 20A	1				
UKIAH	72.41	321.2	11 21	1			11 37	12 4
SHASTA	72.53	322.8	11 23A	0				
SOUTH POLE	73.78	180.0	11 27	-2	20 56	3	11 43	38 56 PKPPKP
HUNGRY HORSE	74.04	332.9	11 31	1			11 53	
SEATTLE	77.44	328.3	11 42	-7				
VICTORIA	78.58	328.5	11 58	2				
HORSESHOE B.	79.08	329.2	11 58	0				
CAPE HALLETT	82.31	196.0	12 15A	0	22 28	4		15 48 PP
HERMANUS	82.73	123.6						22 35 SCS
MALAGA	83.37	48.9	12 15K	-6			12 33	
WINDHOEK	83.96	111.6	12 25	1				
ALMERIA	84.83	49.4	12 28	0			12 43	
TOLEDO	85.00	46.1	12 30	1			12 46	
TAMANRASSET	86.04	65.0	12 36	2				16 33
RELIZANE	86.62	51.4					12 53	16 14 *PPP
ALICANTE	86.88	48.7	12 24	-14	22 48	-21		22 38 SKS
KIMBERLEY	88.87	119.5	13 47A	59				
RATHFARNHAM	89.74	33.5	13 18	26				
RESOLUTE	91.86	354.3	13 2	0	23 58	4		16 46 PP
KEW	92.23	36.7	13 16	13				
THULE	92.59	1.1	12 21	-44			13 6	
KARAPIRO	96.16	227.7	13 22A	1			13 37	
EBINGEN	96.75	41.9					13 40	
TUBINGEN	96.92	41.5					13 40	
STUTTGART	97.07	41.3	13 26	1			13 41	
COLLEGE	98.35	335.4	13 30	-1			13 47	17 32 PP
JENA	99.13	39.6	13 36	1			13 51	14 44
PRUHONICE	100.76	41.0	13 45	3				14 29
PULKOVO	110.65	31.8						19 11 PP
KHEYS	111.78	8.8	18 31	4			19 8	
MOSCOW	114.93	35.7						19 31 PP
SVERDLOVSK	126.68	29.8	18 48	-8				
RABAUL	130.92	249.4	19 6	2				
ASHKABAD	132.25	53.3	19 9	3				23 0
PORT MORESBY	132.77	240.0	19 10A	3				21 31 PP
TRUK	135.34	264.1	19 15	3				
STALINABAD	139.87	48.9	19 22	2				
QUETTA	140.90	62.1	19 24	2				23 17 *PPP
GUAM	143.46	270.7	19 25	-2				
WARSAK DAM	143.63	54.4	19 25	-2				
IRKUTSK	144.07	2.8	19 30	2			19 44	
MATUSIRO	145.79	312.1	19 32A	1			19 49	41 50 SS
LAHORE	146.66	57.0	19 35	3				
CHANGCHUN	148.49	334.2	19 40	5				
ULAN-BATOR	148.49	0.2	19 41	6				
DEHRA DUN	150.08	57.1	19 46	9				
KOROR	151.71	254.8	19 47	7				
LEMBANG	156.99	181.5	19 53	6				20 23 PKP2
LHASA	160.23	45.1	19 55	4				
SHILLONG	163.14	54.4	18 58A	-56				20 2
CHITTAGONG	164.46	64.9	19 59	4				
MEDAN	164.92	146.2	19 58K	2				20 40 PKP2
CHENGTU	165.47	10.4	19 58	2				
KUNMING	170.42	24.3	20 4	5				

DECEMBER 19 18.H 36.M 24.5 EPICENTRE 51.46-177.68 DEPTH= 0.KM

A=-0.62508 B=-0.02531 C= 0.78015 D=-0.0405 E= 0.9992
G=-0.7795 H=-0.0316 K=-0.6256 HT= -6.0

SE= 2.33

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
PETROPAVLOVK	14.56	285.9	3	30	1								
MAGADAN	19.44	306.9	4	34	4	8	21	17					
COLLEGE	20.43	37.5	4	40	-1	8	42	16					
Y.-SAKHLINSK	26.03	275.7	5	39	3	10	12	6					
YAKUTSK	29.87	311.2	6	10	-1								
TIKSI	30.90	330.3	6	19	-1								
ALBERNI	33.19	72.5	6	45	5								
HORSESHOE B.	34.06	71.6	6	49	1								
VICTORIA	34.34	73.1	6	52	2								
MATUSIRO	34.48	261.9	6	50A	-1	12	20	0			8	0	PP
VLADIVOSTOK	34.59	276.3	6	51	-1								
ABUYAMA	37.21	262.1	7	10A	-5	13	0	-2					
CHANGCHUN	38.29	281.6	7	23A	-1						8	53	PP
SHASTA	38.96	83.7	7	30	1								
RESOLUTE	39.38	24.6	7	32	-1	13	42	7			9	12	PP
MINERAL	39.65	83.6	7	34	-1								
HUNGRY HORSE	39.97	68.5	7	38	0								
BERKELEY	40.72	87.2	7	52	8	13	49	-6					
RENO	41.24	83.4	7	48	0								
LICK	41.44	87.4	7	56	6								
BUTTE	42.01	70.8	7	59	5								
FRESNO	42.94	86.7	8	2	0								
EUREKA	43.66	80.8	8	8	0								
THULE	44.85	18.4	8	17	0								
SALT LAKE C.	45.41	76.7	8	22	0								
PASADENA	45.64	88.3	8	9	-15	15	1	-5			18	37	SS
KHEYS	45.73	349.3	8	16	-8	14	46	-22					
IRKUTSK	45.94	303.2	8	26	0								
PEKING	46.05	282.7	8	26A	-1	15	15	2					
BOULDER CITY	46.54	83.9	8	30	-1								
ULAN-BATOR	46.90	296.9	8	35	1								
ZO-SE	48.70	269.9	8	47	-1	15	53	3					
LARAMIE	48.86	72.2	8	48	-1								
PAOTOW	49.42	287.2	8	55	2	16	4	4					
NANKING	49.54	272.6	8	52A	-2								
BOULDER	49.82	73.3	7	57	-59								
TUCSON	51.49	84.7	9	13	4								
TUCSON TELE.	51.50	84.5	9	8	-1								
WUHAN	53.23	274.4	9	21A	-1								
SIAN	54.19	281.8	9	28A	-1	17	5	-1					
LANCHOW	56.05	286.9	9	43	0	17	32	1					
APATITY	59.03	346.6	10	11	7								
CANTON	59.32	269.1	10	4	-2								
HONG KONG	59.34	267.8				19	13	59					
CHENGTU	59.66	282.1	10	7A	-1								
SODANKYLA	60.08	349.4	10	10	-1								
KIRUNA	60.26	352.2	10	11	-1								
SVERDLOVSK	61.90	328.0	9	24	-59								
CLEVELAND	62.33	57.5	10	25	-1								
OTTAWA	62.47	51.0	10	25	-2								
SHAWINIGAN	63.03	48.4	10	28	-3								
SEVEN FALLS	63.51	46.9	10	33	-1								
KUNMING	64.50	278.7	10	40	-1								
PULKOVO	66.83	345.0	11	18	22								
WESTON	66.84	50.6	10	55K	-1								
NURMIJARVI	66.94	348.2	10	54	-2								
CHAPEL HILL	67.70	60.2	10	39	-22						11	1	
PORT MORESBY	67.79	217.9	10	58	-4	19	52	-7			20	49	SCS
COLUMBIA	68.04	62.8	11	2	-1								
LHASA	68.18	290.4	11	6A	2	20	9	5					
UPPSALA	68.35	351.8	11	4	-1								
HALIFAX	68.67	44.4				20	14	4					
MOSCOW	69.23	339.5	11	11	0								
NAMANGAN	69.96	311.1	11	16	1								
SHILLONG	70.70	286.9	11	19K	0								
GOTEBORG	70.91	354.5	11	19K	-2								
CHATRA	72.54	291.1	11	27	-3								
CHITTAGONG	73.14	284.7	11	34	0	21	3	1			11	49	PCP
WARSAK DAM	75.53	306.7	11	46	-2								
WITTEVEEN	76.03	357.3	11	51	0								
LAHORE	76.04	303.2	11	51	0								
MUNSTER	76.85	356.6	11	55	0								
HALLE	77.09	353.8	11	52	-5								
COLLMBERG	77.21	353.1	11	56	-1								
JENA	77.68	354.0	11	59	-1						13	6	

CHARTERS TS.	77.87	214.5	11	57A	-4						
BENSBERG	77.87	356.9	12	2	1						
BERMUDA	77.94	52.8				21	52	-2			
KISHINEV	79.28	341.9	12	9	0						
BRATISLAVA	79.94	350.0	12	13	1						
STUTTGART	79.97	355.4	12	13	1						
TIFLIS	80.11	329.1								13	15
STRASBOURG	80.23	356.3	12	15	1					12	49
EBINGEN	80.57	355.5	12	16	0						
QUETTA	80.90	307.6	12	18	1	22	29	3		12	25 PCP
NEUCHATEL	81.84	356.8	12	23	1						
BRISBANE	82.72	206.0				22	42	-2			
KARACHI	84.42	305.0	12	40	5						
POONA	86.65	295.6	12	45	-1						
BOMBAY	86.93	296.7	12	48	0	23	42	16		23	59
SAN JUAN	88.50	62.1	12	56	1						
KARAPIRO	89.21	185.4	13	4	5						
KSARA	90.10	332.6	13	3	0						
HELWAN	95.09	335.0	13	27	1						
BYRD STATION	135.29	167.8	19	17	-5						
SOUTH POLE	141.27	180.0	19	26	-7						
PIETERMZBURG	149.79	305.4	19	52	5						
KIMBERLEY	151.76	314.8	19	57	7						

DECEMBER 20 19.H 20.M 46.S EPICENTRE 28.75 127.28 DEPTH= 0.KM

A=-0.53184 B= 0.69871 C= 0.47849 D= 0.7957 E= 0.6057
G=-0.2898 H= 0.3807 K=-0.8781 HT= 2.2

SE= 3.79

	DELTA DEG.	AZ. DEG.	P M	S	O-C S	S M	S	O-C S	*PP M	S	SUPP. M	S
YAKUSIMA	3.28	58.1	0	56	2							
KAGOSIMA	3.99	44.4	1	11	7	2	19	26				
TOMIE	4.07	18.1	1	24	19	2	35	41				
NAGASAKI	4.56	28.8	1	15	3	2	20	14				
UNZENDAKE	4.72	32.1	1	48	34						2	46
MIYAZAKI	4.78	47.[illegible]	1	18	3	2	22	10				
KUMAMOTO	5.01	35.1	1	20	2	2	29	11				
SAGA	5.18	29.3	1	36	15						2	6
HUKUOKA	5.52	28.4	1	32	7	3	20	50				
ITUHARA	5.70	17.0	1	58	30	3	7	32				
ZO-SE	5.79	295.4	1	28	-1	2	40	3			2	23
OOITA	5.82	38.8	1	33	3	3	5	27				
ILAN	6.33	232.5	1	48	11							
SIMIDU	6.33	49.2	1	47	10							
TAIPEI	6.34	235.6	1	57	20	3	48	57				
UWAZIMA	6.36	44.1	1	33	-4							
HSINCHU	6.87	236.5	1	54	10							
MATUYAMA	6.90	41.4	1	47	2	3	18	13				
HWALIEN	6.96	228.1	1	57	11	3	53	47				
HIROSIMA	7.12	36.8	2	9	21							
KOTI	7.18	46.7	2	0	11	3	19	7				
HAMADA	7.36	32.4	1	57	6	3	44	27				
TAICHUNG	7.48	233.7									2	29 PG
HSINKONG	7.74	224.7	1	56	-1	4	2	36				
ALISHAN	7.81	229.7	2	1	3							
TAKAMATU	8.01	44.4	2	0	0							
NANKING	8.03	296.3	1	59	-2	3	35	2				
TAITUNG	8.13	224.1	2	8	6							
TOKUSIMA	8.19	47.8	2	2	-1							
TAINAN	8.55	229.6	2	25	17							
SUMOTO	8.56	47.4	2	4	-4	3	43	-3				
TAWU	8.59	223.5	2	29	21							
KAOHSIUNG	8.78	227.6	2	38	27							
HENGCHUN	8.94	222.7	2	34	21							
OWASE	9.29	52.9	2	17	-1							
ABUYAMA	9.33	47.0	2	16A	-3						4	52 S*
KAMEYAMA	9.90	49.8	2	37	10							
HIKONE	10.01	47.2	2	25	-3							
IBUKISAN	10.16	47.1	2	28	-2						3	2
NAGOYA	10.42	49.7	2	31	-3							
GIHU	10.43	48.1	2	34	0							
OMAESAKI	10.99	55.2									5	14 S*
KOHU	11.77	51.5	3	6	14	5	4	-1				
MATUSIRO	12.06	47.0	2	55K	-1	5	19	7			3	39

OIWAKE	12.14	48.6	2	55	-2					
KUMAGAYA	12.60	51.1	3	18	15					
KAKIOKA	13.19	52.3	3	12	1					
HONG KONG	13.46	244.5	3	20	5	6	13	27		
BAGUIO CITY	13.74	208.1	3	19	1	6	12	19		
CANTON	13.80	249.0	3	18	-1	5	58	4		
PEKING	14.50	323.8	3	32A	4	6	21	10		
VLADIVOSTOK	14.82	13.3	3	38	6					
CHANGCHUN	15.13	354.5	3	41	4	6	40	14		
SIAN	16.58	293.9	3	56K	1	7	13	13		
SAPPORO	18.24	34.7							8	7
PAOTOW	18.42	314.4	4	20K	2	7	56	14		
CHENGTU	20.30	281.1	4	38	-2	8	26	3		
PHU-LIEN	20.33	251.7	4	40	0				4	59 PP
LANCHOW	21.08	296.3	4	47K	-1	8	45	6	5	13 PP
KUNMING	22.23	266.2	4	57	-3	9	5	5		
GUAM	22.24	129.5	4	58	-2	9	0	-1		
KOROR	22.36	160.9	4	59	-2	9	4	1		
WUWEI	22.47	300.4	5	4	2					
ULAN-BATOR	24.80	326.1	5	25K	0					
IRKUTSK	29.03	330.4	6	3	-1	10	59	4		
LHASA	31.57	280.6	6	27	1					
SHILLONG	31.59	272.7	6	23K	-3	11	52	17	15	28
CHITTAGONG	32.53	266.9	6	35	0	11	56	6	7	46 PP
MAGADAN	34.73	20.9	6	50	-4	12	25	1		
CHATRA	35.42	276.7	6	59	-1				15	15
PORT BLAIR	36.43	249.3							8	44 PP
MEDAN	36.95	232.6	7	13A	1					
BOKARO	37.37	272.3				13	4	0		
LEMBANG	40.13	211.2	7	38K	-1	13	50	4		
RABAUL	40.57	139.8	7	41	-2					
SEMIPALATNSK	41.35	314.9	7	49	0	14	3	-1		
PORT MORESBY	42.50	150.2	7	55	-4	14	18	-4	14	38 PS
DEHRA DUN	42.59	284.6	7	58	-1					
TIKSI	42.94	0.7	8	1	-1	14	23	-5	9	41 PP
AGRA	43.30	280.1	8	1A	-4					
FRUNSE	44.31	303.2	8	12	-1					
LAHORE	45.50	287.2	8	22K	-1					
HYDERABAD	46.03	266.9	8	28	1				15	14
WARSAK DAM	47.38	291.1	8	37K	-1					
TASHKENT	48.30	301.2	8	43	-2				20	44 SSS
STALINABAD	48.96	297.6	8	47	-3					
POONA	49.64	270.5	8	52	-3					
KODAIKANAL	50.04	258.8							10	56
BOMBAY	50.41	271.4	8	59	-2	16	17	3		
CHARTERS TS.	51.82	157.1	9	8K	-4					
QUETTA	51.99	287.3	9	12K	-1	16	40	4		
SVERDLOVSK	53.77	321.3	9	26	0					
ASHKABAD	57.14	298.6	9	51	0	17	49	4		
	59.31	348.7	9	58	-8				10	48 PCP
BRISBANE	61.12	153.8	10	14K	-4	17	24	-73		
COLLEGE	62.23	28.7	10	23	-3	18	45	-6		
ADELAIDE	64.25	169.6	10	35A	-4					
APATITY	65.22	335.0	10	43K	-2	19	29	1		
GORIS	65.79	303.1	10	48	-1				19	47 PS
TIFLIS	66.22	305.8	10	52	0				19	57 PS
MOSCOW	66.57	321.9	10	53	-1					
CANBERRA	66.94	160.8	10	54A	-2					
SODANKYLA	67.76	335.7	10	59	-3					
NORD	68.35	354.7	11	2	-3					
PULKOVO	68.97	327.4	11	7	-2	21	13	60	25	8 SS
KIRUNA	69.75	337.2	11	11	-3					
NURMIJARVI	71.28	329.3	11	20	-3					
SIMFEROPOL	72.39	311.9	11	28	-2	20	56	3		
RESOLUTE	73.25	10.7	11	32K	-3				21	44 SCS
THULE	74.63	3.8	11	39	-4					
UPPSALA	74.69	330.5	11	40	-3					
SKALSTUGAN	74.81	335.2	11	40	-4					
KSARA	75.68	300.8	11	50	1					
LWOW	76.46	319.6	11	51	-2					
ISTANBUL UN.	77.45	309.9	11	56	-3					
CINE	79.67	307.2	12	8	-3				13	57
PRUHONICE	81.58	323.0	12	21	0				15	34 PP
STUTTGART	85.10	324.1	12	37	-2					
SHASTA	85.48	45.7	12	39K	-2					
HUNGRY HORSE	85.69	35.9	12	41	-1					
MINERAL	86.17	45.6	12	42K	-2					
BERKELEY	87.16	47.9	12	48	-1					

RENO	87.76	45.5	12	51K	-1					
LICK	87.87	48.1	12	51K	-1					
BUTTE	87.95	37.1	12	52	-1					
BOZEMAN	88.98	36.6	12	57	-1					
EUREKA	90.17	43.7	13	3	0					
PASADENA	92.02	49.0	13	10	-2					
BOULDER CITY	93.06	45.9	13	15	-2					
RAPID CITY	94.07	33.9	13	20	-1					
TUCSON	97.99	46.6	13	38	-1					
TUCSON TELE.	98.00	46.5	13	38	-1				17 35	PP
TAMANRASSET	104.02	306.0							18 24	PP
SOUTH POLE	118.59	180.0	18	46	-4					
BYRD STATION	122.11	169.1	18	55	-2					
HUANCAYO	153.16	56.4	20	3	11					

DECEMBER 21 5.H 46.M 26.S EPICENTRE 44.56 80.88 DEPTH= 0.KM
A= 0.11330 B= 0.70589 C= 0.69920 D= 0.9874 E=-0.1585
G= 0.1108 H= 0.6904 K=-0.7149 HT= -3.4

SE= 2.21

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
CHILIK	2.03	241.8	0	38	2								
KURMENTY	2.41	232.3	0	43	1						1	16	S*
PRZHEVALSK	2.75	221.9	0	48	2								
ILI	2.80	258.8	0	48	1								
ALMATA-2	2.84	244.3	0	48	0								
ALMATA	3.12	247.0	0	52	0						1	39	
FABRICHNAYA	3.52	248.6	0	57	0						1	10	
NARYN	4.75	230.6	1	16	1						2	37	SG
FRUNSE	4.87	252.0	1	16	0						1	28	
SEMIPALATNSK	5.86	356.0	1	30	-1		36	-3					
ANDIJAN	7.34	241.7	1	51	0						2	54	
FERGANA	7.92	241.3									2	21	
TCHIMKENT	8.51	258.6	2	6	-2	3	41	-5			2	28	
TASHKENT	9.10	253.2	2	17	1						2	54	
KHOROG	9.95	227.9	2	28	0	4	24	3			5	16	
KULYAB	10.68	235.3	2	35	-3						5	35	
STALINABAD	10.87	240.7	2	36	-4						5	49	
YUMEN	12.66	104.0	3	3	-1								
WARSAK DAM	12.77	217.5	2	51K	-15								
LAHORE	13.97	203.8	3	18K	-4								
DEHRA DUN	14.39	189.9	3	24	-3	6	3	-6			3	45	PPP
LHASA	16.93	148.2	4	1K	1	7	12	4					
IRKUTSK	17.31	55.2	4	5A	0	7	23	6					
AGRA	17.54	188.5	4	OK	-8	7	26	4			4	17	PP
WUWEI	17.63	104.5	4	11	2								
SVERDLOVSK	17.68	321.2	4	7	-2						4	27	PP
SINING	17.71	109.4	4	11	1								
QUETTA	18.09	222.2	4	11K	-4	7	33	-2			4	24	PP
ASHKABAD	18.15	256.5	4	14	-1						8	51	PCP
KYAKHTA	18.19	62.3	4	14A	-2	7	40	3					
ULAN-BATOR	18.28	70.2	4	15	-2								
CHATRA	18.40	161.9	4	19	1	7	53	11					
KABANSK	18.64	57.1	4	19	-2								
KIZYL-ARVAT	19.13	261.8	4	24	-3						5	31	
LANCHOW	19.39	108.0	4	30A	0	8	5	1					
YINCHUAN	19.92	98.9	4	40	4								
SHILLONG	20.93	151.2	4	45K	-2	8	40	4					
TOCKLAI	21.00	143.2	4	48	0						6	7	
BOKARO	21.06	167.4	4	47	-1	8	44	5			5	8	PP
TIENSHUI	21.53	109.0	4	55	2								
PAOTOW	21.78	90.3	4	55A	-1	8	53	1					
KARACHI	21.78	215.5	5	3	7								
HOWRAH	22.79	162.0	5	7	1	9	19	8					
CHENGTU	22.88	119.5	5	7	1	9	16	3					
BAKU	23.16	270.5	5	15	6						9	29	
SIAN	23.88	105.9	5	17A	1	9	34	4					
CHITTAGONG	23.90	154.3	5	17	1	9	34	4			5	52	PP
MAKHACH-KALA	24.07	278.0	5	19	1						9	41	
GORIS	26.03	271.0	5	40	3						10	17	
KUNMING	26.30	130.5	5	39	0	10	12	1			6	3	PP
TIFLIS	26.35	276.6	5	41	1						6	22	PP
PEKING	26.36	87.4	5	40	0	10	4	-8					

VIZIANAGRAM	26.45	174.5							14	3	
BOMBAY	26.45	197.3	5	41	0	10	10	-3	6	41	PP
POONA	26.61	195.0	5	41K	-1	10	17	1	11	58	SSS
HYDERABAD	27.12	185.1	5	45K	-2	10	23	-1	12	24	SS
SOTCHI	29.37	282.8	6	8	1	11	4	4	7	4	PP
MOSCOW	29.41	307.9	6	8	1	11	0	-1			
WUHAN	29.92	106.4	6	13K	1	11	9	0			
MADRAS	31.45	181.3	7	15	49	13	10	97	8	49	PP
CHANGCHUN	31.57	75.4	6	27A	0	11	38	3	7	31	PP
PHU-LIEN	31.86	129.7	6	29	0	11	40	0			
NANKING	31.99	99.9	6	31K	1	11	43	1			
SIMFEROPOL	32.85	287.5	6	38	0	11	56	1	13	4	SCP
PULKOVO	33.60	315.1	6	44	0	12	5	-2	7	54	PP
APATITY	33.77	329.4	6	45A	-1	12	7	-2	14	1	SS
CANTON	34.06	118.2	6	50	2	12	14	0			
70-SE	34.20	99.2	6	49K	0	12	15	-1			
PORT BLAIR	34.31	159.1	6	53	3	12	20	2	8	10	PP
KODAIKANAL	34.33	186.0				14	17	119	12	18	PCP
HONG KONG	35.19	118.1	7	0	2	12	30	-1			
KSARA	36.08	268.5	6	59	-7	12	43	-2	8	30	PP
SODANKYLA	36.26	327.9	7	6	-1	12	55	7	8	31	PP
VLADIVOSTOK	36.34	73.8	7	7	-1	12	46	-3	8	36	PP
NURMIJARVI	36.46	316.2	7	7	-2				15	16	
KHEYS	37.10	352.0	7	14	0	12	57	-4	8	36	PP
COLOMBO	37.52	181.6	7	34	16	13	9	2			
ISTANBUL UN.	37.71	283.3	7	20	1				8	45	PP
LWOW	38.20	298.7	7	24	1	13	18	0	8	51	PP
BUCHAREST	38.45	289.7	7	28	3	13	24	3	9	22	PCP
KIRUNA	38.68	328.1	7	27	0	13	24	-1	16	15	SS
CAMPULUNG	38.88	291.4				13	17	-11	9	8	
WARSAW	39.46	303.2	7	35K	1	13	36	-1	16	55	SSS
CINE	39.81	278.9	7	40	3				9	9	
UPPSALA	40.02	315.5	7	38A	0	13	37	7	17	32	
KRAKOW	40.69	300.2	7	44	0	13	45	-10	16	43	SS
SOFIA	40.96	288.4	7	47	1	14	0	1	9	14	PP
TIMISOARA	41.23	293.5	7	54	6	14	12	9	17	31	
HELWAN	41.47	266.6	7	52	2	14	10	3			
RACIBORZ	41.74	300.7	7	54	1	14	6	-5	9	34	PP
SZEGED	41.77	294.6							9	26	PP
BUDAPEST	42.03	296.7	7	58	3	14	17	2	9	44	PCP
BELGRADE	42.08	292.5	7	56A	1	14	18	2	9	36	PP
SKALSTUGAN	42.10	321.6	7	55	-1				18	23	
Y.-SAKHLINSK	42.23	64.0	7	56	-1	14	16	-2	18	10	SSS
KALOCSA	42.41	295.4	8	16	18	14	12	-9	9	29	PP
HURBANOVO	42.45	297.6	8	3	5	14	19	-2	10	9	PPP
ABUYAMA	42.46	83.7	7	58A	-1	14	21	0			
SKOPJE	42.55	288.2	8	5A	6	14	29	6	10	0	PCP
ATHENS	42.71	281.8	8	0A	-1	14	27	2			
BRATISLAVA	43.04	298.4	8	5	2	14	39	9	9	52	PCP
GOTEBORG	43.28	313.1	8	5	0						
MAGADAN	43.39	44.1	8	5	-1	14	32	-3	13	44	PCS
VIENNA-H.	43.47	298.7	8	9A	2	14	50	14	9	52	PCP
MATUSIRO	43.51	80.0	8	4	-3	14	31	-6	9	55	PP
COPENHAGEN	43.52	310.1	8	8	1	14	39	2	17	52	SS
BAGUIO CITY	43.59	117.2	8	14	6						
MEDAN	43.72	153.8	7	56	-13	14	16	-24			
PRUHONICE	44.01	301.7	8	12A	1	14	42	-2	10	3	PP
PRAGUE	44.05	301.8	8	12	1	14	46	2	10	3	PP
POTSDAM	44.12	305.4	8	12	0	14	48	3	17	55	SS
COLLMBERG	44.50	303.9	8	14	-1	14	53	2	9	59	PP
SENDAI	44.56	76.3	8	18	2						
ZAGREB	44.61	295.6	8	16A	0	14	47	-6	10	4	PP
TUKUBASAN	44.99	79.3	8	17	-2	13	55	-63			
HALLE	45.06	304.5	8	15	-5	14	58	-1	10	1	PP
MANILA	45.22	118.5	8	26	5	15	2	1			
PLAUEN	45.28	303.1	8	21	0				10	9	PP
CHEB	45.29	302.5	8	23	2				8	45	
JENA	45.47	303.9	8	23	0	14	52	-13	10	9	PP
SONNEBERG	45.89	303.3	8	26	0	15	11	0	10	18	
BERGEN	45.95	318.0							18	40	SS
TARANTO	46.03	288.2	9	11	44	15	16	3			
TRIESTE	46.11	296.3	8	27K	-1	15	14	0	10	19	PP
NORD	47.33	348.6	8	37	-1	15	27	-4	10	27	PP
MUNSTER	47.41	306.4	8	38	0				14	58	
WITTEVEEN	47.64	307.8	8	41	1						
STUTTGART	47.70	301.9	8	40A	-1	15	36	-1	10	29	PP
RAVENSBURG	47.85	300.5	8	44	2						
TUBINGEN	47.88	301.6	8	42A	0						

BENSBERG	48.05	305.3	8	44K	1				10	37 PP
EBINGEN	48.08	301.2	8	43A	0					
REGGIO CALA.	48.25	286.2	8	44	-1	15	46	2		
MESSINA	48.27	286.4	8	36	-9	15	44	-1	10	24 PP
CHUR	48.29	299.4	8	44A	-1					
ROME	48.57	292.2	8	42	-5	15	52	3	10	36 PP
PRATO	48.58	295.2	8	47	0	15	45	-4		
STRASBOURG	48.65	302.2	8	49	1	15	57	7	10	42 PP
DE BILT	48.76	307.3				15	52	0		
BASLE	49.20	301.0	8	54	2				11	4
PAVIA	49.23	297.5							23	15
KLYUCHI	49.42	46.2	8	54	0				19	57
PETROPAVLOVK	49.51	50.7							13	11
NEUCHATEL	49.82	300.6	8	54	-3					
ABERDFEN	50.66	315.6				16	22	4	17	11
DURHAM	51.38	312.7	9	7	-2				20	16 SS
PARIS	51.70	304.4	9	12	1					
CUGLIERI	51.99	292.1	9	54	41	17	24	48		
KEW	52.12	308.5	9	14	0	16	38	0	20	29 SS
CLERMONT-FD.	52.74	300.7	9	17	-2	16	52	5	20	40 SS
SCORESBY SD.	52.76	335.7	9	19	0	16	59	12	17	17
RATHFARNHAM	54.51	312.6	9	32K	0				13	36
SETIF	56.21	289.6	9	43	-1	17	24	-9	12	56 PPP
LEMBANG	56.54	147.6	9	43	-4	17	7	-31		
ALGIERS UNI.	57.47	291.4	9	56	3	17	49	-1	18	35
THULE	57.70	351.8	9	51A	-4	17	51	-2	10	46 PCP
ALICANTE	58.90	294.8	10	1	-2	18	3	-6	12	11 PP
KOROR	59.37	111.9	10	3	-4	18	13	-2	12	16 PP
RELIZANE	59.71	291.8	10	3	-6	18	7	-12	12	14 PP
TOLEDO	60.32	298.1	10	12	-1				12	18 PP
RESOLUTE	61.02	358.7	10	16A	-2	18	34	-2	12	30 PP
ALMERIA	61.06	294.4	10	18	0	18	1	-35	12	11 PP
GRANADA	61.60	295.3	10	18A	-4				12	42 PP
MALAGA	62.39	295.4	10	25	-2				11	5 PCP
TAMANRASSET	64.16	277.2	10	37	-2	19	18	3	12	59 PP
COLLEGE	64.48	20.8	10	38	-3	19	23	4	11	29 PCP
BANGUI	67.38	253.0	10	56	-3				14	55 PPP
TANANARIVE	70.12	213.6	11	16K	0				11	41
TRUK	71.25	98.1	11	24	1					
RABAUL	79.75	106.3	12	11	-1	22	11	-3		
PORT MORESBY	80.19	113.5	12	15	1	22	20	1	22	36 SCS
PERTH	82.53	150.6							22	43
SEVEN FALLS	85.36	341.1	12	40	-1					
MBOUR	85.53	285.7	12	46	5	23	19	6		
HALIFAX	85.76	335.4	12	25A	-18	23	10	-5		
SEATTLE	85.94	15.5	12	46A	3					
SHAWINIGAN	86.34	342.1	12	45K	0					
HUNGRY HORSE	86.56	9.9	12	46	-1					
PIETERMZBURG	87.00	222.3	12	50	1					
OTTAWA	88.06	343.7	12	54A	0					
KIMBERLEY	89.11	226.8	13	0	1					
BOZEMAN	89.54	8.3	13	0	-1					
WESTON	89.94	339.8	13	5K	2					
RAPID CITY	91.67	2.9	13	11	0					
SHASTA	92.59	17.5	13	14	-1					
MINERAL	93.09	17.0	13	17	0					
RENO	94.23	15.9	13	23	1					
SALT LAKE C.	94.29	9.7	13	23	0					
EUREKA	94.98	13.0	13	26	0				15	36
BERKELEY	95.33	18.2	13	28	1					
LICK	95.97	17.9	13	30	0					
FRESNO	96.91	16.6	13	36	1					
BOULDER CITY	98.58	12.8	13	45	3					
FAYETTEVILLE	99.61	356.0	13	45	-2					
PASADENA	99.77	15.9	17	23	777	24	26	0	17	58 PP
RIVERVIEW	100.75	127.1				24	31	0		
TUCSON TELE.	102.74	10.1	14	2	1				18	11 PP
TUCSON	102.82	10.2	14	3	2				30	22 PKKP
WILKES	112.77	167.4							19	59 PP
KARAPIRO	118.28	116.5	18	53	3					
CAPE HALLETT	131.56	155.9	19	20A	5				22	40 PKS
SOUTH POLE	134.36	180.0	19	16	-4				22	51 SKP
HUANCAYO	141.72	320.4	19	34	0				22	54 PP
LA PAZ	141.75	307.1	19	39	5				23	34 PKS
BYRD STATION	143.65	174.1	19	34	-3				22	24 PP
SANTA LUCIA	155.38	287.1							43	55 SS

DECEMBER 23 6.H 27.M 14.S EPICENTRE 2.15 -78.98 DEPTH= 0.KM

A= 0.19098 B=-0.98089 C= 0.03718 D=-0.9816 E=-0.1911
G= 0.0071 H=-0.0365 K=-0.9993 HT= 7.2

SE= 2.14

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
BOGOTA	5.49	63.2	1	27	2	2	40	10					
FUQUENE	6.19.	57.6	1	36	1	2	55	7					
BALBOA HTS.	6.79	355.2	1	48	5	2	56	-7					
GALERAZAMBA	9.34	23.1	2	22	3								
HUANCAYO	14.56	165.6	3	33K	4	6	12	-1					
COMITAN	19.08	318.1	4	22	-4						5	0	
TRINIDAD	19.30	63.2	4	29	0	8	6	4					
GRENADA	19.73	59.3	4	30	-4								
SAN JUAN	20.48	37.2	4	41	-1	8	56	29					
ST. VINCENT	20.67	57.1	4	42K	-2								
MERIDA	21.38	331.7				8	48	3			6	22	
LA PAZ	21.40	150.3	4	49	-3	9	12	27			5	18	PP
FORT FRANCE	21.59	53.6	4	50	-3	8	54	5					
ST. CLAUDE	21.91	50.0	4	58	1	9	20	25					
BARBADOS	22.06	59.4	4	55	-3								
VERA CRUZ	23.85	316.4	5	16	0						10	46	SS
TACUBAYA	26.18	312.3	5	34	-4						5	47	
COLUMBIA	31.75	356.8	6	28	0								
SANTA LUCIA	36.24	168.2									9	52	PP
FAYETTEVILLE	36.59	339.1	7	9	-1								
TUCSON TELE.	42.33	318.6	7	59	2						9	43	PCP
TUCSON	42.35	318.4	7	59	2								
OTTAWA	43.17	3.4	8	4	0								
SHAWINIGAN	44.56	6.1	8	16	1								
SEVEN FALLS	45.35	7.8	8	22	0								
BOULDER CITY	47.25	319.7	8	39	2								
PASADENA	48.46	315.6	8	47	1								
SALT LAKE C.	48.57	326.7	8	49	2								
FRESNO	50.99	317.5	9	6	0								
BOZEMAN	51.66	331.7	9	11	0								
RENO	52.53	320.4	9	18K	1								
LICK	52.54	317.1	9	19K	2								
BUTTE	52.64	331.0	9	18	0								
BERKELEY	53.24	317.4	9	23K	0								
MINERAL	54.13	320.3	9	30	1								
SHASTA	54.82	320.3	9	33	-1								
HUNGRY HORSE	55.01	332.1	9	35	-1								
VICTORIA	59.86	327.4	10	10K	0								
HORSESHOE B.	60.29	328.3	10	11	-2								
MBOUR	62.38	75.0	10	27	0								
RESOLUTE	73.06	355.6	11	31	-3								
THULE	74.44	2.6	11	40	-2								
COLLEGE	79.18	336.1	12	8	0								
DURHAM	80.99	34.9	12	22	4								
KEW	81.26	38.4	12	19	0								
NORD	83.97	7.5	12	34	1								
TAMANRASSET	84.11	67.5	12	35A	1						15	46	PP
BYRD STATION	84.50	186.5	12	36	0	23	0	-2			12	47	
BENSBERG	85.92	39.2	12	43	0								
MUNSTER	86.22	38.2	12	43	-2								
STUTTGART	87.20	41.5	12	49	0								
SKALSTUGAN	88.66	26.6	13	6	10								
GOTEBORG	88.72	32.5	13	0	3								
SOUTH POLE	92.13	180.0	13	13	0						17	2	PP
LWIRO	107.84	91.7									28	4	
MATUSIRO	128.24	321.7									28	10	SKKS
CHARTERS TS.	132.40	244.7	19	16	-1						22	39	
POONA	146.28	51.3	19	44	3								
SHILLONG	151.06	17.3	19	56	7								

DECEMBER 25 8.H 5.M 42.5 EPICENTRE -5.57 151.22 DEPTH= 51.KM

DEPTH OF FOCUS= 0.003R

A=-0.87235 B= 0.47926 C=-0.09646 D= 0.4815 E= 0.8764
G= 0.0845 H=-0.0464 K=-0.9953 HT= 7.0

SE= 2.76

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
RABAUL	1.66	34.9	0	27K	-1								
PORT MORESBY	5.54	226.4	1	22K	0	2	27	2					
TRUK	12.97	2.8	3	2K	-2	5	26	-2					
CHARTERS TS.	15.14	198.1	3	31K	-1	6	29	10					
GUAM	19.98	341.3	4	32A	1						12	37	SCP
KOROR	21.05	307.3	4	43A	1	8	42	14			8	15	PCP
BRISBANE	21.86	175.7	4	48K	-2	8	46	3					
NOUMEA	22.21	139.9	4	54A	1	8	49	-1					
RIVERVIEW	28.12	180.1	5	47K	-2	10	25	-4					
SUVA	29.36	117.5	6	0A	0	10	50	1			6	57	PP
CANBERRA	29.67	183.7	6	2A	-1				6	34	7	15	PP
ADELAIDE	31.41	199.9	6	17K	-2	11	22	1			7	26	PP
MELBOURNE	32.61	189.2	6	28K	-1				6	37	7	33	PP
MANILA	36.05	304.1	7	1	2	12	59	26					
ONERAHI	36.83	147.8	7	8	3						8	41	
FORT NELSON	37.36	184.7	7	9	-1	12	59	6					
BAGUIO CITY	37.36	306.3	7	10	0	12	54	1					
AFIAMALU	37.36	105.6	7	9A	-1	13	2	9			8	19	PP
KARAPIRO	39.07	148.9	7	23K	-1	13	15	-4	7	33	9	32	PCP
TONGARIRO	40.05	150.2	7	31A	-1				7	41			
COBB RIVER	40.26	154.6	7	39	5	13	39	2			17	12	SS
TUAI	40.57	148.3	7	36	0								
TAWU	40.63	314.1	7	37	0								
HSINKONG	40.77	315.4	7	40	2								
KAIMATA	40.93	157.1	7	43	4				7	53	9	33	PP
YAKUSIMA	40.95	332.2	7	40	1						8	36	
HWALIEN	41.17	316.7	7	46	5								
WELLINGTON	41.32	152.9	7	41K	-1	13	51	-2	7	50	9	30	PP
SIOMISAKI	41.48	340.4	7	42	-2						9	22	
MIYAZAKI	41.79	334.4				14	12	12			17	1	SS
OMAESAKI	41.80	343.8									9	57	PP
SIMIDU	41.90	336.7	7	33	-14						9	35	PP
TAIPEI	41.95	317.8	7	42	-5	14	7	5					
MISIMA	42.09	344.9	7	46	-3								
SHIZUOKA	42.10	344.2	7	43	-6								
YOKOHAMA	42.21	345.9	7	59	9	14	39	33			10	5	PP
PERTH	42.21	227.1	7	50	0	14	7	1			9	25	PP
KOTI	42.36	337.9	7	51	0	14	20	12			10	3	PP
GEBBIES PASS	42.41	156.9	7	51	0	14	7	-2	8	1	9	46	PP
TOKYO C.M.O.	42.42	346.1									9	30	
TOKUSIMA	42.45	339.4	8	2	10								
HUNATU	42.50	344.9	7	52	0								
KAMEYAMA	42.54	342.0	7	34	-18						10	26	
NARA	42.59	341.1	8	35	42								
SUMOTO	42.60	339.9	7	39	-14						10	1	PP
OSAKA	42.66	340.8	8	40	47						10	16	PP
KOHU	42.67	344.7	8	2	9								
NAGOYA	42.69	342.7	8	3	9								
KOBE	42.80	340.4	8	39	45						17	25	
ROXBURGH	42.83	161.3	8	2K	7	14	12	-3			17	35	SS
ABUYAMA	42.84	341.0	7	53A	-2								
TUKUBASAN	42.86	346.7	7	55	0	14	34	19					
TAKAMATU	42.86	339.0	7	53	-2								
GIHU	42.96	342.6	8	6	10								
KUMAGAYA	42.96	345.9	7	52	-4								
HIKONE	43.00	341.9	7	59	3								
NAGASAKI	43.15	333.4	7	54	-3	14	16	-4					
UTUNOMIYA	43.23	346.6	8	5	7								
OIWAKE	43.34	345.0	8	9	10								
LEMBANG	43.35	266.0	7	59	0	14	27	4					
MATUMOTO	43.42	344.4	7	58	-2								
MATUSIRO	43.63	344.8	7	58A	-3	14	24	-3			9	39	PP
HUKUOKA	43.64	334.6				14	42	15			18	5	SS
NAGANO	43.75	344.8	8	3	1								
TOYAMA	44.05	343.7	8	34	29								
HAMADA	44.12	337.2	8	8	3	14	46	12			10	25	PP
DJAKARTA	44.15	266.9	7	59	-6						14	3	
HUKUSIMA	44.25	347.8	8	5	-1						10	7	PP
SENDAI	44.66	348.4	8	11	1	14	30	-12			10	20	PP
YAMAGATA	44.75	347.8	8	9	-1								
MIZUSAWA	45.45	349.0	8	29	13								
HONG KONG	45.63	308.7	8	19A	2	14	59	4	8	48	9	1	*SP
AKITA	46.22	348.1	8	45	23						10	35	PP
CANTON	46.74	309.0	8	27A	1	15	13	2			15	35	PS
NANKING	48.50	322.6	8	41A	1	15	42	6			10	32	PP

MACQUARIE I.	49.18	174.0	8	45K	0	15	50	4				
SAPPORO	49.23	350.5	8	47	?					12	0	
PHU-LIEN	51.01	302.3	8	59	0							
VLADIVOSTOK	51.53	342.0	9	1	-2	16	34	16		11	1	PP
Y.-SAKHLINSK	52.83	352.7	9	10	-3	16	50	14		12	16	PPP
MEDAN	53.25	278.6	9	18	2	17	11	29				
CHANGCHUN	54.45	337.1	9	23A	-2	16	56	-2		11	27	PP
PEKING	55.67	327.7	9	32A	-1	17	16	2		17	36	PS
KUNMING	56.14	305.1	9	37A	0	17	21	1		17	41	PS
SIAN	56.23	317.9	9	37A	0							
HONOLULU	56.41	60.0	9	37A	-2	17	28	4	9 53			
CHENGTU	57.74	311.6	9	47A	-1	17	42	1		18	5	PS
PETROPAVLOVK	58.82	5.2								10	53	PCP
PAOTOW	59.47	324.4	10	1A	1	18	7	3				
PORT BLAIR	60.65	286.6	10	38	30					12	14	PP
LANCHOW	60.71	316.9	10	8A	-1	18	27	7		12	27	PP
CHITTAGONG	64.37	297.9	10	31	-2							
MAGADAN	64.92	359.8	10	32	-4					23	30	SS
SHILLONG	65.36	301.3	10	39A	0	19	36	18				
ULAN-BATOR	65.94	329.0	10	43	0	19	28	3				
WILKES	66.78	196.7	10	53	5	19	34	-1				
LHASA	67.45	305.1	10	53	0	19	46	3		20	7	PS
CAPE HALLETT	67.69	173.8	10	54A	0	19	48	2		13	23	PP
CHATRA	69.76	301.1	11	10	3							
IRKUTSK	70.01	331.5	11	7A	-1							
BOKARO	70.10	297.7	11	21	12	20	54	39				
COLOMBO	72.27	279.0	11	18	-4	20	48	8				
MIRNY	72.65	200.9	11	22	-2				11 45	21	35	PS
SCOTT BASE	72.70	176.6	11	24K	0	20	51	6		11	34	PCP
AGRA	77.72	299.2	11	55A	2	21	56	16		14	57	PP
DEHRA DUN	78.42	302.3	12	1	4	21	46	-1				
POONA	79.86	289.9	12	3A	-2	22	18	15		27	49	SS
BOMBAY	80.88	290.1	12	9	-1	22	41	28		22	22	SKS
LAHORE	81.80	302.9	12	13	-2							
SEMIPALATNSK	82.32	322.4	12	15	-3	22	32	4				
COLLEGE	83.16	22.1	13	19A	57	22	29	-8		23	19	SCS
FRUNSE	84.05	314.0	12	26	-1	22	44	-1		23	5	SCS
BYRD STATION	84.42	169.9	12	28A	0	22	44	-5	12 39	28	7	SS
SOUTH POLE	84.46	180.0	12	27A	-2	22	45	-5	12 39	15	50	PP
WARSAK DAM	84.57	304.8	12	28A	-1							
SITKA	85.75	31.7	12	34K	-1							
KARACHI	87.18	296.1	12	41A	-1							
STALINABAD	87.55	308.9	12	43	-1	23	5	-14				
TASHKENT	87.61	311.7	12	40	-4	22	59	-21		16	8	PP
QUETTA	87.83	300.4	12	45A	0	23	6	-16				
ALBERNI	90.25	40.6	12	57	0							
BERKELEY	90.64	52.2	12	58A	0	23	45	-3	13 10	23	28	SKS
SHASTA	90.86	49.4	12	59A	0							
LICK	91.07	52.8	13	1A	1				13 13	16	40	PP
HORSESHOE B.	91.26	40.7	13	0	-1							
MINERAL	91.42	49.8	13	1A	-1							
FRESNO	92.48	53.5	13	7A	0							
RENO	92.72	50.7	13	8A	0	24	2	-4	13 18			
PASADENA	93.60	56.2	13	12A	0	24	4	-10	13 23	23	41	SKS
ASHKABAD	95.65	307.5	13	20	-1					26	6	PS
EUREKA	95.68	51.0	13	22A	1				13 45	16	58	PP
KHEYS	97.03	350.0								13	19	
HUNGRY HORSE	97.29	42.1	13	28A	-1					17	21	PP
BUTTE	98.29	44.4	13	32K	-1							
SALT LAKE C.	98.86	49.7	13	35A	-1							
BOZEMAN	99.36	44.8	13	38A	0							
TUCSON	99.67	58.4	13	41A	1	24	45	-20		17	42	PP
TUCSON TELE.	99.76	58.3	13	41A	1					17	42	PP
TANANARIVE	101.04	249.6	13	55	9					14	4	
RESOLUTE	101.54	14.4	13	45	-3	25	42	21		17	36	PP
GORIS	105.01	309.3				24	58	21		18	26	PP
RAPID CITY	105.05	46.0	14	3A	777					18	47	PP
APATITY	105.50	339.4				24	41	1		18	33	PP
MOSCOW	107.75	327.0								18	45	PP
SODANKYLA	107.91	340.4	14	13	777					18	29	PP
KIRUNA	109.63	342.2								18	58	PP
PULKOVO	109.99	332.5								18	57	PP
TACUBAYA	110.29	71.5	18	32	6					18	58	PP
SIMFEROPOL	112.95	316.6								19	22	PP
KSARA	114.08	304.5	18	34	0					19	33	PP
GRAHAMSTOWN	114.90	229.4	18	38	3							
SKALSTUGAN	114.96	341.1	18	35	0							
UPPSALA	115.45	336.1								19	36	PP

FLORISSANT	115.49	49.6							19 35	PP
ST. LOUIS 1	115.63	49.7	18	35K	-2				19 31	PP
IASI	116.53	320.6							20 0	PP
LWOW	117.59	324.4							19 53	PP
ISTANBUL UN.	117.68	313.7							19 56	PP
WARSAW	118.11	327.8							19 58	PP
KIMBERLEY	118.22	233.3	18	42K	0				29 0	
BUCHAREST	118.53	318.2				25	57	26	20 0	PP
HELWAN	118.59	300.9	18	43	1				20 0	PP
GOTEBORG	119.09	336.3	18	40	-3				18 55	
COPENHAGEN	120.23	334.4							20 18	PP
ASTRIDA	121.00	263.6	18	48	1					
UVIRA	121.47	262.5	18	50	2				20 13	PP
RUMANGABO	121.56	265.0	18	50	2				19 20	
HURBANOVO	121.90	324.6							19 33	
LWIRO	121.96	263.9	18	51	2					
POTSDAM	122.05	331.1	19	1	12				20 41	
BRATISLAVA	122.38	325.3	18	50	0				20 36	PP
COLLMBERG	122.75	330.2	18	49	-1					
PRUHONICE	122.76	328.2	18	50A	0				20 29	PP
OTTAWA	123.18	38.0	18	51A	0				19 13	
PLAUEN	123.67	329.8	18	50	-2				20 31	PP
JENA	123.68	330.5	18	51	-1				20 37	PP
COLUMBIA	124.05	52.4	18	55K	2					
SHAWINIGAN	124.34	35.5	18	54A	0				19 6	
SANTA LUCIA	124.52	137.3							20 49	
MUNSTER	124.85	333.4	18	54	-1					
SEVEN FALLS	125.12	34.0	18	54A	-1				19 6	
GEORGETOWN	125.25	45.5	18	56K	1					
BENSBERG	125.75	332.8	18	56	0				19 8	
STUTTGART	126.25	329.7	18	58	1				20 56	PP
DURHAM	126.27	340.8	18	45A	-12					
TUBINGEN	126.48	329.5	18	58	0					
FORDHAM	126.57	42.0	19	18	20				37 58	
RAVENSBURG	126.68	328.5	18	59	1					
EBINGEN	126.75	329.2	18	58	0					
STRASBOURG	127.09	330.3	18	59	0				21 0	PP
WINDHOEK	127.13	236.3	19	1	2					
CHUR	127.31	327.7	18	58	-1					
WESTON	127.46	39.1	19	1K	1					
BASLE	127.89	329.4	19	4	4					
KEW	128.50	337.6	19	1	-1				22 23	PKS
NEUCHATEL	128.56	329.3	19	2	0					
RATHFARNHAM	128.98	342.8	19	2	-1					
PARIS	129.40	333.6							22 30	PKS
MONACO	130.44	325.8	19	5	0				22 49	PKS
HUANCAYO	130.52	110.9	19	1A	-4				21 29	PP
HALIFAX	130.62	32.5	18	25	-41				22 28	PKS
CLERMONT-FD.	131.33	330.5	19	8	1				22 53	PKS
BANGUI	132.77	270.8	19	18	8					
BAGNERES	134.75	330.1	19	18	5				22 49	PKS
LA PAZ	135.33	120.1	19	18	4				22 0	PP
SAN JUAN	141.42	67.5	19	26A	0				22 26	PP
TAMANRASSET	142.75	300.8	19	23	-5				22 37	PP
ST. CLAUDE	146.09	69.5	19	51	17					
GRENADA	146.84	76.5	19	36	1					
FORT FRANCE	146.91	71.6	19	38	3				24 26	
ST. VINCENT	147.10	74.4	19	37	2					
TRINIDAD	147.21	79.0	19	39	3					
BARBADOS	148.71	73.9	19	42	4					
MBOUR	165.45	307.8	20	2	3				24 49	PP

DECEMBER 25 18.H 33.M 23.S EPICENTRE 26.94 54.07 DEPTH= 0.KM

A= 0.52391 B= 0.72283 C= 0.45059 D= 0.8097 E=-0.5869
G= 0.2644 H= 0.3648 K=-0.8927 HT= 2.8

SE= 1.38

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
KARACHI	11.69	92.5	2	52	1							
QUETTA	11.78	71.1	2	52	0	4	52	-13				
TIFLIS	16.60	335.0	3	57	2	7	5	5				
WARSAK DAM	16.63	60.7	3	55	-1							
MAKHACH-KALA	16.87	343.2	4	1	2	7	10	4				

KSARA	17.11	298.0	4	3	1	7	27	15	7	43 SS
LAHORE	18.27	70.6	4	15	-1					
BOMBAY	19.02	110.9	4	28	3	8	20	25		
NAMANGAN	20.18	41.6	4	38	0	8	22	2		
HELWAN	20.21	283.6	4	39	0	8	37	16		
SOTCHI	20.27	328.7	4	40	1					
DEHRA DUN	21.31	75.3	5	4	14				8	49
SIMFEROPOL	24.05	323.5	5	18	1	9	35	3		
ISTANBUL UN.	24.99	310.6	5	25	-1					
MOSCOW	31.14	342.0	6	23	1					
SHILLONG	33.85	83.6	6	44	-2					
PRUHONICE	37.93	318.1	7	21	1					
NURMIJARVI	39.07	337.3	7	27	-3					
COLLMBERG	39.35	319.4	7	32	0					
STUTTGART	40.84	314.5	7	43	-2					
UPPSALA	41.28	333.0	7	47K	-1					
APATITY	42.53	348.4	7	59A	1	14	22	0		
MUNSTER	42.73	318.6	8	0	0					
SODANKYLA	43.77	345.1	8	9	0				9	52 PP
TAMANRASSET	44.03	275.6	8	10	-1				9	41
SKALSTUGAN	45.51	335.3	8	22K	-1					
KEW	47.41	316.3	8	39	1					
COLLEGE	86.92	9.2	12	46	-2				13	10
SOUTH POLE	116.78	180.0	18	46	0					

DECEMBER 26 5.H 51.M 11.S EPICENTRE -22.13-179.46 DEPTH= 605.KM

DEPTH OF FOCUS= 0.090R

A=-0.92718 B=-0.00881 C=-0.37452 D=-0.0095 E= 1.0000
G= 0.3745 H= 0.0036 K=-0.9272 HT= 4.1

SE= 2.01

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	4.43	333.0	1	28A	-2	2	39	-2					
NOUMEA	13.06	266.6	2	53	4	5	13	8					
KARAPIRO	16.32	194.2	3	21K	0								
TUAI	16.87	189.2				6	5	-7					
TONGARIRO	17.55	193.0	3	34	2	6	34	11					
WELLINGTON	19.71	193.0				6	55	-4					
COBB RIVER	20.01	197.5				7	10	6					
KAIMATA	21.72	198.5				7	39	7					
GEBBIES PASS	22.49	195.1	4	16	-2	7	55	11			7	38	
BRISBANE	25.51	252.4	4	44A	0						10	23	
RIVERVIEW	28.36	239.3	5	17	8	9	14	-2					
CANBERRA	30.48	237.5	5	26A	-1				7	3			
CHARTERS TS.	32.02	267.4	5	37	-3	10	8	-4					
PORT MORESBY	34.45	286.2	5	59K	-1	10	45	-4	7	38	11	7	SCP
ADELAIDE	38.63	241.4	6	34	-1								
TRUK	40.70	313.1	6	58	7								
GUAM	49.84	311.9	8	0	-1								
SCOTT BASE	56.17	183.5	8	46	0						10	43	PP
BYRD STATION	63.27	170.3	9	31	-2				11	34	38	21	PKPPKP
SOUTH POLE	68.01	180.0	10	1	-1	18	19	4	12	2	38	4	PKPPKP
BAGUIO CITY	70.11	297.9	10	13	-1								
MATUSIRO	70.73	324.9	10	14	-4								
LEMBANG	71.66	270.0	10	24K	1						20	55	
NANKING	79.92	310.6	11	9	0								
LICK	80.36	43.2	11	12	1								
PASADENA	80.78	47.5	11	12	-1								
FRESNO	81.20	44.5	11	15	0								
SHASTA	81.95	40.1	11	20	1								
MINERAL	82.21	40.8	11	21	1								
CHANGCHUN	82.87	323.2	11	23K	-1								
BOULDER CITY	84.08	47.5	11	30	1								
TUCSON	84.98	52.4	11	35	1				13	47			
TUCSON TELE.	85.11	52.4	11	36	1				13	43			
EUREKA	85.23	44.0	11	36	1				13	45			
SALT LAKE C.	88.59	44.6	11	51	0								
KUNMING	88.91	297.5	11	54K	2								
COLLEGE	90.09	12.9	11	55	-3				14	2	39	37	PKPPKP
CHENGTU	90.23	303.1	12	0	1								
HUNGRY HORSE	91.25	37.4							14	17			
RESOLUTE	109.73	16.3									17	21	PP
WARSAK DAM	117.33	297.8	17	37	-1								

QUETTA	120.58	292.8	17	45	1						
KIMBERLEY	124.28	205.9	17	23K	-28						
SODANKYLA	131.88	346.8	18	4	-2				20	37	SKP
SKALSTUGAN	137.82	352.2	18	6	-11						
NURMIJARVI	138.09	342.4	18	3	-14				20	53	SKP
UPPSALA	140.42	346.5	18	15	-7						
UVIRA	142.20	231.2	18	24	-2						
ASTRIDA	142.35	232.9	18	24	-2						
LWIRO	143.27	232.3	18	27	0						
RUMANGABO	143.49	234.0	18	29	1						
GOTEBORG	143.51	349.7	18	22A	-6						
LWOW	146.73	331.9	18	35	2						
RATHFARNHAM	148.45	7.8	18	35	0						
COLLMBERG	149.31	344.6	18	41	5				21	0	
HALLE	149.37	346.0	18	38	1						
MUNSTER	149.71	351.3	18	43	6						
JENA	149.99	346.0	18	43	6				19	4	
PRAGUE	150.05	342.0	18	45	8						
PRUHONICE	150.09	341.7	18	44A	6	21	4				
STUTTGART	152.54	347.5	18	42	1				19	3	
TAMANRASSET	175.35	278.9	19	3	2	21	21		24	37	PP

DECEMBER 28 5.H 34.M 38.S EPICENTRE 30.01 79.94 DEPTH= 0.KM

A= 0.15154 B= 0.85403 C= 0.49767 D= 0.9846 E=-0.1747
G= 0.0869 H= 0.4900 K=-0.8674 HT= 1.8

SE= 1.95

	DELTA DEG.	AZ. DEG.	P M	P S	P O-C S	S M	S S	S O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
DEHRA DUN	1.66	281.1	0	36	6								
AGRA	3.33	210.9	0	58K	4						1	42	
LAHORE	5.06	289.0	1	20	1	2	17	-2					
CHATRA	7.11	114.7	1	48	1	3	11	1					
BOKARO	8.08	138.3	2	0	-1	3	25	-9			2	11	PPP
WARSAK DAM	8.16	301.3	2	3	1	3	36	)					
LHASA	9.65	89.4	2	24A	1	4	12	-1					
QUETTA	11.25	274.1	2	42	-3	4	41	-11			2	48	PP
SHILLONG	11.45	109.9	2	45A	-2	4	47	-10			2	53	PP
KARACHI	12.15	252.9	2	59	1	5	15	0					
VIZIANAGRAM	12.26	164.1	2	58	0	5	6	-11					
STALINABAD	12.55	315.7	3	0	-2	5	16	-8					
HYDERABAD	12.60	186.5	2	57	-6	5	12	-13			3	9	PP
POONA	12.70	207.2	3	OK	-4	5	15	-13			3	8	PP
BOMBAY	12.82	211.9	3	3	-3	5	28	-2			3	11	PP
CHITTAGONG	13.10	122.8	3	7	-3	5	26	-11			3	24	PPP
TOCKLAI	13.46	100.4	3	4	-10								
FRUNSE	13.54	343.0	3	13	-2	5	42	-6					
MADRAS	16.93	179 2	3	59	0	6	54	-13			4	12	PP
YUMEN	17.31	49.0	4	4	0								
SINING	19.39	64.4	4	32	3								
ASHKABAD	19.55	299.6	4	31A	0	8	13	6			9	23	
SEMIPALATNSK	20.37	0.6	4	38	-2	8	20	-4					
WUWEI	20.38	61.2	4	41	0								
KUNMING	20.75	98.3	4	43A	-1	8	27	-5					
CHENGTU	20.78	82.1	4	44A	-1	8	31	-2					
LANCHOW	20.89	66.9	4	47A	1	8	40	5					
PORT BLAIR	21.78	144.3	4	59	4	8	51	-1			5	24	PP
TIENSHUI	22.27	71.5	5	3	3								
COLOMBO	22.99	180.2	5	12	5	9	17	3					
YINCHUAN	23.29	61.7	5	14	4								
SIAN	24.86	72.7	5	25A	0	9	49	3					
PAOTOW	26.61	58.5	5	37A	-4	10	18	3					
ULAN-BATOR	27.34	41.6	5	49	1								
IRKUTSK	28.59	32.0	6	OA	1						6	45	PP
GORIS	29.05	298.1	6	4	1	10	55	0					
SVERDLOVSK	30.04	338.7	6	12	0	11	12	2			7	8	PP
CANTON	30.54	95.1	6	16A	-1	11	18	0					
TIFLIS	30.58	302.1	6	18	1	11	19	0			12	57	PCS
PEKING	31.12	61.4	6	22A	0	11	27	0					
HONG KONG	31.58	95.9	6	28K	2	11	30	-5					
MEDAN	31.72	142.4	6	28A	1	12	8	31					
NANKING	33.24	76.4	6	40A	0	11	59	-2					
ZO-SE	35.39	77.6	7	OA	1								
KSARA	37.38	287.5	7	16	0	13	4	0			8	45	PP

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CHANGCHUN	38.33	56.1	7	23A	-1	13	20	1		
SIMFEROPOL	38.77	305.6	7	27A	0					
MOSCOW	39.35	323.1	7	32	0				13	24 SCP
MANILA	40.72	103.0	7	44	0	14	33	38		
HELWAN	41.86	282.5	7	54	1	14	10	-2		
ISTANBUL UN.	42.36	299.3	7	58A	1	14	15	-4		
NAGASAKI	42.41	73.0	7	58	1	15	15	55		
VLADIVOSTOK	43.09	57.6	8	3	0	14	34	4		
CINE	43.29	294.4	8	4	-1					
FOCSANI	43.69	306.2				14	41	2	9	53
BACAU	43.94	307.4	8	26	16	14	55	13		
BUCHAREST	44.45	304.3	8	16A	2	14	50	1	17	43 SS
PULKOVO	44.47	326.6	8	14	0	14	45	-5	17	58 SS
CAMPULUNG	45.21	305.5	8	24	4	15	4	4		
LWOW	46.05	311.8	8	27	0	15	20	7	10	15 PP
APATITY	46.47	337.4	8	31A	1	15	14	-4	10	23 PCP
SOFIA	46.51	302.0	8	31	1	15	50	31	11	32 PP
ATHENS	46.68	295.5	8	31	-1				10	3 PCP
NURMIJARVI	47.40	326.5	8	33	-4	15	24	-8		
TIMISOARA	47.88	306.2	8	44	3	15	46	8	10	39 PP
WARSAW	48.10	315.0	8	42A	-1	15	38	-4	15	54 PPS
BELGRADE	48.47	305.0	8	48A	2	15	46	-1	17	1
SKALNATE PL.	48.49	310.8	9	4	18					
MATUSIRO	48.53	66.1	8	45	-1	15	54	6	10	13
KRAKOW	48.70	312.0	8	48	0	15	46	-4	10	39 PP
SODANKYLA	48.74	335.6	8	47	-1	15	49	-2	10	41 PP
TIKSI	49.26	18.4				15	55	-3	10	12 PCP
RACIBORZ	49.82	312.0	8	57	1				11	3 PP
HURBANOVO	49.87	309.1	9	0	3	16	12	6	10	46 PP
BRATISLAVA	50.60	309.6	9	4	2	16	25	9	11	4 PP
Y.-SAKHLINSK	50.63	52.0	9	3	1					
UPPSALA	50.72	324.7	9	2A	-1	16	14	-4	11	0 PP
KIRUNA	51.14	335.2	9	6A	0	16	22	-2	20	20 SS
KHEYS	51.43	354.0	9	8	0				11	2
ZAGREB	51.54	306.6	9	9	0	16	28	-1		
PRUHONICE	52.17	312.0	9	14A	0	16	40	2	11	14 PP
PRAGUE	52.25	312.1	9	15K	0	16	44	5	11	14 PP
REGGIO CALA.	52.94	297.0	9	20	0	16	45	-4		
POTSDAM	52.98	315.1	9	21	1	16	49	0	11	22 PP
MESSINA	52.99	297.2	9	19A	-1	16	56	7		
COLLMBERG	53.08	313.7	9	20	-1	16	49	-1	10	28 PCP
TRIESTE	53.11	306.6	9	19A	-2	16	49	-2	11	19 PP
COPENHAGEN	53.26	319.2	9	23	1	16	55	2	11	24 PP
GOTEBORG	53.51	321.8	9	23A	-1				11	23 PP
SKALSTUGAN	53.66	329.1	9	24A	-1					
PLAUEN	53.68	312.8	9	22	-3	16	54	-5	11	19 PP
HALLE	53.72	314.0	9	22	-4	16	54	-5	11	23 PP
JENA	54.00	313.4	9	28	0	16	55	-8	11	29 PP
SONNEBERG	54.29	312.7	9	29	-1	17	5	-2	10	54
ROME	54.60	302.2	9	29A	-3	17	8	-3		
MAGADAN	55.03	36.0	9	36	1				17	26 PS
PRATO	55.24	304.8	9	39	2	17	18	-2		
RAVENSBURG	55.64	309.7	9	40	0					
STUTTGART	55.77	310.9	9	40A	-1	17	27	0	11	45 PP
CHUR	55.84	308.6	10	38	57					
TUBINGEN	55.89	310.7	9	42	1					
EBINGEN	56.01	310.3	9	42	0					
MUNSTER	56.36	314.9	9	44	-1					
PAVIA	56.37	306.7	9	47K	2	17	56	21	9	57
STRASBOURG	56.74	310.9	9	48	1				11	56 PP
BENSBERG	56.77	313.8	9	48	0				10	20
WITTEVEEN	56.83	316.0	9	48	0					
BASLE	57.04	309.7	9	50A	0				11	19
RUMANGABO	57.40	246.5	9	53	1	17	57	9		
NEUCHATEL	57.55	309.1	9	52	-1				17	49
TANANARIVE	57.79	216.8	9	55A	0					
DE BILT	57.83	315.3	10	0	5	17	52	-2	10	45 PCP
ASTRIDA	57.85	245.0	9	56	1					
MONACO	57.87	305.3	9	53	-2				10	47 PCP
LWIRO	58.37	246.0	10	0	1				25	51
PARIS	60.13	311.9	10	11K	0	18	27	3	12	27 PP
CLERMONT-FD.	60.40	308.4	10	12	-1					
KEW	61.31	315.4	10	16A	-3	18	35	-4	12	30 PP
DURHAM	61.33	319.2	10	18K	-1				12	41 PP
NORD	61.47	350.4	10	19A	-1					
ALGIERS UNI.	62.96	298.6	10	28	-2					
TORTOSA	63.59	303.6	10	38	4	18	58	-10		
RATHFARNHAM	64.38	318.4	10	39K	-1				12	55 PP
ALICANTE	65.10	301.3	10	43	-1	19	21	-5	13	6 PP

RELIZANE	65.20	298.3	10	43A	-2				12 59 PP
TAMANRASSET	66.01	283.3	10	49	-1	19	34	-3	13 15 PP
ALMERIA	67.10	300.3	10	54	-3	19	50	-1	13 24 PP
TOLEDO	67.19	303.9	10	57A	-1	19	52	0	13 21 PP
GRANADA	67.83	301.0	11	2K	0	20	2	3	11 28 PCP
MALAGA	68.59	300.8	11	6	0	20	5	-3	
SERRA PILAR	69.95	306.5	11	15K	0				
TRUK	70.65	92.5	11	20K	1				
LISBON	71.29	304.3	11	24K	1				
THULE	71.98	352.5	11	25	-2				
PORT MORESBY	75.48	110.0	11	48A	1	21	28	1	11 58 PCP
RESOLUTE	75.52	358.6	11	45A	-2	21	26	-2	14 39 PP
PIETERMZBURG	75.79	223.1	11	50	1				
COLLEGE	78.40	18.8	12	2	-2	22	6	7	38 50 PKPPKP
KIMBERLEY	78.64	227.3	12	3	-2				
GRAHAMSTOWN	80.72	222.9	12	16	0				
CHARTERS TS.	80.89	119.3	12	18A	1	22	24	-1	
ADELAIDE	85.08	135.1	12	38	0				
HERMANUS	85.94	226.3							23 11
SITKA	88.30	18.4	12	55	1				
MBOUR	88.76	285.8	13	0	4	23	46	3	
BRISBANE	90.25	121.8	13	4	1	23	35	-21	
CANBERRA	91.89	130.2	13	11	0				
RIVERVIEW	92.48	127.9	13	15	1	24	19	3	
MIRNY	96.77	174.8				24	5	-6	
SEVEN FALLS	98.82	340.3	13	44	1				17 39 PP
SHAWINIGAN	99.90	341.3	13	48	1				
HUNGRY HORSE	101.00	9.4	13	51	-1				18 0 PP
OTTAWA	101.75	342.7	13	57	1				18 6 PP
EUREKA	109.30	13.0	17	53	777				19 10 PP
TUCSON TELE.	117.17	10.1	18	49	2				19 59 PP
TUCSON	117.24	10.3	18	49	2				
CAPE HALLETT	118.39	159.7	18	50	1				29 48 PKKP
SOUTH POLE	119.85	180.0	18	51A	-1	25	42	-7	20 13 PP
BYRD STATION	129.25	175.7	19	0	-10				21 16 PP
LA PAZ	147.85	287.5	19	47A	3				19 55 PKP2
HUANCAYO	150.92	302.7	19	55	7				

DECEMBER 29 22.H 38.M 44.S EPICENTRE 2.49 99.02 DEPTH= 173.KM

DEPTH OF FOCUS= 0.022R

A=-0.15657 B= 0.98672 C= 0.04318 D= 0.9876 E= 0.1567
G=-0.0068 H= 0.0426 K=-0.9991 HT= 7.1

SE= 2.18

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S
MEDAN	1.13	342.8	0	30K	2							
PORT BLAIR	11.05	325.9	2	36	2	4	26	-9				
DJAKARTA	11.62	137.9	2	38K	-3	4	49	1				
LEMBANG	12.63	137.2	2	50K	-4	5	17	5				
COLOMBO	19.57	283.6	4	16	0	7	56	13			4	56 PP
MADRAS	21.36	300.2	4	34	0	8	25	9			4	59 PP
KUNMING	22.70	8.6	4	49	2	8	44	5			5	17 PP
SHILLONG	23.95	343.9	5	26A	27	9	35	35				
HONGKONG	24.58	35.6	5	11	6	9	16	5				
MANILA	24.78	59.8	5	7	0							
BAGUIO CITY	25.33	55.5	5	14	2	9	26	3				
CHATRA	26.73	335.9	5	26	1	10	24	38				
LHASA	28.04	345.1	5	36K	-1	10	8	1			6	10
CHENGTU	28.41	9.1	5	38	-2	10	12	-1				
POONA	29.36	304.6	5	48	-1	10	34	6				
BOMBAY	30.39	304.3				10	46	2			6	45 PP
AGRA	31.70	322.6	6	8	-1	11	3	-2				
SIAN	32.92	15.2	6	49	29	12	17	53				
LANCHOW	33.72	7.0	6	56	30	12	28	52				
DEHRA DUN	34.07	326.5	6	30	1						12	35
LAHORE	37.11	323.8	6	53	-2							
KARACHI	38.51	310.0	7	2	-5							
PAOTOW	39.20	13.3	7	45	33	13	58	59				
WARSAK DAM	40.49	323.8	7	22	-1							
QUETTA	41.00	315.5	7	28	1							
NAMANGAN	45.57	330.9	8	2	-2							
ULAN-BATOR	45.76	7.4	8	25	20							

PORT MORESBY	49.39	104.5	8	34K	0	15	24	-2	9	24	19 9	SS
MATUSIRO	49.53	42.0	8	34	-1	15	28	0			9 54	PCP
CHARTERS TS.	51.46	118.0	8	49	0	15	56	2				
ADELAIDE	52.63	138.7	8	58K	0							
TRUK	52.84	82.6	8	59	0							
RABAUL	53.53	97.0	9	4	-1							
TANANARIVE	54.88	244.9	9	15A	1						10 9	
MELBOURNE	58.42	138.1	9	40	1							
BRISBANE	59.89	123.8	9	50	1	17	43	-3				
CANBERRA	59.97	133.7	9	50K	0						10 51	
TIFLIS	62.23	316.7	10	3	-2							
KSARA	66.44	305.9	10	33	1				11	8	11 26	*SP
MIRNY	69.02	182.6	10	50	2	19	44	6				
ASTRIDA	69.45	266.3	10	51	0						11 26	
HELWAN	69.46	300.9	10	49	-2	19	44	1				
RUMANGABO	69.77	267.7	10	54	1						11 29	
UVIRA	70.11	265.4	10	56	1						11 30	
LWIRO	70.35	266.7	11	7	10	19	56	3				
TIKSI	71.60	9.6	11	3	-1							
MOSCOW	72.17	328.6	11	5	-2							
ISTANBUL UN.	73.36	312.1	11	12K	-2						12 7	PCP
CINE	73.41	308.4	11	13	-2						11 49	PCP
MAWSON	74.37	193.6	11	21	1							
GRAHAMSTOWN	76.78	235.1	11	35	1							
KIMBERLEY	77.42	240.0	11	39K	2							
APATITY	78.55	339.1	11	42	-1							
NURMIJARVI	80.16	331.1	11	49	-3							
KARAPIRO	80.92	128.8	11	56A	0						12 34	
SODANKYLA	80.98	338.1	11	55	-1						12 31	
TARANTO	82.12	310.3	12	16	14						14 56	
ZAGREB	83.36	315.7	12	43A	34							
KIRUNA	83.40	338.0	12	8	-1				12	47		
UPPSALA	83.52	329.8	12	8	-1				12	44		
PRUHONICE	84.54	319.8	12	14	0						13 6	
TRIESTE	84.92	315.4	12	14	-2						13 6	
COLLMBERG	85.57	321.1	12	56	36							
ROME	85.77	311.6	12	48	27						14 40	
CAPE HALLETT	86.73	163.1	12	26	1						24 16	PPS
SCOTT BASE	87.82	168.7	12	31A	1	23	0	4			24 10	PS
STUTTGART	88.02	318.5	12	32	1						13 23	
TAMANRASSET	92.27	292.8	12	52	1						17 7	
SOUTH POLE	92.47	180.0	12	53	1	23	8	-30				
RELIZANE	95.42	306.1	13	5	-1						15 9	
COLLEGE	97.40	23.3	13	16	1						16 36	
BYRD STATION	100.30	173.7	13	30	2				13	58		
RESOLUTE	102.49	3.8	13	38	1	25	36	34			33 16	PSPS
HUNGRY HORSE	121.77	25.3	18	34	1							
EUREKA	127.31	33.9	18	46	2							
RAPID CITY	129.54	20.7	18	54	6						19 35	
SEVEN FALLS	129.80	351.0	18	50	1							
TUCSON TELE.	135.35	36.7	18	53	-6						19 40	
HUANCAYO	168.97	210.3	19	53	8							

DECEMBER 30 8.H 38.M 6.S EPICENTRE -35.38-106.53 DEPTH= 61.KM

DEPTH OF FOCUS= 0.004R

A=-0.23245 B=-0.78338 C=-0.57644 D=-0.9587 E= 0.2845
G= 0.1640 H= 0.5526 K=-0.8171 HT= -0.0

SE= 2.27

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SANTA LUCIA	29.54	96.7	6	37	36	12	35	105					
HUANCAYO	36.55	58.3	7	4	2	12	54	15			8	30	PP
LA PAZ	39.01	71.2	7	22A	0	13	26	10			8	54	PP
LA PLATA	39.42	103.9				13	19	-4			8	59	PP
BYRD STATION	45.05	183.2	8	11	0	15	0	15			10	37	
BOGOTA	50.12	44.2	8	51	0	16	8	11			19	44	SS
FUQUENE	51.01	43.9	8	58	0	16	19	10					
CAPE HALLETT	54.65	201.9	9	20	-5	17	11	13			10	29	PCP
SOUTH POLE	54.80	180.0	9	27	1	17	9	9	9	36	39	17	PKPPKP
TACUBAYA	54.92	8.5	9	33	6						11	28	PP
SCOTT BASE	55.02	195.0	9	28K	1	17	3	0			10	24	PCP
TONGARIRO	60.30	241.0	10	3	-2								
ROXBURGH	62.05	232.3				18	54	19					

TRINIDAD	62.49	51.6	10	19	0					
ONERAHI	62.54	244.2	10	21	1					
SAN JUAN	65.78	42.5	10	38	-3				11	19
TUCSON	67.40	356.1	10	49	-2					
TUCSON TELE.	67.48	356.2	10	49	-2					
SUVA	67.73	263.1	10	57	4	19	54	10	14	22 PP
PASADENA	70.02	349.7	11	6	-1	20	22	10	21	0 SCS
BOULDER CITY	71.42	352.9	11	14	-2					
FAYETTEVILLE	72.03	10.5	11	10K	-9					
FRESNO	72.84	348.9	11	22A	-2					
COLUMBIA	73.03	22.0	11	24	-1					
LICK	73.70	347.5	11	28A	-1					
BERKELEY	74.33	347.1	11	30	-3					
EUREKA	75.00	352.4	11	36	-1					
RENO	75.55	349.4	11	39A	-1					
UKIAH	75.73	346.7	11	39	-2					
SALT LAKE C.	75.94	355.8	11	40	-2					
LARAMIE	76.32	0.7	11	43	-1					
MINERAL	76.63	348.2	11	48	2					
MAWSON	77.02	175.9	11	48	0					
SHASTA	77.10	347.7	11	46	-2					
MIRNY	77.29	187.9				21	41	7		
BERMUDA	78.00	35.2				21	54	13		
RAPID CITY	79.15	2.4	12	5	5					
RIVERVIEW	79.96	235.7	12	2	-2	22	13	11		
CANBERRA	80.52	233.4	12	7K	0					
BOZEMAN	80.78	356.8	12	9	1					
BUTTE	81.21	355.7	12	10	-1					
BRISBANE	82.36	241.8				22	31	3		
HUNGRY HORSE	83.63	355.0	12	22	-1					
SEATTLE	83.86	349.3	12	26A	2					
VICTORIA	84.88	348.8	12	33	4					
OTTAWA	85.10	21.2	12	31	1					
HORSESHOE B.	85.69	349.1	12	34	1					
SHAWINIGAN	87.03	22.6	12	41	1					
ADELAIDE	87.28	228.3	12	44	3					
SEVEN FALLS	88.16	23.5	12	47	2					
CHARTERS TS.	91.79	244.0	12	59	-3					
PORT MORESBY	97.65	252.8	13	29	0	25	9	23	26	17 PS
MBOUR	97.82	78.0							31	58 SS
RESOLUTE	110.05	3.3				26	42	13	18	48 PP
TAMANRASSET	120.33	82.4	18	44	0				20	14 PP
TANANARIVE	120.66	151.2							20	21 PP
ALGIERS UNI.	124.29	66.3							19	41
MATUSIRO	128.50	291.5	19	5	5				38	34 PSPS
COLLMBERG	134.55	50.0	19	12	0					
PRUHONICE	135.44	52.0	19	15	2				22	58 PKS
YAKUTSK	136.26	325.4	19	21	6					
BRATISLAVA	136.98	54.8	19	18	2					
SODANKYLA	138.40	25.2	19	18	-1					
NURMIJARVI	140.10	35.5	19	24	2					
APATITY	140.58	22.9	19	25	2					
CINE	143.71	72.8	19	26	-2				22	12
HELWAN	144.28	86.7	19	28	-1					
ISTANBUL UH.	144.89	67.1	19	30	0				19	37 PKP2
PEKING	146.14	290.8	19	32	0				23	16 PP
MOSCOW	148.22	39.0	19	41	5					
SIMFEROPOL	148.71	60.1	19	43	7					
KSARA	149.14	81.9	19	40	3				19	51 PKP2
KUNMING	152.83	255.8	19	53	10				23	41 PP
TIFLIS	156.76	65.6	19	59	11					
SHILLONG	161.40	243.3	19	51	-2					
POONA	163.21	181.2	20	6	11					
KARACHI	168.99	148.1	20	3	3					
QUETTA	172.45	131.6	20	4	2					
NAMANGAN	174.23	13.7	20	4	2					
WARSAK DAM	177.90	130.5	20	4	1					

DECEMBER 31 1.H 45.M 57.S EPICENTRE -23.06-178.47 DEPTH= 394.KM

DEPTH OF FOCUS= 0.057R

A=-0.92072 B=-0.02460 C=-0.38946 D=-0.0267 E= 0.9996
G= 0.3893 H= 0.0104 K=-0.9210 HT= 3.9

SE= 1.73

	DELTA DEG.	AZ. DEG.	P M	P S	O-C S	S M	S S	O-C S	*PP M	*PP S	SUPP. M	SUPP. S	
SUVA	5.68	328.7	1	29A	0	2	39	-1					
NOUMEA	13.94	270.7	3	9K	6	5	39	8					
ONERAHI	14.11	204.6	3	6	1	5	42	8			4	42	
KARAPIRO	15.68	197.8	3	13A	-8	6	9	5					
TUAI	16.13	192.4	3	25	-1	6	20	7			14	33	SCS
TONGARIRO	16.88	196.2	3	32	-2	6	34	7					
WELLINGTON	19.03	195.8	3	55	0	7	8	2			14	44	SCS
COBB RIVER	19.43	200.3	4	0	1	7	17	4					
KAIMATA	21.15	201.1	4	17	1	7	51	9					
GERBIES PASS	21.85	197.5	4	21	-1	8	0	6					
ROXBURGH	24.54	201.0				8	43	5			15	9	SCS
BRISBANE	26.12	254.4	5	1K	0	9	6	3					
RIVERVIEW	28.69	241.3	5	24	0	9	45	1					
CANBERRA	30.78	239.3	5	43K	1								
CHARTERS TS.	32.90	268.5	6	0K	0	10	49	0					
RABAUL	34.01	299.0	6	7	-3				7	23			
MELBOURNE	34.55	236.3	6	24	10	11	12	-2			7	11	
PORT MORESBY	35.58	286.8	6	22K	-1				7	40	8	24	*SP
ADELAIDE	39.00	242.5	6	51	0	12	19	-2					
TRUK	41.99	312.8	7	13	-2								
CAPE HALLETT	49.67	184.5	8	14A	-1	14	58	5			9	31	PCP
GUAM	51.13	311.6	8	24	-2				9	51	12	40	SCP
SCOTT BASE	55.30	183.8	8	57K	1	16	19	11			10	17	PCP
SOUTH POLE	67.08	180.0	10	14	0	18	36	1	11	37	12	41	PP
MIRNY	68.51	205.5	10	22	0	18	51	-1					
BAGUIO CITY	71.35	297.7	10	37	-2								
MATUSIRO	72.02	324.5	10	41K	-2				12	8			
ZO-SE	79.01	310.6	11	22K	0								
MAWSON	79.01	200.0	11	23	1				12	53			
HONGKONG	79.55	299.6	11	26K	1	20	56	3			23	54	*SS
BERKELEY	80.37	41.8	11	30A	1				12	55			
LICK	80.42	42.6	11	30K	0				12	57			
PASADENA	80.74	46.9	11	33	2	21	13	8	12	57	26	37	SS
FRESNO	81.23	43.9	11	34	0				13	1			
SHASTA	82.08	39.6	11	38K	0				13	6			
MINERAL	82.33	40.2	11	39K	0				13	5			
RENO	82.91	41.7	11	42K	0				13	8			
BOULDER CITY	84.04	46.9	11	50	2				13	16			
CORVALLIS	84.06	36.1	11	49K	1								
CHANGCHUN	84.15	322.8	11	48K	-1								
TUCSON	84.83	51.9	11	53	1				13	22			
TUCSON TELE.	84.96	51.9	11	53	0				13	20			
EUREKA	85.27	43.5	11	55	1				13	21	17	3	
VICTORIA	86.57	33.1	12	1K	1								
HORSESHOE B.	87.20	32.5	12	3K	0								
PEKING	87.40	315.7	12	4K	0	22	16	6	13	34	21	53	SKS
SALT LAKE C.	88.61	44.2	12	10	0								
SIAN	89.44	307.8	12	14K	0	22	37	9					
KUNMING	90.14	297.1	12	18K	1	22	41	7			22	11	SKS
COLLEGE	90.79	12.6	12	19	-1				13	45			
BUTTE	90.99	39.5	12	21	0				13	48			
HUNGRY HORSE	91.44	37.0	12	22	-1				13	52	29	42	PKKP
CHENGTU	91.50	302.7	12	24K	1	22	54	8			22	17	SKS
LARAMIE	92.98	46.1	12	30	0				14	0			
LANCHOW	93.99	307.5	12	35	0	23	17	9			22	29	SKS
RAPID CITY	95.81	44.5	12	48	5				14	18			
RESOLUTE	110.37	16.4	17	44A	-1	25	28	101			33	23	SS
OTTAWA	114.81	49.2	17	53	-1								
THULE	116.97	14.4	17	56	-2								
SEVEN FALLS	118.37	47.7	18	0	-1								
WARSAK DAM	118.57	297.2	18	0	-1								
GRAHAMSTOWN	119.06	203.9	18	4	2								
QUETTA	121.77	292.1	18	9	2				19	40			
KIMBERLEY	123.83	204.7	18	13	2								
APATITY	131.29	344.3	18	24	-2								
WINDHOEK	132.18	199.6	18	29	2						21	20	
SODANKYLA	132.99	347.0	18	27	-2						21	25	SKP
KIRUNA	133.71	350.2	18	26	-4								
SKALSTUGAN	138.86	352.7	18	32	-8								
NURMIJARVI	139.25	342.7	18	32	-8						21	40	SKP
UPPSALA	141.53	347.0	18	38	-7								
UVIRA	142.31	229.1	18	46	-1						21	52	SKP
ASTRIDA	142.50	230.8	18	46	-1						21	49	SKP
COLLMBERG	150.44	345.3	18	59	0						20	40	PP
HALLE	150.49	346.7	19	1	2				20	32	19	9	PKP2

MUNSTER	150.76	352.3	19 6	6		20 38	
ISTANBUL UN.	150.80	314.4	19 4A	4		20 31	PKP2
JENA	151.10	346.8	19 0	0		20 45	PP
PRUHONICE	151.25	342.4	19 1	1	20 43	21 50	
PLAUEN	151.38	345.8	19 3	3		20 43	PP
KEW	151.60	2.4	19 8	7			
BENSBERG	151.81	352.4	19 9	8		20 19	
BRATISLAVA	152.04	337.5	19 8	7	20 44		
HELWAN	152.53	290.7	19 10	8	20 46		
CINE	153.00	308.5	19 3	0	20 54		
STUTTGART	153.63	348.5	19 4	0	20 45	21 10	*SPKP
TUBINGEN	153.88	348.6	19 12	8			
EBINGEN	154.24	348.5	19 13	9			
PARIS	154.29	358.5	19 6	1			
ZAGREB	154.44	336.1	19 5	0			
TRIESTE	155.37	339.1	19 3	-3	20 45	19 37	PKP2
CHUR	155.40	346.7	19 7	1			
ATHENS	155.87	313.1	18 59	-8			
MBOUR	160.48	113.0	20 0	48		23 43	PP
MESSINA	160.72	324.7				21 26	
GRANADA	165.25	16.3	20 23A	66			
RELIZANE	167.33	3.6	19 19	1	20 58	25 15	*PPP
TAMANRASSET	176.31	266.4	19 24K	1	21 9	24 58	PP

DECEMBER 31 3.H 45.M 15.S EPICENTRE 30.09 79.86 DEPTH= 0.KM

A= 0.15265 B= 0.85312 C= 0.49889 D= 0.9844 E=-0.1761
G= 0.0879 H= 0.4911 K=-0.8667 HT= 1.8

SE= 2.53

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S	
DEHRA DUN	1.58	278.6	0 35K	5	0 57	6			
AGRA	3.37	209.1	0 57K	2				1 41	
LAHORE	4.97	288.4	1 21	3	2 36	19		1 30	P*
CHATRA	7.21	115.0	1 57	7				4 2	
WARSAK DAM	8.05	301.1	2 4A	3	3 33	-1			
BOKARO	8.19	138.2	2 41	38	4 33	55			
LHASA	9.72	89.9	2 25A	1	4 10	-6			
HOWRAH	10.68	132.7			4 40	1			
QUETTA	11.17	273.7	2 44	0	4 48	-3		2 53	PP
SHILLONG	11.55	110.1	2 46A	-3	4 46	-14			
KARACHI	12.10	252.5	2 59	2	5 12	-2		3 10	PP
HYDERABAD	12.67	186.1	3 0A	-5	5 14	-14		6 48	
NAMANGAN	12.74	330.7	3 3	-2					
POONA	12.74	206.7	3 2A	-4	5 16	-13		3 6	PP
BOMBAY	12.85	211.4	3 5	-2	5 28	-4		3 15	PP
CHITTAGONG	13.21	122.9	3 11	-1					
MADRAS	17.01	178.9	4 0	-1	6 59	-11		7 19	SS
KODAIKANAL	19.89	186.9						5 21	
KUNMING	20.84	98.4	4 46A	0					
CHENGTU	20.84	82.3	4 44	-2					
LANCHOW	20.92	67.1	4 46A	-1					
SIAN	24.91	72.8	5 26A	0					
PAOTOW	26.63	58.7	5 43	1					
ULAN-BATOR	27.33	41.8	5 50	1					
PEKING	31.15	61.5	6 23	0					
HONG KONG	31.66	96.0			11 11	-26			
KSARA	37.29	287.4	7 22	6				15 23	
JERUSALEM	38.12	284.2						14 25	
MOSCOW	39.25	323.1	7 32	0					
HELWAN	41.77	282.3	7 54	1				17 30	
CINE	43.19	294.3	7 32	-33					
YAKUTSK	45.30	30.5	8 22	0					
APATITY	46.36	337.4	8 31K	1					
NURMIJARVI	47.29	326.4	8 37	0					
SODANKYLA	48.64	335.6	8 48	0				10 45	PP
TIKSI	49.20	18.4	8 50	-2					
UPPSALA	50.61	324.7	9 2A	-1					
KIRUNA	51.03	335.1	9 6	0					
PRUHONICE	52.07	312.0	9 15	1				11 13	
MESSINA	52.89	297.1	9 23	3					
COLLMBERG	52.97	313.7	9 20	-1					
GOTEBORG	53.41	321.7	9 24A	0					
SKALSTUGAN	53.55	329.1	9 25	0					
PLAUEN	53.57	312.7	9 19	-6					

HALLE	53.62	314.0	9 21	-5	11 29 PP
JENA	53.89	313.3	9 27	-1	9 48
STUTTGART	55.66	310.9	9 41	0	
TUBINGEN	55.78	310.6	9 41	0	
EBINGEN	55.90	310.2	9 42	0	
MUNSTER	56.25	314.9	9 44	-1	
PARIS	60.02	311.9	10 12K	1	10 33
SETIF	61.24	297.3	10 24	5	
RELIZANE	65.10	298.2	10 44	-1	11 26 PCP
TAMANRASSET	65.92	283.3	10 49	-1	12 59 PP
THULE	71.89	352.5	11 24	-3	
RESOLUTE	75.43	358.6	11 46A	-2	
PORT MORESBY	75.57	110.0	11 49	0	
COLLEGE	78.35	18.8	12 3	-1	15 7
CHARTERS TS.	80.99	119.2	12 23	5	13 22
RIVERVIEW	92.58	127.9			14 54
HUNGRY HORSE	100.93	9.4			17 53 PP
HUANCAYO	150.81	302.7	20 1	12	

DECEMBER 31 10.H 30.M 47.S EPICENTRE 46.79 154.11 DEPTH= 40.KM

DEPTH OF FOCUS= 0.001R

A=-0.61820 B= 0.30000 C= 0.72652 D= 0.4366 E= 0.8997
G=-0.6536 H= 0.3172 K=-0.6871 HT= -4.2

SE= 2.34

	DELTA DEG.	AZ. DEG.	P M S	O-C S	S M S	O-C S	*PP M S	SUPP. M S
SEVERO-KUR.	4.10	18.0	1 1	-1	1 47	-2		1 21
KURILSK	4.62	252.5	1 12	3				2 4
NEMURO	6.96	243.3	1 41	-1	2 53	-8		2 6
PETROPAVLOVK	6.99	23.1	1 40	-2				
Y.-SAKHLINSK	7.81	275.3	1 57	3				
KUSIRO	7.88	244.6	1 55	0	3 16	-8		
UGLEGORSK	8.41	290.2	2 6	4	3 48	11		
OBIHIRO	8.66	247.4	2 6	0				
ASAHIGAWA	8.81	254.3	2 10	2				
HIROO	8.93	243.6	2 9	0	3 42	-8		
URAKAWA	9.33	244.3	2 15	0	3 54	-6		
SAPPORO	9.79	252.3	2 21	0				4 26
OKHA	9.86	317.5	2 23	1	4 17	4		
TOMAKOMAI	9.90	249.0	2 25	2	4 12	-2		
KLYUCHI	10.40	21.0	2 28	-2				
MORI	10.76	249.1	2 35	1	4 25	-10		
HAKODATE	10.83	247.3	2 33	-2	4 23	-13		
HATINOHE	11.05	240.1	2 35	-3	4 30	-12		
MORIOKA	11.79	237.7	2 45	-3	4 51	-9		
MIZUSAWA	12.20	235.8			4 59	-10		
ISINOMAKI	12.58	233.0	2 56	-3	5 7	-12		
SENDAI	12.93	233.5	3 0	-4	5 20	-7		
MAGADAN	12.94	352.4	3 4	0				
HUKUSIMA	13.53	233.0	3 10	-2	5 20	-22		
ONAHAMA	13.89	229.7			5 39	-11		
UTUNOMIYA	14.74	231.1	3 20	3	6 12	2		
KAKIOKA	14.82	229.6	3 27	-1	5 58	-14		
KUMAGAYA	15.30	231.3			6 17	-6		
TOKYO C.M.O.	15.46	229.3			6 19	-8		
NAGANO	15.57	235.2	3 43	5				
TITIBU	15.59	231.5			6 21	-9		
OIWAKE	15.62	233.6	3 49	10	6 39	8		
MATUSIRO	15.65	234.9	3 37A	-2	6 36	5		
MATUMOTO	16.00	234.6	3 44	0				
KOHU	16.13	231.8	3 45	0	6 34	-8		
VLADIVOSTOK	16.14	264.9	3 44	-1				
IBUKISAN	17.52	235.8	4 6	3				
HIKONE	17.68	235.8	4 5	0				
CHANGCHUN	20.42	272.2	4 33	-3				
TIKSI	27.61	343.0	5 44	-2				
PEKING	28.17	270.0	5 52	1				
NANKING	30.70	254.0	6 13	0				
ULAN-BATOR	31.62	289.7	6 21	0				
PAOTOW	32.14	275.1	6 26	0				
COLLEGE	35.69	38.4	6 57	1				7 10
LANCHOW	38.59	272.5	7 22A	1				

HONG KONG	40.36	246.7	7 47	12	12 56	-44				
BAGUIO CITY	41.08	233.8	8 1	20						
CHENGTU	41.55	265.4	7 46A	1	13 56	-2				
KUNMING	46.02	260.3	8 22	1						
KHEYS	46.32	346.4	8 12	-12					19 1	SSS
RESOLUTE	50.58	18.7	8 56	-1					16 33	*SS
RABAUL	50.80	182.5	8 58	0			9 19			
LHASA	51.07	273.8	9 2	2						
SHILLONG	53.07	269.2	9 13	-2						
THULE	54.12	11.3	9 21	-2						
FRUNSE	54.24	297.0	9 24	0						
SVERDLOVSK	54.27	317.5	9 23	-1						
APATITY	57.58	337.0	9 46K	-2						
SHASTA	57.92	63.1	9 50	0						
HUNGRY HORSE	58.24	51.6	9 52	-1						
SODANKYLA	59.46	339.1	9 58	-3			10 29			
BERKELEY	59.70	65.6	10 2	-1						
RENO	60.20	62.8	10 6	0						
STALINABAD	60.35	295.9	10 5	-2						
LICK	60.42	65.8	10 7	-1						
BUTTE	60.44	53.1	10 10	2						
KIRUNA	60.53	341.6	10 7	-1						
LAHORE	61.16	286.4	10 10	-3						
WARSAK DAM	61.43	290.3	10 14A	0						
BOZEMAN	61.49	52.7	10 16	1						
FRESNO	61.92	65.2	10 18	0						
EUREKA	62.56	60.7	10 22	0			10 41		10 52	*SP
SCORESBY SD.	63.01	358.5	10 38	13						
SALT LAKE C.	64.16	57.3	10 33	0						
PASADENA	64.62	66.5	10 35	-1						
MOSCOW	64.80	326.0	10 33	-4						
NURMIJARVI	65.46	335.2	10 39	-2					11 18	
BOULDER CITY	65.50	63.0	10 42	1						
SKALSTUGAN	65.92	342.4	10 48	4						
RAPID CITY	66.74	49.9	10 54	5						
CHARTERS TS.	66.86	188.0	10 48	-2						
QUETTA	66.87	289.9	10 50	0						
LARAMIE	67.35	53.4	10 52	-1						
KIZYL-ARVAT	67.50	303.4	10 55	1						
UPPSALA	67.94	338.0	10 55	-2						
TUCSON	70.46	63.6	11 12	0						
TUCSON TELE.	70.46	63.5	11 12	0						
TIFLIS	71.85	312.0	11 22	2						
RACIBORZ	76.25	332.5							11 57	PCP
COLLMBERG	76.72	336.1	11 49	0						
JENA	77.44	336.8	12 4	11			12 26			
PRUHONICE	77.46	334.6	11 54	1					12 38	*SP
MUNSTER	77.51	339.5	12 6	13						
BRATISLAVA	78.27	332.2	12 10	13			12 32			
SEVEN FALLS	78.55	29.5	12 8	9						
STUTTGART	80.05	337.3	12 10	3						
KSARA	82.42	312.3	12 20	1						
CINE	83.08	319.7	12 22	-1						
TAMANRASSET	105.16	330.1	13 3	777			13 33			
BYRD STATION	135.06	165.7	19 14	-1						

The scanned images of the bulletins of the International Seismological Summary (ISS) have been obtained as part of a global earthquake relocation project (Villaseñor et al., 1997) initiated with funding from the US National Science Foundation through grant EAR-9725140 and collected by SGA Storia Geofisica Ambiente (Bologna) on behalf of the Istituto Nazionale di Geofisica e Vulcanologia (Rome), in the frame of Euroseismos project.

A digital hypocenter file of the ISS (Villaseñor and Engdahl, 2005) can be obtained from the USGS web site: http://earthquake.usgs.gov/scitech/iss/

Villaseñor, A., and E.R. Engdahl, *A digital hypocenter catalog for the International Seismological Summary,* Seism. Res. Lett., vol. 76, no. 5, pp. 554-559, 2005.

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