

THE UNIVERSITY OF OKLAHOMA
SCHOOL OF GEOLOGY AND GEOPHYSICS

SEISMOLOGICAL BULLETIN

NO. 1

APRIL - DECEMBER, 1964

LEONARD EARTH SCIENCES OBSERVATORY

LEONARD, OKLAHOMA, U.S.A.

(STATION CODE: TUL)

LOCATION

Latitude: $35^{\circ} 54.6'$ N

Longitude: $95^{\circ} 47.6'$ W

Elevation: 260 m

INSTRUMENTS

Short-period Seismographs: 3-component, portable Benioff

$T_s = 1.0$ sec, $T_g = 0.75$ sec, $V = 45$ K at 1 Hz

Long-period Seismographs: 3-component, Press-Ewing

$T_s = 22$ sec, $T_g = 97$ sec

Note: All constants are approximate because precise calibration
was not performed during this period.

① Director's name
needed

② editor

③ locals

④ New pub. time in last

⑤ Rep. cover of all
instruments

The observatory is also equipped with the following instruments besides seismographs (dates in parentheses indicate data available):

- Earth-tide gravimeter (5 April, 1962 - present) ✓
- Helium magnetometer (20 February, 1962 - 7 September, 1965) ✓
- Magnetic variograph (28 July, 1961 - present) ✓
- Telluric currents (17 April, 1962 - present) ✓
- Microbarograph (24 December, 1961 - present) ✓
- Riometer (8 November, 1962 - present) ✓
- Electric field (23 July, 1963 - present) ✓
- Anemograph (27 March, 1962 - present) ✓
- Thermograph (2 January, 1962 - present) ✓

Please address all communications to:

School of Geology and Geophysics
The University of Oklahoma
Norman, Oklahoma 73069 U.S.A.

HEADING:	TIME MO DY HR MN SEC (ORIGIN	PHASE LAT.	SP LP NEZNEZ LONG.	FIRST MOTION EPICENTER	DIST. DEG.	AZIMUTH FROM STA. EPI. DEPTH KM	RES. SEC. MAG.)
EXAMPLE:	04 02 01 31 06.0 (01 11 55.0	EPKP 5.90N	XXX 95.70E	D NEAR COAST OF N SUMATRA	129.87	345.6 132	15.3 5.20)
FIELD:	11 / 12 21 / 22	/ 13 / 23	/ 14 / 24	/ 15 / 26	/ 16 / 25	/ 17 / 26	/ 18

FIELD

Example above

11	Time of onset in month, day, hours, minutes and seconds (GMT)*	April 2, 01 ^h 31 ^m 06 ^s 0
12	Phase	ePKP
13	Components recorded: SP for short-period, LP for long period, N for North-South, E for East-West and Z for vertical	SPN, SPE & SPZ
14	Direction of first motion: C for compression and D for dilatation**	dilatation
15	Epicenter distance in degrees	129.78°
16	Azimuth from station to epicenter in degrees	345.6°
17	Azimuth from epicenter to station in degrees	15.3
18	Residual from Jeffreys-Bullen Tables in seconds	late by 1.0 second
21	Origin time in hours, minutes and seconds	01 ^h 11 ^m 55 ^s 0
22	Epicenter latitude in degrees N or S	5.90°N
23	Epicenter longitude in degrees E or W	95 70°E
24	Epicenter location	Near coast of North Sumatra
25	Depth of focus in km	132 km
26	Magnitude	5.2

Data in parentheses (Fields 21-26) are from PDE cards, courtesy of USC&GS.

* Time accuracy was maintained within ± 0.5 sec.

** Not available for 1964.

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TIME						PHASE	SP LP	FIRST	DIST.	AZIMUTH FROM			RES.
MO	DY	HR	MN	SEC			NEZNEZ	MOTION	DEG.	STAT.	EPIC.	SEC	
(ORIGIN						LAT.	LONG.	EPICENTER		DEPTH KM			MAG.)
4	1	0	8	48.0		IP	XX		40.30	323.6	104.1	-1.7	
		(	0	1	10.6	60.40N	146.40W	PRINCE WILLIAM SOUND, ALASKA			10	4.90)	← when from
4	1	3	13	25.0		IP	XX		40.08	323.2	104.0	-1.5	
		(	3	5	49.9	60.10N	146.10W	PRINCE WILLIAM SOUND, ALASKA			15	4.40)	
4	1	3	31	9.0		EP	XX		42.26	318.2	95.8	-1.2	
		(	3	23	17.2	57.20N	151.30W	PRINCE WILLIAM SOUND, ALASKA			25	5.10)	
4	1	4	34	36.0		IP	XX		41.21	155.8	340.5	.3	
		(	4	26	52.7	2.80S	80.10W	ECUADOR			35	4.50)	
4	1	4	57	19.0		EP	X		42.32	318.2	95.7	-1.0	
		(	4	49	26.0	57.20N	151.40W	ALASKA AFTERSHOCK			20	4.80)	
4	1	5	40	38.0		EP	XX		39.98	322.9	103.9	-.7	
		(	5	33	2.9	59.90N	146.00W	ALASKA AFTERSHOCK			15	4.50)	
4	1	6	24	.0		EP	X		40.59	323.2	103.1	-1.8	
		(	6	16	21.0	60.20N	147.10W	ALASKA AFTERSHOCK			15	4.80)	
4	1	6	47	28.0		EP	XX		40.44	323.6	103.8	-.8	
		(	6	39	48.5	60.40N	146.70W	ALASKA AFTERSHOCK			10	4.40)	
4	2	1	31	6.0		EPKP	XX		137.03	343.1	13.7	3.7	
		(	1	11	55.0	5.90N	95.70E	NEAR COAST OF N SUMATRA			132	5.20)	
4	2	10	5	53.0		EP	XX		43.02	317.0	93.7	-1.5	
		(	9	57	54.5	56.50N	152.80W	ALASKA AFTERSHOCK			20	4.90)	
4	2	11	48	57.0		IP	XX		41.57	320.7	99.1	-1.8	
		(	11	41	10.7	58.80N	149.60W	ALASKA AFTERSHOCK			20	5.40)	
4	2	22	41	57.0		EP	X		39.13	323.1	105.5	-2.6	
		(	22	34	31.7	59.80N	144.30W	ALASKA AFTERSHOCK			20	5.00)	
4	3	4	31	53.0		EPKP	X		138.64	341.1	15.3	-6.9	
		(	4	12	41.9	4.00N	96.60E	NEAR WEST COAST OF SUMATRA			70	5.80)	
4	3	8	46	11.0		EP	XX		39.27	322.7	104.9	-2.4	
		(	8	38	42.8	59.60N	144.70W	ALASKA AFTERSHOCK			10	5.40)	
4	3	8	54	11.0		EP	XX		41.91	319.3	97.3	-7.6	
		(	8	46	27.0	57.90N	150.50W	ALASKA AFTERSHOCK			15	5.50)	

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Centre

TIME					PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	ALTA
MO	DY	HR	MN	SEC		NEZNEZ	MOTION	DEG.	STAT.	EPIC.
(ORIGIN					LAT.	LONG.	EPICENTER		DEPTH KM	MAG.)
4	3	13	55	3.0	IP	X		47.20	156.7	341.0
		(13	46	38.0	8.70S	78.70W	NEAR COAST OF CENTRAL PERU			82 4.60)
4	3	22	41	22.0	IP	XXXXX		41.16	325.2	104.2
		(22	33	42.2	61.60N	147.60W	ALASKA AFTERSHOCK			40 5.70)
4	4	4	42	36.0	IP	X		40.32	323.4	103.9
		(4	34	56.9	60.30N	146.50W	ALASKA AFTERSHOCK			5 5.00)
4	4	5	1	36.0	IP	XX		40.38	323.1	103.4
		(4	54	1.7	60.10N	146.70W	ALASKA AFTERSHOCK			40 5.60)
4	4	6	48	35.0	EP	XX		24.43	160.6	344.0
		(6	43	20.2	12.50N	87.70W	OFF WEST COAST OF NICARAGUA			41 4.30)
4	4	7	1	2.0	EP	XX		40.11	323.7	104.5
		(6	53	25.9	60.40N	146.00W	ALASKA AFTERSHOCK			15 4.80)
4	4	8	48	28.0	IP	XX		42.91	317.0	93.9
		(8	40	29.8	56.50N	152.60W	ALASKA AFTERSHOCK			15 5.30)
4	4	9	18	54.0	IP	XX		43.00	317.6	94.2
		(9	10	55.1	56.90N	152.70W	ALASKA AFTERSHOCK			15 5.90)
4	4	17	54	13.0	IP	XXXXX		43.90	316.7	92.1
		(17	46	8.6	56.30N	154.40W	ALASKA AFTERSHOCK			25 5.70)
4	4	18	7	48.0	EP	XX		43.96	316.8	92.1
		(17	59	43.3	56.40N	154.50W	ALASKA AFTERSHOCK			25 5.50)
4	5	1	30	13.0	IP	XX		43.40	316.6	92.8
		(1	22	13.3	56.20N	153.50W	ALASKA AFTERSHOCK			25 5.40)
4	5	1	49	44.0	IP	XX		43.28	316.6	93.0
		(1	41	45.0	56.20N	153.30W	ALASKA AFTERSHOCK			35 5.20)
4	5	11	30	37.0	IP	XX		78.22	170.8	350.0
		(11	18	38.9	41.90S	83.70W	OFF COAST OF SOUTHERN CHILE			33 5.30)
4	5	19	35	57.0	IP	XX		40.40	323.3	103.5
		(19	28	18.1	60.20N	146.70W	ALASKA AFTERSHOCK			15 5.80)
4	7	13	37	11.0	IPKP	XX		129.05	305.9	41.1
		(13	18	18.9	.10N	123.20E	NORTHERN CELEBES			150 5.90)

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TIME						PHASE	SP LP	FIRST	DIST.	AZIMUTH	FR.	RES.
MO	DY	HR	MN	SEC			NEZNEZ	MOTION	DEG.	STAT.	EPIC.	SEC
(ORIGIN						LAT.	LONG.	EPICENTER		DEPTH	KM	MAG.)
4	7	19	36	19.0		IP	XX		42.47	315.9	93.6	-1.1
					(19	28	24.7	55.70N 151.90W ALASKA AFTERSHOCK			20	5.60)
4	8	3	43	26.0		EP	X		19.85	177.5	357.9	-.9
					(3	38	56.1	16.00N 94.90W NEAR COAST OF OAXACA MEXICO			33	4.30)
4	8	8	27	52.0		EPKP	X		147.81	29.5	336.3	1.7
					(8	8	11.8	6.80S 68.90E CHAGOS ARCHIPELAGO REGION			33	5.70)
4	8	11	10	9.0		IP	XXXXX		78.95	319.1	49.4	-1.2
					(10	58	9.1	45.80N 150.80E KURILE ISLANDS			40	5.50)
4	8	19	40	57.0		IP	XX		40.41	322.3	102.6	-1.2
					(19	33	19.0	59.60N 147.00W ALASKA AFTERSHOCK			15	5.10)
4	8	19	57	53.0		IP	XX		40.06	323.7	104.6	-.9
					(19	50	16.8	60.40N 145.90W ALASKA AFTERSHOCK			10	5.30)
4	9	4	20	19.0		IP	XX		22.94	165.2	347.7	-1.0
					(4	15	23.0	13.50N 89.90W EL SALVADOR			89	5.00)
4	9	13	13	49.0		IP	XX		39.96	322.5	103.5	-1.8
					(13	6	15.2	59.60N 146.10W ALASKA AFTERSHOCK			15	5.10)
4	9	22	4	36.0		IP	XX		58.80	152.8	337.0	-2.9
					(21	54	42.1	18.50S 71.50W SOUTHERN PERU			39	5.20)
4	10	1	15	52.0		IP	XX		42.03	320.0	97.8	-.8
					(1	8	.2	58.40N 150.60W ALASKA AFTERSHOCK			15	5.50)
4	12	1	32	27.0		IP	XXXXX		42.70	317.2	94.3	-1.2
					(1	24	31.2	56.60N 152.20W ALASKA AFTERSHOCK			22	5.60)
4	12	12	55	52.0		EP	XX		42.20	317.3	95.1	-1.6
					(12	48	2.2	56.60N 151.30W ALASKA AFTERSHOCK			33	5.10)
4	13	8	42	7.0		IP	XX		79.54	41.0	311.0	-1.7
					(8	30	3.6	45.30N 18.10E NORTHERN YUGOSLAVIA			33	.00)
4	13	12	33	1.0		EP	XX		38.83	322.6	105.5	2.3
					(12	25	36.0	59.40N 143.90W ALASKA AFTERSHOCK			40	4.90)
4	13	14	12	51.0		IP	XX		42.25	318.8	96.3	-2.0
					(14	5	.1	57.60N 151.20W ALASKA AFTERSHOCK			25	5.50)

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TIME					PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	RES.
MO	DY	HR	MN	SEC		NEZNEZ	MOTION	DEG.	STAT.	EPIC. SEC
(ORIGIN					LAT.	LONG.	EPICENTER		DEPTH KM	MAG.)
4	13	21	33	34.0	IP	XX		43.69	318.4	93.8 -2.9
			(21	25	33.0	57.50N 153.90W	ALASKA AFTERSHOCK			30 5.50)
4	13	22	1	11.0		X				
4	13	22	1	16.0		XX				
4	14	1	16	.0	IP	XX		74.22	320.0	53.0 -1.0
			(1	4	28.8	49.40N 155.50E	KURILE ISLANDS			60 5.20)
4	14	23	3	28.0	IP	XX		43.04	319.2	95.5 -2.4
			(22	55	31.8	58.00N 152.60W	ALASKA AFTERSHOCK			30 5.40)
4	15	8	31	16.0	IP	XX		43.31	318.6	97.6 1.9
			(8	23	27.4	57.40N 149.50W	ALASKA AFTERSHOCK			15 4.90)
4	16	3	27	28.0	IP	XX		42.31	318.2	95.7 -2.4
			(3	19	34.8	57.20N 151.40W	ALASKA AFTERSHOCK			10 5.00)
4	17	4	57	27.0	EP	X		43.07	316.8	93.5 -3.2
			(4	49	30.5	56.40N 152.90W	ALASKA AFTERSHOCK			25 5.30)
4	17	9	17	1.0	IP	XX		42.37	318.9	96.2 -1.4
			(9	9	7.8	57.70N 151.40W	ALASKA AFTERSHOCK			20 5.40)
4	18	20	16	22.0	IP	X		43.50	316.4	92.5 -2.3
			(20	8	19.7	56.10N 153.70W	ALASKA AFTERSHOCK			15 4.90)
4	19	5	24	55.0	IP	X		78.00	170.9	350.2 -2.3
			(5	13	1.6	41.70S 83.90W	OFF COAST OF SOUTHERN CHILE			33 5.50)
4	20	12	4	22.0	IP	XX		40.97	324.9	104.3 -1.3
			(11	56	41.6	61.40N 147.30W	ALASKA AFTERSHOCK			30 5.70)
4	21	5	9	16.0	IP	XX		41.05	325.0	104.3 -.8
			(5	1	35.7	61.50N 147.40W	ALASKA AFTERSHOCK			40 5.40)
4	21	4	42	47.0	IP	X		17.56	187.3	6.2 1.4
			(4	38	44.2	18.40N 98.10W	PUEBLA MEXICO			70 4.50)
4	22	9	55	8.0	IP	XX		45.17	43.6	270.0 -1.6
			(9	46	54.2	56.10N 34.90W	NORTH ATLANTIC OCEAN			33 4.80)
4	23	3	51	49.0	EPKP	XX X		125.13	291.6	49.3 1.5
			(3	32	50.3	5.30S 134.00E	ARU ISLANDS REGION			33 6.40)

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TIME						PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	RES.
MO	DY	HR	MN	SEC			NEZNEZ	MOTION	DEG.	STAT.	EPIC.
(ORIGIN						LAT.	LONG.	EPICENTER		DEPTH KM	MAG.)
4	23	15	4	25.0		IP	XX		42.60	318.3	95.3 -1.7
(14 56 30.9						57.30N	151.90W	ALASKA AFTERSHOCK			25 5.30)
4	24	1	22	5.0		IP	XX		4.90	159.5	340.6 -3.1
(1 20 55.0						31.30N	93.80W	TEXAS-LOUISIANA BORDER RGN.			33 3.70)
4	24	3	58	30.0		EP	X		39.15	322.6	104.9 -1.1
(3 51 5.0						59.50N	144.50W	ALASKA AFTERSHOCK			33 5.20)
4	24	6	14	44.0		IPKP	XX		117.13	284.2	52.1 1.3
(5 56 10.1						5.10S	144.20E	NE NEW GUINEA			106 6.30)
4	24	7	35	3.0		IP	XX		4.60	158.3	339.4 1.3
(7 33 52.6						31.60N	93.80W	TEXAS-LOUISIANA BORDER RGN.			33 3.70)
4	24	7	48	28.0			XX				
4	24	14	45	23.0		IP	XXXXX		23.38	162.6	345.6 -.5
(14 40 28.3						13.30N	88.80W	NEAR COAST OF EL SALVADOR			158 5.10)
4	24	20	13	52.0			XX				
4	25	9	51	.0		EP	XX		39.45	323.2	105.0 .2
(9 43 30.7						59.90N	144.90W	ALASKA AFTERSHOCK			30 5.00)
4	26	14	18	53.0		IPKP	XX		144.46	322.6	29.7 -.5
(13 59 27.7						5.80S	105.00E	SOUTHERN SUMATRA			90 5.60)
4	27	21	2	36.0			XX				
4	27	21	12	11.0			XX				
4	28	0	31	56.0		IP	X		4.70	158.8	339.9 -.5
(0 30 46.0						31.50N	93.80W	TEXAS-LOUISIANA BORDER			33 3.40)
4	28	21	19	48.0		IP	X		4.96	160.9	341.9 -1.1
(21 18 35.0						31.20N	93.90W	TEXAS-LOUISIANA BORDER			33 .00)
4	29	4	33	48.0		IP	X		86.66	42.6	314.9 -.1
(4 21 6.7						39.30N	23.70E	AEGEAN SEA			33 5.10)
5	1	3	20	49.0			XX				
5	1	6	9	28.0			XX				

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TIME					PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	RES.
MO	DY	HR	MN	SEC		NEZNEZ	MOTION	DEG.	STAT. EPIC.	SEC
(ORIGIN					LAT.	LONG.	EPICENTER		DEPTH KM	MAG.)
5	2	5	35	13.0	IPKP	XX		143.90	327.3	26.0 -1.0
	(	5	15	51.1	4.00S	102.80E	SOUTHERN SUMATRA		106	5.40)
5	2	16	23	3.0	EP	XXXXX		79.41	319.1	49.0 -1.4
	(	16	11	.2	45.50N	150.30E	KURILE ISLANDS		35	5.70)
5	5	3	36	46.0	I	XX		59.09	149.8	334.6 .5
	(	3	26	46.1	17.70S	68.90W	WESTERN BOLIVIA		33	4.90)
5	7	4	12	18.0	EP	XX		57.91	313.2	71.3 -3.1
	(	4	2	28.7	51.60N	177.30W	ANDREANOF ALEUTIAN ISLANDS		25	5.00)
5	7	6	4	29.0	IPKP	XX		124.65	66.8	311.6 3.2
	(	5	45	29.5	4.00S	34.90E	TANGANICA		33	6.40)
5	7	8	11	6.0	IP	XXXXX		88.88	321.4	41.5 -.4
	(	7	58	14.3	40.40N	139.00E	OFF COAST OF N HONSHU JAPAN		33	6.20)
5	7	20	25	40.0	IP	XX		88.81	321.5	41.5 -1.1
	(	20	12	49.3	40.50N	139.00E	OFF W COAST OF HONSHU JAPAN		33	5.90)
5	8	21	42	4.0	IP	XX		39.08	324.8	107.4 -5.3
	(	21	34	40.6	60.80N	143.60W	ALASKAN AFTERSHOCK		35	5.40)
5	8	23	50	.0	IP	XX		53.10	312.3	77.0 -2.5
	(	23	40	44.1	52.20N	169.50W	ANDREANOF ALEUTIAN ISLANDS		20	5.20)
5	9	2	11	45.0		XX				
5	9	22	35	38.0		XX				
5	14	13	58	18.0	I	XX		29.94	7.8	195.2 -3.6
	(	13	52	14.4	65.30N	86.50W	MELVILLE PENINSULA, CANADA		33	4.50)
5	15	10	22	57.0	IP	XX		24.20	163.6	346.5 -1.4
	(	10	17	45.9	12.40N	89.00W	OFF COAST OF EL SALVADOR		53	4.40)
5	15	12	16	2.0	E	XX		26.90	157.6	341.6 -3.3
	(	12	10	25.4	10.50N	85.70W	NEAR COAST OF COSTA RICA		33	4.50)
5	15	19	44	14.0	EP	XX		15.53	258.7	68.7 -.9
	(	19	40	35.0	31.50N	113.70W	GULF OF CALIFORNIA		33	5.00)
5	16	14	52	44.0	EP	XX		42.14	96.5	318.8 -.9
	(	14	44	54.0	57.60N	151.00W	ALASKA AFTERSHOCK		33	5.40)

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TIME					PHASE	SP LP	FIRST	DIST.	AZIMUTH	FR.	RES.
MO	DY	HR	MN	SEC		NEZNEZ	MOTION	DEG.	STAT.	EPIC.	SEC
(ORIGIN					LAT.	LONG.	EPICENTER		DEPTH KM MAG.)		
5	17	0	57	35.0	I	XXXXX		38.24	322.8	106.7	-1.3
(0 50 17.9					59.40N	142.70W	ALASKA AFTERSHOCK			35	5.10)
5	17	4	50	13.0	IP	XXXXX		47.00	313.4	85.4	-.8
(4 41 44.0					53.90N	159.70W	SOUTH OF ALASKA			33	5.50)
5	17	19	34	58.0	IP	XXXXX		48.04	72.3	289.1	-.6
(19 26 20.6					35.20N	35.90W	NORTH ATLANTIC OCEAN			33	5.60)
5	18	1	19	45.0		XX					
5	19	4	22	20.0	IP	X		18.19	167.7	349.6	-4.0
(4 18 5.0					18.00N	91.80W	TABASCO MEXICO			33	4.10)
5	19	10	51	29.0	IP	XX		74.41	319.1	49.0	-.2
(10 39 24.8					45.50N	150.30E	KURILE ISLANDS			33	5.40)
5	19	23	11	4.0	EP	XXXX		39.21	154.8	339.8	-1.3
(23 3 41.8					.70S	80.20W	NEAR COAST OF EQUADOR			54	5.40)
5	21	15	44	5.0	EP	XX		43.60	320.6	95.7	-1.9
(15 36 1.5					59.00N	153.50W	ALASKA AFTERSHOCK			15	5.30)
5	21	22	37	18.0	IP	XXXXX		21.16	146.9	332.3	-.4
(22 32 33.9					17.50N	83.90W	CARIBBEAN SEA			33	4.90)
5	23	11	26	45.0	IP	XX		4.72	81.1	264.5	-1.5
(11 25 34.2					36.50N	90.00W	SOUTHEASTERN MISSOURI			18	4.50)
5	24	18	12	1.0	IP	XX		63.08	154.9	338.0	-.3
(18 1 34.8					23.20S	71.60W	OFF COAST OF N CHILE			33	4.50)
5	25	20	3	53.0	IPKP1	XX		152.97	349.8	8.4	.1
(19 44 7.0					9.10S	88.90E	INDIAN OCEAN			33	5.50)
5	26	11	13	26.0	IP	XXX		108.31	146.9	307.6	.0
(10 59 12.3					56.20S	27.80W	SANDWICH ISLANDS			120	7.60)
5	27	4	27	25.0	EP	XX		21.32	173.9	354.9	3.6
(4 22 38.0					14.60N	93.50W	OFF COAST OF CHIAPAS MEXICO			63	4.40)
5	27	11	13	6.0	EP	XX		35.66	138.9	327.5	-2.4
(11 6 22.0					6.80N	73.10W	NORTHERN COLOMBIA			139	5.00)
5	28	12	44	51.0	EP	X		75.23	101.9	307.4	-.3
(12 33 10.2					.80S	24.70W	MID-ATLANTIC OCEAN			33	5.20)

TIME					PHASE	SP LP		FIRST MOTION	DIST. DEG.	AZIMUTH FR.		STAT.	EPIC. DEPTH KM	FR. MAG.
MO	DY	HR	MN	SEC		NEZ	NEZ			STAT.	EPIC.			
(ORIGIN)					LAT.	LONG.		EPICENTER						
5	28	12	59	3.0	IP		X		52.87	154.2	338.7		-3.9	
		(12	49	57.5	13.40S	74.90W		SOUTHERN PERU					103	5.20)
5	28	16	25	54.0	IP		X		42.08	320.6	98.2		-1.8	
		(16	18	4.2	58.80N	150.60W		ALASKA AFTERSHOCK					25	5.40)
5	29	10	25	12.0	I		XX		40.20	323.4	103.9		-1.5	
		(10	17	34.5	60.20N	146.30W		ALASKA AFTERSHOCK					5	5.60)
5	30	3	25	53.0	IP		XX		41.13	321.9	100.9		-2.6	
		(3	18	8.3	59.50N	148.50W		ALASKA AFTERSHOCK					1	5.50)
5	30	14	43	45.0	IP		XX		90.87	317.3	42.9		.1	
		(14	30	45.3	36.20N	141.10E		NEAR E COAST HONSHU, JAPAN					49	5.40)
5	31	0	52	54.0	IP		XXXXX		82.61	319.4	46.6		-1.9	
		(0	40	36.4	43.50N	146.80E		KURILE ISLANDS					48	6.30)
5	31	10	36	15.0	IP		XX		28.58	118.6	311.0		-.3	
		(10	30	25.0	19.20N	69.40W		DOMINICAN REPUBLIC					83	5.00)
6	2	16	16	52.0	IP		XX		39.15	322.9	105.3		-.3	
		(16	9	23.5	59.70N	144.40W		ALASKA AFTERSHOCK					15	5.10)
6	3	4	33	15.0	IP		X		18.87	194.9	12.6		-.9	
		(4	28	54.7	17.50N	100.80W		NEAR COAST GUERRERO MEXICO					22	4.70)
6	5	9	58	10.0	EP		XX		40.11	323.7	104.5		-1.8	
		(9	50	35.0	60.40N	146.00W		ALASKA AFTERSHOCK					15	5.20)
6	5	22	14	52.0	EP		XX		42.78	319.4	96.0		.3	
		(22	6	53.0	58.10N	152.10W		ALASKA AFTERSHOCK					15	5.00)
6	6	19	18	26.0	EP		X		64.60	198.4	16.7		-1.8	
		(19	7	51.4	26.60S	114.40W		EASTER ISLAND REGION					33	5.80)
6	7	20	21	31.0	EP		X		71.08	154.4	336.0		-2.3	
		(20	10	15.9	30.40S	67.60W		LA RIOJA PROVINCE ARGENTINA					29	5.20)
6	10	22	35	26.0	EPKP		X		122.62	305.9	41.3		2.9	
		(22	16	44.8	5.00N	127.40E		TALAUD ISLANDS REGION					146	5.50)
6	10	23	33	12.0	E		XX		43.77	320.7	95.5		-1.2	
		(23	25	9.1	59.10N	153.80W		ALASKA AFTERSHOCK					33	5.10)

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TIME						PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	RES.
MO	DY	HR	MN	SEC			NEZNEZ	MOTION	DEG.	STAT. EPIC.	SEC
(ORIGIN						LAT.	LONG.	EPICENTER		DEPTH KM	MAG.)
6	11	3	19	.0			X				
6	11	3	20	52.0	IP		XX		50.68	329.1	88.6 -2.9
		(	3	11	56.6	65.50N	168.10W	BERING STRAIT			33 4.90)
6	14	12	28	56.0	EP		XX		95.16	34.6	324.3 -.4
		(	12	15	31.3	38.00N	38.50E	SOUTHEASTERN TURKEY			8 .00)
6	16	4	14	40.0	I		XXX		90.40	319.9	41.6 -.7
		(	4	1	44.3	38.30N	139.10E	NEAR W COAST OF HONSHU JAPAN			57 6.10)
6	20	17	16	40.1			XX				
6	20	19	39	44.0	IP		XX		19.04	209.0	24.5 -.9
		(	19	35	23.0	18.80N	105.40W	NEAR COAST OF JALISCO MEXICO			33 4.50)
6	23	1	38	55.0	IP		XXXXX		83.11	319.5	46.1 -.7
		(	1	26	37.0	43.30N	146.10E	KURILE ISLANDS			77 6.20)
6	27	8	55	16.0	EP		XX		21.32	152.5	336.9 .1
		(	8	50	29.1	16.50N	85.70W	NEAR NORTH COAST HONDURAS			28 4.30)
6	28	17	38	45.0	IP		XX		66.22	307.5	102.9 -1.5
		(	17	27	59.8	4.00N	32.40W	NORTH ATLANTIC OCEAN			33 5.50)
6	28	18	31	25.0	EP		XX		48.43	312.6	83.1 -1.7
		(	18	22	46.3	53.20N	162.00W	UNIMAK ISLAND, ALEUTIAN IS.			39 5.10)
6	28	19	16	54.0	IP		XX		41.81	319.9	98.0 .5
		(	19	9	5.4	58.30N	150.20W	ALASKAN AFTERSHOCK			33 5.50)
6	29	4	47	9.0	EP		XX		15.75	238.5	50.7 -2.0
		(	4	43	30.0	26.70N	110.80W	GULF OF CALIFORNIA			33 5.30)
6	29	7	29	33.0	IP		XXXXX		43.42	326.1	101.0 -1.1
		(	7	21	32.8	62.70N	152.00W	SOUTHERN ALASKA			33 5.60)
6	30	14	5	30.0	IPKP		XX X		130.18	305.8	41.2 1.8
		(	13	46	21.6	.80S	122.50E	NORTHERN CELEBES			36 6.30)
6	30	20	20	5.0	IP		XX		81.58	322.7	45.5 -.7
		(	20	8	28.5	46.60N	144.60E	SEA OF OKHOTSK			383 5.50)
7	1	22	58	36.0	EP		XX		54.35	152.6	337.3 -1.8
		(	22	49	23.4	14.30S	73.10W	SOUTHERN PERU			139 5.20)

MO	DY	HR	MN	SEC	PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	FR.	STAT.	EPIC.	SEC
(	ORIGIN	LAT.	LONG.	MOTION	DEG.	DEPTH	KM	MAG.)					
7	2	1	26	36.0	EP	XX		40.03	323.3	104.1	-3.0		
(	1	19	2.7	60.10N	146.00W	ALASKA	AFTERSHOCK				14	5.10)	
7	3	5	9	39.0	EP	XX		18.07	206.7	22.7	-.5		
(	5	5	33.8	19.40N	104.30W	JALISCO,	MEXICO				102	4.40)	
7	2	17	9	21.0	IP	XXX X		26.74	306.3	104.2	.1		
(	17	3	42.4	47.70N	128.30W	OFF COAST OF	WASHINGTON				33	4.90)	
7	4	12	23	20.0	IP	XX		55.68	152.5	337.1	.0		
(	12	13	56.9	15.50S	72.50W	SOUTHERN	PERU				148	5.30)	
7	5	3	22	3.0	IP	XX		39.69	324.5	106.0	-1.4		
(	3	14	33.3	60.80N	144.90W	ALASKA	AFTERSHOCK				30	4.90)	
7	5	19	11	35.0	IP	XX XX		15.67	235.8	48.4	-3.2		
(	19	7	57.8	26.20N	110.20W	GULF OF	CALIFORNIA				29	6.00)	
7	6	2	12	.0	IP	XX		15.47	236.7	49.2	3.5		
(	2	8	19.2	26.50N	110.20W	GULF OF	CALIFORNIA				33	5.00)	
7	6	7	26	15.0	IP	XX XX		18.01	194.3	12.2	-1.8		
(	7	22	11.7	18.30N	100.40W	GUERRERO	MEXICO				100	6.30)	
7	6	10	42	41.0	IP	XX		17.64	194.8	12.7	-.1		
(	10	38	41.0	18.70N	100.50W	GUERRERO,	MEXICO				108	4.70)	
7	7	13	50	8.0	IP	XX		25.20	296.8	96.5	.3		
(	13	44	40.0	43.40N	127.20W	OFF COAST OF	OREGON				7	5.70)	
7	8	12	14	27.0	IPKP1	XX X		128.39	294.9	47.7	.9		
(	11	55	39.0	5.50S	129.80E	BANDA	SEA				165	6.50)	
7	9	11	35	28.0	EP	XX		95.67	245.6	53.4	.4		
(	11	22	5.4	23.30S	175.70W	TONGA	ISLANDS				43	5.70)	
7	9	16	53	41.0	IP	XXXX		104.19	261.0	56.3	.0		
(	16	39	49.3	15.50S	167.60E	NEW HEBRIDES	ISLANDS				121	6.60)	
7	11	9	51	50.0	IP	XX		39.98	322.6	103.5	-1.8		
(	9	44	18.7	59.70N	146.10W	ALASKA	AFTERSHOCK				33	5.30)	
7	11	12	3	36.0	EP	XX		70.49	103.4	307.8	-2.2		
(	11	52	25.0	1.00N	29.30W	MID-ATLANTIC	OCEAN				33	4.90)	

TIME						PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	RES.
MO	DY	HR	MN	SEC			NEZNEZ	MOTION	DEG.	STAT. EPIC.	SEC
(ORIGIN						LAT.	LONG.	EPICENTER		DEPTH KM	MAG.)
7	11	20	33	11.0	IP		XX		40.03	322.6	103.5
											-2.1
						(20 25 40.3	59.70N 146.20W	ALASKA AFTERSHOCK			40 5.60)
7	12	1	58	26.0	I		XX		90.12	320.1	41.7
						(1 45 25.6	38.60N 139.20E	NEAR W COAST HONSHU, JAPAN			13 6.00)
7	12	16	58	50.0	I		XX		66.00	151.2	334.6
						(16 48 21.7	24.50S 66.90W	CHILE-ARGENTINA BORDER			164 5.10)
7	13	12	0	11.0	IP		XX		24.75	294.8	95.0
						(11 54 50.7	42.50N 126.70W	NEAR COAST OF OREGON			33 5.60)
7	14	12	52	38.0	IP		XX		23.94	293.3	23.9
						(12 47 25.6	41.80N 125.70W	NEAR COAST OF N CALIFORNIA			33 5.40)
7	14	10	1	36.0	IP		XX		30.81	115.3	309.1
						(9 55 24.4	19.00N 66.50W	PUERTO RICO			46 4.80)
7	17	2	46	58.0	IP		XX		87.43	43.3	314.9
						(2 34 26.9	38.20N 23.70E	SOUTHERN GREECE			150 5.40)
7	17	4	52	28.0	IP		XX		72.63	318.6	55.0
						(4 41 5.1	49.30N 158.60E	KURILE ISLANDS			50 5.40)
7	20	18	54	13.0	IP		XX		19.81	219.4	33.1
						(18 49 43.5	19.80N 109.00W	REVILLA GIGEDO ISLANDS RGN.			33 5.10)
7	21	1	12	28.0	IP		XX		20.03	219.3	33.0
						(1 7 55.8	19.60N 109.10W	REVILLA GIGEDO ISLANDS RGN.			33 5.30)
7	21	7	7	7.0	IP		XX		23.67	161.8	344.9
						(7 1 59.3	13.10N 88.40W	NEAR COAST OF EL SALVADOR			68 4.70)
7	21	10	7	11.0	IP		XX		67.61	346.0	39.1
						(9 56 16.6	72.10N 130.20E	LAPTEV SEA			33 5.40)
7	22	10	37	51.0	EP		XX		15.78	259.8	69.6
						(10 34 11.9	31.70N 114.10W	GULF OF CALIFORNIA			33 4.60)
7	25	19	42	3.0	IP		XXXXX		67.67	156.3	338.3
						(19 31 7.0	27.90S 70.90W	NORTHERN CHILE			26 6.10)
7	30	5	21	34.0	IP		XX		26.19	158.2	342.1
						(5 16 3.3	11.10N 86.20W	NEAR W COAST OF COSTA RICA			42 5.70)

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TIME					PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	RES.
MO	DY	HR	MN	SEC		NEZNEZ	MOTION	DEG.	STAT.	EPIC.
(ORIGIN					LAT.	LONG.	EPICENTER		DEPTH KM	MAG.)
7	31	6	7	.0	EP	XX		113.60	279.9	53.5 .0
	(	5	52	18.8	6.10S	149.40E	NEW BRITAIN			63 5.90)
8	2	8	44	2.0	IP	XXXXX		41.40	316.8	95.9 .1
	(	8	36	16.9	56.20N	149.90W	ALASKA AFTERSHOCK			31 5.40)
8	3	1	54	11.0	EP	XXXXX		27.26	119.3	311.3 .8
	(	1	48	23.3	19.80N	70.70W	DOMINICAN REPUBLIC REGION			7 5.20)
8	5	11	24	.0	EP	XXX		103.98	240.5	56.3 -2.3
	(	11	6	2.6	32.10S	179.80E	SOUTH OF KERMADEC ISLANDS			235 5.80)
8	5	22	35	14.0	IP	XXXXX		79.00	164.0	342.8 -1.2
	(	22	23	13.0	41.10S	74.90W	OFF COAST OF SOUTHERN CHILE			33 6.10)
8	7	15	36	6.0	EP	XX		22.09	169.9	351.5 -.8
	(	15	31	18.0	14.00N	91.90W	NEAR S COAST OF GUATEMALA			89 5.00)
8	8	15	50	24.0	IP	XXXX		24.40	160.8	344.1 -.4
	(	15	45	10.9	12.50N	87.80W	OFF W COAST OF NICARAGUA			63 5.80)
8	8	20	12	26.0	EP	XX		26.27	127.0	317.0 2.3
	(	20	6	51.0	18.00N	74.00W	NEAR SOUTH COAST OF HAITI			10 5.10)
8	10	1	16	21.0	IP	XXXXX		30.16	116.1	309.5 -.4
	(	1	10	12.4	19.10N	67.30W	MONA PASSAGE			33 5.50)
8	10	17	6	20.0	IP	XX		40.63	122.5	316.1 -.6
	(	16	58	44.0	9.20N	62.00W	NEAR COAST OF VENEZUELA			51 5.50)
8	13	0	45	.0	EP	XXX		109.25	277.4	53.9 .0
	(	0	31	14.1	5.40S	154.30E	SOLOMON ISLANDS			383 6.00)
8	18	4	55	46.0	IP	XXXXX		66.08	156.2	338.5 -1.7
	(	4	44	58.0	26.40S	71.50W	OFF COAST OF N CHILE			8 6.40)
8	20	7	29	16.0	EP	XX		17.99	188.0	6.8 -.7
	(	7	25	9.3	18.00N	98.40W	CENTRAL MEXICO			60 4.40)
8	20	8	45	.0	IP	XX		37.90	114.3	310.0 .4
	(	8	37	47.1	14.90N	60.40W	WINDWARD ISLANDS			65 5.50)
8	22	3	7	6.0	IP	XXXXX		16.01	259.4	69.0 -1.1
	(	3	3	20.7	31.50N	114.30W	GULF OF CALIFORNIA			15 5.30)

TIME					PHASE	SP LP		FIRST MOTION	DIST. DEG.	AZIMUTH FR.		RES. SEC
MO	DY	HR	MN	SEC		NEZNEZ	LONG.			STAT.	EPIC.	
(ORIGIN					LAT.	LONG.		EPICENTER	DEPTH KM		MAG.)	
8	24	10	44	49.0	IP	XX			40.71	152.2	337.7	.5
	(10	37	23.4		1.50S	78.10W	ECUADOR				173	5.10)
8	24	22	4	44.0	IP	XX			41.87	320.0	98.0	.5
	(21	56	54.2		58.40N	150.30W	GULF OF ALASKA				22	5.80)
8	25	13	57	45.0	EP	XXXXX			63.38	351.0	37.7	-2.1
	(13	47	20.6		78.20N	126.60E	EAST OF SEVERNAYA ZEMLYA				50	6.10)
9	3	21	18	27.0	IP	XX			15.77	227.9	41.4	2.8
	(21	14	43.0		24.60N	108.60W	GULF OF CALIFORNIA				33	5.30)
9	4	3	38	41.0	IP	XX			38.95	323.0	105.7	-2.8
	(3	28	33.1		7.60N	36.90W	CENTRAL MID-ATLANTIC RIDGE				22	5.40)
9	4	9	46	52.0	IP	XX			59.56	150.2	334.9	-2.1
	(9	36	58.7		18.30S	69.00W	NORTHERN CHILE				101	5.40)
9	4	10	53	15.0	IPKP1	XX			126.21	294.8	47.5	1.6
	(10	34	13.1		4.00S	131.40E	WEST NEW GUINEA REGION				33	5.90)
9	10	9	20	9.0	IP	XX			19.44	180.6	.5	-2.1
	(9	15	47.0		16.40N	96.00W	OAXACA, MEXICO				59	4.50)
9	11	4	34	19.0	IP	XX			65.58	150.6	334.2	-1.8
	(4	23	56.0		23.90S	66.60W	JUJUY PROVINCE ARGENTINA				195	5.30)
9	12	22	25	56.0	IPKP	XX			122.20	229.9	70.9	1.2
	(22	7	3.2		49.10S	164.20E	AUCKLAND ISLANDS REGION				33	6.90)
9	14	13	38	14.0	IP	XX			20.95	173.0	354.1	.6
	(13	33	33.7		15.00N	93.20W	NEAR COAST CHIAPAS, MEXICO				64	4.90)
9	14	15	50	2.0	EP	XX			20.81	166.3	348.5	-.7
	(15	45	22.2		15.50N	90.80W	GUATEMALA				38	4.80)
9	15	15	48	50.0	IPKP	XX X			134.64	347.6	10.1	-3.0
	(15	29	32.2		8.90N	93.10E	NICOBAR ISLANDS REGION				37	6.20)
9	16	1	58	11.0	IP	XXX X			40.54	322.9	102.9	-1.1
	(1	50	33.9		60.00N	147.10W	GULF OF ALASKA				29	5.50)
9	17	15	10	46.0	IP	XX			48.84	59.0	283.3	-.5
	(15	2	.9		44.50N	31.30W	NORTH ATLANTIC RIDGE				24	5.60)

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TIME						PHASE	SP LP	FIRST	DIST.	AZIMUTH	FR.	RES.
MO	DY	HR	MN	SEC			NEZNEZ	MOTION	DEG.	STAT.	EPIC.	SEC
(ORIGIN)						LAT.	LONG.	EPICENTER		DEPTH	KM	MAG.)
9	17	5	12	52.0	E		XXX X		20.59	175.0	355.9	-.9
	(	5	8	15.1	15.30N	94.00W		NEAR COAST OF OAXACA MEXICO		42	5.30)	
9	23	5	8	35.0	E		XX		49.51	313.4	82.0	-2.3
	(	4	59	47.4	53.60N	163.90W		UNIMAK ISLAND REGION		29	5.50)	
9	24	14	5	6.0	EP		XX		25.43	297.0	96.5	.3
	(	13	59	36.8	43.50N	127.50W		OFF COAST OF OREGON		14	.00)	
9	25	15	52	36.0	I		XX		61.98	313.5	66.7	1.4
	(	15	42	17.9	50.30N	176.60E		RAT ISLANDS, ALEUTIAN IS.		30	5.50)	
9	27	23	8	39.0	EP		XX		62.50	151.4	335.7	-2.0
	(	22	58	29.3	21.40S	68.70W		CHILE-BOLIVIA BORDER REGION		132	5.40)	
10	1	18	24	40.0	EP		XX		22.79	165.6	348.0	-1.9
	(	18	19	43.8	13.60N	90.10W		NEAR COAST OF GUATEMALA		62	4.40)	
10	1	18	35	50.0	E		XX		27.49	309.4	106.6	-.5
	(	18	30	1.9	49.30N	128.80W		VANCOUVER ISLAND REGION		9	5.30)	
10	2	1	10	38.0			XX					
10	3	13	47	18.0			XX					
10	6	7	29	18.0	EP		XX		71.90	184.3	4.3	-.7
	(	7	17	57.1	36.20S	100.90W		SOUTHERN PACIFIC OCEAN		33	5.50)	
10	6	14	42	48.0	IP		XX		88.35	39.5	317.6	-.9
	(	14	29	55.6	40.20N	28.10E		TURKEY		10	5.10)	
10	6	14	44	11.0	IP		XXXX		88.33	39.4	317.6	-1.4
	(	14	31	19.2	40.30N	28.20E		TURKEY		10	6.00)	
10	9	19	33	24.0	IP		XX		35.72	138.8	324.4	-.8
	(	19	26	39.7	6.80N	73.00W		NORTHERN COLOMBIA		157	5.30)	
10	10	19	46	20.0	I		XX		40.15	323.6	104.4	-1.1
	(	19	38	47.7	60.40N	146.10W		SOUTHERN ALASKA		44	5.30)	
10	10	20	14	12.0	I		XX		39.84	323.9	105.2	.0
	(	20	6	39.8	60.50N	145.40W		SOUTHERN ALASKA		31	5.40)	
10	11	10	16	19.0	I		XX		55.64	269.6	59.1	-.9
	(	10	6	44.9	19.10N	156.60W		HAWAII REGION		33	5.30)	

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TIME						PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	RES.
MO	DY	HR	MN	SEC			NEZNEZ	MOTION	DEG.	STAT. EPIC.	SEC
(ORIGIN						LAT.	LONG.	EPICENTER		DEPTH KM	MAG.)
10	11	14	29	4.0	I		XX		58.25	152.5	336.8
											-.9
						(14 19 11.5	17.90S	71.50W	NEAR COAST OF PERU		35 5.20)
10	11	21	36	26.0	EPP		XX		130.55	306.8	40.5
											-4.8
						(21 15 3.9	.60S	121.70E	NORTHERN CELEBES		33 6.30)
10	12	22	6	34.0	I		XX		68.32	193.8	13.0
											-.4
						(21 55 33.2	31.30S	110.80W	EASTER ISLAND REGION		25 6.00)
10	15	20	39	.0	EP		XX		80.20	318.8	48.6
											-.3
						(20 26 53.5	44.70N	149.80E	KURILE ISLANDS		49 5.20)
10	16	7	11	48.0	I		XX		80.63	318.6	48.3
											-1.5
						(6 59 38.6	44.30N	149.50E	KURILE ISLANDS		33 5.50)
10	16	7	33	50.0	EP		X		80.75	318.6	48.3
											-4.3
						(7 21 42.7	44.20N	149.40E	KURILE ISLANDS		33 5.20)
10	16	8	30	38.0	EP		XX		80.48	318.9	48.3
											-.5
						(8 18 28.3	44.60N	149.40E	KURILE ISLANDS		33 5.20)
10	16	9	30	27.0			XX				
10	17	2	7	33.0	IP		XX		39.64	322.4	103.9
											-.5
						(2 0 3.3	59.50N	145.50W	GULF OF ALASKA		33 5.20)
10	17	3	36	36.0	EPKP		XX		131.08	310.3	38.2
											2.9
						(3 17 28.1	.70N	119.30E	NORTHERN CELEBES		62 5.40)
10	18	12	50	22.0	EPKP		X XX		133.62	298.6	45.8
											-13.9
						(12 32 24.1	7.00S	124.00E	BANDA SEA		574 5.80)
10	18	18	36	36.0	EP		XX		13.82	300.4	110.4
											-2.3
						(18 33 19.9	41.90N	111.80W	UTAH		10 4.30)
10	21	7	41	58.0	I		XX		14.95	311.2	120.9
											-3.5
						(7 38 31.0	44.80N	111.60W	HEBGEN LAKE REGION		33 5.80)
10	21	23	28	56.0	EPP		X X		115.69	350.6	8.6
											-9.2
						(23 9 18.8	28.10N	93.80E	INDIA CHINA-BORDER REGION		37 5.90)
10	23	2	3	23.0	IP		XXXXX		38.37	103.9	303.2
											-.2
						(1 56 3.2	19.80N	56.00W	NORTH ATLANTIC OCEAN		31 6.40)
10	23	21	18	40.0	IP		XX		81.89	319.4	47.1
											-.4
						(21 6 24.2	44.00N	147.50E	KURILE ISLANDS		45 5.90)

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TIME					PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	RES	
MO	DY	HR	MN	SEC		NEZNEZ	MOTION	DEG.	STAT.	EPIC.	
(ORIGIN)					LAT.	LONG.	EPICENTER		DEPTH	SEC	
									KM	MAG.)	
10	25	6	33	20.0	IP	XX		41.52	151.3	337.0	-1.5
		(6	25	48.6	2.00S	77.20W	ECUADOR			160	5.30)
10	25	23	4	10.0	IP	XX		40.84	153.8	338.9	-.5
		(22	56	32.8	2.00S	79.00W	ECUADOR			57	5.40)
10	28	0	33	11.0	IP	X		69.31	156.7	338.4	-.9
		(0	22	7.3	29.60S	70.70W	CENTRAL CHILE			45	4.90)
10	28	1	38	57.0	IP	XX		18.19	175.0	355.8	-.7
		(1	34	54.5	17.70N	94.20W	CHIAPAS, MEXICO			159	4.60)
11	2	6	58	54.0	IP	XX		43.12	151.3	337.0	-.7
		(6	51	8.8	3.50S	76.60W	NORTHERN PERU			161	5.80)
11	4	2	21	27.0	IP	XX		60.77	151.1	335.4	-1.2
		(2	11	24.9	19.70S	69.20W	NORTHERN CHILE			102	5.20)
11	5	8	52	58.0	IP	XX		29.95	118.8	311.5	-1.1
		(8	47	6.0	18.20N	68.40W	MONA PASSAGE			183	4.80)
11	6	10	5	30.0	IP	XX		80.83	318.9	48.0	-1.3
		(9	53	22.4	44.40N	149.00E	KURILE ISLANDS			60	5.70)
11	9	5	3	17.0	EPKP	XX		130.70	294.6	48.0	1.2
		(4	44	19.9	7.20S	128.20E	BANDA SEA			129	5.30)
11	9	5	6	26.0		XX					
11	11	16	49	36.0	IP	XX		19.60	219.5	33.3	-1.1
		(16	45	9.0	20.00N	108.90W	REVILLA GIGEDO ISLANDS RGN.			33	4.60)
11	11	18	58	4.0	IP	XX		52.83	154.3	338.8	-.1
		(18	48	56.6	13.40S	75.00W	PERU			99	5.00)
11	11	19	17	50.0	IP	X		67.33	324.1	59.0	-.8
		(19	6	57.1	56.50N	161.30E	NEAR E COAST OF KAMCHATKA			33	5.60)
11	14	12	57	13.0	IP	XX		19.62	208.5	24.0	-1.7
		(12	52	46.3	18.20N	105.50W	OFF COAST JALISCO, MEXICO			33	5.30)
11	15	0	35	56.0	EP	XX		19.40	209.1	24.6	-1.8
		(0	31	32.0	18.50N	105.60W	OFF COAST OF JALISCO MEXICO			33	4.40)
11	15	14	17	21.0	EP	XX		20.05	209.1	24.5	-1.6
		(14	12	49.6	17.90N	105.90W	OFF COAST OF JALISCO MEXICO			33	4.10)

TIME						PHASE	SP LP	FIRST	DIST.	AZIMUTH	FR.	RES.
MO	DY	HR	MN	SEC			NEZNEZ	MOTION	DEG.	STAT.	EPIC.	SEC
(ORIGIN						LAT.	LONG.	EPICENTER		DEPTH	KM	MAG.)
11	15	15	47	6.0	EP		XX		20.14	209.0	24.4	-2.4
						(15 42 34.4	17.80N 105.90W	OFF COAST OF JALISCO MEXICO			33	4.50)
11	16	2	51	25.0	EP		XX		20.94	280.4	84.8	-.3
						(2 46 43.0	36.90N 121.80W	CENTRAL CALIFORNIA			33	5.20)
11	16	6	13	21.0	IP		X		94.59	4.0	354.9	-.2
						(5 59 57.4	49.70N 78.00E	EASTERN KAZAKH SSR			0	6.00)
11	16	16	57	38.0	EP		X		19.43	186.3	5.4	-.6
						(16 53 18.0	16.50N 98.00W	NEAR COAST GUERRERO, MEXICO			103	4.30)
11	17	8	30	18.0	EP		X XX		112.32	279.4	53.5	.0
						(8 15 39.3	5.70S 150.70E	NEW BRITAIN REGION			45	6.70)
11	17	16	22	7.0	EP		X		23.29	164.6	347.2	.3
						(16 17 3.0	13.20N 89.60W	EL SALVADOR			54	4.50)
11	18	5	13	6.0	IP		XX		71.81	154.8	336.2	-.5
						(5 1 41.4	31.20S 67.60W	SAN JUAN PROVINCE ARGENTINA			8	5.60)
11	19	23	53	47.0	EPKP		X		112.42	279.1	53.7	3.1
						(23 35 6.0	6.00S 150.80E	NEW BRITAIN REGION			3	6.00)
11	22	20	15	54.0	IP		XX		17.75	197.6	15.0	.5
						(20 11 53.0	18.80N 101.40W	GUERRERO, MEXICO			123	4.50)
11	24	11	0	54.0	IPKP		X		144.06	318.2	33.0	-.3
						(10 41 33.5	6.80S 107.40E	JAVA			125	6.00)
11	24	12	59	40.0	EPKP		X		118.03	314.2	36.6	-.3
						(12 40 51.4	13.10N 124.70E	LUZON PHILIPPINE ISLANDS			5	6.10)
11	25	9	44	50.0	IPP		XX		132.96	302.9	43.0	-4.6
						(9 24 8.9	4.30S 122.20E	CELEBES			610	6.20)
11	27	7	54	58.0	IP		XX		43.17	326.0	101.4	-.6
						(7 47 7.6	62.60N 151.50W	CENTRAL ALASKA			113	5.40)
11	27	11	0	16.0	EP		X		23.30	162.3	345.3	-.8
						(10 55 11.0	13.40N 88.70W	EL SALVADOR			33	4.10)
11	27	14	0	46.0	IP		XX		91.11	320.1	41.1	1.0
						(13 47 42.7	37.90N 138.30E	NEAR W COAST HONSHU, JAPAN			36	5.50)

TIME					PHASE	SP LP		FIRST MOTION	DIST. DEG.	AZIMUTH FR.		RES. SEC
MO	DY	HR	MN	SEC		NEZ	NEZ			STAT.	EPIC.	
(ORIGIN					LAT.	LONG.		EPICENTER		DEPTH KM		MAG.)
11	28	16	49	27.0	IP	XX			49.16	146.9	333.4	-1.0
		(16	41	33.4	7.70S	71.20W		WESTERN BRAZIL			626	5.40)
11	28	16	57	23.0	IP	XX			49.34	147.3	333.7	-1.4
		(16	49	30.3	8.00S	71.40W		WESTERN BRAZIL			655	5.60)
11	30	12	47	2.0	IPKP	X			136.36	344.6	12.5	4.9
		(12	27	38.6	6.80N	94.80E		NICOBAR ISLANDS REGION			33	5.70)
11	30	5	6	2.0	IP	X			93.13	249.0	53.2	1.4
		(4	53	23.9	18.90S	175.80W		TONGA ISLANDS			232	5.50)
12	2	8	29	.0	EP	XX			44.82	80.7	291.7	1.8
		(8	20	45.6	30.60N	42.00W		NORTH ATLANTIC RIDGE			33	5.20)
12	2	13	27	24.0	EP	X			50.36	313.8	81.1	-.7
		(13	18	29.0	53.80N	165.40W		FOX ISLANDS, ALEUTIAN IS.			35	5.00)
12	2	14	47	6.0	EPKP	X			149.90	232.4	101.9	3.4
		(14	27	15.4	49.10S	121.40E		SOUTH OF AUSTRALIA			16	.00)
12	3	2	5	30.0	IP	X			22.84	162.8	345.7	.4
		(2	0	29.0	13.80N	89.00W		EL SALVADOR			41	4.20)
12	3	4	9	40.0								
12	3	14	56	28.0	IP	XX			24.41	162.5	345.6	-.6
		(14	51	10.9	12.30N	88.50W		OFF COAST CENTRAL AMERICA			33	4.10)
12	4	2	0	45.0	EP	X			28.68	194.4	11.7	-.3
		(1	54	49.3	7.80N	102.70W		OFF COAST OF MEXICO			33	4.90)
12	5	21	18	53.0		XX						
12	7	9	17	13.0	EPKP	X			111.66	279.3	53.5	4.8
		(8	58	43.8	5.40S	151.30E		NEW BRITAIN REGION			54	5.80)
12	7	18	59	8.0	IP	XX			31.63	153.5	338.7	-1.8
		(18	52	47.6	6.70N	82.20W		SOUTH OF PANAMA			30	5.20)
12	8	4	17	20.0	IP	XX			25.57	159.7	343.3	-.1
		(4	11	53.7	11.50N	87.00W		NEAR COAST OF NICARAGUA			48	5.00)
12	9	13	45	56.0	IP	XX			70.16	149.4	332.3	-2.4
		(13	35	42.4	27.50S	63.20W		SANTIAGO D. ESTERO PRV. ARG.			586	5.90)

TIME					PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.	RES.
MO	DY	HR	MN	SEC		NEZNEZ	MOTION	DEG.	STAT. EPIC.	SEC
(ORIGIN					LAT.	LONG.	EPICENTER		DEPTH KM	MAG.)
12	9	16	54	14.0	IP	XX		61.88	150.3	334.6
		(16	44	2.2	20.40S	68.00W	SOUTHERN BOLIVIA			83 5.00)
12	10	15	21	56.0	IP	XX		73.33	192.3	12.4
		(15	10	25.6	36.50S	110.50W	EASTER ISLAND CORDILLERA			33 5.30)
12	10	21	23	59.0	IP	XX X		88.93	321.4	41.5
		(15	11	5.5	40.40N	138.90E	EASTERN SEA OF JAPAN			33 6.00)
12	13	0	42	14.0	IP	XX		49.67	328.3	90.3
		(0	33	24.7	64.90N	165.70W	ALASKA			15 5.40)
12	15	3	44	23.0	IP	XXXXX		17.78	215.0	29.8
		(3	40	16.5	20.80N	106.60W	OFF COAST JALISCO, MEXICO			33 5.10)
12	15	12	18	6.0	IP	XXX X		21.43	169.1	350.8
		(12	13	25.8	14.70N	91.70W	GUATEMALA			118 5.40)
12	17	5	30	43.0	IP	XX		79.58	319.1	48.8
		(5	18	34.8	45.40N	150.10E	KURILE ISLANDS			17 5.30)
12	17	14	3	56.0	EP	X		19.85	183.1	2.6
		(13	59	25.3	16.00N	96.90W	OAXACA, MEXICO			36 4.90)
12	17	23	54	36.0	IP	XX		58.33	313.2	70.8
		(23	44	46.2	51.40N	177.90W	ANDREANOF ISLANDS ALEUTIAN			57 5.50)
12	21	17	44	5.0	IP	XX		40.51	323.6	103.7
		(17	36	29.0	60.50N	146.80W	SOUTHERN ALASKA			43 5.00)
12	22	0	32	55.0	IP	XX		50.72	148.1	334.2
		(0	24	48.7	9.50S	71.30W	PERU-BRAZIL BORDER REGION			614 5.30)
12	22	8	7	9.0	IP	XX		29.53	119.0	311.6
		(8	1	12.6	18.40N	68.80W	MONA PASSAGE			115 5.60)
12	22	20	58	48.0	IP	XX XX		18.13	263.4	71.4
		(20	54	35.3	31.90N	117.10W	OFF W COAST BAJA CALIFORNIA			14 6.30)
12	25	8	58	33.0	IP	XX		60.03	150.4	335.0
		(8	48	37.7	18.80S	69.00W	NORTHERN CHILE			117 5.10)
12	25	16	34	13.0	IP	XXX X		18.47	196.4	13.9
		(16	30	1.9	18.00N	101.20W	NEAR COAST GUERRERO, MEXICO			81 4.80)

TIME					PHASE	SP LP	FIRST	DIST.	AZIMUTH FR.		RES.
MO	DY	HR	MN	SEC		NEZNEZ	MOTION	DEG.	STAT.	EPIC.	SEC
(ORIGIN					LAT.	LONG.	EPICENTER		DEPTH KM MAG.)		
12	25	18	7	17.0	IP	XX		66.26	152.6	335.6	-2.6
			(17	56	40.1	25.30S	68.10W	CHILE-ARGENTINA BORDER	RGN.	101	5.00)
12	26	8	20	55.0	IP	XXX X		19.43	191.0	9.3	-.1
			(8	16	28.9	16.70N	99.60W	NEAR COAST	GUERRERO, MEXICO	33	5.40)
12	26	14	41	40.0	IP	XXXXX		72.12	321.4	54.5	-.5
			(14	30	29.1	51.80N	156.80E	KAMCHATKA		136	5.70)
12	28	17	14	44.0	IP	X		57.47	1.0	345.0	-1.1
			(17	4	57.0	86.70N	68.70E	NORTH OF FRANZ JOSEF	LAND	33	5.70)
12	30	15	40	22.0	EP	X		95.78	315.5	41.6	-1.3
			(15	27	25.8	31.30N	138.80E	SOUTH OF HONSHU, JAPAN		261	5.40)
12	31	1	9	11.0	IP	XX		20.03	215.4	29.8	.1
			(1	4	38.0	18.90N	107.90W	OFF COAST OF JALISCO	MEXICO	33	4.40)
12	31	16	30	55.0	IP	XX		90.21	43.9	316.1	1.3
			(16	18	1.7	35.80N	25.60E	CRETE		86	5.10)

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END OF RUN 00494-02	ELAPSED TIME	.08
END OF JOB 00494	TOTAL ELAPSED TIME	.14