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ARCATA--BERKELEY--COLUMBIA COLLEGE--ELK RIVER--FICKLE HILL

FRIANT--FOX CREEK--GRANITE CREEK--JAMESTOWN--LLANADA--MINA

MINERAL--MOUNT HAMILTON--OROVILLE--PARAISO--PILARCITOS CREEK

PRIEST--SAN ANDREAS GEOPHYSICAL OBSERVATORY

SAN PABLO DAM--WHISKEYTOWN DAM

Earthquakes and the Registration of Earthquakes

From January 1, 1986 to December 31, 1986

M. Richard McKenzie

Robert A. Uhrhammer

International Seismological Centre

BULLETIN OF THE SEISMOGRAPHIC STATIONS
of the University of California

Volume 56, Nos. 1 and 2
January 1, 1986 to December 31, 1986

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INTRODUCTION

Each issue of the Bulletin includes determination of epicenters, origin times, magnitudes and other information available at the time of writing, for earthquakes in Northern California and adjoining areas. Recorded arrival times of seismic waves are tabulated for the above earthquakes and for teleseisms.

Information items regarding the seismographic stations that comprise the Berkeley network are repeated in each issue.

Note that the No. 1 and No. 2 issues of Volume 56 are published together in the current issue.

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History of the University of California Stations

"The Seismographic Stations at Mount Hamilton and Berkeley present several items of interest in the history of earthquake science, one of which is that according to the available records they were the first seismographic stations set up in America. Furthermore, they have functioned continuously from their founding to the present day, with improvements in instrumental equipment from time to time as the development of the science and opportunity have permitted.

Several outstanding figures in the seismology of the 1880's were impressed with the importance of these stations, and Ewing, Milne, and Gray each took a personal interest in aiding one or both stations to obtain their own best and most modern types of instruments."

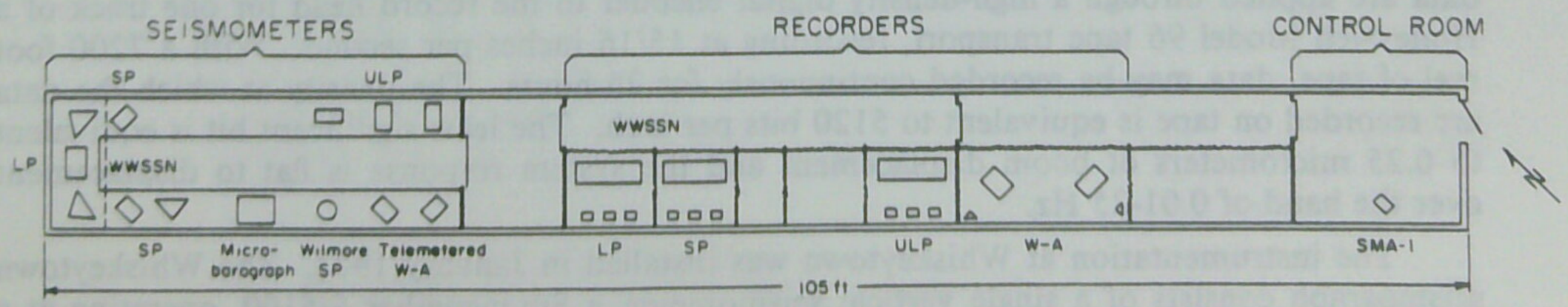
The quotation is from "History of the University of California Seismographic Stations and Related Activities" by Professor George D. Louderback, published in the Bulletin of the Seismological Society of America, Vol. 32, No. 3, pp. 205-229, 1942. In this paper may be found a detailed account of the development of the Berkeley stations from the installation of the instruments (the first earthquake known recorded at Mount Hamilton was on April 24, 1887) to 1942.

Since 1942, the number of seismographic stations associated with the University of California has increased from six to twenty in 1986. In 1950, Professor Perry Byerly was appointed Director by the Regents; he had been in charge of instruction and research since 1925. Professor Bruce A. Bolt was appointed Director in 1963. Since 1969, the stations have entered into research and service contracts with the Air Force Office of Scientific Research, the National Science Foundation, the California Department of Water Resources, the California Division of Mines and Geology, the U.S. Geological Survey, the U.S. Corps of Engineers, the East Bay Municipal Utility District, and others. A telemetry network of nineteen stations in Central California, recording on film and selected stations on magnetic tape, is now operated together with seismographs with broadband frequency response at Berkeley, Mt. Hamilton, Jamestown, Oroville, San Andreas Geophysical Observatory, and Whiskeytown Dam. Copies of seismograms and magnetic tapes from seismographs of the Berkeley network are available, together with response characteristics, on request to the director.

The Byerly Seismographic Station (BKS)

Equipment of a WWSSN station began operating in a newly constructed adit east of the main campus on June 8, 1962. The closest buildings, part of the Lawrence Berkeley Laboratory, are about 0.8 km away.

A plan of the adit is shown in the diagram below. Piers are constructed of reinforced concrete with no isolation from floor and walls. The temperature is stable. A ventilating and dehumidifying system is connected to all rooms.



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Twelve seismographs are currently operating in the adit. Their free periods range from 0.8 sec to 100 sec and the magnification of the photographic recordings ranges from approximately 500 to 25000. Details are given in the table on instrumentation.

The portal of the adit is in an old quarry which exposes near-vertical, intensely contorted, thinly-bedded, brittle chert, and softer interbedded shale of the Miocene Claremont Formation. Individual beds are one to a few inches thick; the chert beds are intensely fractured and intricately criss-crossed by fine patterns of jointing. Near-surface beds are warped by down-hill creep; soil is very thin. The area is crossed by numbers of minor faults, and is about one mile from the active trace of the Hayward fault.

On March 20, 1964, the Regents of the University of California named this station the "Byerly Seismographic Station" in recognition of the work of Professor Perry Byerly.

The instrumentation in the Byerly Seismographic Station was temporarily removed from service, starting on July 10, 1986, to facilitate renovation and waterproofing of the vault. The instruments were reinstalled, calibrated and returned to service by October 3, 1986.

Broadband Seismometers

A network of broadband seismometers is now operated by the University of California at seismographic stations at Berkeley (BKS), Mt. Hamilton (MHC), Jamestown (JAS), Oroville (ORV), San Andreas Geophysical Observatory (SAO) and Whiskeytown (WDC).

At Berkeley, broadband instrumentation has been gradually developed, starting with the installation, in 1963, of a Press-Ewing seismometer operating at a free period of 30 seconds. In 1971, the installation of a 3-component set of special ultra-long period (ULP) seismometers in the Byerly Seismographic Vault was completed. The seismometers are Sprengnether S-5100's operated at a period of 100 seconds and they utilize electronic recentering feedback for long-term stability and temperature/barometric feedback also for the vertical component. The ultra-long period system generates photographic paper records equivalent to a 100 second pendulum with a velocity transducer recorded by a 300 second galvanometer with a magnification of 500 at a period of 100 seconds.

Starting in September 1975, low- (±2 mm) and high- (±0.02 mm) gain displacement signals from each of the three components were telemetered to the laboratory and recorded on 0.03 ips, 0-10 Hz, FM magnetic tape. The high-gain displacement signals are high-pass filtered at 500 seconds to reduce tidal signals. In 1980, a digital telemetry system was installed where the displacement signals from the three ULP seismometers are sampled at 99 samples per second each channel, with a resolution of 16 binary digits through a Phoenix Data 6816 ADC. An RCA COSMAC 1802 microprocessor system controls the analog-to-digital conversion process and buffers the incoming data. The digital data are temporarily stored in the microprocessor RAM memory, extra synchronization words are inserted, and finally the data are sent out bit-serially to a modem. The bit-serial digital data are transmitted over a leased phone line by modem pair. At the receiving end, the reconstructed serial data are applied to a PCM encode module which codes the data as DM-M. The coded PCM data are applied through a high-density digital encoder to the record head for one track of a Honeywell Model 96 tape transport, recording at 15/16 inches per second. With a 7200 foot reel of tape, data may be recorded continuously for 26 hours. The density at which the data are recorded on tape is equivalent to 5120 bits per inch. The least significant bit is equivalent to 0.25 micrometers of boom displacement and the system response is flat to displacement over the band of 0.01-25 Hz.

The instrumentation at Whiskeytown was installed in January 1973. The Whiskeytown seismograph consists of a single vertical seismometer, a Sprengnether S-5100, operating at a free period of 40 seconds and a damping ratio of 0.70. Signals from this seismometer are telemetered to Berkeley via FM telemetry components and leased telephone lines where they are recorded on analog magnetic tape recorders. Low- (±2 mm) and high- (±0.01 mm) gain displacement signals and velocity signals (two levels) from WDC are recorded on a Honeywell

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Model 96 tape transport at 15/16 inches per second. The seismometer at WDC is operated in sealed pressure vessel identical to those used with high-gain long-period (HGLP) instruments.

An on-site digital recording system (DRS) was installed at Jamestown in September 1980. The DRS continuously records a three-component long-period (LP) channel at one sample per second each component and records, in an event detect mode, a three-component intermediate-period (IP) channel at 10 samples per second each component, and a vertical short-period (SP) channel at 20 samples per second. The DRS records the filtered output of Teledyne 210 and 200 seismometers operating with 16 bit resolution (no gain-ranging) on 1600 bpi magnetic tape for the LP and IP channels. The DRS was upgraded by the USGS, Albuquerque Seismological Laboratory to allow remote recording, calibration and control over a duplex 2400 bits per second telemetry link and the upgraded version was installed at JAS in February, 1982. At the same time, the control and recording part of the DRS was installed at Berkeley (150 km west of JAS) and a dedicated telephone line was used for the digital telemetry link. On July 26, 1984 the JAS station was moved to a temporary site (JAS1) 3 km to the south. During 1986 a new seismographic vault was constructed at Columbia College (11 km NNE of JAS) to house the DRS equipment temporarily installed at JAS1. The Columbia College Seismographic Station (CMB) began operation on November 6, 1986.

Equipment was installed at Oroville in June 1979 to telemeter three-component broadband velocity signals from the Geotech 7505 and 8700 seismometers, operating at a free period of 15 seconds, to Berkeley via FM telemetry over leased telephone lines. In December 1979, the free period of the seismometers was changed to 20 seconds. In February 1986, a vertical Streckeisen broadband seismometer was installed, followed, in March 1986, by the installation of two horizontal Streckeisen broadband seismometers. The operation of the corresponding Geotech seismometers was discontinued at these times.

In March and April 1985, three component Streckeisen broadband seismometers were installed at Mt. Hamilton. The broadband signals are sent to Berkeley via FM telemetry over leased phone lines. On September 10, 1986 a microcomputer based digital data acquisition and telemetry system was installed at Mt. Hamilton as the first step in setting up the newly developed Berkeley Digital Seismograph Network (BDSN). The BDSN continuously records the BRB channels from the Streckeisen STS-1 broadband seismometers at 20 samples per second each component and the short-period at 40 samples per second using a 16 bit resolution digitizing system with no gain ranging. The digital data are telemetered to Berkeley over a duplex 2400 bit per second leased line and archived on 20 Megabyte disk cartridges. Details of the BDSN system are given in "A PC-Based Broadband Digital Seismograph Network" (B. A. Bolt, J. E. Friday and R. A. Uhrhammer, Geophysical Journal, June 1988).

In November 1985, a vertical and on June 11, 1986, two horizontal Streckeisen broadband seismometers were installed at the San Andreas Geophysical Observatory. The broadband signals are telemetered to Berkeley via FM telemetry over leased phone lines.

Response curves for these broadband instruments are shown on pages 12-13. The displacement transfer functions for the broadband instruments in the Berkeley network are given in the Table on page 9. The transfer function is computed from the poles, zeroes and scaling constant (k) by:

$$\tau(\omega) = \frac{k \prod_{i=1}^{\#zeroes} (s_i - j\omega)}{\prod_{l=1}^{\#poles} (s_l - j\omega)}$$

where $\tau(\omega)$ is normalized to counts/meter and $j = \sqrt{-1}$.

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STATIONS IN OPERATION: January 1 to December 31, 1986

Station (From N to S)	North Latitude	West Longitude	Elev. Meters	Foundation Material	Symbol	Present Auspices and Date Established
Arcata	40°52.6'	124°04.5'	60	Sandstone (loose)	ARC	Humboldt State Univ. 1948
Fickle Hill	40°48.1'	123°59.1'	610	Siltstone over graywacke	FHC	Humboldt State Univ 1968
Fox Creek	40°31.3'	123°59.5'	113	Quaternary alluvium	FOX	Richard McKenna Ranch, 1986
Whiskeytown	40°34.8'	122°32.4'	300	Pre-Devonian metavolcanic	WDC	National Park Service 1973
Elk River	40°41.7'	124°08.4'	49	Marine siltstone	EKR	Buck Noel Ranch 1986
Mineral	40°20.7'	121°36.3'	1495	Volcanic	MIN	National Park Service 1938
Oroville	39°33.3'	121°30.0'	360	Basalt	ORV	Dept. of Water Resources 1969
Mina (Nevada)	38°26.0'	118°09.4'	1529	Limestone	MNA	Univ. of Nevada, Reno 1969
Columbia College	38°02.1'	120°23.1'	719	Paleozoic marine limestone	CMB	Columbia College November, 1986
Jamestown	37°55.6'	120°25.2'	427	Metamorphic (serpentine)	JAS1	Sonora Mining July 1984-Oct. 1986
San Pablo Dam	37°56.7'	122°15.4'	119	Middle Miocene marine	ZSP	East Bay M.U.D. 1978
Berkeley (Byerly)	37°52.6'	122°14.1'	276	Claremont shales and cherts	BKS	University of Calif. 1962
Berkeley	37°52.4'	122°15.6'	81	Franciscan sandstone	BRK	University of Calif. 1887
Pilaricitos Creek	37°30.0'	122°22.9'	91	Granodiorite (weathered)	PCC	Sare Ranch, 1965
Mt. Hamilton	37°20.5'	121°38.5'	1282	Franciscan formation (greenstone)	MHC	Lick Observatory 1887
Granite Creek	37°01.8'	121°59.8'	122	Granite	GCC	Richard E. Randolph Santa Cruz, 1965
Friant	36°59.5'	119°42.5'	119	Alluvium overlying granite	FRI	Bureau of Reclamation 1971
San Andreas Geophysical Observatory	36°45.9'	121°26.7'	350	Granite	SAO	University of Calif. 1966
Llanada	36°37.0'	120°56.6'	475	Alluvium overlying sandstone	LLA	Charles McCullough Ranch, 1961
Paraiso	36°19.9'	121°22.2'	363	Granodiorite	PRS	Paraiso Hot Springs 1961
Priest	36°08.5'	120°39.9'	1187	Greenstone basic metamorphic	PRI	Federal Aviation Agency 1961

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STATION INSTRUMENTATION: January 1 to December 31, 1986

Station	Type of Instrument	T_o sec	T_g sec	Component*	Mag at T_o**	1	2	3	4	5	6
ARC	Wood-Anderson torsion	0.8	-	S, W	2,000	x					
BKS	Benioff 100kg	1.0	0.75	Z	25,000	x					
	Sprengnether S-5007	15	100	N, E, Z	3,000	x					
	Wood-Anderson torsion	0.8	-	S, W	2,000	x					
	Sprengnether ULP S-5100	100	300 Filter	N45 W, N45 E, Z	500	x					
	Filtered Displacement				---				x		
	Displacement				---				x		
	Displacement Digital				---				x		
	Willmore MK II	1.0	0.2	Z	---				x		
	14000X torsion	0.8	-	N, E	14,000 max		x		x		
	700X torsion	0.8	-	N, E	700 max		x		x		
BRK	Benioff 100 kg	1.0	0.2	Z	25,000			x			
	Benioff 100 kg	1.0	8.0	Z	Variable						x
	100X torsion	0.8	-	N, E	100 max	x					
	4X torsion	0.8	-	N, E	4 max	x					
	Press-Ewing	15	30	Z	1,000		x				
CMB	Teledyne 210 & 200	15	-	N, E, Z	Digital Tape					x	
	Teledyne S-13	1.0	-	Z	Digital Tape		x	x		x	
ELK	Mark Products L-4C	1.0	-	Z					x		
FHC	Benioff 14 kg	1.0	0.2	Z	50,000		x	x	x		
FOX	Mark Products L-4C	1.0	-	Z					x		
FRI	Benioff 14 kg	1.0	0.33 Filter	Z	150,000		x	x	x		
GCC	Benioff 14 kg	1.0	0.2	Z	50,000			x	x		
JAS1	Benioff 14 kg	1.0	0.2	Z	600,000		x	x	x		
	Teledyne 210 & 200	15	-	N, E, Z	Digital tape					x	
	Teledyne S-13	1.0	-	Z	Digital tape					x	
LLA	Benioff 14 kg	1.0	0.2	Z	50,000			x	x		
MHC	Benioff 14 kg	1.0	0.2	Z	50,000		x	x	x		
	Wood-Anderson	0.8	-	S, E	2,000	x					
	Streckeisen	20	-	N, E, Z	Digital Disc		x		x		
	Willmore	1.0	-	Z	Digital Disc		x			x	
MIN	Wood-Anderson	0.8	-	S, E	2,000	x					
	Teledyne S-13	1.0	0.2 Filter	Z	150,000			x	x		
MNA	Geotech SL210 filtered to give short-period response	15	1.0 Filter	Z				x	x		
ORV	Benioff 100 kg	1.0	0.2	Z	220,000			x	x		
	Geotech 7505 & 8700	20	BB	N, E, Z	---				x		
	Streckeisen	20	-	N, E, Z	—				x		
PCC	Benioff 14 kg	1.0	0.2	Z	50,000			x	x		
PRI	Benioff 14 kg	1.0	0.2	Z	50,000		x	x	x		
PRS	Benioff 14 kg	1.0	0.2	Z	50,000			x	x		
SAO	Sprengnether 0.70 kg	0.2	0.05 Filter	Z	1,5000,000		x	x	x		
	Streckeisen	20	-	N, E, Z	—		x		x		
WDC	Sprengnether S-5100	40	-	Z							
	BB velocity				---				x		
	Displacement								x		
	Filtered Displacement								x		
	Short Period (Filter)				500,000		x	x	x		
ZSP	Teledyne S-13	1.0	0.2 Filter	Z	---		x		x		

1 Signals recorded on photographic paper.
2 Signals recorded on heat sensitive paper.
3 Signals telemetered to Berkeley. Magnification using 20X viewer.
4 Signals recorded on magnetic tape, Berkeley.
5 Signals recorded on digital magnetic tape or disc.
6 Ink recording.

* Direction of motion: In the "component" column, each horizontal component seismograph is designated by the direction of ground motion corresponding to upward trace motion on the seismogram when it is oriented so that time increases from left to right. On all vertical component (Z) instruments, upward trace motion corresponds to upward ground motion.

** Relative magnification curves of instruments recording photographically and through the telemetry system are listed on pages 10-13. Absolute magnification may be obtained by use of calibration pulses recorded daily from each station.

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UNIVERSITY OF CALIFORNIA ACCELEROGRAPH STATIONS

Station Name	Coordinates	Installation Date	Instrument S.N.	Component	Sensitivity (cm/g)	Period (sec)	Damping % of Critical	Structure	Location in Structure
BERKELEY MEMORIAL STADIUM	37.87 N 122.25 W	03 Aug 76	CRA-1 #148 (Recorder) FBA-3	V Down L North T East	1.90 1.83 1.82	.019 .018 .018	.63 .63 .65	Metal Box	Ground level
EARTH SCIENCES BUILDING	37.87 N 122.26 W	01 Nov 68	Wilmot Seismoscope SR-100	Duplex Horizontal	0.0545 (m/rad)	.75	≈10	Six-story building	Ground level
SAGO CENTRAL USGS #1032	36.77 N 121.45 W	08 Apr 78	SMA-1 #832	North Down West	1.94 1.85 1.81	.040 .039 .038	.60 .60 .60	Concrete vault	Ground level
SAGO EAST USGS #1657	36.81 N 121.41 N	21 Sep 78	SMA-1 #1419	North Down West	1.85 1.80 1.81	.040 .037 .038	.66 .63 .62	One-story building	Ground level
BERKELEY HAVILAND HALL USGS #1006	37.87 N 122.26 W	15 Apr 76	SMA-1 #2500 with WWVB	N45W Down S45W	1.79 1.73 1.71	.038 .038 .039	.60 .58 .57	Concrete building	Ground level
BERKELEY BYERLY SEISM STATION USGS #1005	37.87 N 122.24 W	29 Apr 76	SMA-1 #2503 with WWVB	N45W Down S45W	1.79 1.79 1.73	.038 .039 .039	.60 .55 .57	Concrete vault	Ground level
					Sensitivity (g/F.S.)	Bandwidth (Hz)			
RICHMOND FIELD STATION	37.92 N 122.33 W	12 May 76	Columbia Research Force Balance Accelerometer	Z,H_1^{*},H_2^{**} Z,H_1,H_2	±0.010 ±0.50	.05-50 0-50		5" I.D. uncased backfilled borehole (43.8m deep)	Downhole (43.7m)
			SA-107 (+2g units) (0-50 Hz)	Z,H_1,H_2 Z,H_1,H_2	±0.010 ±0.50	.05-50 0-50			Midhole (15.7m)
				Z,H_1,H_2 Z,H_1,H_2	±0.010 ±0.50	.05-50 0-50			Metal Box Surface Level

* accelerometer aligned S45W

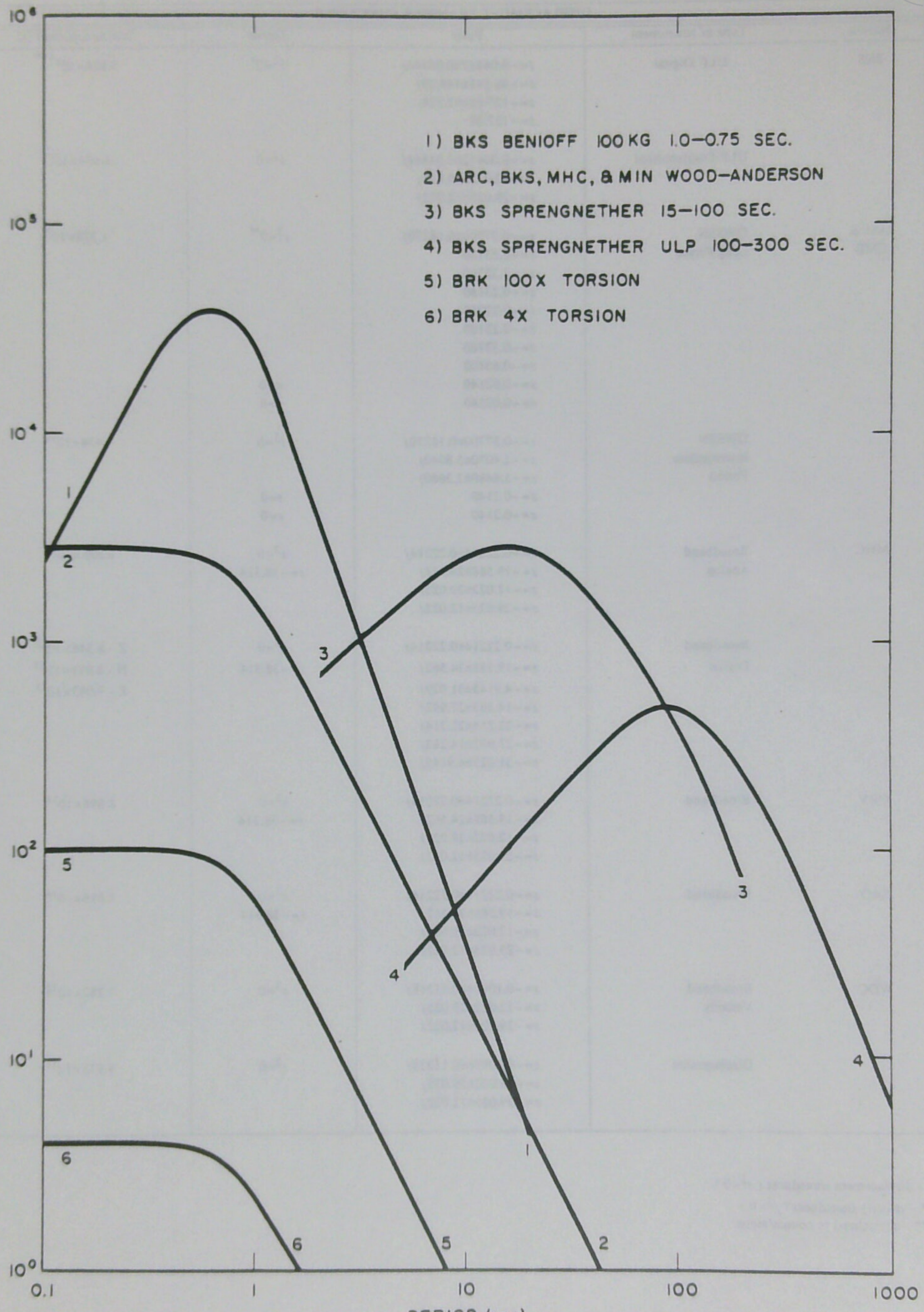
** accelerometer aligned S45E

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DISPLACEMENT TRANSFER FUNCTIONS				
Station	Type of Instrument	Poles	Zeroes	Scaling Constant (k)
BKS	ULP Digital	$s=-0.04442\pm0.04444j$ $s=-48.541\pm149.39j$ $s=-127.08\pm92.328j$ $s=-157.08$	$s^2=0$*	3.824×10^{17}***
	ULP Displacement	$s=-0.04442\pm0.04444j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^2=0$	8.674×10^{11}
JAS1 & CMB	DWSSN Long Period	$s=-0.37700\pm0.18270j$ $s=-0.23180$ $s=-0.32760$ $s=-0.23180$ $s=-0.32760$ $s=-0.65400$ $s=-0.02140$ $s=-0.02140$	$s^3=0$** $s=0$ $s=0$	1.378×10^{7}
	DWSSN Intermediate Period	$s=-0.37700\pm0.18270j$ $s=-2.4070\pm5.8040j$ $s=-5.8480\pm2.3660j$ $s=-0.2140$ $s=-0.2140$	$s^3=0$ $s=0$ $s=0$	4.434×10^{10}
MHC	Broadband Analog	$s=-0.22214\pm0.22214j$ $s=-19.588\pm24.562j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^3=0$ $s=-38.314$	8.896×10^{14}
	Broadband Digital	$s=-0.22214\pm0.22214j$ $s=-19.588\pm24.562j$ $s=-4.9145\pm31.029j$ $s=-14.263\pm27.992j$ $s=-22.214\pm22.214j$ $s=-27.992\pm14.263j$ $s=-31.029\pm4.9145j$	$s^3=0$ $s=-38.314$	Z - 8.346×10^{23} N - 8.911×10^{23} E - 9.043×10^{23}
ORV	Broadband	$s=-0.22214\pm0.22214j$ $s=-19.588\pm24.562j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^3=0$ $s=-38.314$	8.896×10^{14}
SAO	Broadband	$s=-0.22214\pm0.22214j$ $s=-19.588\pm24.562j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^3=0$ $s=-38.314$	8.896×10^{14}
WDC	Broadband Velocity	$s=-0.10966\pm0.11218j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^3=0$	7.382×10^{12}
	Displacement	$s=-0.10996\pm0.11218j$ $s=-12.022\pm29.025j$ $s=-29.025\pm12.022j$	$s^2=0$	9.975×10^{11}

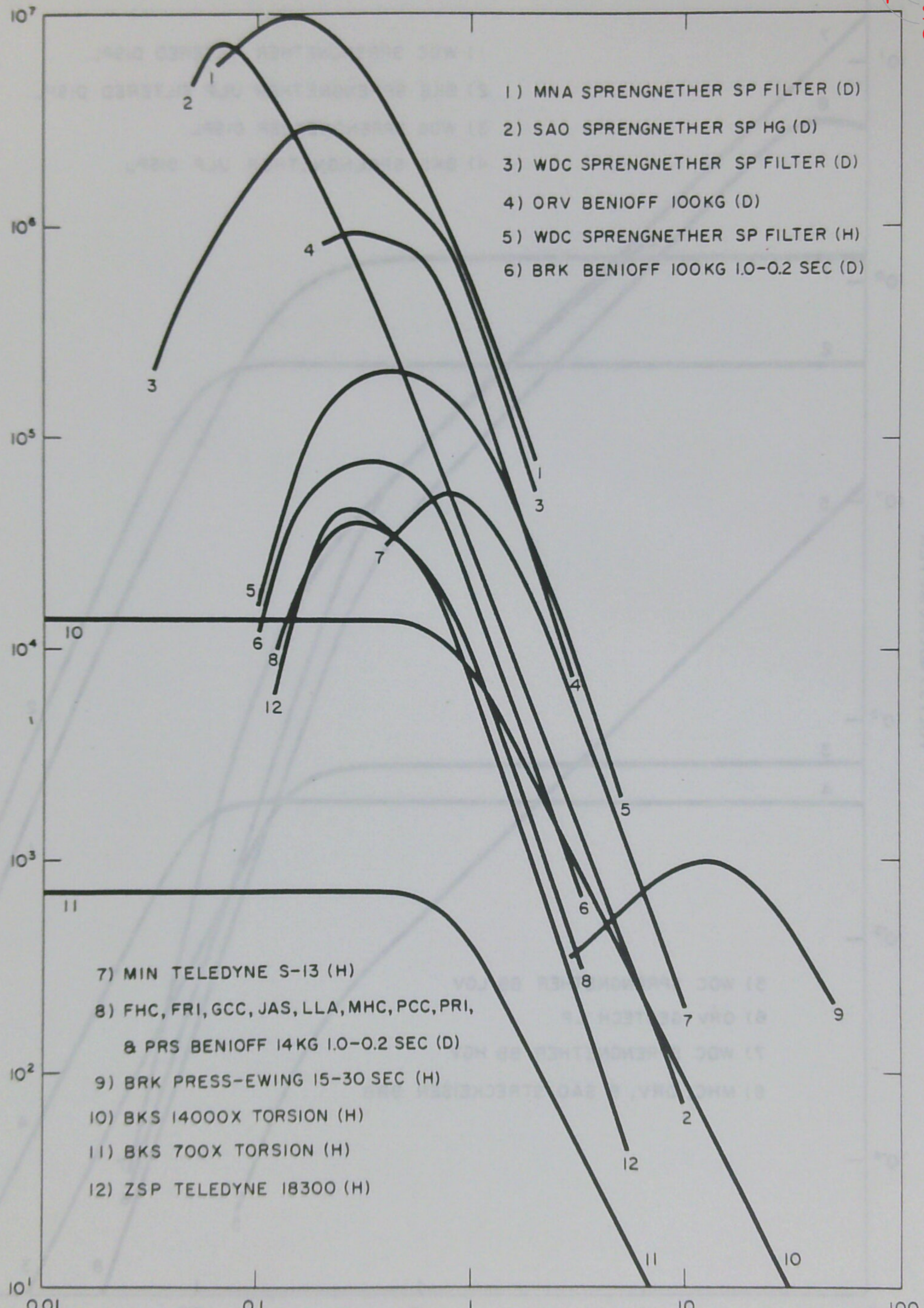
* - displacement transducer ($s^2=0$)
** - velocity transducer ($s^3=0$)
*** - normalized to counts/meter

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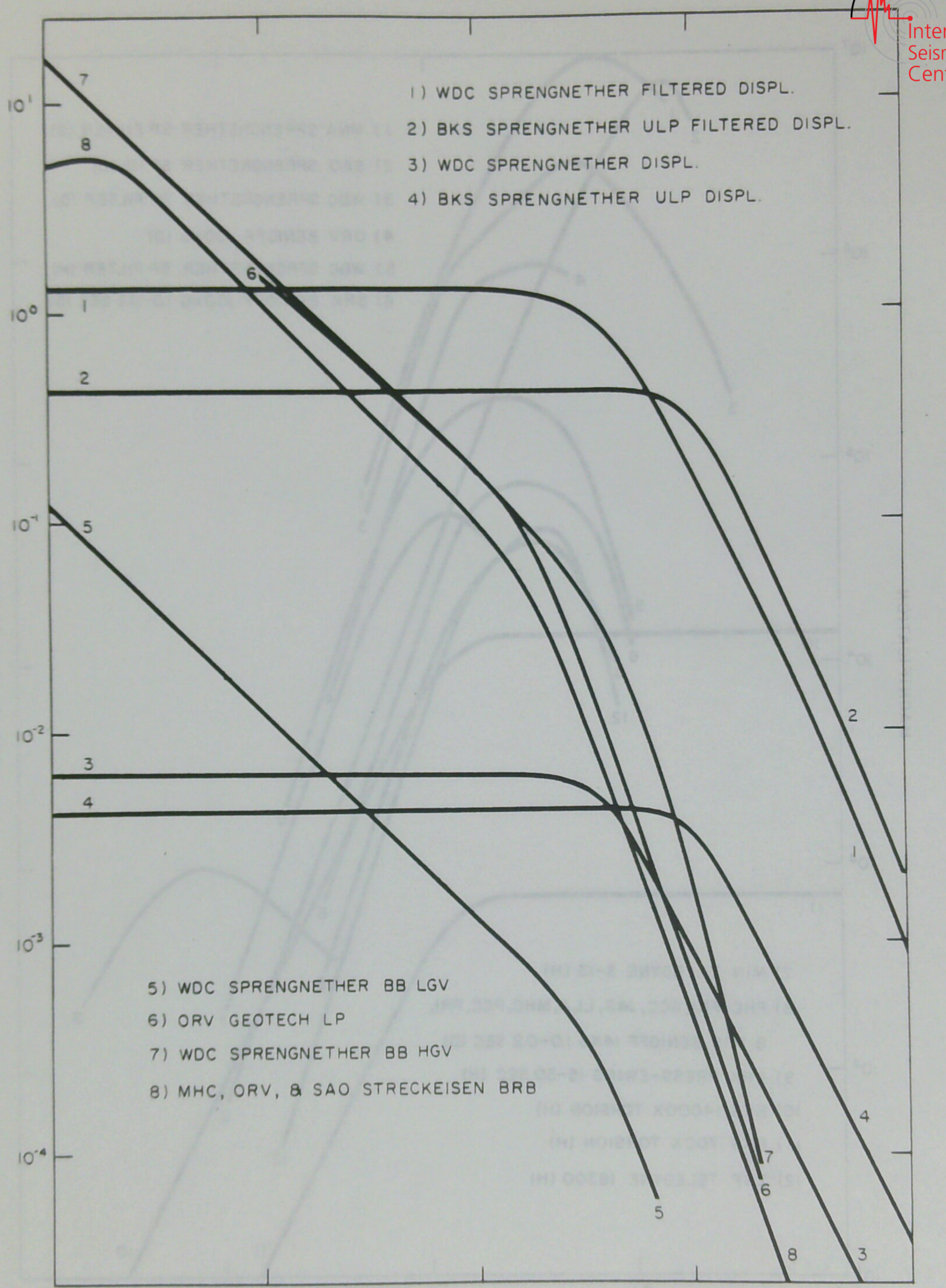
Response curves for photographically recording seismographs. The BKS Benioff and Sprengnether 15-100 second instruments are the WWSSN system.

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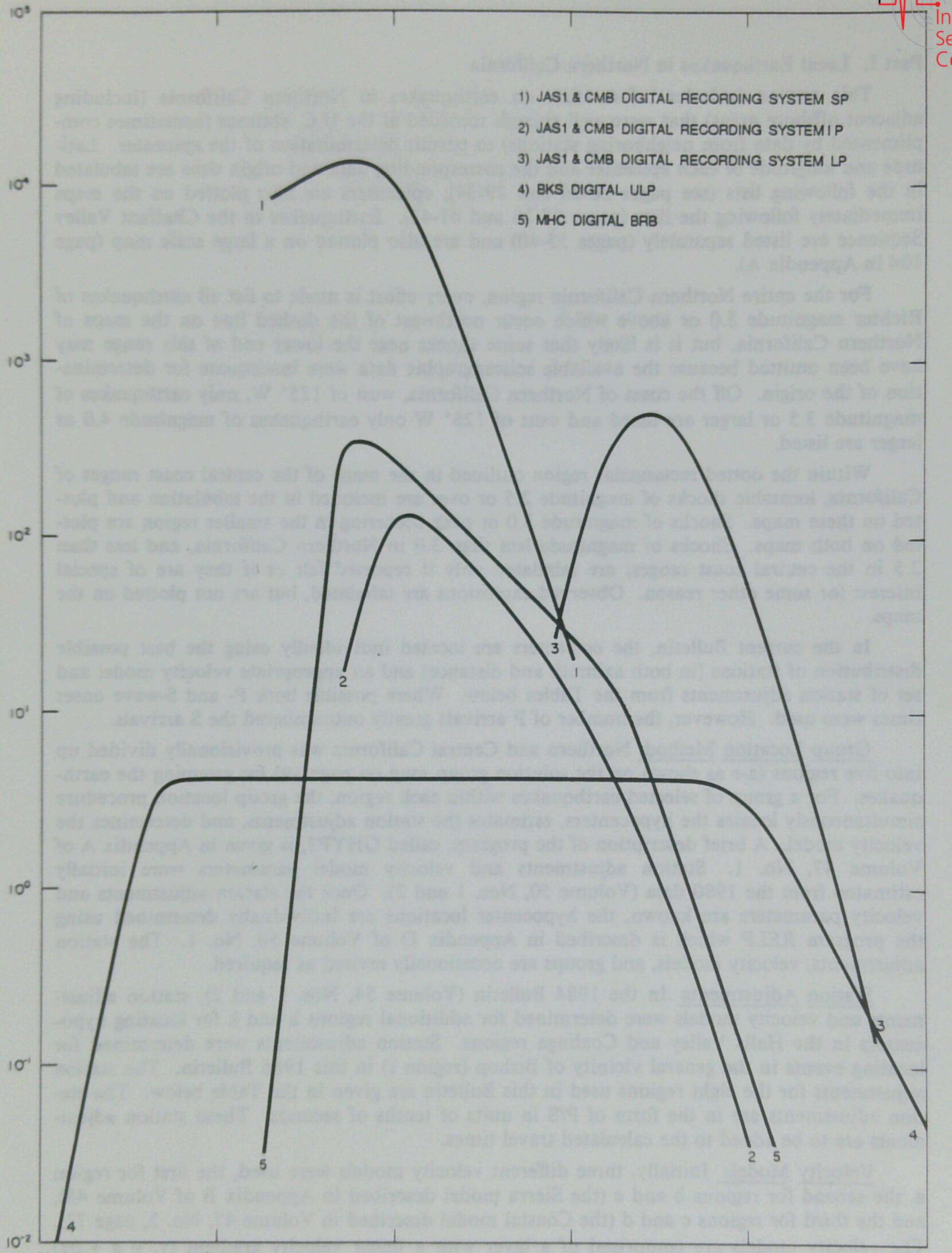
Response curves for Helicorder (HEL) and Develocorder (DEV) channels when viewed at 20X enlargement. The Benioff 14 kg curve (8) represents several different stations and is normalized to 10,000 magnification at 1 second period. (See station instrumentation table for actual magnification at 1 second period.)

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Response curves for broadband seismographs recorded analog on low-speed (15/16 ips) FM magnetic tape at Berkeley. Displacement sensitivity (magnification) in volts/micrometer is given for playback using a Honeywell 96 tape transport and ±10 volt FS discriminators.

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Response curves for digitally recorded seismographs. The Jamestown (JAS1) and Columbia College (CMB) digital WWSSN station data are recorded on 1600 bpi magnetic tape. The Berkeley (BKS) digital ULP is recorded on one track of a Honeywell 96 tape recorder at 15/16 ips (density 5120 bpi). The Mt. Hamilton (MHC) digital BRB station data are recorded on 20 megabyte Bernoulli cartridge disks.

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Part I. Local Earthquakes in Northern California

This section includes information on earthquakes in Northern California (including adjacent offshore areas) that were well enough recorded at the U.C. stations (sometimes complimented by data from neighboring stations) to permit determination of the epicenter. Latitude and longitude of each epicenter and the corresponding data and origin time are tabulated in the following lists (see pages 20-26 and 29-34); epicenters are also plotted on the maps immediately following the lists (pages 27-28 and 41-42). Earthquakes in the Chalfant Valley Sequence are listed separately (pages 35-40) and are also plotted on a large scale map (page 104 in Appendix A).

For the entire Northern California region, every effort is made to list all earthquakes of Richter magnitude 3.0 or above which occur northwest of the dashed line on the maps of Northern California, but it is likely that some shocks near the lower end of this range may have been omitted because the available seismographic data were inadequate for determination of the origin. Off the coast of Northern California, west of 125° W, only earthquakes of magnitude 3.5 or larger are listed and west of 126° W only earthquakes of magnitude 4.0 or larger are listed.

Within the dotted rectangular region outlined in the maps of the central coast ranges of California, locatable shocks of magnitude 2.5 or over are included in the tabulation and plotted on these maps. Shocks of magnitude 3.0 or over occurring in the smaller region are plotted on both maps. Shocks of magnitude less than 3.0 in Northern California, and less than 2.5 in the central coast ranges, are tabulated only if reported felt or if they are of special interest for some other reason. Observed explosions are tabulated, but are not plotted on the maps.

In the current Bulletin, the epicenters are located individually using the best possible distribution of stations (in both azimuth and distance) and an appropriate velocity model and set of station adjustments from the Tables below. Where possible both P- and S-wave onset times were used. However, the number of P arrivals greatly outnumbered the S arrivals.

Group Location Method Northern and Central California was provisionally divided up into five regions (a-e as shown on the solution group map on page 19) for grouping the earthquakes. For a group of selected earthquakes within each region, the group location procedure simultaneously locates the hypocenters, estimates the station adjustments, and determines the velocity model. A brief description of the program, called GHYP2, is given in Appendix A of Volume 47, No. 1. Station adjustments and velocity model parameters were initially estimated from the 1980 data (Volume 50, Nos. 1 and 2). Once the station adjustments and velocity parameters are known, the hypocenter locations are individually determined using the program RELP which is described in Appendix D of Volume 50, No. 1. The station adjustments, velocity models, and groups are occasionally revised as required.

Station Adjustments In the 1984 Bulletin (Volume 54, Nos. 1 and 2), station adjustments and velocity models were determined for additional regions h and k for locating hypocenters in the Halls Valley and Coalinga regions. Station adjustments were determined for locating events in the general vicinity of Bishop (region s) in this 1986 Bulletin. The station adjustments for the eight regions used in this Bulletin are given in the Table below. The station adjustments are in the form of P/S in units of tenths of seconds. These station adjustments are to be added to the calculated travel times.

Velocity Models Initially, three different velocity models were used, the first for region a, the second for regions b and e (the Sierra model described in Appendix B of Volume 48), and the third for regions c and d (the Coastal model described in Volume 47, No. 2, page 72). The velocity models are comprised of a layer with a linear velocity gradient ($v_o = a + bz$) over a halfspace ($v_1 = c$) where a is the velocity at the top of the layer, b is the velocity gradient, and c is the velocity in the halfspace. In this Bulletin, six velocity models are used for locating the hypocenters in the eight regions. The parameters for the velocity models are given in the Table below.

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STATION ADJUSTMENTS								
Station	Region							
	a	b	c	d	e	h	k	s
ARC	-2/-9							
BKS	1/15		0/5	-1/1				11/
BRK	1/0		2/5	-1/1		1/		-2/
CMB								0/0
FHC	-1/-7	3/10	11/		1/-1			
FRI				0/-6			-2/	0/-4
GCC			-2/	-4/-5		2/		1/0
JAS1		-12/-3	4/4	2/-3	-1/-9	2/	5/	-2/0
LLA				-2/0		-6/	-2/	6/
MHC			-1/	2/1		0/	3/	5/
MIN	-2/15	-2/0	3/3					2/
MNA					1/1			5/1
ORV	-1/13	-4/-3	-5/-7	-6/				5/
PCC	0/		-1/6	-4/-4		-3/		0/
PRI				3/3		-1/		1/26
PRS				-2/-4		-2/	2/	4/
SAO				-2/		2/	5/	5/
WDC	0/7	-5/0	-4/4					
ZSP	-2/		0/6	1/6				13/

VELOCITY MODELS							
Region	P-wave			S-wave			Layer Thickness (km)
	a (km/sec)	b (1/sec)	c (km/sec)	a (km/sec)	b (1/sec)	c (km/sec)	
a	5.24	.068	7.98	3.03	.039	4.61	25.
b, e & s	6.00	.024	7.85	3.46	.014	4.53	45.
c, d & h	5.28	.075	7.70	2.98	.043	4.36	25.
k	5.20	.120	7.50	2.20	.042	4.50	18.

Explanation of the Listing of Earthquakes:

KEY is a letter and number combination which indicates the grid location of the earthquake on the maps. The map key is set up on half-degree grid intervals and a map key index is given at the end of each list as a cross reference (including date, time and magnitude) for identifying the earthquakes plotted on the maps.

DATE and **O-TIME (UTC)** are the date and origin time of the earthquake given in Coordinated Universal Time (UTC). To obtain local time, subtract 8 hours for Pacific Standard Time (PST) and 7 hours for Pacific Daylight Time (PDT).

N LAT and **W LONG** are the north latitude and west longitude of the epicenter. Geographic coordinates are quoted to tenths of a minute for computer-located epicenters. Uncertainties of order five kilometers or more may exist in determinations where the depth has been restricted, or where the epicenters lie outside the network.

DEPTH of focus for each earthquake is given to the nearest kilometer. If the depth is restrained, it is indicated by an "R".

SE is the standard error of the observations in seconds.

Region	Number of Earthquakes	Region Name
a	59	Northern coast
b	0	Northern California
c	9	Ukiah-Willits
d	164	Central coast
e	13	Sierra Nevada
h	26	Halls Valley
k	10	Coalinga
o	1	No Adjustments
s	130	Bishop

SLN indicates the number of stations and station adjustments and velocity model used in determining the hypocenter. The number indicates the number of stations and the letter

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(see above Table) indicates the regional station adjustments and velocity model used in determining the location of the hypocenter. A letter "o" is used for the cases where the earthquake was either outside the above regions or no station adjustments were used in the solution.

MAG is the local magnitude (M_L) of the earthquake (on the Richter scale) determined from the maximum trace amplitudes recorded for the shock by standard Wood-Anderson torsion seismographs. The number of observations used to determine M_L is given in parenthesis immediately following the magnitude value. The magnitudes of earthquakes for which no Wood-Anderson records are available are determined from Benioff seismograph maximum trace amplitudes, and are indicated by an asterisk.

MOMENT is the seismic moment (M_o) in dyne-cm for regional earthquakes as calculated from standard Wood-Anderson torsion seismographs recorded within 300 km of the epicenter with peak-to-peak amplitudes of at least 3 mm. Seismic moment in dyne-cm is defined by (Bolt and Herraiz, BSSA, Vol. 73, 735-748, 1983):

$$\log(M_o) = 16.74 + 1.22 \log(CDE)$$

where C is the maximum peak-to-peak amplitude in mm, D is the duration in seconds from the S-wave onset to the last point where the peak-to-peak amplitude exceeds $C/3$, and E is the epicentral distance in kilometers. The number of observations used to determine M_o is given in parenthesis immediately following the moment value.

COMMENTS gives a short descriptive location of the epicenter and felt information.

Recent Rate of Seismicity

Northern and Central California The Bulletin of the Seismographic Stations lists 3638 earthquakes ($3.0 \leq M_L \leq 6.9$), which occurred in the 280,000km^2 area of northern and central California, from 1949 through 1983. The 3638 earthquakes were declustered into 2312 earthquake sequences (of one or more earthquakes). The cumulative number of earthquake sequences (N) was fit to the Gutenburg-Richter relation by the maximum likelihood method and the result is

$$\log N = 4.23 - .815\, M_L$$

with a corresponding variance of

$$\sigma^2_{\log N} = .000781 - .000792 M_L + .000525 M_L^2$$

(normalized to earthquake sequences per year per 280,000km^2).

The annual rate of seismicity ($r = 10^{\log N}$) in earthquake sequences per year and the percent probability of one or more earthquakes of magnitude M_L or larger occurring in one day, week, month, year or decade is:

Northern and Central California						
$M_L \geq$	r (eq/yr)	Percent Probability in one				
		day	week	month	year	decade
3.0	60.	15.	69.	99.	100.	100.
3.5	24.	6.3	36.	86.	100.	100.
4.0	9.2	2.5	16.	54.	100.	100.
4.5	3.6	0.99	6.7	26.	97.	100.
5.0	1.4	0.39	2.7	11.	76.	100.
5.5	0.55	0.15	1.1	4.5	43.	100.
6.0	0.22	0.059	0.42	1.8	19.	89.
6.5	0.085	0.023	0.16	0.71	8.1	57.
7.0	0.033	0.009	0.064	0.28	3.3	28.

During 1986, 66 earthquake sequences ($M_L \geq 3.0$) occurred in Northern and Central California. Earthquakes occurring in the vicinity of the Geysers geothermal field (south of Clear Lake, H8 on maps) were excluded from the count on the assumption that they may be

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induced by geothermal energy production activities. Thus the observed rate of seismicity in 1986 is not significantly different than the average annual rate of seismicity during the past 35 years.

Central Coast Ranges

The Bulletin of the Seismographic Stations lists 4267 earthquakes $M_L \geq 2.5$, which occurred in the 40,000km^2 area of the central coast ranges, from 1949 through 1983. The 4267 earthquakes were declustered into 2386 sequences (of one or more earthquakes). The cumulative number of sequences (N) was fit to the Gutenburg-Richter relation by the maximum likelihood method and the result is

$$\log N = 3.78 - 0.793 M_L$$

with a corresponding variance of

$$\sigma^2_{\log N} = 0.000615 - 0.000598 M_L + 0.000603 M_L^2$$

(normalized to earthquake sequences per year per 40,000 km^2).

The annual rate of seismicity ($r = 10^{\log N}$) in earthquake sequences per year and the percent probability of one or more earthquakes of magnitude M_L or larger occurring in one day, week, month, year or decade is:

Central Coast Ranges						
$M_L \geq$	r (eq/yr)	Percent Probability in one				
		day	week	month	year	decade
2.5	62.	16.	70.	99.	100.	100.
3.0	25.	6.6	38.	88.	100.	100.
3.5	10.	2.7	17.	57.	100.	100.
4.0	4.0	1.1	7.4	29.	98.	100.
4.5	1.6	0.44	3.0	13.	80.	100.
5.0	0.65	0.18	1.2	5.3	48.	100.
5.5	0.26	0.071	0.50	2.1	23.	93.
6.0	0.10	0.029	0.20	0.87	9.9	65.
6.5	0.042	0.011	0.080	0.35	4.1	34.
7.0	0.017	0.005	0.032	0.14	1.7	15.

During 1986, 72 earthquake sequences ($M_L \geq 2.5$) occurred in the central coast ranges. Thus the observed rate of seismicity in 1986 is not significantly different than the average annual rate of seismicity during the past 35 years.

Significant Earthquake Sequences

During 1986, four earthquake sequences ($M_L \geq 5$) occurred in Northern and Central California and vicinity: a M_L 5.5 sequence ESE of Hollister (K12 on maps); a M_L 5.7 sequence in the Mt. Lewis area NE of San Jose (J11 on maps); a M_L 6.4 sequence in the Chalfant Valley NNW of Bishop (Q10 on maps); and, a M_L 5.1 sequence in the Cape Mendocino area (E5 on maps).

The Hollister sequence began at 1920 UTC on January 26 with the occurrence of the mainshock (M_L 5.5; *MM VI*) and 17 aftershocks ($M_L \geq 2.5$) occurred in the following 6 weeks. The largest aftershock, registering M_L 4.0, occurred within 4 hours of the mainshock. This sequence is a typical example of the most common type (no foreshocks, inverse time rate decay and largest aftershock 1.4 - 1.7 M_L units below mainshock magnitude) which occur in the Central Coast Ranges (about 65 percent of $M_L \geq 5$ follow this pattern).

The Mt. Lewis sequence commenced at 01:54 UTC on March 24 with the occurrence of a M_L 2.5 foreshock and the mainshock (M_L 5.7; MM VI) at 11:55 UTC on March 31. Two M_L 2.5 foreshocks (approximately 7 days and 9 hours prior to the mainshock) and 39 aftershocks ($M_L \geq 2.5$) occurred through the end of 1986. About 30 percent of the $M_L \geq 5$ sequences observed in the Central Coast Ranges follow this pattern).

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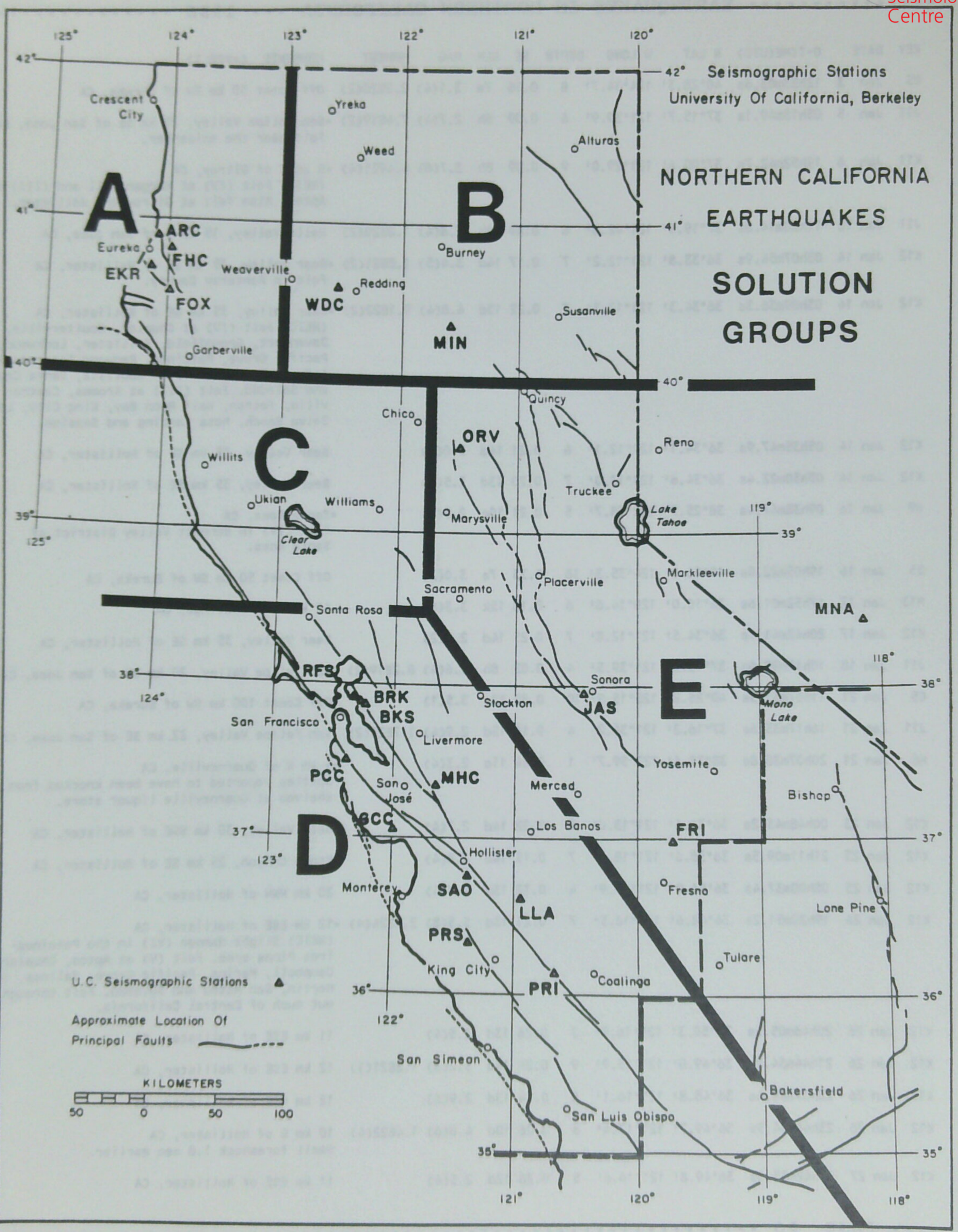
The Chalfant Valley sequence began with the occurrence of a M_L 3.9 foreshock at 16:00 UTC on July 18. During the next three days a foreshock sequence of 15 more earthquakes ($3.5 \leq M_L \leq 5.9$) developed prior to the occurrence of the mainshock (M_L 6.4; MM VI) at 14:42 UTC on July 21. A large aftershock sequence of at least 108 earthquakes ($M_L \geq 3.5$), including five earthquakes of $M_L \geq 5$, occurred by the end of the year (see pages 35-41 and Appendix A). Historically, large sequences similar to this one with numerous $M_L \geq$ 2.5 foreshocks and aftershocks are common along the eastern front of the Sierra Nevada.

The Mendocino sequence started on November 21 with a pair of M_L 5.1 (MM VI) earthquakes 76 seconds apart in time (at 22:33 and 23:34 UTC). During the next six weeks (until the end of the year) 14 aftershocks ($M_L \geq 3.0$) occurred with the largest aftershock registering M_L 4.0. This type of sequence (with two or more principle earthquakes along with aftershocks) occurs only in about 5 percent of the historical M_L 5 sequences.

Acknowledgements

We would like to thank the following institutions for their assistance in supplying readings for the epicenter locations: Seismological Laboratory, California Institute of Technology; Seismological Laboratory, University of Nevada at Reno; Pacific Gas and Electric Company; Lawrence Livermore National Laboratory; California Division of Mines and Geology; California Department of Water Resources; National Earthquake Information Center, U. S. Geological Survey; and the Northern California Seismic Analysis Group, U. S. Geological Survey.

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UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS
EARTHQUAKES IN NORTHERN CALIFORNIA ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
D5	Jan 3	12h33m03.6s	40°28.3'	124°34.7'	8	0.16	7a	3.1(4)	2.2E20(2)	Off Coast 50 km SW of Eureka, CA
J11	Jan 5	05h18m49.1s	37°15.7'	121°39.9'	6	0.09	8h	2.7(4)	7.4E19(2)	•San Felipe Valley, 20 km SE of San Jose, CA Felt near the epicenter.
K11	Jan 6	19h52m42.7s	37°00.6'	121°29.0'	9	0.09	8h	3.7(6)	4.4E21(4)	•8 km E of Gilroy, CA (NEIC) Felt (IV) at Morgan Hill and (III) at Aptos. Also felt at Gilroy and Hollister.
J11	Jan 12	11h20m14.8s	37°19.4'	121°42.8'	6	0.09	8h	2.8(4)	1.0E20(2)	Halls Valley, 15 km E of San Jose, CA
K12	Jan 14	03h07m54.9s	36°33.8'	121°12.2'	7	0.17	14d	3.4(5)	1.8E21(2)	•Bear Valley, 35 km SE of Hollister, CA Felt in Monterey County.
K12	Jan 14	03h09m36.3s	36°34.3'	121°12.3'	7	0.22	13d	4.8(4)	9.1E22(2)	•Bear Valley, 35 km SE of Hollister, CA (NEIC) Felt (IV) at Chualar, Coulterville, Davenport, Greenfield, Hollister, Lockwood, Pacific Grove, Paicines, Redwood Estates, San Ardo, Salinas, San Juan Bautista, Santa Cruz and Soledad. Felt (III) at Aromas, Castroville, Felton, Half Moon Bay, King City, La Selva Beach, Moss Landing and Seaside.
K12	Jan 14	05h35m47.9s	36°34.1'	121°12.1'	6	0.21	14d	3.0(4)		Bear Valley, 35 km SE of Hollister, CA
K12	Jan 14	05h50m22.4s	36°34.6'	121°13.0'	7	0.20	13d	2.5(4)		Bear Valley, 35 km SE of Hollister, CA
H9	Jan 16	09h38m47.4s	38°25.7'	122°38.7'	5	0.21	10c	2.5(3)		•Santa Rosa, CA Felt (IV) in Bennett Valley District of Santa Rosa.
D5	Jan 16	19h05m22.0s	40°26.8'	124°35.3'	18	0.33	7a	3.0(2)		Off Coast 50 km SW of Eureka, CA
M13	Jan 17	17h52m01.6s	36°10.0'	120°14.6'	6	0.18	15k	3.3(6)		10 km E of Coalinga, CA
K12	Jan 17	20h42m41.1s	36°34.5'	121°12.8'	7	0.21	14d	2.5(2)		Bear Valley, 35 km SE of Hollister, CA
J11	Jan 18	10h17m29.6s	37°16.2'	121°39.5'	4	0.03	8h	2.6(4)	8.2E19(2)	San Felipe Valley, 20 km SE of San Jose, CA
C5	Jan 21	11h57m31.3s	40°26.2'	125°15.9'	10	0.30	13a	3.5(1)		Off Coast 100 km SW of Eureka, CA
J11	Jan 21	16h17m33.6s	37°16.2'	121°38.2'	4	0.16	13d	2.9(4)	1.7E20(2)	San Felipe Valley, 22 km SE of San Jose, CA
H8	Jan 21	20h07m30.8s	38°32.6'	122°59.7'	1	0.24	11c	2.3(4)		•5 km N of Guerneville, CA Bottles reported to have been knocked from shelves at Guerneville liquor store.
K12	Jan 23	00h48m45.2s	36°34.6'	121°13.0'	5	0.22	14d	2.7(4)		Bear Valley, 30 km SSE of Hollister, CA
K12	Jan 23	21h11m09.5s	36°38.6'	121°18.4'	7	0.15	14d	2.8(4)		Stone Canyon, 25 km SE of Hollister, CA
K12	Jan 25	08h00m37.4s	36°56.9'	121°25.9'	4	0.32	13d	2.7(4)		20 km NNW of Hollister, CA
K12	Jan 26	19h20m51.2s	36°48.6'	121°16.5'	7	0.21	13d	5.5(8)	2.0E24(4)	•12 km ESE of Hollister, CA (NEIC) Slight damage (VI) in the Paicines-Tres Pinos area. Felt (V) at Aptos, Chualar, Campbell, Marina, Pacific Grove, Salinas, San Martin, San Mateo and Soledad. Felt throughout much of Central California.
K12	Jan 26	20h46m05.5s	36°50.3'	121°16.9'	3	0.26	13d	2.5(4)		11 km ESE of Hollister, CA
K12	Jan 26	21h44m34.2s	36°49.0'	121°15.9'	9	0.24	14d	3.2(6)	1.2E21(1)	12 km ESE of Hollister, CA
K12	Jan 26	23h09m58.4s	36°48.8'	121°16.1'	8	0.14	13d	2.9(6)		12 km ESE of Hollister, CA
K12	Jan 26	23h46m54.9s	36°49.7'	121°17.4'	6	0.26	10d	4.0(6)	1.4E22(4)	10 km E of Hollister, CA Small foreshock 1.8 sec earlier.
K12	Jan 27	05h42m33.0s	36°49.8'	121°16.6'	5	0.28	12d	2.5(4)		11 km ESE of Hollister, CA

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EARTHQUAKES IN NORTHERN CALIFORNIA ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
K12	Jan 27	10h07m37.1s	36°48.6'	121°15.8'	7	0.26	12d	3.4(6)	1.8E21(2)	14 km ESE of Hollister, CA
K12	Jan 27	14h26m06.4s	36°50.1'	121°16.7'	5	0.18	13d	3.3(6)	1.9E21(2)	10 km ESE of Hollister, CA
K12	Jan 27	17h01m24.5s	36°50.3'	121°16.8'	6	0.21	13d	2.7(4)		11 km ESE of Hollister, CA
K12	Jan 27	17h21m43.9s	36°49.9'	121°17.0'	6	0.27	13d	2.5(4)		11 km ESE of Hollister, CA
K12	Jan 27	19h23m20.1s	36°49.3'	121°16.0'	9	0.22	13d	2.6(4)		13 km ESE of Hollister, CA
K12	Jan 27	19h51m34.1s	36°48.8'	121°15.3'	8	0.19	13d	3.4(6)	2.4E21(2)	14 km ESE of Hollister, CA
K12	Jan 27	23h09m19.3s	36°49.8'	121°16.5'	7	0.23	12d	2.6(4)		11 km ESE of Hollister, CA
J10	Jan 30	17h47m07.5s	37°38.7'	121°50.2'	4	0.20	14d	2.9(6)	6.6E20(4)	•6 km SW of Livermore, CA Felt in Livermore, Pleasanton.
J10	Jan 31	00h01m28.7s	37°38.7'	121°49.9'	2	0.26	13d	2.7(2)	3.9E20(1)	6km SW of Livermore, CA
J10	Jan 31	16h37m49.8s	37°38.7'	121°50.2'	5	0.14	13d	3.1(5)	6.3E20(1)	6 km SW of Livermore, CA
P11	Feb 1	08h51m26.8s	37°27.6'	118°50.4'	11	0.17	9e	3.0 *		24 km SE of Mammoth Lakes, CA
E4	Feb 2	19h31m22.8s	40°48.1'	124°03.8'	25R	0.17	11a	3.2(4)	1.6E20(2)	•8 km ENE of Eureka, CA Felt in Eureka.
L12	Feb 2	22h07m30.9s	36°56.8'	120°59.3'	5	0.35	10d	2.9(4)	4.1E20(1)	17 km SW of Los Banos, CA
D4	Feb 5	12h00m10.4s	40°36.5'	124°43.6'	16	0.21	12a	3.5(2)		Off Coast 50 km SW of Eureka, CA
L12	Feb 9	21h53m10.2s	36°44.1'	120°55.4'	2	0.24	11d	2.6(2)		Panoche Hills, 45 km SE of Hollister, CA
J10	Feb 10	16h22m54.0s	37°49.3'	121°55.3'	13	0.14	10d	2.6(4)		Danville area, 30 km SE of Berkeley, CA
M13	Feb 10	16h42m14.9s	36°08.4'	120°11.8'	11	0.18	13k	2.8(2)		15 km E of Coalinga, CA
C2	Feb 11	01h15m59.5s	41°43.3'	125°14.7'	5	0.41	11a	4.9(8)	7.1E22(2)	Off Coast 85 km W of Crescent City, CA
K12	Feb 14	22h21m31.8s	36°46.0'	121°15.9'	9	0.25	15d	3.1(2)		15 km SE of Hollister, CA
J11	Feb 15	09h53m43.4s	37°07.0'	121°32.0'	4	0.13	7h	2.5(4)		12 km NE of Gilroy, CA
I6	Feb 15	22h27m01.0s	39°37.8'	122°04.3'	22	0.31	11o	3.1(8)	1.0E22(2)	•22 km SW of Chico, CA (NEIC) Felt (III) at Durham and (II) at Artois. Also felt at Chico.
J10	Feb 17	00h39m31.1s	37°48.8'	121°55.1'	10	0.16	10d	2.8(4)	7.5E20(2)	Near Danville, 30 km ESE of Berkeley, CA
A5	Feb 17	12h28m07.1s	40°28.7'	127°17.6'	5R	0.55	5a	4.3(6)		Off the Coast, 270 km W of Eureka, CA
D4	Feb 19	00h25m40.1s	40°43.8'	124°51.3'	8	0.24	8a	4.0(1)	1.0E21(1)	Off Coast 60 km W of Eureka, CA
K12	Feb 19	03h01m09.1s	36°49.6'	121°16.6'	9	0.23	13d	3.1(2)	1.2E21(1)	11 km ESE of Hollister, CA
K12	Feb 19	23h49m07.7s	36°50.9'	121°17.8'	9	0.25	13d	3.1(4)	1.7E21(2)	•10 km E of Hollister, CA Felt in San Benito County.
K12	Feb 20	00h35m08.0s	36°50.5'	121°17.8'	6	0.24	13d	2.6(2)		10 km E of Hollister, CA
L12	Feb 26	18h27m49.6s	36°44.6'	120°45.8'	4	0.36	11d	2.6(4)		40 km SSE of Los Banos, CA
D4	Feb 28	10h31m35.8s	40°35.8'	124°43.7'	14	0.20	10a	3.5(4)	5.0E20(2)	Off Coast 50 km SW of Eureka, CA
K12	Mar 3	14h45m20.0s	36°50.1'	121°16.1'	6	0.25	12d	2.7(3)		•12 km ESE of Hollister, CA Felt in the Hollister area.
K12	Mar 4	19h54m53.3s	36°46.3'	121°16.0'	9	0.25	13d	2.7(4)		14 km SE of Hollister, CA
R11	Mar 6	20h16m53.2s	37°11.0'	117°19.4'	12	0.34	9e	3.9(4)		100 km S of Tonapah, Nevada

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UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS
EARTHQUAKES IN NORTHERN CALIFORNIA ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
D5	Mar 7	22h26m33.7s	40°18.2'	124°30.9'	2	0.25	15a	3.8(3)	1.7E21(2)	Off Coast 13 km W of Cape Mendocino, CA
I10	Mar 9	01h28m13.0s	37°40.3'	122°29.9'	7	0.25	9d	3.0(4)	4.8E20(2)	•Daly City, CA (NEIC) Felt strongly at Sausalito, some small items knocked from shelves. Also felt in the Daly City-San Francisco area.
E5	Mar 11	00h05m09.9s	40°18.4'	124°23.1'	22	0.16	10a	3.6(4)	1.7E21(2)	Along Coast 2 km W of Cape Mendocino, CA
C5	Mar 11	15h34m38.3s	40°24.7'	125°26.0'	12	0.28	12a	3.9(4)	1.8E21(2)	Off Coast 110 km SW of Eureka, CA
M13	Mar 13	08h37m01.2s	36°16.0'	120°21.4'	8	0.21	15k	2.6(2)		15 km N of Coalinga, CA
P11	Mar 19	09h27m39.1s	37°27.7'	118°37.3'	10	0.08	6e	3.4(5)		•22 km NW of Bishop, CA (NEIC) Felt (III) at Auberry and Miramonte.
F4	Mar 20	22h41m38.0s	40°56.9'	123°41.1'	6	0.35	6a	3.8(3)	2.6E21(1)	Near Willow Creek, 34 km ENE of Arcata, CA
F4	Mar 20	22h42m59.8s	40°58.3'	123°41.1'	5R	0.25	6a	3.4(3)	7.3E20(1)	Near Willow Creek, 35 km ENE of Arcata, CA
F4	Mar 20	22h43m12.7s	40°58.3'	123°41.3'	16	0.40	4a	3.3(3)	3.7E20(1)	Near Willow Creek. 34 km ENE of Arcata, CA
L12	Mar 21	01h23m47.5s	36°56.4'	120°59.9'	4	0.26	12d	3.0(4)	7.3E20(2)	18 km SW of Los Banos, CA
C3	Mar 21	06h37m26.9s	41°00.4'	125°13.2'	5R	0.27	8a	3.7(4)	3.3E20(2)	Off Coast 90 km NW of Eureka, CA
H8	Mar 23	04h58m02.6s	38°48.0'	122°48.4'	2R	0.29	7c	3.6(6)	1.2E22(2)	•The Geysers area, 23 km S of Clear Lake, CA (NEIC) Felt strongly at The Geysers. Felt (V) at Cobb, (IV) at Loch Lomond and Jenner, (III) at Boyes Hot Springs and Freestone.
J11	Mar 24	01h54m41.7s	37°29.2'	121°41.5'	8	0.12	9d	2.5(4)	3.5E20(2)	Mt. Lewis area, 25 km NE of San Jose, CA
K12	Mar 24	22h55m34.0s	36°33.4'	121°11.0'	4	0.23	12d	3.0(2)		Bear Valley, 40 km SSE of Hollister, CA
J11	Mar 27	21h25m16.3s	37°15.2'	121°40.5'	5	0.09	7h	2.9(4)	1.8E20(2)	San Felipe Valley, 20 km ESE of San Jose, CA
I10	Mar 29	16h24m04.2s	37°52.3'	122°12.7'	9	0.05	6d	4.1(8)	2.5E22(3)	•Berkeley Hills, CA Small items knocked from shelves in parts of Berkeley; broken display window in El Cerrito Widely felt in the San Francisco Bay area from southern Marin County to San Jose.
J11	Mar 31	04h05m00.1s	37°29.2'	121°41.4'	8	0.14	8d	2.5(4)	1.7E20(2)	Mt. Lewis area, 25 km NE of San Jose, CA
J11	Mar 31	11h55m40.1s	37°29.1'	121°41.6'	8	0.12	9d	5.7(6)	2.6E24(2)	•Mt. Lewis area, 24 km NE of San Jose, CA (NEIC) Six people were treated for minor injuries. Slight damage (VI) in the Fremont area and power outages in parts of Fremont and San Jose. Felt (V) at many cities in the southern San Francisco Bay area including Alameda, Cupertino, Milpitas, Mountain View, Palo Alto, Pleasanton, Redwood City, San Jose, San Leandro, Santa Clara, Sunnyvale and Union City. Felt throughout much of central California from Santa Rosa to San Luis Obispo and east to Yosemite National Park.
J11	Mar 31	12h03m18.5s	37°28.7'	121°42.4'	5R	0.17	5d	2.5(2)	1.4E20(2)	Mt. Lewis area, 23 km NE of San Jose, CA
J10	Mar 31	12h03m46.0s	37°30.6'	121°42.6'	5	0.20	8d	2.8(2)	2.7E20(2)	Mt. Lewis area, 25 km NE of San Jose, CA
J10	Mar 31	12h17m48.4s	37°30.4'	121°41.3'	8	0.20	9d	3.0(4)	4.2E20(2)	Mt. Lewis area, 27 km NE of San Jose, CA
J11	Mar 31	12h39m24.0s	37°27.9'	121°42.0'	8	0.19	9d	3.1(6)	7.8E20(2)	Mt. Lewis area, 22 km NE of San Jose, CA
J10	Mar 31	13h05m38.2s	37°30.8'	121°41.3'	7	0.15	9d	3.4(6)	3.9E21(4)	Mt. Lewis area, 27 km NE of San Jose, CA
J11	Mar 31	13h39m14.7s	37°27.9'	121°41.9'	5	0.12	8d	2.8(5)	2.4E20(2)	Mt. Lewis area, 22 km NE of San Jose, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
J11	Mar 31	14h20m14.6s	37°28.2'	121°41.8'	8	0.16	9d	3.2(6)	4.6E20(2)	Mt. Lewis area, 22 km NE of San Jose, CA
J11	Mar 31	15h17m17.8s	37°29.0'	121°41.8'	8	0.15	9d	2.5(3)	5.9E19(2)	Mt. Lewis area, 24 km NE of San Jose, CA Double event, about 6 sec. apart in time and of approximately the same magnitude.
J11	Mar 31	15h25m11.5s	37°29.9'	121°41.5'	9	0.19	8d	2.8(4)	3.6E20(2)	Mt. Lewis area, 25 km NE of San Jose, CA
J11	Mar 31	16h18m13.8s	37°28.2'	121°41.6'	8	0.18	9d	2.7(4)	1.3E20(2)	Mt. Lewis area, 23 km NE of San Jose, CA
J11	Mar 31	17h12m39.4s	37°28.5'	121°41.6'	7	0.14	9d	2.8(4)	1.1E20(2)	Mt. Lewis area, 22 km NE of San Jose, CA
J11	Mar 31	19h41m15.9s	37°29.1'	121°41.5'	8	0.15	9d	2.8(6)	1.0E20(2)	Mt. Lewis area, 24 km NE of San Jose, CA
J11	Mar 31	21h21m53.9s	37°27.4'	121°41.7'	6	0.17	9d	2.6(4)	6.5E19(2)	Mt. Lewis area, 21 km NE of San Jose, CA
J11	Mar 31	21h30m09.5s	37°29.3'	121°41.6'	8	0.11	9d	2.8(4)	4.5E20(2)	Mt. Lewis area, 24 NE of San Jose, CA
J11	Apr 1	08h53m43.9s	37°27.0'	121°41.8'	6	0.14	9d	2.8(4)	2.9E20(2)	Mt. Lewis area, 22 km NE of San Jose, CA
J11	Apr 2	02h50m37.3s	37°27.9'	121°41.8'	7	0.14	8d	3.3(6)	1.8E21(4)	Mt. Lewis area, 22 km NE of San Jose, CA
J11	Apr 2	13h53m59.7s	37°28.9'	121°41.6'	7	0.12	9d	2.8(6)	2.6E20(2)	Mt. Lewis area, 23 km NE of San Jose, CA
J11	Apr 3	05h27m48.6s	37°09.7'	121°34.7'	5	0.09	8h	2.6(4)	9.9E19(2)	Anderson Lake, 32 km SE of San Jose, CA
D3	Apr 3	06h40m37.5s	41°12.7'	124°33.0'	12	0.28	7a	3.6(4)	9.6E20(2)	Off Coast 50 km NW of Eureka, CA
J10	Apr 3	16h33m35.9s	37°30.9'	121°41.4'	7	0.12	9d	3.0(3)	7.3E20(2)	Mt. Lewis area, 26 km NE of San Jose, CA
J11	Apr 4	10h16m41.3s	37°17.5'	121°41.1'	6	0.18	8h	3.2(6)	9.9E20(4)	Halls Valley, 19 km SE of San Jose, CA
J10	Apr 5	08h10m19.4s	37°31.0'	121°41.4'	8	0.12	10d	2.5(4)	1.2E20(2)	Mt. Lewis area, 26 km NE of San Jose, CA
J10	Apr 5	18h43m37.0s	37°31.1'	121°41.5'	7	0.17	9d	3.4(6)	2.2E21(4)	Mt. Lewis area, 26 km NE of San Jose, CA
J10	Apr 6	14h18m56.1s	37°30.3'	121°41.8'	8	0.13	9d	2.6(4)	3.4E20(2)	Mt. Lewis area, 24 km NE of San Jose, CA
J11	Apr 9	08h34m53.7s	37°28.8'	121°37.6'	9	0.18	9d	3.0(6)	4.7E20(2)	E of Mt. Lewis, 28 km NE of San Jose, CA Double event, with second event occurring about 3.1 sec. after the first.
J10	Apr 9	16h21m54.2s	37°31.1'	121°41.0'	8	0.17	9d	2.8(4)	1.7E20(2)	Mt. Lewis area, 27 km NE of San Jose, CA
J10	Apr 10	22h12m59.8s	37°31.1'	121°41.4'	8	0.13	8d	3.0(4)	8.6E20(2)	Mt. Lewis area, 26 km NE of San Jose, CA
J11	Apr 11	18h17m58.0s	37°27.1'	121°41.7'	6	0.18	9d	2.5(4)	5.3E19(2)	Mt. Lewis area, 21 km NE of San Jose, CA
K12	Apr 14	23h29m28.7s	36°41.1'	121°21.6'	6	0.34	9d	2.8(4)		Stone Canyon, 18 km SSE of Hollister, CA
C5	Apr 15	00h13m16.9s	40°27.0'	125°19.2'	5R	0.38	10a	4.4(8)	8.6E21(2)	Off Coast 120 km SW of Eureka, CA
J11	Apr 15	05h23m19.3s	37°27.7'	121°41.7'	6	0.17	9d	2.5(4)	8.8E19(2)	Mt. Lewis area, 22 km NE of San Jose, CA
K12	Apr 15	09h25m56.7s	36°40.6'	121°20.8'	4	0.20	12d	3.6(6)	3.6E21(2)	Stone Canyon, 19 km SSE of Hollister, CA
C4	Apr 15	14h04m44.0s	40°35.6'	125°13.4'	5R	0.12	9a	3.5(4)	5.5E20(2)	Off Coast 90 km SW of Eureka, CA
K12	Apr 16	04h46m22.9s	36°41.0'	121°20.7'	2	0.09	6d	2.5(2)		Stone Canyon, 19 km SSE of Hollister, CA
J12	Apr 18	06h21m20.2s	36°49.8'	121°34.8'	6	0.17	12d	2.9(4)		San Juan Bautista, 17 km W of Hollister, CA
G3	Apr 18	09h35m44.5s	41°08.4'	123°22.0'	39	0.16	10a	3.0(4)		Salmon Mountain, 55 km NE of Arcata, CA
I9	Apr 18	11h00m21.7s	38°13.8'	122°10.7'	3	0.16	10d	2.3(2)		•10 km SE of Napa, CA Felt at Suisun Bay.
K12	Apr 22	17h47m50.2s	36°45.3'	121°29.7'	3	0.20	10d	3.0(4)		Fremont Peak, 13 km SW of Hollister, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
J11	Apr 23	16h35m06.0s	37°25.7'	121°48.0'	2	0.25	13d	2.2(4)		•13 km NE of San Jose, CA Felt at Milpitas and the Altamont section of San Jose.
L13	Apr 26	20h36m48.1s	36°02.0'	120°39.1'	4	0.25	11d	2.5(2)		25 km NW of Parkfield, CA
J11	Apr 28	17h33m47.8s	37°28.7'	121°41.6'	7	0.14	9d	3.5(6)	3.9E21(4)	•Mt. Lewis area, 23 km NE of San Jose, CA Felt at Fremont and Pleasanton.
K12	Apr 28	22h18m40.6s	36°48.9'	121°15.5'	8	0.24	11d	3.6(6)	3.2E21(2)	•13 km ESE of Hollister, CA (NEIC) Felt (IV) at Paicines and Tres Pinos.
D4	Apr 30	22h37m30.4s	40°45.6'	124°33.6'	19	0.24	12a	3.9(4)	1.3E21(1)	•Off Coast 35 km W of Eureka, CA (NEIC) Felt (IV) at Samoa. Also felt at Eureka.
J14	May 3	01h09m53.4s	35°44.3'	121°35.9'	9	0.44	10d	2.5 *		Off Coast 40 km NW of San Simeon, CA
D5	May 6	22h38m35.4s	40°22.5'	124°37.2'	22	0.22	8a	3.0(4)	2.3E20(2)	Off Coast 20 km W of Cape Mendocino, CA
A5	May 7	06h08m41.9s	40°14.4'	127°16.4'	5R	0.16	6a	4.3(6)		Off Coast 270 km SW of Eureka, CA
K12	May 8	17h08m07.3s	36°45.6'	121°15.3'	8	0.25	13d	2.9(4)		17 km SE of Hollister, CA
K12	May 9	02h29m42.9s	36°53.1'	121°17.4'	7	0.16	11d	3.0(4)	1.4E21(2)	11 km ENE of Hollister, CA
I11	May 10	22h30m13.1s	37°20.9'	122°17.3'	13	0.18	9d	2.7(4)	1.2E20(2)	•La Honda, 35 km W of San Jose, CA Felt in Redwood City.
J11	May 12	09h17m09.3s	37°27.7'	121°41.6'	6	0.16	9d	3.1(6)	7.2E20(2)	•Mt. Lewis area, 22 km NE of San Jose, CA Felt at San Jose and Sunnyvale.
K12	May 12	23h00m19.7s	36°50.9'	121°17.8'	6	0.24	12d	3.2(4)	1.8E21(2)	•10 km E of Hollister, CA Felt in San Benito County.
I11	May 14	00h30m09.6s	37°21.8'	122°15.7'	14	0.02	7d	3.2(4)	7.8E20(3)	•Portola Valley, 33 km W of San Jose, CA Felt in Palo Alto and surrounding area, and at Redwood City.
J11	May 15	08h32m02.1s	37°28.6'	121°41.7'	7	0.14	9d	3.3(4)	9.5E20(2)	•Mt. Lewis area, 23 km NE of San Jose, CA Felt at Fremont and San Jose.
C5	May 16	17h21m30.1s	40°22.2'	125°22.1'	21	0.13	7a	3.9(5)	2.6E21(1)	Off Coast 80 km W of Cape Mendocino, CA
L13	May 20	03h37m03.5s	36°10.8'	120°47.1'	10	0.20	11d	2.6(4)		Peachtree Valley, 30 km ESE of King City, CA
K12	May 21	13h33m00.8s	36°36.5'	121°13.9'	2	0.16	11d	2.7(4)		Bear Valley area, 30 km SE of Hollister, CA
J11	May 25	00h34m19.8s	37°27.3'	121°41.5'	7	0.14	9d	2.8(4)	7.9E19(2)	Mt. Lewis area, 23 km NE of San Jose, CA
K12	May 25	03h46m02.8s	36°46.0'	121°14.8'	11	0.24	12d	3.0(4)		17 km SE of Hollister, CA
H8	May 25	09h51m03.1s	38°48.6'	122°47.9'	4	0.12	12c	3.2(6)	5.4E21(2)	•The Geysers, 22 km S of Clear Lake, CA Felt at Lake Berryessa.
J11	May 26	19h56m33.5s	37°10.0'	121°36.4'	4	0.24	8h	2.7(4)	4.0E20(2)	Anderson Lake, 30 km SE of San Jose, CA
K12	May 30	01h03m48.9s	36°53.5'	121°20.0'	6	0.29	12d	2.8(4)		8 km NE of Hollister, CA
K12	May 31	08h47m07.2s	36°37.6'	121°16.4'	6	0.16	14d	3.7(6)	2.6E21(2)	Stone Canyon, 28 km SE of Hollister, CA
K12	May 31	08h47m56.1s	36°37.1'	121°15.3'	4	0.11	6d	4.7(8)	8.0E22(2)	•Stone Canyon, 30 km SE of Hollister, CA (NEIC) Felt (IV) at Castroville, Freedom, Paicines, Salinas, Seaside and Tres Pinos. Felt (III) at Big Sur, Carmel, Moss Landing and Watsonville.
K12	May 31	14h51m28.4s	36°37.5'	121°16.3'	6	0.14	12d	2.7(4)		Stone Canyon, 27 km SE of Hollister, CA
K12	Jun 1	06h49m04.0s	36°36.6'	121°15.9'	6	0.21	16d	2.9(4)	1.5E21(1)	Stone Canyon area, 28 km SE of Hollister, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
K12	Jun 1	06h49m35.0s	36°36.4'	121°15.1'	7	0.29	7d	3.5(4)	5.7E21(2)	Stone Canyon area, 29 km SE of Hollister, CA
K12	Jun 1	19h34m45.4s	36°37.4'	121°17.2'	6	0.18	15d	2.5(4)		Stone Canyon area, 27 km SE of Hollister, CA
K12	Jun 2	14h16m45.4s	36°36.2'	121°15.4'	6	0.14	15d	2.8(4)		Stone Canyon area, 29 km SE of Hollister, CA
K12	Jun 3	03h33m45.5s	36°36.3'	121°15.4'	5	0.29	16d	2.9(4)		Stone Canyon area, 29 km SE of Hollister, CA
K12	Jun 4	01h57m00.3s	36°36.1'	121°15.1'	6	0.17	14d	2.9(2)		Stone Canyon area, 29 km SE of Hollister, CA
K12	Jun 5	00h15m56.0s	36°39.9'	121°20.4'	4	0.22	17d	3.1(4)	6.5E20(2)	Stone Canyon area, 20 km SE of Hollister, CA
L15	Jun 7	09h50m02.0s	35°26.8'	120°42.8'	6	0.32	8d	2.8 *		19 km NW of San Luis Obispo, CA
J10	Jun 9	04h48m05.8s	37°57.6'	121°40.1'	1	0.18	9d	2.1(4)		•Brentwood, 50 km ENE of Berkeley, CA Felt in the Brentwood area.
K12	Jun 10	01h32m58.4s	36°37.7'	121°18.0'	8	0.21	18d	3.3(4)	8.6E20(2)	Stone Canyon area, 26 km SE of Hollister, CA
M13	Jun 10	10h30m01.0s	36°23.1'	120°28.1'	5	0.22	17k	2.7(4)		28 km NW of Coalinga, CA
J12	Jun 11	13h03m01.8s	36°56.7'	121°37.1'	6	0.14	11d	2.7(3)		•8 km SW of Gilroy, CA Felt in Gilroy.
K12	Jun 11	15h08m59.5s	36°37.2'	121°16.6'	7	0.19	14d	3.5(4)	6.2E21(2)	•Stone Canyon area, 28 km SE of Hollister, CA Felt in Salinas and Hollister.
M13	Jun 13	13h25m16.5s	36°01.1'	120°00.5'	8	0.20	14k	3.5(5)		•Kettleman Hills, 34 km SE of Coalinga, CA (NEIC) Felt (II) at Orasi.
J11	Jun 14	20h31m44.8s	37°17.2'	121°40.7'	6	0.10	8h	2.7(4)	6.1E19(2)	Halls Valley, 20 km SE of San Jose, CA
J10	Jun 19	06h59m25.2s	37°31.1'	121°41.1'	8	0.14	9d	2.5(4)	7.8E19(2)	Mt. Lewis area, 27 km NE of San Jose, CA
E5	Jun 20	02h28m13.9s	40°24.9'	124°28.0'	20	0.20	7a	3.2(4)	2.8E20(2)	Off Coast 6 km W of Cape Mendocino, CA
D4	Jun 22	20h34m51.9s	40°41.5'	124°40.4'	16	0.17	12a	4.0(6)	7.9E21(1)	Off Coast 43 km WSW of Eureka, CA
G4	Jun 22	23h57m06.1s	40°35.8'	123°27.0'	12	0.03	5a	3.5(4)		60 km SE of Eureka, CA
K13	Jun 23	03h41m34.6s	36°27.9'	121°03.0'	6	0.20	8d	2.5(4)		Bear Valley, 28 km NNE of King City, CA
J10	Jun 27	04h06m43.4s	37°44.7'	121°58.9'	4	0.18	9d	2.4(4)		•Near San Ramon, 28 km SE of Berkeley, CA Felt in Danville, San Ramon.
N6	Jun 28	02h06m29.9s	39°31.7'	119°46.8'	14	0.11	9e	3.7(6)		•Reno, Nevada (NEIC) Felt (V) at Reno and Sparks. Felt (IV) at Fernley. Also felt at Sun Valley.
J10	Jun 30	11h00m05.9s	37°50.5'	121°45.8'	11	0.19	11d	3.3(6)	1.7E21(4)	•17 km N of Livermore, CA Felt at Alamo, Berkeley, Danville, Richmond.

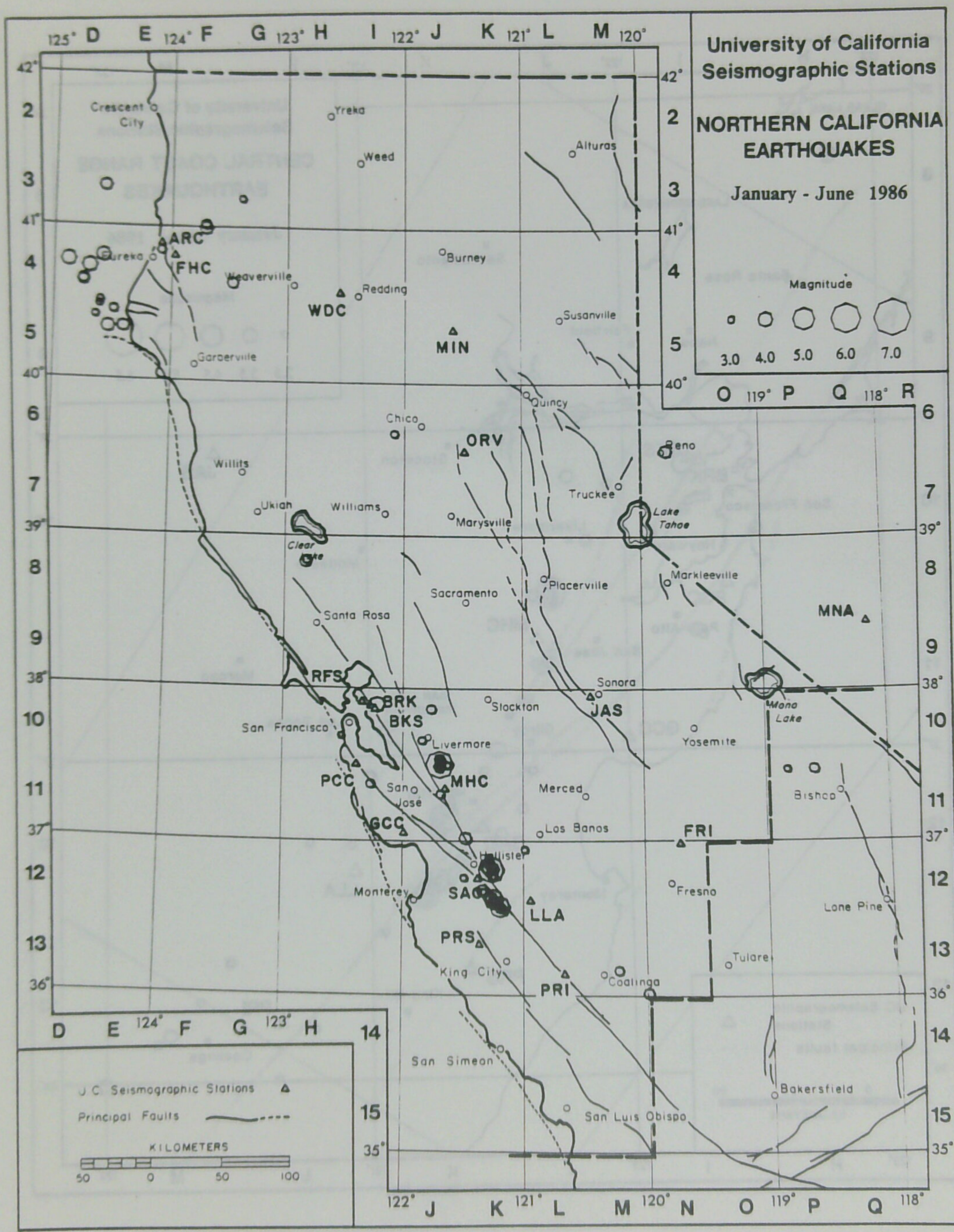
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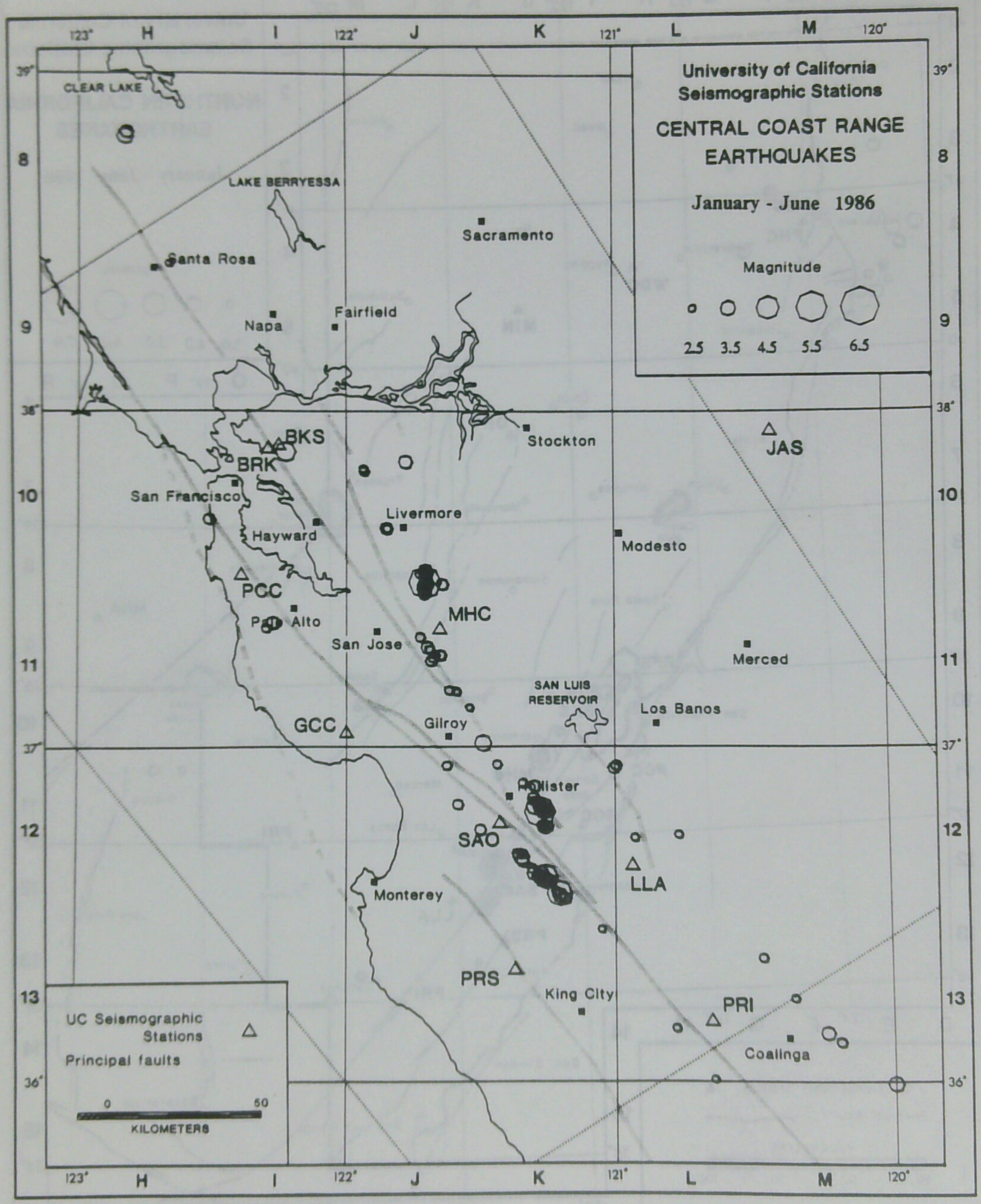
MAP KEY INDEX ... EARTHQUAKES IN NORTHERN CALIFORNIA ... 1986

KEY	DATE	TIME	MAG
A5	Feb 17	12:28	4.3
	May 7	06:08	4.3
C2	Feb 11	01:15	4.9
C3	Mar 21	06:37	3.7
C4	Apr 15	14:04	3.5
C5	Jan 21	11:57	3.5
	Mar 11	15:34	3.9
	Apr 15	00:13	4.4
	May 16	17:21	3.9
D3	Apr 3	06:40	3.6
D4	Feb 5	12:00	3.5
	Feb 19	00:25	4.0
	Feb 28	10:31	3.5
	Apr 30	22:37	3.9
	Jun 22	20:34	4.0
D5	Jan 3	12:33	3.1
	Jan 16	19:05	3.0
	Mar 7	22:26	3.8
	May 6	22:38	3.0
E4	Feb 2	19:31	3.2
E5	Mar 11	00:05	3.6
	Jun 20	02:28	3.2
F4	Mar 20	22:41	3.8
	Mar 20	22:42	3.4
	Mar 20	22:43	3.3
G3	Apr 18	09:35	3.0
G4	Jun 22	23:57	3.5
H8	Jan 21	20:07	2.3
	Mar 23	04:58	3.6
	May 25	09:51	3.2
H9	Jan 16	09:38	2.5
I6	Feb 15	22:27	3.1
I9	Apr 18	11:00	2.3
I10	Mar 9	01:28	3.0
	Mar 29	16:24	4.1
I11	May 10	22:30	2.7
	May 14	00:30	3.2
J10	Jan 30	17:47	2.9
	Jan 31	00:01	2.7
	Jan 31	16:37	3.1
	Feb 10	16:22	2.6
	Feb 17	00:39	2.8
	Mar 31	12:03	2.8
	Mar 31	12:17	3.0
	Mar 31	13:05	3.4
	Apr 3	16:33	3.0
	Apr 5	08:10	2.5
	Apr 5	18:43	3.4
	Apr 6	14:18	2.6
	Apr 9	16:21	2.8
	Apr 10	22:12	3.0
	Jun 9	04:48	2.1
	Jun 19	06:59	2.5
	Jun 27	04:06	2.4
	Jun 30	11:00	3.3
J11	Jan 5	05:18	2.7
	Jan 12	11:20	2.8
	Jan 18	10:17	2.6
	Jan 21	16:17	2.9
	Feb 15	09:53	2.5
	Mar 24	01:54	2.5
	Mar 27	21:25	2.9
	Mar 31	04:05	2.5
	Mar 31	11:55	5.7
	Mar 31	12:03	2.5
	Mar 31	12:39	3.1
	Mar 31	13:39	2.8
	Mar 31	14:20	3.2
	Mar 31	15:17	2.5
	Mar 31	15:25	2.8
	Mar 31	16:18	2.7
	Mar 31	17:12	2.8
	Mar 31	19:41	2.8
	Mar 31	21:21	2.6
	Mar 31	21:30	2.8
	Apr 1	08:53	2.8
	Apr 2	02:50	3.3
	Apr 2	13:53	2.8
	Apr 3	05:27	2.6
	Apr 4	10:16	3.2
	Apr 9	08:34	3.0
	Apr 11	18:17	2.5
	Apr 15	05:23	2.5
	Apr 23	16:35	2.2
	Apr 28	17:33	3.5
	May 12	09:17	3.1
	May 15	08:32	3.3
	May 25	00:34	2.8
	May 26	19:56	2.7
	Jun 14	20:31	2.7
J12	Apr 18	06:21	2.9
	Jun 11	13:03	2.7
J14	May 3	01:09	2.5
K11	Jan 6	19:52	3.7
K12	Jan 14	03:07	3.4
	Jan 14	03:09	4.8
	Jan 14	05:35	3.0
	Jan 14	05:50	2.5
	Jan 17	20:42	2.5
	Jan 23	00:48	2.7
	Jan 23	21:11	2.8
	Jan 25	08:00	2.7
	Jan 26	19:20	5.5
	Jan 26	20:46	2.5
	Jan 26	21:44	3.2
	Jan 26	23:09	2.9
	Jan 26	23:46	4.0
	Jan 27	05:42	2.5
	Jan 27	10:07	3.4
	Jan 27	14:26	3.3
	Jan 27	17:01	2.7
	Jan 27	17:21	2.5
	Jan 27	19:23	2.6
	Jan 27	19:51	3.4
	Jan 27	23:09	2.6
	Feb 14	22:21	3.1
	Feb 19	03:01	3.1
	Feb 19	23:49	3.1
	Feb 20	00:35	2.6
	Mar 3	14:45	2.7
	Mar 4	19:54	2.7
	Mar 24	22:55	3.0
	Apr 14	23:29	2.8
	Apr 15	09:25	3.6
	Apr 16	04:46	2.5
	Apr 22	17:47	3.0
	Apr 28	22:18	3.6
	May 8	17:08	2.9
	May 9	02:29	3.0
	May 12	23:00	3.2
	May 21	13:33	2.7
	May 25	03:46	3.0
	May 30	01:03	2.8
	May 31	08:47	3.7
	May 31	08:47	4.7
	May 31	14:51	2.7
	Jun 1	06:49	2.9
	Jun 1	06:49	3.5
	Jun 1	19:34	2.5
	Jun 2	14:16	2.8
	Jun 3	03:33	2.9
	Jun 4	01:57	2.9
	Jun 5	00:15	3.1
	Jun 10	01:32	3.3
	Jun 11	15:08	3.5
K13	Jun 23	03:41	2.5
L12	Feb 2	22:07	2.9
	Feb 9	21:53	2.6
	Feb 26	18:27	2.6
	Mar 21	01:23	3.0
L13	Apr 26	20:36	2.5
	May 20	03:37	2.6
L15	Jun 7	09:50	2.8
M13	Jan 17	17:52	3.3
	Feb 10	16:42	2.8
	Mar 13	08:37	2.6
	Jun 10	10:30	2.7
	Jun 13	13:25	3.5
N6	Jun 28	02:06	3.7
P11	Feb 1	08:51	3.0
	Mar 19	09:27	3.4
R11	Mar 6	20:16	3.9

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EARTHQUAKES IN NORTHERN CALIFORNIA ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
J10	Jul 1	21h31m59.7s	37°30.8'	121°41.5'	7	0.15	9d	2.8(4)	2.8E20(2)	Mt. Lewis area, 17 km NE of San Jose, Ca
D3	Jul 4	19h55m35.7s	41°03.1'	124°36.2'	9	0.38	11a	3.7(3)	2.5E21(1)	Off Coast 50 km NW of Eureka, CA
J13	Jul 8	00h40m23.4s	36°05.0'	121°49.6'	19	0.19	9d	4.4(5)	2.6E22(4)	•Off Coast 60 km SSE of Monterey, CA (NEIS) Felt (IV) at Big Sur and (III) at Monterey. Also felt at Santa Cruz.
J12	Jul 10	04h01m29.3s	36°50.2'	121°35.7'	4	0.20	10d	2.8(4)		17 km W of Hollister, CA
D4	Jul 10	04h24m42.8s	40°40.7'	124°45.2'	6	0.24	7a	3.2(2)	2.6E20(2)	Off Coast 50 km WSW of Eureka, CA
D5	Jul 10	20h52m43.4s	40°29.3'	124°42.3'	15	0.28	9a	3.7(3)	2.8E20(2)	Off Coast 60 km SW of Eureka, CA
J10	Jul 12	08h04m46.4s	37°31.1'	121°41.4'	6	0.14	9d	2.9(2)	4.4E20(2)	Mt. Lewis area, 27 km NE of San Jose, Ca
J13	Jul 12	18h47m12.1s	36°06.6'	121°48.1'	14	0.29	10d	2.8(2)		Off Coast 60 km SSE of Monterey, CA
P10	Jul 15	03h48m36.3s	37°30.5'	118°38.0'	11	0.20	11e	3.3(3)		25 km SE of Mammoth Lakes, CA
J10	Jul 16	16h27m49.9s	37°44.8'	121°58.3'	4	0.18	9d	2.4(2)		•San Ramon, 30 km SE of Berkeley, CA Felt in San Ramon.
J11	Jul 16	20h59m03.8s	37°17.8'	121°39.7'	6	0.28	8h	3.0 *		•Halls Valley, 20 km ESE of San Jose, CA Felt in eastern San Jose.
P10	Jul 18	07h18m05.5s	37°33.4'	118°53.2'	3	0.18	13e	3.2(2)		13 km SE of Mammoth Lakes, CA
K12	Jul 19	11h00m37.0s	36°39.3'	121°18.8'	3	0.22	14d	2.6(2)		Stone Canyon area, 22 km SE of Hollister, CA
K12	Jul 20	14h42m32.2s	36°50.7'	121°17.1'	7	0.21	11d	2.8(2)		11 km ESE of Hollister, CA
I11	Jul 21	01h32m22.7s	37°21.7'	122°16.0'	12	0.11	10d	2.7(1)		Portola Valley, 34 km WNW of San Jose, CA
Q10	Jul 21	14h42m26.5s	37°32.2'	118°27.0'	9	0.05	16s	6.4(7)	3.5E24(1)	•Chalfant Valley, 20 km NNW of Bishop, CA (NEIC) About 20 mobile homes were damaged and a number of others shaken off their foundations in the Chalfant Valley, California. Several buildings were damaged (VI) at Bishop, California. Landslides occurred in the area. Fault rupture, maximum of 5 cm. of right-lateral slip, occurred along faults in the Volcanic Tableland west of Chalfant Valley and the White Mountains fault zone. The earthquake was felt throughout a large area of California and Nevada from San Francisco to Reno and south to Los Angeles and Las Vegas. Felt in high-rise buildings as far away as Salt Lake City, Utah. (see listing of the Chalfant Valley Sequence on pages 35-40).
K12	Jul 22	10h21m41.4s	36°55.4'	121°27.0'	5	0.23	10d	2.7(2)		9 km NW of Hollister, CA
N8	Jul 23	07h39m10.5s	38°39.6'	119°32.5'	21	0.16	7s	4.3(2)	1.2E22(2)	Topaz Lake, 22 km E of Markleeville, CA
J11	Jul 24	07h52m27.3s	37°21.1'	121°44.1'	6	0.08	8h	2.7(2)	6.6E19(2)	Halls Valley, 14 km E of San Jose, CA
J10	Jul 26	07h12m16.9s	37°31.2'	121°41.4'	8	0.15	9d	3.3(3)	1.0E21(2)	Mt. Lewis area, 26 km NE of San Jose, CA
J10	Jul 27	22h58m40.1s	37°31.1'	121°41.6'	7	0.15	9d	2.9(2)	2.0E20(2)	Mt. Lewis area, 26 km NE of San Jose, CA
D5	Jul 31	15h19m25.3s	40°19.5'	124°44.5'	10	0.14	9a	3.4(3)		Off Coast 30 km WSW of Cape Mendocino, CA
K12	Aug 3	09h00m14.2s	36°35.1'	121°13.8'	7	0.24	9d	3.4(3)	2.6E21(2)	Bear Valley, 35 km SE of Hollister, CA
C5	Aug 3	16h15m30.4s	40°25.8'	125°21.9'	7	0.21	11a	4.3(4)	9.6E21(1)	Off Coast 80 km W of Cape Mendocino, CA

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EARTHQUAKES IN NORTHERN CALIFORNIA ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
J11	Aug 4	03h41m41.9s	37°25.9'	121°46.4'	8	0.16	11d	3.4(2)	1.7E21(2)	•Calaveras Reservoir, 14 km NE of San Jose, CA (NEIC) Felt (IV) at San Jose and (III) at Santa Clara.
L13	Aug 6	14h44m34.8s	36°19.7'	120°55.6'	6	0.10	10d	2.6(2)		Eagle Mountain, 22 km NE of King City, CA
K12	Aug 7	03h32m22.4s	36°38.6'	121°18.3'	7	0.08	11d	2.9(2)		Stone Canyon, 24 km SSE of Hollister, CA
K12	Aug 7	19h09m28.0s	36°35.5'	121°14.0'	7	0.13	13d	2.5(2)		Bear Valley, 32 km SE of Hollister, CA
F4	Aug 8	17h31m35.3s	40°51.7'	123°43.5'	42	0.13	7a	3.8(2)	1.1E22(1)	•Near Salyer, 37 km ENE of Eureka, CA Felt at Eureka. Double event about 4 seconds apart.
J11	Aug 12	13h02m29.1s	37°21.6'	121°44.5'	5	0.13	8h	2.6(2)	3.7E19(2)	Halls Valley area, 13 km ENE of San Jose, CA
E5	Aug 14	00h50m40.8s	40°22.6'	124°19.7'	18	0.23	12a	3.7(2)	3.6E21(1)	•Near Petrolia, 47 km SSW of Eureka, CA Felt at Rio Dell and Scotia.
K12	Aug 14	14h15m47.8s	36°35.2'	121°13.8'	7	0.16	11d	2.6(2)		Bear Valley, 33 km SE of Hollister, CA
L13	Aug 15	08h45m18.5s	36°13.7'	120°50.7'	5	0.14	12d	2.8(2)		Peachtree Valley, 25 km E of King City, CA
J11	Aug 20	02h37m38.1s	37°21.5'	121°44.7'	3	0.13	8h	2.5(2)	6.1E19(2)	Halls Valley area, 12 km ENE of San Jose, CA
J11	Aug 20	07h02m16.8s	37°07.3'	121°33.8'	6	0.08	8h	3.3(3)	1.3E21(2)	•12 km N of Gilroy, CA Felt at Gilroy and Morgan Hill.
J11	Aug 20	09h50m21.0s	37°07.2'	121°33.7'	6R	0.09	8h	2.8(3)	3.6E20(2)	•12 km N of Gilroy, CA Felt at Gilroy and Morgan Hill.
J11	Aug 20	09h57m05.0s	37°07.1'	121°33.9'	7	0.12	8h	3.2(3)	1.2E21(2)	•12 km N of Gilroy, CA Felt at Gilroy and Morgan Hill.
J10	Aug 21	01h04m29.3s	37°31.6'	121°41.1'	6	0.14	9d	3.2(3)	6.8E20(2)	Mt. Lewis area, 28 km NE of San Jose, CA
K12	Aug 22	16h54m50.7s	36°37.2'	121°07.3'	13	0.16	9d	2.9(2)		Bear Valley area, 35 km SE of Hollister, CA
J10	Aug 25	11h47m51.2s	37°44.8'	121°58.1'	4	0.14	9d	2.6(2)		•San Ramon, 29 km SE of Berkeley, CA Felt at Danville and San Ramon.
N6	Aug 25	17h06m37.3s	39°38.2'	119°49.2'	5	0.27	7e	2.9 *		•13 km N of Reno, NV (NEIC) Felt (III) at Sparks. Also felt at Reno.
J11	Aug 28	06h34m54.8s	37°15.2'	121°39.6'	5	0.04	8h	2.5(2)	3.3E19(2)	San Felipe Valley, 22 km SE of San Jose, CA
M14	Aug 29	06h44m42.5s	35°53.3'	120°28.5'	5	0.11	11d	3.3(2)		•Parkfield, CA Felt at Parkfield and Paso Robles.
D4	Aug 29	23h03m09.9s	40°36.4'	124°46.9'	11	0.15	7a	3.3(2)	2.7E20(2)	Off Coast 55 km WSW of Eureka, CA
A2	Aug 31	23h29m33.9s	41°49.9'	126°30.5'	5R	0.31	18a	4.3(2)	5.4E21(1)	Off Coast 190 km W of Crescent City, CA
F3	Sep 2	13h59m56.1s	41°07.7'	123°45.3'	12	0.18	4a	3.4(3)	8.4E20(2)	Near Hoopa, 50 km NE of Eureka, CA
J11	Sep 3	04h31m14.8s	37°17.7'	121°40.0'	10	0.10	8h	4.0(1)		•San Felipe Valley, 19 km ESE of San Jose, CA Felt at San Jose.
E5	Sep 8	03h37m41.3s	40°24.4'	124°22.8'	18	0.09	6a	3.2(3)	3.9E20(2)	Cape Mendocino, 46 km SSW of Eureka, CA
K12	Sep 8	16h22m44.8s	36°50.3'	121°23.7'	7	0.19	12d	2.4(2)		•Hollister, CA Felt at Hollister.
M13	Sep 12	23h38m11.2s	36°14.6'	120°29.1'	8	0.20	12k	3.4(4)		17 km NW of Coalinga, CA
K12	Sep 14	08h15m55.4s	36°52.5'	121°20.3'	6	0.31	14d	3.4(4)	1.9E21(2)	6 km NE of Hollister, CA
J11	Sep 15	20h17m50.3s	37°18.0'	121°41.2'	4	0.12	8h	3.1(2)	1.6E20(2)	Halls Valley, 18 km ESE of San Jose, CA

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EARTHQUAKES IN NORTHERN CALIFORNIA ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
D5	Sep 18	02h37m36.8s	40°20.2'	124°35.0'	15	0.18	6a	3.3(1)		Off Coast 18 km SW of Cape Mendocino, CA
M13	Sep 19	06h26m34.6s	36°17.6'	120°22.4'	9	0.25	15k	2.8 *		17 km NNW of Coalinga, CA
K12	Sep 23	06h15m51.3s	36°38.3'	121°17.3'	2	0.10	13d	2.8(2)		Stone Canyon area, 25 km SE of Hollister, CA
K12	Sep 23	06h19m46.3s	36°38.5'	121°17.5'	3	0.14	13d	2.5(2)		Stone Canyon area, 25 km SE of Hollister, CA
J11	Sep 23	14h41m15.1s	37°21.9'	121°44.5'	6	0.13	8h	3.2(2)	3.4E20(2)	Halls Valley, 13 km ENE of San Jose, CA
J13	Sep 23	19h27m56.7s	36°04.4'	121°47.5'	18	0.37	10d	3.7(3)	1.8E21(2)	•Off Coast 62 km SSE of Monterey, CA (NEIC) Felt (IV) at Big Sur. Also felt at King City.
R11	Sep 24	14h20m33.2s	37°25.1'	117°08.5'	3	0.28	7s	4.0(2)		72 km SSE of Tonopah, NV
R11	Sep 24	14h35m55.9s	37°19.3'	117°12.1'	10	0.28	6s	4.1(2)		83 km S of Tonopah, NV
A4	Sep 27	07h06m30.5s	40°31.6'	126°00.0'	5R	0.24	5a	3.7(3)		Off Coast 160 km WSW Eureka, CA
C5	Oct 3	13h33m61.9s	40°17.6'	125°07.3'	4	0.11	6a	3.0(4)		Off Coast 65 km SW of Cape Mendocino, CA
J12	Oct 5	21h56m59.1s	36°56.9'	121°41.1'	6	0.16	14d	2.7(4)		Near Watsonville, 13 km SW of Gilroy, CA
J11	Oct 9	02h06m23.0s	37°17.8'	121°41.3'	5	0.08	8h	3.0(4)	2.0E20(2)	Halls Valley, 18 km ESE of San Jose, CA
J10	Oct 11	05h17m36.4s	37°49.6'	121°57.6'	6	0.10	13d	4.2(6)	8.3E21(2)	•Danville, 25 km ESE of Berkeley, CA Widely felt in the San Francisco Bay Area, including the cities of Berkeley, Castro Valley, Danville, Oakland, Walnut Creek.
J10	Oct 11	06h39m38.2s	37°49.6'	121°57.1'	5	0.10	14d	3.2(6)	1.9E21(4)	Danville, 25 km ESE of Berkeley, CA
F8	Oct 12	06h43m01.9s	38°43.0'	123°30.0'	11	0.24	13c	4.0(8)	1.6E22(4)	•Along Coast, 55 km SW of Ukiah, CA (NEIS) Felt (V) at Sea Ranch, (IV) at Annapolis and Gualala. Felt (III) at Manchester, Pt. Arena and Villa Grande.
F5	Oct 16	06h16m40.7s	40°19.6'	123°55.6'	6	0.11	6o	2.4(2)		•Weott, 55 km SE of Eureka, CA Felt at Rio Dell and Scotia.
I10	Oct 16	11h20m37.6s	37°45.3'	122°08.3'	7	0.13	9d	2.2(4)		•Lake Chabot Area, 17 km SE of Berkeley, CA Felt at San Leandro.
09	Oct 19	00h42m40.3s	38°25.1'	119°18.7'	5	0.18	14e	3.7(6)		19 km NW of Bridgeport, CA
J11	Oct 20	02h48m59.9s	37°27.4'	121°41.9'	6	0.15	9d	2.7(4)	7.6E19(2)	Mt. Lewis area, 21 km NE of San Jose, CA
K12	Oct 21	13h14m58.6s	36°45.6'	121°22.0'	11	0.08	10d	3.3(4)	7.8E20(2)	•10 km SSE of Hollister, CA Felt at Hollister and Santa Cruz.
J11	Oct 27	02h06m45.5s	37°10.5'	121°35.0'	8	0.06	8h	3.6(6)	5.8E21(4)	•Anderson Reservoir, 19 km N of Gilroy, CA (NEIC) Felt (II) at Morgan Hill. Also felt near Anderson Reservoir.
09	Oct 30	04h01m53.2s	38°05.6'	119°16.1'	4	0.20	16e	3.6(6)		13 km NW of Mono Lake, CA
J12	Oct 30	18h12m08.3s	36°49.6'	121°34.7'	4	0.19	12d	3.1(4)		16 km W of Hollister, CA
09	Oct 31	03h57m28.9s	38°25.2'	119°19.4'	1	0.24	16e	4.6(6)	4.7E22(6)	•20 km NNW of Bridgeport, CA (NEIC) Felt (IV) at Bridgeport and Topaz. Also felt at Coleville, South Lake Tahoe and Walker.
J12	Oct 31	18h46m14.2s	36°56.8'	121°34.3'	7	0.19	15d	3.5(6)	7.6E21(4)	•7 km S of Gilroy, CA (NEIC) Felt (V) at Aromas, (IV) at Moss Landing and (III) at Santa Cruz. Also felt at Gilroy, Hollister, Oakland, San Juan Bautista Salinas, San Jose and Watsonville.

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
H8	Nov 1	08h40m12.7s	38°46.0'	122°43.9'	3	0.27	8c	3.0(4)	9.9E20(2)	The Geysers area, 26 km S of Clear Lake, CA
J11	Nov 1	14h22m02.9s	37°20.9'	121°43.9'	6	0.10	8h	2.9(4)	1.5E20(2)	Halls Valley, 14 km E of San Jose, CA
J11	Nov 1	14h50m57.4s	37°20.8'	121°43.8'	6	0.10	8h	3.4(6)	2.1E21(4)	•Halls Valley, 14 km E of San Jose, CA (NEIC) Felt (III) at Hollister, San Jose and Tres Pinos. Also felt at Los Gatos and Santa Cruz.
N8	Nov 1	19h23m38.3s	38°42.7'	119°32.4'	17	0.20	10e	4.6(6)	4.2E22(6)	•Topaz Lake, 21 km E of Markleeville, CA (NEIC) Felt (V) at Topaz; (IV) at Avery, Pinegrove and Twain Harte, CA and Wellington, NV. Also felt at Bridgeport, Coleville and Walker, CA.
I10	Nov 2	03h46m14.4s	37°37.8'	122°29.0'	10	0.21	12d	3.0(4)	4.1E20(2)	•Pacifica, 17 km SW of San Francisco, CA Felt at San Francisco.
D4	Nov 7	01h04m03.1s	40°35.8'	124°33.3'	9	0.14	7a	3.3(4)	3.9E20(2)	Off Coast 39 km SW of Eureka, CA
M13	Nov 12	22h07m17.2s	36°06.7'	120°09.7'	3	0.10	8k	3.1(3)		17 km ESE of Coalinga, CA
H8	Nov 14	04h26m20.4s	38°31.7'	122°58.6'	2	0.28	10c	2.6(4)		•Near Guerneville, 25 km NW of Santa Rosa, CA Felt Guerneville to Forestville.
J10	Nov 18	13h45m55.8s	37°31.5'	121°41.5'	6	0.12	9d	2.7(2)	1.3E20(2)	Mt. Lewis area, 27 km NE of San Jose, CA
L13	Nov 18	14h07m10.9s	36°12.7'	120°49.1'	9	0.12	8d	2.8(2)		Peachtree Valley, 28 km E of King City, CA
C5	Nov 19	16h19m06.0s	40°22.5'	125°03.6'	8	0.21	16a	3.9(5)	3.4E21(1)	•Off Coast 55 km W of Cape Mendocino, CA (NEIC) Felt (II) at Rio Dell.
E5	Nov 21	23h33m01.7s	40°22.3'	124°26.6'	15	0.17	10a	5.1(7)	6.1E23(2)	•Cape Mendocino area, 51 km SW of Eureka, CA (NEIC) Slight damage (VI) at Carlotta, Honeydew, Hydesville, Fortuna, Petrolia, Rio Dell and Scotia. Felt (V) at Arcata, Alderpoint, Blocksburg, Fields Landing, Loleta, Miranda, Phillipsville, Rederest, Redway and Weott. Felt in Humboldt, Mendocino and Trinity Counties.
E5	Nov 21	23h34m18 s	40°22 '	124°27 '	15R		3a	5.1(7)	4.6E23(2)	•Cape Mendocino area, 51 km SW of Eureka, CA (NEIC) Felt at Arcata, Honeydew, Kneeland, Miranda, Rio Dell and Samoa. Hypocenter adopted from 23:33.
E5	Nov 22	00h05m24.7s	40°28.8'	124°28.6'	23	0.15	10a	3.5(3)	8.9E20(1)	Cape Mendocino area, 42 km SW of Eureka, CA
E5	Nov 22	00h57m52.4s	40°26.8'	124°28.9'	24	0.26	13a	3.2(3)	2.3E20(1)	Cape Mendocino area, 46 km SW of Eureka, CA
D5	Nov 22	01h29m55.9s	40°22.7'	124°34.5'	19	0.15	9a	3.2(4)	1.9E21(1)	Cape Mendocino area, 57 km SW of Eureka, CA
E5	Nov 22	03h17m58.4s	40°22.2'	124°29.6'	18	0.19	16a	3.8(5)	1.3E22(3)	Cape Mendocino area, 54 km SW of Eureka, CA
M13	Nov 22	18h36m58.2s	36°05.2'	120°03.0'	6	0.21	13k	3.2(4)		28 km ESE of Coalinga, CA
D5	Nov 23	01h21m48.3s	40°22.0'	124°30.9'	19	0.18	13a	3.5(4)	1.6E21(2)	Cape Mendocino area, 55 km SW of Eureka, CA
D5	Nov 23	05h41m06.3s	40°21.6'	124°31.7'	20	0.15	13a	4.0(6)	2.9E22(2)	•Cape Mendocino area, 56 km SW of Eureka, CA (NEIC) Felt (III) at Rio Dell.
E5	Nov 23	09h13m37.7s	40°24.5'	124°18.6'	17	0.21	11a	3.2(2)	4.2E20(1)	Cape Mendocino area, 43 km SSW of Eureka, CA
E5	Nov 23	16h00m45.0s	40°22.7'	124°23.0'	18	0.14	11a	3.0(2)		Cape Mendocino area, 49 km SW of Eureka, CA
M13	Nov 24	04h31m49.5s	36°06.8'	120°00.9'	7	0.11	8k	3.1(6)		30 km E of Coalinga, CA
K12	Nov 24	15h08m01.3s	36°36.1'	121°14.4'	4	0.20	9d	3.1(4)		Stone Canyon area, 31 km SE of Hollister, CA
E5	Nov 26	08h22m15.4s	40°21.4'	124°28.5'	18	0.17	13a	3.5(3)	4.4E21(1)	Cape Mendocino area, 54 km SW of Eureka, CA

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UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS
EARTHQUAKES IN NORTHERN CALIFORNIA ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
J11	Nov 28	09h59m35.2s	37°16.5'	121°41.0'	5	0.15	8h	2.6(4)	4.2E19(2)	San Felipe Valley, 19 km SE of San Jose, CA
L15	Dec 7	12h33m08.8s	35°21.1'	120°58.8'	6	0.15	9d	3.3(4)		•Off Coast 30 km WNW of San Luis Obispo, CA Felt at Cayucos, Chorro Valley, Los Osos, Morro Bay and San Luis Obispo.
P9	Dec 9	04h16m12.9s	38°07.3'	118°57.7'	9	0.15	10e	3.4(6)		N of Mono Lake, 28 km SE of Bridgeport, CA
J11	Dec 9	22h15m42.1s	37°28.5'	121°43.9'	6	0.24	9d	2.5(4)	4.9E19(2)	Mt. Lewis area, 21 km NE of San Jose, CA
J10	Dec 11	09h17m08.7s	37°34.1'	121°39.6'	5	0.18	8d	2.8(6)	5.8E20(2)	16 km SE of Livermore, CA
J10	Dec 11	14h18m05.3s	37°34.1'	121°39.9'	4	0.16	10d	4.1(6)	2.6E22(2)	•16 km SE of Livermore, CA (NEIC) Felt (IV) at Livermore and San Jose. Felt in Alameda, Contra Costa, San Joaquin, Santa Clara and Santa Cruz Counties.
J10	Dec 11	15h14m48.3s	37°34.0'	121°39.3'	4	0.17	7d	2.5(4)	1.5E20(2)	17 km SE of Livermore, CA
J10	Dec 11	23h07m23.9s	37°34.2'	121°39.3'	6	0.20	7d	3.3(4)	2.0E21(2)	16 km SE of Livermore, CA
I9	Dec 13	01h47m06.5s	38°17.9'	122°09.2'	7	0.17	13d	2.9(6)	2.5E21(2)	•12 km E of Napa, 47 km NNE of Berkeley, CA Felt at Fairfield and Vacaville.
J10	Dec 13	10h20m17.5s	37°33.8'	121°40.1'	4	0.15	12d	3.1(6)	9.8E20(2)	16 km SE of Livermore, CA
I8	Dec 14	23h00m23.5s	38°48.9'	122°26.7'	15	0.14	11c	3.3(6)	1.2E22(2)	19 km SE of Clear Lake, CA
E5	Dec 16	17h48m42.9s	40°21.0'	124°24.9'	17	0.10	12a	3.1(4)	9.4E20(2)	Cape Mendocino area, 52 km SW of Eureka, CA
O9	Dec 18	18h40m27.4s	38°24.1'	119°19.3'	10	0.13	7e	3.0(4)		18 km NW of Bridgeport, CA
J11	Dec 20	02h19m41.8s	37°27.2'	121°48.1'	6	0.13	11d	3.6(4)	6.9E21(2)	•Calaveras Reservoir, 15 km NE of San Jose, CA (NEIC) Felt (III) at Milpitas, Santa Clara and San Jose.
D5	Dec 20	19h45m32.9s	40°21.8'	124°35.4'	13	0.16	13a	3.7(6)	8.7E21(2)	•Cape Mendocino area, 59 km SW of Eureka, CA (NEIC) Felt (III) at Rio Dell.
D5	Dec 25	02h25m15.7s	40°18.8'	124°33.9'	22	0.16	13a	3.4(4)	1.2E21(2)	•Cape Mendocino area, 62 km SW of Eureka, CA (NEIS) Felt (II) at Honeydew.
H10	Dec 25	13h28m28.1s	37°44.7'	122°34.2'	9	0.15	10d	2.7(4)	3.6E20(2)	•Off Coast 5 km W of San Francisco, CA Felt at San Francisco.
J11	Dec 29	15h28m04.9s	37°27.5'	121°48.0'	6	0.16	10d	4.0(3)		•Calaveras Reservoir, 16 km NE of San Jose, CA (NEIC) Felt (IV) at Boulder Creek, Burlingame Campbell, Cupertino, Fremont, Milpitas, NAS Moffett Field, Mountain View, Redwood City, San Carlos, Santa Clara, San Jose and San Lorenzo. Felt throughout much of the San Francisco Bay area.
E5	Dec 30	06h29m06.6s	40°22.8'	124°16.4'	18	0.10	9a	3.2(4)	1.4E21(1)	Cape Mendocino area, 46 km SSW of Eureka, CA
D5	Dec 31	14h26m56.0s	40°23.0'	124°41.2'	11	0.20	8a	3.1(4)	5.8E20(2)	Cape Mendocino area, 63 km SW of Eureka, CA
J11	Dec 31	12h05m50.5s	37°25.3'	121°40.3'	5	0.09	8d	3.0(4)	3.5E20(1)	Mt. Lewis area, 21 km NE of San Jose, CA
H8	Dec 31	19h33m48.6s	38°49.0'	122°48.8'	5	0.20	8c	3.1(5)	4.6E21(2)	The Geysers, 23 km S of Clear Lake, CA

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UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS

MAP KEY INDEX ... EARTHQUAKES IN NORTHERN CALIFORNIA ... 1986

KEY	DATE	TIME	MAG
A2	Aug 31	23:29	4.3
A4	Sep 27	07:06	3.7
C5	Aug 3	16:15	4.3
	Oct 3	13:33	3.0
	Nov 19	16:19	3.9
D3	Jul 4	19:55	3.7
D4	Jul 10	04:24	3.2
	Aug 29	23:03	3.3
	Nov 7	01:04	3.3
D5	Jul 10	20:52	3.7
	Jul 31	15:19	3.4
	Sep 18	02:37	3.3
	Nov 22	01:29	3.2
	Nov 23	01:21	3.5
	Nov 23	05:41	4.0
	Dec 20	19:45	3.7
	Dec 25	02:25	3.4
	Dec 31	14:26	3.1
E5	Aug 14	00:50	3.7
	Sep 8	03:37	3.2
	Nov 21	23:33	5.1
	Nov 21	23:34	5.1
	Nov 22	00:05	3.5
	Nov 22	00:57	3.2
	Nov 22	03:17	3.8
	Nov 23	09:13	3.2
	Nov 23	16:00	3.0
	Nov 26	08:22	3.5
	Dec 16	17:48	3.1
	Dec 30	06:29	3.2
F3	Sep 2	13:59	3.4
F4	Aug 8	17:31	3.8
F5	Oct 16	06:16	2.4
F8	Oct 12	06:43	4.0
H8	Nov 1	08:40	3.0
	Nov 14	04:26	2.6
	Dec 31	19:33	3.1
H10	Dec 25	13:28	2.7
I8	Dec 14	23:00	3.3
I9	Dec 13	01:47	2.9
I10	Oct 16	11:20	2.2
	Nov 2	03:46	3.0
I11	Jul 21	01:32	2.7
J10	Jul 1	21:31	2.8
	Jul 12	08:04	2.9
	Jul 16	16:27	2.4
	Jul 26	07:12	3.3
	Jul 27	22:58	2.9
	Aug 21	01:04	3.2
	Aug 25	11:47	2.6
	Oct 11	05:17	4.2
	Oct 11	06:39	3.2
	Nov 18	13:45	2.7
	Dec 11	09:17	2.8
	Dec 11	14:18	4.1
	Dec 11	15:14	2.5
	Dec 11	23:07	3.3
	Dec 13	10:20	3.1
J11	Jul 16	20:59	3.0
	Jul 24	07:52	2.7
	Aug 4	03:41	3.4
	Aug 12	13:02	2.6
	Aug 20	02:37	2.5
	Aug 20	07:02	3.3
	Aug 20	09:50	2.8
	Aug 20	09:57	3.2
	Aug 28	06:34	2.5
	Sep 3	04:31	4.0
	Sep 15	20:17	3.1
	Sep 23	14:41	3.2
	Oct 9	02:06	3.0
	Oct 20	02:48	2.7
	Oct 27	02:06	3.6
	Nov 1	14:22	2.9
	Nov 1	14:50	3.4
	Nov 28	09:59	2.6
	Dec 9	22:15	2.5
	Dec 20	02:19	3.6
	Dec 29	15:28	4.0
	Dec 31	12:05	3.0
J12	Jul 10	04:01	2.8
	Oct 5	21:56	2.7
	Oct 30	18:12	3.1
	Oct 31	18:46	3.5
J13	Jul 8	00:40	4.4
	Jul 12	18:47	2.8
	Sep 23	19:27	3.7
K12	Jul 19	11:00	2.6
	Jul 20	14:42	2.8
	Jul 22	10:21	2.7
	Aug 3	09:00	3.4
	Aug 7	03:32	2.9
	Aug 7	19:09	2.5
	Aug 14	14:15	2.6
	Aug 22	16:54	2.9
	Sep 8	16:22	2.4
	Sep 14	08:15	3.4
	Sep 23	06:15	2.8
	Sep 23	06:19	2.5
	Oct 21	13:14	3.3
	Nov 24	15:08	3.1
L13	Aug 6	14:44	2.6
	Aug 15	08:45	2.8
	Nov 18	14:07	2.8
L15	Dec 7	12:33	3.3
M13	Sep 12	23:38	3.4
	Sep 19	06:26	2.8
	Nov 12	22:07	3.1
	Nov 22	18:36	3.2
	Nov 24	04:31	3.1
M14	Aug 29	06:44	3.3
N6	Aug 25	17:06	2.9
N8	Jul 23	07:39	4.3
	Nov 1	19:23	4.6
O9	Oct 19	00:42	3.7
	Oct 30	04:01	3.6
	Oct 31	03:57	4.6
	Dec 18	18:40	3.0
P9	Dec 9	04:16	3.4
P10	Jul 15	03:48	3.3
	Jul 18	07:18	3.2
Q10	Jul 21	14:42	6.4
R11	Sep 24	14:20	4.0
	Sep 24	14:35	4.1

KEY	DATE	TIME	MAG

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UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS
CHALFANT VALLEY SEQUENCE ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
Q10	Jul 18	16h00m08.5s	37°34.2'	118°26.6'	4	0.06	9s	3.9(3)		•Chalfant Valley, 23 km NNW of Bishop, CA (NEIC) Felt in the Chalfant Valley.
Q10	Jul 20	14h29m46.0s	37°33.9'	118°26.7'	6	0.06	11s	5.9(7)	1.4E24(2)	•Chalfant Valley, 23 km NNW of Bishop, CA (NEIC) Felt (V) at Bishop, Benton and Big Pine, California. Also felt (V) at Dyer, Nevada. Felt at Fresno and Bakersfield, California and in parts of southwestern Nevada.
Q10	Jul 20	14h46m07.8s	37°34.4'	118°26.6'	8	0.07	14s	4.1(3)		Chalfant Valley, 23 km NNW of Bishop, CA
Q10	Jul 20	15h29m28.2s	37°33.1'	118°28.0'	7	0.10	9s	3.5(2)		Chalfant Valley, 21 km NNW of Bishop, CA
Q10	Jul 20	16h23m01.7s	37°32.5'	118°28.0'	6	0.05	13s	3.5(1)		Chalfant Valley, 21 km NNW of Bishop, CA
Q10	Jul 20	16h32m34.1s	37°33.5'	118°24.5'	5	0.07	11s	3.9(1)		Chalfant Valley, 21 km NNW of Bishop, CA
Q10	Jul 20	16h37m25.1s	37°33.6'	118°29.1'	10	0.24	8s	3.7(1)		Chalfant Valley, 24 km NNW of Bishop, CA
Q10	Jul 20	17h41m55.8s	37°33.1'	118°28.2'	7	0.04	14s	3.5(1)		Chalfant Valley, 21 km NNW of Bishop, CA
Q10	Jul 20	18h36m54.1s	37°32.0'	118°27.6'	5	0.04	12s	3.8(1)		Chalfant Valley, 19 km NNW of Bishop, CA
Q10	Jul 20	18h38m52.9s	37°32.3'	118°26.4'	9	0.04	9s	4.7(1)	3.3E22(1)	•Chalfant Valley, 20 km NNW of Bishop, CA (NEIC) Felt (V) at Bishop, California and Dyer, Nevada.
Q10	Jul 20	18h40m51.0s	37°32.0'	118°26.0'	9R	0.00	5s	3.8(1)		Chalfant Valley, 20 km NNW of Bishop, CA- In coda; hypocenter adopted from 18:38:52.9.
Q10	Jul 21	02h27m54.3s	37°32.0'	118°25.9'	8	0.05	14s	3.7(2)		Chalfant Valley, 19 km NNW of Bishop, CA
Q10	Jul 21	03h12m11.3s	37°33.4'	118°28.4'	8	0.05	14s	4.4(2)	1.6E22(1)	Chalfant Valley, 22 km NNW of Bishop, CA
Q10	Jul 21	08h10m31.1s	37°31.8'	118°27.6'	5	0.07	13s	4.1(3)	8.9E21(2)	Chalfant Valley, 19 km NNW of Bishop, CA
Q10	Jul 21	08h20m44.2s	37°34.1'	118°27.0'	7	0.07	11s	3.6(1)		Chalfant Valley, 23 km NNW of Bishop, CA
Q10	Jul 21	11h15m21.8s	37°34.2'	118°27.8'	10	0.07	11s	4.3(3)	2.6E22(2)	Chalfant Valley, 23 km NNW of Bishop, CA
Q10	Jul 21	14h42m26.5s	37°32.2'	118°27.0'	9	0.05	16s	6.4(7)	3.5E24(1)	•Chalfant Valley, 20 km NNW of Bishop, CA (NEIC) About 20 mobile homes were damaged and a number of others shaken off their foundations in the Chalfant Valley, California. Several buildings were damaged (VI) at Bishop, California. Landslides occurred in the area. Fault rupture, maximum of 5 cm. of right-lateral slip, occurred along faults in the Volcanic Tableland west of Chalfant Valley and the White Mountains fault zone. The earthquake was felt throughout a large area of California and Nevada from San Francisco to Reno and south to Los Angeles and Las Vegas. Felt in high-rise buildings as far away as Salt Lake City, Utah.
P10	Jul 21	14h51m10.1s	37°34.2'	118°31.5'	1	0.20	3s	5.7(6)	4.3E23(1)	•Chalfant Valley, 26 km NW of Bishop, CA (NEIC) Felt (V) at Benton and Big Pine, CA.
P10	Jul 21	14h57m50.9s	37°31.6'	118°33.4'	7	0.26	5s	4.8(3)	5.9E22(2)	Chalfant Valley, 24 km NW of Bishop, CA
Q10	Jul 21	15h00m42.7s	37°34.5'	118°25.2'	4	0.27	5s	3.9(2)		Chalfant Valley, 24 km NNW of Bishop, CA In coda of 14:57.
P10	Jul 21	15h03m02.4s	37°37.9'	118°30.0'	8R	0.33	5s	3.5(2)		Chalfant Valley, 31 km NNW of Bishop, CA
Q10	Jul 21	15h05m41.1s	37°32.0'	118°28.9'	4	0.33	5s	4.1(3)		Chalfant Valley, 21 km NW of Bishop, CA
Q10	Jul 21	15h10m28.8s	37°31.9'	118°24.0'	4	0.32	5s	3.8(2)		Chalfant Valley, 19 km N of Bishop, CA

International Seismological Centre

UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS
CHALFANT VALLEY SEQUENCE ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
Q10	Jul 21	15h11m30.9s	37°32.3'	118°28.4'	9	0.14	4s	4.4(2)	1.9E22(2)	Chalfant Valley, 21 km NNW of Bishop, CA
Q10	Jul 21	15h15m29.5s	37°36.0'	118°27.3'	3	0.29	12s	3.5(3)		Chalfant Valley, 28 km NNW of Bishop, CA
Q11	Jul 21	15h19m34.9s	37°29.3'	118°22.2'	16	0.11	4s	4.7(3)	4.4E22(2)	Chalfant Valley, 14 km NNE of Bishop, CA
Q10	Jul 21	15h26m49.2s	37°32.2'	118°25.5'	18	0.17	5s	4.6(2)	2.2E22(2)	Chalfant Valley, 19 km NNW of Bishop, CA
Q10	Jul 21	15h29m10.4s	37°33.8'	118°28.0'	1	0.12	3s	3.7(2)		Chalfant Valley, 24 km NNW of Bishop, CA
Q10	Jul 21	15h31m04.8s	37°35.8'	118°27.2'	4	0.15	8s	3.6(2)		Chalfant Valley, 27 km NNW of Bishop, CA
Q10	Jul 21	15h36m49.9s	37°33.2'	118°26.1'	5	0.10	10s	4.0(2)		Chalfant Valley, 21 km NNW of Bishop, CA
Q10	Jul 21	15h41m22.0s	37°32.5'	118°24.3'	5	0.06	11s	4.2(2)		Chalfant Valley, 19 km N of Bishop, CA
Q10	Jul 21	15h46m23.0s	37°33.6'	118°25.2'	1	0.22	7s	4.5(2)	1.8E22(2)	Chalfant Valley, 22 km NNW of Bishop, CA
Q10	Jul 21	15h50m22.6s	37°38.8'	118°24.8'	20	0.09	4s	3.8(2)		Chalfant Valley, 31 km N of Bishop, CA
Q11	Jul 21	16h26m44.7s	37°29.2'	118°23.6'	8	0.06	12s	4.6(2)	2.2E22(2)	Chalfant Valley, 14 km N of Bishop, CA
Q10	Jul 21	16h36m43.8s	37°32.1'	118°27.9'	10	0.12	8s	3.8(2)		Chalfant Valley, 20 km NNW of Bishop, CA
Q10	Jul 21	17h05m33.4s	37°31.9'	118°27.7'	9	0.11	6s	4.5(2)	2.2E22(2)	Chalfant Valley, 20 km NW of Bishop, CA
Q10	Jul 21	17h08m32.9s	37°32.8'	118°25.2'	6R	0.00	5s	3.5(2)		Chalfant Valley, 20 km NNW of Bishop, CA
Q11	Jul 21	17h20m00.4s	37°26.8'	118°22.1'	11	0.21	9s	4.5(2)	1.7E22(2)	Chalfant Valley, 10 km NNE of Bishop, CA
Q10	Jul 21	17h30m30.1s	37°32.8'	118°24.3'	6	0.15	10s	3.9(2)		Chalfant Valley, 20 km NNW of Bishop, CA
Q10	Jul 21	17h48m55.8s	37°35.9'	118°26.9'	3	0.12	10s	4.3(2)	1.9E22(1)	Chalfant Valley, 26 km NNW of Bishop, CA
Q10	Jul 21	17h53m03.0s	37°34.3'	118°28.9'	11	0.07	9s	3.5 *		Chalfant Valley, 24 km NNW of Bishop, CA
Q10	Jul 21	18h13m57.6s	37°37.4'	118°28.3'	3	0.17	6s	4.0(2)		Chalfant Valley, 30 km NNW of Bishop, CA
Q10	Jul 21	18h18m33.2s	37°31.5'	118°25.6'	7	0.11	5s	3.5(2)		Chalfant Valley, 18 km NNW of Bishop, CA
Q10	Jul 21	20h36m05.2s	37°31.4'	118°27.3'	9	0.04	12s	4.0(2)		Chalfant Valley, 19 km NNW of Bishop, CA
Q11	Jul 21	20h40m24.8s	37°26.5'	118°22.3'	4	0.06	10s	3.6(2)		Chalfant Valley, 9 km NNE of Bishop, CA
Q10	Jul 21	21h08m41.8s	37°35.1'	118°27.2'	5	0.07	10s	3.6(2)		Chalfant Valley, 25 km NNW of Bishop, CA
Q10	Jul 21	21h51m44.9s	37°36.2'	118°26.3'	3	0.11	10s	3.7(2)		Chalfant Valley, 27 km NNW of Bishop, CA
Q11	Jul 21	22h07m01.2s	37°28.8'	118°22.4'	6	0.06	15s	3.1 *		Chalfant Valley, 13 km NNE of Bishop, CA Foreshock to 22:07:19.
P10	Jul 21	22h07m17 s	37°29 '	118°22 '	6R		14s	5.6(6)	4.2E23(2)	•Chalfant Valley, 13 km N of Bishop, CA In coda; hypocenter adopted from 22:07:01.2.
Q10	Jul 21	23h43m06.7s	37°36.5'	118°29.4'	7	0.12	10s	4.2(2)		Chalfant Valley, 29 km NNW of Bishop, CA
Q10	Jul 21	00h09m53.8s	37°36.6'	118°25.8'	4	0.16	10s	4.5(2)	3.0E22(1)	Chalfant Valley, 27 km NNW of Bishop, CA
Q10	Jul 22	02h21m31.5s	37°36.1'	118°29.4'	7	0.11	10s	3.6(2)		Chalfant Valley, 27 km NW of Bishop, CA
Q10	Jul 22	03h02m10.7s	37°34.8'	118°29.0'	7	0.05	15s	3.8(2)		Chalfant Valley, 25 km NW of Bishop, CA
Q10	Jul 22	03h18m48.1s	37°31.7'	118°26.7'	10	0.12	13s	3.9(3)		Chalfant Valley, 19 km NW of Bishop, CA
Q10	Jul 22	05h24m08.0s	37°33.0'	118°25.6'	6	0.04	12s	3.6(2)		Chalfant Valley, 21 km NNW of Bishop, CA
P10	Jul 22	05h40m43.9s	37°31.5'	118°34.8'	6	0.19	10s	4.1(3)		24 km NW of Bishop, CA
Q11	Jul 22	06h21m52.8s	37°26.5'	118°23.3'	12	0.05	16s	4.2(3)	2.0E22(1)	Chalfant Valley, 8 km N of Bishop, CA

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UNIVERSITY OF CALIFORNIA SEISMOGRAPHIC STATIONS
CHALFANT VALLEY SEQUENCE ... 1986

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
Q10	Jul 22	06h33m39.2s	37°31.7'	118°26.4'	9	0.05	14s	3.5(2)		Chalfant Valley, 18 km NNW of Bishop, CA
Q10	Jul 22	06h58m11.2s	37°36.5'	118°28.9'	3	0.22	6s	3.6(3)		Chalfant Valley, 28 km NNW of Bishop,CA
Q10	Jul 22	08h29m16.3s	37°31.6'	118°27.0'	3	0.11	16s	4.0(3)		Chalfant Valley, 19 km NW of Bishop, CA
Q11	Jul 22	09h34m16.1s	37°26.4'	118°22.6'	9	0.11	13s	3.5(2)		Chalfant Valley, 8 km N of Bishop, CA
Q10	Jul 22	12h24m50.2s	37°31.3'	118°28.9'	9	0.05	17s	4.4(3)	2.4E22(2)	Chalfant Valley, 18 km NW of Bishop, CA
Q10	Jul 22	13h33m59.8s	37°31.0'	118°28.7'	9	0.12	9s	4.7(5)	4.9E22(2)	Chalfant Valley, 19 km NW of Bishop, CA
P11	Jul 22	13h49m00.3s	37°29.9'	118°31.2'	19	0.21	7s	5.0(5)	8.9E22(2)	Chalfant Valley, 25 km NW of Bishop, CA
Q10	Jul 22	13h57m34.9s	37°32.0'	118°29.0'	9	0.04	9s	3.6(2)		Chalfant Valley, 20 km NW of Bishop, CA
Q10	Jul 22	17h17m21.5s	37°30.6'	118°26.4'	10	0.04	16s	3.7(2)		Chalfant Valley, 17 km NNW of Bishop, CA
Q10	Jul 22	17h39m18.5s	37°34.0'	118°29.1'	9	0.09	17s	3.6(2)		Chalfant Valley, 24 km NW of Bishop, CA
Q10	Jul 22	18h16m53.1s	37°34.7'	118°29.0'	8	0.06	17s	3.5(2)		Chalfant Valley, 25 km NW of Bishop, CA
Q11	Jul 22	18h19m36.3s	37°29.0'	118°22.6'	7	0.11	18s	4.2(2)	1.1E22(1)	Chalfant Valley, 13 km NNE of Bishop, CA
Q11	Jul 22	18h29m43.8s	37°29.6'	118°22.9'	7	0.05	15s	4.7(2)	2.0E22(2)	Chalfant Valley, 14 km NNE of Bishop, CA
Q10	Jul 22	20h16m59.6s	37°36.4'	118°27.8'	9	0.15	16s	4.2(2)	2.1E22(1)	Chalfant Valley, 27 km NNW of Bishop, CA
Q10	Jul 22	20h22m26.3s	37°36.4'	118°28.4'	8	0.10	16s	4.3(2)	1.3E22(2)	Chalfant Valley, 28 km NW of Bishop, CA
Q11	Jul 22	20h49m14.9s	37°29.0'	118°22.7'	7	0.04	18s	3.5(2)		Chalfant Valley, 13 km NNE of Bishop, CA
Q11	Jul 22	22h06m41.7s	37°29.6'	118°22.5'	7	0.13	9s	4.2(3)		Chalfant Valley, 14 km NNE of Bishop, CA
Q10	Jul 22	02h12m14.0s	37°30.1'	118°28.9'	17	0.14	8s	3.6(2)		Chalfant Valley, 18 km NW of Bishop, CA
Q10	Jul 23	02h58m20.5s	37°32.1'	118°25.3'	10	0.05	9s	3.8(2)		Chalfant Valley, 18 km NNW of Bishop,CA
Q10	Jul 23	03h01m02.4s	37°35.9'	118°29.4'	6	0.12	9s	3.7(3)		Chalfant Valley, 28 km NW of Bishop, CA
Q10	Jul 23	15h39m11.7s	37°32.3'	118°27.8'	6	0.03	5s	4.7(5)	4.8E22(2)	Chalfant Valley, 20 km NNW of Bishop,CA
Q10	Jul 23	16h27m41.3s	37°34.6'	118°29.0'	11	0.19	7s	3.5(3)		Chalfant Valley, 25 km NW of Bishop, CA
Q10	Jul 24	01h17m09.8s	37°34.4'	118°28.8'	8	0.06	18s	3.5(3)		Chalfant Valley, 24 km NW of Bishop, CA
Q10	Jul 24	02h43m11.0s	37°36.3'	118°28.5'	4	0.09	19s	4.1(3)	2.2E22(1)	Chalfant Valley, 27 km NW of Bishop, CA
Q11	Jul 24	06h10m05.3s	37°27.6'	118°22.0'	7	0.08	17s	4.2(2)		Chalfant Valley, 11 km NNE of Bishop, CA
Q10	Jul 24	09h22m30.4s	37°32.8'	118°24.3'	2	0.05	13s	3.6(2)		Chalfant Valley, 20 km N of Bishop, CA
Q11	Jul 24	14h58m44.9s	37°29.0'	118°22.9'	7	0.05	16s	3.7(2)		Chalfant Valley, 13 km N of Bishop, CA
Q10	Jul 24	16h44m40.8s	37°32.4'	118°27.0'	8	0.07	10s	3.5(2)		Chalfant Valley, 20 km NNE of Bishop, CA
Q11	Jul 24	19h03m25.9s	37°27.9'	118°22.2'	6	0.03	8s	4.3(2)	1.5E22(1)	Chalfant Valley, 13 km NNE of Bishop, CA
Q10	Jul 25	10h11m04.5s	37°34.7'	118°29.1'	8	0.06	8s	3.6(2)		Chalfant Valley, 27 km NNW of Bishop, CA
Q10	Jul 26	14h39m41.0s	37°31.7'	118°28.8'	7	0.07	19s	4.2(3)	1.1E22(2)	Chalfant Valley, 20 km NNW of Bishop, CA
Q10	Jul 26	21h58m47.3s	37°35.1'	118°27.6'	8	0.10	19s	3.6(3)		Chalfant Valley, 25 km NNW of Bishop, CA
Q11	Jul 27	03h49m40.6s	37°22.3'	118°17.4'	2	0.03	8s	4.2(3)		9 km E of Bishop, CA
Q10	Jul 27	10h08m02.2s	37°30.3'	118°23.9'	7	0.03	19s	3.9(3)		Chalfant Valley, 16 km N of Bishop, CA
Q10	Jul 29	07h11m58.8s	37°32.6'	118°26.7'	8	0.05	20s	4.2(2)	1.4E22(1)	Chalfant Valley, 21 km NNW of Bishop, CA

International Seismological Centre

KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
Q10	Jul 29	09h57m57.2s	37°35.9'	118°28.6'	7	0.06	12s	4.6(4)	3.8E22(2)	•Chalfant Valley, 27 km NNW of Bishop, CA (NEIC) Felt (IV) at Bishop.
Q11	Jul 29	15h14m25.4s	37°27.1'	118°22.5'	8	0.08	9s	4.2(2)	6.8E21(1)	Chalfant Valley, 10 km NNE of Bishop, CA
P10	Jul 30	00h46m50.7s	37°31.7'	118°30.9'	11	0.07	19s	3.6(3)		Chalfant Valley, 21 km NW of Bishop, CA
Q10	Jul 30	06h03m32.2s	37°36.3'	118°28.8'	8	0.05	19s	4.0(3)		Chalfant Valley, 28 km NNW of Bishop, CA
Q10	Jul 30	06h41m52.9s	37°34.9'	118°28.1'	7	0.05	20s	4.8(5)	5.1E22(2)	•Chalfant Valley, 25 km NNW of Bishop, CA (NEIC) Felt (V) at Benton and (IV) at Bishop.
Q11	Jul 31	07h22m40.2s	37°27.8'	118°22.0'	7	0.06	17s	5.8(7)	1.6E24(2)	•Chalfant Valley, 11 km NNE of Bishop, CA (NEIC) Felt strongly in the Bishop-Chalfant Valley area. Felt (V) at Big Pine, Camp Nelson, Sonora and Sequoia National Park, California. Also felt (V) at Byer, Nevada.
Q11	Jul 31	07h28m04.7s	37°26.7'	118°22.6'	11	0.12	8s	4.5(3)	1.8E22(2)	Chalfant Valley, 10 km NNE of Bishop, CA
Q11	Jul 31	07h36m02.4s	37°28.2'	118°22.5'	8	0.08	17s	4.0(3)		Chalfant Valley, 12 km NNE of Bishop, CA
Q11	Jul 31	07h50m46.2s	37°29.3'	118°22.3'	6	0.06	15s	3.8(3)		Chalfant Valley, 14 km NNE of Bishop, CA
Q11	Jul 31	08h10m42.8s	37°26.0'	118°21.3'	9	0.06	16s	3.9(3)		Chalfant Valley, 9 km NE of Bishop, CA
Q11	Jul 31	08h15m39.3s	37°28.7'	118°22.4'	7	0.07	14s	4.0(3)		Chalfant Valley, 13 km NNE of Bishop, CA
Q10	Aug 1	06h34m43.3s	37°33.3'	118°27.5'	11	0.06	20s	3.9(3)		Chalfant Valley, 23 km NNE of Bishop, CA
Q10	Aug 1	14h27m16.4s	37°30.5'	118°23.9'	6	0.09	20s	4.8(2)		Chalfant Valley, 16 km N of Bishop, CA
Q11	Aug 1	14h28m19.6s	37°28.1'	118°26.9'	14	0.29	4s	5.1(5)	2.1E23(2)	•Chalfant Valley, 13 km NW of Bishop, CA In coda 14:27.
Q10	Aug 1	15h10m44.2s	37°30.3'	118°23.5'	6	0.04	19s	3.8(3)		Chalfant Valley, 16 km N of Bishop, CA
Q10	Aug 2	14h51m37.0s	37°36.9'	118°26.0'	7	0.07	10s	3.6(3)		Chalfant Valley, 29 km NNW of Bishop, CA
Q10	Aug 3	10h33m05.3s	37°36.9'	118°27.3'	7	0.03	12s	4.3(3)	2.3E22(2)	Chalfant Valley, 29 km NNW of Bishop, CA
Q11	Aug 5	02h32m08.1s	37°25.7'	118°20.9'	6	0.07	20s	3.7(2)		Chalfant Valley, 9 km NE of Bishop, CA
Q11	Aug 12	09h29m48.3s	37°29.5'	118°22.9'	5	0.03	20s	3.7(2)		Chalfant Valley, 15 km NNE of Bishop, CA
Q10	Aug 12	15h37m28.1s	37°30.1'	118°29.2'	3	0.07	20s	3.8(2)		Chalfant Valley, 18 km NW of Bishop, CA
Q10	Aug 18	10h49m39.0s	37°32.4'	118°27.2'	10	0.04	19s	3.9(3)		Chalfant Valley, 21 km NNW of Bishop, CA
Q11	Aug 20	03h49m46.3s	37°14.6'	118°11.5'	7	0.03	8s	3.3(2)		23 km SE of Bishop, CA
Q11	Aug 23	03h01m30.3s	37°29.6'	118°23.0'	5	0.04	20s	3.9(3)		Chalfant Valley, 15 km N of Bishop, CA
Q10	Aug 26	19h07m21.1s	37°31.5'	118°26.5'	11	0.04	20s	3.6(2)		Chalfant Valley, 19 km NNW of Bishop, CA
Q10	Aug 27	09h20m40.8s	37°36.6'	118°28.0'	5	0.05	10s	3.5(2)		Chalfant Valley, 28 km NNW of Bishop, CA
Q10	Sep 2	00h49m48.6s	37°36.4'	118°28.1'	5	0.04	14s	3.5(3)		Chalfant Valley, 28 km NNW of Bishop, CA
Q10	Sep 16	06h36m57.7s	37°37.0'	118°26.4'	7	0.04	19s	3.5(4)		Chalfant Valley, 29 km NNW of Bishop, CA
Q10	Sep 16	13h14m26.1s	37°36.9'	118°26.5'	5	0.15	7s	3.5(4)		Chalfant Valley, 29 km NNW of Bishop, CA
Q10	Sep 17	05h58m24.2s	37°36.9'	118°26.3'	7	0.06	20s	3.5(2)		Chalfant Valley, 27 km NNW of Bishop, CA
Q10	Sep 18	07h59m48.0s	37°37.2'	118°26.5'	6	0.05	20s	4.0(4)		Chalfant Valley, 28 km NNW of Bishop, CA

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KEY	DATE	O-TIME(UTC)	N LAT	W LONG	DEPTH	SE	SLN	MAG	MOMENT	COMMENTS (•=FELT)
Q11	Oct 9	05h37m25.7s	37°21.2'	118°23.4'	11	0.05	20s	4.4(6)	1.7E22(2)	•Bishop, CA Acceleration of 0.6 g reported at Bishop at the Southern California Edison power plant. Felt at Lake Crowley, and elsewhere in Inyo and Mono Counties. (NEIC) Felt (III) at Lone Pine.
P11	Nov 13	16h55m38.5s	37°28.4'	118°31.3'	2	0.09	20s	3.9(6)		17 km NW of Bishop, CA
P11	Nov 13	18h45m22.5s	37°28.2'	118°31.0'	3	0.07	20s	3.5(4)		16 km NW of Bishop, CA
P11	Dec 12	02h19m40.6s	37°28.3'	118°31.6'	2	0.08	16s	3.8(6)		17 km NW of Bishop, CA
Q10	Dec 26	09h56m27.6s	37°34.3'	118°24.4'	4	0.07	20s	4.0(6)		Chalfant Valley, 23 km NNW of Bishop, CA

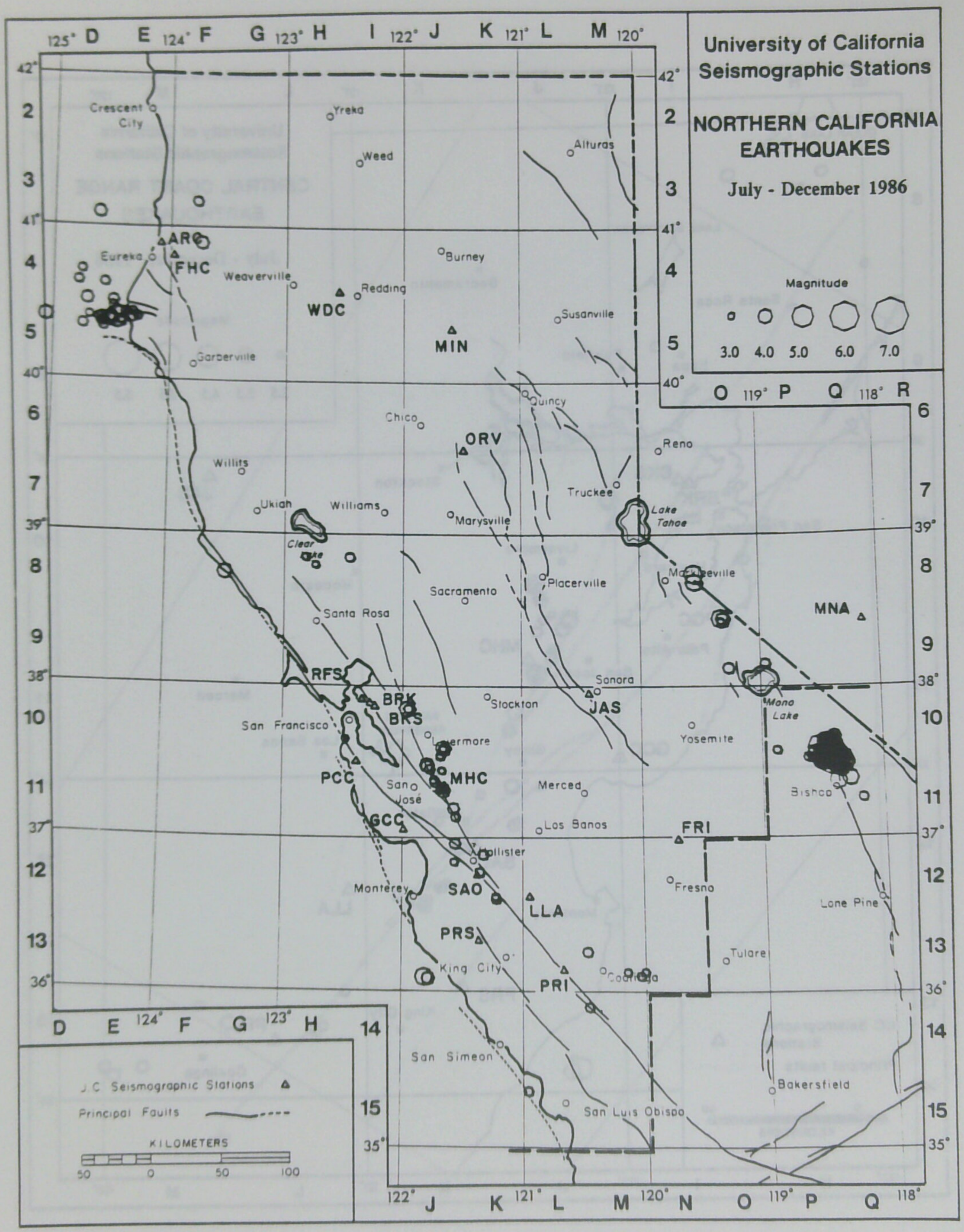
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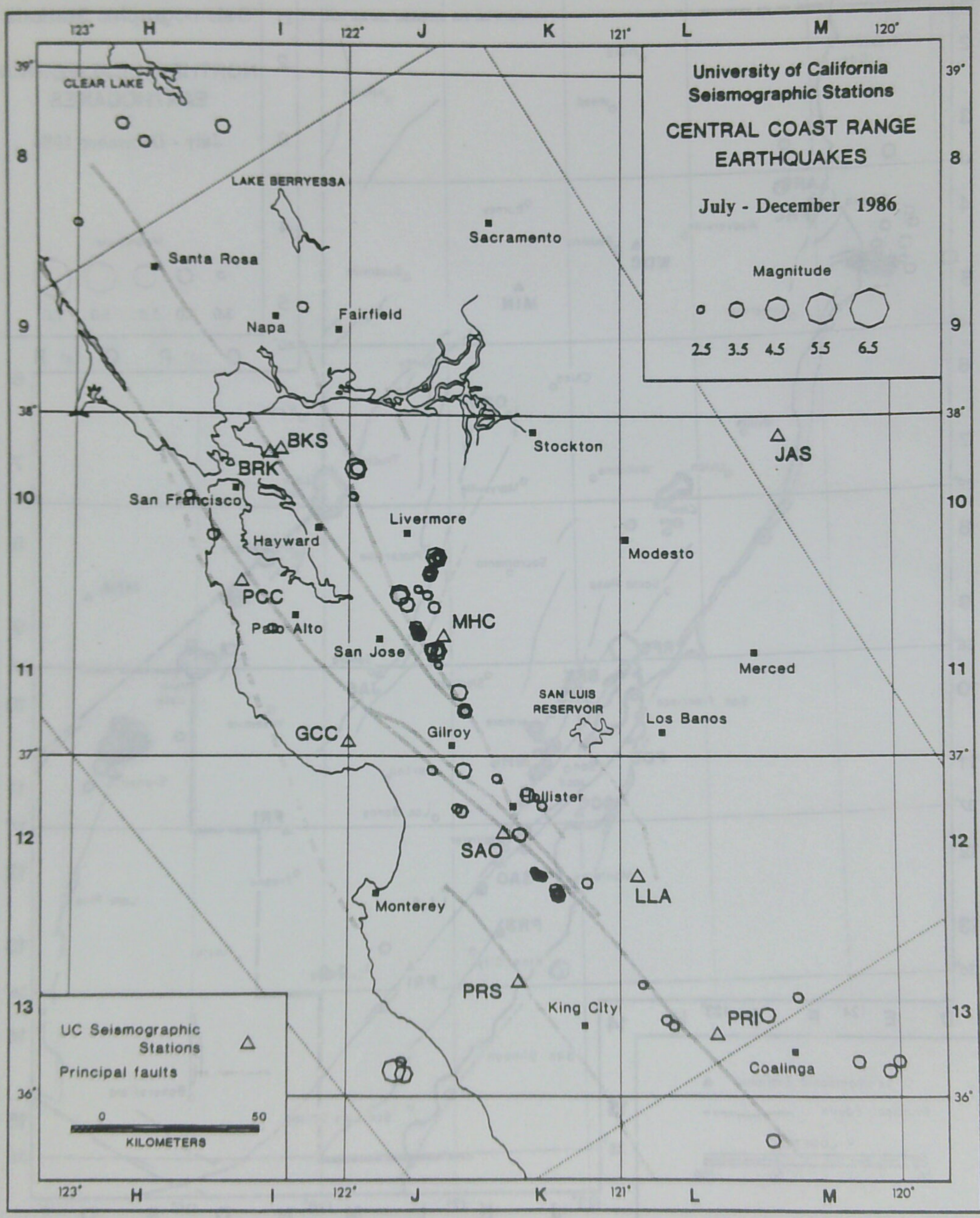
MAP KEY INDEX ··· CHALFANT VALLEY SEQUENCE ··· 1986

KEY	DATE	TIME	MAG
	Jul 20	18:40	3.8
P10	Jul 21	14:51	5.7
	Jul 21	14:57	4.8
	Jul 21	15:03	3.5
	Jul 21	22:07	5.6
	Jul 22	05:40	4.1
	Jul 30	00:46	3.6
P11	Jul 22	13:49	5.0
	Nov 13	16:55	3.9
	Nov 13	18:45	3.5
	Dec 12	02:19	3.8
Q10	Jul 18	16:00	3.9
	Jul 20	14:29	5.9
	Jul 20	14:46	4.1
	Jul 20	15:29	3.5
	Jul 20	16:23	3.5
	Jul 20	16:32	3.9
	Jul 20	16:37	3.7
	Jul 20	17:41	3.5
	Jul 20	18:36	3.8
	Jul 20	18:38	4.7
	Jul 21	02:27	3.7
	Jul 21	03:12	4.4
	Jul 21	08:10	4.1
	Jul 21	08:20	3.6
	Jul 21	11:15	4.3
	Jul 21	14:42	6.4
	Jul 21	15:00	3.9
	Jul 21	15:05	4.1
	Jul 21	15:10	3.8
	Jul 21	15:11	4.4
	Jul 21	15:15	3.5
	Jul 21	15:26	4.6
	Jul 21	15:29	3.7
	Jul 21	15:31	3.6
	Jul 21	15:36	4.0
	Jul 21	15:41	4.2
	Jul 21	15:46	4.5
	Jul 21	15:50	3.8
	Jul 21	16:36	3.8
	Jul 21	17:05	4.5
	Jul 21	17:08	3.5
	Jul 21	17:30	3.9
	Jul 21	17:48	4.3
	Jul 21	17:53	3.5
	Jul 21	18:13	4.0
	Jul 21	18:18	3.5
	Jul 21	20:36	4.0
	Jul 21	21:08	3.6
	Jul 21	21:51	3.7
	Jul 21	23:43	4.2
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	Jul 22	03:02	3.8
	Jul 22	03:18	3.9
	Jul 22	05:24	3.6
	Jul 22	06:33	3.5
	Jul 22	06:58	3.6
	Jul 22	08:29	4.0
	Jul 22	12:24	4.4
	Jul 22	13:33	4.7
	Jul 22	13:57	3.6
	Jul 22	17:17	3.7
	Jul 22	17:39	3.6
	Jul 22	18:16	3.5
	Jul 22	20:16	4.2
	Jul 22	20:22	4.3
	Jul 22	02:12	3.6
	Jul 23	02:58	3.8
	Jul 23	03:01	3.7
	Jul 23	15:39	4.7
	Jul 23	16:27	3.5
	Jul 24	01:17	3.5
	Jul 24	02:43	4.1
	Jul 24	09:22	3.6
	Jul 24	16:44	3.5
	Jul 25	10:11	3.6
	Jul 26	14:39	4.2
	Jul 26	21:58	3.6
	Jul 27	10:08	3.9
	Jul 29	07:11	4.2
	Jul 29	09:57	4.6
	Jul 30	06:03	4.0
	Jul 30	06:41	4.8
	Aug 1	06:34	3.9
	Aug 1	14:27	4.8
	Aug 1	15:10	3.8
	Aug 2	14:51	3.6
	Aug 3	10:33	4.3
	Aug 12	15:37	3.8
	Aug 18	10:49	3.9
	Aug 26	19:07	3.6
	Aug 27	09:20	3.5
	Sep 2	00:49	3.5
	Sep 16	06:36	3.5
	Sep 16	13:14	3.5
	Sep 17	05:58	3.5
	Sep 18	07:59	4.0
	Dec 26	09:56	4.0
Q11	Jul 21	15:19	4.7
	Jul 21	16:26	4.6
	Jul 21	17:20	4.5
	Jul 21	20:40	3.6
	Jul 21	22:07	3.1
	Jul 22	06:21	4.2
	Jul 22	09:34	3.5
	Jul 22	18:19	4.2
	Jul 22	18:29	4.7
	Jul 22	20:49	3.5
	Jul 22	22:06	4.2
	Jul 24	06:10	4.2
	Jul 24	14:58	3.7
	Jul 24	19:03	4.3
	Jul 27	03:49	4.2
	Jul 29	15:14	4.2
	Jul 31	07:22	5.8
	Jul 31	07:28	4.5
	Jul 31	07:36	4.0
	Jul 31	07:50	3.8
	Jul 31	08:10	3.9
	Jul 31	08:15	4.0
	Aug 1	14:28	5.1
	Aug 5	02:32	3.7
	Aug 12	09:29	3.7
	Aug 20	03:49	3.3
	Aug 23	03:01	3.9
	Oct 9	05:37	4.4

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OBSERVED EXPLOSIONS AT THE NEVADA TEST SITE 1986

DATE	O-TIME(UTC)	N LAT	W LONG	MAG	COMMENTS
Mar 22	16h15m00.0s	37.083°	116.066°	5.1(6)	"GLENCOE"
Apr 10	14h08m30.1s	37.218°	116.183°	4.8(6)	"MIGHTY OAK"
Apr 22	14h30m00.0s	37.264°	116.440°	5.4(7)	"JEFFERSON"
May 21	13h59m00.0s	37.125°	116.060°	4.1(4)	"PANAMINT"
Jun 5	15h04m00.0s	37.098°	116.016°	5.2(8)	"TAJO"
Jun 25	20h27m45.1s	37.265°	166.499°	5.4(8)	"DARWIN"
Jul 17	21h00m00.0s	37.279°	116.356°	5.6(5)	"CYBAR"
Jul 24	15h05m00.0s	37.143°	116.071°	4.5(2)	"CORNUCOPIA"
Sep 30	22h30m00.1s	37.300°	116.307°	5.3(6)	"LABQUARK"
Oct 16	19h25m00.0s	37.220°	116.462°	5.4(8)	"BELMONT"
Nov 14	16h00m00.0s	37.100°	116.048°	5.5(8)	"GASCON"
Dec 13	17h50m05.0s	37.263°	116.412°	5.4(6)	"BODIE"

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PART II. REGISTRATION OF EARTHQUAKES

This section tabulates measured arrival times of prominent phases of earthquakes and large explosions recorded at stations in the seismographic network operated by the University of California (Berkeley). Information regarding these stations and instrumentation will be found in the introductory section of this Bulletin. Berkeley source parameters from part I (indicated by BRK) are repeated for all earthquakes in Northern California and adjoining areas. For earthquakes in the list that are located outside of Northern and Central California, location information from the California Institute of Technology (CIT) for Southern California earthquakes and the National Earthquake Information Service (USGS) for teleseisms are given as a guide when appropriate.

Phase arrival times are Coordinated Universal Time (UTC).

In the column identifying the P or PKP phase, "c" or "d" indicates initial compression or dilatation of the ground, respectively, from a wave of the compressional type.

The maximum amplitude of earth displacement in micrometers and periods in seconds of the indicated phases are given for the Berkeley station, BKS, with its phase arrival times. Unless otherwise specified, magnitudes given for the earthquakes outside the Northern California, Nevada, and Oregon region correspond to the magnitude based on surface waves (M_S). The published value is obtained from the amplitude of surface waves of period 20 seconds, according to the formula

$$M_S = \log(\frac{A}{T}) + 1.66 \log \Delta + 3.3,$$

where:

A = ground amplitude in microns (horizontal vector resultant),
T = period in seconds, and
Δ = distance to epicenter in degrees.

The Richter magnitude for local and regional earthquakes is designated M_L if it is determined from Wood-Anderson torsion seismographs and MAG if it is determined from vertical Benioff seismographs. The number of observations used to determine magnitude is given in parenthesis immediately following the magnitude value.

The seismic moment (M_o) is given for local and regional earthquakes as described in Part I.

Distances are given in degrees from the Berkeley station, BKS. USGS magnitude, designated by m_b, is the body wave magnitude.

All measurements and interpretation of seismograms (i.e., identification of phases, arrival times, directions of initial ground motion, and ground amplitudes and periods) are done at Berkeley. Requests for additional data or for copies of seismograms should be addressed to the Director.

DATE	STA	PHASE	TIME (UTC)
Jan 1	WDC	eP	04 42 15.2
	FHC	e(P)	04 42 15.5
	MIN	ePc	04 42 18.4
	ORV	eP	04 42 25.8
	MNA	eP	04 42 41.5
	JAS1	eP	04 42 43.1
		e	04 43 31.7
	MHC	e(P)	04 42 48.8
	GCC	e(P)	04 42 51.1
	FRI	e(P)	04 42 52.5
	LLA	e(P)	04 42 55.5
	PRS	e(P)	04 42 57.9
	PRI	e(P)	04 43 00.8
USGS 04h37m24.9s 62.1N 124.0W			
h=10km mb=4.7			
Northwest Territories, Canada			
Jan 1	MNA	ePKP	16 20 41.9
	FRI	ePKPc	16 20 45.1
	MIN	ePKP	16 20 45.9
	JAS1	ePKP	16 20 46.1
	ORV	ePKP	16 20 46.2
	PRI	ePKP	16 20 48.2
	LLA	ePKP	16 20 48.4
USGS 16h00m50.0s 26.8S 26.6E			
h=5km mb=4.9			
Republic of South Africa			
Jan 1	PRS	eP	19 50 51.2
	PRI	e(P)	19 50 53.1
	MHC	eP	19 50 53.2
	BKS	eP	19 50 53.8
		eLr	20 13 24
		AMP(μm)	PER(s)
		PZ 0.034	1.3
	FRI	ePd	19 50 58.9
	JAS1	ePd	19 50 59.5
		e	19 51 12.7
	ORV	ePd	19 51 01.2
	WDC	ePd	19 51 01.4
		e	19 51 14.4
	MIN	eP	19 51 03.6
	MNA	ePd	19 51 09.7
		e	19 51 22.9
USGS 19h39m21.7s 16.5S 175.4W			
h=33km mb=5.3 Ms=4.9			
Tonga Islands			
Jan 1	PRI	ePd	22 05 48.8
	FRI	iPd	22 05 50.9
		e	22 06 03.9
	LLA	ePd	22 05 53.7
	PRS	ePd	22 05 53.8
	SAO	e(P)	22 05 56.7
	MNA	iPd	22 05 59.2
		i	22 06 13.0
	JAS1	iPd	22 06 02.4
		i	22 06 25.6
	GCC	ePd	22 06 02.5
	MHC	ePd	22 06 03.4
	PCC	e(P)	22 06 06.2
	BRK	eP	22 06 11.3
	BKS	eP	22 06 11.6
		iS	22 10 22
		eLq	22 11 10
		eLr	22 12 08
		e	22 13 50
		e	22 14 05
		AMP(μm)	PER(s)
		PZ 0.14	1.3
		LZ 5.3	20.
		LN 0.79	20.

DATE	STA	PHASE	TIME (UTC)
		LE	7.3 20.
	ORV	iPd	22 06 22.7
		i	22 06 43.2
	MIN	eP	22 06 29.2
	WDC	eP	22 06 32.7
		e	22 06 52.7
	FHC	e(P)	22 06 42.1
BRK Ms=5.2 Distance=24°			
USGS 22h01m13.7s 19.3N 108.4W			
h=10km mb=5.3 Ms=4.9			
Revilla Gigedo Islands Region			
Jan 1	WDC	eP	22 19 08.6
		epP	22 19 17.0
	MIN	e(P)	22 19 13.3
		epP	22 19 21.7
	ORV	eP	22 19 17.5
		epP	22 19 26.2
	PCC	e(P)	22 19 25.4
		epP	22 19 34.4
	GCC	e(P)	22 19 29.7
		epP	22 19 38.4
	MHC	e(P)	22 19 29.8
		epP	22 19 38.5
	JAS1	eP	22 19 31.9
		ipP	22 19 40.4
	PRS	e(P)	22 19 37.0
		epP	22 19 44.8
	LLA	e(P)	22 19 37.4
		epP	22 19 45.9
	MNA	eP	22 19 38.3
		epP	22 19 46.6
	FRI	e(P)	22 19 39.6
		epP	22 19 48.0
	PRI	e(P)	22 19 40.9
USGS 22h10m27.0s 56.0N 165.0E			
h=27km mb=5.2 Ms=4.8			
Komandorsky Islands Region			
Jan 2	WDC	ePc	05 16 31.2
	MIN	ePc	05 16 35.0
	ORV	ePc	05 16 37.7
	BRK	eP	05 16 39.8
	BKS	iP	05 16 40.2
		AMP(μm)	PER(s)
		PZ 0.063	0.8
	MHC	ePc	05 16 43.7
	JAS1	ePc	05 16 46.3
	PRS	ePc	05 16 47.2
	LLA	ePc	05 16 48.0
	PRI	ePc	05 16 50.8
	FRI	iPc	05 16 51.1
	MNA	eP	05 16 53.2
USGS 05h05m20.7s 29.9N 138.7E			
h=421km mb=4.8			
South of Honshu, Japan			
Jan 2	FRI	eP	14 41 08.9
	MNA	eP	14 41 12.3
	JAS1	eP	14 41 18.0
	ORV	eP	14 41 34.5
USGS 14h36m00.0s 18.8N 101.2W			
h=105km mb=4.9			
Guerrero, Mexico			
Jan 3	ARC	eP	12 33 14.4
		iS	12 33 22.1
	FHC	iP	12 33 14.7
		iS	12 33 22.0
	WDC	iP	12 33 29.7
	MIN	iPd	12 33 39.6
	ORV	eP	12 33 43.0

DATE	STA	PHASE	TIME (UTC)
BRK 12h33m03.6s 40.5N 124.6W			
h=8km ML=3.1(4) Mo=2.2E20(2)			
Off Coast 50 km SW of Eureka, CA			
Jan 4	PRI	e	13 49 14.5
	WDC	eP	13 49 16.2
	ORV	eP	13 49 16.9
	JAS1	eP	13 49 18.2
	MIN	e	13 49 18.6
	FRI	eP	13 49 18.6
	MNA	e	13 49 27.0
	BKS	e(Lr)	14 15 42
USGS 13h36m33.7s 17.6S 167.9E			
h=26km mb=5.2 Ms=5.3			
Vanuatu Islands			
Jan 4	PRI	eP	23 35 43.2
	FRI	ePd	23 35 43.3
	LLA	e	23 35 46.2
	PRS	eP	23 35 46.4
	MNA	e	23 35 51.6
	JAS1	ePd	23 35 54.8
	BKS	ePc	23 36 04.5
		e(pP)	23 36 10.9
		e	23 39 46
		eS	23 40 14
		eLr	23 41 29
	ORV	eP	23 36 15.0
	MIN	e	23 36 21.7
	WDC	eP	23 36 25.3
BRK mb=4.8 h=33km Distance=24°			
USGS 23h31m07.5s 19.4N 108.5W			
h=10km mb=5.2 Ms=5.4			
Revilla Gigedo Islands Region			
Jan 5	MHC	iPd	05 18 51.1
	GCC	iPc	05 18 56.5
		iS	05 19 04.2
	SAO	iPc	05 18 59.5
	PCC	iPc	05 19 00.9
	BRK	ePc	05 19 04.0
		iS	05 19 15.5
	BKS	ePd	05 19 04.2
		i	05 19 04.5
		eS	05 19 15.9
	LLA	iPd	05 19 05.1
		iS	05 19 18.1
	ZSP	eP	05 19 05.4
		iS	05 19 18.4
	PRS	iPc	05 19 06.8
	JAS1	iPd	05 19 10.5
	PRI	e	05 19 13.8
	FRI	iPc	05 19 16.0
	ORV	e	05 19 28.4
BRK 05h18m49.1s 37.3N 121.7W			
h=6km ML=2.7(4) Mo=7.4E19(2)			
San Felipe Valley, 20 km SE of San Jose, CA			
Jan 5	PRS	e	21 40 42.6
	GCC	e	21 40 43.5
	PRI	e	21 40 45.0
	ORV	eP	21 40 48.8
	FRI	e	21 40 49.0
	JAS1	eP	21 40 49.1
	WDC	eP	21 40 49.1
USGS 21h28m05.0s 19.8S 168.8E			
h=47km mb=5.3			
Vanuatu Islands			
Jan 6	FHC	e	00 04 52.4
	WDC	ePd	00 05 02.7

DATE	STA	PHASE	TIME (UTC)
	ORV	ePd	00 05 10.6
	MIN	e	00 05 11.1
	JAS1	e	00 05 44.2
	MHC	e	00 05 44.9
	GCC	e	00 05 46.0
	MNA	e	00 05 51.0
	FRI	e	00 05 58.1
	PRI	e	00 06 04.2
USGS 00h02m35.7s 49.4N 129.4W			
h=10km mb=4.4			
Vancouver Island Region			
Jan 6	SAO	iP	19 52 48.1
	MHC	iPd	19 52 49.8
	GCC	iPc	19 52 50.9
	LLA	iPc	19 52 53.4
	PRS	iPd	19 52 55.6
	PCC	iPc	19 52 58.7
	BRK	iPc	19 53 01.7
	BKS	iPc	19 53 01.9
		eS	19 53 17.1
	PRI	iPd	19 53 02.8
		i	19 53 03.4
	ZSP	ePc	19 53 02.8
	JAS1	iPd	19 53 04.5
	FRI	iPc	19 53 06.8
	ORV	iPc	19 53 24.0
	MNA	e	19 53 36
	MIN	e	19 53 37.6
BRK 19h52m42.7s 37.0N 121.5W			
h=9km ML=3.7(6) Mo=4.4E21(4)			
8 km E of Gilroy, CA			
Jan 6	MNA	ePc	21 21 38.4
	FRI	e	21 22 04
	JAS1	e	21 22 05
Jan 7	PRI	e	03 37 41
	ORV	e(P)	03 37 42.0
	WDC	ePc	03 37 42.1
	FRI	e	03 37 44.0
	JAS1	ePc	03 37 44.6
	MIN	e	03 37 47.6
	MNA	eP	03 37 53.2
USGS 03h25m50.9s 15.9S 178.7W			
h=19km mb=5.0			
Fiji Islands Region			
Jan 7	PRS	eP	08 21 25.5
	PRI	eP	08 21 26.9
	WDC	ePc	08 21 28.9
	ORV	eP	08 21 29.8
	JAS1	ePc	08 21 30.2
	FRI	ePc	08 21 31.2
	MIN	e	08 21 37
	MNA	ePc	08 21 39.6
USGS 08h08m46.6s 17.4S 167.6E			
h=25km mb=5.2 Ms=5.3			
Vanuatu Islands			
Jan 7	GCC	ePd	10 50 04.8
	PCC	ePd	10 50 05.0
	PRS	ePd	10 50 05.0
	SAO	ePd	10 50 06.4
	BRK	eP	10 50 06.5
	PRI	ePd	10 50 07.0
	BKS	ePd	10 50 07.0
		i d	10 50 07.7
		AMP(μm)	PER(s)
		PZ 0.10	0.7
	LLA	eP	10 50 07.1
	MHC	ePd	10 50 07.4

DATE	STA	PHASE	TIME (UTC)
	FHC	eP	10 50 11.2
		ePcP	10 50 17.5
	FRI	eP	10 50 12.1
		ePcP	10 50 17.4
		epP	10 52 05.0
	JAS1	ePd	10 50 12.7
		ePcP	10 50 18.2
		epP	10 52 05.7
	ORV	ePd	10 50 14.2
		epP	10 52 06.9
	WDC	ePd	10 50 14.4
		epP	10 52 07.2
	MNA	epP	10 50 15.5
		ePd	10 50 22.0
		ePcP	10 50 25.6
	MIN	eP	10 50 16.1
USGS 10h38m55.2s 21.2S 178.6W			
h=520km mb=5.2			
Fiji Islands Region			
Jan 8	FRI	e(P)	03 55 15.8
	PRI	eP	03 55 16.7
	LLA	ePd	03 55 18.9
	PRS	eP	03 55 19.0
	MNA	ePd	03 55 19.1
	JAS1	iPd	03 55 22.2
	GCC	eP	03 55 22.5
	MHC	eP	03 55 23.6
	BKS	e(P)d	03 55 26.7
		AMP(μm)	PER(s)
		PZ 0.028	0.7
	ORV	ePd	03 55 30.8
	WDC	eP	03 55 35.5
USGS 03h42m50.4s 35.8S 71.1W			
h=105km mb=5.3			
Central Chile			
Jan 9	PRI	eP	09 16 23.4
	FRI	eP	09 16 26.1
	MHC	e(P)	09 16 31.8
	JAS1	eP	09 16 34.3
	MNA	eP	09 16 35.9
	WDC	eP	09 16 50.4
USGS 09h05m34.3s 28.9S 105.8W			
h=10km mb=4.6			
Easter Island Region			
Jan 9	PRS	e(P)	13 54 56.0
	MHC	eP	13 54 58.2
	BKS	eP	13 54 58.3
		AMP(μm)	PER(s)
		PZ 0.017	0.7
	FRI	e(P)	13 55 02.5
	JAS1	eP	13 55 03.5
	ORV	eP	13 55 04.8
	WDC	eP	13 55 05.1
	MNA	e(P)	13 55 11.8
USGS 13h43m33.2s 23.7S 179.9E			
h=536km mb=4.5			
South of Fiji Islands			
Jan 9	FRI	ePc	23 10 26.9
	MNA	ePc	23 10 35.1
	PRI	e	23 10 39.1
	JAS1	e	23 10 50.4
	ORV	e	23 11 07.3
	MIN	eP	23 11 15.5
	BKS	e	23 14 20
		e	23 15 56
USGS 23h07m19.8s 26.3N 110.9W			
h=10km mb=4.6			
Gulf of California			

DATE	STA	PHASE	TIME (UTC)
Jan 10	JAS1	eP	22 35 58.0
	FRI	e	22 35 59.6
	ORV	e	22 36 02.6
	WDC	eP	22 36 02.6
USGS 22h16m22.8s 53.0S 9.5E			
h=10km mb=5.2 Ms=5.0			
Southwest of Africa			
Jan 11	FRI	e	07 48 15.8
	MNA	eP	07 48 23.4
	JAS1	eP	07 48 26.4
	ORV	eP	07 48 46.6
USGS 07h43m31.6s 18.7N 108.2W			
h=10km mb=4.2			
Revilla Gigedo Islands Region			
Jan 12	FRI	eP	06 47 46.2
	MNA	ePd	06 47 47.8
	PRI	ePd	06 47 48.3
	LLA	eP	06 47 51.0
	PRS	eP	06 47 52.1
	JAS1	ePd	06 47 54.7
	MHC	eP	06 47 58.2
	ORV	iPd	06 48 06.9
	MIN	eP	06 48 09.5
	WDC	ePd	06 48 13.1
	FHC	eP	06 48 22.5
USGS 06h38m20.6s 4.0S 79.4W			
h=96km mb=5.5			
Near Coast of Ecuador			
Jan 12	MHC	iPc	11 20 16.5
	GCC	iPd	11 20 22.5
		i	11 20 25.2
		iS	11 20 27.8
	PCC	iPc	11 20 25.6
		iS	11 20 36.8
	SAO	iPd	11 20 26.6
	BRK	eP	11 20 28.5
		iS	11 20 40.5
	BKS	eP	11 20 28.7
		eS	11 20 41.4
	ZSP	eP	11 20 29.9
		iS	11 20 43.0
	LLA	ePd	11 20 31.7
		i	11 20 33.8
	PRS	iPc	11 20 33.7
	JAS1	iPc	11 20 36.2
		iS	11 20 51.4
	PRI	e	11 20 40.2
	FRI	iPc	11 20 42.6
	ORV	e	11 20 50.1
		i	11 20 53.8
BRK 11h20m14.8s 37.3N 121.7W			
h=6km ML=2.8(4) Mo=1.0E20(2)			
Halls Valley, 15 km E of San Jose, CA			
Jan 12	PRI	ePc	14 12 31.5
	PRS	eP	14 12 33.8
	MHC	eP	14 12 40.1
	FRI	e	14 12 41.3
	MNA	ePc	14 12 42.0
	JAS1	ePc	14 12 42.4
	ORV	ePc	14 12 54.3
	WDC	ePc	14 12 57.4
USGS 14h00m55.1s 36.0S 102.2W			
h=10km mb=5.1 Ms=4.7			
Southern Pacific Ocean			
Jan 14	LLA	iPc	03 07 59.3

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DATE	STA	PHASE	TIME (UTC)
	SAO	iPc	03 08 00.2
	PRS	iPc	03 08 00.35
		i	03 08 00.5
	PRI	iPd	03 08 06.7
		eS	03 08 17.5
	GCC	ePc	03 08 09.3
	MHC	ePc	03 08 11.4
		e(S)	03 08 24.0
	FRI	iPc	03 08 17.2
	PCC	eP	03 08 17.8
	JAS1	ePc	03 08 20.9
		eS	03 08 39.9
	BRK	eP	03 08 21.1
	BKS	eP	03 08 21.2
	ZSP	ePc	03 08 21.7
	MNA	e	03 08 48.8
	WDC	e	03 08 57.5
	MIN	e	03 08 58.1
BRK 03h07m54.9s 36.6N 121.2W			
h=7km ML=3.4(5) Mo=1.8E21(2)			
Bear Valley, 35 km SE of Hollister, CA			
Jan 14	LLA	iPc	03 09 40.7
	SAO	iPc	03 09 41.5
	PRS	iPd	03 09 41.9
	PRI	iPd	03 09 48.2
	GCC	iPc	03 09 50.5
	MHC	iPd	03 09 52.9
	FRI	iPc	03 09 58.6
	PCC	iPc	03 09 59.1
	JAS1	iPd	03 10 02.0
	BKS	ePnc	03 10 02.1
		eP*	03 10 05.8
		e(S)	03 10 22
		e	03 10 25
	BRK	ePnd	03 10 02.5
	ZSP	iPnd	03 10 03.8
		iP*	03 10 06.5
		iS	03 10 25.6
	ORV	eP	03 10 23.1
	MNA	e(P)	03 10 26.7
		e	03 10 29.6
	MIN	eP	03 10 35.8
	WDC	eP	03 10 38.9
	FHC	eP	03 10 49.4
BRK 03h09m36.3s 36.6N 121.2W			
h=7km ML=4.8(4) Mo=9.1E22(2)			
Bear Valley, 35 km SE of Hollister, CA			
Jan 14	LLA	iPc	05 35 52.3
	SAO	iPc	05 35 53.1
	PRS	iPd	05 35 53.5
	PRI	iPd	05 35 59.8
	GCC	iPd	05 36 02.5
	MHC	iPd	05 36 04.6
	FRI	iPc	05 36 10.2
	PCC	eP	05 36 11.0
	JAS1	iPd	05 36 14.0
		e(S)	05 36 33
	BRK	e(P)	05 36 14.4
	BKS	eP	05 36 14.4
	ORV	e	05 36 35.7
BRK 05h35m47.9s 36.6N 121.2W			
h=6km ML=3.0(4)			
Bear Valley, 35 km SE of Hollister, CA			
Jan 14	LLA	iPc	05 50 26.9
	SAO	iPc	05 50 27.4
	PRS	iPd	05 50 28.0
	PRI	iPd	05 50 34.4
	GCC	eP	05 50 36.5
		iS	05 50 44.5
	MHC	eP	05 50 38.6
	FRI	iPc	05 50 44.7
	PCC	ePc	05 50 45.2
	JAS1	eP	05 50 48.4
		eS	05 51 06.6
	ORV	eP	05 51 10.3
BRK 05h50m22.4s 36.6N 121.2W			
h=7km ML=2.5(4)			
Bear Valley, 35 km SE of Hollister, CA			
Jan 15	PRS	eP	20 29 59.0
	GCC	e(P)	20 29 59.0
	BRK	eP	20 29 59.6
	MHC	iPd	20 30 00.5
	LLA	e(P)	20 30 00.8
	SAO	e	20 30 01.2
		i	20 30 53.3
	BKS	eP	20 30 01.3
		epP	20 30 46
		ePP	20 33 30
		eS	20 40 28
		e	20 41 24
		e	20 42 36
		eSS	20 46 06
		eLq	20 53 24
		eLr	20 57 08
		AMP(μm)	PER(s)
	PZ	0.073	0.9
	PRI	iPd	20 30 01.4
		epP	20 30 48.3
	WDC	iPd	20 30 05.1
		ipP	20 30 44.2
	JAS1	iPd	20 30 05.4
		ipP	20 30 48.5
	FRI	iPd	20 30 05.4
	ORV	iPd	20 30 05.7
	MIN	eP	20 30 06.7
	MNA	iPd	20 30 14.3
BRK mb=5.9 h=.km Distance=85°			
USGS 20h17m31.4s 21.4S 170.3E			
h=146km mb=6.0			
Loyalty Islands Region			
Jan 15	PRI	eP	20 30 07.5
	PCC	eP	20 30 10.0
	SAO	iP	20 30 11.5
	BKS	eP	20 30 11.7
		epP	20 30 58.5
		AMP(μm)	PER(s)
	LZ	19	20.
	LNE	22	20.
	LNW	7.5	20.
	JAS1	iP	20 30 12.5
		ipP	20 31 04.5
	WDC	iP	20 30 12.5
	MNA	iP	20 30 21.8
		epP	20 30 57.5
USGS 20h17m42.7s 21.3S 170.1E			
h=150km mb=6.2			
Loyalty Islands Region			
Jan 16	FHC	eP	08 45 48.9
	WDC	iPc	08 45 53.7
	MIN	ePc	08 45 57.2
	ORV	iPc	08 45 59.9
	PCC	ePc	08 46 01.4
	BRK	eP	08 46 01.8
	BKS	eP	08 46 01.8
		AMP(μm)	PER(s)
	PZ	0.069	0.7
	GCC	eP	08 46 04.5
	MHC	iPc	08 46 05.7
	SAO	e	08 46 07
	JAS1	iPc	08 46 08.4
	PRS	ePc	08 46 09.3
	LLA	eP	08 46 09.9
	PRI	ePc	08 46 12.8
	FRI	iPc	08 46 13.1
	MNA	ePc	08 46 15.3
USGS 08h34m43.7s 29.8N 138.7E			
h=435km mb=5.2			
South of Honshu, Japan			
Jan 16	ZSP	ePd	09 38 58.8
		i	09 39 10.7
	BRK	eP	09 39 00.1
	BKS	eP	09 39 00.2
		eS	09 39 10.3
	PCC	iPc	09 39 05.4
		eS	09 39 19.2
	ORV	eP	09 39 11.1
		eS	09 39 29.2
	MHC	e(P)	09 39 11.5
	JAS1	iPc	09 39 17.9
BRK 09h38m47.4s 38.4N 122.6W			
h=5km ML=2.5(3)			
Santa Rosa, CA			
Jan 16	WDC	e	13 17 34
	ORV	eP	13 17 44.9
	JAS1	e	13 17 51
	FRI	e	13 17 57.0
USGS 13h04m31.4s 24.8N 122.0E			
h=12km mb=5.5 Ms=5.8			
Taiwan Region			
Jan 16	FRI	e	14 08 10
	JAS1	eP	14 08 20
	PRI	e	14 08 23.0
	ORV	e	14 08 35
USGS 14h00m07.5s 4.2S 104.5W			
h=10km mb=4.7 Ms=4.9			
Northern Easter Island Cordillera			
Jan 16	FHC	eP	19 05 32.8
		iS	19 05 40.8
	WDC	iPc	19 05 46.8
	MIN	iPc	19 05 56.8
	ORV	iPd	19 06 00.9
BRK 19h05m22.0s 40.4N 124.6W			
h=18km ML=3.0(2)			
Off Coast 50 km SW of Eureka, CA			
Jan 16	PCC	ePc	23 18 33.8
	GCC	eP	23 18 34.0
	PRS	ePc	23 18 34.4
	BRK	e(P)	23 18 35
	SAO	eP	23 18 35.1
	BKS	e(P)	23 18 35.1
		AMP(μm)	PER(s)
	PZ	0.047	0.9
	LLA	eP	23 18 36.6
	MHC	eP	23 18 36.7
	PRI	ePc	23 18 36.8
	FRI	ePc	23 18 41.9
	JAS1	ePc	23 18 42.2
	WDC	ePc	23 18 43.0
	ORV	eP	23 18 43.2
	MIN	ePc	23 18 46.5
	MNA	ePc	23 18 51.9
USGS 23h07m33.9s 17.5S 178.9W			
h=479km mb=5.0			
Fiji Islands Region			
Jan 17	FRI	eP	04 25 11.6
	PRI	ePc	04 25 13.2
	MNA	ePc	04 25 14.1
	LLA	eP	04 25 16.1
	PRS	ePc	04 25 17.1
	JAS1	ePc	04 25 19.8
	GCC	eP	04 25 21.4
	MHC	ePc	04 25 22.8
	BKS	eP	04 25 26.9
		AMP(μm)	PER(s)
	PZ	0.10	0.9
	BRK	ePc	04 25 27.1
	ORV	iPc	04 25 31.9
		i	04 25 45.8
	WDC	ePc	04 25 37.8
	FHC	ePc	04 25 46.6
USGS 04h15m00.4s 10.7S 78.4W			
h=51km mb=5.5			
Near Coast of Peru			
Jan 17	PRI	iPc	17 52 08.4
	LLA	ePc	17 52 14.2
	PRS	ePc	17 52 17.8
	FRI	iPd	17 52 17.9
		eS	17 52 28.1
	SAO	iPd	17 52 21.7
	GCC	eP	17 52 27.8
	MHC	eP	17 52 28.0
	JAS1	iPd	17 52 30.3
		iS	17 52 53.0
	PCC	e(P)	17 52 37.1
	MNA	e	17 52 45.8
		e	17 52 50.3
	ORV	eP	17 52 56.0
BRK 17h52m01.6s 36.2N 120.2W			
h=6km ML=3.3(6)			
10 km E of Coalinga, CA			
Jan 17	LLA	iPc	20 42 45.6
	SAO	iPc	20 42 46.2
	PRS	iPd	20 42 46.8
	PRI	ePd	20 42 53.2
	GCC	eP	20 42 55.2
	MHC	eP	20 42 57.5
	FRI	iPc	20 43 03.5
		iS	20 43 20.2
	PCC	ePc	20 43 04.0
	JAS1	eP	20 43 07.2
		eS	20 43 26.0
BRK 20h42m41.1s 36.6N 121.2W			
h=7km ML=2.5(2)			
Bear Valley, 35 km SE of Hollister, CA			
Jan 18	FHC	iPc	02 05 55.1
		e	02 06 10.5
	WDC	iPc	02 06 03.3
		e	02 06 19.0
	MIN	iPc	02 06 08.9
		e	02 06 23.5
	ORV	iPc	02 06 13.0
	BRK	iPc	02 06 17.7
	BKS	iPc	02 06 17.9
		epPd	02 06 33.6
		eS	02 12 11
		e	02 12 36
		e	02 12 38
		eLq	02 14 45
		eLr	02 15 00
		AMP(μm)	PER(s)
	PZ	0.28	1.0
	PCC	eP	02 06 18.6
	GCC	ePc	02 06 23.1
	SAO	eP	02 06 27.4
	JAS1	iPc	02 06 27.7
		e	02 06 43.8
		e	02 08 09.2
	PRS	ePc	02 06 30.5
	LLA	ePc	02 06 31.4
		e	02 06 47.5
	FRI	iPc	02 06 35.6
	PRI	iPc	02 06 35.7
	MNA	iPc	02 06 36.8
		e	02 06 52.7
BRK mb=6.0 h=61km Distance=39°			
USGS 01h59m01.7s 51.6N 173.1W			
h=33km mb=5.8 Ms=5.3			
Andreanof Islands, Aleutian Islands			
Jan 18	PRS	e	08 08 42.2
	PRI	eP	08 08 44.7
	WDC	iPd	08 08 46.2
	ORV	iPd	08 08 47.4
	JAS1	iPd	08 08 48.3
	FRI	iPd	08 08 48.9
	MNA	iPd	08 08 57.5
USGS 07h56m23.4s 15.5S 167.5E			
h=147km mb=5.2			
Vanuatu Islands			
Jan 18	MHC	iP	10 17 31.3
		iS	10 17 33.4
	GCC	iPd	10 17 37.2
		eS	10 17 43.2
	SAO	iPd	10 17 40.4
	PCC	iPc	10 17 41.6
	BKS	ePgd	10 17 44.2
		iPn	10 17 45.7
		eS	10 17 56.8
	BRK	iPc	10 17 44.7
		eS	10 17 57.7
	LLA	eP	10 17 45.8
		e	10 17 47.9
	ZSP	eP	10 17 46.0
	PRS	eP	10 17 47.7
	JAS1	iPc	10 17 51.1
		iS	10 18 07.1
	PRI	eP	10 17 54.3
	FRI	eP	10 17 57.0
		eS	10 18 17.2
	ORV	e	10 18 09.4
BRK 10h17m29.6s 37.3N 121.7W			
h=4km ML=2.6(4) Mo=8.2E19(2)			
San Felipe Valley, 20 km SE of San Jose, CA			
Jan 18	FRI	ePd	18 03 27.6
		e	18 03 37.0
	PRI	eP	18 03 28.4
		e	18 03 38
	MNA	iPd	18 03 31.4
		i	18 03 40.9
	LLA	eP	18 03 32.3
		e	18 03 41.8
	JAS1	eP	18 03 37.9
		e	18 03 47.5
	ORV	e(P)	18 03 53.5
USGS 17h58m09.0s 18.3N 101.2W			
h=33km mb=4.9			
Guerrero, Mexico			
Jan 19	WDC	eP	06 47 38.2
		e	06 47 47.6
	MIN	eP	06 47 42.0
		e	06 47 51.2
	ORV	eP	06 47 44.4
		e	06 47 51.8
	BKS	ePc	06 47 46.1
		AMP(μm)	PER(s)
	PZ	0.036	1.1
	JAS1	eP	06 47 52.7
		e	06 48 00.5
	FRI	eP	06 47 57.7
		e	06 48 06.5
	MNA	eP	06 48 00.8
		e	06 48 09.3
	PRI	e	06 48 02.7
		e	06 48 11.5
USGS 06h35m51.0s 26.9N 142.9E			
h=33km mb=5.3			
Bonin Islands Region			
Jan 21	PRS	ePc	05 36 08.7
		epP	05 36 20.9
	GCC	eP	05 36 08.8
		epP	05 36 21
	PCC	eP	05 36 09.3
		epP	05 36 21.2
	SAO	eP	05 36 09.8
	BRK	eP	05 36 10.9
		epP	05 36 23.2
	LLA	ePc	05 36 10.9
	BKS	eP	05 36 11
		e	05 36 18.3
		e(pP)	05 36 23.6
		e(Lr)	06 00 46
		AMP(μm)	PER(s)
	PZ	0.036	0.9
	PRI	eP	05 36 11.1
		ipP	05 36 23.0
	MHC	ePc	05 36 11.5
		epP	05 36 23.5
	FRI	ePc	05 36 16.5
		epP	05 36 28.5
	FHC	e(P)	05 36 16.8
	JAS1	iPc	05 36 17.4
		ipP	05 36 29.6
	ORV	ePc	05 36 19.5
		epP	05 36 31.5
	WDC	eP	05 36 20.1
		epP	05 36 32.2
	MIN	ePc	05 36 20.8
		epP	05 36 33.8
	MNA	iPc	05 36 27.2
		epP	05 36 39.3
USGS 05h24m22.3s 21.6S 174.3W			
h=40km mb=5.6 Ms=5.2			
Tonga Islands			
Jan 21	FHC	iPc	11 57 50.2
		i	11 57 57.1
		iS	11 58 02.8
	WDC	ePc	11 58 04.9
	MIN	ePd	11 58 14.9
		i	11 58 24.6
		eS	11 58 47.5
	ORV	eP	11 58 [illegible]
		e	11 58 28.0
		e	11 58 32.6
	BKS	e(P)	11 58 23.1
		i	11 58 24.0
	BRK	eP	11 58 23.7

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DATE	STA	PHASE	TIME (UTC)
	PCC	eP	11 58 26.8
	MHC	ePd	11 58 33.6
	GCC	eP	11 58 34.0
	SAO	eP	11 58 39.7
	JAS1	iPc	11 58 40.0
	FRI	eP	11 58 54.3
BRK 11h57m31.3s 40.4N 125.3W			
h=10km ML=3.5(1)			
Off Coast 100 km SW of Eureka, CA			
Jan 21	MHC	iP	16 17 35.3
		iS	16 17 37.2
	SAO	iPd	16 17 44.2
	BKS	iPc	16 17 48.4
		i	16 17 49.5
		eS	16 18 00.6
	BRK	iPc	16 17 48.6
		i	16 18 01.7
	LLA	iPd	16 17 49.8
		iS	16 18 04.3
	PRS	iPd	16 17 51.3
		eS	16 18 05.3
	JAS1	iPc	16 17 54.9
		iS	16 18 10.6
	PRI	ePc	16 17 58.5
	FRI	eP	16 18 00.7
		iS	16 18 21.0
	ORV	iP*d	16 18 13.2
	MIN	e	16 18 26.1
BRK 16h17m33.6s 37.3N 121.6W			
h=4km ML=2.9(4) Mo=1.7E20(2)			
San Felipe Valley, 22 km SE of San Jose, CA			
Jan 21	ZSP	ePc	20 07 47.3
		iS	20 08 00.6
	BKS	eP	20 07 47.7
		iS	20 08 01.2
	BRK	ePc	20 07 47.9
		eS	20 08 01.2
	PCC	ePc	20 07 52.5
		eS	20 08 09.1
	MHC	e(P)	20 07 58.0
	GCC	e	20 08 02.3
	SAO	eP	20 08 05.0
	ORV	e	20 08 05.0
	JAS1	e	20 08 09.2
		eS	20 08 31.7
BRK 20h07m30.8s 38.5N 123.0W			
h=1km ML=2.3(4)			
5 km N of Guerneville, CA			
Jan 22	FHC	ePc	12 39 15.5
	PCC	eP	12 39 15.9
	BRK	ePc	12 39 16.8
	GCC	ePc	12 39 16.9
	BKS	ePc	12 39 17.3
		i	12 39 20.5
		i	12 39 23.0
		e	12 39 33.9
		i	12 39 34
		ipP	12 39 41.0
		isP	12 39 51.5
		e	12 41 25.5
		epPP	12 43 07.4
		iSKS	12 49 38
		eS	12 49 48
		epS	12 50 23
		esS	12 50 38
		ePS	12 51 16
		e	12 52 13
		eSS	12 55 25
		esSSS	12 56 11
		e	12 56 25
		ePKKP	12 57 09
		eSSS	12 59 09
		eLq	13 02 20
		e	13 04 04
		eLr	13 05 20
			AMP(μm) PER(s)
		PZ	0.30 1.0
		LZ	4.5 20.
		LN	2.3 20.
		LE	4.7 20.
	SAO	eP	12 39 18.3
	PRS	ePc	12 39 18.7
	MHC	ePc	12 39 18.9
	WDC	ePc	12 39 19.8
		e	12 39 26.2
		e	12 39 37.4
	LLA	ePc	12 39 20.5
	PRI	ePc	12 39 21.4
		e	12 39 26.4
		e	12 39 39.5
	ORV	ePc	12 39 21.7
	MIN	eP	12 39 22.2
		ePKPPKP	13 05 23
	JAS1	iPc	12 39 23.7
		e	12 39 41.8
		e	12 41 20.0
		ePKPPKP	13 05 27
	FRI	ePc	12 39 25.0
		ePKKP	12 57 15
		ePKPPKP	13 05 20
	MNA	ePc	12 39 33.0
BRK mb=6.0 h=157km Distance=86°			
Solomon Islands			
Jan 23	LLA	iPc	00 48 49.7
	SAO	iPc	00 48 50.1
	PRS	iPd	00 48 50.9
	PRI	iPd	00 48 57.4
	GCC	eP	00 48 59.5
		e	00 49 11.3
	MHC	eP	00 49 01.6
	FRI	iPc	00 49 07.7
		iS	00 49 24.0
	PCC	iPc	00 49 08.1
	JAS1	iPc	00 49 11.6
		iS	00 49 30.1
	BRK	e(P)	00 49 12.3
	BKS	ePc	00 49 14.0
	ORV	eP	00 49 32.7
	MNA	e	00 49 40.2
BRK 00h48m45.2s 36.6N 121.2W			
h=5km ML=2.7(4)			
Bear Valley, 30 km SSE of Hollister, CA			
Jan 23	SAO	iPc	21 11 12.7
	LLA	iPc	21 11 15.3
	PRS	iPd	21 11 15.8
	GCC	eP	21 11 22.0
	PRI	iPd	21 11 23.4
	MHC	ePd	21 11 24.1
	PCC	iPc	21 11 30.7
	FRI	eP	21 11 32.6
		iS	21 11 50.0
	JAS1	iPd	21 11 35.3
		iS	21 11 52.8
	BKS	eP	21 11 37.1
		e(S)	21 11 56.7
	ZSP	e	21 11 38.4
	BRK	e	21 11 39.1
	ORV	e	21 11 56.2
	MNA	e	21 12 06.3
BRK 21h11m09.5s 36.6N 121.3W			
h=7km ML=2.8(4)			
Stone Canyon, 25 km SE of Hollister, CA			
Jan 24	PCC	eP	01 10 25.4
	GCC	ePc	01 10 26.1
	BRK	eP	01 10 26.8
	SAO	eP	01 10 27.1
	PRS	ePc	01 10 27.3
	BKS	eP	01 10 27.3
			AMP(μm) PER(s)
		PZ	0.042 0.7
	FHC	eP	01 10 28
	MHC	ePc	01 10 28.5
	LLA	ePc	01 10 29.1
	PRI	ePc	01 10 29.8
	WDC	ePc	01 10 31.9
	ORV	iPc	01 10 33.0
	JAS1	iPc	01 10 33.6
	MIN	eP	01 10 34.0
	FRI	iPc	01 10 34.2
	MNA	ePc	01 10 42.8
USGS 00h59m12.5s 15.0S 170.6E			
h=662km mb=5.1			
Vanuatu Islands Region			
Jan 25	SAO	iPd	08 00 41.2
	GCC	iPc	08 00 45.9
	MHC	iPc	08 00 46.0
	LLA	iPc	08 00 46.8
		iS	08 00 55.0
	PRS	iPc	08 00 49.1
	PCC	eP	08 00 54.8
	PRI	iPd	08 00 57.1
	BKS	ePd	08 00 57.7
	BRK	e	08 00 58.5
	JAS1	iPd	08 01 00.4
	FRI	iPc	08 01 01.7
		iS	08 01 19.6
BRK 08h00m37.4s 36.9N 121.4W			
h=4km ML=2.7(4)			
20 km NNW of Hollister, CA			
Jan 25	MIN	eP	09 49 36.2
	MNA	eP	09 49 37.0
	FHC	eP	09 49 41.8
	ORV	e	09 49 44.1
	JAS1	iPc	09 49 47.1
	FRI	eP	09 49 50.5
	MHC	e	09 49 55.0
	LLA	eP	09 49 56.9
	BKS	e	10 08 17
		e	10 10 27
		e	10 10 29
			AMP(μm) PER(s)
		LZ	3.7 20.
		LNE	4.1 20.
		LNW	2.2 20.
USGS 09h39m46.2s 61.7N 27.1W			
h=10km mb=5.3 Ms=5.2			
Iceland Region			
Jan 26	FRI	eP	08 00 23.0
	MNA	ePc	08 00 24.0
	PRI	e	08 00 25.6
	LLA	ePc	08 00 26.5
	PRS	ePc	08 00 27.0
	SAO	e	08 00 28.2
	JAS1	iPc	08 00 30.0
	GCC	eP	08 00 31.2
	MHC	ePc	08 00 31.8
	PCC	e	08 00 34.3
	BKS	iPc	08 00 35.0
			AMP(μm) PER(s)
		PZ	0.069 0.9
	BRK	e	08 00 35.3
	ORV	iPc	08 00 39.4
	MIN	eP	08 00 41.5
	WDC	iPc	08 00 45.1
	FHC	eP	08 00 51.2
USGS 07h48m23.5s 27.1S 70.9W			
h=31km mb=5.7 Ms=4.8			
Near Coast of Northern Chile			
Jan 26	SAO	iPd	19 20 54.6
	LLA	iPc	19 20 57.7
	PRS	iPd	19 21 00.6
	GCC	iPc	19 21 02.7
	MHC	iPc	19 21 03.0
	PRI	iPc	19 21 07.1
	PCC	iPc	19 21 10.6
	BKS	iPc	19 21 13.2
		iS	19 21 34.0
	BRK	iPc	19 21 13.7
	FRI	eP	19 21 13.7
	JAS1	iPd	19 21 14.6
	ZSP	iPc	19 21 14.7
	ORV	iPc	19 21 34.2
	MNA	eP	19 21 39.4
	MIN	eP	19 21 40.8
	WDC	iP	19 21 49.5
	FHC	iPd	19 22 00.4
BRK 19h20m51.2s 36.8N 121.3W			
h=7km ML=5.5(8) Mo=2.0E24(4)			
12 km ESE of Hollister, CA			
Jan 26	SAO	iP	20 46 08.9
	LLA	iPc	20 46 12.4
		iS	20 46 17.2
	PRS	iPd	20 46 15.3
	MHC	ePd	20 46 16.9
	GCC	iPc	20 46 16.9
	PRI	eP	20 46 22.8
	PCC	iPc	20 46 25.6
	FRI	iPc	20 46 28.4
		iS	20 46 44.9
	JAS1	iPc	20 46 28.9
	BKS	eP	20 46 30.1
		eS	20 46 49.1
	BRK	e	20 46 31.7
	ZSP	e	20 46 33.8
	ORV	eP	20 46 51.0
BRK 20h46m05.5s 36.8N 121.3W			
h=3km ML=2.5(4)			
11 km ESE of Hollister, CA			
Jan 26	SAO	iPd	21 44 37.9
	LLA	iPc	21 44 40.6
		eS	21 44 48.7
	PRS	iPd	21 44 43.6
		iS	21 44 53.4
	GCC	iPc	21 44 45.8
	MHC	iPc	21 44 46.0
	PRI	ePc	21 44 50.1
	PCC	ePc	21 44 53.3
	BRK	ePc	21 44 56.5
	FRI	iPd	21 44 56.5
		iS	21 45 12.9
	BKS	iPc	21 44 56.6
		i	21 45 03.8
		i	21 45 15.7
	JAS1	iPc	21 44 57.2
		iS	21 45 14.1
	ORV	eP	21 45 17.5
	MNA	ePc	21 45 26.6
BRK 21h44m34.2s 36.8N 121.3W			
h=9km ML=3.2(6) Mo=1.2E21(1)			
12 km ESE of Hollister, CA			
Jan 26	SAO	iPc	23 10 01.6
	LLA	iPc	23 10 04.7
		iS	23 10 09.6
	PRS	iPd	23 10 07.8
		iS	23 10 17.5
	GCC	iPc	23 10 09.9
	MHC	eP	23 10 10.2
	PRI	ePc	23 10 14.2
		iS	23 10 28.8
	PCC	iPd	23 10 18.3
	FRI	ePd	23 10 20.7
		iS	23 10 37.0
	BKS	iPc	23 10 20.8
		i	23 10 26.4
	JAS1	iPc	23 10 21.3
		eS	23 10 37.3
	ORV	eP	23 10 41.5
	MNA	iPd	23 10 51.3
BRK 23h09m58.4s 36.8N 121.3W			
h=8km ML=2.9(6)			
12 km ESE of Hollister, CA			
Jan 26	SAO	iPc	23 46 58.2
	LLA	iPc	23 47 01.6
	PRS	iPd	23 47 04.4
	GCC	iPc	23 47 06.1
	MHC	ePc	23 47 06.3
	PRI	iPd	23 47 11.2
	PCC	iPc	23 47 14.1
	BKS	iPc	23 47 17.2
	FRI	iPc	23 47 17.5
	JAS1	iPc	23 47 18.2
	ORV	eP	23 47 37.9
	MNA	e	23 47 47.1
BRK 23h46m54.9s 36.8N 121.3W			
h=6km ML=4.0(6) Mo=1.4E22(4)			
10 km E of Hollister, CA			
Jan 27	PRI	e(P)	02 11 05.6
	MHC	e(P)	02 11 06.8
	JAS1	eP	02 11 12.6
		epP	02 11 30.4
	ORV	eP	02 11 14.9
	WDC	eP	02 11 15.0
	MIN	e(P)	02 11 17.2
		e	02 11 34.3
	MNA	eP	02 11 22.8
		epP	02 11 39.3
USGS 01h59m40.6s 18.2S 172.7W			
h=62km mb=4.6			
Tonga Islands Region			
Jan 27	SAO	iPd	05 42 36.4
	LLA	iPc	05 42 39.8
		iS	05 42 44.9
	PRS	iPd	05 42 42.6
	MHC	ePc	05 42 44.4
	GCC	iPc	05 42 44.4
		eS	05 42 53.2
	PRI	e(P)	05 42 49.8
		i	05 42 50.7
	PCC	eP	05 42 52.5
	BKS	iP	05 42 55.4
		iS	05 43 17.1
	FRI	ePc	05 42 55.8
		iS	05 43 12.3
	JAS1	iPc	05 42 56.6
		iS	05 43 13.5
	ORV	e	05 43 15.8
		i	05 43 17.4
	MNA	e	05 43 25.5
BRK 05h42m33.0s 36.8N 121.3W			
h=5km ML=2.5(4)			
11 km ESE of Hollister, CA			
Jan 27	PCC	ePc	07 47 55.7
	GCC	ePc	07 47 56.9
		i	07 48 13.3
	BKS	eP	07 47 57.1
		e	07 48 13.5
			AMP(μm) PER(s)
		PZ	0.10 0.8
	ZSP	e	07 47 57.5
	PRS	eP	07 47 58.7
		i	07 48 00.6
	MHC	ePc	07 47 59.0
		i	07 48 15.3
	SAO	iPc	07 47 59.3
		i	07 48 14.8
	WDC	ePc	07 47 59.6
		i	07 48 16.2
	LLA	ePc	07 48 00.6
	PRI	ePc	07 48 01.5
	ORV	iPc	07 48 01.7
		i	07 48 18.2
	MIN	ePc	07 48 02.0
	JAS1	iPc	07 48 03.8
		i	07 48 20.1
	FRI	ePc	07 48 05.1
		e	07 48 21.7
	MNA	iPd	07 48 13.1
		e	07 48 28.8
USGS 07h35m23.6s 10.4S 161.1E			
h=82km mb=5.5			
Solomon Islands			
Jan 27	SAO	iPd	10 07 40.8
	LLA	iPc	10 07 43.4
	PRS	iPd	10 07 46.6
	MHC	eP	10 07 48.6
		iS	10 07 57.5
	PRI	iPc	10 07 53.0
	BKS	iP	10 07 58.4
		iS	10 08 20.0
	FRI	iPd	10 07 59.6
		iS	10 08 15.8
	JAS1	iPd	10 08 00.0
	ORV	eP	10 08 20.6
	MNA	ePd	10 08 29.4
BRK 10h07m37.1s 36.8N 121.3W			
h=7km ML=3.4(6) Mo=1.8E21(2)			
14 km ESE of Hollister, CA			
Jan 27	LLA	e	10 33 45.2
	PRS	eP	10 33 48.9
	PRI	eP	10 33 50.3
	SAO	e	10 33 50.7
	BKS	eP	10 33 51.6
			AMP(μm) PER(s)
		PZ	0.033 0.9
	FRI	eP	10 33 56.0
	JAS1	eP	10 33 56.7
			10 34
	ORV	eP	10 33 58.2
	WDC	eP	10 33 59.5
		eP	10 33 59.3

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DATE	STA	PHASE	TIME (UTC)
	MIN	eP	10 34 00.6
	MNA	eP	10 34 05.8
USGS 10h21m59.5s 23.7S 177.3W			
h=178km mb=5.1			
South of Fiji Islands			
Jan 27	SAO	iP	14 26 09.7
	LLA	iPc	14 26 13.3
	PRS	eP	14 26 16.2
	MHC	eP	14 26 17.9
		iS	14 26 27.5
	PRI	eP	14 26 22.9
	BKS	iP	14 26 28.6
		iS	14 26 46.8
	FRI	eP	14 26 29.1
		iS	14 26 45.8
	JAS1	ePd	14 26 29.7
	ORV	e	14 26 49.6
		i	14 26 51.0
	MNA	e	14 26 58.5
BRK 14h26m06.4s 36.8N 121.3W			
h=5km ML=3.3(6) Mo=1.9E21(2)			
10 km ESE of Hollister, CA			
Jan 27	SAO	iPd	17 01 27.9
	LLA	iPc	17 01 31.35
	PRS	iPc	17 01 34.4
	GCC	iPc	17 01 35.7
	MHC	iPc	17 01 35.8
	PRI	iPc	17 01 40.9
	PCC	eP	17 01 44.3
	BKS	eP	17 01 46.5
		eS	17 02 08.6
	BRK	e(P)	17 01 46.9
	FRI	eP	17 01 47.2
		eS	17 02 04.0
	JAS1	eP	17 01 47.3
		eS	17 02 04.5
	ORV	eP	17 02 08.4
	MNA	e	17 02 13.0
BRK 17h01m24.5s 36.8N 121.3W			
h=6km ML=2.7(4)			
11 km ESE of Hollister, CA			
Jan 27	SAO	iP	17 21 47.3
	LLA	iPc	17 21 50.7
	PRS	iPd	17 21 53.6
	GCC	iPc	17 21 55.1
	MHC	iPc	17 21 55.2
	PRI	iPc	17 22 00.2
	PCC	eP	17 22 04.0
	FRI	iPc	17 22 06.5
		iS	17 22 23.4
	JAS1	iPc	17 22 07.4
		iS	17 22 24.7
	BKS	iP	17 22 07.9
		iS	17 22 33.2
BRK 17h21m43.9s 36.8N 121.3W			
h=6km ML=2.5(4)			
11 km ESE of Hollister, CA			
Jan 27	SAO	iP	19 23 23.8
	LLA	iPc	19 23 26.6
	PRS	iPd	19 23 29.6
	GCC	iPc	19 23 31.5
	MHC	iPc	19 23 31.7
	PRI	iPc	19 23 36.1
	PCC	eP	19 23 39.8
	BKS	iP	19 23 42.4
		eS	19 24 08.1
	FRI	iPc	19 23 42.6
		iS	19 23 58.9
	JAS1	eP	19 23 42.7
	BRK	e	19 23 44.3
	ORV	eP	19 24 04.2
BRK 19h23m20.1s 36.8N 121.3W			
h=9km ML=2.6(4)			
13 km ESE of Hollister, CA			
Jan 27	FRI	eP	19 42 30.9
	PRI	ePc	19 42 31.4
	LLA	ePc	19 42 35.2
	MNA	ePc	19 42 35.3
	PRS	e(P)	19 42 36.2
	JAS1	ePc	19 42 41.4
	MHC	ePc	19 42 44.4
	ORV	ePc	19 42 58.2
	WDC	e(P)	19 43 06.5
USGS 19h36m16.4s 17.9N 102.7W			
h=33km mb=4.9			
Near Coast of Michoacan, Mexico			
Jan 27	SAO	iPc	19 51 37.8
	LLA	iPc	19 51 40.35
	PRS	iPd	19 51 43.6
	GCC	iPc	19 51 45.8
	MHC	iPc	19 51 46.0
	PRI	eP	19 51 49.9
	PCC	iPc	19 51 53.7
	FRI	ePd	19 51 56.3
		iS	19 52 12.6
	BKS	iP	19 51 56.4
		eS	19 52 30.1
	BRK	eP	19 51 56.6
	JAS1	iPd	19 51 57.0
	ORV	eP	19 52 18.6
	MNA	eP	19 52 26.3
	ZSP	iPd	19 52 58.2
BRK 19h51m34.1s 36.8N 121.3W			
h=8km ML=3.4(6) Mo=2.4E21(2)			
14 km ESE of Hollister, CA			
Jan 27	SAO	iP	23 09 22.8
	LLA	iPc	23 09 26.0
	PRS	iPd	23 09 29.0
	GCC	iPc	23 09 30.6
	MHC	iPc	23 09 30.7
	PRI	ePc	23 09 35.6
	PCC	eP	23 09 39.0
	BRK	iPd	23 09 41.7
	BKS	iP	23 09 41.8
		eS	23 10 02.9
	FRI	eP	23 09 41.9
		iS	23 09 58.7
	JAS1	eP	23 09 42.0
	ORV	eP	23 10 03.5
	MNA	e(P)	23 10 13.0
BRK 23h09m19.3s 36.8N 121.3W			
h=7km ML=2.6(4)			
11 km ESE of Hollister, CA			
Jan 28	MNA	e(P)	07 01 02
		epP	07 01 39.9
	PRI	e(P)	07 01 03
		epP	07 01 41.5
	LLA	e(P)	07 01 06.0
		epP	07 01 44.2
	PRS	e(P)	07 01 07.3
	JAS1	eP	07 01 08.9
		epP	07 01 47.1
	MHC	eP	07 01 13.0
		epP	07 01 51
	BKS	ePc	07 01 17.7
		e	07 01 28.1
		epP	07 01 56.3
		AMP(μm)	PER(s)
		PZ 0.016	0.8
	ORV	iPd	07 01 21.0
		ipP	07 01 59.2
	WDC	ePd	07 01 26.9
		epP	07 02 05
USGS 06h51m45.5s 1.8S 77.5W			
h=164km mb=5.2			
Ecuador			
Jan 28	WDC	e(PKP)	12 51 09.8
	ORV	ePKP	12 51 12.5
	JAS1	ePKP	12 51 16
		e	12 53 04
	MIN	e	12 51 17
	FRI	e(PKP)	12 51 18.6
USGS 12h32m16.6s 8.8N 94.2E			
h=27km mb=5.7 Ms=5.8			
Nicobar Islands Region			
Jan 28	PRI	eP	15 48 54.7
	FRI	eP	15 48 56.8
	PRS	e	15 49 00.5
	MNA	iPd	15 49 03.0
	JAS1	iPd	15 49 07.2
	MHC	e(P)	15 49 09.0
	ORV	ePd	15 49 24.2
	WDC	e(P)	15 49 34.2
USGS 15h43m56.8s 17.8N 106.0W			
h=33km mb=4.8			
Off Coast of Jalisco, Mexico			
Jan 28	FRI	e(P)	23 30 27
		epP	23 30 59.1
	JAS1	eP	23 30 28.8
		epP	23 31 00
	ORV	eP	23 30 30.2
	WDC	eP	23 30 30.6
		epP	23 31 02.2
	MIN	eP	23 30 32.7
		epP	23 31 02.3
	MNA	eP	23 30 38.9
		epP	23 31 10.2
USGS 23h19m00.3s 17.5S 174.3W			
h=126km mb=5.1			
Tonga Islands			
Jan 29	WDC	eP	09 39 58.3
	ORV	eP	09 40 02.4
	MHC	e	09 40 05
	PRS	e(P)	09 40 08.0
	JAS1	eP	09 40 09.2
	PRI	e(P)	09 40 10.5
	FRI	eP	09 40 12.6
	MNA	e(P)	09 40 17.5
USGS 09h27m42.9s 13.9N 146.3E			
h=63km mb=5.2			
South of Mariana Islands			
Jan 29	MNA	e(P)	13 42 59.3
	FRI	e(P)	13 43 01.2
	JAS1	e(P)	13 43 08.8
	ORV	e(P)	13 43 20.3
	MIN	e(P)	13 43 22.3
	WDC	e(P)	13 43 25.0
	FHC	e(P)	13 43 38.2
USGS 13h34m09.8s 6.9N 76.8W			
h=10km mb=5.6 Ms=5.3			
Northern Colombia			
Jan 29	JAS1	e(P)	15 26 05.0
USGS 15h13m53.6s 38.3S 93.8W			
h=10km mb=5.0 Ms=4.8			
West Chile Rise			
Jan 29	FRI	e	20 06 47
	PRI	e	20 06 49
	MNA	ePc	20 06 51.6
USGS 20h01m22.1s 17.3N 101.5W			
h=33km mb=4.6			
Near Coast of Guerrero, Mexico			
Jan 30	WDC	ePc	06 11 33.3
	FHC	e	06 11 33.8
	MIN	ePc	06 11 36.7
	ORV	ePc	06 11 46.2
	MNA	eP	06 12 01.3
	JAS1	e(P)	06 12 01.4
	MHC	e(P)	06 12 08.0
	LLA	e(P)	06 12 14.5
USGS 06h06m41.3s 62.3N 124.1W			
h=10km mb=4.6			
Northwest Territories, Canada			
Jan 30	FHC	eP	07 16 32.4
	WDC	eP	07 16 46.3
	MIN	e(P)	07 16 53.3
		e	07 16 58.1
	ORV	iPd	07 17 03.2
	BKS	eP	07 17 14.4
		e	07 17 28.1
		AMP(μm)	PER(s)
		PZ 0.078	0.7
	MHC	eP	07 17 27.3
	JAS1	iPc	07 17 29.9
	LLA	e(P)	07 17 38.3
	MNA	e(P)	07 17 40.9
	FRI	iPd	07 17 44.6
	PRI	eP	07 17 46.8
USGS 07h15m33.5s 43.6N 127.3W			
h=10km mb=5.2			
Off Coast of Oregon			
Jan 30	MHC	iPc	17 47 14.5
		iS	17 47 20.0
	BKS	iP	17 47 15.5
		iS	17 47 22.5
	BRK	iPc	17 47 15.6
	PCC	iPd	17 47 16.3
	ZSP	iPc	17 47 16.6
		iS	17 47 23.9
	GCC	iPd	17 47 19.5
	SAO	iP	17 47 24.9
		iS	17 47 38.5
	JAS1	iPd	17 47 28.0
	LLA	iPc	17 47 29.6
	PRS	iPd	17 47 31.4
	ORV	e(P)	17 47 38.8
	FRI	e	17 47 38.8
	PRI	e	17 47 38.9
BRK 17h47m07.5s 37.6N 121.8W			
h=4km ML=2.9(6) Mo=6.6E20(4)			
6 km SW of Livermore, CA			
Jan 31	MHC	iPc	00 01 35.6
		eS	00 01 41.5
	BRK	iPd	00 01 36.6
		iS	00 01 44.0
	BKS	eP	00 01 37.0
		eS	00 01 43.5
	PCC	iPc	00 01 37.6
	ZSP	iP	00 01 38.2
		eS	00 01 46.0
	GCC	iPc	00 01 40.8
	SAO	eP	00 01 46.0
		eS	00 02 01.0
	JAS1	eP	00 01 49.6
		eS	00 02 07.0
	LLA	eP	00 01 50.8
	PRS	e	00 01 53.0
BRK 00h01m28.7s 37.6N 121.8W			
h=2km ML=2.7(2) Mo=3.9E20(1)			
6km SW of Livermore, CA			
Jan 31	MNA	eP	06 03 40.3
	PRI	ePc	06 03 40.6
	LLA	e	06 03 43.0
	PRS	e	06 03 43.6
	JAS1	ePc	06 03 45.9
	MHC	e	06 03 48.6
	ORV	ePc	06 03 54.6
	WDC	e	06 04 01.2
USGS 05h51m40.2s 20.8S 68.7W			
h=112km mb=4.9			
Chile-Bolivia Border Region			
Jan 31	MHC	iPc	16 37 56.7
	BKS	eP	16 37 57.8
		iS	16 38 04.55
	BRK	iPc	16 37 57.9
	PCC	iPd	16 37 58.7
	ZSP	iPc	16 37 58.7
		eS	16 38 06.0
	SAO	iP	16 38 07.2
	JAS1	iPc	16 38 10.6
	LLA	iPc	16 38 11.8
	PRS	eP	16 38 14.0
	PRI	e	16 38 21.1
	FRI	e	16 38 21.6
		i	16 38 22.9
	ORV	e	16 38 22.1
BRK 16h37m49.8s 37.6N 121.8W			
h=5km ML=3.1(5) Mo=6.3E20(1)			
6 km SW of Livermore, CA			
Jan 31	JAS1	iPd	16 52 53.2
		AMP(μm)	PER(s)
		PZ 0.0064	0.7
USGS 16h46m43.3s 41.7N 81.2W			
h=10km mb=5.0			
Ohio			
Feb 1	FRI	iPd	08 51 42.2
		iS	08 51 53.1
	MNA	iPd	08 51 46.9
		iS	08 52 01.9
	JAS1	iPc	08 51 50.4
	LLA	eP	08 52 00.0
	PRI	e	08 52 03.0
	SAO	iPc	08 52 04.7
	MHC	eP	08 52 05.6
		iS	08 52 34.6
	ORV	e	08 52 18.5
BRK 08h51m26.8s 37.5N 118.8W			
h=11km Mag=3.0			
24 km SE of Mammoth Lakes, CA			
Feb 2	ARC	iP	19 31 26.4
		iS	19 31 29.8
	FHC	iPc	19 31 27.1
		iS	19 31 30.9
	WDC	iPc	19 31 42.3
		iS	19 31 56.4
	MIN	iPc	19 31 52.5
		iS	19 32 13.3
	ORV	eP	19 31 58.7
BRK 19h31m22.8s 40.8N 124.1W			
h=25kmR ML=3.2(4) Mo=1.6E20(2)			
8 km ENE of Eureka, CA			
Feb 2	LLA	iPd	22 07 37.2
	SAO	iPc	22 07 38.9
	MHC	iPc	22 07 43.7
		iS	22 07 53.6
	PRS	eP	22 07 44.0
	GCC	iPc	22 07 45.9
		iS	22 07 57.1
	PRI	iPc	22 07 48.0
	FRI	iPc	22 07 49.3
		iS	22 08 03.3
	JAS1	iPd	22 07 51.6
		iS	22 08 06.2
	PCC	eP	22 07 52.9
	BRK	e	22 07 55.2
	ZSP	e	22 07 56.0
	BKS	e	22 07 56.0
BRK 22h07m30.9s 36.9N 121.0W			
h=5km ML=2.9(4) Mo=4.1E20(1)			
17 km SW of Los Banos, CA			
Feb 3	FHC	ePc	20 58 37.5
	WDC	iPc	20 58 42.2
		ipP	21 00 33.5
		i	21 00 38.5
	MIN	iPc	20 58 45.9
		ipP	21 00 38.2
		i	21 00 42.1
	ORV	iPc	20 58 48.3
		ipP	21 00 43.9
	BRK	eP	20 58 49.8
	BKS	eP	20 58 50.0
		eS	21 08 10.0
		eLr	21 20 14.0
		AMP(μm)	PER(s)
		PZ 0.20	1.0
	PCC	iPc	20 58 50.7
	GCC	eP	20 58 52.6
		ipP	21 00 48.5
	MHC	eP	20 58 53.6
		epP	21 00 46.0
		i	21 00 51.9
	SAO	e(P)	20 58 56.2
	JAS1	iPc	20 58 56.3
		ipP	21 00 49.0
		i	21 00 54.8
	PRS	ePc	20 58 56.9
		epP	21 00 49.3
		e	21 00 55.3
	LLA	ePc	20 58 57.7
	PRI	ePc	20 59 00.5
		epP	21 00 53.5
	FRI	ePc	20 59 01.1
		ipP	21 00 53.9
		i	21 00 59.8
	MNA	iPc	20 59 03.7
		ipP	21 00 56.5
		i	21 01 02.1
BRK mb=6.2 h=33km Distance=83°			
USGS 20h47m35.3s 27.8N 139.6E			
h=508km mb=5.8			
Bonin Islands Region			
Feb 5	FHC	iPc	12 00 21.9
		e	12 00 22.0
		e	12 00 29.8
		e	12 00 43
	WDC	iPc	12 00 37.0

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DATE	STA	PHASE	TIME (UTC)
	MIN	iP	12 00 47.2
		eS	12 01 15.0
	ORV	iPd	12 00 50.9
		eS	12 01 21.0
	PCC	e(P)	12 01 03.0
	JAS1	e	12 01 15.0
	SAO	eP	12 01 16.9
BRK 12h00m10.4s 40.6N 124.7W			
h=16km ML=3.5(2)			
Off Coast 50 km SW of Eureka, CA			
Feb 5	WDC	e(PKP)	18 19 38.4
	ORV	e(PKP)	18 19 41.4
	MNC	e	18 19 44.1
	JAS1	e(PKP)	18 19 44.3
	FRI	e(PKP)	18 19 47.2
	MNA	e	18 19 48.5
USGS 18h00m38.3s 5.8S 104.3E			
h=33km mb=5.1			
Southern Sumatra			
Feb 6	WDC	iPc	13 11 19.3
	MIN	iPc	13 11 22.7
	ORV	iPc	13 11 25.1
	BKS	eP	13 11 26.7
		AMP(μm)	PER(s)
	PZ	0.038	0.8
	JAS1	iPc	13 11 33.1
	FRI	ePc	13 11 38.0
USGS 13h00m13.8s 27.9N 139.4E			
h=532km mb=4.9			
Bonin Islands Region			
Feb 7	MNA	e	04 05 39.3
	JAS1	eP	04 05 46.6
USGS 03h54m58.6s 45.5N 27.9W			
h=10km mb=4.9 Ms=5.3			
North Atlantic Ridge			
Feb 7	WDC	ePc	08 20 03.3
	ORV	ePc	08 20 04.3
	JAS1	ePc	08 20 04.4
	FRI	eP	08 20 04.5
	MIN	e	08 20 05.0
USGS 08h07m51.0s 18.9S 169.4E			
h=277km mb=4.6			
Vanuatu Islands			
Feb 7	PRS	eP	16 10 44.4
	PRI	eP	16 10 46.5
	MHC	eP	16 10 46.8
	FRI	eP	16 10 51.3
	JAS1	ePc	16 10 51.9
	ORV	eP	16 10 53.5
	WDC	ePc	16 10 53.7
	MIN	eP	16 10 55.1
	MNA	eP	16 11 00.6
USGS 15h59m15.3s 25.1S 179.7E			
h=522km mb=4.5			
South of Fiji Islands			
Feb 9	LLA	iPd	21 53 12.3
	SAO	iPc	21 53 18.9
	PRS	eP	21 53 19.1
	PRI	iPc	21 53 23.1
		i	21 53 25.7
		iS	21 53 34.2
	MHC	iPd	21 53 26.6
	GCC	ePc	21 53 26.9
	FRI	eP	21 53 29.6
		iS	21 53 41.8
	JAS1	iPc	21 53 32.7
		iS	21 53 49.5
BRK 21h53m10.2s 36.7N 120.9W			
h=2km ML=2.6(2)			
Panoche Hills, 45 km SE of Hollister, CA			
Feb 9	JAS1	eP	23 44 47.2
		i	23 45 10.5
	ORV	eP	23 44 55.2
		e	23 45 19.5
	WDC	eP	23 45 01.5
		e	23 45 24.7
	MNA	e	23 45 07.0
USGS 23h32m12.0s 36.1S 71.3W			
h=86km mb=5.3			
Central Chile			
Feb 10	PRS	e	10 03 46.4
	BRK	e	10 03 46.6
	MHC	eP	10 03 47.9
	PRI	eP	10 03 48.4
	WDC	e	10 03 52.2
	JAS1	ePc	10 03 52.8
		e	10 04 23.5
	FRI	eP	10 03 52.8
	ORV	ePc	10 03 53.0
	MIN	eP	10 03 54.2
	MNA	ePc	10 04 01.5
USGS 09h51m12.6s 21.6S 170.4E			
h=100km mb=5.8			
Loyalty Islands Region			
Feb 10	BKS	iP	16 22 59.5
		iS	16 23 04.7
	BRK	iPc	16 22 59.7
	ZSP	iPc	16 23 00.0
	PCC	iPd	16 23 03.25
	MHC	iPc	16 23 04.25
		iS	16 23 12.4
	GCC	eP	16 23 08.5
		eS	16 23 19.3
	SAO	eP	16 23 13.2
	JAS1	ePd	16 23 14.7
		iS	16 23 31.0
	LLA	eP	16 23 17.6
	PRS	eP	16 23 18.8
	ORV	e	16 23 23.3
		i	16 23 44.1
	FRI	e	16 23 27.2
	PRI	e	16 23 30.4
	MIN	e	16 23 37.8
BRK 16h22m54.0s 37.8N 121.9W			
h=13km ML=2.6(4)			
Danville area, 30 km SE of Berkeley, CA			
Feb 10	PRI	iPc	16 42 22.1
	LLA	iPd	16 42 28.5
		i	16 42 33.6
	FRI	iPd	16 42 30.2
		iS	16 42 41.9
	PRS	iPc	16 42 31.4
	SAO	iP	16 42 34.9
	MHC	e(P)	16 42 42.2
	GCC	e(P)	16 42 42.4
	JAS1	iPd	16 42 43.8
		iS	16 43 11.8
	PCC	e	16 42 54.3
	MNA	e	16 43 03.6
	ORV	e	16 43 10.5
BRK 16h42m14.9s 36.1N 120.2W			
h=11km ML=2.8(2)			
15 km E of Coalinga, CA			
Feb 10	FHC	eP	18 44 44.2
	WDC	ePc	18 44 48.0
	MIN	ePc	18 44 53.9
	ORV	eP	18 44 54.7
	MNC	eP	18 45 04.8
	JAS1	ePc	18 45 05.7
	PRS	ePc	18 45 09.1
	LLA	ePc	18 45 09.9
	MNA	ePc	18 45 12.7
	PRI	e(P)	18 45 13
	FRI	ePc	18 45 13.2
	BKS	e	18 54 10
		e	18 54 14
		e	19 03 32
		e	19 03 36
USGS 18h33m47.2s 39.5N 143.3E			
h=36km mb=5.5 Ms=5.9			
Off East Coast of Honshu, Japan			
Feb 10	MNA	ePKP1c	21 04 54.1
		ePKP2c	21 04 57.7
	FRI	iPKP1c	21 04 57.0
		ePKP2	21 05 02.7
	MIN	ePKP1	21 04 58.1
	JAS1	iPKP1c	21 04 58.3
		ePKP2c	21 05 05.3
	ORV	ePKP1c	21 04 58.5
		ePKP2	21 05 05.8
	WDC	ePKP1c	21 04 59.0
	LLA	ePKP1c	21 05 00.2
		ePKP2	21 05 08
	PRI	iPKP1c	21 05 00.2
	MHC	ePKP2	21 05 11.1
USGS 20h45m01.7s 27.9S 26.8E			
h=5km mb=5.0			
Republic of South Africa			
Feb 11	ARC	iP	01 16 20.5
		i	01 16 27.4
		iS	01 16 36.0
	FHC	iPd	01 16 22.0
		i	01 16 35.6
		eS	01 16 39
	WDC	iPc	01 16 37.4
	MIN	iPc	01 16 47.5
	ORV	eP	01 16 53.6
	BRK	ePd	01 17 05.3
	ZSP	iPc	01 17 05.4
	BKS	iPd	01 17 05.7
		iS	01 17 56.2
	PCC	ePd	01 17 08.5
	MHC	iPd	01 17 15.9
		iS	01 18 15.7
	GCC	ePd	01 17 16.2
	JAS1	iPd	01 17 19.0
		iS	01 18 11.6
		iSg	01 18 35
	SAO	iPd	01 17 22.5
	PRS	ePd	01 17 27.8
	LLA	eP	01 17 28.0
	FRI	ePc	01 17 34.0
	MNA	iPd	01 17 34.4
	PRI	iPd	01 17 36.0
BRK 01h15m59.5s 41.7N 125.2W			
h=5km ML=4.9(8) Mo=7.1E22(2)			
Off Coast 85 km W of Crescent City, CA			
Feb 11	PRS	e(P)	13 12 06
		epP	13 12 16.8
	PRI	e(P)	13 12 08
	MHC	e(P)	13 12 08.7
		epP	13 12 19.5
	LLA	e(P)	13 12 09
	SAO	e	13 12 09.5
	FRI	eP	13 12 13.5
		epP	13 12 24.5
	JAS1	ePc	13 12 14.4
		epP	13 12 25.2
	WDC	eP	13 12 17.0
		epP	13 12 27.8
	MNA	iPc	13 12 24.6
		epP	13 12 35.6
USGS 13h00m26.1s 20.3S 173.8W			
h=35km mb=5.0 Ms=5.0			
Tonga Islands			
Feb 12	FRI	e(P)	03 08 23.8
	MNA	ePc	03 08 25.3
		e	03 08 32.1
	PRI	ePc	03 08 25.9
	LLA	ePc	03 08 28.8
		e	03 08 35.4
	JAS1	e	03 08 34.4
	MHC	ePc	03 08 36.3
	ORV	eP	03 08 46.1
	MIN	e(P)	03 08 49
	WDC	ePc	03 08 52.8
USGS 02h59m48.9s 2.4N 84.4W			
h=10km mb=5.0 Ms=4.4			
Off Coast of Central America			
Feb 12	FHC	ePd	03 10 46.5
		epP	03 10 55.1
		e	03 10 58.2
	WDC	iPd	03 10 52.0
		ipP	03 11 00.5
		i	03 11 03.7
		i	03 11 06.3
	MIN	iPd	03 10 56.0
		epP	03 11 07.6
		i	03 11 10.1
	ORV	ePd	03 10 58.5
	PCC	e(P)d	03 11 01.5
	BRK	ePd	03 11 01.7
	BKS	iPc	03 11 02.8
		ipP	03 11 13.6
		iP	03 11 14
		iS	03 20 28
		eSS	03 25 27
		iLq	03 29 58
		eLr	03 33 04
		AMP(μm)	PER(s)
	PZ	0.077	1.1
		LZ	4.5 20.
		LN	3.0 20.
		LE	4.5 20.
	GCC	ePd	03 11 05.0
		epP	03 11 16.6
	MHC	ePd	03 11 05.9
		epP	03 11 17.6
		i	03 11 20.4
	JAS1	iPd	03 11 08.9
		ipP	03 11 16.4
		i	03 11 20.5
		i	03 11 23.2
		e	03 11 34.4
		ePP	03 13 59
	SAO	eP	03 11 09
	PRS	ePd	03 11 10.2
		epP	03 11 21.9
	LLA	ePd	03 11 11.1
		epP	03 11 22.4
	PRI	ePd	03 11 14.0
		epP	03 11 23.8
		e	03 11 28.3
	FRI	ePd	03 11 14.0
		ipP	03 11 22.3
		i	03 11 25.7
		i	03 11 28.2
	MNA	iPd	03 11 15.9
		epP	03 11 24.0
		i	03 11 27.7
		i	03 11 30.2
		eS	03 21 18
BRK Ms=5.8 Distance=73°			
USGS 02h59m30.4s 36.4N 141.1E			
h=30km mb=6.1 Ms=5.9			
Near East Coast of Honshu, Japan			
Feb 12	FHC	eP	09 14 23.7
	WDC	eP	09 14 27.0
	ORV	eP	09 14 30.2
	MIN	eP	09 14 30.9
	JAS1	eP	09 14 33.7
	FRI	eP	09 14 36.2
	MNA	eP	09 14 42.4
USGS 09h01m09.9s 6.6S 147.3E			
h=38km mb=5.8 Ms=5.7			
East New Guinea Region			
Feb 12	MNA	eP	22 50 56.0
		e	22 51 03.4
	ORV	e	22 51 12.5
		ePd	22 51 15.1
	JAS1	e	22 51 15.2
	MIN	eP	22 51 16.2
	WDC	iPd	22 51 19.7
USGS 23h41m38.7s 17.0N 62.3W			
h=21km mb=5.2 Ms=5.3			
Leeward Islands			
Feb 13	WDC	e(P)	00 37 18.4
	ORV	eP	00 37 22.9
	JAS1	eP	00 37 23.6
	FRI	e	00 37 25.0
	MNA	eP	00 37 33.2
	BKS	eLr	01 03 52
USGS 00h24m45.1s 13.4S 166.7E			
h=19km mb=5.7 Ms=5.3			
Vanuatu Islands			
Feb 13	PCC	ePc	19 20 26.8
		epP	19 21 17.9
	GCC	eP	19 20 27.5
		epP	19 21 17.8
	BRK	ePc	19 20 28.2
		epP	19 21 18.7
	BKS	iPc	19 20 28.5
		ipP	19 21 19.2
		AMP(μm)	PER(s)
	PZ	0.091	1.0
	SAO	eP	19 20 28.9
		epP	19 21 19.2
	PRS	ePc	19 20 28.9
		epP	19 21 19.3
	MHC	ePc	19 20 30.0
		epP	19 21 20.4
	LLA	ePc	19 20 31.2
		epP	19 21 21.3
	PRI	ePc	19 20 31.5
		epP	19 21 22.0
	WDC	iPc	19 20 32.6
		ipP	19 21 23.4
	ORV	iPc	19 20 34.0
		epP	19 21 24.5
	JAS1	iPc	19 20 35.2
		ipP	19 21 25.3
		ePP	19 23 53
	FRI	iPc	19 20 35.8
		ipP	19 21 26.4
	MNA	ePc	19 20 44.2
		epP	19 21 35.0
BRK mb=5.5 h=207km Distance=84°			
USGS 19h08m20.6s 14.2S 167.3E			
h=206km mb=5.7			
Vanuatu Islands			
Feb 13	FHC	ePc	20 41 42.0
	WDC	ePc	20 41 43.2
		e	20 49 10.6
	ORV	ePc	20 41 54.2
	MNA	ePc	20 42 09.9
		e	20 49 27
	JAS1	iPc	20 42 11.0
	BRK	e(P)	20 42 13.0
	MHC	eP	20 42 17.0
	GCC	eP	20 42 19.1
	FRI	ePc	20 42 20.6
	SAO	e	20 42 24
	LLA	eP	20 42 24.0
	PRS	e(P)	20 42 25
	PRI	eP	20 42 29.1
USGS 20h36m51.4s 62.2N 124.2W			
h=10km mb=5.3 Ms=4.9			
Northwest Territories, Canada			
Feb 14	PCC	ePd	18 12 20.8
	PRS	ePd	18 12 20.8
	BRK	eP	18 12 22.2
	BKS	ePd	18 12 22.5
		AMP(μm)	PER(s)
	PZ	0.078	0.7
	PRI	ePd	18 12 22.9
	FHC	ePd	18 12 26.9
	FRI	eP	18 12 28.1
	JAS1	i(P)d	18 12 29.0
	ORV	iPd	18 12 29.9
	WDC	iPd	18 12 30.2
	MNA	iPd	18 12 37.6
USGS 18h01m17.9s 21.0S 178.9W			
h=610km mb=5.4			
Fiji Islands Region			
Feb 14	MNA	eP	20 07 03.4
		e	20 12 09.3
	ORV	eP	20 07 27.1
	WDC	e	20 07 34.8
USGS 20h00m25.1s 14.2N 92.1W			
h=33km mb=4.9			
Near Coast of Chiapas, Mexico			
Feb 14	SAO	iP	22 21 35.2
	LLA	iPc	22 21 37.6
	PRS	iPd	22 21 40.3
	PRI	iPd	22 21 47.1
	FRI	iPc	22 21 53.3
		iS	22 22 10.6
	BRK	e(P)	22 21 [illegible]
		eSg	22 22 16.4
	BKS	ePd	22 21 54.9
		e	22 21 56.9
		e	22 22 09.3
		e	22 22 14.5

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DATE	STA	PHASE	TIME (UTC)
		e	22 22 18.4
	JAS1	iPc	22 21 55.7
		iS	22 22 11.8
	ZSP	ePd	22 21 56.0
	ORV	e	22 22 16.2
	MNA	e	22 22 25.0
BRK 22h21m31.8s 36.8N 121.3W			
h=9km ML=3.1(2)			
15 km SE of Hollister, CA			
Feb 15	MHC	iPd	09 53 48.5
		iS	09 53 52.7
	SAO	iP	09 53 50.9
	LLA	iPd	09 53 56.3
		iS	09 54 07.3
	PCC	eP	09 53 58.1
		iS	09 54 10.9
	PRS	e(P)	09 53 58.9
		eS	09 54 09.4
	BKS	ePc	09 54 01.2
		eS	09 54 15.9
	BRK	eP	09 54 01.7
		eS	09 54 15.9
	ZSP	ePd	09 54 02.9
		eS	09 54 18.1
	JAS1	iPc	09 54 05.2
		iS	09 54 20.0
	PRI	e	09 54 08.0
	ORV	e	09 54 25.2
BRK 09h53m43.4s 37.1N 121.5W			
h=4km ML=2.5(4)			
12 km NE of Gilroy, CA			
Feb 15	MNA	iPc	21 44 17.6
		ipPd	21 46 56.3
	PRI	ePc	21 44 19.7
	LLA	e(P)	21 44 22.5
	PRS	e(P)	21 44 23.8
		epP	21 46 59.5
	JAS1	iPc	21 44 26.1
		ipPd	21 46 59.4
	MHC	ePc	21 44 31.0
		e(pP)	21 47 02
	ORV	iPc	21 44 40.7
		epP	21 47 03.7
	WDC	ePc	21 44 48.1
		ipPd	21 47 06.6
	FHC	ePc	21 45 00.0
	BRK	epP	21 47 03.1
	BKS	epP	21 47 03.8
	MIN	epP	21 47 05.1
USGS 21h37m48.6s 14.8N 91.4W			
h=136km mb=5.3			
Guatemala			
Feb 15	ORV	iPc	22 27 09.9
		iS	22 27 16.55
	MIN	iPd	22 27 15.1
		iPc	22 27 15.3
		e	22 27 20.7
		e	22 27 24.5
		iS	22 27 26.4
	WDC	iPd	22 27 16.6
		i	22 27 20.6
		eS	22 27 28.7
	ZSP	e(P)	22 27 28.5
	BRK	e(P)	22 27 29.5
	BKS	eP	22 27 30.2
		eS	22 27 52.7
	FHC	eP	22 27 32.2
		e	22 28 03.0
	PCC	e(P)	22 27 34.7
		iSg	22 27 58.9
	JAS1	eP	22 27 35.7
	MHC	eP	22 27 37.8
	SAO	eP	22 27 45.3
	LLA	e	22 27 46.3
	MNA	e(P)	22 27 51.8
		i	22 28 00.4
	FRI	e	22 27 56
	PRI	e	22 28 03
BRK 22h27m01.0s 39.6N 122.1W			
h=22km ML=3.1(8) Mo=1.0E22(2)			
22 km SW of Chico, CA			
Feb 16	PRS	eP	09 21 20.1
	PRI	eP	09 21 21.0
	LLA	ePc	09 21 21.0
	MHC	eP	09 21 21.2
	FHC	eP	09 21 22.1
	WDC	ePc	09 21 23.5
	ORV	ePc	09 21 25.2
	JAS1	iPc	09 21 26.2
	MIN	iPc	09 21 27.4
	MNA	ePc	09 21 35.9
USGS 09h09m25.5s 12.3S 167.2E			
h=284km mb=5.0			
Santa Cruz Islands			
Feb 17	BKS	iPc	00 39 36.3
		iS	00 39 40.8
	BRK	iPc	00 39 36.6
		eS	00 39 40.6
	ZSP	iPc	00 39 37.2
		i	00 39 39.7
	PCC	iPd	00 39 40.2
	MHC	iPc	00 39 41.2
		e	00 39 44.2
		eS	00 39 49.4
	GCC	iPd	00 39 45.5
		eS	00 39 56.7
	SAO	eP	00 39 49.7
	JAS1	eP	00 39 52.5
	LLA	eP	00 39 54.6
		e	00 39 58.2
	PRS	e	00 39 56.5
	PRI	e	00 40 08.6
BRK 00h39m31.1s 37.8N 121.9W			
h=10km ML=2.8(4) Mo=7.5E20(2)			
Near Danville, 30 km ESE of Berkeley, CA			
Feb 17	FHC	iPc	12 28 46.6
		i	12 28 53.2
		eS	12 29 16.3
	WDC	iPc	12 29 04.0
		eS	12 29 42.5
	MIN	e(P)	12 29 05.8
	BRK	eP	12 29 17.1
	ZSP	eP	12 29 17.1
		e	12 30 08.0
	BKS	eP	12 29 17.5
		e	12 29 21.25
		e	12 29 23.4
		e	12 29 30.0
		eS	12 30 11.2
	PCC	iPc	12 29 19.3
		eS	12 30 11.5
	MHC	eP	12 29 27.4
		eS	12 30 26.0
	SAO	eP	12 29 33.5
		eS	12 30 38.0
	JAS1	e(P)	12 29 36.5
		eS	12 30 45
	PRS	eP	12 29 38.3
		eS	12 30 47.5
	LLA	e(P)	12 29 39
		eS	12 30 49.8
	PRI	e(P)	12 29 53.4
		e(S)	12 31 04
BRK 12h28m07.1s 40.5N 127.3W			
h=5kmR ML=4.3(6)			
Off the Coast, 270 km W of Eureka, CA			
Feb 19	FHC	iPc	00 25 53.3
		iS	00 26 01.9
	WDC	iPc	00 26 08.9
	MIN	iPd	00 26 19.4
	PCC	eP	00 26 35.8
	MHC	eP	00 26 43.6
	SAO	eP	00 26 49.3
BRK 00h25m40.1s 40.7N 124.9W			
h=8km ML=4.0(1) Mo=1.0E21(1)			
Off Coast 60 km W of Eureka, CA			
Feb 19	SAO	iPd	03 01 12.7
	LLA	iPc	03 01 15.8
	PRS	eP	03 01 18.7
	GCC	eP	03 01 20.5
	MHC	ePc	03 01 20.6
		eS	03 01 29.2
	PRI	eP	03 01 25.2
	PCC	eP	03 01 28.8
	BRK	eP	03 01 31.4
	BKS	ePd	03 01 31.6
		e	03 01 33.4
		e	03 01 37.7
		eS	03 01 45.6
	JAS1	eP	03 01 31.8
		eS	03 01 49.2
	MNA	e	03 02 01.7
BRK 03h01m09.1s 36.8N 121.3W			
h=9km ML=3.1(2) Mo=1.2E21(1)			
11 km ESE of Hollister, CA			
Feb 19	SAO	iP	23 49 11.3
	LLA	iPc	23 49 15.0
	PRS	iPd	23 49 17.8
	MHC	iPd	23 49 18.8
		iS	23 49 27.0
	GCC	iPc	23 49 18.8
	PRI	e(P)	23 49 23.8
		iS	23 49 39.0
	PCC	iPc	23 49 27.0
	BRK	e(P)	23 49 29.7
	BKS	eP	23 49 29.8
		e	23 49 32.0
		eS	23 49 50.2
	FRI	e	23 49 30.5
	JAS1	iPc	23 49 30.9
		iS	23 49 49.5
	ZSP	eP	23 49 31.2
	MNA	eP	23 50 00.2
BRK 23h49m07.7s 36.8N 121.3W			
h=9km ML=3.1(4) Mo=1.7E21(2)			
10 km E of Hollister, CA			
Feb 20	SAO	iPc	00 35 11.3
	LLA	iPc	00 35 15.3
		eS	00 35 20.7
	PRS	iPd	00 35 18.1
	GCC	iPc	00 35 18.9
	MHC	iPc	00 35 19.2
	PRI	eP	00 35 25.0
		e	00 35 39.0
	PCC	eP	00 35 27.3
	JAS1	eP	00 35 31.2
		eS	00 35 47.5
	BKS	e(P)	00 35 32.0
		eS	00 35 52.7
BRK 00h35m08.0s 36.8N 121.3W			
h=6km ML=2.6(2)			
10 km E of Hollister, CA			
Feb 20	PRI	eP	09 27 40.6
	MNA	eP	09 27 40.8
	LLA	eP	09 27 41.4
	PRS	e(P)	09 27 42
	SAO	e	09 27 44
	JAS1	eP	09 27 46.0
	GCC	e(P)	09 27 47.4
	MHC	eP	09 27 47.8
	BRK	e	09 27 51
	BKS	ePc	09 27 52.5
		e	09 28 07.2
	WDC	eP	09 28 00.1
	FHC	eP	09 28 07.7
USGS 09h16m02.6s 21.1S 70.1W			
h=33km mb=5.7 Ms=5.0			
Near Coast of Northern Chile			
Feb 20	PRS	eP	12 27 51.0
	GCC	eP	12 27 51.2
	BRK	e(P)	12 27 52.0
	LLA	e(P)	12 27 53
	MHC	eP	12 27 53.0
	PRI	eP	12 27 53.0
	BKS	ePc	12 27 53.5
	FHC	e(P)	12 27 58.5
	JAS1	eP	12 27 59.0
	WDC	e(P)	12 28 01.4
	MIN	eP	12 28 03.5
	MNA	eP	12 28 07.0
USGS 12h16m41.7s 22.1S 179.6W			
h=601km mb=5.7			
South of Fiji Islands			
Feb 21	JAS1	eP	03 19 27.7
		e	03 19 41.5
	PRS	e(P)	03 19 31
	MNA	eP	03 19 34.6
		e	03 19 48.5
USGS 03h08m17.6s 41.8N 142.6E			
h=64km mb=5.1			
Hokkaido, Japan, Region			
Feb 21	PRI	eP	18 33 16.0
	MNA	eP	18 33 27.5
		e	18 34 10.2
		e	18 36 19.5
	JAS1	eP	18 33 33.5
		i	18 36 25.6
	MIN	eP	18 34 09.0
	BKS	eLq	18 36 00
		eLr	18 36 30
USGS 18h31m18.5s 30.7N 113.7W			
h=10km mb=4.5			
Gulf of California			
Feb 23	PRS	eP	18 41 22.7
	BKS	eP	18 41 23.1
		e	18 41 48.8
		eLq	19 07 33
		eLr	19 08 00
		AMP(μm)	PER(s)
		PZ 0.036	0.9
	JAS1	eP	18 41 28.3
	MNA	eP	18 41 38.5
USGS 18h28m52.2s 14.4S 166.7E			
h=33km mb=5.4 Ms=5.0			
Vanuatu Islands			
Feb 24	GCC	eP	00 31 56.1
	PRS	eP	00 31 57.2
	BRK	eP	00 31 57.3
	SAO	eP	00 31 57.6
	MHC	eP	00 31 58.4
	BKS	ePc	00 31 58.8
		e	00 32 03.2
		eS	00 42 15
		e(PS)	00 43 06
		eLq	00 52 47
		eLr	00 56 55
		AMP(μm)	PER(s)
		PZ 0.11	1.2
	PRI	eP	00 31 59.7
	JAS1	eP	00 32 02.5
		i	00 32 04.4
	WDC	i	00 32 03.7
	MIN	eP	00 32 05.6
	MNA	ePc	00 32 12.6
BRK mb=5.8 h=33km Distance=81°			
USGS 00h19m41.7s 16.9S 174.3E			
h=10km mb=5.7 Ms=5.7			
Fiji Islands Region			
Feb 24	BRK	e	19 54 43
	BKS	eP	19 54 43.3
		i	19 54 49
		e	19 55 21
		eS	20 05 19
		e	20 05 32
		ePS	20 06 16
		e	20 07 18
		eSS	20 11 18
		eLq	20 18 04
		eLr	20 20 06
		AMP(μm)	PER(s)
		PZ 0.055	1.4
		LZ 5.5	20.
		LN 2.5	20.
		LE 4.3	20.
	GCC	e	19 54 44
	MHC	eP	19 54 44.2
	PRS	e	19 54 44.3
	PRI	eP	19 54 45.3
	WDC	e	19 54 45.9
		e	19 58 45.9
	LLA	e	19 54 46.6
	JAS1	eP	19 54 47
		ePP	19 58 17.6
	FRI	e	19 54 51
	MNA	ePd	19 54 56.2
BRK Ms=5.4 Distance=88°			
USGS 19h41m46.4s 8.9S 156.8E			
h=10km mb=5.7 Ms=6.0			
Solomon Islands			
Feb 26	LLA	iPd	18 27 53.3
	SAO	iPd	18 28 00.7
	PRI	ePc	18 28 01.7
		i	18 28 04.7
	PRS	eP	18 28 01.7
		e	18 28 07.3
	FRI	e(P)	18 28 05.6
	MHC	ePc	18 28 07.4
		e(S)	18 28 20.5
	GCC	ePc	18 28 08.8
	JAS1	iPd	18 28 11.5
		iS	18 28 27.0
	BKS	ePrd	18 28 17.3
		ePg	18 28 24.3
		e(S)	18 28 46.6
	PCC	eP	18 28 18.0
	MNA	e	18 28 37.5
BRK 18h27m49.6s 36.7N 120.8W			
h=4km ML=2.6(4)			
40 km SSE of Los Banos, CA			
Feb 27	WDC	e(P)	06 36 18.7
	MIN	e(P)	06 36 22.4
	ORV	e	06 36 24.6
	BKS	e(P)	06 36 25.7
		i	06 36 27.7
		AMP(μm)	PER(s)
		PZ 0.038	1.4
	JAS1	ePc	06 36 32.4
	PRS	eP	06 36 34.0
	LLA	eP	06 36 34.7
	MNA	eP	06 36 38.5
USGS 06h23m13.7s 24.0N 122.2E			
h=44km mb=5.8 Ms=5.5			
Taiwan Region			
Feb 28	ARC	iP	10 31 46.7
		iS	10 31 53.9
	FHC	iPc	10 31 47.5
		i	10 31 54.5
		iS	10 31 55.5
	WDC	iPc	10 32 02.4
		i	10 32 22.3
	MIN	iPc	10 32 12.5
		i	10 32 39.5
	BRK	e	10 32 25.4
	PCC	e	10 32 28.2
	SAO	ePd	10 32 32.0
	MHC	e	10 32 35.7
	GCC	e	10 32 36.3
	ORV	e	10 32 45.3
		iSg	10 32 47.9
BRK 10h31m35.8s 40.6N 124.7W			
h=14km ML=3.5(4) Mo=5.0E20(2)			
Off Coast 50 km SW of Eureka, CA			
Feb 28	MIN	ePd	10 43 07.9
	BRK	eP	10 43 09
	ORV	eP	10 43 09.1
	BKS	e(P)	10 43 10.2
		AMP(μm)	PER(s)
		PZ 0.062	1.3
	MHC	eP	10 43 13.9
	PRS	ePd	10 43 16.7
	JAS1	ePd	10 43 17.3
	LLA	eP	10 43 17.9
	PRI	eP	10 43 20.4
	FRI	iPd	10 43 21.8
	MNA	eP	10 43 25.2
USGS 10h31m12.9s 22.1N 143.9E			
h=112km mb=4.9			
Volcano Islands Region			
Mar 2	WDC	iPc	03 24 00.2
	MIN	eP	03 24 01.8
		e	03 24 [illegible]
	ORV	iPc	03 24 [illegible]
		i	03 24 33.9
	JAS1	iPc	03 24 18.8
	MNA	eP	03 24 25.5
	FRI	iPc	03 24 43.6
		i	03 24 54.5
USGS 03h14m41.8s 51[illegible]N 156[illegible]E			

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DATE	STA	PHASE	TIME (UTC)
h=117km mb=5.6			
Kamchatka			
Mar 2	WDC	eP	05 47 51.8
	MIN	eP	05 47 59.9
	BKS	iPc	05 48 9.3
		iS	05 54 32
		eLr	06 00
			AMP(μm) PER(s)
		PZ	0.057 1.0
		LZ	8.6 20.
		LN	3.6 20.
		LE	6.8 20.
	ORV	eP	05 48 03.7
		i	05 48 08.8
	MHC	e	05 48 04.5
	GCC	e	05 48 13.1
	JAS1	eP	05 48 17.9
	PRS	e	05 48 20.4
	LLA	e	05 48 20.9
	PRI	eP	05 48 26.1
	FRI	i	05 48 26.5
		i	05 48 34.4
	MNA	eP	05 48 27.1
BRK Ms=5.6 Distance=44°			
USGS 05h40m12.1s 50.8N 179.2E			
h=33km mb=5.4 Ms=5.3			
Rat Islands, Aleutian Islands			
Mar 2	WDC	iPd	07 20 34.8
	MIN	eP	07 20 38.7
	ORV	eP	07 20 42.8
	BRK	eP	07 20 46.1
	BKS	ePc	07 20 46.7
			AMP(μm) PER(s)
		PZ	0.019 0.7
	GCC	eP	07 20 49.4
	JAS1	eP	07 20 52.1
	MNA	eP	07 21 02.2
USGS 07h09m27.5s 38.5N 142.3E			
h=39km mb=5.6 Ms=5.7			
Near East Coast of Honshu, Japan			
Mar 2	WDC	iPc	20 49 47.3
	ORV	eP	20 49 56.8
	JAS1	ePc	20 50 11.2
	PRI	e	20 50 19.0
USGS 20h42m25.8s 51.3N 176.7W			
h=33km mb=5.1 Ms=4.4			
Andreanof Islands, Aleutian Islands			
Mar 3	SAO	iPd	14 45 23.5
	LLA	iPc	14 45 26.7
	PRS	iP	14 45 29.7
	MHC	iP	14 45 31.2
	GCC	iPc	14 45 32.0
	PRI	iPc	14 45 36.2
		iS	14 45 48.0
	PCC	e	14 45 38.9
	BKS	eP	14 45 42.2
	BRK	eP	14 45 42.3
	FRI	iPd	14 45 42.6
	JAS1	iPc	14 45 42.9
		iS	14 45 59.9
	ZSP	eP	14 45 43.9
	ORV	eP	14 46 03.9
BRK 14h45m20.0s 36.8N 121.3W			
h=6km ML=2.7(3)			
12 km ESE of Hollister, CA			
Mar 4	MNA	ePc	07 34 36.8
	LLA	ePc	07 34 43.8
	PRS	eP	07 34 44.5
	JAS1	eP	07 34 45.7
	MHC	ePc	07 34 51.2
	GCC	ePc	07 34 51.4
	BRK	eP	07 34 56.3
	BKS	ePd	07 34 56.7
			AMP(μm) PER(s)
		PZ	0.014 0.7
	ORV	iPc	07 35 00.0
	FHC	eP	07 35 17.5
USGS 07h27m24.3s 11.8N 85.8W			
h=186km mb=4.5			
Nicaragua			
Mar 4	FHC	eP	08 53 34.0
		ePcP	08 56 26.4
	WDC	ePd	08 53 42.5
		ePcP	08 56 28.3
	MIN	ePd	08 53 48.4
		ePcP	08 56 30
	ORV	ePd	08 53 52.4
		ePcP	08 56 30.5
		e	08 56 35.5
	BRK	eP	08 53 57.4
	BKS	eP	08 53 58.4
		eS	08 59 34
		eLq	09 02 00
			AMP(μm) PER(s)
		PZ	0.075 1.2
		LZ	2.1 20.
		LN	3.8 20.
		LE	1.8 20.
	GCC	ePd	08 54 03.3
	MHC	ePd	08 54 03.9
		ePcP	08 56 36
	SAO	eP	08 54 07
	JAS1	iPd	08 54 07.9
		ePcP	08 56 36.7
		i	08 56 40.5
	PRS	ePd	08 54 10.7
	LLA	ePd	08 54 11.9
	PRI	eP	08 54 16
		ePcP	08 56 40.3
		e	08 56 44.7
	FRI	e(P)	08 54 16.3
	MNA	ePd	08 54 17.2
		ePcP	08 56 40.7
		e	08 56 47
BRK Ms=5.2 Distance=36°			
USGS 08h47m14.6s 51.6N 166.9W			
h=33km mb=5.6 Ms=4.6			
Aleutian Islands Region			
Mar 4	SAO	iPc	19 54 56.8
	LLA	iPc	19 54 59.3
	PRS	iPd	19 55 01.9
	GCC	iPc	19 55 04.9
	MHC	iPc	19 55 05.6
	PRI	iPc	19 55 08.6
	PCC	iPd	19 55 13.7
	BKS	eP	19 55 16.2
	JAS1	iPd	19 55 17.1
		eS	19 55 33.3
BRK 19h54m53.3s 36.8N 121.3W			
h=9km ML=2.7(4)			
14 km SE of Hollister, CA			
Mar 5	GCC	ePc	08 36 40.5
	PRS	ePc	08 36 40.5
	PCC	eP	08 36 40.8
	PRI	ePc	08 36 42.4
	BRK	ePc	08 36 42.4
	BKS	eP	08 36 42.4
		AMP(μm)	PER(s)
	PZ	0.062	1.1
MHC	ePc	08 36 42.7	
FHC	eP	08 36 46.8	
JAS1	iPc	08 36 47.7	
ORV	ePc	08 36 49.2	
WDC	iPc	08 36 49.6	
MIN	eP	08 36 51.0	
MNA	ePc	08 36 55.8	
USGS 08h25m08.8s 26.6S 178.3E			
h=613km mb=5.3			
South of Fiji Islands			
Mar 5	PCC	iPc	15 59 12.3
	GCC	iPc	15 59 12.7
	BKS	iPc	15 59 13.5
			AMP(μm) PER(s)
	PZ	1.1	1.0
PRS	iPc	15 59 13.7	
BRK	iPc	15 59 13.8	
	ePP	16 03 31	
SAO	iPc	15 59 13.9	
ZSP	iPc	15 59 14.2	
MHC	ePc	15 59 14.5	
	ePP	16 03 32	
FHC	iPc	15 59 15.4	
LLA	iPc	15 59 15.6	
PRI	ePc	15 59 16.0	
WDC	iPc	15 59 18.5	
	e	15 59 33.5	
	e(PP)	16 03 36	
ORV	iPc	15 59 19.4	
	ePP	16 03 42.0	
JAS1	iPc	15 59 19.6	
	e	15 59 46.5	
	ePP	16 03 38.0	
	e	16 03 38.0	
	e	16 25 21	
FRI	ePc	15 59 20.4	
MIN	ePc	15 59 20.9	
	ePP	16 03 40.4	
MNA	e	15 59 59.7	
	ePP	16 03 54.9	
	e	16 25 20	
USGS 15h47m06.8s 18.8S 169.6E			
h=286km mb=5.6			
Vanuatu Islands			
Mar 6	FHC	e(Pdif)	00 19 19.2
	WDC	ePdifc	00 19 21.2
		ePKKP	00 35 41.5
		ePKPPKP	00 43 55
	MIN	ePdif	00 19 22.0
	ORV	ePdifc	00 19 23.2
		ePKKP	00 35 40.0
		ePKPPKP	00 43 57
	MNA	ePdifc	00 19 31.8
		e(PKKP)	00 35 40
	BKS	ePdif	00 19 32
		ePP	00 23 50
		iPS	00 32 29
		i	00 33 00
		iSS	00 38 26
		eLq	00 46 48
		eLr	00 55 20
			AMP(μm) PER(s)
		LZ	13 20.
		LN	14 20.
		LE	12 20.
	JAS1	ePdif	00 19 32.8
		ePKKP	00 35 35.0
		ePKPPKP	00 43 50
	FRI	e(Pdif)	00 19 34.8
	MHC	e	00 19 35.0
	PRI	ePdifc	00 19 38.1
BRK Ms=6.6 Distance=101°			
USGS 00h05m38.4s 40.4N 51.6E			
h=33km mb=6.2 Ms=6.3			
Caspian Sea			
Mar 6	WDC	ePc	03 44 30.6
	MIN	ePc	03 44 36.0
	ORV	e(P)	03 44 41
	JAS1	e(P)	03 44 58.2
USGS 03h39m01.3s 56.4N 153.7W			
h=33km mb=4.3			
Kodiak Island Region			
Mar 6	FHC	ePd	03 46 56.5
	WDC	iPd	03 47 04.3
	MIN	ePd	03 47 09.4
	ORV	eP	03 47 15.1
	BKS	e	03 47 28.7
	JAS1	iPd	03 47 31.8
	PRS	e	03 47 38.5
	LLA	e	03 47 38.6
	MNA	iPd	03 47 38.9
	PRI	eP	03 47 43.5
USGS 03h41m36.4s 56.3N 153.5W			
h=33km mb=5.1 Ms=4.8			
Kodiak Island Region			
Mar 6	FHC	e(P)	04 13 38.5
	WDC	eP	04 13 46.4
	MIN	eP	04 13 52.0
	ORV	eP	04 13 57.1
	BKS	ePc	04 14 11.3
		e	04 19 10
		eLr	04 21 18
			AMP(μm) PER(s)
		PZ	0.063 1.2
		LZ	3.2 20.
		LN	3.6 20.
		LE	3.0 20.
	MHC	e	04 14 12
	JAS1	eP	04 14 14.1
	MNA	eP	04 14 21.0
	PRI	e	04 14 27
BRK Ms=4.9 Distance=28°			
USGS 04h08m18.8s 56.3N 153.5W			
h=33km mb=5.3 Ms=5.0			
Kodiak Island Region			
Mar 6	BKS	e(P)	12 44 8.8
	BRK	e(P)	12 44 07.6
	WDC	iPc	12 44 09.2
	MHC	e(P)	12 44 10
	PRS	e(P)	12 44 10
	ORV	ePc	12 44 11.4
	JAS1	ePc	12 44 14.3
	MNA	ePc	12 44 23.3
USGS 12h31m24.1s 7.0S 155.8E			
h=71km mb=5.9			
Solomon Islands			
Mar 6	GCC	eP	12 47 25.7
	BKS	iPc	12 47 26.2
		e	12 54 49
		eS	12 54 54
		e	12 56 09
		eSKS	12 58 06
		ePPS	12 59 57
		eSS	13 04 36
		eLq	13 11 17
			AMP(μm) PER(s)
		PZ	0.092 1.1
		LZ	2.9 20.
		LN	1.3 20.
		LE	1.6 20.
	PRS	eP	12 47 26.3
	SAO	eP	12 47 26.5
	BRK	ePc	12 47 26.7
	MHC	iPc	12 47 27.9
	LLA	e(P)	12 47 28.3
	PRI	iPc	12 47 28.6
	FHC	ePc	12 47 28.9
	WDC	iPc	12 47 32.3
		epP	12 48 04
		e	13 10 03
	JAS1	iPc	12 47 32.8
		epP	12 48 05.0
		e	13 09 58
	ORV	iPc	12 47 33.0
		epP	12 48 05.0
	MIN	iPc	12 47 34.3
	MNA	iPc	12 47 41.5
BRK Ms=5.8 Distance=89°			
USGS 12h34m56.0s 21.2S 170.0E			
h=124km mb=5.8			
Loyalty Islands Region			
Mar 6	MNA	iPc	20 17 19.1
		eS	20 17 39.7
	FRI	eP	20 17 27.5
	JAS1	eP	20 17 35.5
		i	20 17 39.2
		e(S)	20 18 11.0
	LLA	eP	20 17 41.3
		e	20 17 44.3
	PRI	eP	20 17 42.9
		e(S)	20 18 22.5
	MHC	e(P)	20 17 48.0
		e	20 17 51.3
		e	20 17 57.0
	SAO	eP	20 17 49.0
	PRS	e	20 17 49.3
	PCC	e	20 17 58.5
	BKS	e(P)	20 17 59.3
	ORV	ePc	20 18 05.7
BRK 20h16m53.2s 37.2N 117.3W			
h=12km ML=3.9(4)			
100 km S of Tonapah, Nevada			
Mar 7	FHC	eP	02 59 37.0
		e	03 00 02.9
	WDC	ePc	02 59 40.7
		i	03 00 07.4
		e	03 03 50.7
		e	03 10 03.5
	BKS	eP	02 59 40.8
		e	02 59 58
		ipP	03 00 07.10
		e	03 00 16
		esP	03 00 21.5
		i	03 01 18.0
		ePP	03 03 06.5
		epPP	03 03 24.8
		eSKS	03 10 03
		eS	03 10 25
		eSP	03 11 22
		ePS	03 11 30
		esPS	03 12 02
		eSS	03 16 14
		eSSS	03 20 06
		isSSS	03 20 36
		eG	03 22 58
		eLq	03 23 12
		eLr	03 27 14
			AMP(μm) PER(s)
		PZ	0.036 0.9
		LZ	8.9 20.
		LN	1.5 20.
		LE	7.1 20.
	MHC	eP	02 59 42.5
	MIN	eP	02 59 43.1
	ORV	ePc	02 59 43.4
		i	03 00 10.3
		i	03 02 17.1
		e	03 10 07.3
		ePKPPKP	03 25 17.0
	PRS	eP	02 59 43.4
	LLA	eP	02 59 44.8
	PRI	e	02 59 46.4
	JAS1	ePc	02 59 47.8
		i	03 00 13.3
		i	03 02 26.0
		i	03 03 24.5
		e	03 10 08.6
		ePKPPKP	03 25 17.1
	MNA	eP	02 59 55.7
		i	03 00 21.2
		e	03 10 22.5
	BRK	e	03 00 08.0
BRK Ms=6.1 Distance=89°			
USGS 02h46m52.0s 5.0S 151.7E			
h=115km mb=6.0			
New Britain Region			
Mar 7	GCC	e	09 06 00.2
	PRS	e	09 06 00.6
	BKS	ePc	09 06 02.0
	MHC	eP	09 06 02.5
	PRI	eP	09 06 02.6
	JAS1	eP	09 06 08.2
	WDC	eP	09 06 08.6
	ORV	eP	09 06 09.4
	MNA	eP	09 06 18.0
USGS 08h55m10.5s 18.0S 178.5W			
h=605km mb=4.6			
Fiji Islands Region			
Mar 7	ARC	iP	22 26 46.7
		iS	22 26 56.2
		iS	22 26 56.7
	FHC	iP	22 26 47.0
		iS	22 26 53.9
	WDC	iP	22 26 59.7
		iS	22 27 22.2
	MIN	eP	22 27 09.0
	ORV	iP	22 27 12.3
BRK 22h26m33.7s 40.3N 124.5W			
h=2km ML=3.8(3) Mo=1.7E21(2)			
Off Coast 13 km W of Cape Mendocino, CA			
Mar 9	PCC	iPd	01 28 16.7
	BRK	iPc	01 28 18.6
		iS	01 28 22.3
	BKS	iPc	01 28 19.0
		iS	01 28 23.3
	ZSP	iP	01 28 20.1
		iS	01 28 33.9
	MHC	iPc	01 28 [illegible]
	GCC	iPc	01 28 27.4
		iS	01 28 36.6
	SAO	eP	01 28 34.3
	LLA	eP	01 28 40.3

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DATE	STA	PHASE	TIME (UTC)
	JAS1	eP	01 28 41.2
BRK 01h28m13.0s 37.7N 122.5W			
h=7km ML=3.0(4) Mo=4.8E20(2)			
Daly City, CA			
Mar 9	FHC	eP	12 36 30.5
	WDC	iPd	12 36 35.9
	MIN	eP	12 36 39.7
	BRK	eP	12 36 44.4
	BKS	iPc	12 36 44.5
		AMP(μm)	PER(s)
		PZ 0.080	0.9
	GCC	eP	12 36 47.8
	MHC	eP	12 36 48.6
	JAS1	iPd	12 36 51.5
	PRS	eP	12 36 52.4
	LLA	eP	12 36 53.2
	PRI	eP	12 36 56.1
	FRI	iPd	12 36 56.6
	MNA	iPd	12 36 59.0
USGS 12h25m06.4s 32.4N 141.1E			
h=77km mb=5.2			
South of Honshu, Japan			
Mar 9	FHC	eP	13 55 55.6
	WDC	e	13 56 02.5
	MIN	eP	13 56 08.1
	BKS	eP	13 56 25.3
		iS	14 01 57
		e	14 02 31
		e	14 02 52
		iLq	14 04 11
		eLr	14 05 28
		AMP(μm)	PER(s)
		PZ 0.12	1.4
		LZ 6.4	20.
		LN 5.0	20.
		LE 5.4	20.
	JAS1	ePc	13 56 28.5
	MNA	eP	13 56 36.0
		i	13 56 44.7
BRK Ms=5.5 Distance=37°			
USGS 13h49m28.2s 54.3N 167.9W			
h=33km mb=5.2 Ms=5.5			
Fox Islands, Aleutian Islands			
Mar 10	PRI	eP	15 33 46.6
		e	15 34 25.0
	PRS	iPc	15 33 52.0
	LLA	iPc	15 33 54.1
	FRI	eP	15 33 56.9
	SAO	iP	15 33 57.4
	GCC	eP	15 34 03.2
	MHC	eP	15 34 06.5
		eS	15 34 42.5
	JAS1	iPc	15 34 11.0
		eS	15 34 51.5
	PCC	eP	15 34 11.6
	BRK	eP	15 34 14.7
	BKS	iPn	15 34 14.9
		iPg	15 34 34.6
	ZSP	iPc	15 34 15.8
		eS	15 34 42.3
	MNA	e(P)	15 34 22
	MIN	eP	15 34 46.8
BRK ML=4.4(4)			
PAS 15h33m16.0s 34.4N 119.8W			
h=24km ML=4.0			
Along Coast 10 km WSW of Santa Barbara, CA			
Mar 10	MNA	ePd	23 13 29.9

DATE	STA	PHASE	TIME (UTC)
Mar 11	ARC	eP	00 05 20.6
		iS	00 05 29.0
	FHC	iPd	00 05 20.7
		iS	00 05 28.0
	WDC	iPc	00 05 32.7
		iS	00 05 49.2
	MIN	iPc	00 05 42.1
		i	00 06 07.8
	ORV	iP	00 05 44.7
	PCC	eP	00 05 56.4
	MHC	ePc	00 06 03.5
	JAS1	iPd	00 06 08.4
		i	00 06 53.0
BRK 00h05m09.9s 40.3N 124.4W			
h=22km ML=3.6(4) Mo=1.7E21(2)			
Along Coast 2 km W of Cape Mendocino, CA			
Mar 11	FHC	ePc	07 15 42.4
	WDC	e(P)	07 15 56.3
	JAS1	e	07 16 43
USGS 07h14m59.5s 41.7N 127.3W			
h=10km mb=4.0			
Off Coast of Northern California			
Mar 11	ARC	eP	15 34 57.6
		iS	15 35 11.1
	FHC	iPc	15 34 58.3
		iS	15 35 12.5
	WDC	iPc	15 35 13.2
		iS	15 35 39.5
	MIN	eP	15 35 23.1
	BRK	eP	15 35 31.6
	PCC	ePc	15 35 35.0
	MHC	eP	15 35 41.7
	JAS1	eP	15 35 48.0
	SAO	e(P)	15 35 48.0
BRK 15h34m38.3s 40.4N 125.4W			
h=12km ML=3.9(4) Mo=1.8E21(2)			
Off Coast 110 km SW of Eureka, CA			
Mar 11	WDC	eP	22 23 33.0
	BRK	e	22 23 36
	MHC	e(P)	22 23 40.0
	PRS	e(P)	22 23 42.2
	PRI	e(P)	22 23 45.5
	MNA	eP	22 23 51.4
USGS 22h11m17.6s 13.7N 144.9E			
h=121km mb=5.0			
Mariana Islands			
Mar 12	MNA	e(P)	14 17 59.3
USGS 14h06m23.6s 15.1S 173.3W			
h=33km mb=5.0 Ms=4.7			
Tonga Islands			
Mar 12	PRI	ePd	22 16 01.0
	MNA	ePd	22 16 01.3
	LLA	eP	22 16 03.6
	PRS	ePd	22 16 04.1
	JAS1	eP	22 16 06.2
	GCC	ePd	22 16 08.4
	MHC	ePd	22 16 08.6
	MIN	e(P)	22 16 17.1
	WDC	eP	22 16 20.2
	FHC	eP	22 16 27.3
USGS 22h04m19.8s 24.1S 66.8W			
h=206km mb=5.3			
Salta Province, Argentina			
Mar 13	MHC	e(P)	05 49 17.0

DATE	STA	PHASE	TIME (UTC)
	BKS	eP	05 49 17.0
		e	05 49 35.0
		ePPS	06 01 16
		e	06 01 52
		eG	06 12 38
		eLR	06 16 16
		e	06 16 20
		AMP(μm)	PER(s)
		LZ 6.4	20.
		LN 2.1	20.
		LE 5.7	20.
		LZ 8.2	20.
		LNE 4.5	20.
		LNW 3.0	20.
	MIN	e	05 49 19
	JAS1	eP	05 49 21.5
		e	05 53 03
	MNA	ePd	05 49 30.4
		e	05 53 15
	WDC	e	05 52 49
BRK Ms=6.0 Distance=88°			
USGS 05h36m28.8s 7.1S 155.6E			
h=65km mb=5.7			
Solomon Islands			
Mar 13	PRI	iPd	08 37 06.7
	LLA	eP	08 37 11.5
	PRS	eP	08 37 15.7
	FRI	iPd	08 37 15.9
	SAO	eP	08 37 18.9
	GCC	ePd	08 37 25.9
	MHC	eP	08 37 26.1
	JAS1	iPd	08 37 28.9
		iS	08 37 49.4
	PCC	e	08 37 30
	BKS	e	08 37 40
	MNA	e	08 37 50.4
		eS	08 38 26.2
BRK 08h37m01.2s 36.3N 120.4W			
h=8km ML=2.6(2)			
15 km W of Coalinga, CA			
Mar 14	FHC	eP	08 52 29.9
	WDC	iPc	08 52 37.0
	MIN	ePc	08 52 41.1
	ORV	eP	08 52 44.0
	BRK	eP	08 52 48.2
	BKS	ePc	08 52 48.6
		AMP(μm)	PER(s)
		PZ 0.088	0.8
	GCC	ePc	08 52 52.5
	MHC	ePc	08 52 53.0
	SAO	e(P)	08 52 54
	JAS1	iPd	08 52 55.6
		i	08 53 02.0
	PRS	ePc	08 52 58.0
	LLA	ePc	08 52 58.7
	FRI	e(P)	08 53 02
	PRI	ePc	08 53 02.1
	MNA	iPc	08 53 03.0
USGS 08h42m15.2s 44.0N 147.6E			
h=82km mb=5.7			
Kuril Islands			
Mar 14	FHC	ePc	11 34 13.3
	WDC	ePc	11 34 20.8
	MIN	eP	11 34 26.3
	ORV	e(P)	11 34 30.7
	BRK	eP	11 34 35.4
	BKS	ePc	11 34 36.4
		AMP(μm)	PER(s)
		PZ 0.057	1.0

DATE	STA	PHASE	TIME (UTC)
	GCC	e(P)	11 34 41.0
	MHC	ePc	11 34 41.6
	JAS1	ePc	11 34 44.5
		i	11 34 49.7
		e	11 36 25
	PRS	ePc	11 34 48.1
	LLA	eP	11 34 49.8
	MNA	ePc	11 34 52.9
	PRI	eP	11 34 53.0
USGS 11h27m08.2s 52.5N 179.1W			
h=221km mb=4.8			
Andreanof Islands, Aleutian Islands			
Mar 14	BKS	ePc	17 08 20
		eSN	17 19 04
		eLR	17 35 20
		AMP(μm)	PER(s)
		PZ 0.080	0.9
		LZ 20	20.
		LN 13	20.
		LE 8.9	20.
	PRS	ePd	17 08 20.4
	SAO	e(P)	17 08 21.2
	PRI	eP	17 08 21.2
	GCC	eP	17 08 22.3
	MHC	eP	17 08 22.5
	BRK	eP	17 08 22.8
		eS	17 18 19
		e	17 24 50
		eLr	17 35 20
	LLA	eP	17 08 23.2
	JAS1	eP	17 08 28.1
	FHC	eP	17 08 28.9
	WDC	ePd	17 08 31.4
	MIN	ePd	17 08 32.7
	MNA	ePd	17 08 36.4
BRK Ms=6.4 Distance=87°			
USGS 16h55m53.0s 30.1S 176.6W			
h=42km mb=5.4 Ms=6.1			
Kermadec Islands Region			
Mar 15	FRI	e	11 40 56.4
	MNA	eP	11 40 57.4
	PRI	eP	11 40 58.2
	LLA	eP	11 41 00.5
		ipP	11 41 59.3
	PRS	eP	11 41 01.0
	JAS1	eP	11 41 02.4
		ipP	11 42 02.0
	SAO	e	11 41 03.4
	MHC	e	11 41 05.9
	BRK	eP	11 41 09.8
	ORV	iP	11 41 13.3
		ipP	11 42 09.3
	MIN	eP	11 41 14.1
	WDC	eP	11 41 17.6
	FHC	eP	11 41 25.4
	BKS	iSE	11 50 10
USGS 11h29m44.4s 18.9S 67.4W			
h=243km mb=5.6			
Bolivia			
Mar 15	FRI	e	18 50 53.5
	MNA	ePKPc	18 50 54.8
	PRS	e	18 50 55.1
	LLA	e	18 50 55.2
	JAS1	iPKP	18 50 56.2
	MHC	ePKP	18 50 56.8
	PCC	e	18 50 57.4
	BRK	ePKP	18 50 57.9
	ORV	i	18 50 58.2
	BKS	ePKP	18 50 58.3

DATE	STA	PHASE	TIME (UTC)
	MIN	ePKP	18 50 59.5
	WDC	ePKPc	18 51 01.1
USGS 18h32m10.8s 55.9S 27.4W			
h=89km mb=5.9			
South Sandwich Islands Region			
Mar 17	WDC	eP	09 29 36.5
	MIN	eP	09 29 38.7
	ORV	ePc	09 29 40.8
		e	09 31 21.6
	BRK	eP	09 29 42.6
	BKS	eP	09 29 43.2
	MHC	e	09 29 46.7
	GCC	e	09 29 47.9
	JAS1	eP	09 29 49.0
	PRS	e	09 29 50.0
	LLA	eP	09 29 51.0
	MNA	eP	09 29 56.5
		e	09 31 37.7
USGS 09h18m25.3s 27.4N 139.9E			
h=476km mb=5.5			
Bonin Islands Region			
Mar 19	FHC	eP	08 51 16.7
	MNA	ePd	08 51 28.4
	PRI	eP	08 51 32.8
	WDC	ePc	08 51 33.4
	MIN	eP	08 51 41.3
	ORV	eP	08 51 49.6
	PCC	e	08 52 02
	JAS1	ePc	08 52 14.3
		e	08 52 45.5
		eLr	08 54 46
	FRI	e	08 52 29
	BKS	Lq	08 53 32
		Lr	08 54 00
USGS 08h50m07.7s 43.9N 128.4W			
h=10km mb=4.8 Ms=4.7			
Off Coast of Oregon			
Mar 19	FRI	iPc	09 27 57.0
		eS	09 28 09.9
	MNA	iPd	09 27 58.1
		iS	09 28 11.6
	JAS1	iPc	09 28 05.7
		iS	09 28 24.9
	LLA	ePc	09 28 14.3
	PRI	eP	09 28 15.2
		eS	09 28 45.0
	SAO	eP	09 28 19.0
	PRS	ePc	09 28 20.4
	MHC	iPc	09 28 20.7
	GCC	e	09 28 23.7
	PCC	eP	09 28 27.2
	ORV	e	09 28 31
	MIN	e	09 28 58.1
BRK 09h27m39.1s 37.5N 118.6W			
h=10km ML=3.4(5)			
22 km NW of Bishop, CA			
Mar 19	WDC	eP	21 40 41.2
	ORV	eP	21 40 45.9
	MNA	eP	21 41 00.2
USGS 21h28m01.9s 12.4N 141.8E			
h=43km mb=5.4 Ms=5.0			
South of Mariana Islands			
Mar 20	MHC	e	11 52 57.8
	ORV	eP	11 53 02.5
	JAS1	iPd	11 53 03.2
	MNA	e	11 53 12.2
USGS 11h40m17.3s 17.4S 167.2E			

DATE	STA	PHASE	TIME (UTC)
h=24km mb=4.7			
Vanuatu Islands			
Mar 20	FHC	e(P)	19 46 36.8
	WDC	e(P)	19 46 45.4
	MIN	e	19 46 51
	ORV	e(P)	19 46 55.0
	JAS1	e(P)	19 47 11.0
	MHC	e	19 47 14.5
	MNA	e(P)	19 47 18.2
	LLA	e	19 47 18.6
	PRS	e	19 47 21.0
	PRI	e	19 47 26
	BKS	eLq	19 55 44
		AMP(μm)	PER(s)
		LZ 0.0	20.
		LN 1.1	20.
		LE 0.71	20.
USGS 19h40m08.9s 54.2N 168.2W			
h=33km mb=4.8 Ms=4.3			
Fox Islands, Aleutian Islands			
Mar 20	FHC	iPc	22 41 43.6
		iS	22 41 48.6
	ARC	iP	22 41 43.9
		iS	22 41 48.0
	WDC	iPd	22 41 55.2
		i	22 41 55.5
		i	22 42 02.5
		iS	22 42 07.0
	MIN	iPc	22 42 06.7
		iS	22 42 26.8
	ORV	eP	22 42 12.5
		i(S)	22 42 39.8
BRK 22h41m38.0s 40.9N 123.7W			
h=6km ML=3.8(3) Mo=2.6E21(1)			
Near Willow Creek, 34 km ENE of Arcata, CA			
Mar 20	FHC	iPc	22 43 05.5
		iS	22 43 10.4
	ARC	iP	22 43 05.7
		iS	22 43 10.2
	WDC	ePc	22 43 17.4
		i	22 43 17.5
		iS	22 43 31.0
	MIN	eP	22 43 28.4
		iS	22 43 49.4
	ORV	e(P)	22 43 34.8
BRK 22h42m59.8s 41.0N 123.7W			
h=5kmR ML=3.4(3) Mo=7.3E20(1)			
Near Willow Creek, 35 km ENE of Arcata, CA			
Mar 20	FHC	iP	22 43 18.5
		iS	22 43 22.7
	ARC	iP	22 43 19.8
		iS	22 43 22.7
	WDC	iP	22 43 29.0
		iS	22 43 42.8
	MIN	e	22 43 39.4
		iS	22 44 01.2
BRK 22h43m12.7s 41.0N 123.7W			
h=16km ML=3.3(3) Mo=3.7E20(1)			
Near Willow Creek. 34 km ENE of Arcata, CA			
Mar 21	LLA	iPd	01 23 53.9
	SAO	iPc	01 23 55.6
	MHC	iPc	01 24 00.4
		iS	01 24 10.6
	PRS	iPd	01 24 00.6

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DATE	STA	PHASE	TIME (UTC)
		i	01 24 02.2
	GCC	iPc	01 24 02.6
	PRI	ePd	01 24 04.6
	FRI	i	01 24 06.2
	JAS1	iPd	01 24 07.4
		iS	01 24 22.0
	PCC	e(P)	01 24 09.3
	BRK	ePn	01 24 10.5
		eP*	01 24 12.3
	BKS	ePc	01 24 11.8
	ZSP	ePc	01 24 12.5
	ORV	iP*d	01 24 36.0
	MNA	eP*c	01 24 36.5
		iS	01 25 12.4
	MIN	e	01 24 47.5
BRK 01h23m47.5s 36.9N 121.0W			
h=4km ML=3.0(4) Mo=7.3E20(2)			
18 km SW of Los Banos, CA			
Mar 21	ARC	iP	06 37 43.4
		iS	06 37 54.8
	FHC	iPc	06 37 44.8
		iS	06 37 57.7
	WDC	iPc	06 38 00.8
		iS	06 38 27.0
	MIN	ePc	06 38 11.2
	ORV	iPc	06 38 16.0
		iS	06 38 52.6
	BKS	ePn	06 38 25.6
		e(P*)	06 38 30.2
	BRK	ePd	06 38 25.8
	PCC	iPc	06 38 28.9
	MHC	ePc	06 38 35.8
	GCC	eP	06 38 36.1
	SAO	eP	06 38 41.9
BRK 06h37m26.9s 41.0N 125.2W			
h=5kmR ML=3.7(4) Mo=3.3E20(2)			
Off Coast 90 km NW of Eureka, CA			
Mar 21	FHC	ePc	23 59 33.2
	WDC	iPc	23 59 34.1
		e	23 59 38.1
		e	23 59 48.3
		i	23 59 58.4
	MIN	ePc	23 59 38.5
	ORV	iPc	23 59 48.9
	MNA	iPc	00 00 06.8
		i	00 00 11.0
		i	00 04 49
	JAS1	iPc	00 00 09.8
		i	00 00 13.8
		e	00 03 36
		i	00 05 02
		i	00 06 07
	BKS	ePc	00 00 09.8
		e	00 00 14.8
		iS	00 03 30
		eLr	00 04 20
		AMP(μm)	PER(s)
		PZ	0.78 1.5
		LZ	20 20.
		LN	14 20.
		LE	20 20.
	BRK	e(P)	00 00 10.7
		eS	00 03 32
		eLr	00 05 05
		i	00 07 04
		AMP(μm)	PER(s)
		LZ	6.0 20.
	PCC	e(P)c	00 00 12.2
	MHC	ePc	00 00 16.9
	GCC	ePc	00 00 20.8

DATE	STA	PHASE	TIME (UTC)
	FRI	e(P)	00 00 21.1
	SAO	ePc	00 00 24.8
	LLA	ePc	00 00 26.4
	PRS	ePc	00 00 29.4
	PRI	ePc	00 00 33.0
		e	00 00 36.1
BRK Ms=5.4 Distance=17°			
USGS 23h56m18.6s 54.3N 121.9W			
h=18km mb=5.4 Ms=5.2			
British Columbia			
Mar 22	WDC	e	04 58 43.5
	MIN	ePd	04 58 46.3
	ORV	e(P)	04 58 48.8
	JAS1	e	04 58 56
	PRI	e	04 59 05.7
	MNA	e	04 59 05.8
	BKS	e(Lr)	05 29 50
USGS 04h45m32.9s 23.4N 121.6E			
h=44km mb=5.6 Ms=5.5			
Taiwan			
Mar 22	FHC	eP	05 35 27.8
	WDC	ePd	05 35 34.3
	MIN	ePd	05 35 39.3
	BKS	e	05 35 42
	ORV	eP	05 35 44.6
	JAS1	ePd	05 36 01.9
	MHC	e	05 36 02
	MNA	ePd	05 36 06.9
	LLA	eP	05 36 09.9
	PRS	eP	05 36 10.3
	PRI	eP	05 36 15.2
USGS 05h30m02.0s 60.3N 153.3W			
h=165km mb=4.4			
Southern Alaska			
Mar 22	WDC	ePc	11 32 39.7
	MIN	eP	11 32 42.0
	ORV	eP	11 32 44.7
	JAS1	ePc	11 32 52.8
	GCC	e	11 32 53.1
	MNA	ePc	11 32 58.5
USGS 11h19m36.2s 24.7N 122.8E			
h=33km mb=5.4			
Taiwan Region			
Mar 22	WDC	ePc	12 02 43.6
	ORV	ePc	12 02 45.3
	MIN	e	12 02 46.3
	JAS1	ePc	12 02 52.0
	MNA	e	12 02 55.0
USGS 11h49m31.9s 24.9N 122.7E			
h=33km mb=5.0			
Taiwan Region			
Mar 22	WDC	ePc	12 19 37.0
	MIN	eP	12 19 39.9
	ORV	eP	12 19 42.3
	BRK	eP	12 19 42.9
	MHC	e(P)	12 19 48.2
	JAS1	eP	12 19 49.7
	PRS	e	12 19 54
	MNA	e(P)	12 19 56.0
USGS 12h06m33.7s 24.7N 122.8E			
h=33km mb=5.4 Ms=5.7			
Taiwan Region			
Mar 22	WDC	eP	13 47 01.0
	MIN	eP	13 47 04.0
	ORV	ePc	13 47 06.1
	JAS1	eP	13 47 16

DATE	STA	PHASE	TIME (UTC)
	MNA	e	13 47 19.7
USGS 13h33m58.4s 24.8N 123.1E			
h=33km mb=5.3 Ms=5.4			
Southwestern Ryukyu Islands			
Mar 22	WDC	e	14 40 21
	MIN	eP	14 40 23.2
	ORV	eP	14 40 27.0
	JAS1	eP	14 40 33.5
	MNA	eP	14 40 39.6
USGS 14h27m17.8s 24.7N 123.0E			
h=33km mb=4.9 Ms=5.5			
Southwestern Ryukyu Islands			
Mar 22	MNA	iPc	15 27 01.8
	FRI	i	15 27 11.6
	JAS1	ePc	15 27 16.0
	MIN	eP	15 27 17.7
	ORV	eP	15 27 18.2
	WDC	eP	15 27 20.9
	PRI	eP	15 27 21.5
	LLA	eP	15 27 22.3
	SAO	eP	15 27 24.9
	PRS	eP	15 27 25.1
	MHC	ePc	15 27 25.8
	BKS	ePc	15 27 27.5
		AMP(μm)	PER(s)
		PZ	0.075 0.7
	BRK	ePc	15 27 27.6
	GCC	eP	15 27 28.0
	PCC	eP	15 27 29.2
USGS 15h18m40.4s 34.1N 61.0W			
h=23km mb=5.0			
North Atlantic Ocean			
Mar 22	MNA	iPc	16 15 36.9
	FRI	iPc	16 15 48.1
	JAS1	iPc	16 15 56.9
		i	16 16 06.3
	PRI	iPc	16 16 00.8
	LLA	ePc	16 16 01.8
		i	16 16 10.9
	SAO	ePc	16 16 07.3
	PRS	iPc	16 16 07.5
	MHC	ePc	16 16 09.9
	GCC	e	16 16 13.5
	ORV	iPc	16 16 15.9
	BKS	ePc	16 16 16.7
		e	16 16 28
	ZSP	eP	16 16 17
	BRK	e(P)	16 16 17.2
	PCC	ePc	16 16 17.2
	MIN	ePc	16 16 23.1
	WDC	iPc	16 16 32.5
BRK 16h15m00.1s 37.1N 16.1W			
h=0kmR ML=5.1(6)			
Underground Nuclear Explosion, N.T.S.			
Mar 22	MHC	e	17 00 32.9
	JAS1	ePc	17 00 34.5
	MNA	ePc	17 00 35.4
	ORV	e	17 00 44.5
	MIN	e	17 00 49.5
	WDC	ePc	17 00 50.0
USGS 16h48m49.0s 36.2S 104.0W			
h=10km mb=4.7			
Southern Pacific Ocean			
Mar 22	PRI	ePc	17 04 54.4
	PRS	e	17 04 57.3
	LLA	e	17 04 58.3

DATE	STA	PHASE	TIME (UTC)
	JAS1	iPc	17 05 04.2
	MNA	ePc	17 05 05.4
	MHC	e	17 05 06
	BKS	ePc	17 05 11
		e	17 05 17.9
		ePP	17 07 00
		iS	17 12 00
		eLq	17 15 20
		eLr	17 18 00
		AMP(μm)	PER(s)
		PZ	0.031 0.8
		LZ	30 20.
		LN	11 20.
		LE	5.9 20.
	ORV	eP	17 05 18.7
	MIN	eP	17 05 24.4
	WDC	ePc	17 05 29.5
	FHC	e	17 05 32
BRK Ms=5.9 Distance=47°			
USGS 16h56m51.8s 4.4S 104.7W			
h=10km mb=5.4 Ms=5.9			
Northern Easter Island Cordillera			
Mar 23	ZSP	ePc	04 58 20.9
		iS	04 58 36.7
	BKS	iPc	04 58 21.5
		eS	04 58 37.2
	BRK	ePd	04 58 21.8
	ORV	ePc	04 58 24.3
	PCC	ePd	04 58 26.3
	MHC	eP	04 58 31.1
	MIN	ePc	04 58 31.3
	GCC	eP	04 58 33.4
	WDC	iPgd	04 58 35.3
	JAS1	iPc	04 58 37.2
		iS	04 59 04.0
	LLA	ePd	04 58 44.5
	PRS	eP	04 58 45.7
	FHC	e	04 58 47.0
	FRI	i	04 58 51.7
	PRI	e	04 58 53.0
	MNA	e	04 59 00.9
BRK 04h58m02.6s 38.8N 122.8W			
h=2kmR ML=3.6(6) Mo=1.2E22(2)			
The Geysers area, 23 km S of Clear Lake, CA			
Mar 23	PRI	eP	11 59 34.0
	MNA	ePd	11 59 35.4
		epP	11 59 52.5
	LLA	ePd	11 59 36.4
		epP	11 59 53.3
	PRS	ePd	11 59 36.9
	JAS1	ePd	11 59 39.9
		epP	11 59 57
	GCC	ePd	11 59 41.2
	MHC	ePd	11 59 41.8
	BRK	eP	11 59 45.1
	BKS	ePd	11 59 45.2
		AMP(μm)	PER(s)
		PZ	0.12 1.7
	ORV	ePd	11 59 49.3
		epP	12 00 06.4
		e	12 00 15.6
	MIN	ePd	11 59 51.4
	WDC	ePd	11 59 54.4
	FHC	eP	12 00 01.2
USGS 11h47m38.8s 26.7S 70.9W			
h=61km mb=5.4			
Near Coast of Northern Chile			
Mar 24	MHC	iPc	01 54 44.9

DATE	STA	PHASE	TIME (UTC)
	iS	01 54 47.7
	GCC	iPd	01 54 51.6
	PCC	iPc	01 54 52.1
	BKS	iPc	01 54 53.0
	BRK	iPd	01 54 53.1
	SAO	iPc	01 54 55.9
	LLA	eP	01 55 00.3
	JAS1	iPd	01 55 01.5
		iS	01 55 16.7
	PRS	eP	01 55 02.7
	PRI	eP	01 55 08.2
	ORV	e	01 55 17.5
BRK 01h54m41.7s 37.5N 121.7W			
h=8km ML=2.5(4) Mo=3.5E20(2)			
Mt. Lewis area, 25 km NE of San Jose, CA			
Mar 24	FHC	eP	02 13 53.7
	WDC	ePc	02 13 58.3
		e	02 14 06.1
	MIN	e(P)	02 13 59.9
	ORV	ePc	02 14 03.6
	BRK	e	02 14 06.4
	BKS	ePc	02 14 07
		eS	02 24 35
		eSS	02 30 12
		eLq	02 36 46
		eLr	02 40 00
		AMP(μm)	PER(s)
		PZ	0.039 1.0
		LZ	2.3 20.
		LN	0.89 20.
		LE	2.1 20.
	PCC	e(P)	02 14 07.5
	GCC	eP	02 14 09.4
	MHC	eP	02 14 10.2
	JAS1	ePc	02 14 12.4
		e	02 17 39
	LLA	eP	02 14 13.7
	PRS	eP	02 14 14.5
	PRI	e(P)	02 14 17
	MNA	eP	02 14 18.7
BRK Ms=5.6 Distance=85°			
USGS 02h01m28.9s 28.5N 130.0E			
h=26km mb=5.6 Ms=5.9			
Ryukyu Islands			
Mar 24	MNA	ePc	09 26 52.9
	JAS1	e(P)	09 27 06.3
	LLA	e(P)	09 27 16.4
	MHC	ePc	09 27 17.0
	BKS	eP	09 27 18.7
	PCC	eP	09 27 20.6
USGS 09h18m29.2s 34.1N 60.9W			
h=10km mb=4.9 Ms=4.0			
North Atlantic Ocean			
Mar 24	MNA	iPc	10 40 38.4
		e	10 43 14.1
	PRI	eP	10 40 40.0
	LLA	eP	10 40 43.3
	PRS	e(P)	10 40 44.7
	JAS1	e(P)	10 40 46.5
		e	10 43 17.1
	MHC	eP	10 40 51.6
	GCC	eP	10 40 51.7
	ORV	eP	10 41 01.3
		e	10 43 23
	MIN	ePc	10 41 05.0
		e	10 43 24.4
	WDC	e(P)	10 41 08.8
		e	10 43 24.7

DATE	STA	PHASE	TIME (UTC)
	BKS	e	10 43 20.7
USGS 10h33m57.6s 14.1N 91.3W			
h=66km mb=5.1			
Guatemala			
Mar 24	BKS	e(P)d	19 45 15.5
		e	19 53 12
		e(PS)	19 58 10
		e	19 59 12
		e(SS)	20 03 46
		eLq	20 11 27
		eLr	20 15 48
		AMP(μm)	PER(s)
		PZ	0.055 0.9
		LZ	19 20.
		LN	5.0 20.
		LE	15 20.
	WDC	e(P)	19 45 17.5
	ORV	e	19 45 20
	MIN	e	19 45 26
	JAS1	e	19 45 30
	LLA	e	19 45 30
	MNA	e	19 45 36
BRK Ms=6.6 Distance=98°			
USGS 19h31m39.3s 2.5s 138.7E			
h=29km mb=5.8 Ms=6.8			
West Irian			
Mar 24	PRI	iPc	19 47 49.2
	PRS	ePc	19 47 52.8
	FRI	ePc	19 47 53.6
	LLA	ePc	19 47 54.5
	SAO	e	19 47 57.4
	GCC	e(P)c	19 47 59.8
	MHC	eP	19 48 04.0
	JAS1	iPc	19 48 05.9
		e	19 48 37.3
	PCC	e(P)	19 48 06
	MNA	iPc	19 48 06.6
		e	19 49 35
	BRK	e	19 48 11.1
	BKS	ePc	19 48 11.5
		AMP(μm)	PER(s)
		PZ	0.16 1.0
	ORV	iPc	19 48 26.1
	MIN	ePc	19 48 33.4
	WDC	iPc	19 48 37.2
		e	19 49 55
		e	19 50 10
		e	19 51 27
	FHC	ePc	19 48 44.7
USGS 19h43m23.9s 18.1N 113.6W			
h=10km mb=5.1			
Revilla Gigedo Islands Region			
Mar 24	MNA	eP	22 41 40.6
		e	22 41 55
		i	22 42 56.3
	ORV	e(P)	22 42 16
	JAS1	e	22 42 25
		eS	22 44 57
	WDC	e(P)	22 42 27
USGS 22h40m23.5s 39.2N 112.0W			
h=0km mb=4.7			
Utah			
Mar 24	LLA	iPc	22 55 38.1
	PRS	iPd	22 55 39.5
	SAO	iP	22 55 39.6
	PRI	iPd	22 55 45.5
	GCC	iPd	22 55 49.0
	MHC	iPc	22 55 50.9

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DATE	STA	PHASE	TIME (UTC)
	PCC	ePc	22 55 57.6
	JAS1	eP	22 56 00.7
		eS	22 56 19.6
	BKS	eP	22 56 02.7
	ORV	e(P)	22 56 22.5
	MNA	e	22 56 28.5
BRK 22h55m34.0s 36.6N 121.2W			
h=4km ML=3.0(2)			
Bear Valley, 40 km SSE of Hollister, CA			
Mar 25	MNA	e(P)	02 54 18
		i	02 54 34.1
		e	02 55 37
	JAS1	e(P)	02 54 46
		e	02 55 04
		e	02 56 35
	ORV	e(P)	02 54 53
	MIN	e(P)	02 54 55.3
USGS 02h53m01.2s 39.2N 112.0W			
h=0km mb=4.5			
Utah			
Mar 25	FHC	iPc	04 11 49.1
	WDC	iPc	04 11 54.4
	MIN	eP	04 11 58.3
	ORV	iPc	04 12 01.1
	BRK	ePc	04 12 04.3
	BKS	ePc	04 12 04.6
		AMP(μm)	PER(s)
	PZ	0.14	0.8
	PCC	ePc	04 12 04.7
	GCC	ePc	04 12 07.8
	MHC	ePc	04 12 08.5
	SAO	eP	04 12 10.7
	JAS1	iPc	04 12 11.2
	PRS	ePc	04 12 12.8
	LLA	ePc	04 12 13.6
	PRI	ePc	04 12 16.7
	FRI	e(P)	04 12 16.8
	MNA	iPc	04 12 18.0
USGS 04h00m43.4s 37.3N 139.4E			
h=144km mb=5.3			
Honshu, Japan			
Mar 25	PRS	eP	08 11 46.0
	PCC	ePd	08 11 46.2
	BKS	e	08 11 48.1
	JAS1	e(P)	08 11 54
		epP	08 12 40.5
	ORV	iPd	08 11 56.0
		epP	08 12 42.0
	WDC	iPd	08 11 56.4
		epP	08 12 41.9
	MIN	ePd	08 11 58.3
		epP	08 12 44.5
	MNA	e(P)	08 12 03
		epP	08 12 50.2
USGS 08h00m05.9s 22.1S 176.7W			
h=192km mb=5.1			
South of Fiji Islands			
Mar 25	MIN	eP	12 26 52.5
	ORV	eP	12 26 54.9
USGS 12h13m47.0s 24.8N 123.2E			
h=31km mb=5.1 Ms=5.0			
Southwestern Ryukyu Islands			
Mar 25	ORV	e(P)	13 25 23.7
USGS 13h13m19.4s 23.4N 143.3E			
h=33km mb=4.8			
Volcano Islands Region			

DATE	STA	PHASE	TIME (UTC)
Mar 25	WDC	ePKP	17 29 57.8
		e	17 30 10.5
	MIN	ePKP	17 29 58.7
		e	17 30 12.1
	ORV	ePKP	17 29 59.6
		e	17 30 12.8
	JAS1	e(PKP)	17 30 03.1
		e	17 30 16.3
	PRI	ePKP	17 30 05.3
		e	17 30 18.3
	MNA	ePKP	17 30 06.2
		e	17 30 19.3
	BKS	e	17 30 14.7
USGS 17h10m57.6s 6.2S 104.2E			
h=46km mb=5.5 Ms=5.7			
Sunda Strait			
Mar 25	BKS	iPc	18 28 24.0
		AMP(μm)	PER(s)
	PZ	0.033	0.6
	PRS	e	18 28 25.0
	MHC	e	18 28 25.4
	WDC	e(P)	18 28 26.1
	ORV	e(P)	18 28 27.5
	JAS1	e(P)	18 28 29.9
USGS 18h15m52.1s 10.4S 161.2E			
h=96km mb=5.2			
Solomon Islands			
Mar 26	WDC	ePc	01 03 04.3
	MIN	ePc	01 03 11.0
	ORV	ePc	01 03 21.0
	MNA	e(P)	01 03 51.3
	BKS	e	01 04 46.0
USGS 01h00m45.1s 49.1N 127.7W			
h=10km mb=4.3			
Vancouver Island Region			
Mar 26	JAS1	e(P)	07 17 21.1
	ORV	eP	07 17 30.6
	WDC	eP	07 17 35.7
USGS 07h04m51.9s 34.0S 72.0W			
h=48km mb=5.0 Ms=5.1			
Near Coast of Central Chile			
Mar 26	FHC	e(P)	20 04 26
	WDC	e(P)	20 04 39
	MIN	e(P)	20 04 51
	BKS	e(P)	20 05 11.2
		e	20 06 44
	MHC	e(P)	20 05 22.1
	JAS1	eP	20 05 24.6
	PRS	e(P)	20 05 34.6
	LLA	e(P)	20 05 35.6
USGS 20h03m34.0s 43.4N 126.9W			
h=10km mb=4.5			
Off Coast of Oregon			
Mar 26	PRI	ePKPc	22 08 39.4
	MNA	ePKPc	22 08 39.6
	PRS	ePKPc	22 08 40.2
	LLA	ePKPc	22 08 40.2
	JAS1	iPKPc	22 08 41.3
		e	22 12 07.3
	MHC	ePKPc	22 08 42.1
	PCC	ePKPc	22 08 43.0
	BRK	ePKP	22 08 43.0
	BKS	iPKPc	22 08 43.2
		AMP(μm)	PER(s)
	PKPZ	0.041	0.8
	ORV	e(PKP)	22 08 43.9

DATE	STA	PHASE	TIME (UTC)
	MIN	ePKP	22 08 45.0
	WDC	ePKPc	22 08 45.9
		e	22 12 12
USGS 21h49m57.3s 56.4S 26.6W			
h=111km mb=5.7			
South Sandwich Islands Region			
Mar 26	MNA	iPd	22 16 26.3
		iPcP	22 16 57.8
		e	22 18 26.2
		e	22 24 12
		ePKPPKP	22 45 27
	PRI	iPd	22 16 28.4
	LLA	iPd	22 16 31.0
	PRS	iPd	22 16 32.2
	JAS1	iPd	22 16 33.3
		iPcP	22 17 02.1
		e	22 18 31.7
		ePP	22 19 14.2
		i	22 20 06.5
		ePKPPKP	22 45 23
	SAO	ePd	22 16 33.4
	GCC	iPd	22 16 37.2
	MHC	iPd	22 16 37.3
		e	22 24 36
	PCC	ePd	22 16 40.3
	BKS	iPd	22 16 41.2
		e(PP)	22 18 40
		eS	22 24 39
		AMP(μm)	PER(s)
	PZ	0.20	1.0
	BRK	ePd	22 16 41.3
	ORV	iPd	22 16 43.9
		ePKPPKP	22 45 16.8
	MIN	ePd	22 16 45.9
		ePKPPKP	22 45 13.7
	WDC	iPd	22 16 49.3
		iPcP	22 17 12.7
		e	22 24 54
		ePKPPKP	22 45 14
	FHC	iPd	22 16 58.3
USGS 22h06m57.7s 7.1S 71.6W			
h=608km mb=5.8			
Western Brazil			
Mar 27	GCC	ePc	12 09 50.7
	SAO	e(P)	12 09 51
	PRS	ePc	12 09 51.3
	BRK	e(P)	12 09 52.4
	BKS	ePc	12 09 52.6
		ePP	12 12 39
		eS	12 19 37
		eLq	12 28 52
		eLr	12 31 40
		AMP(μm)	PER(s)
	PZ	0.13	1.5
	LZ	8.2	20.
	LN	5.0	20.
	LE	5.7	20.
	PRI	iPc	12 09 53.3
	MHC	iPc	12 09 53.4
	LLA	e(P)	12 09 53.5
	FHC	e(P)	12 09 55
	JAS1	iPc	12 09 59.5
		i	12 10 04.8
		e	12 10 28.4
	WDC	iPc	12 10 00.1
	ORV	iPc	12 10 00.2
	MIN	iPc	12 10 02.0
	MNA	iPc	12 10 09.9
		e	12 10 15.0
		e	12 10 33.5

DATE	STA	PHASE	TIME (UTC)
BRK Ms=6.0 Distance=74°			
USGS 11h58m19.5s 14.5S 178.0W			
h=33km mb=5.7 Ms=5.9			
Fiji Islands Region			
Mar 27	MHC	iPd	21 25 18.4
	GCC	ePd	21 25 23.2
	SAO	iPd	21 25 26.9
	PCC	iPc	21 25 28.2
	BRK	iPc	21 25 31.3
	BKS	ePc	21 25 31.5
	LLA	eP	21 25 32.2
	ZSP	eP	21 25 32.5
	JAS1	iPd	21 25 37.8
		i	21 25 42.0
		eS	21 25 53.7
	PRI	ePc	21 25 40.6
	FRI	eP	21 25 43.5
		eS	21 26 03.2
	ORV	eP	21 25 55.6
	MNA	e	21 26 11
BRK 21h25m16.3s 37.3N 121.7W			
h=5km ML=2.9(4) Mo=1.8E20(2)			
San Felipe Valley, 20 km ESE of San Jose, CA			
Mar 28	GCC	ePd	03 07 57.2
	PRS	ePd	03 07 57.4
	PCC	ePd	03 07 57.5
	SAO	eP	03 07 58.0
	BRK	eP	03 07 59.2
		e	03 08 03.7
	LLA	eP	03 07 59.5
	PRI	ePd	03 07 59.9
		e	03 09 30.0
	MHC	ePd	03 08 00.0
	BKS	ePd	03 08 00.0
		AMP(μm)	PER(s)
	PZ	0.15	0.9
	FHC	ePd	03 08 04.2
	FRI	eP	03 08 04.7
	ORV	iPd	03 08 06.7
	JAS1	iPd	03 08 06.7
		i	03 08 09.0
		e	03 08 13.0
		e	03 08 25.2
		e	03 09 31.7
	WDC	ePd	03 08 06.8
		e	03 08 23.5
		e	03 09 38.5
	MIN	ePd	03 08 08.5
		e	03 08 12.4
	MNA	iPd	03 08 14.2
		i	03 08 18.6
		e	03 08 23.9
		e	03 08 35.3
		e	03 09 42.8
USGS 02h56m26.8s 23.1S 178.7W			
h=383km mb=5.3			
South of Fiji Islands			
Mar 28	WDC	eP	16 16 07.1
	BKS	eP	16 16 08.3
		e	16 16 33.4
		ePS	16 28 30
		eLq	16 40 48
		eLr	16 45 12
		AMP(μm)	PER(s)
	PZ	0.022	0.9
	LZ	0.71	20.
	LN	0.0	20.
	LE	0.54	20.

DATE	STA	PHASE	TIME (UTC)
	ORV	eP	16 16 08.8
	LLA	eP	16 16 11.0
	JAS1	eP	16 16 13.2
	PRS	e	16 16 15.3
	MNA	eP	16 16 22.3
BRK Ms=5.0 Distance=94°			
USGS 16h03m05.9s 6.0S 149.6E			
h=87km mb=5.6			
New Britain Region			
Mar 28	FHC	eP	18 33 40.3
		epP	18 34 02.8
	WDC	iPd	18 33 46.5
		epP	18 34 07.8
	MIN	eP	18 33 49.2
		epP	18 34 12.5
	ORV	iPd	18 33 54.7
	MHC	e	18 34 04.5
	JAS1	iPd	18 34 07.0
		ipP	18 34 30.0
	PRS	e	18 34 09.8
	LLA	e	18 34 10.5
	MNA	e	18 34 13.7
USGS 18h24m10.7s 48.8N 154.8E			
h=88km mb=5.2			
Kuril Islands			
Mar 29	MNA	eP	02 18 04.0
	PRI	eP	02 18 04.5
	LLA	ePd	02 18 07.0
	JAS1	iPd	02 18 09.4
	GCC	eP	02 18 11.5
	MHC	eP	02 18 12.0
	BKS	e(P)	02 18 16.1
		e	02 18 44
		e	02 18 49
		AMP(μm)	PER(s)
	PZ	0.044	0.9
	ORV	ePd	02 18 19.2
	MIN	eP	02 18 21.0
	WDC	iPd	02 18 24.3
	FHC	e	02 18 30.5
USGS 02h06m45.9s 19.3S 67.5W			
h=213km mb=5.3			
Southern Bolivia			
Mar 29	PCC	eP	14 28 49.2
	SAO	e	14 28 49.9
	BKS	iPd	14 28 51.3
		AMP(μm)	PER(s)
	PZ	0.12	1.4
	MHC	eP	14 28 51.5
	PRI	ePc	14 28 51.8
	JAS1	ePc	14 28 57.2
	ORV	eP	14 28 58.3
	WDC	iPc	14 28 58.3
	MIN	ePc	14 29 00.0
	MNA	ePc	14 29 06.9
USGS 14h17m59.4s 17.9S 178.6W			
h=604km mb=5.4			
Fiji Islands Region			
Mar 29	SAO	eP	15 17 17.6
	PRI	eP	15 17 18.8
	BKS	eP	15 17 18.9
		e	15 19 27
		iPP	15 20 16
		eS	15 26 27
		i	15 27 30
		eG	15 36 23
		eLr	15 39 11
		AMP(μm)	PER(s)

DATE	STA	PHASE	TIME (UTC)
	PZ	0.26	1.7
	LZ	3.9	20.
	LN	2.7	20.
	LE	2.7	20.
	MHC	eP	15 17 19.6
	JAS1	iPd	15 17 25.3
	ORV	eP	15 17 26.8
	WDC	eP	15 17 27.2
	MIN	eP	15 17 29.3
	MNA	eP	15 17 35.5
BRK Ms=5.6 Distance=74°			
USGS 15h05m44.6s 17.7S 174.6W			
h=33km mb=5.4 Ms=5.5			
Tonga Islands			
Mar 29	BKS	iP	16 24 05.86
		iS	16 24 07.1
	BRK	iPc	16 24 05.86
	ZSP	iPd	16 24 06.5
		S(a/s)	16 24 08.6
	PCC	iPd	16 24 11.8
	MHC	iPd	16 24 17.4
	GCC	iPd	16 24 19.5
	SAO	iPd	16 24 25.2
	JAS1	iPc	16 24 28.2
	LLA	eP	16 24 30.7
	ORV	iPc	16 24 31.9
	PRI	iPc	16 24 39.0
	MIN	eP	16 24 43.0
	WDC	iPd	16 24 45.8
	FRI	i	16 24 49.2
	FHC	e	16 24 54.8
	MNA	eP	16 24 55.0
BRK 16h24m04.2s 37.9N 122.2W			
h=9km ML=4.1(8) Mo=2.5E22(3)			
Berkeley Hills, CA			
Mar 30	WDC	ePKP	09 12 40.2
		ePKKP	09 23 06.7
	ORV	ePKP	09 12 41.3
		ePKKP	09 23 05.2
	JAS1	ePKP	09 12 42.5
		ePKKPc	09 23 04.3
		eSKKP	09 27 02.3
	MNA	ePKPd	09 12 47.0
		ePKKPc	09 22 56.4
		eSKKP	09 26 55.0
	MIN	ePKKPc	09 23 05.1
		eSKKP	09 27 03.0
	PRI	ePKKP	09 23 07.2
	BKS	e	09 23 38
		e	09 29 34
		eLr	09 47 59
		AMP(μm)	PER(s)
	LZ	2.9	20.
	LN	0.54	20.
	LE	2.1	20.
USGS 08h53m53.2s 26.2S 132.8E			
h=10km mb=5.8 Ms=5.8			
South Australia			
Mar 31	MNA	ePd	01 28 15.2
	PRI	eP	01 28 21.2
	LLA	ePd	01 28 23.8
	MHC	ePd	01 28 30.8
	GCC	ePd	01 28 31.4
	BKS	ePc	01 28 34.2
		e	01 28 45.3
		AMP(μm)	PER(s)
	PZ	0.054	0.8
	PCC	eP	01 28 34.6
	BRK	eP	01 28 35.2

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DATE	STA	PHASE	TIME (UTC)
	ORV	iPd	01 28 35.9
	MIN	eP	01 28 37.8
	WDC	ePd	01 28 41.4
	FHC	ePd	01 28 52.2
USGS 01h19m23.9s 6.8N 73.0W			
h=159km mb=5.0			
Northern Colombia			
Mar 31	MHC	iPc	04 05 03.3
		iS	04 05 05.9
	GCC	ePc	04 05 10.1
	PCC	iPc	04 05 10.45
	BKS	iPc	04 05 11.4
		e	04 05 20.5
	BRK	iPc	04 05 11.5
	ZSP	iPd	04 05 12.9
	LLA	ePc	04 05 18.8
	JAS1	iPd	04 05 19.9
		iS	04 05 35.0
BRK 04h05m00.1s 37.5N 121.7W			
h=8km ML=2.5(4) Mo=1.7E20(2)			
Mt. Lewis area, 25 km NE of San Jose, CA			
Mar 31	MHC	iPc	11 55 43.2
	GCC	iPd	11 55 49.9
	PCC	iPc	11 55 50.4
	BRK	iPc	11 55 51.5
		iS	11 56 00.2
	BKS	iPc	11 55 51.5
	ZSP	iPc	11 55 52.5
	SAO	iPc	11 55 54.3
	LLA	ePc	11 55 58.6
	JAS1	iPd	11 55 59.9
	PRI	iPc	11 56 06.7
	FRI	i(P)c	11 56 08.0
	ORV	ePd	11 56 13.2
	MIN	ePc	11 56 25.0
	MNA	iPd	11 56 28.0
	WDC	iPd	11 56 37.8
	FHC	e(P)d	11 56 48.8
BRK 11h55m40.1s 37.5N 121.7W			
h=8km ML=5.7(6) Mo=2.6E24(2)			
Mt. Lewis area, 24 km NE of San Jose, CA			
Mar 31	MHC	i(P)	11 58 41.9
		i(S)	11 58 44.1
	ZSP	i(P)	11 58 53.1
		i(S)	11 59 04.1
	SAO	i(P)	11 58 54.3
BRK 11h58m38.7s 37.5N 121.7W			
h=8kmR ML=3.2(4)			
Mt. Lewis area, 24 km NE of San Jose, CA			
Mar 31	MHC	iPc	12 03 21.5
	GCC	ePd	12 03 28.1
	PCC	eP	12 03 28.8
	BKS	i(P)c	12 03 30.1
	BRK	ePd	12 03 30.1
	ZSP	e(P)d	12 03 31.2
	JAS1	i(P)d	12 03 32.1
	SAO	iP	12 03 33.0
	LLA	eP	12 03 34.6
BRK 12h03m18.5s 37.5N 121.7W			
h=5kmR ML=2.5(2) Mo=1.4E20(2)			
Mt. Lewis area, 23 km NE of San Jose, CA			
Mar 31	MHC	iPc	12 03 49.4
		iS	12 03 52.6
	PCC	iPc	12 03 56.2
	GCC	iPc	12 03 56.2
	BRK	iPc	12 03 57.1
	ZSP	i(P)d	12 03 58.3
		iS	12 04 09.2
	SAO	iP	12 04 01.0
	JAS1	iS	12 04 20.8
BRK 12h03m46.0s 37.5N 121.7W			
h=5km ML=2.8(2) Mo=2.7E20(2)			
Mt. Lewis area, 25 km NE of San Jose, CA			
Mar 31	MHC	iPc	12 17 51.85
	GCC	iPd	12 17 58.5
	PCC	iPc	12 17 58.7
	BKS	iPc	12 17 59.5
		eS	12 18 08.0
	BRK	iPc	12 17 59.6
	ZSP	ePc	12 18 00.5
	SAO	iPc	12 18 03.2
	LLA	iPc	12 18 07.6
	JAS1	iPd	12 18 07.9
		iS	12 18 22.8
	PRI	ePc	12 18 15.4
	FRI	iPc	12 18 17.2
		iS	12 18 39.3
	ORV	e(P)	12 18 21.6
		e	12 18 23.1
BRK 12h17m48.4s 37.5N 121.7W			
h=8km ML=3.0(4) Mo=4.2E20(2)			
Mt. Lewis area, 27 km NE of San Jose, CA			
Mar 31	MHC	iPc	12 39 26.7
	GCC	iPd	12 39 33.5
	PCC	iPc	12 39 34.3
	BKS	iPc	12 39 35.5
		iS	12 39 45.1
	BRK	iPc	12 39 35.6
	ZSP	iPc	12 39 36.7
	SAO	iPc	12 39 38.0
	LLA	ePc	12 39 42.4
	JAS1	iP	12 39 44.1
		iS	12 39 59.7
	PRI	eP	12 39 50.4
	ORV	e	12 40 00.0
	MIN	e	12 40 13.0
	MNA	e	12 40 17.8
BRK 12h39m24.0s 37.5N 121.7W			
h=8km ML=3.1(6) Mo=7.8E20(2)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Mar 31	MHC	iPc	13 05 41.75
	GCC	iPd	13 05 48.5
	PCC	iPc	13 05 48.6
	BRK	iPc	13 05 49.4
	BKS	iPc	13 05 49.4
		iS	13 05 58.2
	ZSP	iPc	13 05 50.3
		iS	13 06 01.2
	SAO	iPc	13 05 53.0
	JAS1	iPc	13 05 57.75
		iS	13 06 12.3
	PRI	iPc	13 06 05.3
	FRI	iPc	13 06 06.4
	ORV	ePd	13 06 11.4
	MIN	e	13 06 25.6
	WDC	e	13 06 26.2
	MNA	e	13 06 27.1
BRK 13h05m38.2s 37.5N 121.7W			
h=7km ML=3.4(6) Mo=3.9E21(4)			
Mt. Lewis area, 27 km NE of San Jose, CA			
Mar 31	MHC	iPc	13 39 17.5
	GCC	iPd	13 39 24.25
	PCC	iPc	13 39 25.1
	BRK	iPc	13 39 26.4
	BKS	iPc	13 39 26.4
		eS	13 39 35.9
	ZSP	ePc	13 39 27.4
	SAO	iPc	13 39 28.75
	LLA	iPc	13 39 33.3
	JAS1	iPd	13 39 34.9
	PRI	e	13 39 40.8
	ORV	e	13 39 50.4
BRK 13h39m14.7s 37.5N 121.7W			
h=5km ML=2.8(5) Mo=2.4E20(2)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Mar 31	MHC	iPc	14 20 17.4
	GCC	iPd	14 20 24.15
	PCC	iPc	14 20 24.9
	BRK	iPc	14 20 26.1
	BKS	iPc	14 20 26.1
		eS	14 20 35.5
	ZSP	iPc	14 20 27.0
	SAO	iPc	14 20 28.6
	LLA	iPc	14 20 33.1
	JAS1	iPd	14 20 34.5
		iS	14 20 49.7
	PRI	eP	14 20 41.0
	FRI	ePc	14 20 41.5
	ORV	i	14 20 50.9
	MIN	e	14 21 06.9
	MNA	e	14 21 07.0
BRK 14h20m14.6s 37.5N 121.7W			
h=8km ML=3.2(6) Mo=4.6E20(2)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Mar 31	MHC	iPc	15 17 20.9
	GCC	ePd	15 17 27.6
	PCC	iPc	15 17 28.1
	BKS	iPc	15 17 29.1
		iS	15 17 36.1
	BRK	ePc	15 17 29.2
		i	15 17 36.2
	ZSP	i(P)d	15 17 30.4
		e	15 17 36.8
	SAO	iPc	15 17 32.0
	LLA	eP	15 17 36.4
	JAS1	ePd	15 17 37.8
		iS	15 17 52.7
	PRS	e	15 17 41.1
	PRI	e	15 17 47.8
BRK 15h17m17.8s 37.5N 121.7W			
h=8km ML=2.5(3) Mo=5.9E19(2)			
Mt. Lewis area, 24 km NE of San Jose, CA			
Mar 31	MHC	iP	15 25 14.8
	GCC	iP	15 25 21.5
	PCC	iP	15 25 21.8
		iS	15 25 30.0
	BRK	ePd	15 25 22.7
	BKS	iPc	15 25 22.7
		eS	15 25 35.4
	ZSP	ePc	15 25 23.6
	SAO	eP	15 25 26.0
	LLA	iPc	15 25 30.5
	JAS1	iPd	15 25 31.1
		iS	15 25 46.2
	PRI	eP	15 25 38.6
	ORV	e	15 25 46.8
BRK 15h25m11.5s 37.5N 121.7W			
h=9km ML=2.8(4) Mo=3.6E20(2)			
Mt. Lewis area, 25 km NE of San Jose, CA			
Mar 31	MHC	iPc	16 18 16.7
	GCC	iPd	16 18 23.4
	PCC	iPc	16 18 24.1
	BKS	iPc	16 18 25.2
		eS	16 18 34.2
	BRK	iPd	16 18 25.3
	ZSP	iPd	16 18 26.5
	SAO	iPc	16 18 27.8
	LLA	iPc	16 18 32.2
	JAS1	iPd	16 18 33.7
		iS	16 18 48.9
	PRS	e	16 18 34.5
	PRI	ePc	16 18 40.5
	ORV	e	16 18 50.1
BRK 16h18m13.8s 37.5N 121.7W			
h=8km ML=2.7(4) Mo=1.3E20(2)			
Mt. Lewis area, 23 km NE of San Jose, CA			
Mar 31	MHC	iPc	17 12 42.3
	GCC	iPd	17 12 49.0
	PCC	iPc	17 12 49.7
	BKS	iPc	17 12 50.8
		iS	17 13 04.8
	BRK	iPc	17 12 50.9
	ZSP	iPd	17 12 52.2
	SAO	iP	17 12 53.5
	LLA	iPc	17 12 57.9
	JAS1	iPd	17 12 59.3
		iS	17 13 14.4
	PRI	e	17 13 06.5
	ORV	e	17 13 15.6
BRK 17h12m39.4s 37.5N 121.7W			
h=7km ML=2.8(4) Mo=1.1E20(2)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Mar 31	MHC	iPc	19 41 19.05
	GCC	iPd	19 41 25.8
	PCC	iPc	19 41 26.3
	BRK	iPc	19 41 27.3
	BKS	iPc	19 41 27.3
		eS	19 41 36.2
	ZSP	iPd	19 41 28.5
	SAO	iP	19 41 30.1
	LLA	iPc	19 41 34.6
	JAS1	iPd	19 41 35.7
		iS	19 41 50.9
	PRI	e	19 41 42.2
BRK 19h41m15.9s 37.5N 121.7W			
h=8km ML=2.8(6) Mo=1.0E20(2)			
Mt. Lewis area, 24 km NE of San Jose, CA			
Mar 31	MHC	iPc	21 21 56.4
	GCC	iPd	21 22 03.35
	PCC	iPc	21 22 04.3
	BRK	eP	21 22 05.8
	BKS	iPc	21 22 05.9
		iS	21 22 16.4
	ZSP	iPd	21 22 07.1
	SAO	iP	21 22 07.9
	LLA	iPc	21 22 12.4
	JAS1	iPd	21 22 14.1
		iS	21 22 29.3
	PRI	e	21 22 20
BRK 21h21m53.9s 37.5N 121.7W			
h=6km ML=2.6(4) Mo=6.5E19(2)			
Mt. Lewis area, 21 km NE of San Jose, CA			
Mar 31	MHC	iPc	21 30 12.8
	GCC	iPd	21 30 19.4
	PCC	iPc	21 30 19.9
	BKS	iPc	21 30 20.8
		eS	21 30 30.2
	BRK	iPc	21 30 20.9
	ZSP	iPd	21 30 22.2
	SAO	iPc	21 30 23.8
	LLA	iPc	21 30 28.2
	JAS1	iPd	21 30 29.3
		iS	21 30 44.5
	PRS	e(P)	21 30 30.4
	PRI	e	21 30 46.2
BRK 21h30m09.5s 37.5N 121.7W			
h=8km ML=2.8(4) Mo=4.5E20(2)			
Mt. Lewis area, 24 NE of San Jose, CA			
Apr 1	MHC	iPc	08 53 46.4
	GCC	iPd	08 53 53.2
	PCC	iPd	08 53 54.3
		iS	08 54 03.3
	BKS	iPc	08 53 55.8
		iS	08 54 05.0
	BRK	iPd	08 53 55.8
	ZSP	eP	08 53 57.1
		iS	08 54 07.5
	SAO	iPc	08 53 57.7
	LLA	iPc	08 54 02.3
	JAS1	iPd	08 54 04.2
	PRS	eP	08 54 04.5
	PRI	eP	08 54 10.4
BRK 08h53m43.9s 37.4N 121.7W			
h=6km ML=2.8(4) Mo=2.9E20(2)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Apr 1	PCC	iP	10 24 06.5
	GCC	iPd	10 24 36.5
	PRS	iPd	10 24 36.9
	SAO	iPd	10 24 37.5
	BKS	iPd	10 24 38.0
		i	10 26 34.5
		ipP	10 26 39.6
			AMP(μm) PER(s)
		PZ	0.75 1.1
	BRK	iPd	10 24 38.2
	PRI	iP	10 24 39.1
	MHC	iPd	10 24 39.1
	LLA	iPd	10 24 39.2
	FHC	iPd	10 24 42.1
	FRI	iPd	10 24 44.3
	JAS1	iPd	10 24 44.7
		ipP	10 26 41.5
	ORV	iPd	10 24 45.6
	WDC	iPd	10 24 45.6
		ipP	10 26 43.0
	MIN	iPd	10 24 47.5
	MNA	iPd	10 24 54.4
		e	10 34 17.5
USGS 10h13m40.7s 18.0S 178.5W			
h=540km mb=5.8			
Fiji Islands Region			
Apr 1	FHC	ePc	13 49 36.8
	WDC	iPc	13 49 42.5
	MIN	eP	13 49 46.3
	ORV	iPc	13 49 51.4
	BKS	ePc	13 49 58.3
		eS	13 57 27
		eSS	14 01 09
		eLr	14 05 46
			AMP(μm) PER(s)
		LZ	3.0 20.
		LN	1.3 20.
		LE	2.5 20.
	PCC	eP	13 49 59.3
	MHC	eP	13 50 02.9
	JAS1	iPc	13 50 05.1
	SAO	e	13 50 06.3
	PRS	eP	13 50 09.2
	LLA	eP	13 50 09.8
	MNA	iPc	13 50 12.1
	PRI	eP	13 50 13.5
BRK Ms=5.3 Distance=55°			
USGS 13h40m45.2s 54.7N 161.6E			
h=35km mb=5.7 Ms=5.1			
Near East Coast of Kamchatka			
Apr 1	MNA	eP	22 15 41.2
	JAS1	eP	22 15 49.7
	ORV	eP	22 16 04.5
USGS 22h08m51.8s 13.4N 91.0W			
h=48km mb=4.7			
Near Coast of Guatemala			
Apr 2	MHC	iPc	02 50 40.1
	GCC	iP	02 50 46.8
	PCC	iPc	02 50 47.7
	BRK	iPd	02 50 49.1
		iS	02 50 58.5
	BKS	iPc	02 50 49.2
		iS	02 50 58.0
	ZSP	iPc	02 50 50.0
	SAO	iP	02 50 51.4
	LLA	iPc	02 50 56.0
	JAS1	iPd	02 50 57.4
		iS	02 51 12.5
	PRS	iPd	02 50 58.0
	PRI	eP	02 51 03.2
	ORV	iPc	02 51 13.4
	MNA	e	02 51 30.5
BRK 02h50m37.3s 37.5N 121.7W			
h=7km ML=3.3(6) Mo=1.8E21(4)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Apr 2	MIN	e	08 56 31.9
	WDC	e	08 56 32.6
	MNA	e	08 56 33.4
	ORV	eP	08 56 36.9
	JAS1	e	08 56 43.0
USGS 08h46m40.1s 62.8N 25.2W			
h=10km mb=5.0 Ms=5.0			
Iceland Region			
Apr 2	MHC	iPc	13 54 02.8
	GCC	iPd	13 54 09.5
	PCC	iPc	13 54 10.1
	BRK	iPc	13 54 11.1
	BKS	iPc	13 54 11.2
		iS	13 54 [illegible].0
	ZSP	eP	13 54 12.3
	SAO	iPc	13 54 13.8
	LLA	ePc	13 54 18.2
		iS	13 54 32.3
	JAS1	iPd	13 54 19.6

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DATE	STA	PHASE	TIME (UTC)
		IS	13 54 34.4
	PRS	i	13 54 23.9
	PRI	e	13 54 28.0
	ORV	e	13 54 34.0

BRK 13h53m59.7s 37.5N 121.7W
h=7km ML=2.8(6) Mo=2.6E20(2)
Mt. Lewis area, 23 km NE of San Jose, CA

Apr 2	MIN	eP	15 36 08.7	
	MNA	e	15 36 09.6	
	ORV	eP	15 36 12.0	
	WDC	e	15 36 16.2	
	BKS	eLr	16 00 33	
			AMP(μm)	PER(s)
		LZ	2.7	20.
		LN	1.4	20.
		LE	1.1	20.

USGS 15h26m16.4s 62.7N 25.3W
h=10km mb=5.3 Ms=4.7
Iceland Region

Apr 3	WDC	ePd	03 02 39.0	
	MIN	ePd	03 02 44.3	
	ORV	ePd	03 02 49.5	
	JAS1	ePd	03 03 06.7	
	MNA	ePd	03 03 13.4	
	BKS	e	03 10 00	

USGS 02h57m11.1s 56.3N 153.5W
h=33km mb=4.7 Ms=4.8
Kodiak Island Region

Apr 3	MHC	iPd	05 27 52.55
	GCC	iPc	05 27 56.0
		iS	05 28 01.9
	SAO	iPd	05 27 57.05
	PCC	iPc	05 28 02.3
	LLA	ePc	05 28 02.4
	PRS	iPc	05 28 04.8
	BRK	eP	05 28 05.8
	BKS	ePc	05 28 06.0
		eS	05 28 19.6
	ZSP	ePc	05 28 07.0
		iS	05 28 21.6
	JAS1	iPd	05 28 10.1
		iS	05 28 26.0
	PRI	e(P)	05 28 11.1

BRK 05h27m48.6s 37.2N 121.6W
h=5km ML=2.6(4) Mo=9.9E19(2)
Anderson Lake, 32 km SE of San Jose, CA

Apr 3	ARC	eP	06 40 46.9	
		iS	06 40 53.6	
	FHC	iPd	06 40 48.6	
		iS	06 40 57.2	
	WDC	ePc	06 41 04.3	
		iS	06 41 24.3	
	MIN	ePd	06 41 14.8	
		e	06 41 53.8	
	ORV	e(P)	06 41 20.8	
		e	06 41 31.9	
		e	06 41 54.5	

BRK 06h40m37.5s 41.2N 124.6W
h=12km ML=3.6(4) Mo=9.6E20(2)
Off Coast 50 km NW of Eureka, CA

Apr 3	JAS1	e	07 52 58	
	MNA	ePc	07 53 11.9	

USGS 07h39m54.5s 6.4S 151.7E
h=33km mb=5.6 Ms=4.9
New Britain Region

DATE	STA	PHASE	TIME (UTC)
Apr 3	PRS	eP	14 07 34.7
	MHC	ePc	14 07 37.2
	PRI	e(P)	14 07 38.2
	JAS1	ePc	14 07 43.5
	ORV	ePc	14 07 44.8
	WDC	e(P)	14 07 45.0
	MNA	eP	14 07 53.9

USGS 13h56m22.8s 15.2S 174.1W
h=95km mb=4.8
Tonga Islands

Apr 3	MHC	iPc	16 33 39.6
		iS	16 33 42.1
	GCC	iPd	16 33 46.2
	PCC	iPd	16 33 46.3
	BRK	iPc	16 33 47.1
	BKS	iPc	16 33 47.1
		eS	16 33 57.7
	ZSP	iPc	16 33 47.9
	SAO	iPc	16 33 50.7
	LLA	iPc	16 33 55.2
	JAS1	iPd	16 33 55.5
		iS	16 34 10.7
	PRS	ePd	16 33 57.4
	PRI	ePd	16 34 03.1
	ORV	e	16 34 10.9
	MNA	e	16 34 22.8

BRK 16h33m35.9s 37.5N 121.7W
h=7km ML=3.0(3) Mo=7.3E20(2)
Mt. Lewis area, 26 km NE of San Jose, CA

Apr 4	MHC	iP	10 16 42.9	
	GCC	iPd	10 16 48.8	
	SAO	iPd	10 16 52.5	
	PCC	iPc	10 16 52.7	
	BRK	iPc	10 16 55.5	
	BKS	iPc	10 16 55.8	
		iS	10 17 07.1	
	ZSP	iPc	10 16 57.1	
		iS	10 17 04.8	
	LLA	iPd	10 16 57.9	
	PRS	ePd	10 16 59.0	
	ORV	e	10 17 02.6	
	JAS1	iPc	10 17 02.6	
	PRI	eP	10 17 06.2	

BRK 10h16m41.3s 37.3N 121.7W
h=6km ML=3.2(6) Mo=9.9E20(4)
Halls Valley, 19 km SE of San Jose, CA

Apr 5	MHC	iPc	08 10 23.2
	PCC	iPd	08 10 29.8
		iS	08 10 36.3
	GCC	ePd	08 10 29.8
		iS	08 10 39.0
	BKS	iPc	08 10 30.4
		iS	08 10 40.5
	BRK	iPc	08 10 30.5
		iS	08 10 40.7
	ZSP	i(P)d	08 10 31.6
	SAO	iPc	08 10 34.1
	LLA	ePc	08 10 38.5
	JAS1	iPd	08 10 38.9

BRK 08h10m19.4s 37.5N 121.7W
h=8km ML=2.5(4) Mo=1.2E20(2)
Mt. Lewis area, 26 km NE of San Jose, CA

Apr 5	MHC	iP	18 43 40.8	
	GCC	iPd	18 43 47.3	
	PCC	iPc	18 43 47.5	
	BRK	iPc	18 43 48.1	
	BKS	iPc	18 43 48.1	
		iS	18 43 58.6	
	ZSP	iPc	18 43 49.3	
	SAO	iPc	18 43 52.0	
	LLA	iPc	18 43 56.3	
	JAS1	iPd	18 43 56.5	
	PRS	iPc	18 43 58.8	
	PRI	eP	18 44 03.1	
	ORV	eP	18 44 10.2	
	WDC	e	18 44 24.5	

BRK 18h43m37.0s 37.5N 121.7W
h=7km ML=3.4(6) Mo=2.2E21(4)
Mt. Lewis area, 26 km NE of San Jose, CA

Apr 5	MNA	eP	20 25 21.3	
	PRS	e	20 25 22.5	
	LLA	e	20 25 24.0	
	JAS1	eP	20 25 28.1	
	ORV	eP	20 25 38.5	
	WDC	e	20 25 49.3	

USGS 20h14m28.7s 13.4S 71.8W
h=50km mb=5.3 Ms=4.6
Peru

Apr 5	WDC	iPc	23 09 29.0	
	MIN	e	23 09 33.0	
	ORV	iPc	23 09 36.5	
	BKS	ePc	23 09 40.5	
	JAS1	iPc	23 09 48.0	
	MNA	e	23 09 54.9	
	PRI	e	23 09 55.0	

USGS 22h59m10.3s 44.5N 147.9E
h=88km mb=5.3
Kuril Islands

Apr 6	MHC	iPc	14 18 59.6
	GCC	iPd	14 19 06.2
	PCC	iPc	14 19 06.4
		iS	14 19 13.5
	BRK	iPc	14 19 07.3
	BKS	ePc	14 19 07.3
	ZSP	eP	14 19 08.6
	SAO	iPc	14 19 10.7
	LLA	ePc	14 19 15.0
	JAS1	iPd	14 19 15.8
	PRS	eP	14 19 17.3
	PRI	e	14 19 22.5
	ORV	e	14 19 29.5

BRK 14h18m56.1s 37.5N 121.7W
h=8km ML=2.6(4) Mo=3.4E20(2)
Mt. Lewis area, 24 km NE of San Jose, CA

Apr 7	MNA	iPd	22 49 45.9	
		epP	22 49 58.6	
		ePcP	22 52 39.3	
	PRI	ePd	22 49 46.5	
		epP	22 49 59.8	
		ePcP	22 52 40.7	
	LLA	ePd	22 49 49.8	
		epP	22 50 02.9	
		ePcP	22 52 41.2	
	PRS	ePd	22 49 51.3	
		ePcP	22 52 41.3	
	SAO	e	22 49 54	
	JAS1	iPd	22 49 54.1	
		epP	22 50 06.8	
		iPcP	22 52 42.1	
	MHC	iPd	22 49 58.4	
		epP	22 50 11.5	
		ePcP	22 52 43.9	
	GCC	iPd	22 49 58.6	
		epP	22 50 11.6	
	PCC	e(P)	22 50 02.8	
	BRK	e(P)	22 50 04	
	BKS	e(P)	22 50 04.1	
		eS	22 55 52.0	
		eLq	22 59 26.0	
		eLr	23 02 42.0	
			AMP(μm)	PER(s)
		PZ	0.038	1.1
		LZ	3.6	20.
		LN	2.1	20.
		LE	4.6	20.
	ORV	ePd	22 50 08.9	
		epP	22 50 21.0	
		ePcP	22 52 47.0	
	MIN	ePd	22 50 13.3	
		epP	22 50 26.0	
	WDC	ePd	22 50 17.2	
		epP	22 50 30.2	
		iPcP	22 52 49.3	
	FHC	ePd	22 50 28.7	
		epP	22 50 41.5	

BRK Ms=5.3 Distance=36°
USGS 22h43m29.6s 15.5N 94.4W
h=48km mb=5.8 Ms=5.2
Near Coast of Oaxaca, Mexico

Apr 8	GCC	eP	08 24 01.4	
	PRS	eP	08 24 01.7	
	SAO	e	08 24 02	
	PRI	eP	08 24 03.3	
	MHC	ePc	08 24 04.2	
	JAS1	ePc	08 24 09.3	
		e	08 24 13.0	
	ORV	eP	08 24 11.4	
	WDC	iPc	08 24 12.2	
	MIN	ePc	08 24 13.5	
	MNA	iPc	08 24 18.2	

USGS 08h11m53.8s 26.2S 177.1W
h=102km mb=5.2
South of Fiji Islands

Apr 8	FRI	eP	18 12 46.4	
	PRI	iPd	18 12 49.1	
		e	18 12 52.0	
		e	18 12 58.3	
		e	18 13 07.5	
		e	18 13 49.0	
	LLA	iPd	18 12 51.9	
	PRS	iPd	18 12 53.0	
	SAO	eP	18 12 54.4	
	JAS1	iPd	18 12 54.7	
		i	18 12 59.5	
		i	18 13 02.5	
		e	18 13 17.0	
	MHC	ePd	18 12 58.4	
	GCC	iPd	18 12 58.4	
	PCC	ePd	18 13 01.5	
	BRK	iPd	18 13 02.8	
	BKS	iPd	18 13 02.8	
		e	18 13 24.1	
		e	18 13 48.7	
		e	18 14 03.4	
		e	18 14 07.4	
		e	18 14 17.6	
		eS	18 20 57.8	
			AMP(μm)	PER(s)
		PZ	0.48	1.0
	ORV	iPd	18 13 05.9	
		i	18 13 47.7	
	MIN	iPd	18 13 08.0	
	WDC	iPd	18 13 11.6	
		i	18 13 29.8	
	FHC	iPd	18 13 20.8	
		e	18 13 31.0	
		e	18 14 03.0	

BRK mb=6.5 h=33km Distance=59°
USGS 18h02m44.7s 7.9S 73.9W
h=173km mb=5.8
Peru-Brazil Border Region

Apr 9	MNA	e	01 56 14
	JAS1	eP	01 56 15.9
	WDC	e(P)	01 56 29.8

USGS 01h44m39.8s 34.9S 108.1W
h=10km mb=5.1
Easter Island Cordillera

Apr 9	MHC	iPd	08 34 56.7
	GCC	iPd	08 35 04.0
	PCC	iPc	08 35 05.0
	BKS	ePc	08 35 05.5
		i	08 35 08.6
	BRK	iPc	08 35 05.7
	ZSP	eP	08 35 06.6
	SAO	iPc	08 35 07.5
	LLA	iPc	08 35 11.6
	JAS1	iPd	08 35 12.7
	PRS	e	08 35 13.8
	PRI	e(P)	08 35 23.8
	ORV	eP	08 35 27.3
	MIN	e	08 35 40.0
	MNA	e	08 35 46.4

BRK 08h34m53.7s 37.5N 121.6W
h=9km ML=3.0(6) Mo=4.7E20(2)
E of Mt. Lewis, 28 km NE of San Jose, CA

Apr 9	WDC	eP	14 40 11.0	
	MIN	e(P)	14 40 18.2	
	ORV	e(P)	14 40 20	
	JAS1	e(P)	14 40 34.8	
		e	14 40 39.6	
	MNA	e(P)	14 40 43.2	

USGS 14h32m00.3s 51.0N 173.4E
h=33km mb=5.4
Aleutian Islands Region

Apr 9	MHC	iPc	16 21 57.9	
		iS	16 22 00.9	
	PCC	iPd	16 22 04.6	
	GCC	iPd	16 22 04.6	
	BKS	iPc	16 22 05.2	
	BRK	iPc	16 22 05.4	
	ZSP	iPc	16 22 06.3	
	SAO	eP	16 22 09.0	
	LLA	eP	16 22 13.3	
	JAS1	ePd	16 22 13.5	
		eS	16 22 29.0	
	PRS	e(P)	16 22 15.8	
	PRI	eP	16 22 21.3	
	ORV	eP	16 22 30.2	
	MNA	e(P)	16 22 48	

BRK 16h21m54.2s 37.5N 121.7W
h=8km ML=2.8(4) Mo=1.7E20(2)
Mt. Lewis area, 27 km NE of San Jose, CA

Apr 9	JAS1	eP	18 22 36.6	
		epP	18 23 29	
	ORV	eP	18 22 46.1	
		epP	18 23 36.7	
	LLA	e	18 23 33.5	

USGS 18h10m54.5s 23.0S 66.7W
h=216km mb=5.2
Juyjuy Province, Argentina

Apr 9	PRI	e(PKP)	22 29 04.7	
	BKS	e	22 29 05.0	
		e	22 29 08.1	
		e	22 29 10.4	
	LLA	ePKP	22 29 05.4	
	JAS1	ePKP	22 29 06.2	
	BRK	e	22 29 08.0	
	ORV	ePKP	22 29 09.2	
	WDC	ePKP	22 29 11.1	

USGS 22h10m14.3s 56.0S 27.0W
h=40km mb=5.4 Ms=5.1
South Sandwich Islands Region

Apr 10	MNA	iPc	14 09 04.6	
	FRI	iPc	14 09 16.7	
	JAS1	e	14 09 20.0	
		iPc	14 09 25.1	
		e	14 09 33.0	
	PRI	iPc	14 09 29.8	
		e	14 09 38.2	
		e	14 10 20.5	
	LLA	e	14 09 30.5	
		e	14 09 38.2	
	SAO	eP	14 09 36.2	
		e	14 09 49.2	
		e	14 10 47.5	
	MHC	iPc	14 09 38.5	
		e	14 09 49.0	
		e	14 10 50.5	
	GCC	e(P)	14 09 41	
	ORV	iPc	14 09 43.5	
	BKS	ePc	14 09 44.9	
		e	14 09 47.3	
		e	14 09 54.0	
		e	14 10 04.5	
	BRK	e(P)	14 09 45.1	
		e	14 09 55.3	
	ZSP	e(P)	14 09 45.5	
		e	14 09 56.2	
	PCC	ePc	14 09 45.8	
		i	14 09 57.0	
	MIN	e(P)	14 09 51.0	
	WDC	ePc	14 10 03.0	

BRK ML=4.8(6)
USGS 14h08m30.1s 37.2N 116.2W
h=0km mb=4.9
Underground Nuclear Explosion, N.T.S.

Apr 10	PRI	eP	20 05 57.8	
	PRS	eP	20 05 59.8	
	LLA	e	20 06 02	
	MHC	eP	20 06 06.2	
	MNA	eP	20 06 06.5	
	JAS1	eP	20 06 06.6	
	ORV	eP	20 06 17.0	
	MIN	e	20 06 20.6	
	WDC	eP	20 06 22.7	

Southern Pacific Ocean Region

Apr 10	MHC	iPc	22 13 03.6	
		iS	22 13 06.7	
	PCC	iPd	22 13 10.2	
	GCC	iPd	22 13 10.2	
	BRK	iPc	22 13 10.8	
	BKS	iPd	22 13 10.8	

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
	ZSP	ePc	22 13 11.9
	SAO	iP	22 13 14.4
	LLA	iPc	22 13 19.1
	JAS1	iPd	22 13 19.3
		iS	22 13 34.8
	PRS	iPd	22 13 20.8
	PRI	ePP	22 13 27.0
	FRI	ePc	22 13 28.0
	ORV	e	22 13 34.9
	MNA	e	22 13 52.0
BRK 22h12m59.8s 37.5N 121.7W			
h=8km ML=3.0(4) Mo=8.6E20(2)			
Mt. Lewis area, 26 km NE of San Jose, CA			
Apr 11	MNA	ePc	13 08 58.4
		e	13 09 11.4
	JAS1	ePc	13 09 09.3
		e	13 09 23.1
	LLA	ePc	13 09 10.9
	PRS	eP	13 09 12.8
	MHC	ePc	13 09 16.3
		e	13 09 29.8
	ORV	ePc	13 09 16.8
		e	13 09 30.4
	MIN	iPc	13 09 17.7
		e	13 09 31.0
	WDC	e(P)	13 09 20.9
		e	13 09 34.3
	FHC	e	13 09 32.9
	BKS	e	13 10 08.0
USGS 12h59m06.9s 12.3N 59.4W			
h=53km mb=5.0			
Windward Islands			
Apr 11	FHC	eP	17 28 48.1
	WDC	iPc	17 28 54.8
	MIN	eP	17 29 00.3
	ORV	eP	17 29 04.2
	BRK	eP	17 29 13.2
		eS	17 34 58
		eLr	17 38 38
		AMP(μm)	PER(s)
	LZ	11	20.
	BKS	eP	17 29 13.6
		eS	17 34 56
		eLq	17 37 28
		eLr	17 38 8
		AMP(μm)	PER(s)
	PZ	0.065	1.0
	LZ	22	20.
	LNE	15	20.
	LNW	16	20.
	MHC	eP	17 29 18.0
	JAS1	eP	17 29 18.7
	LLA	eP	17 29 25.2
	MNA	eP	17 29 28.7
	PRI	eP	17 29 31.0
BRK Ms=6.0 Distance=37°			
USGS 17h22m20.8s 54.2N 167.9W			
h=33km mb=5.3 Ms=5.9			
Fox Islands, Aleutian Islands			
Apr 11	MHC	iPc	18 18 00.5
	GCC	ePd	18 18 07.4
		iS	18 18 15.5
	PCC	ePc	18 18 08.2
	BKS	iPc	18 18 10.0
		e(S)	18 18 19.5
	BRK	iPd	18 18 10.1
	ZSP	iPd	18 18 11.3
	SAO	iPc	18 18 11.9
	LLA	ePc	18 18 16.4
	JAS1	iPd	18 18 18.1
BRK 18h17m58.0s 37.5N 121.7W			
h=6km ML=2.5(4) Mo=5.3E19(2)			
Mt. Lewis area, 21 km NE of San Jose, CA			
Apr 12	PRS	eP	04 15 48.9
	PRI	eP	04 15 50.2
	BKS	ePd	04 15 50.7
		AMP(μm)	PER(s)
	PZ	0.090	0.8
	BRK	eP	04 15 50.8
	MHC	eP	04 15 51.5
	FHC	eP	04 15 55.8
	JAS1	iPd	04 15 57.7
	ORV	iPd	04 15 59.3
	WDC	iPd	04 15 59.7
	MIN	eP	04 16 01.8
	MNA	ePd	04 16 08.4
USGS 04h04m31.8s 15.4S 173.2W			
h=33km mb=5.5 Ms=5.1			
Tonga Islands			
Apr 12	JAS1	eP	20 32 11.2
	ORV	e	20 32 12.0
	WDC	eP	20 32 12.8
	MNA	eP	20 32 21.0
USGS 20h20m46.4s 15.2S 173.3W			
h=33km mb=5.5 Ms=5.6			
Tonga Islands			
Apr 13	PRS	eP	02 07 16.0
	MHC	eP	02 07 18.5
	JAS1	iPd	02 07 24.8
	WDC	iPd	02 07 26.8
	PRI	e	02 07 27.7
	MNA	ePd	02 07 35.5
USGS 01h56m07.2s 15.6S 173.2W			
h=107km mb=5.2			
Tonga Islands			
Apr 13	BKS	ePc	03 12 6.5
		AMP(μm)	PER(s)
	PZ	0.056	0.8
	WDC	iPc	03 12 01.8
	MIN	iPc	03 12 05.2
	PCC	eP	03 12 06.0
	BRK	eP	03 12 06.2
	ORV	iPc	03 12 06.7
	GCC	eP	03 12 08.4
	MHC	eP	03 12 09.8
	PRS	eP	03 12 12.2
	LLA	eP	03 12 12.3
	JAS1	iPc	03 12 13.5
	PRI	eP	03 12 15.7
	FRI	eP	03 12 17.7
	MNA	iPc	03 12 22.6
USGS 03h00m20.8s 17.2W 145.6E			
h=298km mb=5.2			
Mariana Islands			
Apr 13	PRI	eP	10 01 00.3
	LLA	e	10 01 12.6
	GCC	eP	10 01 13.2
	MHC	eP	10 01 14.3
	JAS1	ePc	10 01 16.5
	MNA	ePc	10 01 20.1
	ORV	eP	10 01 38.2
	MIN	eP	10 01 45.8
	WDC	e	10 01 49.2
USGS 09h56m58.9s 19.8N 116.0W			
h=10km mb=4.5 Ms=4.1			
East Central Pacific Ocean			
Apr 14	GCC	e	00 37 42.0
	BRK	e	00 37 42.3
	FHC	e	00 37 42.6
	BKS	ePd	00 37 42.8
		ePP	00 41 16
		eS	00 49 12
		eScS	00 50 16
		eSS	00 53 48
		eLq	01 00 20
		eLr	01 03 26
		AMP(μm)	PER(s)
	PZ	0.096	1.0
	LZ	21	20.
	LN	8.9	20.
	LE	16	20.
	PRS	e	00 37 43.1
	SAO	e	00 37 44.0
	MHC	eP	00 37 44.0
	WDC	eP	00 37 45.0
	LLA	e	00 37 45.1
	PRI	eP	00 37 45.6
	ORV	eP	00 37 46.6
	JAS1	eP	00 37 47.3
		e	00 41 02.1
	MIN	eP	00 37 48.9
	MNA	eP	00 37 57.1
BRK Ms=6.5 Distance=83°			
USGS 00h25m12.5s 13.9S 166.8E			
h=29km mb=6.0 Ms=6.2			
Vanuatu Islands			
Apr 14	JAS1	iPc	06 31 37.0
		epP	06 32 27.2
	ORV	eP	06 31 38.3
		epP	06 32 28.5
	WDC	eP	06 31 38.9
		epP	06 32 29.2
	MIN	eP	06 31 40.5
	MNA	eP	06 31 46.5
		epP	06 32 36.6
USGS 06h19m59.8s 20.5S 175.9W			
h=211km mb=4.9			
Tonga Islands			
Apr 14	PRS	eP	10 48 18.5
	GCC	eP	10 48 18.6
	PCC	eP	10 48 18.7
	SAO	eP	10 48 19.2
	LLA	e	10 48 19.3
	BRK	eP	10 48 20.2
	BKS	ePc	10 48 20.4
		AMP(μm)	PER(s)
	PZ	0.047	0.8
	PRI	ePc	10 48 20.7
	MHC	eP	10 48 21.1
	JAS1	ePc	10 48 26.2
		e	10 50 15.8
	ORV	ePc	10 48 27.6
	WDC	ePc	10 48 28.1
		e	10 50 18.3
	MIN	ePc	10 48 29.9
	MNA	eP	10 48 45.7
USGS 10h37m13.0s 20.5S 177.7W			
h=506km mb=5.3			
Fiji Islands Region			
Apr 14	FHC	e	11 05 20.8
	BRK	e	11 05 26.2
	BKS	ePc	11 05 26.4
		AMP(μm)	PER(s)
	PZ	0.063	1.2
	WDC	ePc	11 05 26.7
		e	11 09 09.0
	MHC	eP	11 05 28.1
	GCC	eP	11 05 28.4
	MIN	ePc	11 05 29.1
	PRS	eP	11 05 29.2
	ORV	ePc	11 05 29.5
	LLA	eP	11 05 30.7
	PRI	e	11 05 32.0
	JAS1	ePc	11 05 32.8
		e	11 09 13.0
	FRI	iPc	11 05 35.4
	MNA	iPc	11 05 41.8
USGS 10h52m48.8s 4.9S 151.3E			
h=216km mb=5.4			
New Britain Region			
Apr 14	JAS1	ePKP	15 11 10.5
	PRS	e	15 11 10.5
	MNA	e	15 11 11.5
	MHC	e	15 11 13.3
	ORV	e	15 11 13.5
	MIN	e	15 11 14.3
	BRK	e	15 11 15.3
	WDC	e	15 11 16.7
USGS 14h52m10.6s 57.7S 24.4W			
h=11km mb=5.7 Ms=6.3			
South Sandwich Islands Region			
Apr 14	FHC	eP	22 43 14.0
	WDC	ePc	22 43 19.3
	MIN	e	22 43 24.0
	ORV	ePc	22 43 25.2
	BRK	eP	22 43 26.4
	BKS	eP	22 43 26.5
	MHC	ePc	22 43 30.0
	SAO	eP	22 43 32.5
	JAS1	iPc	22 43 33.3
	PRS	eP	22 43 33.3
	LLA	eP	22 43 34.5
	PRI	ePc	22 43 36.9
	FRI	ePc	22 43 38.1
	MNA	ePc	22 43 41.1
USGS 22h31m25.5s 25.8N 142.4E			
h=30km mb=5.4			
Volcano Islands Region			
Apr 14	SAO	iPc	23 29 30.9
	LLA	iPc	23 29 35.6
	PRS	iP	23 29 35.7
	GCC	ePc	23 29 40.0
	MHC	iPd	23 29 42.5
	PRI	ePd	23 29 43.6
		iS	23 29 58.3
	PCC	iPd	23 29 49.4
	BRK	e	23 29 52.7
		e	23 29 55.6
	FRI	iPd	23 29 52.9
	JAS1	ePd	23 29 53.3
		iS	23 30 12.2
	ZSP	e	23 29 53.8
	BKS	ePc	23 29 54.9
	ORV	e	23 30 13
	MNA	e	23 30 21.2
BRK 23h29m28.7s 36.7N 121.4W			
h=6km ML=2.8(4)			
Stone Canyon, 18 km SSE of Hollister, CA			
Apr 15	ARC	iP	00 13 35.7
		iS	00 13 49.0
	FHC	iPc	00 13 36.9
		iS	00 13 50.0
	WDC	iPc	00 13 51.8
	MIN	iPc	00 14 01.8
	ORV	eP	00 14 03.8
	ZSP	e(P)	00 14 09.0
		e	00 14 47.6
	BKS	iP	00 14 09.6
	BRK	iPc	00 14 10.0
	PCC	iPc	00 14 13.0
	GCC	e(P)c	00 14 19.3
	MHC	iPc	00 14 19.9
	SAO	iPc	00 14 26.1
	JAS1	iPc	00 14 26.8
	LLA	eP	00 14 31.3
	PRS	eP	00 14 31.5
	PRI	e(P)	00 14 39.8
	FRI	i	00 14 40.9
	MNA	e	00 14 45.0
BRK 00h13m16.9s 40.4N 125.3W			
h=5kmR ML=4.4(8) Mo=8.6E21(2)			
Off Coast 120 km SW of Eureka, CA			
Apr 15	PRI	e(P)	00 50 20
	WDC	eP	00 50 26.0
	JAS1	ePd	00 50 26.7
	ORV	eP	00 50 27.6
	MIN	eP	00 50 29.7
	MNA	ePd	00 50 37.0
USGS 00h38m59.3s 14.9S 174.3W			
h=33km mb=5.2 Ms=5.4			
Samoa Islands Region			
Apr 15	MHC	iPc	05 23 21.95
		iS	05 23 24.3
	GCC	ePd	05 23 28.8
	PCC	iPc	05 23 29.7
	BRK	iPc	05 23 31.1
	BKS	iPc	05 23 31.1
	SAO	eP	05 23 33.4
	LLA	eP	05 23 37.5
	JAS1	iPc	05 23 39.4
		iS	05 23 39.4
		iS	05 23 54.5
	PRS	e	05 23 40
	PRI	e(P)	05 23 45.6
BRK 05h23m19.3s 37.5N 121.7W			
h=6km ML=2.5(4) Mo=8.8E19(2)			
Mt. Lewis area, 22 km NE of San Jose, CA			
Apr 15	GCC	ePd	07 58 56.7
	PRS	eP	07 58 57.2
	PRI	ePd	07 58 59.2
	MHC	ePd	07 58 59.4
	JAS1	ePd	07 59 05.0
	WDC	ePd	07 59 05.7
	ORV	ePd	07 59 06.0
	MNA	eP	07 59 14.5
USGS 07h48m10.1s 18.2S 177.9W			
h=630km mb=4.9			
Fiji Islands Region			
Apr 15	SAO	iPc	09 25 59.1
	LLA	iPc	09 26 03.5
	PRS	iPd	09 26 03.7
	GCC	iPc	09 26 08.4
	MHC	iPd	09 26 10.8
		iS	09 26 22.4
	PRI	iPd	09 26 11.5
		i	09 26 12.8
	PCC	iPd	09 26 17.7
	BRK	eP	09 26 20.4
	BKS	iP	09 26 20.6
	FRI	eP	09 26 21.0
	ZSP	iPd	09 26 22.0
	JAS1	iPd	09 26 22.1
		iS	09 26 42.1
	ORV	iPc	09 26 43.0
	MNA	e	09 26 52.0
		e	09 27 34
		e	09 27 39
	MIN	e	09 26 55.7
BRK 09h25m56.7s 36.7N 121.3W			
h=4km ML=3.6(6) Mo=3.6E21(2)			
Stone Canyon, 19 km SSE of Hollister, CA			
Apr 15	WDC	eP	10 37 51.1
	ORV	eP	10 37 55.0
	JAS1	eP	10 38 01.8
	PRI	e(P)	10 38 03.5
	MNA	e(P)	10 38 10
USGS 10h25m14.4s 12.1N 143.8E			
h=14km mb=5.3			
South of Mariana Islands			
Apr 15	GCC	eP	13 26 16.2
	PCC	ePc	13 26 16.5
	PRS	eP	13 26 16.5
	SAO	e(P)	13 26 17.2
	BRK	eP	13 26 18.5
	BKS	eP	13 26 18.7
		AMP(μm)	PER(s)
	PZ	0.066	0.8
	PRI	eP	13 26 18.8
	LLA	eP	13 26 19.0
	MHC	eP	13 26 19.1
	JAS1	iPc	13 26 25.2
	ORV	iPc	13 26 26.6
	WDC	eP	13 26 27.1
	MIN	eP	13 26 29.0
	MNA	ePc	13 26 35.8
USGS 13h15m02.8s 15.6S 173.9W			
h=88km mb=5.3			
Tonga Islands			
Apr 15	ARC	eP	14 05 01.2
		iS	14 05 13.2
	FHC	iP	14 05 02.0
		i	14 05 08.7
		i	14 05 12.3
		iS	14 05 14.7
	WDC	iPc	14 05 17.3
	MIN	eP	14 05 27.4
	ORV	eP	14 05 30.7
		e(S)	14 06 06.2
	PCC	eP	14 05 40.6
	MHC	e(P)	14 05 44.4
	SAO	e(P)	14 05 54.3
BRK 14h04m44.0s 40.6N 125.2W			
h=5kmR ML=3.5(4) Mo=5.5E20(2)			
Off Coast 90 km SW of Eureka, CA			
Apr 16	FHC	e(P)	01 43 18
	WDC	eP	01 43 23.7
	MIN	eP	01 43 27.0
	ORV	ePd	01 43 29.7
	BRK	e(P)	01 43 31.4
	BKS	eP	01 43 31.8
		eS	01 43 46
		e	01 44 12

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DATE	STA	PHASE	TIME (UTC)
		eLg	02 06 16
		eLr	02 12 12
		AMP(μm)	PER(s)
		PZ	0.056 0.6
		LZ	3.9 20.
		LN	2.9 20.
		LE	3.8 20.
	MHC	e(P)	01 43 35.5
	JAS1	e(P)	01 43 38.7
	PRS	e(P)	01 43 39.2
	LLA	e(P)	01 43 40.2
	PRI	e(P)	01 43 43.0
	MNA	eP	01 43 46.3
BRK Ms=5.8 Distance=76°			
USGS 01h31m44.2s 30.6N 141.6E			
h=30km mb=5.7 Ms=5.6			
South of Honshu, Japan			
Apr 16	LLA	iPc	04 46 29.5
	PRS	iPd	04 46 29.8
	GCC	eP	04 46 35.0
	MHC	e(P)	04 46 37.7
	PRI	eP	04 46 38.5
	PCC	ePd	04 46 43.8
	JAS1	e	04 46 51.1
BRK 04h46m22.9s 36.7N 121.3W			
h=2km ML=2.5(2)			
Stone Canyon, 19 km SSE of Hollister, CA			
Apr 16	FHC	eP	13 02 39.1
	WDC	eP	13 02 45.1
		ePKPPKP	13 31 40
	MIN	eP	13 02 49.4
	ORV	eP	13 02 52.5
	BRK	eP	13 02 56.4
		i	13 03 10
		eS	13 11 39
		eSS	13 16 00
		e	13 19 13
		eLr	13 22 14
		AMP(μm)	PER(s)
		LZ	3.5 20.
	BKS	ePd	13 02 57.6
		eS	13 11 38
		eScS	13 12 58
		eSS	13 15 56
		eLq	13 19 10
		eLr	13 22 00
		AMP(μm)	PER(s)
		PZ	0.16 1.2
		LZ	6.1 20.
		LN	5.2 20.
		LE	5.5 20.
	GCC	eP	13 03 00.6
		e	13 03 14.1
	SAO	e(P)	13 03 03.5
	JAS1	eP	13 03 04.1
		ePKPPKP	13 31 22
	PRS	eP	13 03 06.2
	LLA	eP	13 03 06.8
	PRI	eP	13 03 10.2
		e	13 03 40
	FRI	eP	13 03 10.2
	MNA	eP	13 03 11.1
		i	13 03 30.5
		ePKPPKP	13 31 24
BRK Ms=5.9 Distance=66°			
USGS 12h52m16.1s 43.9N 147.6E			
h=23km mb=6.3 Ms=6.1			
Kuril Islands			
Apr 16	WDC	eP	19 07 13.5
	ORV	eP	19 07 15.9
	PRS	e(P)	19 07 25
	JAS1	eP	19 07 25.0
	MNA	e(P)	19 07 32.7
USGS 18h55m30.5s 30.7N 141.4E			
h=26km mb=5.4 Ms=5.2			
South of Honshu, Japan			
Apr 17	MNA	e(P)	07 37 00
	PRI	eP	07 37 00.6
		e	07 37 27.8
	LLA	eP	07 37 03.0
		e	07 37 30.2
	JAS1	eP	07 37 05.8
		e	07 37 33.0
	GCC	e	07 37 08
	ORV	iPc	07 37 15.7
		e	07 37 42.9
	WDC	eP	07 37 20.6
		e	07 37 48.1
USGS 07h25m27.7s 20.9S 68.9W			
h=100km mb=4.7			
Chile-Bolivia Border Region			
Apr 18	MNA	e	03 31 19.7
	LLA	eP	03 31 21.7
	PRS	eP	03 31 22.2
	JAS1	eP	03 31 24.5
	GCC	eP	03 31 26.8
	MHC	e	03 31 27.3
	ORV	eP	03 31 34.3
	MIN	eP	03 31 36.1
	WDC	eP	03 31 39.5
USGS 03h19m39.9s 22.7S 68.5W			
h=118km mb=5.1			
Northern Chile			
Apr 18	SAO	iPd	06 21 22.8
	GCC	iPc	06 21 27.6
	PRS	iPd	06 21 30.2
	MHC	iPd	06 21 30.9
	LLA	iPc	06 21 31.0
	PCC	ePc	06 21 36.9
	FRI	iPd	06 21 37.5
	PRI	iPc	06 21 39.2
	BRK	e(P)	06 21 40.3
		i	06 21 42.4
	BKS	e(P)	06 21 40.8
		i	06 21 42.6
		eS	06 21 58.7
	ZSP	ePd	06 21 41.8
		i	06 21 44.0
	JAS1	iPc	06 21 44.7
		iS	06 22 03.0
	ORV	e	06 22 07.7
BRK 06h21m20.2s 36.8N 121.6W			
h=6km ML=2.9(4)			
San Juan Bautista, 17 km W of Hollister, CA			
Apr 18	FHC	iPc	09 35 55.2
		i	09 36 06.7
	WDC	iPc	09 35 58.6
		iS	09 36 10.1
	MIN	iPc	09 36 08.4
		i	09 36 10.1
	ORV	eP	09 36 17.7
		i	09 36 21.9
BRK 09h35m44.5s 41.1N 123.4W			
h=39km ML=3.0(4)			
Salmon Mountain, 55 km NE of Arcata, CA			
Apr 18	ZSP	iPd	11 00 27.8
	BKS	iPd	11 00 29.0
		eS	11 00 34.5
	BRK	iPd	11 00 29.1
		i	11 00 35.2
	PCC	ePc	11 00 35.8
	MHC	eP	11 00 40.8
	GCC	e(P)	11 00 44.4
	JAS1	eP	11 00 46.5
	SAO	e	11 00 49.0
	ORV	e	11 00 54.5
BRK 11h00m21.7s 38.2N 122.2W			
h=3km ML=2.3(2)			
10 km SE of Napa, CA			
Apr 19	FRI	eP	23 38 09.1
	MNA	eP	23 38 11.4
	PRI	eP	23 38 11.8
	LLA	eP	23 38 13.5
	PRS	eP	23 38 14.5
	JAS1	eP	23 38 17.3
	MHC	eP	23 38 19.1
	GCC	eP	23 38 19.8
	BRK	e	23 38 24.7
	BKS	eP	23 38 25.0
		AMP(μm)	PER(s)
		PZ	0.094 1.2
	ORV	iPd	23 38 29.4
	MIN	e	23 38 29.6
	WDC	eP	23 38 35.5
	FHC	eP	23 38 44.3
USGS 23h28m09.1s 9.3S 79.0W			
h=61km mb=5.5			
Off Coast of Northern Peru			
Apr 20	WDC	eP	07 17 04.2
	BRK	e	07 17 06.9
	ORV	eP	07 17 07.5
	BKS	eP	07 17 08
		ePP	07 20 59
		eSKS	07 27 44
		e(SS)	07 35 48
		e(SSS)	07 37 56
		e	07 42 40
		eLq	07 43 16
		e	07 45 40
		eL2	08 17 44
		eR2	08 22 28
		AMP(μm)	PER(s)
		PZ	0.084 .8
		LZ	27 20.
		LN	12 20.
		LE	20 20.
	MHC	e	07 17 09.2
	MIN	eP	07 17 09.8
	PRS	e	07 17 10.2
	JAS1	e	07 17 12.0
	LLA	e	07 17 12.9
	PRI	eP	07 17 14.8
	MNA	eP	07 17 20.3
BRK Ms=6.7 Distance=101°			
USGS 07h03m30.9s 2.4S 139.3E			
h=33km mb=6.1 Ms=6.7			
West Irian			
Apr 20	MNA	iPc	23 13 07.9
		i	23 13 16.6
		i	23 13 44.1
	FRI	iPc	23 13 19.0
	JAS1	eP	23 13 28.0
		e	23 13 38.4
		e	23 14 26.6
	PRI	ePc	23 13 31.4
	LLA	e	23 13 32.3
	PRS	e	23 13 37.8
	MHC	e	23 13 42.7
	ORV	iPc	23 13 47.4
	GCC	e	23 13 52.3
BRK ML=4.0(1)			
USGS 23h12m29.9s 37.0N 116.0W			
h=5km mb=4.0			
Southern Nevada			
Apr 21	PRS	eP	01 22 44.4
	LLA	e	01 22 44.5
	PRI	eP	01 22 48.3
	MHC	eP	01 22 48.7
	JAS1	iPc	01 22 54.8
	ORV	ePc	01 22 56.3
	WDC	ePc	01 22 56.7
	MNA	ePc	01 23 05.4
USGS 01h11m29.0s 15.2S 173.3W			
h=33km mb=5.2 Ms=4.6			
Tonga Islands			
Apr 21	SAO	e(P)	18 42 56.3
	MHC	ePc	18 42 58.1
	JAS1	iPc	18 43 04.2
	ORV	ePc	18 43 06.0
	WDC	iPc	18 43 06.7
	MNA	iPc	18 43 14.1
USGS 18h31m21.3s 19.3S 173.2W			
h=33km mb=5.1			
Tonga Islands			
Apr 22	MNA	iPc	14 30 32.2
	FRI	iPc	14 30 44.1
	JAS1	iPc	14 30 52.1
		i	14 30 59.6
	PRI	iPc	14 30 57.3
		i	14 31 04.8
	LLA	eP	14 30 57.9
		i	14 30 59.6
		i	14 31 03.5
	SAO	ePc	14 31 03.3
		i	14 31 10.7
	PRS	iPc	14 31 03.8
		i	14 31 12.3
	MHC	iPc	14 31 05.7
		i	14 31 15.5
		i	14 32 13.6
	GCC	eP	14 31 08.9
		iP*	14 31 15.6
	ORV	iPc	14 31 11.1
	BRK	ePc	14 31 12.2
		iP*	14 31 21.8
	BKS	eP	14 31 12.4
		iS	14 32 52.0
	PCC	ePc	14 31 13.0
	ZSP	e(P)	14 31 13.0
		i	14 31 22.5
	MIN	ePc	14 31 18.6
	WDC	iPc	14 31 28.0
		i	14 31 46.3
	FHC	e	14 31 41.5
BRK ML=5.4(7)			
USGS 14h30m00.0s 37.3N 116.4W			
h=0km mb=5.3 Ms=4.2			
Underground Nuclear Explosion, N.T.S.			
Apr 22	SAO	iP	17 47 51.15
	PRS	iPd	17 47 58.7
	LLA	iPc	17 47 59.3
	GCC	eP	17 47 59.4
	MHC	iPd	17 48 02.4
	PRI	eP	17 48 06.7
		eS	17 48 23.5
	PCC	iPd	17 48 08.8
	BRK	e	17 48 12.0
	BKS	eP	17 48 12.4
		eS	17 48 35.7
	FRI	eP	17 48 15.6
	JAS1	iS	17 48 34.5
BRK 17h47m50.2s 36.8N 121.5W			
h=3km ML=3.0(4)			
Fremont Peak, 13 km SW of Hollister, CA			
Apr 22	PRS	eP	18 48 05.6
		epP	18 48 21.9
	GCC	e(P)	18 48 05.7
	PRI	ePd	18 48 07.3
		epP	18 48 23.6
	MHC	eP	18 48 08.3
	JAS1	iPd	18 48 13.3
		epP	18 48 29.2
	ORV	ePd	18 48 15.1
		epP	18 48 31.6
	WDC	ePd	18 48 16.4
		epP	18 48 32.7
	MNA	ePd	18 48 21.4
		epP	18 48 37.9
USGS 18h35m40.1s 29.0S 177.7W			
h=57km mb=5.4			
Kermadec Islands			
Apr 23	WDC	iPc	09 23 33.7
	MIN	ePc	09 23 37.4
	ORV	iPc	09 23 40.0
	BKS	eP	09 23 41.7
		eS	09 33 24
		e	09 36 10
		eSSS	09 41 36
		eLq	09 43 40
		eLr	09 45 40
		AMP(μm)	PER(s)
		PZ	0.078 1.0
		LZ	5.9 20.
		LN	5.7 20.
		LE	5.7 20.
	MHC	e(P)	09 23 45.9
	JAS1	iPc	09 23 49.0
	PRS	eP	09 23 49.6
	FRI	eP	09 23 54.2
	MNA	eP	09 23 56.7
BRK Ms=5.9 Distance=78°			
USGS 09h11m53.2s 30.6N 142.0E			
h=13km mb=5.6 Ms=5.7			
South of Honshu, Japan			
Apr 23	MHC	iPd	16 35 09.1
		iS	16 35 12.3
	GCC	iPd	16 35 14.0
	PCC	ePc	16 35 15.5
	BKS	eP	16 35 17.5
		e(S)	16 35 26.5
	BRK	ePc	16 35 17.6
	SAO	ePd	16 35 19.9
	LLA	ePc	16 35 25.4
	PRS	ePd	16 35 27.2
	JAS1	iPd	16 35 28.4
		iS	16 35 46.0
	PRI	ePc	16 35 33.8
	PRI	gP	20 36 37.8
	MNA	iPc	20 36 37.9
	LLA	ePc	20 36 40.6
	PRS	ePc	20 36 41.8
	SAO	e(P)	20 36 43.2
	JAS1	eP	20 36 44.2
	GCC	ePc	20 36 47.4
	MHC	iPc	20 36 47.7
	ORV	ePc	20 36 56.8
	WDC	iPc	20 37 03.3
	FHC	eP	20 37 12.4
USGS 20h27m12.7s 3.9S 81.0W			
h=46km mb=5.4 Ms=4.4			
Peru-Ecuador Border Region			
Apr 25	JAS1	eP	16 59 15.2
		e	16 59 24.3
		ipP	16 59 48.4
	ORV	eP	16 59 16.5
	WDC	eP	16 59 17.1
		e	16 59 24.5
		ipP	16 59 50.3
	MNA	eP	16 59 25.4
		ipP	16 59 58.8
	GCC	e	16 59 39.2
	PRI	e	16 59 41.8
	BRK	e	16 59 41.8
	BKS	e	16 59 41.8
	MHC	e	16 59 42.3
USGS 16h47m49.6s 17.3S 174.1W			
h=131km mb=5.4			
Tonga Islands			
Apr 26	WDC	iPd	17 15 07.1
	MIN	eP	17 15 13.6
	ORV	iPd	17 15 22.9
	JAS1	iPd	17 15 48.8
	MNA	eP	17 15 53.6
	PRI	e	17 16 13.7
USGS 17h12m24.2s 50.5N 129.8W			
h=10km mb=4.4 Ms=4.4			
Vancouver Island Region			
Apr 26	BRK	eP	17 26 25.5
	BKS	eP	17 26 25.5
		AMP(μm)	PER(s)
		PZ	0.087 1.0
	FHC	eP	17 26 26.5
	PRS	eP	17 26 27.0
	SAO	eP	17 26 27.5
	MHC	eP	17 26 28.6
	PRI	eP	17 26 31.9
	WDC	iPd	17 26 33.6
	ORV	iPd	17 26 35.8
	JAS1	iPd	17 26 37.5
	MIN	iPd	17 26 38.1
	FRI	e	17 26 39.5
	MNA	eP	17 26 53.7
USGS 17h19m46.6s 20.8N 155.7W			
h=33km mb=5.1			
Hawaiian Islands			
Apr 26	PRI	iPd	20 36 50.6
	LLA	ePc	20 37 00.6
	PRS	iPc	20 37 00.7
		iS	20 37 11.7
	SAO	iPd	20 37 05.9
	FRI	iP	20 37 10.6

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DATE	STA	PHASE	TIME (UTC)
		iS	20 37 25.2
	GCC	e	20 37 13.6
	MHC	e	20 37 17.5
	JAS1	i	20 37 21.6
BRK 20h36m48.1s 36.0N 120.7W			
h=4km ML=2.5(2)			
25 km NW of Parkfield, CA			
Apr 27	JAS1	ePKPc	03 43 01.2
	ORV	ePKPP	03 43 03.0
	MIN	ePKPP	03 43 03.2
	WDC	ePKPPc	03 43 04.3
USGS 03h24m06.2s 31.1S 13.5W			
h=10km mb=5.7 Ms=5.7			
South Atlantic Ridge			
Apr 27	PCC	eP	09 34 36.5
	GCC	eP	09 34 36.6
	PRS	ePd	09 34 37.2
	SAO	eP	09 34 37.7
	BRK	eP	09 34 39.0
	PRI	eP	09 34 39.2
	MHC	eP	09 34 39.3
	JAS1	iPd	09 34 44.9
		epP	09 36 44.9
	WDC	ePd	09 34 45.7
		epP	09 36 46.3
	ORV	ePd	09 34 45.9
		epP	09 36 46.0
	MIN	eP	09 34 48.1
		epP	09 36 48.2
	MNA	iPd	09 34 54.7
USGS 09h23m44.5s 18.0S 178.4W			
h=571km mb=5.4			
Fiji Islands Region			
Apr 27	ORV	eP	09 59 25.3
	WDC	e	09 59 25.3
	JAS1	e	09 59 27.1
	MNA	eP	09 59 36.3
USGS 09h46m28.5s 6.8S 154.5E			
h=35km mb=5.4 Ms=4.9			
Solomon Islands			
Apr 27	MNA	e	16 16 40.5
		e	16 17 20.8
		e	16 18 32.7
		i	16 18 36.8
	JAS1	eP	16 16 45.3
		i	16 19 24.0
	WDC	e	16 17 37.5
USGS 16h14m29.1s 30.5N 113.9W			
h=10km mb=5.0			
Gulf of California			
Apr 27	FHC	eP	22 07 00.0
	WDC	ePc	22 07 08.3
	ORV	iPc	22 07 18.2
	BRK	eP	22 07 23.7
	BKS	eP	22 07 24.2
		AMP(μm)	PER(s)
		PZ 0.042	0.7
	JAS1	iPc	22 07 33.6
	PRS	eP	22 07 37.0
	LLA	eP	22 07 37.9
	MNA	eP	22 07 42.2
	PRI	eP	22 07 42.4
USGS 22h00m31.3s 52.8N 168.6W			
h=33km mb=4.8			
Fox Islands, Aleutian Islands			
Apr 28	MHC	iP	17 33 50.8

DATE	STA	PHASE	TIME (UTC)
	GCC	iPd	17 33 57.6
	PCC	iPc	17 33 58.2
	BRK	iPc	17 33 59.4
	BKS	iPc	17 33 59.4
	ZSP	iPc	17 34 00.3
	SAO	iP	17 34 02.0
	LLA	iPc	17 34 06.6
	JAS1	iPd	17 34 07.7
	PRS	eP	17 34 08.8
	PRI	eP	17 34 14.3
	FRI	iPd	17 34 15.9
	ORV	eP	17 34 21.4
	MIN	e	17 34 34.1
	MNA	e	17 34 35.3
	WDC	ePc	17 34 35.9
BRK 17h33m47.8s 37.5N 121.7W			
h=7km ML=3.5(6) Mo=3.9E21(4)			
Mt. Lewis area, 23 km NE of San Jose, CA			
Apr 28	MNA	ePKPc	18 29 34.6
	ORV	ePKPc	18 29 35.8
	JAS1	e(PKP)	18 29 38.8
USGS 18h09m57.5s 8.7S 38.9E			
h=10km mb=5.0			
Tanzania			
Apr 28	SAO	iPd	22 18 44.3
	LLA	iPc	22 18 46.8
	PRS	iPd	22 18 50.0
	GCC	iPc	22 18 52.2
	MHC	iPc	22 18 52.5
	PRI	iPc	22 18 56.4
	PCC	ePc	22 19 00.1
	FRI	iPc	22 19 03.2
	BRK	iPd	22 19 03.3
	BKS	iPd	22 19 03.4
	JAS1	iPd	22 19 03.6
		iS	22 19 21.6
	ZSP	iPd	22 19 04.7
	ORV	eP	22 19 24.5
	MNA	e	22 19 29.3
		i	22 19 32.8
	MIN	e	22 19 35.8
BRK 22h18m40.6s 36.8N 121.3W			
h=8km ML=3.6(6) Mo=3.2E21(2)			
13 km ESE of Hollister, CA			
Apr 29	WDC	ePc	08 29 43.5
	MIN	ePc	08 29 47.2
	ORV	e(P)	08 29 50.0
	BRK	e(P)	08 29 52.4
	BKS	e(P)	08 29 52.4
		AMP(μm)	PER(s)
		PZ 0.020	0.6
	JAS1	ePc	08 29 59.1
		e	08 30 02.6
		e	08 30 15.8
	PRS	eP	08 29 59.8
	FRI	eP	08 30 04.1
	MNA	ePc	08 30 06.6
USGS 08h17m58.7s 30.8N 141.5E			
h=38km mb=5.1 Ms=5.2			
South of Honshu, Japan			
Apr 29	PRS	e(P)	15 29 12
	GCC	e(P)	15 29 12.8
	SAO	e(P)	15 29 13.7
	JAS1	ePc	15 29 20.4
	ORV	eP	15 29 20.4
	WDC	eP	15 29 23.1
	MIN	eP	15 29 24.8

DATE	STA	PHASE	TIME (UTC)
	MNA	eP	15 29 31.1
USGS 15h17m51.9s 18.8S 174.6W			
h=176km mb=4.8			
Tonga Islands			
Apr 30	WDC	e(P)	04 36 46.6
	ORV	e(P)	04 36 53.0
	MNA	eP	04 37 08.7
USGS 04h24m48.8s 35.4N 131.5E			
h=33km mb=5.1			
Sea of Japan			
Apr 30	FRI	ePc	07 12 28.6
	PRI	ePc	07 12 29.4
		e	07 20 48
		e	07 23 47
	MNA	iPc	07 12 33.0
	LLA	eP	07 12 33.3
	PRS	eP	07 12 34.0
	SAO	e(P)	07 12 36
	JAS1	ePc	07 12 38.9
		e	07 20 45
		e	07 23 38
	GCC	e(P)	07 12 41.7
	MHC	ePc	07 12 41.8
	PCC	e(P)	07 12 46.7
	BKS	ePc	07 12 48
		eS	07 17 24
		eLq	07 19 16
		AMP(μm)	PER(s)
		PZ 0.20	1.0
		LN 290	20.
		LE 210	20.
	BRK	e(P)	07 12 48.1
	ORV	ePc	07 12 55.3
	MIN	ePc	07 13 00.8
	WDC	iPc	07 13 05.4
		e	07 22 34
	FHC	eP	07 13 16.0
BRK Ms=6.9 Distance=27°			
USGS 07h07m18.1s 18.4N 103.0W			
h=26km mb=6.2 Ms=7.0			
Michoacan, Mexico			
Apr 30	FRI	eP	08 14 10.0
	PRI	ePc	08 14 10.3
	MNA	ePc	08 14 14.2
	JAS1	ePc	08 14 20.3
	MHC	e(P)	08 14 23.5
	ORV	ePc	08 14 37.3
	MIN	e(P)	08 14 41
	WDC	eP	08 14 46.2
	FHC	e(P)	08 14 58.7
USGS 08h09m01.0s 18.4N 103.0W			
h=33km mb=4.9			
Near Coast of Michoacan, Mexico			
Apr 30	LLA	e(P)	08 18 08
	MNA	ePc	08 18 08.2
	MHC	e(P)	08 18 16.8
	ORV	eP	08 18 31.01
	WDC	eP	08 18 39.3
Michoacan, Mexico			
Apr 30	MNA	iPc	14 20 56.5
		epP	14 21 23.2
	PRI	ePc	14 20 56.7
		epP	14 21 23.6
	FRI	eP	14 20 57.9
	LLA	eP	14 20 59.5
		epP	14 21 25.7
	PRS	ePc	14 21 00.1

DATE	STA	PHASE	TIME (UTC)
	SAO	e(P)	14 21 01.9
	JAS1	eP	14 21 02.3
		ipP	14 21 29.0
	GCC	eP	14 21 04.9
	MHC	eP	14 21 05.2
		epP	14 21 31.9
	BRK	e(P)	14 21 08.9
	BKS	e(P)	14 21 09.4
		AMP(μm)	PER(s)
		PZ 0.042	0.7
	ORV	ePd	14 21 12.7
		ipP	14 21 39.2
	WDC	iPd	14 21 17.9
	FHC	eP	14 21 25.8
		epP	14 21 52.3
USGS 14h09m39.9s 18.0S 69.5W			
h=105km mb=5.5			
Northern Chile			
Apr 30	WDC	e(PKP)	18 07 41.0
	JAS1	e(PKP)	18 07 41.2
	ORV	e(PKP)	18 07 42
	PRI	e(PKP)	18 07 46
	MNA	e(PKP)	18 07 46.5
USGS 17h47m52.6s 47.2S 100.1E			
h=10km mb=5.3 Ms=5.6			
Southeast Indian Rise			
Apr 30	ARC	iP	22 37 38.2
		iS	22 37 43.8
	FHC	iPc	22 37 39.1
		iS	22 37 44.7
	WDC	iPc	22 37 54.9
		iS	22 38 14.0
	MIN	ePc	22 38 05.2
		i	22 38 27.3
		i	22 38 31.5
	ORV	iPc	22 38 10.2
	PCC	e(P)	22 38 24.5
		e	22 39 04
	MHC	ePc	22 38 31.4
		e	22 39 18.8
	GCC	ePc	22 38 33.2
	SAO	eP	22 38 38.6
	LLA	e	22 38 44.5
		e	22 39 40
BRK 22h37m30.4s 40.8N 124.6W			
h=19km ML=3.9(4) Mo=1.3E21(1)			
Off Coast 35 km W of Eureka, CA			
Apr 30	FHC	eP	23 27 05.4
		epP	23 27 18.7
	WDC	eP	23 27 10.0
		epP	23 27 23.3
	ORV	eP	23 27 15.8
		epP	23 27 29.1
	BRK	e(P)	23 27 18.3
		epP	23 27 31.7
	BKS	e(P)	23 27 20.1
		AMP(μm)	PER(s)
		PZ 0.035	1.0
	MHC	e(P)	23 27 21.9
	JAS1	eP	23 27 24.1
		epP	23 27 37.5
	PRS	e	23 27 26
	FRI	eP	23 27 28.7
		epP	23 27 42.6
	PRI	e(P)	23 27 29
		epP	23 27 42.3
	MNA	e(P)	23 27 30.5
		epP	23 27 44.0
USGS 23h14m43.7s 28.7N 130.1E			

DATE	STA	PHASE	TIME (UTC)
h=43km mb=5.5 Ms=5.5			
Ryukyu Islands			
May 1	GCC	eP	17 32 43.8
	PRS	eP	17 32 44.2
	PRI	eP	17 32 46.7
	MHC	eP	17 32 46.9
	BKS	eP	17 32 47.6
		AMP(μm)	PER(s)
		PZ 0.035	1.0
	LLA	e	17 32 49.4
	FRI	eP	17 32 52.5
	JAS1	ePc	17 32 53.4
		e	17 33 08.2
		ePP	17 35 36.3
	ORV	ePc	17 32 55.5
		e	17 33 09.4
		ePP	17 35 38
	WDC	ePc	17 32 56.0
		e	17 33 10.0
		ePP	17 35 38.1
	MNA	ePc	17 33 03.6
USGS 17h21m24.2s 15.1S 174.4W			
h=33km mb=5.2 Ms=5.5			
Tonga Islands			
May 1	PRS	eP	19 44 20.2
	PRI	eP	19 44 22.1
	MHC	eP	19 44 22.1
	FRI	e(P)	19 44 27
	ORV	eP	19 44 27.0
	JAS1	eP	19 44 27.2
	WDC	e	19 44 29.0
	MNA	eP	19 44 35.5
USGS 19h31m40.2s 21.9S 170.2E			
h=51km mb=5.8 Ms=5.8			
Loyalty Islands Region			
May 1	GCC	ePc	22 22 51.2
	PCC	ePc	22 22 51.3
	PRS	iPc	22 22 51.6
	SAO	ePc	22 22 52.2
	MHC	ePc	22 22 53.6
	PRI	eP	22 22 53.8
	FRI	ePc	22 22 59.0
	WDC	ePc	22 23 00.5
	ORV	iPc	22 23 00.6
	MNA	iPc	22 23 09.1
USGS 22h12m01.9s 17.9S 178.6W			
h=609km mb=5.0			
Fiji Islands Region			
May 2	FHC	e	10 38 44.8
	WDC	iPc	10 38 52.4
	MIN	iPc	10 38 57.2
	ORV	iPc	10 39 01.6
	BRK	e	10 39 06.8
	BKS	eP	10 39 07.4
		eS	10 46 11
		eSS	10 50 08
		eLq	10 52 08
		eLr	10 54 20
		AMP(μm)	PER(s)
		PZ 0.036	0.8
		LZ 7.5	20.
		LNE 5.2	20.
		LNW 5.2	20.
	PCC	e	10 39 08.3
	MHC	eP	10 39 13.3
	GCC	eP	10 39 14.6
	JAS1	iPc	10 39 15.5
	SAO	e	10 39 16.8

DATE	STA	PHASE	TIME (UTC)
	PRS	eP	10 39 19.7
	LLA	eP	10 39 20.2
	MNA	iPc	10 39 22.4
	FRI	iPc	10 39 22.9
	PRI	eP	10 39 24.1
BRK Ms=5.7 Distance=51°			
USGS 10h30m02.9s 55.2N 163.8E			
h=14km mb=6.0 Ms=5.9			
Off East Coast of Kamchatka			
May 3	PRS	iPd	01 10 04.6
		iS	01 10 14.5
	PRI	eP	01 10 10.3
		iS	01 10 21.4
	SAO	iPd	01 10 11.8
	LLA	e	01 10 12.3
BRK 01h09m53.4s 35.7N 121.6W			
h=9km Mag=2.5			
Off Coast 40 km NW of San Simeon, CA			
May 3	WDC	eP	23 10 02.2
	MIN	eP	23 10 05.7
	ORV	eP	23 10 13.1
	MNA	e	23 10 29.1
	JAS1	eP	23 10 29.7
	MHC	e	23 10 36.2
	FRI	e	23 10 39.4
USGS 23h05m11.6s 62.2N 124.0W			
h=10km mb=4.9 Ms=4.2			
Northwest Territories, Canada			
May 4	WDC	ePc	09 47 00.2
	MIN	eP	09 47 04.0
	ORV	eP	09 47 06.2
	BKS	eP	09 47 11.0
		AMP(μm)	PER(s)
		PZ 0.055	1.3
	MHC	eP	09 47 12.9
	JAS1	eP	09 47 15.5
	LLA	e	09 47 16.4
	PRS	e	09 47 16.8
	PRI	e	09 47 20.2
	FRI	eP	09 47 20.4
	MNA	eP	09 47 23.4
USGS 09h35m25.7s 32.2N 141.6E			
h=27km mb=5.3 Ms=4.7			
South of Honshu, Japan			
May 4	JAS1	eP	12 45 55.1
		e	12 46 07.3
	WDC	e	12 45 56.3
	ORV	e	12 45 59.0
	MIN	e	12 45 59.3
	MHC	e	12 46 02.3
	PRS	e	12 46 05.9
	FRI	e	12 46 10.0
	MNA	e	12 46 11.8
USGS 12h33m04.4s 11.7N 141.9E			
h=49km mb=5.1			
West Caroline Islands			
May 4	WDC	eP	15 17 37.2
	ORV	eP	15 17 55.0
	JAS1	eP	15 18 18.8
	FRI	eP	15 18 37.9
USGS 15h16m04.2s 44.2N 129.2W			
h=10km mb=4.6			
Off Coast of Oregon			
May 4	WDC	eP	15 43 41.8
	MIN	eP	15 43 54.8
	ORV	eP	15 43 58.7

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DATE	STA	PHASE	TIME (UTC)
	JAS1	eP	15 44 22.9
	MNA	eP	15 44 36.7
	FRI	eP	15 44 37.4
USGS 15h42m07.5s 44.2N 129.3W			
h=10km mb=4.5 Ms=4.2			
Off Coast of Oregon			
May 5	WDC	eP	03 49 20.6
		ePP	03 53 23.8
	MIN	eP	03 49 27.8
		ePP	03 53 34.7
	ORV	eP	03 49 29.8
		ePP	03 53 53.1
	MNA	eP	03 49 30.4
	BKS	e	04 20 38
		iLr	04 23 38
		AMP(μm)	PER(s)
		LZ	5.0 20.
		LN	4.6 20.
		LE	4.1 20.
USGS 03h35m38.8s 38.0N 37.8E			
h=9km mb=5.9 Ms=5.9			
Turkey			
May 5	FRI	iPc	05 51 50.5
	PRI	ePc	05 51 50.6
	MNA	ePc	05 51 54.1
		e	06 00 00.3
	LLA	ePc	05 51 54.6
	PRS	eP	05 51 55.1
	SAO	eP	05 51 58.0
	JAS1	iPc	05 52 00.9
	GCC	eP	05 52 02.5
	MHC	eP	05 52 03.0
	PCC	eP	05 52 08.4
	BRK	eP	05 52 10.0
		eS	05 57 06
		eLr	06 00 02
		AMP(μm)	PER(s)
		LZ	7.0 20.
	BKS	eP	05 52 10.9
		eS	05 57 04.8
		eLq	05 58 20
		eLr	05 59 24
		AMP(μm)	PER(s)
		PZ	0.12 1.1
		LZ	11 20.
		LN	11 20.
		LE	15 20.
	ORV	iPc	05 52 17.6
	MIN	ePc	05 52 22.1
	WDC	ePc	05 52 25.9
		e	05 55 49.7
	FHC	ePc	05 52 37.3
BRK Ms=5.6 Distance=26°			
USGS 05h46m37.5s 18.2N 102.7W			
h=37km mb=5.6 Ms=5.5			
Michoacan, Mexico			
May 5	FRI	ePKP	07 00 11.4
	MNA	ePKP	07 00 13.4
	PRI	ePKP	07 00 13.5
	LLA	ePKP	07 00 14.8
	JAS1	iPKPd	07 00 16.0
	MHC	ePKP	07 00 17.5
	BKS	ePKP	07 00 18.8
		AMP(μm)	PER(s)
		PKPZ 0.030	1.0
	ORV	ePKP	07 00 19.0
	BRK	e	07 00 19.0
	MIN	ePKP	07 00 21.2
	WDC	ePKP	07 00 22.5

DATE	STA	PHASE	TIME (UTC)
USGS 06h40m29.0s 52.6S 18.6E			
h=10km mb=5.4			
Southwest of Africa			
May 5	FRI	e	10 03 23.2
	JAS1	eP	10 03 24.7
	MNA	e	10 03 25.8
	MHC	e	10 03 26.1
	BKS	eP	10 03 27.5
		AMP(μm)	PER(s)
		PZ 0.014	0.7
	WDC	e	10 03 30.4
	ORV	e	10 03 30.5
	MIN	e	10 03 30.9
USGS 09h44m27.5s 58.8S 24.9W			
h=33km mb=5.2 Ms=5.2			
South Sandwich Islands Region			
May 5	WDC	eP	13 38 37.2
	MIN	eP	13 38 40.9
	ORV	iPd	13 38 44.0
	JAS1	iPd	13 38 53.9
	PRS	eP	13 38 55.5
	LLA	eP	13 38 56.3
	FRI	eP	13 39 00.2
	MNA	eP	13 39 01.1
USGS 13h27m25.0s 36.9N 141.5E			
h=77km mb=4.8			
Near East Coast of Honshu, Japan			
May 6	FHC	iPc	22 38 47.0
		eS	22 38 55.2
	WDC	iPc	22 39 00.3
		iS	22 39 19.6
	MIN	ePc	22 39 10.7
	ORV	ePc	22 39 13.8
BRK 22h38m35.4s 40.4N 124.6W			
h=22km ML=3.0(4) Mo=2.3E20(2)			
Off Coast 20 km W of Cape Mendocino, CA			
May 7	FHC	ePd	06 09 22.4
		eS	06 09 51.2
	WDC	iPc	06 09 36.9
		iS	06 10 18.2
	MIN	iPc	06 09 46.6
	ORV	ePc	06 09 49.4
	ZSP	iPd	06 09 50.1
	BRK	iPd	06 09 50.2
	BKS	iPd	06 09 50.4
	PCC	iPd	06 09 51.9
	GCC	iPd	06 09 59.4
	MHC	iPd	06 10 00.2
	SAO	ePd	06 10 06.1
	JAS1	e(P)	06 10 09.4
	PRS	ePd	06 10 10.7
	LLA	ePd	06 10 12.0
	PRI	ePd	06 10 19.4
	FRI	iPd	06 10 21.4
BRK 06h08m41.9s 40.2N 127.3W			
h=5kmR ML=4.3(6)			
Off Coast 270 km SW of Eureka, CA			
May 7	FHC	e	20 50 34
	WDC	eP	20 50 41.4
		eScP	20 56 46
	MIN	e(P)	20 50 48
	ORV	e(P)	20 50 52
		eScP	20 56 50
	BKS	eP	20 51 02
		eS	20 57 00
		eLq	21 00 00

DATE	STA	PHASE	TIME (UTC)
		AMP(μm)	PER(s)
	LN	22	20.
	LE	19	20.
	LZ	15	20.
	MHC	e(P)	20 51 03
	GCC	e(P)	20 51 03
	JAS1	e(P)	20 51 03.5
		eScP	20 56 55
	PRS	e(P)	20 51 10
	LLA	e(P)	20 51 10
	FRI	e(P)	20 51 11
		eScP	20 57 01
	MNA	e	20 51 16
BRK Ms=6.1 Distance=40°			
USGS 20h43m31.3s 51.4N 174.8W			
h=22km mb=6.1 Ms=6.0			
Andreanof Islands, Aleutian Islands			
May 7	FHC	ePd	22 54 12.6
		eScP	23 00 32.4
	WDC	iPd	22 54 21.0
	MIN	eP	22 54 26.3
	ORV	eP	22 54 30.4
	BRK	eP	22 54 34
	BKS	e(P)	22 54 35.1
		eS	23 00 12
		eG	23 04 00
		eLr	23 05 20
		AMP(μm)	PER(s)
	LZ	1300	20.
	LNE	1200	20.
	LNW	1800	20.
	eG2	01 01 20	
	eR2	01 25 00	
	eG3	01 34 40	
	eR3	02 10 20	
	eG4	03 33 40	
	eG5	04 05 20	
	eR4	04 31 20	
	eR5	05 15 30	
	eG6	06 04 00	
	eG7	06 36 00	
	eR6	07 38 50	
	eR7	08 23 00	
	eR10	11 31 00	
PCC	e	22 54 36	
GCC	e(P)	22 54 40.7	
	eScP	23 00 44.9	
MHC	eP	22 54 41.5	
JAS1	eP	22 54 44.1	
SAO	e	22 54 46	
PRS	e(P)	22 54 49	
LLA	e(P)	22 54 50	
FRI	eP	22 54 53.2	
	eScP	23 00 50.5	
	ePKPPKP	23 26 16	
MNA	eP	22 54 54.0	
PRI	e(P)	22 54 54.7	
	eScP	23 00 49.5	
BRK Ms=7.9 Distance=40°			
USGS 22h47m10.9s 51.5N 174.8W			
h=33km mb=6.4 Ms=7.7			
Andreanof Islands, Aleutian Islands			
May 7	FHC	e(P)	23 58 05.4
	WDC	iPd	23 58 12.8
		eScP	00 04 17
	MIN	eP	23 58 18.2
	ORV	eP	23 58 22.3
		eScP	00 04 20.2
	BRK	eP	23 58 27.0
	BKS	eP	23 58 27.7

DATE	STA	PHASE	TIME (UTC)
		AMP(μm)	PER(s)
	PZ	0.026	1.0
	MHC	eP	23 58 33.4
	JAS1	iPd	23 58 37.0
		eScP	00 04 26.4
	SAO	e(P)	23 58 39
	PRS	eP	23 58 39.7
	FRI	eP	23 58 44.2
		eScP	00 04 29.5
	PRI	eP	23 58 44.4
USGS 23h51m01.9s 51.5N 174.9W			
h=33km mb=5.8			
Andreanof Islands, Aleutian Islands			
May 8	FHC	e(P)	01 13 15.7
	WDC	iPc	01 13 25.3
		ePcP	01 15 50.9
	MIN	iPc	01 13 30.8
	ORV	iPc	01 13 34.9
	BRK	eP	01 13 39.8
	BKS	eP	01 13 39.9
		AMP(μm)	PER(s)
		PZ 0.063	0.8
	GCC	eP	01 13 44.9
	MHC	ePc	01 13 45.9
		ePcP	01 15 52.4
	SAO	e(P)	01 13 49
	JAS1	iPc	01 13 49.3
	PRS	eP	01 13 52.6
		ePcP	01 15 54.8
	LLA	eP	01 13 53.4
	PRI	e(P)	01 13 57
		ePcP	01 15 57.2
	FRI	ePc	01 13 57.5
		ePcP	01 15 56.6
USGS 01h06m15.6s 51.6N 174.7W			
h=33km mb=5.3			
Andreanof Islands, Aleutian Islands			
May 8	FHC	ePc	01 18 14.8
	WDC	ePc	01 18 22.7
	MIN	ePc	01 18 28.1
	ORV	ePc	01 18 32.2
	BRK	eP	01 18 37.2
	BKS	eP	01 18 37.2
		e	01 18 39.1
		AMP(μm)	PER(s)
		PZ 0.028	0.8
	PCC	ePc	01 18 38.0
	GCC	eP	01 18 42.3
	MHC	eP	01 18 43.1
	JAS1	iPc	01 18 46.8
		e	01 25 52
	SAO	e(P)	01 18 47
	PRS	eP	01 18 49.5
	LLA	eP	01 18 50.7
	PRI	eP	01 18 54.5
	MNA	ePc	01 18 55.8
USGS 01h11m02.3s 51.1N 176.7W			
h=33km mb=5.9			
Andreanof Islands, Aleutian Islands			
May 8	FHC	eP	01 22 27.6
	WDC	ePc	01 22 35.8
		i	01 22 47.5
	MIN	eP	01 22 42.5
		e	01 22 52.9
	ORV	e(P)	01 22 45.5
	BRK	e(P)	01 22 50.4
		e	01 23 02.2
	BKS	e	01 22 55.8
	MHC	e	01 22 56

DATE	STA	PHASE	TIME (UTC)
		e	01 23 07.7
	JAS1	e(P)	01 23 00.3
		i	01 23 11.2
		eScP	01 28 55
	PRS	e(P)	01 23 02.6
		e	01 23 14.0
	GCC	e	01 23 06.8
	FRI	eP	01 23 07.8
		e	01 23 19.1
		eScP	01 28 57
	SAO	e	01 23 11.3
	LLA	e	01 23 14.8
	PRI	e	01 23 18.9
USGS 01h15m15.0s 51.2N 176.8W			
h=33km mb=5.6			
Andreanof Islands, Aleutian Islands			
May 8	ORV	eP	01 30 18.7
	JAS1	eP	01 30 32.7
	FRI	e	01 30 41.0
USGS 01h22m46.9s 51.2N 176.9W			
h=33km mb=5.2			
Andreanof Islands, Aleutian Islands			
May 8	WDC	e(P)	01 38 17.3
	MIN	e(P)	01 38 22
	ORV	e(P)	01 38 26.3
	JAS1	eP	01 38 41.2
		i	01 38 51.3
	FRI	eP	01 38 49.3
USGS 01h30m54.9s 51.2N 176.8W			
h=33km mb=5.1			
Andreanof Islands, Aleutian Islands			
May 8	WDC	ePd	02 11 22.2
	MIN	ePd	02 11 27.7
	ORV	ePd	02 11 31.7
	BRK	e(P)	02 11 36.0
	MHC	ePd	02 11 42.2
	JAS1	ePd	02 11 46.1
	PRS	e(P)	02 11 49.1
	LLA	e	02 11 52
	PRI	ePd	02 11 54.0
	FRI	eP	02 11 54.0
	MNA	ePd	02 11 55.0
USGS 02h04m00.3s 51.2N 176.9W			
h=33km mb=5.5			
Andreanof Islands, Aleutian Islands			
May 8	WDC	eP	03 27 29.3
	MIN	e	03 27 34.8
	ORV	eP	03 27 38.7
	JAS1	eP	03 27 53.6
	FRI	eP	03 28 00.9
	MNA	eP	03 28 01.6
USGS 03h20m14.7s 51.3N 175.5W			
h=33km mb=4.8			
Andreanof Islands, Aleutian Islands			
May 8	WDC	eP	03 51 19.5
	MIN	e	03 51 28.8
	ORV	eP	03 51 29.5
	JAS1	eP	03 51 43.5
	FRI	eP	03 51 51.3
USGS 03h44m06.7s 51.3N 175.2W			
h=33km mb=5.1			
Andreanof Islands, Aleutian Islands			
May 8	WDC	eP	04 00 10.2
	ORV	e(P)	04 00 21.0
	MIN	e	04 00 21.4
	MHC	e	04 00 32.5

DATE	STA	PHASE	TIME (UTC)
	JAS1	e(P)	04 00 36.2
	FRI	eP	04 00 43.5
	MNA	eP	04 00 45.3
	PRI	e	04 00 50.5
USGS 03h52m61.5s 51.2N 176.7W			
h=33km mb=5.2			
Andreanof Islands, Aleutian Islands			
May 8	FHC	eP	04 11 01.8
	WDC	eP	04 11 08.1
		e	04 17 07.8
	MIN	eP	04 11 14.5
	ORV	eP	04 11 19.0
		e	04 17 11.1
	BKS	e	04 11 20.9
	BRK	e	04 11 21.6
	GCC	e	04 11 29.1
	MHC	eP	04 11 30.2
	JAS1	eP	04 11 32.4
		e	04 16 54.0
	SAO	e	04 11 35.0
	PRS	eP	04 11 36.8
	LLA	eP	04 11 37.5
	FRI	eP	04 11 41.3
	PRI	eP	04 11 41.6
	MNA	eP	04 11 42.7
USGS 04h03m60.1s 51.1N 176.4W			
h=33km mb=5.8 Ms=5.5			
Andreanof Islands, Aleutian Islands			
May 8	FHC	eP	05 44 23.9
	WDC	iPc	05 44 35.4
		iScP	05 50 37.0
	MIN	ePc	05 44 41.0
	ORV	ePc	05 44 44.9
		eScP	05 50 41.7
		i	05 51 10.0
	BRK	eP	05 44 49.8
	BKS	eP	05 44 50.1
		eS	05 50 55
		eLq	05 53 28
		AMP(μm)	PER(s)
		PZ	0.057 1.0
		LN	31 20.
		LE	26 20.
		LZ	20 20.
	MHC	eP	05 44 55.3
		eScP	05 50 47.4
	GCC	eP	05 44 55.3
	JAS1	ePc	05 44 59.7
		iScP	05 50 48.8
	SAO	e	05 45 00.4
	PRS	eP	05 45 02.7
	LLA	eP	05 45 03.2
	FRI	eP	05 45 07.4
		eScP	05 50 52.5
		i	05 51 47.4
	PRI	eP	05 45 08.0
	MNA	eP	05 45 08.5
		iScP	05 50 54.1
BRK Ms=6.3 Distance=39°			
USGS 05h37m20.3s 51.3N 175.4W			
h=18km mb=6.0 Ms=6.2			
Andreanof Islands, Aleutian Islands			
May 8	WDC	eP	16 43 06.8
	ORV	eP	16 43 17.4
	JAS1	eP	16 43 31.2
	LLA	e	16 43 32.3
	FRI	eP	16 43 41.3
	MNA	e	16 43 45.5
USGS 16h36m02.0s 51.5N 176.9W			

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DATE	STA	PHASE	TIME (UTC)
h=33km mb=5.4 Ms=5.1			
Andreanof Islands, Aleutian Islands			
May 8	SAO	iPc	17 08 10.8
	LLA	iPc	17 08 13.2
		iS	17 08 17.5
	PRS	iPd	17 08 15.9
	GCC	iPc	17 08 19.0
	MHC	ePc	17 08 20.1
	PRI	ePc	17 08 22.2
		i	17 08 34.0
	PCC	iPd	17 08 27.8
	FRI	iPd	17 08 29.9
		iS	17 08 45.9
	BRK	e	17 08 30.5
	BKS	e	17 08 30.6
	JAS1	iPc	17 08 30.8
		iS	17 08 47.5
	ZSP	eP	17 08 31.2
BRK 17h08m07.3s 36.8N 121.3W			
h=8km ML=2.9(4)			
17 km SE of Hollister, CA			
May 9	WDC	eP	01 12 50.4
	MIN	eP	01 12 58.0
	ORV	eP	01 13 01.5
	JAS1	eP	01 13 16.4
	PRS	e	01 13 20.3
	FRI	eP	01 13 24.1
	MNA	eP	01 13 25.0
USGS 01h05m30.6s 51.2N 176.9W			
h=33km mb=5.5 Ms=5.6			
Andreanof Islands, Aleutian Islands			
May 9	WDC	eP	01 15 33.7
	MIN	eP	01 15 43.5
	ORV	e	01 15 45.3
	BRK	e	01 15 52.5
	BKS	e	01 15 55.50
	MHC	e	01 15 58.8
	JAS1	eP	01 16 00.5
	FRI	eP	01 16 05.3
	PRI	eP	01 16 08.3
	MNA	eP	01 16 08.7
USGS 01h08m10.4s 51.2N 176.9W			
h=33km mb=5.6 Ms=5.5			
Andreanof Islands, Aleutian Islands			
May 9	SAO	iPc	02 29 46.7
	LLA	iPc	02 29 50.5
	PRS	iPd	02 29 53.5
	MHC	iPc	02 29 53.5
	GCC	iPc	02 29 53.9
		iS	02 30 02.8
	PRI	iPc	02 30 00.1
	PCC	eP	02 30 02.0
	JAS1	iPd	02 30 05.1
		iS	02 30 22.4
	FRI	iPd	02 30 05.6
		iS	02 30 21.9
	BRK	iPc	02 30 06.2
	BKS	iPc	02 30 06.2
	ZSP	iPd	02 30 07.7
		i	02 30 29.2
	ORV	eP	02 30 26.6
	MNA	eP	02 30 34.8
	MIN	e	02 30 40.3
BRK 02h29m42.9s 36.9N 121.3W			
h=7km ML=3.0(4) Mo=1.4E21(2)			
11 km ENE of Hollister, CA			
May 9	MNA	eP	16 35 27.3

DATE	STA	PHASE	TIME (UTC)
	FRI	eP	16 35 28.2
	PRI	eP	16 35 28.8
	LLA	eP	16 35 30.2
	PRS	eP	16 35 31.7
	JAS1	eP	16 35 32.3
	GCC	eP	16 35 35.5
	MHC	eP	16 35 35.7
	ORV	eP	16 35 41.6
	MIN	eP	16 35 44.0
	WDC	eP	16 35 47.0
	BKS	e(P)	16 36 42.0
		eLq	16 59 14.0
		eLr	17 03 40.0
		e	17 05 52.0
		AMP(μm)	PER(s)
		LZ 1.8	20.
		LN 0.71	20.
		LE 3.4	20.
BRK Ms=5.6 Distance=75°			
USGS 16h23m48.7s 17.1S 65.6W			
h=12km mb=5.6 Ms=5.5			
Bolivia			
May 9	WDC	eP	19 11 35.1
	MIN	eP	19 11 41.5
	ORV	eP	19 11 45.0
	BKS	eP	19 11 50.1
		e	19 12 03.5
		e	19 12 23.0
		epPP	19 13 49.6
		eS	19 17 47.2
		eLq	19 20 36.0
		eLr	19 22 44.0
		AMP(μm)	PER(s)
		PZ 0.043	1.0
	MHC	eP	19 11 55.5
	JAS1	eP	19 11 59.9
	LLA	e	19 12 02.0
	PRS	e	19 12 02.2
	FRI	eP	19 12 07.7
	PRI	eP	19 12 08.3
	MNA	eP	19 12 09.0
USGS 19h04m28.4s 51.5N 174.2W			
h=33km mb=5.8 Ms=5.6			
Andreanof Islands, Aleutian Islands			
May 9	WDC	iPc	19 31 49.7
		i	19 32 03.3
	ORV	iPc	19 31 58.4
		i	19 32 12.9
	BKS	eP	19 32 08.4
		AMP(μm)	PER(s)
		PZ 0.028	0.7
	MHC	e	19 32 09.9
	JAS1	iPc	19 32 13.1
	PRS	eP	19 32 15.9
	PRI	eP	19 32 21.0
	FRI	iPc	19 32 21.0
		e	19 32 33.7
	MNA	eP	19 32 22.0
USGS 19h24m42.2s 51.4N 174.1W			
h=33km mb=5.3 Ms=5.8			
Andreanof Islands, Aleutian Islands			
May 10	FRI	eP	02 12 08.0
	PRI	eP	02 12 08.3
	MNA	eP	02 12 08.5
	LLA	ePc	02 12 10.7
	PRS	ePc	02 12 11.1
	JAS1	iPc	02 12 13.5
	ORV	iPc	02 12 23.0
		e	02 12 56.8

DATE	STA	PHASE	TIME (UTC)
	WDC	iPc	02 12 27.5
USGS 02h00m23.8s 23.6S 67.9W			
h=130km mb=5.2			
Chile-Argentina Border Region			
May 10	WDC	iPd	09 20 41.1
	MIN	eP	09 20 46.6
	ORV	e	09 20 50.6
	JAS1	iPd	09 21 05.4
	BKS	e	09 21 09.0
	FRI	eP	09 21 13.3
	MNA	eP	09 21 14.4
USGS 09h13m29.3s 51.9N 175.1W			
h=33km mb=5.0 Ms=4.9			
Andreanof Islands, Aleutian Islands			
May 10	PRI	e	09 59 30.0
	MNA	eP	09 59 38.6
	JAS1	eP	09 59 41.4
	ORV	eP	09 59 58.2
	MIN	eP	10 00 05.0
	WDC	e	10 00 07.0
	BKS	eS	10 05 20.0
		eLq	10 07 40.0
		eLr	10 09 24.0
		AMP(μm)	PER(s)
		LZ 3.6	20.
		LN 5.5	20.
		LE 6.4	20.
BRK Ms=5.4 Distance=36°			
USGS 09h53m01.3s 8.5N 103.1W			
h=10km mb=5.0 Ms=5.4			
Off Coast of Mexico			
May 10	PRI	eP	12 13 55.6
	FRI	eP	12 13 58.0
	PRS	eP	12 13 58.6
	GCC	e	12 14 03.7
	MHC	e	12 14 04.4
	MNA	ePd	12 14 04.6
	JAS1	iPd	12 14 05.0
	BRK	e	12 14 07.2
	BKS	eP	12 14 08.0
		AMP(μm)	PER(s)
		PZ 0.097	1.1
	ORV	eP	12 14 14.8
	MIN	eP	12 14 18.0
	WDC	iPd	12 14 20.7
USGS 12h02m01.5s 37.1S 94.1W			
h=10km mb=5.5 Ms=4.9			
West Chile Rise			
May 10	PCC	iPd	22 30 16.9
		iS	22 30 19.7
	GCC	eP	22 30 20.8
	BRK	iPd	22 30 23.1
	MHC	iPd	22 30 23.1
		iS	22 30 29.3
	BKS	iPd	22 30 23.35
		i(S)	22 30 30.0
	ZSP	iPd	22 30 24.8
		iS	22 30 33.9
	SAO	iPd	22 30 29.2
	PRS	ePc	22 30 36.2
BRK 22h30m13.1s 37.3N 122.3W			
h=13km ML=2.7(4) Mo=1.2E20(2)			
La Honda, 35 km W of San Jose, CA			
May 11	FHC	ePd	01 36 52.3
		ipP	01 37 45.9
	WDC	ePd	01 36 56.5
		ipP	01 37 50.7

DATE	STA	PHASE	TIME (UTC)
		i	01 38 27.4
		e	01 47 06.0
		ePKPPKP	02 02 45
	MIN	eP	01 36 59.3
		ipP	01 37 55.2
	ORV	ePd	01 37 01.8
		ipP	01 37 57.5
		ePKPPKP	02 02 43
	BKS	ePd	01 37 04.3
		epP	01 37 49
		epPP	01 41 16
		eSKS	01 47 15
		eS	01 47 40
		epS	01 48 44
		epPS	01 49 36
		esPS	01 50 06
		eSS	01 53 50
		esSS	01 55 06
		e	01 56 06
		e	01 56 58
		eSSS	01 57 26
		e	01 59 32
		e	02 00 40
		e	02 00 48
		eG	02 02 20
		e	02 06 06
		e	02 07 08
		AMP(μm)	PER(s)
		PZ 0.14	1.3
	BRK	eP	01 37 04.4
	GCC	eP	01 37 07.3
	MHC	ePd	01 37 08.2
	JAS1	ePd	01 37 09.9
		ipP	01 38 04.4
		ePP	01 40 47.2
		ePKPPKP	02 02 38
	PRS	eP	01 37 11.6
	PRI	eP	01 37 14.2
	FRI	ePd	01 37 14.2
		epP	01 38 06.0
		ePP	01 40 53.4
	MNA	ePd	01 37 15.7
		ipP	01 38 10.2
		e	01 38 38.0
		ePP	01 40 52.4
		e	01 47 31.0
		ePKPPKP	02 02 31
BRK mb=5.7 h=210km Distance=91°			
USGS 01h24m25.8s 26.7N 125.2E			
h=193km mb=5.9			
Northeast of Taiwan			
May 11	FHC	e(P)	13 47 33.8
	WDC	ePc	13 47 41.1
		e	13 47 53.5
	MIN	ePc	13 47 46.3
		e	13 48 00.2
	ORV	ePc	13 47 50.8
		e	13 48 03.8
	BKS	e	13 47 55.3
		e	13 48 09.2
		e	13 48 21.7
		e	13 48 31.8
		e	13 48 58.0
	BRK	eP	13 47 55.5
	JAS1	ePc	13 48 05.5
	MNA	ePc	13 48 14.3
		e	13 48 26.5
	FRI	ePc	13 48 14.3
		e	13 48 26.8
USGS 13h40m37.1s 51.5N 173.7W			
h=33km mb=5.3 Ms=4.8			

DATE	STA	PHASE	TIME (UTC)
Andreanof Islands, Aleutian Islands			
May 11	FHC	eP	19 47 28.9
		epP	19 47 40.5
	WDC	ePc	19 47 35.8
		ipP	19 47 48.8
		ePcP	19 50 12.0
		eScP	19 53 41.4
	ORV	eP	19 47 45.3
		epP	19 47 58.3
		ePcP	19 50 14.0
		eScP	19 53 45.6
	BKS	e(P)	19 47 50.3
		e	19 47 54.5
		e	19 48 03.1
		e	19 48 05.1
		eS	19 53 46.0
		eLq	19 56 40.0
		eLr	19 58 35
		AMP(μm)	PER(s)
		PZ 0.022	0.8
		LZ 3.6	20.
		LN 2.5	20.
		LE 3.6	20.
	BRK	e(P)	19 47 51
	MIN	ipP	19 47 54.4
		eScP	19 53 43.8
	MHC	ePc	19 47 56.3
		epP	19 48 09.5
	JAS1	ePc	19 48 00.3
		ipP	19 48 13.1
		iScP	19 53 52.7
	SAO	e(P)	19 48 01
	PRS	e(P)	19 48 02.4
		epP	19 48 16.0
	LLA	eP	19 48 04.0
		epP	19 48 17.0
	GCC	epP	19 48 08.8
	FRI	eP	19 48 09.0
		epP	19 48 20.8
		ePcP	19 50 33
		eScP	19 53 56.4
	MNA	eP	19 48 09.4
		ipP	19 48 22.2
		eScP	19 53 57.6
	PRI	e(P)	19 48 09.8
		eScP	19 53 57.0
BRK Ms=5.2 Distance=40°			
USGS 19h40m31.0s 51.5N 173.7W			
h=33km mb=5.6 Ms=5.2			
Andreanof Islands, Aleutian Islands			
May 11	FHC	e(P)	22 55 47
		epP	22 56 01.2
	WDC	ePc	22 55 55.4
		ipP	22 56 09.4
		e	22 57 33
	ORV	eP	22 56 05.0
		ipP	22 56 18.8
	BRK	eP	22 56 09.9
		epP	22 56 23.7
	MIN	epP	22 56 14.8
	GCC	eP	22 56 14.9
		epP	22 56 28.8
	BKS	e	22 56 15.1
		e	22 56 23.4
		eS	23 02 07
		eLq	23 05 08
		eLr	23 06 36
		AMP(μm)	PER(s)
		LZ 3.2	20.
		LN 1.8	20.

DATE	STA	PHASE	TIME (UTC)
		LE	3.0 20.
	MHC	eP	22 56 15.5
		epP	22 56 29.7
	JAS1	ePc	22 56 18.8
		ipP	22 56 33.3
	PRS	eP	22 56 22.4
		epP	22 56 36.3
	LLA	e(P)	22 56 23.0
		epP	22 56 37.0
	FRI	eP	22 56 27.5
		epP	22 56 41.4
	PRI	eP	22 56 27.9
	MNA	eP	22 56 28.5
		epP	22 56 42.5
BRK Ms=5.2 Distance=40°			
USGS 22h48m45.6s 51.5N 174.7W			
h=33km mb=5.5 Ms=5.2			
Andreanof Islands, Aleutian Islands			
May 12	ORV	eP	01 38 07.0
		e	01 38 15.4
	WDC	e	01 38 10.5
	JAS1	eP	01 38 13.3
		e	01 38 21.1
	FRI	eP	01 38 17.3
		e	01 38 25.8
	MHC	e	01 38 18
	PRS	e	01 38 20.0
	MNA	e(P)	01 38 22.3
		e	01 38 30.6
USGS 01h25m52.5s 14.7N 147.7E			
h=42km mb=5.1			
Mariana Islands Region			
May 12	FHC	e	03 54 46.5
	WDC	eP	03 54 47.2
	MIN	e(P)	03 54 53.6
	ORV	e(P)	03 54 56.8
	MHC	eP	03 55 06.3
		e	03 55 22.0
	JAS1	e(P)	03 55 12.5
		e	03 55 25.4
		e	03 55 34.7
	FRI	eP	03 55 19.5
		e	03 55 34.0
		e	03 55 43.0
	MNA	e(P)	03 55 20.2
USGS 03h47m37.9s 51.4N 174.7W			
h=33km mb=5.3 Ms=4.8			
Andreanof Islands, Aleutian Islands			
May 12	MHC	iPc	09 17 12.0
	GCC	iPd	09 17 18.8
	PCC	iPc	09 17 19.8
	BRK	iPc	09 17 21.1
	BKS	iPc	09 17 21.1
	ZSP	iPd	09 17 22.5
	SAO	iPc	09 17 23.4
	LLA	iPc	09 17 27.9
	JAS1	iPd	09 17 29.4
		iS	09 17 44.5
	PRS	iPd	09 17 30.3
	ORV	e(P)	09 17 35.2
	PRI	ePc	09 17 35.7
	FRI	iPc	09 17 37.1
BRK 09h17m09.3s 37.5N 121.7W			
h=6km ML=3.1(6) Mo=7.2E20(2)			
Mt. Lewis area, 22 km NE of San Jose, CA			
May 12	SAO	iPc	23 00 23.0
	LLA	iPc	23 00 26.9

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DATE	STA	PHASE	TIME (UTC)
	PRS	iPd	23 00 29.6
	MHC	iPd	23 00 30.7
	GCC	iPc	23 00 30.7
	PRI	eP	23 00 36.1
	PCC	ePd	23 00 39.2
	FRI	iPc	23 00 42.4
		iS	23 00 59.5
	BRK	e(P)	23 00 42.6
	JAS1	iPc	23 00 42.9
		iSc	23 00 59.7
	BKS	e(P)	23 00 42.9
	ZSP	ePc	23 00 43.9
	ORV	iPc	23 01 03.9
	MNA	ePd	23 01 11.8
BRK 23h00m19.7s 36.8N 121.3W			
h=6km ML=3.2(4) Mo=1.8E21(2)			
10 km E of Hollister, CA			
May 13	PRS	eP	10 08 19.6
	PRI	eP	10 08 21.7
	MHC	eP	10 08 22.2
	FRI	eP	10 08 27.2
	JAS1	eP	10 08 28.2
	ORV	eP	10 08 29.9
	WDC	eP	10 08 30.6
	MIN	eP	10 08 32.5
	MNA	ePd	10 08 38.2
USGS 09h56m36.7s 20.6S 174.1W			
h=33km mb=5.4 Ms=5.5			
Tonga Islands			
May 13	WDC	eP	14 21 59.9
	MIN	e(P)	14 22 05.5
	ORV	eP	14 22 10.2
	JAS1	e(P)	14 22 24.3
	MNA	eP	14 22 32.5
USGS 14h14m56.0s 51.6N 173.5W			
h=33km mb=4.8 Ms=4.3			
Andreanof Islands, Aleutian Islands			
May 13	PRI	eP	14 59 38.6
	FRI	ePc	14 59 42.0
	MHC	ePc	14 59 49.7
	JAS1	ePc	14 59 50.9
	MNA	eP	14 59 51.7
	ORV	ePc	15 00 04.7
	WDC	ePc	15 00 10.9
USGS 14h51m10.1s 9.1S 109.1W			
h=10km mb=5.1 Ms=5.0			
Northern Easter Island Cordillera			
May 13	WDC	eP	17 22 44.8
	ORV	e(P)	17 22 56.8
	JAS1	eP	17 23 10.4
	MNA	e(P)	17 23 10.7
USGS 17h15m21.1s 51.1N 176.1W			
h=33km mb=4.9 Ms=4.3			
Andreanof Islands, Aleutian Islands			
May 13	FHC	e(P)	22 11 36.9
	WDC	eP	22 11 40.5
	ORV	eP	22 11 46.7
	MHC	e(P)	22 11 51.6
	JAS1	eP	22 11 56.0
	PRS	eP	22 11 57.3
	FRI	eP	22 12 01.6
	MNA	eP	22 12 04.8
	PRI	e	22 12 06.0
USGS 22h00m08.8s 32.6N 141.4E			
h=39km mb=5.4 Ms=5.6			
South of Honshu, Japan			

DATE	STA	PHASE	TIME (UTC)
May 14	PCC	iPd	00 30 13.2
	GCC	ePd	00 30 17.1
	BRK	iPd	00 30 19.4
		iS	00 30 26.5
	MHC	iPd	00 30 19.4
	BKS	iPd	00 30 19.7
		iS	00 30 27.9
	ZSP	iPd	00 30 21.1
		iS	00 30 29.2
	SAO	iPc	00 30 25.4
	PRS	e(P)	00 30 31.4
	LLA	e(P)	00 30 32.2
	JAS1	iPc	00 30 36.5
	PRI	e	00 30 39.7
	FRI	e	00 30 45.1
	ORV	e	00 30 49.4
BRK 00h30m09.6s 37.4N 122.3W			
h=14km ML=3.2(4) Mo=7.8E20(3)			
Portola Valley, 33 km W of San Jose, CA			
May 14	WDC	ePd	02 03 21.9
	MIN	eP	02 03 27.2
	ORV	ePd	02 03 31.5
	JAS1	e(P)	02 03 46.2
USGS 01h56m18.2s 51.5N 173.4W			
h=33km mb=4.8			
Andreanof Islands, Aleutian Islands			
May 14	FHC	ePc	02 05 25.7
	WDC	iPc	02 05 34.3
	MIN	ePc	02 05 39.8
	ORV	iPc	02 05 43.7
	BRK	ePc	02 05 48.5
	BKS	eP	02 05 49.0
		e	02 05 53.6
		e	02 05 56.7
		e	02 06 15.1
	PCC	eP	02 05 50.2
	MHC	eP	02 05 54.9
	SAO	ePc	02 05 58.3
	JAS1	iPc	02 05 58.7
	PRS	eP	02 06 01.5
	LLA	eP	02 06 02.6
	FRI	iPc	02 06 06.6
	MNA	iPc	02 06 07.6
USGS 01h58m30.9s 51.5N 173.5W			
h=33km mb=5.5 Ms=4.7			
Andreanof Islands, Aleutian Islands			
May 14	WDC	eP	04 01 27.0
	MIN	eP	04 01 33.2
	ORV	eP	04 01 37.6
	JAS1	eP	04 01 53.1
	FRI	eP	04 02 01
USGS 03h54m25.1s 51.5N 173.4W			
h=33km mb=5.0			
Andreanof Islands, Aleutian Islands			
May 14	FHC	eP	04 09 53.3
	WDC	iPc	04 10 01.1
		ipP	04 10 10.9
	MIN	ePc	04 10 06.7
		ipP	04 10 16.2
	ORV	ePc	04 10 10.6
		ipP	04 10 20.0
	BRK	eP	04 10 15.2
		epP	04 10 24.9
	BKS	eP	04 10 15.4
		e	04 10 24.5
		e	04 10 56.0
			AMP(μm) PER(s)

DATE	STA	PHASE	TIME (UTC)
		PZ	0.047 0.8
	PCC	eP	04 10 16
		epP	04 10 25.8
	GCC	eP	04 10 20.6
		epP	04 10 30.3
	MHC	eP	04 10 21.2
		ipP	04 10 30.9
	JAS1	iPc	04 10 24.9
		ipP	04 10 34.5
	PRS	eP	04 10 27.6
		epP	04 10 37.2
	LLA	eP	04 10 28.5
		epP	04 10 38.2
	FRI	ePc	04 10 32.5
		epP	04 10 42.3
	PRI	e(P)	04 10 32.8
	MNA	iP	04 10 33.8
		ipP	04 10 43.3
USGS 04h02m31.7s 51.5N 178.5W			
h=33km mb=5.4 Ms=4.6			
Andreanof Islands, Aleutian Islands			
May 14	FRI	e	11 20 33.2
	JAS1	eP	11 20 40.8
	MNA	eP	11 20 43.5
	ORV	e	11 20 54.0
	WDC	eP	11 20 56
USGS 11h10m21.5s 23.5S 115.1W			
h=10km mb=5.2 Ms=4.4			
Easter Island Cordillera			
May 14	GCC	ePc	23 05 21.3
		e	23 05 27.5
	PRS	ePc	23 05 21.7
		e	23 05 27.9
	SAO	ePc	23 05 22.3
	BRK	eP	23 05 23.1
	PRI	ePc	23 05 24.1
	MHC	ePc	23 05 24.2
		e	23 05 30.4
	BKS	e	23 05 29.9
	FRI	iPc	23 05 30.0
		e	23 05 36.3
	JAS1	iPc	23 05 30.4
		e	23 05 36.5
	ORV	ePc	23 05 31.2
	WDC	iPc	23 05 31.4
	MNA	ePc	23 05 41.8
USGS 22h53m58.3s 14.8S 175.4W			
h=33km mb=5.2 Ms=5.1			
Samoa Islands Region			
May 15	FHC	ePd	06 45 39.0
	WDC	ePd	06 45 47.2
		eScP	06 51 51.8
	MIN	ePd	06 45 52.5
		eScP	06 51 54.0
	ORV	iPd	06 45 56.7
		eScP	06 51 56.2
	BRK	eP	06 46 02.0
	BKS	ePd	06 46 02.0
		eS	06 52 06
		eLq	06 54 44
		eLr	06 56 08
			AMP(μm) PER(s)
		PZ	0.087 1.0
		LZ	61 20.
		LN	36 20.
		LE	42 20.
	PCC	eP	06 46 03.0
	GCC	eP	06 46 07.4
	MHC	ePd	06 46 07.9

DATE	STA	PHASE	TIME (UTC)
	SAO	eP	06 46 11.0
	JAS1	iPd	06 46 12.7
		eScP	06 52 03.5
		eS	06 52 21.1
	PRS	ePd	06 46 14.6
	LLA	eP	06 46 16
	FRI	iPd	06 46 17.8
		eScP	06 52 05.7
	PRI	ePd	06 46 19.7
	MNA	iPd	06 46 20.4
		eScP	06 52 08.4
BRK Ms=6.4 Distance=40°			
USGS 06h38m38.0s 52.3N 174.7W			
h=33km mb=5.7 Ms=6.4			
Andreanof Islands, Aleutian Islands			
May 15	WDC	ePc	06 49 41.3
		e	06 50 02.6
	MIN	eP	06 49 46.7
	ORV	i	06 50 00.2
	MHC	eP	06 50 02.3
		e	06 50 23.8
	PRS	eP	06 50 09.0
		e	06 50 30
	JAS1	i	06 50 10.9
		i	06 50 27.1
	FRI	ePc	06 50 13.7
		e	06 50 23.8
	BRK	e	06 50 17.4
	BKS	e	06 50 17.6
	PCC	e	06 50 18
	GCC	e	06 50 23
	SAO	e	06 50 27.5
	LLA	e	06 50 31.3
USGS 06h42m31.9s 51.4N 174.7W			
h=33km mb=5.1			
Andreanof Islands, Aleutian Islands			
May 15	FHC	eP	08 25 48.7
	WDC	ePd	08 25 56.5
	MIN	eP	08 26 02.0
	ORV	eP	08 26 06.2
	BRK	eP	08 26 11.5
	BKS	eP	08 26 11.9
			AMP(μm) PER(s)
		PZ	0.069 0.8
	GCC	eP	08 26 16.2
	MHC	eP	08 26 17.6
	JAS1	ePd	08 26 21.4
	PRS	eP	08 26 24.3
	FRI	eP	08 26 29.1
	MNA	eP	08 26 30.0
	PRI	eP	08 26 30.3
USGS 08h18m48.0s 52.3N 174.5W			
h=33km mb=5.1 Ms=5.3			
Andreanof Islands, Aleutian Islands			
May 15	MHC	iPc	08 32 05.0
	GCC	iPd	08 32 11.75
	PCC	iPc	08 32 12.4
	BRK	iPc	08 32 13.6
	BKS	iPc	08 32 13.6
	ZSP	iPc	08 32 14.6
		iS	08 32 26.1
	SAO	iPd	08 32 16.25
	LLA	iPc	08 32 20.6
	JAS1	iPd	08 32 22.0
	PRS	iPc	08 32 22.8
	FRI	eP	08 32 29.8
	PRI	eP	08 32 30.9
	ORV	e	08 32 38.0
	MIN	e	08 32 48.7

DATE	STA	PHASE	TIME (UTC)
	WDC	e	08 32 50.2
	MNA	e	08 32 55.8
BRK 08h32m02.1s 37.5N 121.7W			
h=7km ML=3.3(4) Mo=9.5E20(2)			
Mt. Lewis area, 23 km NE of San Jose, CA			
May 15	WDC	iPc	09 41 14.4
	MIN	ePc	09 41 20.0
	ORV	ePc	09 41 24.2
	BKS	e	09 41 29.0
		eLr	09 50 29
			AMP(μm) PER(s)
		LZ	3.0 20.
		LN	2.9 20.
		LE	3.9 20.
	MHC	e	09 41 35.3
	JAS1	iPc	09 41 38.8
	LLA	e	09 41 45.5
	PRI	eP	09 41 46.5
	FRI	eP	09 41 46.8
	MNA	eP	09 41 47.7
BRK Ms=5.3 Distance=40°			
USGS 09h34m05.8s 52.2N 174.5W			
h=33km mb=5.2 Ms=5.3			
Andreanof Islands, Aleutian Islands			
May 16	WDC	eP	17 01 02.5
	ORV	eP	17 01 10.5
	BKS	ePd	17 01 12.0
		e	17 09 24
		iS	17 09 28
		i	17 09 30
		iS	17 09 30
		iScS	17 11 06
		eSS	17 13 10
		i	17 13 37
		eLq	17 16 16
		eLr	17 18 34
			AMP(μm) PER(s)
		LZ	1.6 20.
		LN	0.0 20.
		LE	2.1 20.
	JAS1	eP	17 01 22.5
	MNA	e	17 01 30.5
	FRI	e	17 01 34.0
BRK Ms=5.3 Distance=61°			
USGS 16h51m12.3s 47.2N 154.1E			
h=24km mb=5.8 Ms=5.5			
Kuril Islands			
May 16	FHC	iPc	17 21 48.7
		iS	17 22 02.2
	WDC	iPc	17 22 03.1
		iS	17 22 28.0
	MIN	iPc	17 22 13.1
	ORV	iPc	17 22 16.1
	BRK	e	17 22 18.9
	BKS	eP	17 22 21.7
		eSg	17 23 02.6
	PCC	eP	17 22 24.5
	MHC	eP	17 22 31.7
	GCC	eP	17 22 31.8
	SAO	iPc	17 22 38.0
	JAS1	iPc	17 22 38.1
	FRI	eP	17 22 51.6
BRK 17h21m30.1s 40.4N 125.4W			
h=21km ML=3.9(5) Mo=2.6E21(1)			
Off Coast 80 km W of Cape Mendocino, CA			
May 17	WDC	ePc	13 30 09.0

DATE	STA	PHASE	TIME (UTC)
	MIN	eP	13 30 12.3
	ORV	ePc	13 30 14.4
	BKS	iPd	13 30 16.8
			AMP(μm) PER(s)
		PZ	0.017 0.7
	MHC	eP	13 30 20.0
	JAS1	e	13 30 22.3
	PRS	eP	13 30 23.3
	FRI	eP	13 30 26.5
USGS 13h18m59.7s 27.6N 139.9E			
h=480km mb=4.7			
Bonin Islands Region			
May 17	FHC	eP	16 27 23.6
	WDC	eP	16 27 30.6
		e	16 33 47.0
	MIN	eP	16 27 37.0
	ORV	eP	16 27 41.3
	BRK	e	16 27 46.2
	BKS	ePc	16 27 46.7
		e	16 28 24
		ePPP	16 29 50
		iSN	16 33 52
		e	16 34 48
		Lq	16 36 20
		Lr	16 37 55
			AMP(μm) PER(s)
		PZ	0.23 1.1
		LZ	86 20.
		LNE	45 20.
		LNW	56 20.
	PCC	e	16 27 47.9
	MHC	eP	16 27 52.7
		e	16 33 56.7
	GCC	eP	16 27 52.9
	JAS1	eP	16 27 55.0
		i	16 29 37.5
	SAO	eP	16 27 58.5
	PRS	e	16 27 59.8
	LLA	e	16 28 00.7
	FRI	eP	16 28 03.4
		e	16 34 01.2
	MNA	eP	16 28 04.3
		e	16 34 00.7
	PRI	eP	16 28 04.4
		e	16 29 45.0
BRK Ms=6.5 Distance=40°			
USGS 16h20m22.2s 52.3N 174.5W			
h=26km mb=5.8 Ms=6.6			
Andreanof Islands, Aleutian Islands			
May 17	WDC	e	16 39 06.9
	ORV	eP	16 39 16.3
	BRK	eP	16 39 21.5
	BKS	ePc	16 39 21.7
			AMP(μm) PER(s)
		PZ	0.020 0.8
	MHC	eP	16 39 27.2
	JAS1	iP	16 39 29.0
	PRS	eP	16 39 34.3
	LLA	eP	16 39 34.9
	FRI	eP	16 39 38.9
	PRI	e	16 39 41.1
	MNA	e	16 39 42.8
USGS 16h31m58.2s 52.2N 174.5W			
h=33km mb=4.9			
Andreanof Islands, Aleutian Islands			
May 18	PRS	eP	16 51 04.4
	MHC	eP	16 51 07.1
	PRI	e	16 51 07.4
	FRI	eP	16 51 11.5

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DATE	STA	PHASE	TIME (UTC)
	JAS1	eP	18 51 11.6
	WDC	e	18 51 13.4
	ORV	ePc	18 51 13.6
	MIN	e	18 51 14.4
	MNA	eP	18 51 20.8
USGS 18h39m49.4s 23.3S 179.9E			
h=607km mb=4.7			
South of Fiji Islands			
May 18	WDC	eP	21 38 00.2
	MIN	eP	21 38 05.8
	ORV	eP	21 38 08.4
	JAS1	eP	21 38 23.7
	MNA	eP	21 38 29.3
	FRI	eP	21 38 31.5
USGS 21h29m12.8s 55.1N 163.9E			
h=33km mb=4.9 Ms=4.5			
Off East Coast of Kamchatka			
May 19	FHC	eP	02 44 37.5
	WDC	ePd	02 44 45.4
	MIN	eP	02 44 51.0
	ORV	ePd	02 44 54.9
		ePcP	02 47 07.8
	BKS	iPc	02 45 00.8
		e	02 46 32
		e	02 47 12
		eSe	02 51 04
		e	02 52 12
		Lqn	02 54 01
		Lr	02 55 55
		AMP(μm)	PER(s)
		PZ 0.070	1.0
		LZ 2.1	20.
		LN 0.89	20.
		LE 2.3	20.
	MHC	eP	02 45 05.9
		ePcP	02 47 12.5
	JAS1	ePd	02 45 09.9
	SAO	e	02 45 10.0
	PRS	eP	02 45 13.0
		ePcP	02 47 15.1
	LLA	e	02 45 13.9
	FRI	eP	02 45 17.2
		iPcP	02 47 16.7
	MNA	eP	02 45 17.7
		ePcP	02 47 17.6
	PRI	eP	02 45 18.3
BRK Ms=5.0 Distance=41°			
USGS 02h37m34.9s 52.3N 174.9W			
h=33km mb=5.1 Ms=5.2			
Andreanof Islands, Aleutian Islands			
May 19	FHC	e	03 26 08.4
	WDC	eP	03 26 16.5
	MIN	eP	03 26 21.9
	ORV	eP	03 26 25.9
	BKS	ePd	03 26 32.0
		AMP(μm)	PER(s)
		PZ 0.062	1.1
	MHC	eP	03 26 37.7
	JAS1	eP	03 26 40.8
		e	03 29 04.5
	PRS	e	03 26 44.3
	LLA	eP	03 26 45.2
	FRI	eP	03 26 48.7
	MNA	eP	03 26 49.5
		e	03 29 18.0
USGS 03h19m06.0s 52.3N 174.9W			
h=33km mb=5.0			
Andreanof Islands, Aleutian Islands			

DATE	STA	PHASE	TIME (UTC)
May 19	FRI	eP	06 35 15.1
	JAS1	eP	06 35 22.7
	MNA	eP	06 35 25.5
	ORV	eP	06 35 34.3
	WDC	eP	06 35 41.2
USGS 06h25m06.9s 23.0S 113.6W			
h=10km mb=4.9 Ms=4.8			
Easter Island Region			
May 19	MNA	eP	12 48 33.8
	JAS1	eP	12 48 38.0
	ORV	eP	12 48 47.3
		epP	12 49 15.6
	WDC	eP	12 48 51.2
		epP	12 49 20.4
USGS 12h36m30.3s 28.4S 69.1W			
h=112km mb=5.1			
Chile-Argentina Border Region			
May 19	BKS	ePc	13 15 08.0
		AMP(μm)	PER(s)
		PZ 0.016	0.8
	WDC	eP	13 15 10.8
	ORV	eP	13 15 12.2
	JAS1	eP	13 15 13.4
	FRI	eP	13 15 14.7
	MNA	eP	13 15 23.3
USGS 13h02m43.8s 12.6S 167.3E			
h=33km mb=5.3			
Santa Cruz Islands			
May 19	BKS	iPd	21 06 24.0
		e	21 07 38
		ePP	21 09 36
		eS	21 16 45
		iPPS	21 18 11
		eSS	21 22 54
		Lq	21 28 00
		Lr	21 31 10
		AMP(μm)	PER(s)
		PZ 0.035	1.0
		LZ 1.3	20.
		LN 0.71	20.
		LE 0.82	20.
	GCC	e	21 06 24.3
	BRK	eP	21 06 24.8
	PRS	e	21 06 24.9
	FHC	eP	21 06 24.9
	LLA	e	21 06 26.1
	MHC	eP	21 06 26.4
	PRI	iPc	21 06 28.4
	WDC	iPc	21 06 29.0
		e	21 09 40.4
	ORV	iPc	21 06 30.5
	FRI	eP	21 06 31.4
	JAS1	iPc	21 06 31.7
	MNA	iPc	21 06 41.3
BRK Ms=5.2 Distance=82°			
USGS 20h54m03.7s 12.6S 167.2E			
h=51km mb=5.4 Ms=5.5			
Santa Cruz Islands			
May 19	WDC	eP	23 34 21.9
	MIN	eP	23 34 27.2
	ORV	eP	23 34 31.3
	BKS	e(P)	23 34 36.2
	MHC	eP	23 34 42.1
	JAS1	eP	23 34 45.1
	PRS	eP	23 34 47.0
	FRI	eP	23 34 53.3
	MNA	eP	23 34 53.4
	PRI	eP	23 34 53.7

DATE	STA	PHASE	TIME (UTC)
USGS 23h26m46.3s 51.8N 179.7W			
h=33km mb=5.2			
Andreanof Islands, Aleutian Islands			
May 20	PRI	iPc	03 37 06.3
	LLA	iPd	03 37 12.6
	PRS	iPc	03 37 12.9
	SAO	ePc	03 37 17.7
	FRI	ePc	03 37 24.2
		eS	03 37 39.5
	GCC	e(P)	03 37 26.3
	MHC	e(P)	03 37 27.4
	JAS1	ePd	03 37 33.2
		iS	03 37 55.5
	PCC	e	03 37 36.5
BRK 03h37m03.5s 36.2N 120.8W			
h=10km ML=2.6(4)			
Peachtree Valley, 30 km ESE of King City, CA			
May 20	FHC	eP	04 21 33.8
	WDC	eP	04 21 38.7
	MIN	e	04 21 42.0
	ORV	eP	04 21 44.7
	BRK	eP	04 21 46.9
	BKS	e(P)d	04 21 47.1
		AMP(μm)	PER(s)
		PZ 0.048	1.0
	MHC	eP	04 21 50.6
	SAO	eP	04 21 52.0
	JAS1	eP	04 21 53.4
	PRS	eP	04 21 54.3
	LLA	eP	04 21 54.6
	FRI	eP	04 21 57.9
	MNA	eP	04 22 00.2
USGS 04h10m32.3s 29.9N 137.4E			
h=523km mb=4.8			
South of Honshu, Japan			
May 20	FHC	ePc	05 38 53.7
	WDC	iPc	05 38 57.8
	MIN	ePc	05 39 00.7
	ORV	ePc	05 39 02.8
	BRK	eP	05 39 05.7
	PCC	eP	05 39 05.9
	BKS	iPc	05 39 05.9
		iPP	05 42 52
		e	05 43 12
		e	05 43 45
		eSKS	05 49 54
		ePS	05 51 46
		e	05 55 06
		e	05 55 58
		Lq	06 04 50
		Lr	06 09 40
		AMP(μm)	PER(s)
		PZ 0.57	1.6
		LZ 4.5	20.
		LN 0.54	20.
		LE 5.7	20.
	GCC	ePc	05 39 08.3
	MHC	eP	05 39 09.0
	JAS1	ePc	05 39 10.8
		e	05 43 05.5
	PRS	eP	05 39 12.2
	SAO	eP	05 39 12.4
	LLA	eP	05 39 13.3
	FRI	eP	05 39 15.3
	PRI	ePc	05 39 15.7
	MNA	ePc	05 39 16.6
BRK Ms=6.0 Distance=97°			
USGS 05h25m47.0s 24.1N 121.6E			

DATE	STA	PHASE	TIME (UTC)
h=19km mb=6.1 Ms=6.4			
Taiwan			
May 20	FHC	eP	05 50 36.2
	WDC	ePc	05 50 40.2
	MIN	eP	05 50 43.0
	ORV	ePc	05 50 44.9
	BRK	e	05 50 47.7
	PCC	eP	05 50 48.8
	BKS	iPc	05 50 49.3
		AMP(μm)	PER(s)
		PZ 0.036	0.9
	MHC	eP	05 50 51.1
	JAS1	iPc	05 50 53.3
	GCC	e	05 50 54.0
	PRS	eP	05 50 55.7
	FRI	eP	05 50 57.6
	PRI	eP	05 50 58.1
	MNA	eP	05 50 59.1
	SAO	e	05 51 00.1
USGS 05h37m30.7s 24.1N 121.6E			
h=31km mb=5.5			
Taiwan			
May 20	FHC	iPc	10 23 36.9
	WDC	iPc	10 23 52.8
	MIN	eP	10 24 03.0
	ORV	eP	10 24 08.2
	BKS	iPc	10 24 18.9
		eS	10 25 26
		AMP(μm)	PER(s)
		PZ 0.010	0.6
	MHC	e	10 24 29.8
	JAS1	eP	10 24 33.7
	FRI	eP	10 24 49.4
USGS 10h22m57.6s 42.1N 126.7W			
h=10km mb=4.6 Ms=4.3			
Off Coast of Oregon			
May 20	WDC	ePKP	22 16 01.8
	MIN	ePKP	22 16 03.3
	ORV	ePKP	22 16 04.3
	MHC	ePKP	22 16 06.3
	PRS	ePKP	22 16 07.5
	JAS1	ePKP	22 16 07.8
	BKS	ePKP	22 16 08
		AMP(μm)	PER(s)
		PKPZ 0.019	.8
	LLA	ePKP	22 16 08.1
	FRI	ePKP	22 16 08.7
	PRI	ePKP	22 16 09.1
	MNA	ePKP	22 16 10.7
USGS 21h57m06.3s 7.3S 106.5E			
h=60km mb=5.6			
Java			
May 21	MNA	eP	01 58 14.5
		e	01 58 20.1
		e	01 58 28.8
	JAS1	eP	01 58 23.4
		e	01 58 31.5
	ORV	eP	01 58 23.8
	MIN	iP	01 58 25.3
	BKS	eLr	02 26 00.0
		AMP(μm)	PER(s)
		LN 0.82	20.
		LE 0.36	20.
USGS 01h45m25.0s 14.4N 20.1W			
h=10km mb=5.2 Ms=4.8			
North Atlantic Ocean			
May 21	FHC	ePd	05 57 29.2

DATE	STA	PHASE	TIME (UTC)
		epP	05 57 40.7
	WDC	ePd	05 57 35.2
		epP	05 57 46.6
		eP'P'	06 26 33.0
	ORV	ePd	05 57 42.5
		epP	05 57 54.0
		eP'P'	06 26 32.4
	BRK	e(P)	05 57 46.0
		epP	05 57 57.8
	PCC	e(P)	05 57 46.5
	BKS	eP	05 57 47
		epP	05 57 58.4
		e	05 58 16.5
		iS	06 06 29
		eScS	06 06 50
		eSS	06 10 37
		eLq	06 13 48
			06 16
		eLr	06 16 54
		AMP(μm)	PER(s)
		LZ 11	20.
		LN 0.0	20.
		LE 11	20.
	GCC	ePd	05 57 50.5
		epP	05 58 02.3
	MHC	e(P)	05 57 51.0
		epP	05 58 03.0
	JAS1	ePd	05 57 54.0
		epP	05 58 05.8
	PRS	ePd	05 57 56.5
		epP	05 58 07.7
	LLA	e(P)	05 57 57.0
		epP	05 58 06.7
	FRI	eP	05 58 00.0
		epP	05 58 11.5
	MNA	ePd	05 58 01.3
		epP	05 58 13.1
	PRI	e(P)	05 58 02
		epP	05 58 11.8
BRK Ms=6.1 Distance=66°			
USGS 05h47m10.9s 43.7N 148.4E			
h=39km mb=6.1 Ms=6.2			
Kuril Islands Region			
May 21	FHC	ePd	10 43 13.6
	WDC	iPd	10 43 20.0
	ORV	iPd	10 43 29.2
	MHC	ePd	10 43 42.7
	JAS1	ePd	10 43 43.9
	MNA	iPd	10 43 49.6
	FRI	ePd	10 43 51.4
USGS 10h34m43.4s 59.6N 164.5E			
h=33km mb=4.9			
Kamchatka			
May 21	SAO	iPd	13 33 05.2
	LLA	iPc	13 33 05.3
	PRS	ePd	13 33 06.8
	PRI	ePc	13 33 14.0
	GCC	ePc	13 33 15.1
	MHC	iPd	13 33 17.0
		iS	13 33 29.6
	FRI	ePc	13 33 23.6
	PCC	ePd	13 33 24.9
	JAS1	iPc	13 33 26.7
		iS	13 33 47.4
	BKS	iPd	13 33 27.3
		iS	13 33 56.2
	BRK	eP	13 33 27.6
BRK 13h33m00.8s 36.6N 121.2W			
h=2km ML=2.7(4)			
Bear Valley area, 30 km SE of			

DATE	STA	PHASE	TIME (UTC)
Hollister, CA			
May 21	MNA	iPc	13 59 36.6
	FRI	iPc	13 59 48.3
	JAS1	iPc	13 59 57.0
	PRI	iPc	14 00 02.1
	LLA	ePc	14 00 08.1
	PRS	ePc	14 00 08.2
	MHC	ePc	14 00 10.5
	ORV	iPc	14 00 16.0
BRK ML=4.1(4)			
USGS 13h59m00.0s 37.1N 116.1W			
h=0km			
Underground Nuclear Explosion, N.T.S.			
May 21	WDC	eP	23 33 04.2
	ORV	e	23 33 15.6
	JAS1	e	23 33 31.9
	MNA	e	23 33 35.6
USGS 23h28m00.9s 60.3N 140.5W			
h=16km mb=4.6			
Southeastern Alaska			
May 22	WDC	e	10 40 14.9
	ORV	e	10 40 22.5
	JAS1	eP	10 40 34.5
	MNA	e	10 40 41.0
USGS 10h29m50.6s 43.7N 148.4E			
h=42km mb=5.2 Ms=4.5			
Kuril Islands Region			
May 23	WDC	ePd	03 12 43.7
	ORV	ePd	03 12 48.6
	JAS1	ePd	03 12 54.5
	PRI	e(P)	03 12 55
	FRI	ePd	03 12 58.1
	MNA	ePd	03 13 02.5
USGS 03h00m03.4s 11.8N 142.3E			
h=33km mb=5.1			
South of Mariana Islands			
May 23	FRI	iPc	11 42 26.3
	PRI	iPc	11 42 31.3
		iS	11 43 05
	LLA	iPc	11 42 35.6
	MNA	iPd	11 42 40.2
	JAS1	iPc	11 42 41.4
		iS	11 43 20
	SAO	iPc	11 42 41.5
	MHC	iPc	11 42 46.6
BRK ML=4.2(5)			
PAS 11h41m55.1s 35.8N 118.0			
h=10km ML=3.9			
Lake Isabella area, CA			
May 23	WDC	ePc	23 24 17.0
	MIN	e(P)c	23 24 22.0
	ORV	e(P)c	23 24 28.0
	JAS1	ePc	23 24 44.8
	MNA	ePc	23 24 50.2
	PRS	ePc	23 24 52.5
	FRI	ePc	23 24 53.9
	BKS	e	23 24 54.5
USGS 23h18m42.3s 58.9N 153.4W			
h=79km mb=5.0			
Kodiak Island Region			
May 24	JAS1	ePd	10 11 24.9
	WDC	ePd	10 11 37.6
May 24	MNA	ePc	12 45 54.4

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
		e	10 48 53.1
	JAS1	ePc	10 46 02.2
		e	10 48 55.5
	BKS	e	10 52 14
		e	10 54 40

USGS 10h39m42.9s 15.5N 95.6W
h=33km mb=4.9 Ms=5.2
Near Coast of Oaxaca, Mexico

May 24	BKS	ePc	10 54 55.4
		ePcP	10 55 09.8
		ePd	10 55 57
		e	10 55 58
		eS	11 04 08
		e	11 04 18
		e	11 04 50
		Lq	11 12 55
		eLr	11 15 50
		AMP(μm)	PER(s)
		PZ 0.011	0.9
		LZ 2.9	20.
		LN 2.3	20.
		LE 2.8	20.
	FRI	eP	10 55 01.3
	JAS1	ePc	10 55 02.1
	WDC	ePc	10 55 04.0
	MNA	eP	10 55 12.4

BRK Ms=5.6 Distance=71°
USGS 10h43m35.9s 15.6S 173.1W
h=33km mb=5.4 Ms=5.8
Tonga Islands

May 25	MHC	iPc	00 34 22.35
	GCC	iPd	00 34 29.2
	PCC	iPc	00 34 30.2
	BRK	iPc	00 34 31.5
	BKS	iPc	00 34 31.5
		eS	00 34 41.0
	SAO	ePd	00 34 33.4
	LLA	iPc	00 34 38.0
	JAS1	iPd	00 34 39.85
	FRI	ePd	00 34 40.5

BRK 00h34m19.8s 37.5N 121.7W
h=7km ML=2.8(4) Mo=7.9E19(2)
Mt. Lewis area, 23 km NE of San Jose, CA

May 25	MNA	ePc	01 56 41.2
	JAS1	ePc	01 56 49.8
	MHC	ePc	01 56 54.7
	ORV	ePc	01 57 04.0
	WDC	e(P)	01 57 10

USGS 01h49m08.1s 10.6N 86.0W
h=57km mb=4.7 Ms=4.0
Costa Rica

May 25	SAO	iPc	03 46 06.45
	LLA	iPc	03 46 08.3
	PRS	iPd	03 46 11.2
	GCC	iPc	03 46 14.6
	MHC	iPd	03 46 15.3
	PRI	ePd	03 46 17.7
	PCC	ePd	03 46 23.2
	FRI	ePc	03 46 24.8
		iS	03 46 41.1
	JAS1	iPd	03 46 26.0
	BKS	ePd	03 46 26.1
		eS	03 46 48.1

BRK 03h46m02.8s 36.8N 121.2W
h=11km ML=3.0(4)
17 km SE of Hollister, CA

DATE	STA	PHASE	TIME (UTC)
May 25	BKS	iPd	09 51 22.1
		iS	09 51 37.6
	BRK	iPd	09 51 22.2
	ORV	iPc	09 51 25.0
	PCC	iPd	09 51 26.5
	MHC	ePd	09 51 32.3
	MIN	ePc	09 51 33.8
	JAS1	iPc	09 51 37.6

BRK 09h51m03.1s 38.8N 122.8W
h=4km ML=3.2(6) Mo=5.4E21(2)
The Geysers, 22 km S of Clear Lake, CA

May 25	PCC	ePc	13 08 59.0
	GCC	ePc	13 08 59.9
	MHC	ePc	13 09 02.1
	ORV	e(P)	13 09 05.3
	JAS1	ePc	13 09 07.3
	FRI	ePc	13 09 08.4
	MNA	ePc	13 09 16.8

USGS 12h56m37.3s 11.0S 165.9E
h=33km mb=5.3 Ms=4.5
Santa Cruz Islands

May 26	ORV	e	00 27 02.2
	JAS1	e	00 27 56.2
	WDC	e	00 27 57.2
	BKS	e(P)c	00 28 00.5
		eS	00 37 50
		eLq	00 46 12
		AMP(μm)	PER(s)
		LZ 0.89	20.
		LN 0.89	20.
		LE 0.89	20.
	MNA	e	00 28 01.9

BRK Ms=5.2 Distance=73°
USGS 00h16m24.4s 16.2S 172.9W
h=33km mb=5.2 Ms=5.4
Samoa Islands Region

May 26	GCC	eP	18 51 52.8
	PRS	eP	18 51 53.0
	PCC	eP	18 51 53.1
	MHC	eP	18 51 54.4
	SAO	eP	18 51 54.7
	BRK	eP	18 51 54.9
	BKS	ePd	18 51 54.9
		ipP	18 53 58
		esP	18 55 07
		iS	19 01 18
		iSP	19 02 09
		isS	19 04 58
		isPS	19 05 36
		eSS	19 06 43
		e	19 09 24
		i	19 13 12
		AMP(μm)	PER(s)
		PZ 0.45	1.0
	PRI	eP	18 51 55.1
	LLA	eP	18 51 56.3
	FHC	eP	18 51 59.7
	JAS1	iPd	18 52 00.8
		ipP	18 54 07.6
		e	19 01 23.7
	FRI	eP	18 52 02.2
	ORV	eP	18 52 02.2
	WDC	iPd	18 52 02.5
		ipP	18 54 07.9
		e	19 01 23.6
	MIN	ePd	18 52 04.3
	MNA	iPd	18 52 09.7

BRK mb=5.9 h= 580km Distance=81°

DATE	STA	PHASE	TIME (UTC)

USGS 18h40m44.3s 21.8S 179.1W
h=583km mb=6.1
Fiji Islands Region

May 26	PCC	eP	19 17 28.4
	GCC	eP	19 17 28.4
	PRS	eP	19 17 28.8
	SAO	eP	19 17 30.0
	BKS	iPd	19 17 30.8
		epP	19 19 32
		ePP	19 20 41
		e	19 23 56
		eS	19 26 54
		eSKS	19 27 08
		AMP(μm)	PER(s)
		PZ 3.4	1.0
	MHC	eP	19 17 30.9
	PRI	eP	19 17 31.0
		eP'P'	19 44 08.6
	BRK	iPd	19 17 31.0
		iPp	19 17 33
		epP	19 19 28
		esP	19 20 23
		ePP	19 20 43
		eS	19 26 55
		eSKS	19 27 11
		e	19 29 12
		esS	19 30 20
		esPS	19 31 08
	LLA	i	19 17 31.9
	FHC	eP	19 17 33.8
	FRI	eP	19 17 35.8
		i	19 27 04.7
		eP'P'	19 44 08.7
	JAS1	iPd	19 17 36.1
		ipP	19 19 34.6
		i	19 20 44.6
		i	19 25 57.6
		i	19 27 03.3
		eP'P'	19 44 09.2
	ORV	eP	19 17 37.1
		eP'P'	19 44 09.4
	WDC	iPd	19 17 37.2
		i	19 19 25.4
		e	19 25 56.3
		i	19 27 02.2
		eP'P'	19 44 10.7
	MIN	iPd	19 17 39.7
	MNA	eP	19 17 45.5
		eP'P'	19 44 19.3

BRK mb=6.8 h=547km Distance=81°
USGS 19h06m16.0s 20.2S 178.9E
h=538km mb=6.4
South of Fiji Islands

May 26	MHC	iPd	19 56 37.4
	GCC	iPd	19 56 40.5
		iS	19 56 46.3
	SAO	iP	19 56 42.0
	PCC	eP	19 56 47.0
		i	19 56 47.6
		iS	19 56 59.4
	LLA	iPc	19 56 47.7
	PRS	iPc	19 56 50.4
	BRK	eP	19 56 50.5
	BKS	iPc	19 56 50.5
		eS	19 57 03.8
	ZSP	eP	19 56 52.3
	JAS1	iPd	19 56 55.3
		iS	19 57 11.7
	PRI	eP	19 56 56.4
	FRI	eP	19 56 59.7

DATE	STA	PHASE	TIME (UTC)
	ORV	e	19 57 12.7

BRK 19h56m33.5s 37.2N 121.6W
h=4km ML=2.7(4) Mo=4.0E20(2)
Anderson Lake, 30 km SE of San Jose, CA

May 27	FHC	ePKP	09 11 34.0
	WDC	ePKP	09 11 35.2
	MIN	ePKP	09 11 36.5
	PCC	ePKP	09 11 36.7
	ORV	ePKP	09 11 37.4
	GCC	ePKP	09 11 37.6
	MHC	ePKPc	09 11 38.5
	BKS	ePKP	09 11 38.7
		ePPS	09 25 00
		ePPPS	09 26 06
		e	09 27 50
	PRS	ePKP	09 11 39.1
	LLA	ePKP	09 11 39.6
	JAS1	ePKPc	09 11 40.7
	PRI	ePKPc	09 11 40.8
	FRI	ePKP	09 11 41.2
	MNA	ePKPc	09 11 43.6

USGS 08h54m06.8s 7.1S 124.2E
h=627km mb=5.6
Banda Sea

May 27	GCC	eP	22 14 30.0
	PCC	ePc	22 14 30.2
	PRS	eP	22 14 30.2
	PRI	ePc	22 14 32.3
	BRK	eP	22 14 32.3
	MHC	eP	22 14 32.3
	BKS	iPc	22 14 32.5
		AMP(μm)	PER(s)
		PZ 0.11	0.8
	FRI	ePc	22 14 38.4
	JAS1	iPc	22 14 39.0
	ORV	ePc	22 14 40.4
	WDC	ePc	22 14 40.5
	MIN	ePc	22 14 43.1
	MNA	iPc	22 14 49.5

USGS 22h03m10.1s 15.5S 173.9W
h=33km mb=5.4 Ms=4.9
Tonga Islands

May 27	WDC	eP	22 21 08.4
	GCC	eP	22 21 10.7
	MHC	ePc	22 21 10.9
	ORV	eP	22 21 11.8
	JAS1	iPc	22 21 15.2
	FRI	eP	22 21 17.2
	MNA	ePc	22 21 24.0

USGS 22h07m58.3s 7.8S 150.8E
h=33km mb=5.7
New Britain Region

May 28	PRI	ePc	13 37 39.8
	PRS	eP	13 37 43.4
	LLA	eP	13 37 46.5
	FRI	ePc	13 37 47.3
	SAO	eP	13 37 48.9
	GCC	eP	13 37 53.4
	MHC	eP	13 37 56.3
	JAS1	ePc	13 38 00.2
	MNA	ePc	13 38 04.1
	BKS	iPd	13 38 05.4
		i	13 38 09.1
		ePc	13 38 11
		iS	13 41 38
		eLr	13 42 22.2
		AMP(μm)	PER(s)

DATE	STA	PHASE	TIME (UTC)
		PZ 0.35	1.0
		LZ 4.3	20.
		LN 3.9	20.
		LE 3.9	20.
	BRK	ePc	13 38 08.8
	ORV	ePc	13 38 21.2
	MIN	eP	13 38 30.0
	WDC	eP	13 38 32.8
	FHC	ePc	13 38 40.6

BRK Ms=4.9 Distance=20°
USGS 13h33m44.4s 20.0N 115.9W
h=10km mb=5.5 Ms=5.1
East Central Pacific Ocean

May 29	MNA	e(P)	11 59 48.2
	JAS1	e(P)	11 59 59.2

USGS 11h49m31.5s 50.2N 29.2W
h=10km mb=4.8 Ms=4.8
North Atlantic Ridge

May 29	FRI	eP	20 37 03.1
	PRI	eP	20 37 03.2
	MNA	eP	20 37 04.8
	JAS1	eP	20 37 10.3
	MHC	e	20 37 15.3
	ORV	eP	20 37 28.2
	BKS	eLq	20 45 08
		eLr	20 47 46

USGS 20h31m19.8s 17.0N 98.7W
h=36km mb=5.2 Ms=4.2
Near Coast of Guerrero, Mexico

May 29	FRI	e	20 51 07.3
	LLA	e	20 51 56.6
	PRI	e	20 51 57.2
	MNA	eP	20 52 03.2
	GCC	e	20 52 09.1
	JAS1	e	20 52 10.1
	MHC	e	20 52 10.1
	ORV	e	20 52 26.3

May 30	SAO	iPd	01 03 52.4
	LLA	ePd	01 03 56.9
		eS	01 04 03.5
	MHC	iPd	01 03 58.7
	GCC	iPc	01 03 59.1
	PRS	iPd	01 03 59.7
	PCC	iPd	01 04 08.1
	JAS1	iPd	01 04 11.7
	BKS	iPd	01 04 11.7
		eS	01 04 31.5
	FRI	iPc	01 04 11.8
		eS	01 04 29.1

BRK 01h03m48.9s 36.9N 121.3W
h=6km ML=2.8(4)
8 km NE of Hollister, CA

May 30	FRI	eP	06 22 07.4
	MNA	ePc	06 22 08.3
	PRI	e	06 22 11.0
	JAS1	eP	06 22 16.3
	GCC	e	06 22 21.2
	MHC	e	06 22 21.5
	BKS	ePc	06 22 26.9
		AMP(μm)	PER(s)
		PZ 0.038	0.8
	ORV	eP	06 22 30.7
	MIN	eP	06 22 33.3

USGS 06h14m35.6s 10.8N 85.9W
h=52km mb=4.7 Ms=4.0
Costa Rica

DATE	STA	PHASE	TIME (UTC)
May 30	GCC	eP	08 15 12.4
	BRK	eP	08 15 12.6
	BKS	iPc	08 15 13.0
		eLr	08 41 10
		AMP(μm)	PER(s)
		PZ 0.063	0.8
		LZ 0.71	20.
		LN 0.0	20.
		LE 0.54	20.
	PRS	eP	08 15 14.1
	MHC	ePc	08 15 14.4
	WDC	ePc	08 15 15.3
	LLA	eP	08 15 15.7
	PRI	eP	08 15 16.8
	ORV	eP	08 15 17.4
	MIN	ePc	08 15 18.0
	JAS1	iPc	08 15 19.4
	FRI	ePc	08 15 20.7
	MNA	ePc	08 15 28.7

BRK Ms=4.9 Distance=84°
USGS 08h02m40.4s 10.9S 162.4E
h=61km mb=5.5
Solomon Islands

May 30	PRS	ePc	17 35 11.2
	PRI	ePc	17 35 12.2
	SAO	ePc	17 35 14.1
	LLA	ePc	17 35 14.3
	GCC	ePc	17 35 15.0
	PCC	ePc	17 35 17.9
	MHC	ePc	17 35 18.1
	FRI	ePc	17 35 18.3
	BKS	iPc	17 35 20.0
		AMP(μm)	PER(s)
		PZ 0.058	0.9
	JAS1	iPc	17 35 23.2
		e	17 35 41.3
	MNA	ePc	17 35 31.0
	WDC	iPc	17 35 36.1

USGS 17h24m58.3s 21.9S 139.0W
h=0km mb=5.7 Ms=4.3
Tuamotu Archipelago Region

May 31	WDC	ePd	03 50 40.3
	MIN	eP	03 50 44.6
	ORV	iPd	03 50 47.6
	BKS	ePc	03 50 52.1
		AMP(μm)	PER(s)
		PZ 0.020	0.5
	FHC	e	03 50 54.9
	GCC	e	03 50 55.8
	JAS1	iPd	03 50 58.8
	PRS	eP	03 51 01.2
	FRI	eP	03 51 04.9
	PRI	eP	03 51 05.2
	MNA	eP	03 51 05.9

USGS 03h40m07.4s 43.3N 145.6E
h=80km mb=5.4
Hokkaido, Japan, Region

May 31	SAO	iPc	08 47 10.9
	LLA	iPc	08 47 12.6
	PRS	iPd	08 47 13.5
	PRI	iPd	08 47 28.5
	GCC	iPd	08 47 20.5
	MHC	iPd	08 47 22.4
	PCC	iPd	08 47 28.9
	FRI	iPc	08 47 30.3
	BRK	eP	08 47 31.9
	BKS	iP	08 47 32.1
		iS	08 48 05.4
	JAS1	iPd	08 47 32.5

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DATE	STA	PHASE	TIME (UTC)
BRK 08h47m07.2s 36.6N 121.3W			
h=6km ML=3.7(6) Mo=2.6E21(2)			
Stone Canyon, 28 km SE of Hollister, CA			
May 31	LLA	iPc	08 48 01.2
	PRS	iPd	08 48 02.0
	GCC	iPd	08 48 09.2
	PRI	iPc	08 48 09.7
	MHC	iPd	08 48 11.4
	PCC	iPd	08 48 18.3
	FRI	iPc	08 48 19.0
	BKS	iP	08 48 22.0
		eS	08 48 41.4
	BRK	iPc	08 48 22.0
	ZSP	iPc	08 48 22.4
		iS	08 48 48.1
	JAS1	iPc	08 48 22.6
	ORV	iP	08 48 43.2
	MNA	iPc	08 48 51.0
	MIN	i	08 48 55.0
BRK 08h47m56.1s 36.6N 121.3W			
h=4km ML=4.7(8) Mo=8.0E22(2)			
Stone Canyon, 30 km SE of Hollister, CA			
May 31	SAO	iPc	14 51 32.2
	LLA	iPc	14 51 33.8
	PRS	iPd	14 51 34.5
	GCC	iPd	14 51 41.6
	PRI	ePd	14 51 41.8
	MHC	eP	14 51 43.7
	PCC	ePd	14 51 50.2
	FRI	ePc	14 51 51.3
	JAS1	iP	14 51 54.9
	BKS	iPd	14 51 56.4
		eS	14 52 15.3
BRK 14h51m28.4s 36.6N 121.3W			
h=6km ML=2.7(4)			
Stone Canyon, 27 km SE of Hollister, CA			
May 31	PCC	e	22 23 58.6
	PRS	eP	22 23 58.7
	PRI	eP	22 24 00.8
	MHC	eP	22 24 01.0
	FRI	eP	22 24 06.0
	JAS1	iPd	22 24 06.6
	ORV	eP	22 24 07.8
	WDC	iPd	22 24 07.8
	FHC	e	22 24 08.6
	MNA	e	22 24 16.2
USGS 22h13m07.1s 18.5S 177.8W			
h=578km mb=4.9			
Fiji Islands Region			
Jun 1	SAO	iP	06 49 08.0
	LLA	iPc	06 49 09.1
	PRS	iP	06 49 10.0
	PRI	iPd	06 49 17.0
	GCC	iPc	06 49 17.1
	MHC	iPd	06 49 19.4
	PCC	iPd	06 49 26.0
	FRI	iPc	06 49 27.0
	BKS	iP	06 49 29.5
	BRK	ePc	06 49 29.6
	JAS1	iPc	06 49 30.0
BRK 06h49m04.0s 36.6N 121.3W			
h=6km ML=2.9(4) Mo=1.5E21(1)			
Stone Canyon area, 28 km SE of Hollister, CA			

DATE	STA	PHASE	TIME (UTC)
Jun 1	PRI	iP	06 49 48.6
	MHC	iP	06 49 50.6
		iS	06 50 02.4
	JAS1	iS	06 50 18.7
	MNA	iP	06 50 29.1
BRK 06h49m35.0s 36.6N 121.3W			
h=7km ML=3.5(4) Mo=5.7E21(2)			
Stone Canyon area, 29 km SE of Hollister, CA			
Jun 1	FRI	eP	13 03 21.0
	JAS1	eP	13 03 22.2
	ORV	eP	13 03 22.9
	WDC	eP	13 03 23.9
	MIN	eP	13 03 25.6
	MNA	eP	13 03 30.9
USGS 12h51m39.6s 17.8S 174.6W			
h=33km mb=4.7 Ms=4.7			
Tonga Islands			
Jun 1	SAO	iPc	19 34 49.1
	LLA	iPc	19 34 50.8
	PRS	iPd	19 34 51.5
	GCC	eP	19 34 58.2
	PRI	ePc	19 34 59.0
	MHC	eP	19 35 00.5
	FRI	ePc	19 35 08.5
		iS	19 35 26.0
	JAS1	ePc	19 35 11.2
	BKS	eP	19 35 13.4
BRK 19h34m45.4s 36.6N 121.3W			
h=6km ML=2.5(4)			
Stone Canyon area, 27 km SE of Hollister, CA			
Jun 2	GCC	eP	01 44 05.1
	BRK	eP	01 44 05.5
	BKS	iPd	01 44 06.5
		iS	01 54 54
		ePS	01 55 52
		eSS	02 00 40
		eLq	02 08 10
		eLr	02 11 40
		AMP(μm)	PER(s)
		PZ	0.10 0.9
		LZ	3.8 20.
		LN	0.89 20.
		LE	2.9 20.
	WDC	ePc	01 44 06.8
	MHC	eP	01 44 07.8
	PRS	eP	01 44 08.3
	MIN	eP	01 44 08.9
	ORV	eP	01 44 09.3
	LLA	eP	01 44 09.7
	PRI	eP	01 44 11.3
	JAS1	ePc	01 44 12.3
	FRI	eP	01 44 14.3
	MNA	ePc	01 44 21.2
BRK Ms=5.7 Distance= 89°			
USGS 01h31m09.9s 7.0S 154.5E			
h=15km mb=5.9 Ms=5.7			
Solomon Islands			
Jun 2	SAO	iPc	14 16 49.5
	LLA	iPd	14 16 50.4
	PRS	iPd	14 16 51.2
	PRI	iPc	14 16 58.5
	GCC	iPd	14 16 59.0
	MHC	iPd	14 17 01.0
	FRI	iPc	14 17 06.6
		iS	14 17 25.3
	PCC	iPc	14 17 07.6

DATE	STA	PHASE	TIME (UTC)
	JAS1	iPd	14 17 12.1
	BKS	eP	14 17 12.9
BRK 14h16m45.4s 36.6N 121.3W			
h=6km ML=2.8(4)			
Stone Canyon area, 29 km SE of Hollister, CA			
Jun 2	FHC	e(PKP)	18 10 38.0
	WDC	iPKPd	18 10 38.5
	MIN	ePKP	18 10 40.0
	ORV	ePKPd	18 10 41.4
	BRK	ePKP	18 10 43.4
	BKS	ePKP	18 10 43.4
	PCC	ePKP	18 10 43.6
	MHC	ePKPd	18 10 45.1
	PRS	ePKPd	18 10 46.8
	FRI	ePKPd	18 10 47.3
	MNA	iPKPd	18 10 47.5
	PRI	ePKPd	18 10 48.4
USGS 17h51m55.0s 9.1N 93.5E			
h=80km mb=5.7			
Nicobar Islands Region			
Jun 3	WDC	ePc	01 07 41.4
	BKS	eP	01 07 41.4
		eLr	01 36 18
		AMP(μm)	PER(s)
		PZ	0.041 1.0
	MHC	eP	01 07 43.1
	PRS	eP	01 07 43.6
	ORV	eP	01 07 44.0
	PRI	eP	01 07 46.5
	JAS1	eP	01 07 46.7
		e	01 07 53.3
		e	01 07 58.5
	FRI	eP	01 07 49.5
		e	01 08 00.0
	MNA	ePc	01 07 55.5
		e	01 08 07.4
USGS 00h54m44.9s 5.7S 151.8E			
h=67km mb=5.7			
New Britain Region			
Jun 3	SAO	iP	03 33 49.2
	LLA	iPd	03 33 50.5
	PRS	iPd	03 33 51.4
	PRI	ePd	03 33 58.5
	GCC	iPd	03 33 59.0
	MHC	eP	03 34 01.8
	PCC	ePd	03 34 07.5
	FRI	iPc	03 34 08.3
	JAS1	ePd	03 34 11.2
	BKS	eP	03 34 13.9
		eS	03 34 32.2
BRK 03h33m45.5s 36.6N 121.3W			
h=5km ML=2.9(4)			
Stone Canyon area, 29 km SE of Hollister, CA			
Jun 3	GCC	ePd	09 52 56.5
	PCC	eP	09 52 56.8
	PRS	ePd	09 52 56.8
	MHC	ePd	09 52 59.1
	FRI	ePd	09 53 04.1
	JAS1	ePd	09 53 04.6
	WDC	eP	09 53 05.3
	MIN	eP	09 53 07.5
	MNA	ePd	09 53 13.7
USGS 09h41m44.3s 20.0S 178.7E			
h=540km mb=4.7			
South of Fiji Islands			

DATE	STA	PHASE	TIME (UTC)
Jun 3	GCC	eP	19 45 47.8
	PRS	eP	19 45 48.1
	PCC	eP	19 45 48.9
	PRI	eP	19 45 50.3
	MHC	eP	19 45 50.7
	FRI	eP	19 45 55.5
	JAS1	eP	19 45 56.2
	ORV	eP	19 45 57.6
	WDC	eP	19 45 57.8
	MNA	eP	19 46 05.4
	BKS	eLr	21 07 36
USGS 19h34m40.3s 20.7S 177.9W			
h=501km mb=5.5			
Fiji Islands Region			
Jun 3	PRI	eP	21 00 08.0
	FRI	ePc	21 00 09.3
	PRS	eP	21 00 12.1
	MNA	ePc	21 00 15.0
	JAS1	iPc	21 00 19.7
	MHC	eP	21 00 21.3
	ORV	eP	21 00 38.4
	BKS	e(Lr)	23 01 34
USGS 20h55m05.0s 17.7N 105.7W			
h=10km mb=5.0			
Off Coast of Jalisco, Mexico			
Jun 3	FHC	eP	23 12 30.0
	WDC	eP	23 12 37.5
	MIN	eP	23 12 43.5
	ORV	eP	23 12 48.3
	BRK	eP	23 12 52.2
	BKS	eP	23 12 52.6
		iPPP	23 15 35
		eS	23 19 06
		eLq	23 21 57
		eLr	23 23 54
		AMP(μm)	PER(s)
		PZ	0.048 1.0
		LZ	2.6 20.
		LN	1.3 20.
		LE	2.5 20.
	MHC	eP	23 12 59.2
	JAS1	eP	23 13 02.4
	FRI	eP	23 13 10.7
	MNA	eP	23 13 10.8
BRK Ms=5.1 Distance=40°			
USGS 23h05m28.9s 51.4N 174.7W			
h=33km mb=5.4 Ms=5.1			
Andreanof Islands, Aleutian Islands			
Jun 3	PRI	eP	23 37 07.5
	PRS	ePd	23 37 11.8
	MNA	eP	23 37 15.2
	JAS1	e(P)	23 37 18.6
	MHC	ePd	23 37 19.5
	ORV	eP	23 37 34.9
	BKS	eS	23 42 36
		eLq	23 45 30
		eLr	23 48 08
		AMP(μm)	PER(s)
		LZ	3.5 20.
		LN	3.3 20.
		LE	3.4 20.
BRK Ms=5.4 Distance=45°			
USGS 23h30m55.2s 10.2N 103.6W			
h=10km mb=5.0 Ms=5.4			
Off Coast of Mexico			
Jun 4	SAO	iP	01 57 04.6
	LLA	iPc	01 57 05.3
	PRS	iPd	01 57 06.2

DATE	STA	PHASE	TIME (UTC)
	PRI	ePd	01 57 13.1
	GCC	iPd	01 57 13.9
	MHC	ePd	01 57 15.9
		iS	01 57 27.7
	FRI	iPc	01 57 23.0
	JAS1	ePd	01 57 26.3
		iS	01 57 45.1
	BKS	eP	01 57 27.4
		eS	01 57 48.0
BRK 01h57m00.3s 36.6N 121.3W			
h=6km ML=2.9(2)			
Stone Canyon area, 29 km SE of Hollister, CA			
Jun 4	FHC	e	15 54 30.0
	WDC	iPd	15 54 35.0
	MIN	iPd	15 54 39.3
		i	15 54 48.2
	ORV	iPd	15 54 45.0
	BRK	e	15 54 57.6
	BKS	iPd	15 54 58.0
		e	16 04 36
		AMP(μm)	PER(s)
		PZ	0.18 1.5
	JAS1	iPd	15 55 02.0
	MHC	eP	15 55 03.6
	GCC	eP	15 55 04.5
	MNA	iPd	15 55 05.1
		e	16 00 32
	FRI	iPd	15 55 11.2
	LLA	eP	15 55 11.3
	PRS	eP	15 55 12.0
	PRI	eP	15 55 16.3
USGS 15h48m20.8s 65.6N 152.6W			
h=10km mb=5.2 Ms=4.7			
Alaska			
Jun 5	SAO	iP	00 15 58.6
	LLA	iPc	00 16 02.6
	PRS	iPd	00 16 02.9
	GCC	iPc	00 16 07.9
	MHC	iPd	00 16 10.3
	PRI	ePd	00 16 10.5
		iS	00 16 27.6
	PCC	iPd	00 16 17.1
	FRI	iPd	00 16 20.2
	BKS	iP	00 16 21.1
		eS	00 16 41.9
	ZSP	e	00 16 21.4
	JAS1	iPc	00 16 21.7
		iS	00 16 42.2
	BRK	e	00 16 22.5
	MNA	e	00 16 51.2
BRK 00h15m56.0s 36.7N 121.3W			
h=4km ML=3.1(4) Mo=6.5E20(2)			
Stone Canyon area, 20 km SE of Hollister, CA			
Jun 5	GCC	e	00 29 02.1
	PCC	eP	00 29 02.2
	PRS	ePd	00 29 02.6
	SAO	eP	00 29 03.3
	BRK	eP	00 29 03.7
	PRI	eP	00 29 04.7
	MHC	ePd	00 29 04.7
	FHC	e	00 29 07.3
	FRI	e	00 29 09.4
	JAS1	iPd	00 29 10.0
	WDC	ePc	00 29 10.2
	ORV	eP	00 29 10.9
	MIN	eP	00 29 11.8
	MNA	iPd	00 29 19.2

DATE	STA	PHASE	TIME (UTC)
USGS 00h17m48.6s 20.2S 178.9E			
h=536km mb=5.2			
South of Fiji Islands			
Jun 5	PRI	e	09 13 05.0
	PRS	e	09 13 08.5
	FRI	e	09 13 08.8
	JAS1	eP	09 13 09.4
	MHC	e	09 13 13.8
	MNA	e	09 13 15.1
	BKS	e(P)	09 13 18.5
		eS	09 23 08
		eSS	09 28 20
		eG	09 34 10
		eLr	09 37 14
		AMP(μm)	PER(s)
		PZ	0.040 0.9
		PZ	******
		LZ	1.6 20.
		LN	1.3 20.
		LE	0.71 20.
	WDC	eP	09 13 29.8
BRK Ms=5.3 Distance=81°			
USGS 09h01m15.5s 36.4S 97.4W			
h=10km mb=5.1 Ms=5.3			
West Chile Rise			
Jun 5	MNA	iPc	15 04 37.4
	FRI	iPc	15 04 48.6
	JAS1	iPc	15 04 57.3
	PRI	iPc	15 05 01.4
	LLA	iPc	15 05 03.8
	SAO	iPc	15 05 08.0
	PRS	iPc	15 05 08.0
	MHC	iPc	15 05 10.4
	GCC	iPc	15 05 14.1
	BKS	ePd	15 05 17.0
		iS	15 06 39
	PCC	iPc	15 05 17.8
	ORV	iPc	15 05 18.0
	BRK	iPc	15 05 18.1
	ZSP	iPc	15 05 18.7
	WDC	iPc	15 05 32.8
	MIN	iPc	15 05 37.1
	FHC	iPc	15 05 53.4
BRK ML=5.2(8)			
USGS 15h04m00.0s 37.1N 116.0W			
h=0km mb=5.3 Ms=4.2			
Underground Nuclear Explosion, N.T.S.			
Jun 5	PRI	eP	15 47 36.6
	PRS	eP	15 47 38.5
	MNA	eP	15 47 38.8
	LLA	eP	15 47 39.0
		epP	15 47 53.8
	JAS1	iPd	15 47 42.1
		ipP	15 48 04.5
	GCC	eP	15 47 43.0
	MHC	eP	15 47 43.5
	ORV	eP	15 47 51.3
		epP	15 48 13.5
	WDC	iPd	15 47 55.5
		i	15 48 07.9
		ipP	15 48 16.9
USGS 15h35m13.3s 34.4S 70.9W			
h=92km mb=5.1			
Chile-Argentina Border Region			
Jun 5	ORV	e	20 34 34.3
	MHC	e	20 34 34.8
	JAS1	eP	20 34 35.6

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DATE	STA	PHASE	TIME (UTC)
	BRK	e	20 34 38.3
	PRS	e	20 34 38.3
	PRI	e	20 34 43.0
	MNA	e	20 34 44.4
	BKS	eS	20 40 32
		eLq	20 43 23
		eScS	20 44 42.2
		eLr	20 45 22
		AMP(μm)	PER(s)
		LZ 0.93	20.
		LN 0.18	20.
		LE 1.4	20.

BRK Ms=4.8 Distance=41°
USGS 20h27m03.1s 51.5N 174.3W
h=33km mb=5.4 Ms=4.8
Andreanof Islands, Aleutian Islands

Jun 6	WDC	iPc	14 50 12.2
	MIN	e	14 50 20.5
	ORV	e	14 50 29.3
	JAS1	eP	14 50 54.5
	MHC	e	14 50 54.6
	MNA	e	14 51 05.3
	FRI	e	14 51 11.8
	PRI	e	14 51 19.3

USGS 14h47m33.7s 50.3N 129.6W
h=10km mb=4.5
Vancouver Island Region

Jun 6	FHC	e	21 56 35.0
	WDC	eP	21 56 39.0
	ORV	eP	21 56 45.0
	MHC	e	21 56 50.6
	JAS1	eP	21 56 52.0
	PRI	eP	21 56 57.1
	MNA	eP	21 56 58.3

USGS 21h43m59.8s 25.8N 124.5E
h=169km mb=5.1
Northeast of Taiwan

Jun 7	PRS	e	04 31 05.0
	MHC	e	04 31 06.5
	PRI	e	04 31 07.3
	WDC	ePc	04 31 11.2
		e	04 31 29.3
	JAS1	ePc	04 31 11.5
		i	04 31 29.4
	MIN	eP	04 31 13.0
		e	04 31 31.0
	MNA	eP	04 31 20.3
		i	04 31 38.1
	BKS	eLr	04 58 30
		AMP(μm)	PER(s)
		LZ 0.57	20.
		LN 0.43	20.
		LE 0.46	20.

USGS 04h18m20.0s 22.3S 170.3E
h=23km mb=5.3 Ms=4.8
Loyalty Islands Region

Jun 7	PRI	iPd	09 50 15.6
		iS	09 50 25.9
	PRS	iPc	09 50 21.7
	LLA	iPd	09 50 24.3
	SAO	iP	09 50 24.4
	GCC	e	09 50 32.4
	JAS1	i	09 50 44.7

BRK 09h50m02.0s 35.4N 120.7W
h=6km Mag=2.8
19 km NW of San Luis Obispo, CA

Jun 7	GCC	e	10 16 57.5
	MHC	e	10 16 58.9
	JAS1	eP	10 17 02.5
	WDC	eP	10 17 05.0
	MIN	eP	10 17 09.5
	MNA	e	10 17 14.7
	BKS	e	10 35 48
		e	10 41 12
		eLr	10 46 08
		AMP(μm)	PER(s)

USGS 10h04m54.7s 23.4S 176.1W
h=33km mb=5.3 Ms=4.9
South of Fiji Islands

Jun 7	PRS	e	19 27 22.9
	MHC	e	19 27 25.5
	PRI	e	19 27 29.3
	FRI	e	19 27 29.6
	BRK	e	19 27 30.6
	JAS1	eP	19 27 31.3
	WDC	eP	19 27 32.3
	MIN	e	19 27 39.6
	MNA	eP	19 27 41.8
	BKS	eS	19 37 16
		eLq	19 46 04
		eLr	19 48 48
		AMP(μm)	PER(s)
		LZ 0.61	20.
		LN 0.50	20.
		LE 0.46	20.

USGS 19h15m56.7s 14.9S 176.1W
h=33km mb=4.9 Ms=5.0
Fiji Islands Region

Jun 7	WDC	eP	21 14 20.5
	JAS1	eP	21 14 43.2
	MNA	eP	21 14 51.5

USGS 21h06m41.8s 51.2N 180.0E
h=33km mb=5.0 Ms=4.1
Rat Islands, Aleutian Islands

Jun 8	WDC	iPc	11 12 58.0
	MIN	ePc	11 13 02.2
	ORV	eP	11 13 05.0
	BRK	eP	11 13 09.3
	BKS	ePu	11 13 10
		eS	11 21 54
		esS	11 22 29
		ePS	11 23 00
		e	11 23 39
		ipP	11 27 05
		eLq	11 29 28
		eLr	11 33 00
		AMP(μm)	PER(s)
		PZ 0.038	0.8
	GCC	e	11 13 13.6
	JAS1	iP	11 13 16.7
	PRS	e	11 13 19.0
	FRI	eP	11 13 22.6
	PRI	e	11 13 22.8
	MNA	iPc	11 13 24.0
		i	11 13 41.4

BRK mb=5.4 h= 65km Distance= 68°
USGS 11h02m25.9s 43.3N 146.5E
h=56km mb=6.0
Kurile Islands

Jun 9	PRS	eP	00 59 31.8
	BKS	iPd	00 59 32.8
		AMP(μm)	PER(s)
		PZ 0.030	0.8
	MHC	eP	00 59 33.8
	FRI	eP	00 59 38.5
	JAS1	iPd	00 59 39.0
	WDC	eP	00 59 39.9
	ORV	eP	00 59 40.0
	MIN	eP	00 59 42.2
	MNA	ePd	00 59 48.3

USGS 00h48m19.0s 20.2S 178.9E
h=547km mb=4.9
South of Fiji Islands

Jun 9	WDC	e	02 24 14.4
	MIN	eP	02 24 19.5
	JAS1	eP	02 24 39.8
	BKS	e	02 24 41.2
		eLq	02 32 20
		e	02 32 34
		e	02 33 12
		eLr	02 34 20
		e	02 34 20
		AMP(μm)	PER(s)
		PZ 0.029	0.7
	MNA	eP	02 24 48.2
	FRI	eP	02 24 49.6

USGS 02h17m38.2s 54.1N 168.1W
h=33km mb=5.0 Ms=4.7
Fox Islands, Aleutian Islands

Jun 9	ZSP	eP	04 48 15.2
		e	04 48 19.0
		i	04 48 23.1
	BKS	iPc	04 48 16.7
		iS	04 48 22.5
	BRK	eP	04 48 16.8
		iS	04 48 23.3
	MHC	eP	04 48 18.5
		i	04 48 20.2
	PCC	eP	04 48 21.1
		i	04 48 22.4
		iS	04 48 32.0
	JAS1	iP	04 48 25.2
		iS	04 48 38.7
	GCC	eP	04 48 25.8
	SAO	eP	04 48 31.1
		i	04 48 32.4

BRK 04h48m05.8s 38.0N 121.7W
h=1km ML=2.1(4)
Brentwood, 50 km ENE of Berkeley, CA

Jun 10	SAO	iPc	01 33 01.9
	LLA	iPc	01 33 04.1
	PRS	iPd	01 33 04.6
	GCC	ePc	01 33 10.7
	PRI	iPd	01 33 12.0
		iS	01 33 25.0
	MHC	iPd	01 33 13.2
		eS	01 33 24.7
	PCC	ePd	01 33 19.6
		iS	01 33 37.3
	FRI	iP	01 33 21.5
	BRK	eP	01 33 22.6
	JAS1	ePd	01 33 23.2
	ZSP	eP	01 33 24.2
	BKS	iPc	01 33 25.7
		iS	01 33 47.1
	ORV	eP	01 33 45.4
	MNA	eP	01 33 52.1

BRK 01h32m58.4s 36.6N 121.3W
h=8km ML=3.3(4) Mo=8.6E20(2)
Stone Canyon area, 26 km SE of
Hollister, CA

Jun 10	PRI	iPd	10 30 06.6
	LLA	ePc	10 30 09.0
	PRS	ePc	10 30 14.3
	FRI	iPd	10 30 15.8
		iS	10 30 26.9
	SAO	iPc	10 30 17.0
	MHC	eP	10 30 23.6
	GCC	eP	10 30 24.3
	JAS1	iPc	10 30 26.9
		iS	10 30 46.9
	PCC	eP	10 30 33.4
	BKS	ePc	10 30 38.2
		eS	10 30 47.0
	MNA	eP	10 30 52.0
		iS	10 31 26.9

BRK 10h30m01.0s 36.4N 120.5W
h=5km ML=2.7(4)
28 km NW of Coalinga, CA

Jun 11	WDC	e	03 12 37.1
	JAS1	eP	03 12 42.3
	MNA	e	03 12 52.5
	PRI	e	03 12 55.4
	BKS	e	03 23 26
		e	03 25 30
		eSS	03 31 06
		eLq	03 39 48
		e	03 43 36
		eLr	03 44 46
		AMP(μm)	PER(s)
		LZ 2.3	20.
		LN 0.68	20.
		LE 2.1	20.

USGS 02h59m01.4s 2.1S 139.3E
h=33km mb=5.5 Ms=5.8
West Irian

Jun 11	PRS	eP	06 30 01.3
	MHC	ePc	06 30 03.5
	PRI	ePc	06 30 03.7
	PCC	e	06 30 04.7
	BKS	ePd	06 30 08.0
		eS	06 39 44
		e	06 40 24
		e	06 40 26
		eLq	06 49 24
		eLr	06 52 14
		AMP(μm)	PER(s)
		PZ 0.057	1.6
		LZ 6.9	20.
		LN 3.8	20.
		LE 4.5	20.
	JAS1	ePc	06 30 08.9
	FRI	eP	06 30 09.1
	WDC	ePc	06 30 09.6
	ORV	eP	06 30 10.5
	MIN	ePc	06 30 11.7
	MNA	ePc	06 30 19.3

BRK Ms=5.9 Distance= 77°
USGS 06h18m18.1s 15.4S 179.2W
h=17km mb=5.6 Ms=5.7
Fiji Islands Region

Jun 11	SAO	iPd	13 03 06.4
	GCC	iPc	13 03 07.8
	MHC	iP	13 03 10.0
	PRS	iPd	13 03 13.8
	LLA	eP	13 03 14.2
	PCC	ePc	13 03 17.0
	BRK	eP	13 03 20.2
	BKS	iPd	13 03 20.9
		iS	13 03 37.9
	PRI	eP	13 03 22.7
	JAS1	iPd	13 03 25.7
	FRI	e	13 03 28.9
	ORV	e	13 03 47.0

BRK 13h03m01.8s 36.9N 121.6W
h=6km ML=2.7(3)
8 km SW of Gilroy, CA

Jun 11	MNA	ePd	13 57 44.4
	FRI	ePd	13 57 48.5
	PRI	ePd	13 57 53.5
	JAS1	ePd	13 57 55.0
	LLA	ePd	13 57 55.8
	PRS	ePd	13 57 56.5
	SAO	e	13 57 58.5
	MHC	ePd	13 58 01.5
	GCC	ePd	13 58 02.6
	ORV	ePd	13 58 03.8
	MIN	ePd	13 58 04.4
	BRK	eP	13 58 04.9
		iPP	14 00 30
		ePPP	14 01 45
		eS	14 06 20
		e	14 09 40
		eLr	14 17 10
		AMP(μm)	PER(s)
		LZ 9.0	20.
	PCC	e	13 58 05.2
	BKS	ePc	13 58 07.9
		ePP	14 00 30
		e	14 00 52
		ePPP	14 01 46
		eS	14 06 20
		eSS	14 10 34
		e	14 16 22
		AMP(μm)	PER(s)
		PZ 0.41	1.2
	WDC	ePd	13 58 08.9
	FHC	ePd	13 58 18.6

BRK mb=6.3 h=33km Distance=60°
USGS 13h48m01.4s 10.6N 62.9W
h=18km mb=6.0 Ms=6.2
Near Coast of Venezuela

Jun 11	SAO	iP	15 09 03.4
	LLA	iPc	15 09 05.0
	PRS	iPd	15 09 05.7
	GCC	iPc	15 09 12.4
	PRI	iPd	15 09 12.9
	MHC	iPd	15 09 14.9
		iS	15 09 26.1
	FRI	iPc	15 09 22.5
	BKS	iPnc	15 09 24.7
		iPgd	15 09 26.5
		e	15 09 40.5
		eSn	15 09 44.0
		eSg	15 09 47.5
	JAS1	iPd	15 09 24.9

BRK 15h08m59.5s 36.6N 121.3W
h=7km ML=3.5(4) Mo=6.2E21(2)
Stone Canyon area, 28 km SE of
Hollister, CA

Jun 11	FRI	ePc	21 45 10.9
	MNA	eP	21 45 11.4
	PRI	eP	21 45 12.5
	BKS	e	21 51 04
		eS	21 53 00
		esS	21 54 04

USGS 21h39m47.4s 18.3N 100.6W
h=52km mb=5.1
Guerrero, Mexico

Jun 11	FRI	e	23 20 55.6
	MNA	iPc	23 20 56.9
	PRI	ePc	23 20 58.1
	LLA	eP	23 21 01.2
	PRS	ePc	23 21 02.5
	JAS1	ePc	23 21 05.0
	MHC	eP	23 21 09.6
	GCC	eP	23 21 09.6
	ORV	e	23 21 20.0
	WDC	e	23 21 27.7
	FHC	ePc	23 21 39.3
	BKS	e(Lq)	23 32 28
		e(Lr)	23 34 08

USGS 23h14m30.7s 15.0N 93.2W
h=50km mb=4.8
Near Coast of Chiapas, Mexico

Jun 12	PRS	eP	10 46 22.7
	GCC	eP	10 46 22.8
	PCC	eP	10 46 23.4
	BRK	eP	10 46 24.7
	PRI	eP	10 46 24.8
	MHC	eP	10 46 24.9
	BKS	eP	10 46 26.1
		AMP(μm)	PER(s)
		PZ 0.031	0.8
	FRI	eP	10 46 29.4
	JAS1	ePd	10 46 30.5
	WDC	eP	10 46 31.1
	ORV	e(P)	10 46 32.0
	MIN	eP	10 46 34.0
	MNA	eP	10 46 38.8

USGS 10h34m54.8s 25.2S 179.6E
h=550km mb=4.9
South of Fiji Islands

Jun 13	PRI	iPc	13 25 26.6
		iS	13 25 35.5
	LLA	iPc	13 25 32.8
	FRI	iPd	13 25 32.9
	PRS	iPc	13 25 35.6
	JAS1	iPc	13 25 47.7
		iS	13 26 12.0
	BKS	ePn	13 25 55.4
		ePg	13 26 02.4
		e	13 26 13.5
		eSn	13 26 23.5
		eSg	13 26 38.6
	MNA	iPc	13 26 05.5
		iS	13 26 42.2

BRK 13h25m16.5s 36.0N 120.0W
h=8km ML=3.5(5)
Kettleman Hills, 34 km SE of
Coalinga, CA

Jun 13	WDC	eP	18 38 18.0
	ORV	eP	18 38 36.8
	FRI	eP	18 39 15.1

USGS 18h37m04.2s 43.6N 127.4W
h=10km mb=4.4
Off Coast of Oregon

Jun 14	FRI	ePKP	04 09 21.4
	PRI	ePKP	04 09 21.8
	MNA	ePKP	04 09 22.2
	PRS	ePKP	04 09 23.5
	JAS1	ePKP	04 09 23.6
	GCC	ePKP	04 09 23.8
	MHC	ePKP	04 09 24.6
	PCC	ePKP	04 09 24.8
	BRK	e	04 09 25.5
	BKS	e	04 09 25.6
	MIN	ePKP	04 09 27.3
	WDC	ePKP	04 09 28.4

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
USGS 03h50m25.6s 57.9S 23.4W			
h=33km mb=5.9 Ms=5.0			
South Sandwich Islands Region			
Jun 14	FHC	ePKP	15 09 55.0
	WDC	ePKP	15 09 55.6
	MIN	ePKP	15 09 57.0
	JAS1	e	15 10 01.0
	MHC	ePKP	15 10 01.9
	PRS	ePKP	15 10 03.6
	MNA	ePKP	15 10 04.6
	PRI	e	15 10 05.2
USGS 14h51m03.6s 2.0N 98.0E			
h=66km mb=5.4			
Northern Sumatra			
Jun 14	FHC	eP	18 40 20.5
	WDC	iPc	18 40 31.0
	MIN	iPc	18 40 38.2
	ORV	e	18 40 47.5
	JAS1	eP	18 41 09.6
	MNA	eP	18 41 19.2
	PRI	eP	18 41 32.5
USGS 18h38m09.2s 49.1N 128.7W			
h=10km mb=4.2			
Vancouver Island Region			
Jun 14	MHC	iPd	20 31 46.6
	GCC	iPd	20 31 52.3
	SAO	iPd	20 31 55.8
	PCC	iPc	20 31 56.3
		iS	20 32 07.0
	BRK	ePc	20 31 59.3
		iS	20 32 11.0
	BKS	eP	20 31 59.6
	ZSP	eP	20 32 00.6
	LLA	eP	20 32 01.0
		iS	20 32 15.0
	PRS	iPc	20 32 03.1
		iS	20 32 16.1
	JAS1	iPc	20 32 06.1
		iS	20 32 21.7
	FRI	eP	20 32 12.1
BRK 20h31m44.8s 37.3N 121.7W			
h=6km ML=2.7(4) Mo=6.1E19(2)			
Halls Valley, 20 km SE of San Jose, CA			
Jun 14	GCC	e	23 41 59.6
		e	23 42 18.9
	PRS	e	23 42 02.0
	MHC	e	23 42 02.8
		e	23 42 11.2
	PRI	e	23 42 04.5
	WDC	eP	23 42 06.3
		i	23 42 15.3
		e	23 50 25.0
	FRI	eP	23 42 07.3
		i	23 42 16.5
		e	23 50 26.0
	MIN	eP	23 42 07.5
	JAS1	eP	23 42 07.5
		i	23 42 16.2
		e	23 50 26.0
	PCC	e	23 42 07.6
	ORV	e	23 42 08.2
		e	23 42 16.0
	BKS	e	23 42 10.1
		AMP(μm)	PER(s)
		LZ 6.3	20.
		LN 2.9	20.
		LE 5.0	20.

DATE	STA	PHASE	TIME (UTC)
		eLr	00 07 56
	MNA	e	23 42 10.9
		i	23 42 25.3
		e	23 50 34.8
BRK Ms=5.9 Distance=83°			
USGS 23h29m23.4s 19.1S 169.8E			
h=15km mb=5.3 Ms=5.6			
Vanuatu Islands			
Jun 15	FRI	e	03 23 35.8
	BKS	eP	03 23 36
		eS	03 34 00
		AMP(μm)	PER(s)
		LZ 11	20.
		LN 7.5	20.
		LE 6.8	20.
	JAS1	eP	03 23 36.0
	WDC	eP	03 23 38.0
	MIN	e	03 23 41.4
	MNA	eP	03 23 45.3
BRK Ms=6.2 Distance=85°			
USGS 03h10m57.2s 29.9S 176.5W			
h=10km mb=5.3 Ms=6.0			
Kermadec Islands Region			
Jun 15	FHC	e	17 25 33.8
	WDC	iPc	17 25 39.2
	MIN	e	17 25 42.5
	ORV	eP	17 25 45.6
	JAS1	eP	17 25 54.8
USGS 17h14m30.0s 36.5N 137.1E			
h=273km mb=4.5			
Honshu, Japan			
Jun 16	JAS1	ePKP	10 44 27.8
	MNA	ePKP	10 44 28.3
USGS 10h24m46.2s 4.7S 69.2E			
h=10km mb=5.1			
Chagos Archipelago Region			
Jun 16	GCC	iPd	10 59 37.8
	PRS	iPd	10 59 38.0
	PCC	iPd	10 59 38.1
	SAO	iPd	10 59 38.7
	BRK	iPd	10 59 39.7
	BKS	iPd	10 59 39.9
		ipP	11 01 41.5
		i	11 02 36
		isPP	11 05 20
		eS	11 09 00
		eSP	11 09 52
		e	11 12 32
		e	11 13 08
		e	11 20 24
		ePKPPKP	11 25 52
		AMP(μm)	PER(s)
		PZ 0.26	0.7
	PRI	iPd	10 59 40.2
		ePKPPKP	11 26 26.8
		epRPKP	11 28 42.5
	MHC	iPd	10 59 40.5
	LLA	iPd	10 59 41.4
	FHC	iPd	10 59 44.4
	FRI	iPd	10 59 45.1
		ePKPPKP	11 26 26.2
		epRPKP	11 28 41.0
	JAS1	iPd	10 59 45.6
		ipP	11 01 45.8
		iPKKP	11 18 18.5
		ePKPPKP	11 26 24.5
		epRPKP	11 28 40.8
	ORV	iPd	10 59 47.3

DATE	STA	PHASE	TIME (UTC)
	WDC	iPd	10 59 47.4
		ipP	11 01 48.5
	MIN	iPd	10 59 49.1
	MNA	iPd	10 59 54.7
		iPKKP	11 18 16.7
		ePKPPKP	11 26 17.7
		epRPKP	11 28 38.5
BRK mb=5.8 h=530km Distance=80°			
USGS 10h48m25.8s 22.0S 178.9W			
h=547km mb=6.3			
South of Fiji Islands			
Jun 16	FHC	ePc	15 56 50.4
	WDC	iPc	15 56 57.9
	MIN	iPc	15 57 04.2
	ORV	ePc	15 57 14.2
	BKS	ePc	15 57 33.9
		eS	15 59 50
		AMP(μm)	PER(s)
		LE 7.1	20.
	JAS1	iPc	15 57 38.4
	PCC	e(P)	15 57 38.5
	MHC	e(P)	15 57 42.8
	MNA	iPc	15 57 42.9
	LLA	ePc	15 57 53.4
	GCC	e	15 57 55.2
	PRS	ePc	15 57 55.2
	PRI	e	15 58 01.1
USGS 15h54m38.0s 49.4N 127.1W			
h=31km mb=4.9 Ms=5.0			
Vancouver Island Region			
Jun 16	FRI	e(PKP)	17 34 14.4
	PRI	ePKP	17 34 14.5
	MNA	ePKPd	17 34 14.7
	JAS1	ePKPd	17 34 16.8
	MIN	e(PKP)	17 34 20.4
	WDC	ePKPd	17 34 21.2
USGS 17h15m10.1s 47.3S 13.3W			
h=10km mb=5.3 Ms=5.5			
South Atlantic Ridge			
Jun 16	PRS	ePd	23 16 25.0
	GCC	ePd	23 16 25.5
	MHC	ePd	23 16 27.9
		e	23 16 43.1
	FRI	ePd	23 16 31.3
		e	23 16 47.5
	JAS1	ePd	23 16 32.9
		e	23 16 48.5
	WDC	ePd	23 16 36.1
		e	23 16 51.2
	MNA	ePd	23 16 40.9
USGS 23h03m47.9s 30.3S 177.9W			
h=10km mb=5.1 Ms=4.7			
Kermadec Islands			
Jun 17	WDC	ePc	00 51 39.4
	ORV	ePc	00 51 48.5
	JAS1	iPc	00 52 02.0
	PRS	ePc	00 52 05.9
	LLA	ePc	00 52 06.3
	MNA	ePc	00 52 09.0
	PRI	ePc	00 52 10.2
USGS 00h42m35.4s 53.9N 160.4E			
h=33km mb=5.9 Ms=4.8			
Near East Coast of Kamchatka			
Jun 17	PRI	eP	04 05 13.7
	MNA	eP	04 05 13.9
	LLA	eP	04 05 16.2
	PRS	eP	04 05 16.6

DATE	STA	PHASE	TIME (UTC)
	JAS1	eP	04 05 19.2
	GCC	eP	04 05 20.9
	MHC	eP	04 05 21.4
	ORV	eP	04 05 28.7
	WDC	eP	04 05 33.9
USGS 03h53m31.9s 23.0S 69.1W			
h=96km mb=5.2			
Northern Chile			
Jun 17	WDC	eP	18 27 08.8
		ePKIKP	18 31 23.0
		ePKKP	18 43 25.6
	MHC	e	18 27 17.0
		ePKIKP	18 31 46.8
	JAS1	eP	18 27 20.0
		iPKIKP	18 31 41.1
		ePKKP	18 43 36.2
	PRI	e(P)	18 27 22.4
		ePKKP	18 43 14.8
	MNA	eP	18 27 36.9
		ePKIKP	18 31 51.7
		ePKKP	18 43 10.3
	MIN	ePKIKP	18 31 27.6
	BKS	ePKIKP	18 31 30.2
	ORV	ePKIKP	18 31 30.5
		ePKKP	18 43 22.0
	FRI	ePKIKP	18 31 46.8
	LLA	ePKKP	18 43 16.4
	PCC	ePKKP	18 43 22.2
USGS 18h13m11.6s 5.6N 125.3E			
h=31km mb=6.2 Ms=6.4			
Mindanao, Philippine Islands			
Jun 17	PRS	eP	20 02 31.3
	GCC	eP	20 02 31.5
	MHC	eP	20 02 34.2
	JAS1	eP	20 02 40.4
	WDC	eP	20 02 42.8
USGS 19h50m40.1s 20.9S 173.9W			
h=33km mb=4.9			
Tonga Islands			
Jun 17	WDC	eP	21 56 50.0
	JAS1	eP	21 56 50.7
	FRI	e	21 56 53.3
USGS 21h44m56.5s 21.0S 174.4W			
h=33km mb=5.2			
Tonga Islands			
Jun 18	MIN	eP	04 16 45.1
	JAS1	ePd	04 16 52.2
	FRI	eP	04 16 52.8
	MHC	ePd	04 16 57.7
	PRI	ePd	04 17 02.4
	PRS	eP	04 17 02.5
USGS 04h06m04.0s 45.2N 28.0W			
h=10km mb=5.0 Ms=5.0			
North Atlantic Ridge			
Jun 18	FHC	ePc	08 12 26.5
	WDC	iPc	08 12 34.0
	MIN	eP	08 12 39.5
	ORV	eP	08 12 43.2
	BRK	iPc	08 12 48.2
	BKS	ePc	08 12 48.5
		ePPP	08 15 50
		iS	08 18 52
		eLq	08 22 00
		eLr	08 23 46
		AMP(μm)	PER(s)
		PZ 0.13	1.0
		LZ 65	20.

DATE	STA	PHASE	TIME (UTC)
		LN	26 20.
		LE	49 20.
	PCC	eP	08 12 49.9
	MHC	eP	08 12 54.2
	GCC	eP	08 12 54.5
	JAS1	iPc	08 12 58.0
	SAO	iP	08 12 58.7
	PRS	eP	08 13 00.7
	LLA	eP	08 13 02.0
	FRI	eP	08 13 05.9
	PRI	eP	08 13 06.6
BRK Ms=6.4 Distance=41°			
USGS 08h05m15.5s 51.4N 176.7W			
h=27km mb=5.8 Ms=6.3			
Andreanof Islands, Aleutian Islands			
Jun 18	FHC	ePc	23 25 15.3
	WDC	iPc	23 25 23.2
	MIN	ePc	23 25 28.3
	ORV	ePc	23 25 32.4
	BKS	ePc	23 25 37.4
		AMP(μm)	PER(s)
		PZ 0.084	0.8
	BRK	ePc	23 25 37.5
	PCC	eP	23 25 38.5
	GCC	ePc	23 25 42.8
	MHC	ePc	23 25 43.3
	JAS1	iPc	23 25 46.5
	PRS	ePc	23 25 49.9
	LLA	ePc	23 25 50.5
	FRI	ePc	23 25 54.5
	PRI	ePc	23 25 54.8
USGS 23h17m58.3s 52.3N 179.6E			
h=170km mb=5.1			
Rat Islands, Aleutian Islands			
Jun 19	FRI	e	04 45 02.2
	LLA	eP	04 45 05.1
	JAS1	ePc	04 45 10.5
	MHC	eP	04 45 14.3
	ORV	eP	04 45 27.4
	BKS	Lq	04 52 12
		Lr	04 55 28
		AMP(μm)	PER(s)
		LZ 0.0	20.
		LN 1.3	20.
		LE 2.0	20.
BRK Ms=5.2 Distance=45°			
USGS 04h39m46.1s 18.4N 101.4W			
h=69km mb=5.2			
Guerrero, Mexico			
Jun 19	MHC	iPc	06 59 29.0
		iS	06 59 31.7
	GCC	eP	06 59 35.6
	PCC	eP	06 59 35.8
		iS	06 59 43.8
	BKS	iPc	06 59 36.0
		i	06 59 40.1
		eS	06 59 47.0
	BRK	iPc	06 59 36.3
	SAO	iP	06 59 40.0
	LLA	iPc	06 59 44.3
	JAS1	iPd	06 59 44.7
	PRS	eP	06 59 46.6
	FRI	eP	06 59 53.3
	PRI	e(P)	06 59 56.4
BRK 06h59m25.2s 37.5N 121.7W			
h=8km ML=2.5(4) Mo=7.8E19(2)			
Mt. Lewis area, 27 km NE of San Jose, CA			

DATE	STA	PHASE	TIME (UTC)
Jun 19	PRS	eP	08 53 25.2
	MHC	eP	08 53 27.7
	JAS1	ePd	08 53 32.9
	ORV	eP	08 53 34.4
	WDC	eP	08 53 34.8
	MIN	eP	08 53 36.5
USGS 08h42m21.5s 20.6S 178.3W			
h=555km mb=4.3			
Fiji Islands Region			
Jun 19	FHC	eP	09 14 28.9
		i	09 14 33.5
	WDC	ePd	09 14 36.7
		i	09 14 41.2
	MIN	ePd	09 14 42.3
		i	09 14 46.8
	ORV	eP	09 14 47.7
		e	09 14 52.3
	BRK	eP	09 14 56
		i	09 15 00.6
	PCC	eP	09 14 58
		e	09 15 02.5
	BKS	ePd	09 15 00
		iS	09 19 36
		eLq	09 21 12
		eLr	09 22 00
		AMP(μm)	PER(s)
		PZ 0.21	0.8
		LZ 62	20.
		LN 68	20.
		LE 68	20.
	GCC	eP	09 15 02.3
		e	09 15 07.2
	MHC	eP	09 15 02.4
		e	09 15 07.5
	JAS1	ePd	09 15 04.1
		i	09 15 09.0
	LLA	e(P)	09 15 10.7
		i	09 15 15.6
	PRS	eP	09 15 10.8
		e	09 15 15.4
	FRI	eP	09 15 14.2
		i	09 15 18.5
	PRI	eP	09 15 16.4
		i	09 15 21.0
BRK Ms=6.4 Distance=29°			
USGS 09h09m09.2s 56.3N 152.9W			
h=16km mb=6.0 Ms=6.3			
Kodiak Island Region			
Jun 19	PRI	eP	17 30 39.0
	JAS1	eP	17 30 45.0
	MNA	eP	17 30 47.3
	WDC	eP	17 31 03.4
USGS 17h18m58.2s 36.1S 100.7W			
h=10km mb=4.9 Ms=4.6			
Southern Pacific Ocean			
Jun 19	WDC	ePKPd	18 31 01.8
		e	18 44 34.9
	MIN	ePKP	18 31 03.1
	ORV	ePKP	18 31 04.4
	BRK	ePKP	18 31 06.8
	GCC	ePKP	18 31 08.0
	JAS1	iPKPd	18 31 08.5
		e	18 44 26.0
		e	18 44 32.3
	MHC	ePKP	18 31 08.6
	PRS	ePKP	18 31 10.0
	LLA	ePKP	18 31 10.2
	FRI	ePKPd	18 31 10.7
	MNA	iPKPd	18 31 10.8

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DATE	STA	PHASE	TIME (UTC)
		e	18 44 23.3
	PRI	ePKP	18 31 11.8
USGS 18h12m27.8s 7.8N 94.5E			
h=164km mb=5.9			
Nicobar Islands Region			
Jun 19	PRS	ePc	20 14 17.6
	GCC	ePc	20 14 17.9
	SAO	eP	20 14 18.2
	PRI	iPc	20 14 19.1
	LLA	eP	20 14 19.6
	BRK	eP	20 14 20.0
	MHC	ePc	20 14 20.1
	BKS	ePc	20 14 20.3
		AMP(μm)	PER(s)
	PZ	0.066	0.8
	LZ	1.1	20.
	LN	0.89	20.
	LE	0.71	20.
	FRI	ePc	20 14 24.0
		ipP	20 14 41.1
	JAS1	iPc	20 14 25.0
		ipP	20 14 42.0
	FHC	eP	20 14 25.4
	ORV	ePc	20 14 27.3
	WDC	iPc	20 14 28.2
		ipP	20 14 45.2
	MIN	eP	20 14 29.3
	MNA	ePc	20 14 33.1
		ipP	20 14 50.2
USGS 20h01m43.5s 30.2S 178.1W			
h=33km mb=5.7 Ms=5.4			
Kermadec Islands			
Jun 19	MNA	eP	20 44 53.7
	JAS1	eP	20 44 59.8
	ORV	eP	20 45 09.5
	WDC	eP	20 45 13.1
USGS 20h33m17.2s 17.0S 65.5W			
h=18km mb=5.3 Ms=4.8			
Bolivia			
Jun 19	MNA	eP	22 09 01.0
	PRI	eP	22 09 02.6
	JAS1	eP	22 09 07.5
	GCC	eP	22 09 10.2
	MHC	eP	22 09 10.3
	ORV	e(P)	22 09 17.0
	WDC	eP	22 09 21.9
USGS 21h57m24.3s 16.9S 65.4W			
h=19km mb=5.4 Ms=5.2			
Bolivia			
Jun 19	PRS	eP	23 31 06.2
	GCC	eP	23 31 06.8
	BKS	ePc	23 31 08
		eS	23 41 24
		eLq	23 54 24
		eLr	23 58 40
		AMP(μm)	PER(s)
	LZ	34	20.
	LN	22	20.
	LE	14	20.
	PRI	iPc	23 31 08.2
	BRK	eP	23 31 09
	MHC	eP	23 31 09.0
	FRI	eP	23 31 12.6
	JAS1	iPc	23 31 14.0
	WDC	eP	23 31 17.5
	ORV	ePc	23 31 17.6
	MIN	eP	23 31 18.7
	MNA	iPc	23 31 22.1

DATE	STA	PHASE	TIME (UTC)
BRK Ms=6.6 Distance= 85°			
USGS 23h18m26.8s 30.9S 177.8W			
h=10km mb=5.5 Ms=6.3			
Kermadec Islands			
Jun 20	ARC	eP	02 28 24.1
		iS	02 28 31.8
	FHC	iPd	02 28 24.4
		iS	02 28 32.8
	WDC	iPc	02 28 37.4
	MIN	iPc	02 28 47.3
	SAO	ePc	02 29 15.8
BRK 02h28m13.9s 40.4N 124.5W			
h=20km ML=3.2(4) Mo=2.8E20(2)			
Off Coast 6 km W of Cape Mendocino, CA			
Jun 20	PRS	eP	02 50 40.6
	GCC	ePc	02 50 40.8
	PRI	eP	02 50 42.3
	BRK	eP	02 50 43
	MHC	eP	02 50 43.3
	FRI	eP	02 50 47.0
	JAS1	ePc	02 50 47.7
	WDC	eP	02 50 50.9
	MIN	eP	02 50 52.1
	MNA	ePc	02 50 55.6
USGS 02h37m53.0s 32.2S 179.1W			
h=10km mb=5.5			
South of Kermadec Islands			
Jun 20	FHC	eP	04 41 47.8
	WDC	ePd	04 41 54.7
	MIN	ePd	04 42 00.2
	JAS1	eP	04 42 22.3
	MNA	e	04 42 29.5
USGS 04h36m29.9s 56.5W 152.7W			
h=33km mb=4.7 Ms=4.3			
Kodiak Island Region			
Jun 20	FRI	iPKP	19 00 23.0
	PRI	ePKPc	19 00 23.8
	MNA	ePKPc	19 00 24.4
	PRS	ePKP	19 00 24.4
	LLA	ePKP	19 00 24.4
	SAO	ePKP	19 00 24.7
	JAS1	iPKPc	19 00 25.7
	GCC	ePKP	19 00 25.7
	MHC	iPKPc	19 00 26.3
	BRK	ePKP	19 00 26.8
	BKS	ePKP	19 00 27.3
	ORV	ePKP	19 00 28.4
	MIN	ePKP	19 00 29.3
	WDC	ePKPc	19 00 30.3
USGS 18h41m28.8s 58.6S 25.1W			
h=33km mb=5.8 Ms=5.6			
South Sandwich Islands Region			
Jun 20	FRI	ePKP	21 12 41.1
	MNA	ePKP	21 12 41.2
	PRI	ePKP	21 12 41.5
	PRS	ePKP	21 12 41.7
	JAS1	ePKP	21 12 42.5
	MHC	ePKP	21 12 43.6
	BKS	ePKP	21 12 45.3
	WDC	ePKP	21 12 46.3
USGS 20h53m46.3s 58.6S 24.9W			
h=33km mb=5.1			
South Sandwich Islands Region			
Jun 20	FRI	ePKP	22 07 40.3
	PRS	e	22 07 41.6

DATE	STA	PHASE	TIME (UTC)
	MNA	ePKP	22 07 41.7
	PRI	e	22 07 41.8
	JAS1	iPKP	22 07 43.0
	MHC	ePKP	22 07 43.7
	BRK	ePKP	22 07 45.0
	BKS	ePKP	22 07 45.0
	WDC	ePKP	22 07 47.2
	MIN	ePKP	22 07 47.5
USGS 21h48m46.2s 58.6S 25.1W			
h=33km mb=5.3 Ms=5.1			
South Sandwich Islands Region			
Jun 20	MNA	ePKP	22 28 03.0
	JAS1	iPKPd	22 28 04.3
	MHC	ePKP	22 28 04.9
	BKS	ePKPd	22 28 05.9
	WDC	ePKP	22 28 09.1
USGS 22h09m07.3s 58.6S 25.0W			
h=33km mb=5.1			
South Sandwich Islands Region			
Jun 21	FRI	eP	01 48 28.4
	PRI	e	01 48 30.9
	JAS1	eP	01 48 35.5
	MNA	eP	01 48 38.1
	WDC	eP	01 48 52.7
USGS 01h37m56.8s 26.5S 114.4W			
h=10km mb=4.8 Ms=4.8			
Easter Island Region			
Jun 21	FRI	eP	02 00 28.7
	MHC	eP	02 00 33.5
	JAS1	iPd	02 00 36.1
	MNA	eP	02 00 38.7
	WDC	eP	02 00 53.4
USGS 01h49m56.2s 26.7S 114.4W			
h=10km mb=5.2 Ms=5.0			
Easter Island Region			
Jun 21	FRI	e	02 09 34.0
	JAS1	eP	02 09 41.0
	MNA	eP	02 09 43.7
	WDC	eP	02 09 58.5
USGS 01h59m03.7s 26.3S 114.2W			
h=10km mb=5.1 Ms=4.7			
Easter Island Region			
Jun 22	ARC	iP	20 35 01.3
		iS	20 35 07.7
	FHC	iPc	20 35 02.4
		i	20 35 46.2
	WDC	iPc	20 35 17.9
		i	20 35 54.3
	MIN	iPc	20 35 28.2
	ORV	ePc	20 35 32.3
	BKS	e(P)	20 35 42
		e	20 35 47.5
		e	20 35 49.5
		e	20 35 52.1
		e	20 35 53.9
		e	20 36 05.0
		e	20 36 06.9
		e	20 36 10.0
		e	20 36 13.9
		e	20 36 19.5
	BRK	ePc	20 35 42.5
	PCC	ePc	20 35 45.9
	MHC	ePc	20 35 52.9
	GCC	eP	20 35 53.2
	JAS1	iPd	20 35 56.7
	SAO	eP	20 36 00.0
	PRS	e(P)	20 36 06.3

DATE	STA	PHASE	TIME (UTC)
	LLA	e	20 36 07.3
	FRI	eP	20 36 11.4
	MNA	e	20 36 13.2
BRK 20h34m51.9s 40.7N 124.7W			
h=16km ML=4.0(6) Mo=7.9E21(1)			
Off Coast 43 km WSW of Eureka, CA			
Jun 22	FHC	iPc	23 57 15.1
		iS	23 57 22.7
	ARC	iP	23 57 16.2
		iS	23 57 23.9
	WDC	iPc	23 57 19.4
	MIN	ePc	23 57 29.7
	ORV	eP	23 57 35.2
	JAS1	e	23 58 00.5
BRK 23h57m06.1s 40.6N 123.5W			
h=12km ML=3.5(4)			
60 km SE of Eureka, CA			
Jun 23	LLA	iPd	03 41 38.1
		iS	03 41 41.1
	PRS	iPc	03 41 40.3
		iS	03 41 44.2
	SAO	iPc	03 41 42.7
	PRI	iP	03 41 43.9
		iS	03 41 54.3
	GCC	eP	03 41 52.1
	MHC	ePd	03 41 55.1
	FRI	e	03 41 56.0
	PCC	e	03 42 00.5
	JAS1	iPd	03 42 03.0
	BKS	e	03 42 08.5
		e	03 42 28.6
	MNA	e	03 42 38.0
BRK 03h41m34.6s 36.5N 121.0W			
h=6km ML=2.5(4)			
Bear Valley, 28 km NNE of King City, CA			
Jun 24	PRI	eP	02 05 03.3
	FRI	e	02 05 06.3
	JAS1	ePd	02 05 13.1
	MNA	ePd	02 05 14.5
	WDC	eP	02 05 29.3
USGS 01h53m35.3s 35.2S 106.1W			
h=10km mb=4.9 Ms=4.4			
Easter Island Cordillera			
Jun 24	FHC	ePd	03 04 30.7
	WDC	iPd	03 04 36.1
	MIN	ePd	03 04 39.9
	ORV	ePd	03 04 42.7
	BRK	ePd	03 04 45.5
	PCC	eP	03 04 45.7
	BKS	eP	03 04 46.3
		epP	03 05 13.1
		eS	03 14 18
		e(ScS)	03 14 44
		ePS	03 15 20
		eSS	03 19 36
		eSSS	03 22 46
		AMP(μm)	PER(s)
	PZ	0.39	1.1
	GCC	ePd	03 04 49.0
	MHC	ePd	03 04 49.6
	JAS1	iPd	03 04 52.6
		ePP	03 07 51.8
	SAO	eP	03 04 52.7
	PRS	ePd	03 04 53.9
	LLA	ePd	03 04 54.5
	PRI	ePd	03 04 57.7
	FRI	iPd	03 04 57.9

DATE	STA	PHASE	TIME (UTC)
	MNA	eP	03 04 59.8
		ePP	03 08 09
BRK mb=6.2 h=103km Distance=74°			
USGS 02h53m11.3s 34.8N 140.6E			
h=62km mb=6.1			
Near East Coast of Honshu, Japan			
Jun 24	FHC	ePc	03 24 41.6
		ePP	03 28 28.2
	PCC	ePc	03 24 45.7
	WDC	iPc	03 24 45.9
		iPP	03 28 36.9
	BKS	iPc	03 24 46
		ePP	03 29 00
		ePPP	03 31 06
		eSKS	03 35 16
		eS	03 35 59
		e	03 36 23
		ePS	03 37 09
		eSP	03 37 16
		e	03 38 10
		e	03 39 36
		ePSPS	03 42 08
		eSSS	03 46 24
		eLq	03 49 30
		eLr	03 54 30
		AMP(μm)	PER(s)
	PZ	0.53	1.2
	LZ	120	20.
	LNE	67	20.
	LNW	130	20.
	BRK	ePc	03 24 46.6
	GCC	ePc	03 24 47.5
	MIN	ePc	03 24 48.5
	MHC	iPc	03 24 49.0
		iPP	03 28 43.2
	ORV	ePc	03 24 49.1
	SAO	eP	03 24 49.2
		ePP	03 28 42.8
	PRS	ePc	03 24 50.0
	LLA	ePc	03 24 51.5
	JAS1	ePc	03 24 52.7
		iPP	03 28 50.1
	PRI	ePc	03 24 52.9
		iPP	03 28 48.9
	FRI	iPc	03 24 55.5
	MNA	ePc	03 25 01.4
		iPP	03 29 05.6
		eSKS	03 35 28
BRK Ms=7.4 Distance=95°			
USGS 03h11m30.9s 4.4S 143.9E			
h=102km mb=6.6 Ms=7.1			
Papua New Guinea			
Jun 24	FRI	e(P)	12 37 39.0
	PRI	ePd	12 37 39.8
	MNA	iPd	12 37 41.9
	LLA	eP	12 37 42.0
	PRS	ePd	12 37 42.3
	JAS1	iPd	12 37 45.7
	GCC	ePd	12 37 46.7
	MHC	ePd	12 37 47.2
	ORV	ePd	12 37 54.9
	WDC	ePd	12 38 00.0
USGS 12h25m28.4s 30.7S 71.7W			
h=50km mb=5.4 Ms=4.8			
Near Coast of Central Chile			
Jun 24	PRS	eP	17 51 48.6
	GCC	eP	17 51 49.0
	PRI	eP	17 51 50.4
	BKS	eP	17 51 51

DATE	STA	PHASE	TIME (UTC)
		eS	18 02 20
		e(PS)	18 03 18
		eSS	18 08 02
		e(SSS)	18 11 01.6
		eLg	18 14 02.4
		AMP(μm)	PER(s)
	PZ	0.067	1.1
	LZ	2.3	20.
	LN	2.1	20.
	LE	1.6	20.
	BRK	eP	17 51 51.0
	LLA	eP	17 51 51.0
	MHC	eP	17 51 51.6
	FRI	eP	17 51 55.3
	JAS1	iPd	17 51 56.1
	WDC	eP	17 51 59.5
	MIN	eP	17 52 00.8
	MNA	ePd	17 52 04.0
BRK Ms=5.7 Distance=85°			
USGS 17h39m18.9s 28.3S 178.1W			
h=12km mb=5.5 Ms=5.7			
Kermadec Islands Region			
Jun 24	WDC	e	18 56 56.1
	ORV	e(P)	18 57 02.7
	GCC	eP	18 57 08.8
	JAS1	iPd	18 57 12.1
	PRS	eP	18 57 13.7
	LLA	eP	18 57 14.7
	FRI	eP	18 57 17.8
	PRI	eP	18 57 17.9
	MNA	iPd	18 57 19.7
USGS 18h45m31.3s 34.8N 140.6E			
h=65km mb=5.4			
Near East Coast of Honshu, Japan			
Jun 24	PRS	eP	19 43 36.6
	GCC	eP	19 43 36.7
	PRI	eP	19 43 38.4
	MHC	eP	19 43 39.2
	BKS	eP	19 43 43.3
		eS	19 54 10
		e(PPS)	19 55 21
		eSS	19 59 48.8
		eLg	20 05 28
		eLr	20 09 40
		AMP(μm)	PER(s)
	PZ	0.022	0.7
	LZ	4.1	20.
	LN	4.6	20.
	LE	3.0	20.
	FRI	eP	19 43 43.4
	JAS1	eP	19 43 44.3
	ORV	eP	19 43 46.5
	FHC	e	19 43 47.1
	WDC	eP	19 43 47.3
	MNA	eP	19 43 52.7
BRK Ms=5.9 Distance=85°			
USGS 20h46m02.8s 66.1N 149.6W			
h=10km mb=4.9			
Alaska			
Jun 24	WDC	iPd	20 52 11.9
	JAS1	ePd	20 52 38.8
	MHC	e(P)	20 52 40.9
	MNA	ePd	20 52 41.2
	GCC	e(P)	20 52 42.0
	PRI	ePd	20 52 53.7
USGS 20h46m02.8s 66.1N 149.6W			
h=10km mb=4.9			
Alaska			

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DATE	STA	PHASE	TIME (UTC)
Jun 25	PRI	ePc	00 05 13.3
	PRS	ePc	00 05 15.1
	GCC	ePc	00 05 20.0
	MHC	ePc	00 05 21.1
	JAS1	ePc	00 05 22.0
	MNA	ePc	00 05 22.5
	BKS	e(P)	00 05 24.8
		e	00 05 31.3
	WDC	e(P)	00 05 37.8
USGS 23h53m32.6s 36.1S 100.5W			
h=10km mb=4.8 Ms=5.0			
Southern Pacific Ocean			
Jun 25	MNA	eP	06 56 03.4
	MHC	eP	06 56 21.8
	MIN	eP	06 56 22.2
USGS 06h46m09.5s 13.1N 58.8W			
h=29km mb=4.7 Ms=4.2			
North Atlantic Ocean			
Jun 25	PRI	e(P)	11 58 27.0
	MHC	eP	11 58 27.9
	JAS1	ePc	11 58 32.2
	FRI	eP	11 58 32.8
	ORV	eP	11 58 35.0
	WDC	ePc	11 58 35.5
	MIN	e(P)	11 58 37.0
	MNA	eP	11 58 41.1
USGS 11h45m52.2s 28.5S 178.5W			
h=10km mb=5.1 Ms=4.8			
Kermadec Islands Region			
Jun 25	MNA	iPc	20 28 16.7
	FRI	iPc	20 28 28.5
	JAS1	iPc	20 28 36.6
	PRI	iPc	20 28 41.6
	LLA	ePc	20 28 42.3
	SAO	iPc	20 28 48
	PRS	iPc	20 28 48.1
	MHC	iPc	20 28 50.5
	GCC	ePc	20 28 52.3
	ORV	iPc	20 28 55.5
	BKS	ePc	20 28 56.4
		i	20 29 06.0
		e	20 29 28
		e	20 30 28
	BRK	iP	20 28 56.6
	ZSP	ePc	20 28 57
	PCC	iPc	20 28 57.4
	MIN	iPc	20 29 03.0
	WDC	iPc	20 29 13.0
BRK ML=5.4(8)			
USGS 20h27m45.1s 37.3N 166.5W			
h=0km mb=5.5 Ms=4.2			
Underground Nuclear Explosion, N.T.S.			
Jun 26	BRK	eP	09 09 21.6
	GCC	eP	09 09 21.8
	BKS	eP	09 09 22
		AMP(μm)	PER(s)
		PZ 0.059	0.8
	PRS	eP	09 09 23.5
	MHC	eP	09 09 23.8
	WDC	ePd	09 09 24.4
	LLA	eP	09 09 25.5
	PRI	ePd	09 09 26.3
	ORV	eP	09 09 26.7
	MIN	ePd	09 09 27.0
	JAS1	e(P)	09 09 28.7
	FRI	ePd	09 09 30.0
	MNA	ePd	09 09 37.8

DATE	STA	PHASE	TIME (UTC)
USGS 08h56m52.3s 10.1S 161.1E			
h=104km mb=5.2			
Solomon Islands			
Jun 26	MHC	eP	10 39 12.2
	FRI	e(P)	10 39 16.2
	JAS1	eP	10 39 17.0
	WDC	eP	10 39 20.0
	MNA	eP	10 39 25.6
USGS 10h26m39.5s 28.2S 178.1W			
h=10km mb=4.5			
Kermadec Islands Region			
Jun 26	GCC	ePd	12 05 50.0
	PRS	ePd	12 05 50.2
	PRI	ePd	12 05 52.3
	MHC	ePd	12 05 52.3
	BKS	ePd	12 05 52.6
		AMP(μm)	PER(s)
		PZ 0.019	0.7
	JAS1	ePd	12 05 58.8
	WDC	ePd	12 06 01.5
	MNA	ePd	12 06 09.3
USGS 11h54m26.9s 17.0S 173.1W			
h=33km mb=5.1 Ms=4.6			
Tonga Islands			
Jun 26	WDC	e	16 42 25.2
	JAS1	eP	16 42 27.3
	MNA	e	16 42 38.8
USGS 16h29m48.9s 28.5S 178.4W			
h=10km mb=4.9 Ms=4.5			
Kermadec Islands Region			
Jun 26	PRS	eP	20 11 18.6
		e	20 11 26.1
	GCC	eP	20 11 18.7
		e	20 11 26.4
	SAO	eP	20 11 19.0
	PRI	eP	20 11 20.5
	BRK	eP	20 11 20.6
	BKS	ePd	20 11 21.2
		AMP(μm)	PER(s)
		PZ 0.019	0.8
	MHC	eP	20 11 21.4
		e	20 11 28.7
	FRI	eP	20 11 25.4
		i	20 11 33.0
	JAS1	iPd	20 11 26.5
		e	20 11 33.7
	ORV	eP	20 11 28.5
		e	20 11 36.0
	WDC	ePd	20 11 29.2
		e	20 11 36.6
	MIN	eP	20 11 30.7
	MNA	ePd	20 11 34.6
		e	20 11 42.1
USGS 19h58m49.9s 28.1S 178.0W			
h=13km mb=5.2 Ms=5.0			
Kermadec Islands Region			
Jun 27	PRI	eP	01 32 30.4
	MHC	e	01 32 38.2
	JAS1	eP	01 32 42.6
	MNA	eP	01 32 48.2
USGS 01h22m52.9s 19.3S 126.2W			
h=10km mb=4.6 Ms=4.2			
South Pacific Ocean			
Jun 27	BKS	iPc	04 06 48.2
		iS	04 06 52.3
	BRK	iPc	04 06 48.5

DATE	STA	PHASE	TIME (UTC)
		iS	04 06 52.9
	ZSP	iPc	04 06 49.4
		iS	04 06 54.8
	PCC	iPd	04 06 51.1
	MHC	iPd	04 06 53.1
	GCC	iPd	04 06 56.8
		i	04 07 08.4
	SAO	iP	04 07 03.0
	JAS1	eP	04 07 05.8
	PRS	eP	04 07 09.3
	LLA	e	04 07 10.4
BRK 04h06m43.4s 37.7N 122.0W			
h=4km ML=2.4(4)			
Near San Ramon, 28 km SE of Berkeley, CA			
Jun 27	WDC	ePc	11 30 04.3
	ORV	eP	11 30 11.8
	GCC	eP	11 30 18
	MHC	eP	11 30 19.2
	JAS1	eP	11 30 21.7
	PRS	eP	11 30 23.6
	FRI	eP	11 30 27.4
	MNA	ePc	11 30 28.5
USGS 11h18m51.8s 39.1N 140.9E			
h=28km mb=5.2			
Honshu, Japan			
Jun 27	JAS1	eP	17 01 41.8
	WDC	eP	17 01 45.2
	MNA	e	17 02 05.5
	BKS	eP	17 02 15
		eS	17 12 20
		eLq	17 24 20
		eLr	17 27 36
		AMP(μm)	PER(s)
		LZ 1.4	20.
		LN 1.3	20.
		LE 0.96	20.
BRK Ms=5.4 Distance=83°			
USGS 16h48m57.5s 31.0S 177.5W			
h=25km mb=5.0 Ms=5.4			
Kermadec Islands			
Jun 27	JAS1	eP	17 50 05.8
	WDC	e	17 50 16.1
USGS 17h37m33.8s 28.3S 177.8W			
h=33km mb=4.6 Ms=4.9			
Kermadec Islands Region			
Jun 28	ORV	iPc	02 06 53.8
		iS	02 07 11.2
	MIN	eP	02 06 58.7
		iS	02 07 22.0
	MNA	iPc	02 06 58.7
	JAS1	iPd	02 06 59.3
		iS	02 07 24.0
	MHC	ePd	02 07 08.2
	WDC	eP	02 07 11.2
	FRI	iPc	02 07 12.6
	BRK	e(P)	02 07 13.4
	BKS	e(P)	02 07 14
		ePg	02 07 18.5
		eS	02 07 47
	SAO	e	02 07 18.9
BRK 02h06m29.9s 39.5N 119.8W			
h=14km ML=3.7(6)			
Reno, Nevada			
Jun 28	GCC	iPc	05 15 14.6
		ipP	05 16 07.6
	PCC	iPc	05 15 14.8

DATE	STA	PHASE	TIME (UTC)
		ipP	05 16 06.8
	PRS	iPc	05 15 14.8
		ipP	05 16 07.8
	SAO	iPc	05 15 15.5
	BRK	iPc	05 15 16.7
	BKS	iPc	05 15 16.9
		iPcP	05 15 28
		ipP	05 16 10
		ipPcP	05 16 23.5
		isP	05 16 41
		iS	05 24 47
		iSKS	05 25 09
		isS	05 25 20
		AMP(μm)	PER(s)
		PZ 0.94	1.2
	PRI	iPc	05 15 17.0
	LLA	iPc	05 15 17.1
	ZSP	eP	05 15 17.1
	MHC	iPc	05 15 17.4
		ipP	05 16 11.6
	FHC	eP	05 15 21.7
		ipP	05 16 16.1
	FRI	iPc	05 15 22.3
		ipP	05 16 14.4
		i	05 18 11.6
	JAS1	iPc	05 15 23.0
		iPcP	05 15 28.4
		ipP	05 16 16.9
		eS	05 25 34.3
	ORV	iPc	05 15 24.7
	WDC	iPc	05 15 25.0
	MIN	ePc	05 15 26.8
	MNA	iPc	05 15 32.8
		ipP	05 16 26.9
		eS	05 25 19
BRK mb=6.4 h=200km Distance=77°			
USGS 05h03m47.5s 20.0S 176.1W			
h=211km mb=6.1			
Fiji Islands Region			
Jun 29	FHC	e	04 37 04.8
	WDC	eP	04 37 13.0
	MIN	eP	04 37 19.8
	ORV	eP	04 37 24.0
	BRK	e	04 37 29.1
	BKS	eP	04 37 29.5
		eS	04 43 28.0
		eLq	04 46 26.0
		eLr	04 47 30.0
		AMP(μm)	PER(s)
		PZ 0.038	0.8
		LZ 3.9	20.
		LN 2.3	20.
		LE 4.3	20.
	MHC	eP	04 37 36.5
	JAS1	eP	04 37 37.2
	PRS	eP	04 37 41.7
	PRI	eP	04 37 45.6
	FRI	eP	04 37 45.7
	MNA	eP	04 37 46.1
BRK Ms=5.3 Distance= 39°			
USGS 04h30m03.6s 52.3N 174.9W			
h=33km mb=4.9 Ms=5.2			
Andreanof Islands, Aleutian Islands			
Jun 29	WDC	eP	09 40 24.3
	MIN	eP	09 40 34.9
	ORV	eP	09 40 42.7
	JAS1	eP	09 41 06.8
	FRI	eP	09 41 22.6
USGS 09h38m52.5s 44.3N 129.1W			
h=10km mb=4.0			

DATE	STA	PHASE	TIME (UTC)
Off Coast of Oregon			
Jun 29	PRS	eP	12 10 09.8
	GCC	eP	12 10 11.6
	PRI	eP	12 10 12.5
	BKS	eP	12 10 14.0
		eS	12 20 44.0
		AMP(μm)	PER(s)
		LZ 6.8	20.
		LN 5.7	20.
		LE 4.3	20.
	MHC	eP	12 10 14.2
	FRI	eP	12 10 18.0
		i	12 10 25.2
	JAS1	eP	12 10 18.5
		i	12 10 26.6
	ORV	eP	12 10 21.5
	WDC	eP	12 10 21.8
	MIN	eP	12 10 23.3
	MNA	eP	12 10 26.4
		e	12 10 35.2
BRK Ms=6.1 Distance= 86°			
USGS 11h57m42.8s 28.0S 178.0W			
h=10km mb=5.4 Ms=6.1			
Kermadec Islands Region			
Jun 29	FRI	eP	13 59 16.0
	JAS1	eP	13 59 16.2
	WDC	eP	13 59 19.0
	ORV	eP	13 59 19.1
	MIN	eP	13 59 21.3
	MNA	eP	13 59 23.5
USGS 13h46m39.9s 28.0S 178.0W			
h=10km mb=5.2			
Kermadec Islands Region			
Jun 29	PRI	e	14 21 32.8
	FRI	eP	14 21 39.7
	JAS1	eP	14 21 40.7
		ipP	14 21 47.6
	ORV	eP	14 21 42.8
	WDC	eP	14 21 43.7
		ipP	14 21 50.5
	MIN	eP	14 21 44.8
	BKS	e	14 21 46.0
		AMP(μm)	PER(s)
		PZ 0.10	1.4
	MNA	eP	14 21 49.1
USGS 14h09m04.8s 28.1S 178.1W			
h=21km mb=5.4 Ms=5.2			
Kermadec Islands Region			
Jun 29	BKS	e	15 12 44.5
		eLq	15 34 48.0
		eLr	15 38 40.0
	JAS1	eP	15 12 50.8
	FRI	eP	15 12 51.5
	WDC	eP	15 12 51.8
	ORV	eP	15 12 52.7
	MIN	eP	15 12 55.0
	MNA	eP	15 12 59.0
USGS 15h00m14.0s 28.0S 177.9W			
h=10km mb=5.3 Ms=5.1			
Kermadec Islands Region			
Jun 29	MNA	iPc	20 20 42.0
		e	20 25 35.4
	FRI	eP	20 20 44.2
	PRI	eP	20 20 48.1
	LLA	eP	20 20 50.5
		e	20 25 41.8
	JAS1	iPc	20 20 51.7

DATE	STA	PHASE	TIME (UTC)
		i	20 21 59.2
		i	20 22 40.0
		i	20 25 41.8
	PRS	eP	20 20 52.1
	SAO	eP	20 20 53.8
	GCC	eP	20 20 57.2
	MHC	eP	20 20 57.3
	PCC	eP	20 21 00.4
	BKS	eP	20 21 01.0
		eS	20 28 28.0
		e d	20 29 32.0
		AMP(μm)	PER(s)
		PZ 0.13	0.8
	BRK	eP	20 21 01.8
	ORV	eP	20 21 02.5
	MIN	eP	20 21 04.2
	WDC	iPc	20 21 08.0
	FHC	eP	20 21 19.0
USGS 20h11m50.5s 6.8N 73.0W			
h=159km mb=5.3			
Northern Colombia			
Jun 30	WDC	e	01 28 47.4
	JAS1	eP	01 29 10.5
	FRI	e	01 29 17.0
	MNA	e	01 29 20.5
USGS 01h21m26.6s 51.4N 176.7W			
h=33km mb=4.8 Ms=4.1			
Andreanof Islands, Aleutian Islands			
Jun 30	BKS	iPc	11 00 13.2
		iS	11 00 18.9
	BRK	iPc	11 00 13.4
	ZSP	ePc	11 00 13.8
		iS	11 00 20.9
	MHC	iPc	11 00 16.2
	PCC	iPd	11 00 17.0
	GCC	ePc	11 00 20.8
	JAS1	iPd	11 00 24.8
	SAO	iP	11 00 24.8
	LLA	e	11 00 29.5
	ORV	eP	11 00 34.1
	PRS	eP	11 00 34.3
	FRI	eP	11 00 35.2
	PRI	e	11 00 37.1
	MIN	e	11 00 47.0
BRK 11h00m05.9s 37.8N 121.8W			
h=11km ML=3.3(6) Mo=1.7E21(4)			
17 km N of Livermore, CA			
Jun 30	MNA	ePc	22 59 38.8
		ePcP	23 01 47.0
		eScP	23 05 34
	FRI	ePc	22 59 39.5
		ePcP	23 01 46.8
	PRI	eP	22 59 42.3
		ePcP	23 01 48.7
	LLA	ePc	22 59 45.2
		ePcP	23 01 49.9
	PRS	ePc	22 59 46.7
		ePcP	23 01 50.4
	JAS1	ePc	22 59 48.3
		iPcP	23 01 50.6
		eScP	23 05 38
	SAO	eP	22 59 48.5
	MHC	ePc	22 59 51.2
		ePcP	23 01 51.9
	GCC	eP	22 59 53.5
		ePcP	23 01 52.5
	PCC	ePc	22 59 57.6
	BKS	iP	22 59 58.0
		ePcP	23 01 55.0

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DATE	STA	PHASE	TIME (UTC)
		eScP	23 05 45.0
		eS	23 06 17.0
		eLq	23 09 44.0
		eLr	23 15 04.0
			AMP(μm) PER(s)
		PZ	0.34 0.9
		LZ	5.0 20.
		LN	6.9 20.
		LE	11 20.
	BRK	eP	22 59 58.6
		ePcP	23 01 54.8
	ORV	ePc	23 00 01.5
	MIN	eP	23 00 04.8
		ePcP	23 01 56.5
	WDC	ePc	23 00 08.6
		ePcP	23 01 58.8
		eScP	23 05 50
	FHC	eP	23 00 19.8

BRK Ms=5.8 Distance= 43°
USGS 22h52m12.5s 11.3N 86.0W
h=63km mb=5.4
Near Coast of Nicaragua

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DATE	STA	PHASE	TIME (UTC)
Jul 1	BKS	eP	01 00 20.5
		e	01 03 56
		e	01 06 18
		e	01 07 11
		eS	01 09 49
		eLq	01 18 24
		eLr	01 20 46
		AMP(μm)	PER(s)
		PZ 0.11	1.0
		LZ 5.2	20.
		LN 4.5	20.
		LE 3.9	20.
	PRS	eP	01 00 22.0
	GCC	e(P)	01 00 22.2
	PRI	ePc	01 00 24.2
	SAO	e(P)	01 00 24.2
	MHC	ePc	01 00 25.0
	LLA	e	01 00 27.3
	FRI	eP	01 00 30.0
	JAS1	iPc	01 00 30.9
	ORV	eP	01 00 32.7
	WDC	ePc	01 00 33.1
	MIN	e	01 00 36

BRK Ms=5.8 Distance=74°
USGS 00h49m07.2s 15.6S 172.5W
h=33km mb=5.4 Ms=5.7
Samoa Islands Region

Jul 1	PRS	eP	01 18 03.3
	GCC	eP	01 18 03.7
	SAO	eP	01 18 05.5
	BKS	eP	01 18 05.5
		AMP(μm)	PER(s)
		PZ 0.063	0.8
	MHC	eP	01 18 06.0
	BRK	e(P)	01 18 06.5
	PRI	e(P)c	01 18 07.2
	LLA	e(P)	01 18 07.5
	FRI	eP	01 18 11.5
	JAS1	ePc	01 18 12.4
	WDC	eP	01 18 14.5
	ORV	eP	01 18 15.2
	MIN	eP	01 18 16.0

USGS 01h06m46.9s 15.8S 172.7W
h=33km mb=5.4 Ms=5.7
Samoa Islands Region

Jul 1	PRS	eP	05 21 32.3
	SAO	e(P)	05 21 32.9
	PRI	eP	05 21 33.2
	BRK	e(P)	05 21 34
	MHC	eP	05 21 34.0
	BKS	eP	05 21 36
		eScS	05 31 31
		e	05 42 43
		eLr	05 44 27
		AMP(μm)	PER(s)
		LZ 0.82	20.
		LN 0.79	20.
		LE 0.71	20.
	FRI	eP	05 21 40.7
	JAS1	ePd	05 21 41.3
		eS	05 30 51
	ORV	e(P)	05 21 42.7
	WDC	ePd	05 21 43.2
		eS	05 30 57
	MIN	eP	05 21 45.1
	MNA	ePd	05 21 51.7

BRK Ms=5.1 Distance=74°
USGS 05h10m15.8s 15.6S 172.8W
h=33km mb=5.1 Ms=5.1
Samoa Islands Region

DATE	STA	PHASE	TIME (UTC)
Jul 1	WDC	eP	07 46 02.9
	MIN	eP	07 46 05.4
	ORV	eP	07 46 05.7
	JAS1	eP	07 46 09.7
	BKS	e(P)	07 46 18
		e(S)	07 56 45
		e	07 57 05
		e	07 58 06
		e	08 03 08
		eLq	08 10 05
		eLr	08 14 19
		AMP(μm)	PER(s)
		LZ 2.0	20.
		LN 1.1	20.
		LE 1.3	20.
	MNA	eP	07 46 18.4

BRK Ms=5.5 Distance=87°
USGS 07h32m54.1s 3.2S 148.5E
h=10km mb=5.3 Ms=5.6
Bismarck Sea

Jul 1	MHC	iPc	21 32 03.4
	PCC	iPc	21 32 10.0
	GCC	iPd	21 32 10.1
	BKS	iPc	21 32 10.8
	BRK	iPc	21 32 11.0
	ZSP	eP	21 32 12.2
	SAO	iP	21 32 14.5
	LLA	eP	21 32 18.9
	JAS1	iPd	21 32 19.3
		iS	21 32 34.3
	PRS	eP	21 32 21.3
		iS	21 32 37.0
	PRI	e(P)	21 32 26.7
	ORV	e(P)	21 32 36.3
	MNA	e(P)	21 32 54.7

BRK 21h31m59.7s 37.5N 121.7W
h=7km ML=2.8(4) Mo=2.8E20(2)
Mt. Lewis area, 17 km NE of San Jose, Ca

Jul 2	GCC	ePc	04 28 07.7
	PCC	ePc	04 28 07.8
	SAO	ePc	04 28 08.8
	BRK	iPc	04 28 09.4
	BKS	eP	04 28 09.6
		e	04 30 10
		eS	04 37 30
		e	04 38 21
		AMP(μm)	PER(s)
		PZ 0.097	0.8
	PRI	ePc	04 28 09.9
	MHC	ePc	04 28 10.0
	FHC	ePc	04 28 14.0
	JAS1	iPc	04 28 15.4
		epP	04 30 21.6
	ORV	ePc	04 28 16.8
	WDC	iPc	04 28 17.1
	MIN	ePc	04 28 18.6
	MNA	iPc	04 28 24.3
		epP	04 30 31.4

BRK mb=5.3 h=598km Distance=80°
USGS 04h16m57.7s 22.0S 179.5W
h=597km mb=5.6
South of Fiji Islands

Jul 2	WDC	ePc	10 33 36.4
	MIN	ePc	10 33 38.9
	ORV	ePc	10 33 39.2
	JAS1	ePc	10 33 42.3
	MNA	ePc	10 33 51.1

DATE	STA	PHASE	TIME (UTC)

USGS 10h20m25.4s 7.8S 150.6E
h=28km mb=5.5 Ms=4.6
New Britain Region

Jul 2	PRI	ePc	20 56 19.3
	LLA	e(P)	20 56 22.3
	MHC	ePc	20 56 28.0
	JAS1	ePc	20 56 30.5
		ePKPPKP	21 25 22.2
	BRK	e(P)	20 56 31.1
	BKS	eP	20 56 32.0
		eS	21 05 15
		eSS	21 09 47
		eLq	21 12 56
		eLr	21 16 28
		AMP(μm)	PER(s)
		PZ 0.11	1.4
		LZ 15	20.
		LN 15	20.
		LE 0.36	20.
	MNA	ePc	20 56 33.3
		ePKPPKP	21 25 20.0
	ORV	ePc	20 56 41.7
	WDC	ePc	20 56 47.9
		ePKPPKP	21 25 14.7

BRK Ms=6.2 Distance=67°
USGS 20h45m50.5s 26.8S 114.3W
h=10km mb=5.6 Ms=5.5
Easter Island Region

Jul 3	BKS	e	08 45 08
	JAS1	eP	08 45 26.5
	WDC	eP	08 45 28.7
	MNA	eP	08 45 35.1

USGS 08h33m28.0s 21.6S 174.7W
h=33km mb=4.8 Ms=4.6
Tonga Islands

Jul 3	JAS1	eP	09 32 56.6
	WDC	eP	09 32 58.5
	MNA	eP	09 33 07.8
	BKS	eLq	09 54 39
		eLr	09 58 42

USGS 09h21m29.7s 15.9S 172.7W
h=33km mb=4.8 Ms=4.8
Samoa Islands Region

Jul 4	WDC	ePc	08 59 31.4
	MIN	eP	08 59 32.7
	ORV	e	08 59 42.3
	MNA	eP	08 59 56.0
	JAS1	eP	08 59 57.6
	BKS	e	09 00 00
	MHC	e	09 00 03.6

USGS 08h54m37.6s 62.3N 124.1W
h=10km mb=4.7 Ms=4.4
Northwest Territories, Canada

Jul 4	ARC	iP	19 55 44.1
		iS	19 55 49.5
	FHC	iPc	19 55 46.1
		iS	19 55 54.0
	WDC	iPc	19 56 02.2
		i	19 56 08.5
		iS	19 56 20.6
	MIN	eP	19 56 12.1
		iS	19 56 39.3
	ORV	eP	19 56 18.9

BRK 19h55m35.7s 41.1N 124.6W
h=9km ML=3.7(3) Mo=2.5E21(1)
Off Coast 50 km NW of Eureka, CA

DATE	STA	PHASE	TIME (UTC)
Jul 5	WDC	eP	03 09 08.2
	MIN	eP	03 09 14.9
	ORV	eP	03 09 19.6
	BRK	e	03 09 23.3
	BKS	ePd	03 09 24.7
		e	03 10 17
		eS	03 15 44
		eLq	03 19 11
		eLr	03 21 04
		AMP(μm)	PER(s)
		PZ 0.036	0.7
		LZ 2.3	20.
		LN 1.2	20.
		LE 2.4	20.
	MHC	e	03 09 28.2
	JAS1	iPc	03 09 33.7
	PRI	e	03 09 41.0
	MNA	ePc	03 09 42.0

BRK Ms=5.1 Distance=44°
USGS 03h01m32.6s 51.2N 179.7W
h=33km mb=5.6 Ms=5.2
Andreanof Islands, Aleutian Islands

Jul 5	MNA	ePd	22 15 57.5
		i	22 16 20.0
		i	22 19 10.4
	PRI	eP	22 16 00.0
	LLA	eP	22 16 02.4
	PRS	eP	22 16 03.6
	JAS1	iPd	22 16 06.8
		i	22 16 28.5
		i	22 18 47.0
		i	22 19 11.6
	SAO	e	22 16 07.0
	MHC	eP	22 16 10.5
		i	22 16 45.8
		i	22 18 48.5
	GCC	eP	22 16 10.6
	ORV	e	22 16 20.8
	MIN	eP	22 16 24.6
	WDC	eP	22 16 28.4
		i	22 18 53.3
	FHC	eP	22 16 40.1
		i	22 17 16.5
	BKS	epP	22 16 42
		esPP	22 18 22
		iS	22 21 44
		esS	22 22 24
		eG	22 24 30
		e	22 25 44
		eScS	22 26 30
		eLr	22 27 10
		AMP(μm)	PER(s)
		LZ 3.4	20.
		LN 1.8	20.
		LE 6.5	20.

BRK Ms=5.5 Distance=38°
USGS 22h09m37.0s 15.5N 92.6W
h=111km mb=5.4
Mexico-Guatemala Border Region

Jul 6	JAS1	eP	23 08 22.6
	WDC	e	23 08 26.1
	MNA	e	23 08 31.8
	BKS	e	23 40 04

USGS 22h55m51.4s 28.8S 176.6W
h=33km mb=4.8 Ms=5.0
Kermadec Islands Region

Jul 7	WDC	ePKPc	16 46 08.1
		ePP	16 48 13.5
		eSP	16 58 33

DATE	STA	PHASE	TIME (UTC)
	MIN	ePKPc	16 46 08.7
		ePP	16 48 15.8
	FHC	ePKPc	16 46 09.0
	ORV	ePKP	16 46 10.0
	MNA	ePKPc	16 46 13.3
		ePP	16 46 49.22
	JAS1	iPKPc	16 46 13.6
		ePP	16 48 28.5
		eSP	16 58 44
	BKS	iPKPc	16 46 14
		iPP	16 48 36
		iPKS	16 49 44
		iSKSP	16 58 36
		eSKS	16 58 36
		iPPS	17 00 40
		iPPPS	17 01 42
		eSS	17 06 20
		eSSS	17 11 20
		eLq	17 21 04
		eLr	17 29 06
		AMP(μm)	PER(s)
		LZ 3.1	20.
		LN 3.2	20.
		LE 2.6	20.
	BRK	ePKP	16 46 14.0
	PCC	e(PKP)	16 46 14.5
	MHC	ePKPc	16 46 15.4
	GCC	ePKP	16 46 15.6
	SAO	e(PKP)	16 46 15.7
	LLA	ePKP	16 46 16.7
	PRS	ePKP	16 46 17.1
	PRI	ePKP	16 46 18.1

BRK Ms=6.1 Distance=134°
USGS 16h26m56.6s 10.4N 56.8E
h=7km mb=6.4 Ms=6.2
Carlsberg Ridge

Jul 7	MNA	ePd	21 31 15.8
	PRI	eP	21 31 20.3
	LLA	eP	21 31 23.0
	PRS	eP	21 31 24.4
	MHC	eP	21 31 30.0
	GCC	eP	21 31 30.4
	BKS	iP	21 31 35.1
		eS	21 39 08
		eLq	21 51 38
		eLr	21 54 15
		AMP(μm)	PER(s)
		PZ 0.056	1.2
	ORV	ePc	21 31 37.0
	MIN	ePd	21 31 39.0
	WDC	eP	21 31 42.6
	FHC	eP	21 31 53.7

BRK mb=5.4 h=33km Distance=51°
USGS 21h22m24.4s 5.3N 77.6W
h=20km mb=5.3 Ms=4.6
Near West Coast of Colombia

Jul 8	PRS	iPd	00 40 31.6
	SAO	iPc	00 40 36.8
	GCC	iPc	00 40 39.5
	LLA	iPc	00 40 39.5
	PRI	iPc	00 40 39.9
	MHC	iPc	00 40 44.8
		i	00 41 05.3
	PCC	iPc	00 40 46.7
	BRK	iPc	00 40 51.4
	BKS	iPn	00 40 51.4
		iP*	00 40 57.2
		iPg	00 41 10.0
		iSn	00 41 18.3
		iS*	00 41 20.2

DATE	STA	PHASE	TIME (UTC)
		eSg	00 41 33.2
	ZSP	iPc	00 40 52.9
		e	00 41 23.6
	JAS1	iPc	00 40 57.4
	ORV	ePd	00 41 15.5
	MNA	e	00 41 22
	MIN	e	00 41 28
	WDC	e	00 41 34

BRK 00h40m23.4s 36.1N 121.8W
h=19km ML=4.4(5) Mo=2.6E22(4)
Off Coast 60 km SSE of Monterey, CA

Jul 8	PRI	iPc	09 21 44.0
	LLA	iPc	09 21 50.2
	PRS	ePc	09 21 51.2
	MNA	iPc	09 21 55.1
	SAO	iPc	09 21 56.0
	JAS1	iPc	09 21 59.5
	GCC	ePc	09 22 02.2
	MHC	iP	09 22 02.5
	PCC	ePc	09 22 09.5
	BRK	ePc	09 22 12.2
	BKS	iPn	09 22 12.3
		eP*	09 22 22.3
		ePg	09 22 38.4
		eSn	09 23 11.1
		eS*	09 23 37.1
		eSg	09 23 55.0
	ZSP	ePc	09 22 13.1
	ORV	e(P)d	09 22 25.0
	MIN	ePd	09 22 36.2
	WDC	ePd	09 22 42.3
	FHC	ePd	09 22 56.2

BRK ML=6.6(7)
PAS 09h21m44.5s 34.0N 116.6W
h=11km ML=5.6
NW of Palm Springs, CA

Jul 8	PRI	eP	10 10 03.0
	LLA	eP	10 10 09.6
	PRS	eP	10 10 11.1
	MNA	eP	10 10 13.9
	SAO	eP	10 10 15.2
	JAS1	ePd	10 10 18.4
		iS	10 11 38.3
	MHC	ePd	10 10 21.6
	GCC	e(P)	10 10 21.7
	PCC	eP	10 10 29.2
	BRK	eP	10 10 31.0
	BKS	ePn	10 10 31.1
		eP*	10 10 44.6
	MIN	eP	10 10 56.3

BRK ML=4.3(4)
PAS 10h09m02.9s 34.0N 116.6W
h=8km ML=3.9
NW of Palm Springs, CA

Jul 8	PRI	e(P)	10 23 39.8
	LLA	e(P)	10 23 45.8
	PRS	eP	10 23 46.5
	MNA	iPd	10 23 49.3
	SAO	iP	10 23 51.3
	JAS1	eP	10 23 54.3
	GCC	e(P)	10 23 57.8
	MHC	eP	10 23 58.3
	PCC	e(P)	10 24 05.5
	BRK	eP	10 24 06.2
	BKS	ePn	10 24 07.7
		eP*	10 24 17.4
		ePg	10 24 39.7
		eSn	10 25 16.2
	MIN	e	10 24 42.5

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
BRK ML=4.4(4)			
PAS 10h22m40.6s 34.0N 116.6W			
h=8km ML=4.4			
NW of Palm Springs, CA			
Jul 8	FHC	ePc	20 44 48.3
	WDC	ePc	20 44 54.2
	MIN	eP	20 44 57.9
	ORV	eP	20 45 02.0
	BKS	eP	20 45 06.1
		AMP(μm)	PER(s)
	PZ	0.028	0.8
	GCC	ePc	20 45 09.8
	JAS1	iPc	20 45 12.7
	PRS	eP	20 45 15.2
	LLA	ePc	20 45 16.0
	MNA	ePc	20 45 20.0
USGS 20h34m26.4s 43.8N 146.4E			
h=79km mb=5.0			
Kuril Islands			
Jul 9	PRI	eP	00 13 31.9
	LLA	eP	00 13 39.2
	PRS	eP	00 13 40.4
	MNA	ePd	00 13 43.2
	SAO	eP	00 13 44.5
	JAS1	eP	00 13 47.7
		iS	00 14 53.8
	MHC	eP	00 13 50.9
	GCC	eP	00 13 51.5
	PCC	eP	00 13 59.6
	BKS	eP	00 14 0.5
	BRK	e(P)	00 14 00.5
BRK ML=4.2(4)			
PAS 00h12m32.1s 34.0N 116.6W			
h=6km ML=4.4			
NW of Palm Springs, CA			
Jul 9	WDC	eP	17 17 39.2
		ePcP	17 19 52.8
	MIN	eP	17 17 44.6
	ORV	eP	17 17 48.7
		ePcP	17 19 56.0
	BKS	eP	17 17 56.3
		iS	17 23 56
		iLq	17 27 02
		iLr	17 28 48
		AMP(μm)	PER(s)
		PZ 0.040	0.9
		LZ 2.0	20.
		LN 0.89	20.
		LE 1.5	20.
	JAS1	eP	17 18 03.3
	MNA	eP	17 18 12.3
		ePcP	17 20 06.6
	PRI	eP	17 18 13.6
		ePcP	17 20 06.3
	GCC	ePcP	17 20 00.7
	MHC	ePcP	17 20 01.4
	PRS	ePcP	17 20 03.7
	LLA	ePcP	17 20 04.2
BRK Ms=4.9 Distance=41°			
USGS 17h10m22.9s 51.9N 176.2W			
h=49km mb=5.2 Ms=4.9			
Andreanof Islands, Aleutian Islands			
Jul 9	WDC	eP	23 24 58.0
		ePP	23 29 27.5
	BKS	iP	23 25 03
		iPP	23 29 24
		iPPP	23 32 24
		iSKS	23 35 46
		iPS	23 38 28
		iSS	23 43 22
		iSSS	23 48 20
		ePKPPKP	23 49 26
		eLq	23 53 14
		eG	23 54 24
		eLr	23 58 24
		AMP(μm)	PER(s)
	LZ	16	20.
	LN	5.5	20.
	LE	9.7	20.
	MHC	eP	23 25 05.6
	JAS1	eP	23 25 08.4
		ePP	23 29 34.8
		e	23 40 40.2
	MNA	eP	23 25 15.8
		ePP	23 29 47.0
		e	23 40 34.8
	ORV	ePP	23 29 23.9
	PRI	ePP	23 29 29.5
	PRS	ePP	23 29 33.4
BRK Ms=6.4 Distance=105°			
USGS 23h10m53.1s 1.9N 126.5E			
h=27km mb=6.2 Ms=6.5			
Molucca Passage			
Jul 10	SAO	iP	04 01 31.9
	GCC	iPc	04 01 36.6
	PRS	iPd	04 01 39.5
	MHC	iPd	04 01 39.8
	LLA	iPc	04 01 40.3
		iS	04 01 49.6
	PCC	eP	04 01 46.0
	PRI	eP	04 01 49.2
		iS	04 02 02.6
	BKS	iP	04 01 51.4
		eS	04 02 08.1
	BRK	eP	04 01 51.5
		eS	04 02 08.0
	JAS1	eP	04 01 54.5
BRK 04h01m29.3s 36.8N 121.6W			
h=4km ML=2.8(4)			
17 km W of Hollister, CA			
Jul 10	ARC	eP	04 24 53.9
		iS	04 25 01.2
	FHC	iPc	04 24 55.0
		iS	04 25 02.5
	WDC	iPc	04 25 11.1
	MIN	iPd	04 25 21.0
BRK 04h24m42.8s 40.7N 124.8W			
h=6km ML=3.2(2) Mo=2.6E20(2)			
Off Coast 50 km WSW of Eureka, CA			
Jul 10	MNA	ePc	07 05 37.0
	JAS1	ePc	07 05 46.3
	MIN	ePc	07 05 49.1
	ORV	eP	07 05 49.5
	WDC	ePc	07 05 51.3
	BKS	eLr	07 35 10
USGS 06h53m04.3s 4.3N 32.6W			
h=10km mb=5.4 Ms=5.0			
Central Mid-Atlantic Ridge			
Jul 10	GCC	ePc	18 46 28.2
	PRS	ePc	18 46 28.2
	PCC	ePc	18 46 28.3
	SAO	eP	18 46 29.1
	PRI	ePc	18 46 30.3
	MHC	ePc	18 46 31.0
	JAS1	iPc	18 46 36.4
		epP	18 47 32.7
	ORV	e(P)	18 46 38.0
	WDC	ePc	18 46 38.6
		epP	18 47 34.6
	MIN	eP	18 46 40.4
	MNA	iPc	18 46 46.2
		epP	18 47 42.2
USGS 18h35m04.9s 19.9S 175.8W			
h=232km mb=5.3			
Tonga Islands			
Jul 10	FHC	iPc	20 52 55.6
		iS	20 53 04.0
	ARC	e	20 52 57.1
		i	20 53 03.0
	WDC	iPc	20 53 09.8
	MIN	iPc	20 53 20.2
	ORV	eP	20 53 23.1
	PCC	ePc	20 53 34.6
	GCC	e	20 53 42.4
	SAO	eP	20 53 48.3
BRK 20h52m43.4s 40.5N 124.7W			
h=15km ML=3.7(3) Mo=2.8E20(2)			
Off Coast 60 km SW of Eureka, CA			
Jul 12	MHC	iPc	08 04 50.1
		iS	08 04 53.1
	PCC	iPc	08 04 56.8
	GCC	iPd	08 04 56.8
	BRK	iPc	08 04 57.6
		i	08 05 05.7
	ZSP	iPd	08 04 58.8
	SAO	iPc	08 05 01.3
	LLA	ePc	08 05 05.6
	JAS1	iPd	08 05 06.0
		iS	08 05 21.2
	PRS	eP	08 05 07.8
	PRI	eP	08 05 13.6
	ORV	e(P)	08 05 22.4
BRK 08h04m46.4s 37.5N 121.7W			
h=6km ML=2.9(2) Mo=4.4E20(2)			
Mt. Lewis area, 27 km NE of San Jose, Ca			
Jul 12	PRS	iPd	18 47 19.8
		iS	18 47 26.1
	SAO	iPd	18 47 25.1
	GCC	iPd	18 47 27.9
	LLA	iPd	18 47 28.1
	PRI	iPd	18 47 29.0
		iS	18 47 42.8
	MHC	eP	18 47 33.2
	PCC	e(P)	18 47 36.2
	JAS1	e	18 47 45.8
	BRK	e	18 48 08.8
BRK 18h47m12.1s 36.1N 121.8W			
h=14km ML=2.8(2)			
Off Coast 60 km SSE of Monterey, CA			
Jul 13	MNA	iPc	09 18 23.0
	PRI	eP	09 18 24.4
	PRS	eP	09 18 28.7
	JAS1	iPc	09 18 31.1
	MHC	ePc	09 18 35.9
	GCC	ePc	09 18 36.2
	BRK	ePc	09 18 41.5
		eS	09 24 08.8
		AMP(μm)	PER(s)
	PZ	0.026	0.7
	BKS	ePc	09 18 41.6
	ORV	ePc	09 18 46.3
	MIN	ePc	09 18 50.4
	WDC	eP	09 18 53.9
		ePP	12 57 32.0
		ePKPPKP	13 20 07.0
	MIN	ePd	12 54 05.5
	MNA	ePd	12 54 13.4
		ePP	12 57 46.8
		ePKPPKP	13 20 02.0
USGS 12h41m28.3s 19.5S 169.2E			
h=111km mb=6.2			
Vanuatu Islands			
Jul 16	BRK	iPc	16 27 55.1
		iS	16 27 59.5
	ZSP	iPc	16 27 56.3
		iS	16 28 01.4
	PCC	iPc	16 27 57.9
	MHC	iPd	16 27 59.7
	GCC	eP	16 28 03.2
	SAO	eP	16 28 09.7
	JAS1	eP	16 28 12.3
	PRS	e(P)	16 28 17.3
	LLA	e(P)	16 28 17.5
BRK 16h27m49.9s 37.7N 122.0W			
h=4km ML=2.4(2)			
San Ramon, 30 km SE of Berkeley, CA			
Jul 16	MHC	iPd	20 59 05.4
	GCC	iPd	20 59 11.2
	SAO	iPc	20 59 14.8
	PCC	iPc	20 59 15.8
	BRK	iPc	20 59 18.0
		iS	20 59 28.8
	ZSP	iPc	20 59 19.4
		iS	20 59 32.0
	LLA	ePd	20 59 20.3
	PRS	ePd	20 59 22.1
	JAS1	iPc	20 59 24.5
	PRI	eP	20 59 28.7
	ORV	eP	20 59 43.2
BRK 20h59m03.8s 37.3N 121.7W			
h=6km Mag=3.0			
Halls Valley, 20 km ESE of San Jose, CA			
Jul 17	PRS	eP	02 58 25.7
	MHC	e(P)	02 58 28.0
	JAS1	eP	02 58 33.1
	ORV	eP	02 58 34.6
	WDC	eP	02 58 35.1
	MIN	e(P)	02 58 36.7
	MNA	eP	02 58 42.0
USGS 02h47m04.5s 23.5S 180.0E			
h=541km mb=4.7			
South of Fiji Islands			
Jul 17	GCC	e(P)	13 13 00.7
	MHC	e(P)	13 13 02.1
	LLA	e(P)	13 13 03.2
	PRS	eP	13 13 03.4
	ORV	e(P)	13 13 04.7
	JAS1	eP	13 13 07.5
	MNA	eP	13 13 16.3
USGS 12h59m49.6s 9.5S 152.2E			
h=13km mb=5.0			
Dentrecasteaux Islands Region			
Jul 17	JAS1	ePd	14 43 33.2
	ORV	eP	14 43 34.7
	WDC	ePd	14 43 35.1
	MNA	ePd	14 43 42.0
USGS 14h32m16.8s 21.8S 179.3W			
h=596km mb=4.8			
Fiji Islands Region			
	FHC	ePc	09 19 05.7
USGS 09h12m10.7s 16.1N 93.9W			
h=80km mb=5.9			
Chiapas, Mexico			
Jul 13	PRI	eP	10 26 39.8
	MNA	ePc	10 26 41.1
	LLA	ePc	10 26 42.0
	PRS	ePc	10 26 42.2
	SAO	eP	10 26 43.5
	JAS1	iPc	10 26 45.1
	GCC	ePc	10 26 46.6
	MHC	ePc	10 26 47.2
	BRK	ePc	10 26 50.3
	ORV	ePc	10 26 54.8
	MIN	ePc	10 26 56.6
	WDC	iPc	10 26 59.7
USGS 10h14m38.2s 28.2S 71.1W			
h=60km mb=5.4			
Near Coast of Central Chile			
Jul 13	PRI	iPc	13 48 07.9
	PRS	iPc	13 48 14.0
	LLA	iPc	13 48 14.7
	SAO	ePd	13 48 19.0
	GCC	ePc	13 48 24.9
	MHC	iPd	13 48 27.2
		eS	13 49 28.6
	JAS1	iPc	13 48 28.3
		eS	13 49 29.3
	MNA	ePd	13 48 31.8
		iS	13 49 38.4
	PCC	ePd	13 48 32.7
	BRK	ePc	13 48 36.0
		e	13 49 22
		eS	13 49 40.0
		e	13 50 04
		e	13 50 42
	ZSP	eP	13 48 37.6
	ORV	eP	13 48 55.6
	MIN	ePd	13 49 09.2
	WDC	e	13 49 12.7
	FHC	e	13 49 25.0
BRK ML=5.8(5)			
PAS 13h47m08.2s 33.0N 117.9W			
h=6km ML=5.3			
Off Coast NW of San Diego, CA			
Jul 13	PRI	ePc	14 02 32.1
	PRS	ePc	14 02 38.2
	LLA	eP	14 02 40.0
	SAO	iPc	14 02 43.8
		iS	14 03 36.8
	GCC	ePc	14 02 49.9
	MHC	e(P)	14 02 51.5
	JAS1	ePd	14 02 53.1
	PCC	eP	14 02 57.6
	BRK	e	14 03 04.4
		e	14 03 06.2
BRK Mag=4.2			
PAS 14h01m33.0s 33.0N 117.8W			
h=12km ML=4.6			
Off Coast NW of San Diego, CA			
Jul 14	PRI	eP	06 40 45.2
	PRS	e	06 40 50
	MNA	ePc	06 40 51.8
	JAS1	eP	06 40 56.4
	MHC	e(P)	06 40 58.5
	ORV	e(P)	06 41 17.0
	MNA	eP	06 41 20.7
USGS 06h35m42.6s 17.5N 105.6W			
h=33km mb=4.5			
Off Coast of Jalisco, Mexico			
Jul 14	MNA	e	19 53 41.6
	JAS1	ePc	19 53 42.3
USGS 19h41m06.4s 41.3S 88.1W			
h=10km mb=4.8 Ms=4.8			
West Chile Rise			
Jul 14	WDC	eP	20 27 24.7
	ORV	ePd	20 27 29.3
	GCC	ePd	20 27 30.5
	MHC	eP	20 27 31.7
	PRS	eP	20 27 33.9
	JAS1	ePd	20 27 35.4
	PRI	ePd	20 27 37.3
	MNA	ePd	20 27 43.7
USGS 20h14m50.4s 12.3N 143.9E			
h=27km mb=5.3 Ms=5.0			
South of Mariana Islands			
Jul 15	MNA	iPd	03 48 54.7
		iS	03 49 07.2
	JAS1	iPc	03 49 02.3
		iS	03 49 21.1
	LLA	ePc	03 49 11.2
		eS	03 49 34.4
	PRI	ePd	03 49 12.8
		iS	03 49 42.2
	SAO	iP	03 49 16.3
	MHC	ePd	03 49 16.7
	PRS	ePc	03 49 17.6
	GCC	eP	03 49 20.5
	PCC	eP	03 49 23.7
	BRK	ePd	03 49 24.1
		e	03 49 24.3
	MIN	e	03 49 42.7
BRK 03h48m36.3s 37.5N 118.6W			
h=11km ML=3.3(3)			
25 km SE of Mammoth Lakes, CA			
Jul 15	PRI	eP	06 13 00.4
	PRS	eP	06 13 02.2
	LLA	eP	06 13 02.3
	MNA	e(P)	06 13 03.5
	JAS1	ePd	06 13 06.1
	ORV	eP	06 13 15.1
USGS 06h00m25.3s 37.9S 74.7W			
h=33km mb=5.1			
Off Coast of Central Chile			
Jul 16	PCC	ePd	12 53 56.7
	GCC	ePd	12 53 57.2
	PRS	ePd	12 53 58.2
	BRK	ePd	12 53 58.4
		ipP	12 54 27.2
		isP	12 54 42.8
		iS	13 05 16.0
		eLq	13 17 16.8
		e	13 21 13.2
		e	14 23 57.2
		AMP(μm)	PER(s)
	PZ	0.17	1.1
	SAO	ePd	12 53 58.5
	MHC	ePd	12 53 59.7
		ePP	12 57 23.0
	LLA	ePd	12 54 00.0
	PRI	ePd	12 54 00.7
	WDC	ePd	12 54 03.5
		ePP	12 57 30.3
	ORV	ePd	12 54 04.5
	JAS1	iPd	12 54 04.6

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DATE	STA	PHASE	TIME (UTC)
Jul 17	PRI	eP	20 36 14.5
	LLA	eP	20 36 21.2
	PRS	eP	20 36 22.0
	MNA	iPnd	20 36 25.8
		iP*	20 36 39.8
	SAO	eP	20 36 26.7
	JAS1	ePnc	20 36 31.0
		iS*	20 36 49.4
	MHC	ePc	20 36 33.0
	GCC	eP	20 36 33.7
	PCC	ePc	20 36 40.8
	BRK	ePc	20 36 43.2
	ORV	e	20 36 58.3
BRK ML=4.6(3)			
PAS 20h35m15.0s 34.0N 116.6W			
h=6km ML=4.0			
NW of Palm Springs, CA			
Jul 17	MNA	iPc	21 00 32.8
	JAS1	iPc	21 00 53.1
	PRI	iPc	21 00 58.3
	LLA	eP	21 00 58.8
	SAO	iPc	21 01 04.3
	PRS	iPc	21 01 04.7
	MHC	iPc	21 01 06.6
	GCC	ePc	21 01 09.3
	ORV	iPc	21 01 11.8
	BRK	ePc	21 01 13.0
		i	21 01 38.0
		i	21 01 52.0
	ZSP	eP	21 01 13.5
	PCC	iPc	21 01 14.0
	MIN	iPc	21 01 19.2
	WDC	iPc	21 01 28.5
	FHC	e	21 01 45.0
BRK ML=5.6(5)			
USGS 21h00m00.0s 37.3N 116.4W			
h=0km mb=5.7			
Underground Nuclear Explosion, N.T.S.			
Jul 17	PRI	ePc	21 55 44.7
	LLA	ePc	21 55 51.9
	PRS	eP	21 55 52.3
	MNA	iPnc	21 55 56.1
		iP*	21 56 09.8
	SAO	e(P)	21 55 57.0
	JAS1	iPnc	21 56 01.0
		eP*	21 56 16.4
		iS*	21 57 18.1
	MHC	eP	21 56 03.6
	GCC	eP	21 56 04.1
BRK ML=4.6(3)			
PAS 21h54m45.2s 34.0N 116.6W			
h=7km ML=4.4			
NW of Palm Springs, CA			
Jul 18	PRI	e	00 31 22
	SAO	e	00 31 25
	BRK	eP	00 31 27.8
	JAS1	ePc	00 31 33.3
	MNA	ePc	00 31 38.8
	WDC	eP	00 31 49.6
USGS 00h21m40.0s 19.7S 126.0W			
h=10km mb=5.0 Ms=4.6			
South Pacific Ocean			
Jul 18	MNA	iPc	07 18 25.0
		iS	07 18 38.4
	JAS1	iPd	07 18 28.4
		iS	07 18 44.6
	LLA	eP	07 18 39.2
	PRI	eP	07 18 41.3
	SAO	ePc	07 18 43.8
	MHC	eP	07 18 44.3
	PRS	e(P)	07 18 46.7
	GCC	e	07 18 49.4
BRK 07h18m05.5s 37.6N 118.9W			
h=3km ML=3.2(2)			
13 km SE of Mammoth Lakes, CA			
Jul 18	MNA	iPKPd	15 27 25.4
		i	15 27 29.4
	MIN	ePKPd	15 27 28.4
		i	15 27 32.6
	WDC	iPKPd	15 27 29.1
		i	15 27 33.3
	ORV	ePKPd	15 27 29.5
		i	15 27 34.0
	JAS1	iPKPd	15 27 31.0
		i	15 27 35.0
	FHC	ePKP	15 27 33.3
	SAO	ePKPd	15 27 34.8
	MHC	iPKPd	15 27 34.9
	LLA	ePKPd	15 27 35.0
	PRI	iPKPd	15 27 35.5
	GCC	ePKPd	15 27 35.8
	PRS	ePKPd	15 27 35.9
USGS 15h07m51.8s 16.4S 28.5E			
h=17km mb=5.5 Ms=4.6			
Zambia			
Jul 18	MNA	iPd	16 00 25.2
		iS	16 00 37.4
	JAS1	iPc	16 00 37.3
		iS	16 00 58.1
	LLA	iPd	16 00 47.5
	PRI	iPd	16 00 48.6
	SAO	eP	16 00 51.9
	MHC	ePd	16 00 52.9
	PRS	ePd	16 00 53.4
	GCC	e	16 00 58.7
	BRK	eP	16 00 59.5
		e	16 00 59.5
	PCC	eP	16 01 00.1
BRK 16h00m08.5s 37.6N 118.4W			
h=4km ML=3.9(3)			
Chalfant Valley, 23 km NNW of Bishop, CA			
Jul 18	PRI	iPc	17 01 16.2
	LLA	iPc	17 01 19.7
		e	17 01 53.1
	MNA	iPc	17 01 20.1
	PRS	ePc	17 01 24.1
	JAS1	ePd	17 01 25.0
		iS	17 02 01.5
	MHC	eP	17 01 30.1
	GCC	eP	17 01 30.2
	BRK	e	17 01 40.5
		eP	17 01 40.6
	PCC	e	17 01 41.5
BRK ML=4.1(3)			
PAS 17h00m36.9s 36.1N 117.8W			
h=1km ML=3.7			
SSE of Lone Pine, CA			
Jul 18	MNA	ePc	17 31 46.5
	PRI	eP	17 31 55.2
	LLA	ePc	17 31 57.1
		ePcP	17 33 07.3
	JAS1	iPc	17 31 57.4
		ePcP	17 33 06.5
	PRS	ePc	17 31 59.3
		ePcP	17 33 07.4
	SAO	eP	17 32 00.6
	MHC	ePc	17 32 03.8
	GCC	eP	17 32 04.8
	ORV	ePc	17 32 07.0
	PCC	eP	17 32 07.7
	BRK	ePc	17 32 07.8
	WDC	ePc	17 32 12.3
		ePcP	17 33 14.2
	FHC	ePc	17 32 23.2
USGS 17h22m38.2s 10.8N 69.4W			
h=7km mb=5.9 Ms=4.9			
Venezuela			
Jul 19	FHC	ePc	04 38 11.8
		ePcP	04 41 06.9
	WDC	iPc	04 38 20.0
		iPcP	04 41 08.7
	MIN	ePc	04 38 25.9
		ePcP	04 41 10.4
	ORV	ePc	04 38 30.2
		ePcP	04 41 12.0
	BRK	ePc	04 38 36.1
		ePcP	04 41 14.4
		eS	04 44 06
		eLr	04 47 30
			AMP(μm) PER(s)
		PZ	0.11 .9
		LZ	2.3 20.
	PCC	eP	04 38 37.4
		ePcP	04 41 14.6
	MHC	ePc	04 38 42.5
		ePcP	04 41 16.6
	JAS1	iPc	04 38 45.8
		iPcP	04 41 18.9
		e	04 44 57
	PRS	ePc	04 38 49.8
		ePcP	04 41 18.9
	LLA	ePc	04 38 51.6
		ePcP	04 41 19.1
	MNA	ePc	04 38 54.5
		iPcP	04 41 20.8
	PRI	ePc	04 38 55.1
		ePcP	04 41 21.2
BRK Ms=4.9 Distance=35°			
USGS 04h31m56.0s 53.4N 165.9W			
h=33km mb=5.5 Ms=5.1			
Fox Islands, Aleutian Islands			
Jul 19	FHC	ePc	05 11 24.2
		epP	05 11 40.2
		ePcP	05 13 19.4
	WDC	iPc	05 11 32.4
		epP	05 11 47.6
		iPcP	05 13 21.2
	MIN	ePc	05 11 38.3
		epP	05 11 53.4
		ePcP	05 13 23.0
	ORV	ePc	05 11 42.6
		epP	05 11 57.9
	BRK	ePc	05 11 48.6
		epP	05 12 03.8
		ePcP	05 13 26.8
	PCC	eP	05 11 49.9
	MHC	eP	05 11 56.2
		ePcP	05 13 29.1
	JAS1	iPc	05 11 58.5
		ePcP	05 13 29.7
	SAO	eP	05 11 59
	PRS	ePc	05 12 02.5
		epP	05 12 16.6
		ePcP	05 13 31.4
	LLA	ePc	05 12 03.2
		epP	05 12 18.3
	MNA	iPc	05 12 07.0
		ipP	05 12 22.1
		esP	05 12 31.0
		ePcP	05 13 33.5
	PRI	ePc	05 12 07.7
USGS 05h04m08.2s 53.3N 165.9W			
h=33km mb=5.1 Ms=4.5			
Fox Islands, Aleutian Islands			
Jul 19	FHC	ePc	06 09 20.5
	WDC	iPc	06 09 26.3
	MIN	iPc	06 09 30.7
	ORV	ePc	06 09 34.2
	BRK	ePd	06 09 38.2
		ePcP	06 10 13.6
		e	06 18 49.2
	PCC	ePc	06 09 39.6
	GCC	ePc	06 09 43.4
	MHC	ePc	06 09 43.6
	JAS1	iPc	06 09 46.0
		i	06 10 22.2
	MNA	iPc	06 09 53.2
		e	06 10 29.2
USGS 05h59m36.2s 47.3N 151.1E			
h=141km mb=5.9			
Kuril Islands			
Jul 19	FHC	eP	06 59 39.6
		ePcP	07 02 32.4
	WDC	ePd	06 59 47.2
		ePcP	07 02 34.2
	MIN	ePd	06 59 53.3
		ePcP	07 02 35.9
	ORV	e(P)	06 59 58.0
		ePcP	07 02 37.6
	BRK	eP	07 00 05.2
		ePcP	07 02 39.9
		eS	07 05 44.8
		eLr	07 09 19.2
			AMP(μm) PER(s)
		PZ	0.061 .7
		LZ	11 21.
	PCC	e(P)	07 00 05.3
		ePcP	07 02 40.3
	MHC	eP	07 00 09.9
		ePcP	07 02 42.3
	GCC	e(P)	07 00 10
	JAS1	ePd	07 00 13.7
	SAO	e(P)	07 00 14.6
		ePcP	07 02 43.3
	PRS	eP	07 00 16.9
		ePcP	07 02 44.6
	LLA	eP	07 00 17.3
	MNA	ePd	07 00 21.2
		ePcP	07 02 46.5
		eS	07 06 37
	PRI	eP	07 00 22.5
		ePcP	07 02 46.7
BRK Ms=5.6 Distance=35°			
USGS 06h53m17.8s 53.6N 167.2W			
h=33km mb=5.5 Ms=5.7			
Fox Islands, Aleutian Islands			
Jul 19	FHC	e(P)	09 26 33.2
	WDC	ePd	09 26 48.1
	MIN	ePd	09 26 58.9
	ORV	e(P)	09 27 08.7
	JAS1	ePd	09 27 33.8
USGS 09h25m48.6s 42.6N 127.4W			
h=10km mb=4.1			
Off Coast of Oregon			
Jul 19	SAO	iPc	11 00 40.0
	LLA	iPc	11 00 43.2
	PRS	iPd	11 00 43.6
		i	11 00 50.0
	GCC	eP	11 00 49.3
	PRI	ePd	11 00 51.2
	MHC	ePd	11 00 51.8
	PCC	ePd	11 00 58.5
	JAS1	ePc	11 01 03.1
	BRK	ePc	11 01 04.5
BRK 11h00m37.0s 36.7N 121.3W			
h=3km ML=2.6(2)			
Stone Canyon area, 22 km SE of Hollister, CA			
Jul 19	FHC	eP	11 37 30.9
	WDC	ePc	11 37 39.0
	MIN	ePc	11 37 44.5
	ORV	eP	11 37 49.2
	BRK	e(P)	11 37 55
	PCC	e(P)	11 37 57
	GCC	eP	11 38 00.6
	MHC	e(P)	11 38 01.3
	SAO	eP	11 38 04.5
	JAS1	ePc	11 38 04.7
	PRS	eP	11 38 08.2
	LLA	eP	11 38 09.3
	MNA	ePc	11 38 13.2
	PRI	ePc	11 38 13.7
USGS 11h31m07.6s 53.6N 167.4W			
h=33km mb=5.0 Ms=4.6			
Fox Islands, Aleutian Islands			
Jul 19	FHC	eP	20 58 32
	WDC	ePd	20 58 39.8
	BRK	e(P)	20 58 56.0
	PCC	ePd	20 58 57.2
	JAS1	ePd	20 59 05.4
	LLA	eP	20 59 10.4
	MNA	ePd	20 59 14.2
	PRI	ePd	20 59 14.7
USGS 20h52m09.6s 53.7N 167.2W			
h=33km mb=4.9			
Fox Islands, Aleutian Islands			
Jul 19	FHC	ePd	22 38 59.0
		ePcP	22 41 50.2
	WDC	iPd	22 39 07.2
		iPcP	22 41 51.8
	MIN	ePd	22 39 12.9
		ePcP	22 41 54.2
	ORV	ePd	22 39 17.1
		ePcP	22 41 55.4
	BRK	ePd	22 39 23.0
		eS	22 44 44
		eLq	22 47 33
		eLr	22 48 38
			AMP(μm) PER(s)
		PZ	0.32 1.3
		LZ	13 20.
	PCC	eP	22 39 24.2
	GCC	ePd	22 39 29.2
	MHC	ePd	22 39 29.4
		ePcP	22 42 00.2
	JAS1	iPd	22 39 32.8
	SAO	ePd	22 39 33.4
	PRS	ePd	22 39 36.7
	LLA	ePd	22 39 37.5
	MNA	ePc	22 39 41.3
		iPcP	22 42 04.3
	PRI	ePd	22 39 42.1
BRK Ms=5.6 Distance=35°			
USGS 22h32m36.1s 53.5N 167.3W			
h=33km mb=5.6 Ms=5.6			
Fox Islands, Aleutian Islands			
Jul 20	FHC	e	02 05 33.3
	WDC	ePd	02 05 39.5
	MIN	eP	02 05 45.7
	ORV	eP	02 05 49.6
	MHC	e	02 06 04.7
	JAS1	eP	02 06 05.2
	PRS	e	02 06 11.2
	LLA	e	02 06 12.3
	PRI	e	02 06 18.4
USGS 01h59m08.3s 53.5N 167.3W			
h=33km mb=4.9 Ms=4.5			
Fox Islands, Aleutian Islands			
Jul 20	MNA	iPd	14 30 02.8
	JAS1	iPc	14 30 14.7
	LLA	ePc	14 30 23.9
	PRI	iPc	14 30 25.6
	SAO	iPc	14 30 28.7
	MHC	ePc	14 30 29.1
	PRS	ePd	14 30 30.5
	GCC	ePc	14 30 32.5
	BRK	iPc	14 30 35.6
	ORV	eP	14 30 36.1
	ZSP	iPc	14 30 36.1
		i	14 30 37.6
	PCC	ePc	14 30 36.3
	MIN	ePc	14 30 45.6
	WDC	iPc	14 30 54.0
	FHC	eP	14 31 09.6
BRK 14h29m46.0s 37.6N 118.4W			
h=6km ML=5.9(7) Mo=1.4E24(2)			
Chalfant Valley, 23 km NNW of Bishop, CA			
Jul 20	SAO	iPd	14 42 35.7
	LLA	iPc	14 42 39.2
	PRS	iPd	14 42 42.1
	MHC	iPc	14 42 43.4
	GCC	iPc	14 42 43.4
	PRI	iPd	14 42 50.5
	PCC	eP	14 42 51.3
	BRK	ePd	14 42 54.5
	JAS1	iPc	14 42 55.4
		iS	14 43 12.4
	ZSP	eP	14 42 56.3
		i	14 42 57.8
	ORV	eP	14 43 16.3
BRK 14h42m32.2s 36.8N 121.3W			
h=7km ML=2.8(2)			
11 km ESE of Hollister, CA			
Jul 20	MNA	iPd	14 46 24.4
	JAS1	iPc	14 46 36.4
		iS	14 46 57.8
	LLA	iPd	14 46 46.7
	PRI	iP	14 46 47.8
	SAO	iP	14 46 51.0
	MHC	iPd	14 46 52.2
	PRS	iPd	14 46 52.9
	GCC	eP	14 46 55.5
	ORV	e	14 46 57.8
	BRK	ePc	14 46 58.0
	ZSP	ePc	14 46 58.3
		i	14 47 41.4
	PCC	ePc	14 46 59.2

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DATE	STA	PHASE	TIME (UTC)
	MIN	e	14 47 10.6
BRK 14h46m07.8s 37.6N 118.4W			
h=8km ML=4.1(3)			
Chalfant Valley, 23 km NNW of Bishop, CA			
Jul 20	MNA	iPd	15 29 45.3
		iS	15 29 57.2
	JAS1	iPc	15 29 56.5
		iS	15 30 17.3
	LLA	iPd	15 30 07.2
	PRI	ePc	15 30 07.7
	SAO	iPc	15 30 11.0
	MHC	ePc	15 30 12.1
	PRS	e(P)d	15 30 12.8
	ORV	e	15 30 18.2
	PCC	e	15 30 18.4
	BRK	e	15 30 18.5
BRK 15h29m28.2s 37.6N 118.5W			
h=7km ML=3.5(2)			
Chalfant Valley, 21 km NNW of Bishop, CA			
Jul 20	MNA	iPc	16 23 19.8
		iS	16 23 30.9
	JAS1	iPc	16 23 30.2
		iS	16 23 50.3
	LLA	eP	16 23 40.4
	PRI	ePc	16 23 40.6
	SAO	eP	16 23 44.7
	MHC	ePd	16 23 45.7
	PRS	ePc	16 23 47.2
	GCC	eP	16 23 50.4
	PCC	eP	16 23 54.3
BRK 16h23m01.7s 37.5N 118.5W			
h=6km ML=3.5(1)			
Chalfant Valley, 21 km NNW of Bishop, CA			
Jul 20	MNA	iPc	16 32 50.8
		iS	16 33 03.6
	JAS1	iPd	16 33 03.4
		iS	16 33 23.4
	LLA	eP	16 33 13.0
	PRI	iP	16 33 14.2
	MHC	eP	16 33 17.6
	SAO	iPd	16 33 17.7
	PRS	eP	16 33 19.2
	GCC	eP	16 33 23.7
	BRK	eP	16 33 24.4
	PCC	eP	16 33 24.9
	ORV	ePd	16 33 25.2
BRK 16h32m34.1s 37.6N 118.4W			
h=5km ML=3.9(1)			
Chalfant Valley, 21 km NNW of Bishop, CA			
Jul 20	MNA	iPd	16 37 42.1
		iS	16 37 54.0
	JAS1	iPc	16 37 53.4
		iS	16 38 13.6
	LLA	eP	16 38 03.1
	PRI	ePc	16 38 04.0
	MHC	eP	16 38 07.7
	SAO	iPc	16 38 08.3
	PRS	ePc	16 38 09.2
	GCC	eP	16 38 14.0
	ORV	eP	16 38 15.3
	PCC	eP	16 38 16.6
	BRK	eP	16 38 16.7
BRK 16h37m25.1s 37.6N 118.5W			
h=10km ML=3.7(1)			
Chalfant Valley, 24 km NNW of Bishop, CA			
Jul 20	MNA	iPd	17 42 12.9
		iS	17 42 25.6
	JAS1	iPc	17 42 24.2
		iS	17 42 44.7
	LLA	eP	17 42 33.3
	PRI	iPc	17 42 35.0
	SAO	eP	17 42 38.5
	MHC	eP	17 42 38.7
	PRS	eP	17 42 40.0
	GCC	eP	17 42 42.2
	BRK	eP	17 42 46.2
	PCC	eP	17 42 46.9
BRK 17h41m55.8s 37.6N 118.5W			
h=7km ML=3.5(1)			
Chalfant Valley, 21 km NNW of Bishop, CA			
Jul 20	MNA	eP	18 14 07.4
	LLA	eP	18 14 10.7
	PRS	eP	18 14 11.7
	JAS1	eP	18 14 14.3
	GCC	eP	18 14 17.0
	MHC	eP	18 14 17.2
	ORV	eP	18 14 24.8
	WDC	eP	18 14 30.5
	FHC	eP	18 14 39.3
USGS 18h03m46.9s 10.5S 74.0W			
h=131km mb=4.9			
Peru			
Jul 20	MNA	iPd	18 37 11.6
		iS	18 37 23.7
	JAS1	ePc	18 37 22.8
		iS	18 37 43.0
	LLA	eP	18 37 32.1
	PRI	ePc	18 37 33.3
	SAO	iPc	18 37 37.0
	MHC	eP	18 37 37.3
	PRS	ePc	18 37 38.2
	GCC	eP	18 37 41.8
	BRK	eP	18 37 43.8
	ORV	eP	18 37 44.5
	PCC	eP	18 37 45.3
BRK 18h36m54.1s 37.5N 118.5W			
h=5km ML=3.8(1)			
Chalfant Valley, 19 km NNW of Bishop, CA			
Jul 20	MNA	iPd	18 39 10.0
		iS	18 39 22.0
	JAS1	iPc	18 39 21.8
		iS	18 39 41.8
	LLA	iPc	18 39 31.4
	PRI	iPc	18 39 31.8
	SAO	eP	18 39 36.0
	MHC	iPc	18 39 37.2
	PRS	ePc	18 39 37.3
	GCC	eP	18 39 41.9
	ZSP	eP	18 39 42.4
	BRK	eP	18 39 42.5
	ORV	eP	18 39 43.5
	PCC	iPc	18 39 44.3
	WDC	eP	18 40 02.0
BRK 18h38m52.9s 37.5N 118.4W			
h=9km ML=4.7(1) Mo=3.3E22(1)			
Chalfant Valley, 20 km NNW of Bishop, CA			
Jul 20	LLA	i(P)	18 41 29.3
	SAO	i(P)	18 41 33.6
	MHC	e	18 41 34.6
	BRK	e	18 41 41.9
	PCC	e	18 41 44.8
BRK 18h40m51.0s 37.5N 118.4W			
h=9kmR ML=3.8(1)			
Chalfant Valley, 20 km NNW of Bishop, CA			
Jul 21	PRS	eP	01 13 08.5
	PRI	e(P)	01 13 09.9
	MHC	eP	01 13 11.2
	JAS1	eP	01 13 17.7
	WDC	eP	01 13 19.8
USGS 01h01m53.8s 15.6S 172.4W			
h=33km mb=4.9			
Samoa Islands Region			
Jul 21	PCC	iPc	01 32 26.3
		iS	01 32 29.0
	GCC	ePd	01 32 30.3
	MHC	ePd	01 32 32.4
	BRK	iPd	01 32 32.5
	ZSP	iPd	01 32 34.1
		iS	01 32 43.1
	SAO	iPc	01 32 38.5
	PRS	e	01 32 44.2
		i	01 32 45.4
	LLA	eP	01 32 45.2
	JAS1	eP	01 32 49.6
BRK 01h32m22.7s 37.4N 122.3W			
h=12km ML=2.7(1)			
Portola Valley, 34 km WNW of San Jose, CA			
Jul 21	JAS1	iPc	02 28 23.2
		iS	02 28 43.8
	LLA	ePc	02 28 32.9
	PRI	ePc	02 28 33.5
	SAO	eP	02 28 37.5
	MHC	eP	02 28 38.3
	PRS	ePc	02 28 38.8
	GCC	e	02 28 42.0
	PCC	e(P)	02 28 44.5
	BRK	e(P)	02 28 44.5
	ORV	eP	02 28 44.9
BRK 02h27m54.3s 37.5N 118.4W			
h=8km ML=3.7(2)			
Chalfant Valley, 19 km NNW of Bishop, CA			
Jul 21	MNA	iPd	03 12 28.3
	JAS1	iPc	03 12 39.6
	LLA	ePd	03 12 48.9
	PRI	iPc	03 12 50.2
	SAO	ePc	03 12 53.1
	MHC	ePc	03 12 53.8
	PRS	eP	03 12 55.0
	GCC	ePc	03 12 57.4
	BRK	eP	03 13 00.0
	ZSP	ePc	03 13 00.8
	PCC	ePc	03 13 01.0
	ORV	eP	03 13 01.8
	MIN	e(P)	03 13 14
	WDC	ePc	03 13 20.8
BRK 03h12m11.3s 37.6N 118.5W			
h=8km ML=4.4(2) Mo=1.6E22(1)			
Chalfant Valley, 22 km NNW of Bishop, CA			
Jul 21	MNA	iPc	08 10 48.5
	JAS1	iPc	08 10 59.8
	LLA	iPd	08 11 09.6
	PRI	iPd	08 11 10.3
	SAO	eP	08 11 13.2
	MHC	ePd	08 11 14.5
	PRS	eP	08 11 15.3
	GCC	eP	08 11 19.3
	BRK	ePd	08 11 21.4
	PCC	ePd	08 11 22.3
	ORV	e(P)	08 11 22.5
	ZSP	e	08 11 24.5
	MIN	e(P)	08 11 34.4
BRK 08h10m31.1s 37.5N 118.5W			
h=5km ML=4.1(3) Mo=8.9E21(2)			
Chalfant Valley, 19 km NNW of Bishop, CA			
Jul 21	MNA	iPd	08 21 00.9
		iS	08 21 12.7
	JAS1	ePc	08 21 12.8
		iS	08 21 33.9
	LLA	eP	08 21 22.6
	PRI	ePd	08 21 23.5
	SAO	ePd	08 21 27.2
	MHC	eP	08 21 27.8
	PRS	eP	08 21 28.7
	GCC	eP	08 21 33.2
	ORV	eP	08 21 34.2
	BRK	e	08 21 34.9
	PCC	e(P)	08 21 35.3
BRK 08h20m44.2s 37.6N 118.5W			
h=7km ML=3.6(1)			
Chalfant Valley, 23 km NNW of Bishop, CA			
Jul 21	MNA	iPd	11 15 38.5
	JAS1	iPc	11 15 50.2
	LLA	iPc	11 15 59.8
	PRI	ePc	11 16 00.8
	SAO	iPc	11 16 03.3
		i	11 16 04.7
	MHC	ePc	11 16 04.4
	PRS	iPc	11 16 06.1
	GCC	eP	11 16 08.0
	BRK	eP	11 16 10.3
	PCC	ePc	11 16 11.3
	ORV	iPd	11 16 11.8
	MIN	e	11 16 21.9
	WDC	eP	11 16 30.0
BRK 11h15m21.8s 37.6N 118.5W			
h=10km ML=4.3(3) Mo=2.6E22(2)			
Chalfant Valley, 23 km NNW of Bishop, CA			
Jul 21	PRS	eP	12 22 58.1
	SAO	eP	12 22 59.0
	PRI	ePc	12 23 00.6
	MHC	ePc	12 23 01.2
	LLA	ePc	12 23 01.7
	JAS1	iPc	12 23 06.9
	ORV	ePc	12 23 08.9
	WDC	ePc	12 23 09.4
	MIN	eP	12 23 11.3
	MNA	iPc	12 23 16.9
USGS 12h11m15.9s 20.6S 174.3W			
h=36km mb=5.5 Ms=5.0			
Tonga Islands			
Jul 21	WDC	e(P)	14 26 38.3
	MIN	e	14 26 51.7
	ORV	ePc	14 26 56.3
	JAS1	ePc	14 27 21.0
USGS 14h25m24.0s 43.7N 127.4W			
h=10km mb=4.1			
Off Coast of Oregon			
Jul 21	MNA	iPd	14 42 43.8
	JAS1	iPc	14 42 55.2
	LLA	iPd	14 43 04.6
	PRI	iPd	14 43 05.2
	SAO	eP	14 43 08.5
	MHC	iPc	14 43 09.3
	PRS	iPd	14 43 10.7
	GCC	ePc	14 43 12.8
	BRK	ePc	14 43 15.2
	ZSP	ePc	14 43 15.6
	PCC	iPc	14 43 16.3
	ORV	iPd	14 43 16.9
	MIN	iPd	14 43 25.9
	WDC	iPd	14 43 34.5
	FHC	eP	14 43 50.0
BRK 14h42m26.5s 37.5N 118.4W			
h=9km ML=6.4(7) Mo=3.5E24(1)			
Chalfant Valley, 20 km NNW of Bishop, CA			
Jul 21	MNA	iP	14 51 27.2
		iS	14 51 39.2
	JAS1	iPc	14 51 38.2
		iS	14 51 58.4
	LLA	iPc	14 51 47.1
	PRI	iPc	14 51 49.0
		iS	14 52 20.5
	SAO	iP	14 51 51.8
	MHC	iP	14 51 52.0
	PRS	iP	14 51 53.0
	GCC	iPc	14 51 56.5
	BRK	iP	14 51 59.1
	ZSP	iPd	14 51 59.4
	PCC	iPd	14 51 59.5
	ORV	e(P)	14 52 00.2
	MIN	e(P)	14 52 09.3
	FHC	e	14 52 38
BRK 14h51m10.1s 37.6N 118.5W			
h=1km ML=5.7(6) Mo=4.3E23(1)			
Chalfant Valley, 26 km NW of Bishop, CA			
Jul 21	MNA	iP	14 58 09.3
		iS	14 58 21.0
	JAS1	iP	14 58 18.2
		iS	14 58 38.6
	LLA	iPc	14 58 27.5
	PRI	iP	14 58 28.6
		iS	14 58 59.4
	SAO	iPc	14 58 32.5
	MHC	iPc	14 58 33.6
	PRS	iPc	14 58 33.8
	GCC	iPc	14 58 37.0
	BRK	iPd	14 58 40.2
	ZSP	iPc	14 58 40.6
	PCC	iPc	14 58 40.8
	ORV	e(P)	14 58 44.7
BRK 14h57m50.9s 37.5N 118.6W			
h=7km ML=4.8(3) Mo=5.9E22(2)			
Chalfant Valley, 24 km NW of Bishop, CA			
Jul 21	MNA	iP	15 00 59.2
		iS	15 01 10.8
	JAS1	iP	15 01 10.5
		iS	15 01 33.4
	LLA	iPc	15 01 22.4
	PRI	i	15 01 23.2
		i	15 01 25.0
		i	15 01 25.6
		i	15 01 57.5
	SAO	i	15 01 24.2
	MHC	iPc	15 01 26.3
	PRS	iPd	15 01 28.2
	GCC	iPc	15 01 29.8
	BRK	eP	15 01 33.5
	PCC	i	15 01 34.6
	ZSP	eP	15 01 35.0
BRK 15h00m42.7s 37.6N 118.4W			
h=4km ML=3.9(2)			
Chalfant Valley, 24 km NNW of Bishop, CA			
Jul 21	MNA	iPd	15 03 18.2
		iS	15 03 30.8
	JAS1	iPc	15 03 29.4
		iS	15 03 50.6
	LLA	eP	15 03 41.9
	PRI	iP	15 03 43.7
		iS	15 04 12.5
	SAO	i(P)	15 03 45.5
	MHC	e(P)	15 03 45.7
	PCC	eP	15 03 52.0
BRK 15h03m02.4s 37.6N 118.5W			
h=8kmR ML=3.5(2)			
Chalfant Valley, 31 km NNW of Bishop, CA			
Jul 21	MNA	iPd	15 05 58.2
		i	15 06 11.1
	JAS1	iPc	15 06 10.1
		iS	15 06 30.4
	LLA	iPc	15 06 19.8
	PRI	e(P)	15 06 20.0
		iS	15 06 51.2
	SAO	e(P)	15 06 22.5
	MHC	eP	15 06 24.0
	PRS	ePc	15 06 25.6
	GCC	ePc	15 06 27.2
	BRK	e	15 06 31.7
	PCC	e(P)	15 06 32.0
	ZSP	eP	15 06 32.1
	ORV	e	15 06 32.5
	MIN	e	15 06 50.0
	WDC	e	15 07 01.4
BRK 15h05m41.1s 37.5N 118.5W			
h=4km ML=4.1(3)			
Chalfant Valley, 21 km NW of Bishop, CA			
Jul 21	MNA	iPd	15 10 46.5
		iS	15 10 57.8
	JAS1	iPc	15 10 57.8
		iS	15 11 20.5
	LLA	i(P)c	15 11 08.2
	PRI	iP	15 11 09.0
		iS	15 11 39.1
	PRS	e	15 11 13.3
	MHC	i(P)	15 11 13.4
	SAO	iPc	15 11 13.9
	GCC	e(P)	15 11 17.7
	PCC	e(P)	15 11 20.5
	ORV	e	15 11 22.5
BRK 15h10m28.8s 37.5N 118.4W			
h=4km ML=3.8(2)			
Chalfant Valley, 19 km N of Bishop, CA			
Jul 21	MNA	iPd	15 11 48.0
		iS	15 12 00.3
	JAS1	iPd	15 11 59.3

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DATE	STA	PHASE	TIME (UTC)
		iS	15 12 20.1
	LLA	iPd	15 12 08.5
	PRI	iPd	15 12 09.6
		iS	15 12 40.0
	SAO	iPd	15 12 13.0
	MHC	iPd	15 12 14.5
	PRS	iPd	15 12 14.6
	GCC	iPd	15 12 17.5
	BRK	ePc	15 12 20.3
	PCC	iPc	15 12 21.2
	ORV	i	15 12 27.0
	MIN	iPc	15 12 40.1
	WDC	i	15 12 56.6

BRK 15h11m30.9s 37.5N 118.5W
h=9km ML=4.4(2) Mo=1.9E22(2)
Chalfant Valley, 21 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	15 15 45.6
		iS	15 15 57.1
	JAS1	iPc	15 15 58.0
		iS	15 16 19.0
	LLA	iPd	15 16 08.7
	PRI	iPc	15 16 08.8
		iS	15 16 41.1
	SAO	iP	15 16 13.1
	MHC	ePc	15 16 13.6
	PRS	ePc	15 16 14.4
	GCC	ePc	15 16 17.4
	ORV	ePd	15 16 19.3
	BRK	ePd	15 16 19.9
	PCC	ePc	15 16 20.5
	MIN	i d	15 16 36.7

BRK 15h15m29.5s 37.6N 118.5W
h=3km ML=3.5(3)
Chalfant Valley, 28 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPc	15 19 52.9
		iS	15 20 04.9
	JAS1	iPc	15 20 04.3
		iS	15 20 26.5
	PRI	iP	15 20 13.3
		iS	15 20 43.9
	LLA	iPd	15 20 13.7
	MHC	iPd	15 20 18.1
	SAO	iP	15 20 18.2
	PRS	iPd	15 20 19.7
	GCC	eP	15 20 22.4
	BRK	eP	15 20 25.3
	ORV	eP	15 20 25.4
	ZSP	iPc	15 20 26.0
	PCC	iPc	15 20 26.2
	MIN	i	15 20 33.0
	WDC	e	15 20 44.0

BRK 15h19m34.9s 37.5N 118.4W
h=16km ML=4.7(3) Mo=4.4E22(2)
Chalfant Valley, 14 km NNE of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPc	15 27 06.5
		iS	15 27 18.0
	JAS1	iPc	15 27 17.5
		iS	15 27 39.3
	LLA	ePc	15 27 26.3
	PRI	iPc	15 27 27.4
		iS	15 27 57.7
	MHC	ePc	15 27 31.2
	SAO	iPd	15 27 31.6
	PRS	ePc	15 27 32.5
	GCC	ePc	15 27 35.7
	BRK	eP	15 27 37.6
	PCC	eP	15 27 38.3
	ORV	eP	15 27 39.1
	ZSP	e	15 27 39.6
	MIN	e	15 27 51.0
	WDC	e	15 27 58.0

BRK 15h26m49.2s 37.5N 118.4W
h=18km ML=4.6(2) Mo=2.2E22(2)
Chalfant Valley, 19 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	15 29 27.3
		iS	15 29 39.3
	JAS1	iPc	15 29 39.2
		iS	15 30 00.2
	LLA	iPc	15 29 49.7
	PRI	e(P)	15 29 50.0
		e	15 29 51.0
		i	15 29 53.1
		iS	15 30 21.5
	MHC	e(P)	15 29 53.4
		i	15 29 55.2
	SAO	i(P)	15 29 54.4
	PRS	ePc	15 29 55.8
	GCC	eP	15 30 00.01
	BRK	e	15 30 01.5
	PCC	e(P)	15 30 01.8

BRK 15h29m10.4s 37.6N 118.5W
h=1km ML=3.7(2)
Chalfant Valley, 24 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	15 31 20.9
		iS	15 31 32.5
	JAS1	iPc	15 31 33.4
		iS	15 31 54.3
	LLA	ePd	15 31 43.8
	PRI	iPd	15 31 44.9
		iS	15 32 16.2
		i	15 32 18.2
	SAO	iP	15 31 48.2
	MHC	iPd	15 31 49.2
	PRS	ePd	15 31 49.8
	GCC	ePd	15 31 52.4
	ORV	e(P)	15 31 54.6
	BRK	eP	15 31 55.0
	PCC	ePc	15 31 56.0

BRK 15h31m04.8s 37.6N 118.5W
h=4km ML=3.6(2)
Chalfant Valley, 27 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	15 37 07.0
		i(S)	15 37 18.6
	JAS1	iPc	15 37 18.6
		i(S)	15 37 39.7
	LLA	ePc	15 37 28.0
	PRI	iPc	15 37 29.8
	SAO	iPd	15 37 33.0
	MHC	ePc	15 37 33.9
	PRS	eP	15 37 34.3
	GCC	e(P)	15 37 37.6
	BRK	eP	15 37 39.9
	PCC	e(P)	15 37 40.5
	ZSP	eP	15 37 40.5
	ORV	i	15 37 47.0

BRK 15h36m49.9s 37.6N 118.4W
h=5km ML=4.0(2)
Chalfant Valley, 21 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	15 41 39.0
		i(S)	15 41 51.0
	JAS1	iPc	15 41 51.3
		i(S)	15 42 13.4
	LLA	ePc	15 42 00.8
	PRI	iPc	15 42 01.8
	SAO	iP	15 42 05.6
	MHC	e(P)c	15 42 05.6
	PRS	ePc	15 42 07.1
	GCC	eP	15 42 10.5
	BRK	e(P)	15 42 13.0
	PCC	e	15 42 13.2
	ORV	eP	15 42 13.2
	ZSP	e(P)	15 42 13.8
	MIN	e	15 42 25.2

BRK 15h41m22.0s 37.5N 118.4W
h=5km ML=4.2(2)
Chalfant Valley, 19 km N of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	15 46 39.7
		iS	15 46 52.0
	JAS1	iPc	15 46 52.3
		iS	15 47 14.0
	LLA	iPc	15 47 02.5
	PRI	iPd	15 47 04.1
		iS	15 47 35.8
	SAO	iPd	15 47 07.3
	MHC	eP	15 47 07.4
	PRS	iPc	15 47 08.6
	GCC	ePc	15 47 11.3
	ORV	eP	15 47 13.5
	BRK	eP	15 47 14.1
	ZSP	eP	15 47 14.3
	PCC	ePc	15 47 15.2
	WDC	i	15 47 32.0

BRK 15h46m23.0s 37.6N 118.4W
h=1km ML=4.5(2) Mo=1.8E22(2)
Chalfant Valley, 22 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	15 50 37.8
		iS	15 50 48.3
	JAS1	iPd	15 50 50.8
		iS	15 51 11.8
	LLA	i(P)c	15 51 00.8
	PRI	iPc	15 51 01.8
		iS	15 51 32.6
	MHC	e(P)c	15 51 05.8
	SAO	i(P)	15 51 06.0
	PRS	e(P)	15 51 06.4
	GCC	e(P)	15 51 10.6
	PCC	e(P)c	15 51 13.3
	ORV	e	15 51 14.9
	BRK	e	15 51 15

BRK 15h50m22.6s 37.6N 118.4W
h=20km ML=3.8(2)
Chalfant Valley, 31 km N of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	16 27 02.7
	JAS1	iPc	16 27 14.3
		iS	16 27 34.8
	LLA	eP	16 27 24.0
	PRI	iPd	16 27 24.5
		iS	16 27 52.1
	SAO	eP	16 27 27.8
	MHC	iPd	16 27 29.4
	PRS	eP	16 27 30.5
	GCC	eP	16 27 33.8
	BRK	eP	16 27 35.9
	ORV	eP	16 27 36.5
	PCC	eP	16 27 36.7

BRK 16h26m44.7s 37.5N 118.4W
h=8km ML=4.6(2) Mo=2.2E22(2)
Chalfant Valley, 14 km N of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	16 37 01.0
		iS	16 37 13.2
	JAS1	iPc	16 37 12.2
		iS	16 37 33.1
	LLA	ePc	16 37 21.6
	PRI	iPd	16 37 22.7
		iS	16 37 53.1
		iSg	16 37 55.4
	SAO	iP	16 37 26.0
	MHC	iPd	16 37 26.4
		i	16 37 27.9
	PRS	eP	16 37 27.7
	GCC	iPd	16 37 31.0
	BRK	ePd	16 37 34.0
	ORV	ePc	16 37 34.1
	ZSP	eP	16 37 34.4
	PCC	iPd	16 37 34.9
	MIN	e	16 37 44.6

BRK 16h36m43.8s 37.5N 118.5W
h=10km ML=3.8(2)
Chalfant Valley, 20 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	17 05 50.6
		iS	17 06 02.9
	JAS1	iPc	17 06 01.9
		iS	17 06 23.8
	LLA	iPc	17 06 10.8
	PRI	iPc	17 06 11.8
		iS	17 06 42.7
	SAO	iPc	17 06 15.4
	MHC	iPc	17 06 15.5
	PRS	iPc	17 06 17.0
	GCC	ePc	17 06 19.2
	BRK	eP	17 06 21.7
	ZSP	eP	17 06 22.1
	PCC	iPc	17 06 22.8
	ORV	iPd	17 06 23.7
	MIN	e	17 06 38.2
	WDC	e	17 06 41.6

BRK 17h05m33.4s 37.5N 118.5W
h=9km ML=4.5(2) Mo=2.2E22(2)
Chalfant Valley, 20 km NW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	17 08 50.0
	JAS1	iPc	17 09 02.0
	LLA	eP	17 09 12.9
	PRI	iPd	17 09 13.5
	SAO	iPd	17 09 16.3
	MHC	e	17 09 19.4
	PRS	eP	17 09 29.0

BRK 17h08m32.9s 37.5N 118.4W
h=6kmR ML=3.5(2)
Chalfant Valley, 20 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPc	17 20 19.0
	JAS1	iPd	17 20 30.2
		i	17 20 49.6
	PRI	iPd	17 20 39.3
		i	17 21 10.3
	LLA	iPc	17 20 40.9
	SAO	iP	17 20 43.2
	MHC	iPd	17 20 45.3
	PRS	ePd	17 20 46.1
	GCC	iPc	17 20 50.6
	BRK	eP	17 20 51.9
	PCC	iPd	17 20 52.4
	ORV	i(P)d	17 20 55.1
	WDC	i	17 21 12.9

BRK 17h20m00.4s 37.4N 118.4W
h=11km ML=4.5(2) Mo=1.7E22(2)
Chalfant Valley, 10 km NNE of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	17 30 47.1
	JAS1	iPc	17 30 59.5
	PRI	eP	17 31 09.5
	LLA	eP	17 31 10.1
	SAO	iPc	17 31 13.9
	MHC	eP	17 31 14.5
	PRS	eP	17 31 15.2
	BRK	e(P)	17 31 24.9

BRK 17h30m30.1s 37.5N 118.4W
h=6km ML=3.9(2)
Chalfant Valley, 20 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	17 49 12.0
	JAS1	iPc	17 49 24.4
	LLA	e	17 49 34.8
	PRI	iPc	17 49 35.5
	SAO	iPc	17 49 39.6
	MHC	iPd	17 49 40.3
	PRS	iPc	17 49 40.8
	GCC	eP	17 49 44.1
	BRK	eP	17 49 45.8
	ORV	e	17 49 46.0
	ZSP	eP	17 49 46.8
	PCC	eP	17 49 47.3

BRK 17h48m55.8s 37.6N 118.4W
h=3km ML=4.3(2) Mo=1.9E22(1)
Chalfant Valley, 26 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	17 53 19.8
	JAS1	iPc	17 53 30.9
	LLA	eP	17 53 41.6
	PRI	iPd	17 53 42.7
	MHC	eP	17 53 46.6
	SAO	iPc	17 53 46.9
	PRS	eP	17 53 47.4

BRK 17h53m03.0s 37.6N 118.5W
h=11km Mag=3.5
Chalfant Valley, 24 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	18 14 13.5
		iS	18 14 25.7
	JAS1	iPc	18 14 25.9
		iS	18 14 47.0
	LLA	iPd	18 14 36.8
	PRI	i(P)	18 14 37.3
		i(S)	18 15 09.0
	MHC	eP	18 14 40.7
	SAO	e	18 14 41.0
	PRS	eP	18 14 42.9
	GCC	e	18 14 44.9
	BRK	eP	18 14 48.0
	PCC	e	18 14 49.0

BRK 18h13m57.6s 37.6N 118.5W
h=3km ML=4.0(2)
Chalfant Valley, 30 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPc	18 18 50.5
		iS	18 19 02.8
	JAS1	iPc	18 19 02.2
		iS	18 19 23.8
	LLA	eP	18 19 12.1
	PRI	iPc	18 19 12.8
		iS	18 19 43.2
	SAO	iPd	18 19 15.4
	MHC	eP	18 19 16.2
	GCC	e	18 19 17.9
	PRS	eP	18 19 18.0
	PCC	iPd	18 19 24.8

BRK 18h18m33.2s 37.5N 118.4W
h=7km ML=3.5(2)
Chalfant Valley, 18 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	20 36 22.7
		iS	20 36 35.2
	JAS1	iPc	20 36 34.5
		iS	20 36 53.8
	LLA	eP	20 36 43.7
	PRI	iPc	20 36 43.9
		iS	20 37 14.6
	SAO	iPc	20 36 48.8
	GCC	eP	20 36 49.0
	MHC	iPd	20 36 49.3
	PRS	eP	20 36 49.9
	ORV	e	20 36 55.6
	BRK	e(P)	20 36 55.7
	PCC	e	20 36 55.8

BRK 20h36m05.2s 37.5N 118.5W
h=9km ML=4.0(2)
Chalfant Valley, 19 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	20 40 43.5
		iS	20 40 56.7
	JAS1	iPd	20 40 55.1
	LLA	eP	20 41 03.3
	PRI	e	20 41 04.0
	SAO	eP	20 41 09.5
	MHC	eP	20 41 09.5
	PCC	e	20 41 18

BRK 20h40m24.8s 37.4N 118.4W
h=4km ML=3.6(2)
Chalfant Valley, 9 km NNE of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPd	21 08 58.2
	JAS1	iPc	21 09 10.3
	LLA	iPd	21 09 20.2
	PRI	iPc	21 09 21.4
	SAO	iPd	21 09 24.0
	MHC	eP	21 09 24.7
	PRS	eP	21 09 26.2
	GCC	e	21 09 28.4
	BRK	e(P)	21 09 32.0
	PCC	eP	21 09 32.9

BRK 21h08m41.8s 37.6N 118.5W
h=5km ML=3.6(2)
Chalfant Valley, 25 km NNW of Bishop, CA

DATE	STA	PHASE	TIME (UTC)
Jul 21	MNA	iPc	21 52 01.0
		iS	21 52 15.1
	JAS1	iPc	21 52 13.8
		iS	21 52 35.4
	LLA	ePc	21 52 23.5
	PRI	iPc	21 52 24.9
		iS	21 52 56.2
	MHC	eP	21 52 28.8
	SAO	iPc	21 52 28.4
	PRS	iPd	21 52 30.2
	GCC	eP	21 52 32.8
	ORV	eP	21 52 35.0

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DATE	STA	PHASE	TIME (UTC)
	BRK	eP	21 52 35.5
	ZSP	eP	21 52 35.7
	PCC	eP	21 52 36.6
BRK 21h51m44.9s 37.6N 118.4W			
h=3km ML=3.7(2)			
Chalfant Valley, 27 km NNW of Bishop, CA			
Jul 21	MNA	iPd	22 07 19.3
	JAS1	iPc	22 07 31.0
	PRI	ePc	22 07 40.6
	LLA	ePc	22 07 40.6
	MHC	e(P)	22 07 45.2
	SAO	iPc	22 07 46.0
	PRS	e(P)	22 07 47.7
BRK 22h07m01.2s 37.5N 118.4W			
h=6km Mag=3.1			
Chalfant Valley, 13 km NNE of Bishop, CA			
Jul 21	MNA	i(P)	22 07 34.7
	JAS1	iP	22 07 46.5
	LLA	iPc	22 07 56.5
	PRI	iPc	22 07 57.8
	MHC	iPc	22 08 01.2
	SAO	iP	22 08 01.3
	PRS	iPc	22 08 03.0
	GCC	iPc	22 08 04.7
		i	22 08 05.7
	ORV	e(P)	22 08 06.9
		i	22 08 07.9
	BRK	iPc	22 08 06.9
	ZSP	ePc	22 08 07.4
	PCC	iPc	22 08 08.2
		i	22 08 09.2
	MIN	iPd	22 08 16.9
	WDC	iPd	22 08 25.4
	FHC	e	22 08 48.4
BRK 22h07m17.0s 37.5N 118.4W			
h=6kmR ML=5.6(6) Mo=4.2E23(2)			
Chalfant Valley, 13 km N of Bishop, CA			
Jul 21	MNA	iPd	23 43 22.7
		iS	23 43 34.2
	JAS1	iPc	23 43 34.7
		iS	23 43 55.0
	LLA	iPd	23 43 45.2
	PRI	iPc	23 43 46.3
		iS	23 44 14.3
	GCC	eP	23 43 49.3
	SAO	iPc	23 43 49.4
	MHC	iPd	23 43 50.4
	BRK	eP	23 43 53.5
	ZSP	eP	23 43 56.9
	PCC	eP	23 43 57.0
	ORV	e	23 43 58.5
BRK 23h43m06.7s 37.6N 118.5W			
h=7km ML=4.2(2)			
Chalfant Valley, 29 km NNW of Bishop, CA			
Jul 22	MNA	iPd	00 10 09.8
		iS	00 10 21.8
	JAS1	iPc	00 10 22.7
		iS	00 10 43.9
	LLA	eP	00 10 32.7
	PRI	iPd	00 10 34.4
		iS	00 11 05.4
	MHC	eP	00 10 37.2
	SAO	iPd	00 10 37.6
	GCC	eP	00 10 40.6
	ORV	e	00 10 43.9
	BRK	eP	00 10 44.2
	PCC	ePc	00 10 44.5
	MIN	e	00 10 54.1
	WDC	e	00 11 00.4
BRK 00h09m53.8s 37.6N 118.4W			
h=4km ML=4.5(2) Mo=3.0E22(1)			
Chalfant Valley, 27 km NNW of Bishop, CA			
Jul 22	MNA	iPd	02 21 47.9
	JAS1	iPc	02 21 59.5
	LLA	ePc	02 22 09.5
	PRI	ePd	02 22 11.3
	SAO	eP	02 22 14.0
	MHC	eP	02 22 14.4
	PRS	iPc	02 22 15.7
	GCC	e	02 22 18.8
	BRK	eP	02 22 21.0
	ORV	eP	02 22 21.2
	PCC	eP	02 22 22.2
	MIN	e	02 22 35.0
	WDC	e	02 22 46.8
BRK 02h21m31.5s 37.6N 118.5W			
h=7km ML=3.6(2)			
Chalfant Valley, 27 km NW of Bishop, CA			
Jul 22	GCC	eP	02 25 32.3
		e	02 25 48.6
	PRS	eP	02 25 33.0
	SAO	eP	02 25 33.8
	PRI	eP	02 25 34.7
		e	02 25 49.7
	BRK	eP	02 25 35.5
	MHC	eP	02 25 35.6
		e	02 25 51.0
	JAS1	iPd	02 25 40.5
		i	02 25 55.5
	ORV	eP	02 25 42.7
	WDC	iPd	02 25 43.7
	MIN	eP	02 25 44.8
USGS 02h12m46.5s 33.6S 178.4W			
h=33km mb=5.4 Ms=5.2			
South of Kermadec Islands			
Jul 22	MNA	iPd	03 02 27.4
	JAS1	iPc	03 02 38.9
	LLA	iPd	03 02 49.3
	PRI	iPd	03 02 50.4
	MHC	eP	03 02 53.2
		i	03 02 54.7
	SAO	iPd	03 02 53.5
	PRS	eP	03 02 54.5
	GCC	e	03 02 57.6
	BRK	e	03 02 59.7
		eP	03 02 59.9
	ORV	e	03 03 00.7
	PCC	eP	03 03 01.2
	MIN	e	03 03 14.8
	WDC	e	03 03 21.0
BRK 03h02m10.7s 37.6N 118.5W			
h=7km ML=3.8(2)			
Chalfant Valley, 25 km NW of Bishop, CA			
Jul 22	MNA	iPd	03 19 05.5
	JAS1	iPc	03 19 17.1
	PRI	iPc	03 19 26.1
	LLA	eP	03 19 27.1
	SAO	iPd	03 19 31.7
	MHC	iPd	03 19 32.4
	PRS	eP	03 19 32.8
	BRK	eP	03 19 38.2
	PCC	eP	03 19 39.0
	ORV	e	03 19 39.8
	GCC	e	03 19 44.6
BRK 03h18m48.1s 37.5N 118.4W			
h=10km ML=3.9(3)			
Chalfant Valley, 19 km NW of Bishop, CA			
Jul 22	MNA	iPd	05 24 25.0
		i	05 24 42.0
	JAS1	iPc	05 24 37.0
	LLA	eP	05 24 46.8
	PRI	eP	05 24 47.6
	MHC	eP	05 24 51.3
	SAO	eP	05 24 51.6
	PRS	eP	05 24 53.5
	GCC	eP	05 24 56.9
	BRK	eP	05 24 58.0
	ORV	eP	05 24 58.7
BRK 05h24m08.0s 37.5N 118.4W			
h=6km ML=3.6(2)			
Chalfant Valley, 21 km NNW of Bishop, CA			
Jul 22	MNA	iPd	05 41 02.3
		iS	05 41 14.0
	JAS1	iPc	05 41 13.9
		iS	05 41 34.5
	LLA	eP	05 41 24.2
	PRI	eP	05 41 24.7
		iS	05 41 52.6
	MHC	eP	05 41 28.2
	SAO	eP	05 41 28.3
	PRS	eP	05 41 30.5
	GCC	eP	05 41 32.2
	ORV	eP	05 41 35.3
	PCC	eP	05 41 35.4
	BRK	eP	05 41 36.0
	MIN	e(P)	05 41 45.2
BRK 05h40m43.9s 37.5N 118.6W			
h=6km ML=4.1(3)			
24 km NW of Bishop, CA			
Jul 22	MNA	iPd	06 22 11.6
	JAS1	iPc	06 22 22.2
	PRI	iPc	06 22 31.2
	LLA	iPc	06 22 31.4
	MHC	eP	06 22 35.8
	PRS	eP	06 22 36.5
	GCC	eP	06 22 40.3
	PCC	eP	06 22 43.0
	BRK	eP	06 22 43.5
	ORV	e	06 22 44.3
	SAO	eP	06 22 45.0
	MIN	e	06 22 58.4
	WDC	e	06 23 05.8
BRK 06h21m52.8s 37.4N 118.4W			
h=12km ML=4.2(3) Mo=2.0E22(1)			
Chalfant Valley, 8 km N of Bishop, CA			
Jul 22	MNA	iPd	06 33 56.6
	JAS1	iPc	06 34 08.1
	LLA	eP	06 34 17.8
	PRI	eP	06 34 18.3
	SAO	eP	06 34 21.9
	MHC	iPd	06 34 23.4
	PRS	eP	06 34 23.9
	ORV	e	06 34 28.0
	PCC	e	06 34 30.1
	MIN	e	06 34 41.3
BRK 06h33m39.2s 37.5N 118.4W			
h=9km ML=3.5(2)			
Chalfant Valley, 18 km NNW of Bishop, CA			
Jul 22	MNA	iPd	06 58 27.3
		iS	06 58 38.8
	JAS1	iPc	06 58 39.2
		iS	06 59 00.6
	LLA	eP	06 58 50.0
	PRI	iPc	06 58 51.2
		iS	06 59 19.7
	PRS	e	06 58 53.5
	SAO	iPc	06 58 54.3
	MHC	ePc	06 58 55.0
	GCC	e	06 58 58.7
	ORV	e	06 59 00.9
	BRK	e	06 59 01.2
	PCC	e	06 59 02.0
	MIN	e	06 59 11.7
BRK 06h58m11.2s 37.6N 118.5W			
h=3km ML=3.6(3)			
Chalfant Valley, 28 km NNW of Bishop,CA			
Jul 22	MNA	iPd	08 29 33.6
	JAS1	iPc	08 29 45.1
	LLA	eP	08 29 54.4
	PRI	iPc	08 29 55.7
	SAO	eP	08 29 59.0
	MHC	eP	08 29 59.3
	PRS	eP	08 30 00.8
	GCC	e	08 30 04.2
	BRK	e	08 30 06.0
		eP	08 30 06.0
	PCC	eP	08 30 07.2
	ORV	e	08 30 07.2
	MIN	e	08 30 19.2
BRK 08h29m16.3s 37.5N 118.5W			
h=3km ML=4.0(3)			
Chalfant Valley, 19 km NW of Bishop, CA			
Jul 22	MNA	iPd	09 34 34.8
	JAS1	iPc	09 34 46.0
	LLA	eP	09 34 54.9
	PRI	ePc	09 34 55.6
	SAO	eP	09 34 59.4
	MHC	iPd	09 35 01.0
	PRS	eP	09 35 01.5
	GCC	e	09 35 06.3
	PCC	eP	09 35 08.0
BRK 09h34m16.1s 37.4N 118.4W			
h=9km ML=3.5(2)			
Chalfant Valley, 8 km N of Bishop, CA			
Jul 22	SAO	iPd	10 21 44.8
	GCC	iPc	10 21 49.7
	MHC	iPd	10 21 50.3
		iS	10 21 57.4
	LLA	ePc	10 21 51.3
	PRS	eP	10 21 53.0
	PCC	iPd	10 21 59.0
		iS	10 22 13.0
	PRI	eP	10 22 01.0
	BRK	eP	10 22 01.8
	JAS1	iPd	10 22 04.5
		iS	10 22 21.1
BRK 10h21m41.4s 36.9N 121.4W			
h=5km ML=2.7(2)			
9 km NW of Hollister, CA			
Jul 22	MNA	ePd	12 25 07.8
	JAS1	iPc	12 25 18.7
	LLA	eP	12 25 26.8
	PRI	ePc	12 25 28.0
	SAO	iPc	12 25 31.3
	MHC	iPc	12 25 32.2
	PRS	eP	12 25 32.9
	GCC	e	12 25 35.7
	BRK	ePc	12 25 38.8
	PCC	eP	12 25 39.4
	ORV	e	12 25 40.4
	MIN	e	12 25 53.6
	WDC	e	12 25 58.2
BRK 12h24m50.2s 37.5N 118.5W			
h=9km ML=4.4(3) Mo=2.4E22(2)			
Chalfant Valley, 18 km NW of Bishop, CA			
Jul 22	MNA	iPd	13 34 17.4
		i	13 34 31.0
	JAS1	iP	13 34 28.1
		i	13 34 51.4
	LLA	iPc	13 34 37.1
	PRI	iPd	13 34 38.0
		i	13 35 07.1
	MHC	iPc	13 34 42.0
	SAO	iPc	13 34 42.2
	PRS	iPc	13 34 43.4
	GCC	iPc	13 34 45.3
	BRK	iPc	13 34 48.0
	PCC	iPc	13 34 49.1
	ORV	iPd	13 34 50.0
	MIN	eP	13 34 58.8
	WDC	iPc	13 35 08.1
BRK 13h33m59.8s 37.5N 118.5W			
h=9km ML=4.7(5) Mo=4.9E22(2)			
Chalfant Valley, 19 km NW of Bishop, CA			
Jul 22	MNA	iPd	13 49 17.8
		iS	13 49 30.8
	JAS1	iPc	13 49 28.0
	LLA	ePc	13 49 36.2
	PRI	iPc	13 49 38.0
		iS	13 50 06.5
	MHC	iPc	13 49 41.9
	SAO	iPc	13 49 42.0
	PRS	ePc	13 49 42.4
	GCC	iPc	13 49 45.2
	BRK	iPc	13 49 47.9
	PCC	iPc	13 49 49.2
	ORV	eP	13 49 49.6
	MIN	eP	13 49 58.2
	WDC	iPc	13 50 07.9
BRK 13h49m00.3s 37.5N 118.5W			
h=19km ML=5.0(5) Mo=8.9E22(2)			
Chalfant Valley, 25 km NW of Bishop, CA			
Jul 22	MNA	iPc	13 57 52.3
	JAS1	iPc	13 58 03.1
	GCC	e	13 58 11.3
	LLA	eP	13 58 12.13
	PRI	eP	13 58 13.2
	MHC	eP	13 58 16.9
	SAO	iPc	13 58 17.0
	PRS	eP	13 58 18.4
	PCC	i	13 58 25.5
BRK 13h57m34.9s 37.5N 118.5W			
h=9km ML=3.6(2)			
Chalfant Valley, 20 km NW of Bishop, CA			
Jul 22	MNA	iPd	17 17 39.1
	JAS1	iPc	17 17 50.3
	LLA	ePc	17 17 59.2
	PRI	ePc	17 18 00.0
	SAO	iP	17 18 04.3
	MHC	ePd	17 18 04.5
	PRS	ePd	17 18 05.7
	GCC	ePd	17 18 08.8
	BRK	e(P)	17 18 11.7
	ORV	ePd	17 18 12.4
	PCC	ePc	17 18 12.7
	ZSP	eP	17 18 12.7
	MIN	e	17 18 28.5
	WDC	e	17 18 41.0
BRK 17h17m21.5s 37.5N 118.4W			
h=10km ML=3.7(2)			
Chalfant Valley, 17 km NNW of Bishop, CA			
Jul 22	MNA	iPd	17 39 35.2
	JAS1	iPc	17 39 46.6
	LLA	ePc	17 39 56.3
	PRI	ePc	17 39 57.8
	MHC	eP	17 40 01.1
	SAO	eP	17 40 01.2
	PRS	eP	17 40 02.5
	BRK	e(P)	17 40 08.1
	GCC	e	17 40 08.1
	PCC	eP	17 40 09.1
	ORV	e	17 40 10.5
	MIN	e	17 40 27.2
BRK 17h39m18.5s 37.6N 118.5W			
h=9km ML=3.6(2)			
Chalfant Valley, 24 km NW of Bishop, CA			
Jul 22	MNA	iPd	18 17 09.7
	JAS1	iPc	18 17 21.2
	LLA	eP	18 17 31.0
	PRI	eP	18 17 32.6
	MHC	eP	18 17 35.5
	SAO	eP	18 17 36.0
	PRS	eP	18 17 37.3
	GCC	e(P)	18 17 40.6
	BRK	e(P)	18 17 42.7
	ORV	e(P)	18 17 43.1
	PCC	e(P)	18 17 43.6
	MIN	e	18 18 02.4
BRK 18h16m53.1s 37.6N 118.5W			
h=8km ML=3.5(2)			
Chalfant Valley, 25 km NW of Bishop, CA			
Jul 22	MNA	iPd	18 19 54.3
	JAS1	iPc	18 20 06.2
	LLA	ePc	18 20 15.3
	PRI	iPc	18 20 15.7
	SAO	eP	18 20 19.8
	MHC	ePc	18 20 20.3
	PRS	ePc	18 20 20.9
	GCC	e(P)	18 20 24.8
	BRK	e(P)	18 20 27.3
	PCC	eP	18 20 28.4
	ORV	e(P)	18 20 28.4
	MIN	e	18 20 44.4
BRK 18h19m36.3s 37.4N 118.4W			
h=7km ML=4.2(2) Mo=1.1E22(1)			
Chalfant Valley, 13 km NNE of Bishop, CA			

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DATE	STA	PHASE	TIME (UTC)
Jul 22	MNA	iPd	18 30 01.6
	JAS1	iPc	18 30 13.7
	PRI	eP	18 30 22.3
	LLA	ePc	18 30 22.7
	SAO	eP	18 30 27.6
	MHC	ePd	18 30 27.9
	PRS	ePc	18 30 28.8
	GCC	ePc	18 30 32.5
	BRK	ePc	18 30 34.2
	PCC	ePc	18 30 35.3
	ZSP	eP	18 30 35.4
	ORV	eP	18 30 35.8
	MIN	e	18 30 49.2
	WDC	e(P)	18 30 54.0
BRK 18h29m43.8s 37.5N 118.4W h=7km ML=4.7(2) Mo=2.0E22(2) Chalfant Valley, 14 km NNE of Bishop, CA			
Jul 22	MNA	iPd	20 17 15.7
		i	20 17 16.6
		iS	20 17 28.7
	JAS1	iPc	20 17 28.1
		i	20 17 28.8
		iS	20 17 51.2
	LLA	ePc	20 17 38.6
	PRI	ePc	20 17 39.5
		iS	20 18 10.2
	SAO	ePc	20 17 42.5
		i	20 17 43.9
	MHC	ePc	20 17 43.3
	PRS	ePc	20 17 44.9
	GCC	eP	20 17 47.0
	ORV	iPc	20 17 50.5
	BRK	ePc	20 17 50.6
	ZSP	eP	20 17 51.3
	PCC	ePc	20 17 51.5
	MIN	e	20 18 03.3
	WDC	ePc	20 18 08.4
BRK 20h16m59.6s 37.6N 118.5W h=9km ML=4.2(2) Mo=2.1E22(1) Chalfant Valley, 27 km NNW of Bishop, CA			
Jul 22	MNA	iPd	20 22 42.3
	JAS1	iPc	20 22 54.5
	LLA	iPc	20 23 04.7
	PRI	ePc	20 23 06.0
	SAO	eP	20 23 08.4
	MHC	iPc	20 23 08.8
	PRS	iPc	20 23 10.9
	GCC	ePd	20 23 13.9
	BRK	e(P)	20 23 15.4
	ORV	e(P)	20 23 15.6
	ZSP	ePc	20 23 15.9
	PCC	iPc	20 23 17.3
	MIN	i	20 23 33.3
	WDC	e(P)	20 23 34.4
BRK 20h22m26.3s 37.6N 118.5W h=8km ML=4.3(2) Mo=1.3E22(2) Chalfant Valley, 28 km NW of Bishop, CA			
Jul 22	MNA	iPd	20 49 32.8
	JAS1	iPc	20 49 44.7
	LLA	eP	20 49 53.8
	PRI	eP	20 49 54.0
	SAO	eP	20 49 58.6
	MHC	ePd	20 49 59.8
	PRS	e	20 50 03.1
	GCC	e	20 50 05.6
	PCC	e	20 50 09.0
BRK 20h49m14.9s 37.5N 118.4W h=7km ML=3.5(2) Chalfant Valley, 13 km NNE of Bishop, CA			
Jul 22	MNA	iPc	22 06 59.7
	JAS1	iPc	22 07 11.4
	LLA	ePd	22 07 20.5
	PRI	ePd	22 07 20.9
	SAO	ePd	22 07 25.1
	PRS	eP	22 07 26.4
	MHC	iPd	22 07 26.7
	GCC	e(P)	22 07 29.7
	PCC	eP	22 07 33.3
	BRK	e(P)	22 07 33.3
BRK 22h06m41.7s 37.5N 118.4W h=7km ML=4.2(3) Chalfant Valley, 14 km NNE of Bishop, CA			
Jul 23	MNA	iPd	02 12 31.7
		iS	02 12 43.1
	JAS1	iPc	02 12 42.1
		iS	02 13 00.7
	LLA	eP	02 12 50.8
	PRI	ePc	02 12 52.1
	MHC	eP	02 12 56.1
		i	02 12 57.6
	SAO	iPd	02 12 56.2
	PRS	eP	02 12 57.8
	GCC	e	02 13 00.6
	PCC	eP	02 13 04.3
	ORV	e	02 13 09.7
BRK 02h12m14.0s 37.5N 118.5W h=17km ML=3.6(2) Chalfant Valley, 18 km NW of Bishop, CA			
Jul 23	MNA	iPd	02 58 37.6
		iS	02 58 50.2
	JAS1	iPc	02 58 49.4
		iS	02 59 10.9
	PRI	eP	02 58 58.5
	LLA	eP	02 58 58.9
	SAO	iPc	02 59 03.5
	PRS	eP	02 59 04.4
	MHC	iPd	02 59 04.8
	GCC	e	02 59 09.9
	PCC	eP	02 59 11.6
BRK 02h58m20.5s 37.5N 118.4W h=10km ML=3.8(2) Chalfant Valley, 18 km NNW of Bishop,CA			
Jul 23	MNA	iPd	03 01 18.7
		iS	03 01 30.2
	JAS1	iPc	03 01 30.4
		iS	03 01 51.1
	LLA	iPd	03 01 41.1
	PRI	ePc	03 01 42.2
		i	03 01 43.6
		iS	03 02 12.8
	SAO	iPc	03 01 45.3
	MHC	iPd	03 01 46.3
	PRS	eP	03 01 47.3
	GCC	e	03 01 48.1
	ORV	eP	03 01 51.3
	BRK	e(P)	03 01 51.7
		e	03 01 51.9
	PCC	eP	03 01 53.0
	MIN	e	03 02 02.4
BRK 03h01m02.4s 37.6N 118.5W h=6km ML=3.7(3) Chalfant Valley, 28 km NW of Bishop, CA			
Jul 23	JAS1	iPc	07 39 28.3
	MNA	iPc	07 39 31.0
	ORV	iPc	07 39 41.5
	MHC	iPc	07 39 47.1
		iS	07 40 17.0
	BRK	iPc	07 39 48.6
		iS	07 40 18.6
	LLA	ePc	07 39 49.2
	MIN	ePd	07 39 49.5
	SAO	iPd	07 39 51.0
	PCC	eP	07 39 51.7
	GCC	eP	07 39 51.8
	PRS	eP	07 39 54.9
	PRI	ePc	07 39 55.6
	WDC	iPc	07 39 58.9
BRK 07h39m10.5s 38.7N 119.5W h=21km ML=4.3(2) Mo=1.2E22(2) Topaz Lake, 22 km E of Markleeville, CA			
Jul 23	MNA	iPd	15 39 29.1
		i	15 39 39.4
		i	15 39 43.4
	JAS1	ePc	15 39 40.2
		iS	15 40 01.5
	LLA	eP	15 39 49.8
	PRI	ePc	15 39 50.7
		iS	15 40 21.6
	SAO	eP	15 39 53.5
	MHC	eP	15 39 54.2
	PRS	eP	15 39 55.8
	GCC	eP	15 39 59.1
	PCC	eP	15 40 01.2
	BRK	eP	15 40 02.1
	ORV	eP	15 40 02.2
BRK 15h39m11.7s 37.5N 118.5W h=6km ML=4.7(5) Mo=4.8E22(2) Chalfant Valley, 20 km NNW of Bishop,CA			
Jul 23	MNA	iPd	16 27 58.0
		iS	16 28 10.6
	JAS1	iPc	16 28 08.8
		iS	16 28 29.0
	LLA	eP	16 28 18.6
	PRI	eP	16 28 20.2
		iS	16 28 50.8
	SAO	eP	16 28 23.5
	MHC	eP	16 28 24.4
	PRS	eP	16 28 25.2
	GCC	eP	16 28 27.9
	ORV	eP	16 28 30.8
	PCC	ePd	16 28 31.7
BRK 16h27m41.3s 37.6N 118.5W h=11km ML=3.5(3) Chalfant Valley, 25 km NW of Bishop, CA			
Jul 24	WDC	eP	00 49 21.9
	MHC	eP	00 49 42.2
	JAS1	eP	00 49 45.8
	PRS	e	00 49 48.8
	LLA	e	00 49 49.6
	PRI	eP	00 49 53.7
	MNA	eP	00 49 54.8
USGS 00h42m01.4s 51.4N 176.7W h=33km mb=4.9 Ms=4.5 Andreanof Islands, Aleutian Islands			
Jul 24	MNA	iPd	01 17 26.5
		iS	01 17 38.8
	JAS1	iPc	01 17 38.1
		iS	01 17 58.4
	LLA	eP	01 17 48.3
	PRI	eP	01 17 48.8
		iS	01 18 21.3
	SAO	eP	01 17 52.5
	MHC	eP	01 17 53.7
	PRS	eP	01 17 54.2
	PCC	eP	01 18 00.8
BRK 01h17m09.8s 37.6N 118.5W h=8km ML=3.5(3) Chalfant Valley, 24 km NW of Bishop, CA			
Jul 24	MNA	iPd	02 43 27.1
		iS	02 43 39.7
	JAS1	iPc	02 43 39.3
	LLA	iPc	02 43 49.4
	PRI	ePc	02 43 50.6
	SAO	eP	02 43 53.2
	MHC	ePc	02 43 53.9
	PRS	iPc	02 43 55.7
	GCC	ePc	02 43 58.3
	ORV	eP	02 44 00.8
	BRK	ePc	02 44 01.2
	PCC	ePc	02 44 01.3
	ZSP	ePc	02 44 01.7
	MIN	eP	02 44 11.2
	WDC	e(P)	02 44 18.2
BRK 02h43m11.0s 37.6N 118.5W h=4km ML=4.1(3) Mo=2.2E22(1) Chalfant Valley, 27 km NW of Bishop, CA			
Jul 24	MNA	eP	06 09 22.0
	JAS1	eP	06 09 30.6
	MIN	e	06 10 00.6
	WDC	e	06 10 07.6
USGS 06h05m47.0s 25.3N 109.6W h=10km mb=4.4 Gulf of California			
Jul 24	MNA	iPd	06 10 23.8
		iS	06 10 36.3
	JAS1	iPc	06 10 35.1
		iS	06 10 57.8
	PRI	iPc	06 10 43.9
	LLA	iPd	06 10 44.1
	SAO	eP	06 10 48.2
	MHC	ePc	06 10 48.9
	PRS	eP	06 10 49.5
	GCC	e	06 10 53.9
	BRK	eP	06 10 55.0
	ORV	eP	06 10 57.3
	PCC	eP	06 10 57.5
	ZSP	eP	06 10 57.7
	MIN	e	06 11 09.2
	WDC	e	06 11 13.0
BRK 06h10m05.3s 37.5N 118.4W h=7km ML=4.2(2) Chalfant Valley, 11 km NNE of Bishop, CA			
Jul 24	MHC	iPc	07 52 29.2
	GCC	iPd	07 52 35.3
	PCC	ePc	07 52 37.7
		iS	07 52 47.0
	SAO	iPd	07 52 39.7
	BRK	ePc	07 52 40.4
	ZSP	eP	07 52 42.0
	LLA	iPc	07 52 44.9
	PRS	ePc	07 52 46.6
	JAS1	iPc	07 52 48.8
	PRI	e	07 52 52.9
BRK 07h52m27.3s 37.4N 121.7W h=6km ML=2.7(2) Mo=6.6E19(2) Halls Valley, 14 km E of San Jose, CA			
Jul 24	MNA	iPd	09 22 47.5
		iS	09 23 00.8
	JAS1	iPc	09 22 59.8
		iS	09 23 21.0
	LLA	ePc	09 23 10.1
	PRI	iPc	09 23 10.2
	SAO	eP	09 23 14.2
	PRS	eP	09 23 15.5
	MHC	iPc	09 23 15.7
	GCC	e	09 23 21.0
	ORV	e	09 23 22.0
	PCC	e	09 23 22.7
	MIN	e	09 23 33.2
BRK 09h22m30.4s 37.5N 118.4W h=2km ML=3.6(2) Chalfant Valley, 20 km N of Bishop, CA			
Jul 24	GCC	eP	11 23 02.5
	PCC	eP	11 23 03.0
	PRS	eP	11 23 03.0
	SAO	eP	11 23 03.5
	PRI	eP	11 23 04.8
	MHC	eP	11 23 05.3
	JAS1	iPc	11 23 10.3
	ORV	eP	11 23 12.0
	WDC	ePc	11 23 12.2
	MIN	eP	11 23 13.2
	MNA	ePc	11 23 19.0
USGS 11h11m42.2s 23.4S 179.9E h=556km mb=4.9 South of Fiji Islands			
Jul 24	MNA	iPd	14 59 02.9
		iS	14 59 16.3
	JAS1	iPc	14 59 14.8
		iS	14 59 36.5
	PRI	iPc	14 59 24.3
	LLA	eP	14 59 25.3
	SAO	iPc	14 59 28.4
	MHC	eP	14 59 29.9
	PRS	eP	14 59 30.2
	GCC	e	14 59 34.0
	PCC	e	14 59 37.3
	ORV	e	14 59 41.0
BRK 14h58m44.9s 37.5N 118.4W h=7km ML=3.7(2) Chalfant Valley, 13 km N of Bishop, CA			
Jul 24	MNA	iPc	15 05 36.4
	JAS1	iP	15 05 57.3
		i	15 06 05.5
	PRI	ePc	15 06 02.0
	LLA	e(P)	15 06 04.2
		i	15 06 12.1
	SAO	e(P)	15 06 05.4
	PRS	eP	15 06 07.7
	MHC	e(P)	15 06 10.0
	ORV	eP	15 06 15.8
	PCC	e	15 06 17.7
	MIN	ePc	15 06 23.5
	BRK	e	15 06 25.2
		eP	15 06 25.2
BRK ML=4.5(2) USGS 15h05m00.0s 37.1N 116.1W h=0km mb=4.4 Underground Nuclear Explosion, N.T.S.			
Jul 24	MNA	iPc	16 44 58.0
		iS	16 45 11.2
	JAS1	iPc	16 45 09.5
		iS	16 45 29.8
	LLA	ePc	16 45 18.7
	PRI	ePc	16 45 19.5
	SAO	iPd	16 45 22.8
	MHC	eP	16 45 23.4
		i	16 45 25.0
	PRS	eP	16 45 24.5
	GCC	eP	16 45 27.9
	BRK	e	16 45 31.4
	PCC	e	16 45 31.8
	ORV	e	16 45 33.8
	MIN	e	16 45 50.0
BRK 16h44m40.8s 37.5N 118.5W h=8km ML=3.5(2) Chalfant Valley, 20 km NNE of Bishop, CA			
Jul 24	MNA	iPd	19 03 44.2
		iS	19 03 57.3
	FRI	iPc	19 03 47.0
		iS	19 04 02.3
	JAS1	iPc	19 03 55.7
		iS	19 04 18.1
	LLA	ePd	19 04 04.8
	PRI	ePc	19 04 05.1
		iS	19 04 35.4
	SAO	iPc	19 04 09.4
	MHC	eP	19 04 09.8
		i	19 04 11.0
	PRS	eP	19 04 10.8
	GCC	e	19 04 14.0
	BRK	eP	19 04 17.7
	PCC	eP	19 04 17.9
	ZSP	e	19 04 19.0
	ORV	eP	19 04 20.5
BRK 19h03m25.9s 37.5N 118.4W h=6km ML=4.3(2) Mo=1.5E22(1) Chalfant Valley, 13 km WNE of Bishop, CA			
Jul 25	WDC	ePd	09 08 51.8
		epP	09 09 10.2
	MIN	eP	09 08 57.1
	ORV	eP	09 09 00.0
	BRK	e(P)	09 09 11.8
		e	09 09 12.0
		eS	09 15 07.2
		e	09 20 18.0
			AMP(μm) PER(s)
		PZ	0.057 1.1
		LZ	2.8 17.
	GCC	eP	09 09 13.6
	MHC	e(P)	09 09 14.6
	JAS1	eP	09 09 15.7
		ipP	09 09 34.5
		isP	09 09 41.1
	PRS	e(P)	09 09 51.0
	MNA	e(P)	09 09 24.7
	PRI	e(P)	09 09 25.5
	SAO	e	09 09 25.5

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	FRI	e(P)	09 09 26.0
BRK Ms=5.5 Distance=39°			
USGS 09h01m32.4s 51.2N 176.2W			
h=33km mb=5.3 Ms=5.6			
Andreanof Islands, Aleutian Islands			
Jul 25	MNA	iPd	10 11 21.1
		iS	10 11 33.1
	FRI	iPd	10 11 25.2
		iS	10 11 39.8
	JAS1	iPc	10 11 32.7
		iS	10 11 53.3
	LLA	eP	10 11 43.0
	PRI	ePc	10 11 43.7
		iS	10 12 14.4
	MHC	eP	10 11 46.9
	SAO	eP	10 11 47.3
	PRS	ePc	10 11 48.8
	GCC	e(P)	10 11 51.9
	ORV	eP	10 11 53.6
	PCC	eP	10 11 55.2
	MIN	eP	10 12 03.7
BRK 10h11m04.5s 37.6N 118.5W			
h=8km ML=3.6(2)			
Chalfant Valley, 27 km NNW of Bishop, CA			
Jul 25	PRS	eP	22 05 02.3
	PRI	ePc	22 05 04.2
	MHC	ePc	22 05 05.3
	FRI	ePc	22 05 08.8
	JAS1	e(P)	22 05 10.0
	WDC	e	22 05 17.0
	MNA	ePc	22 05 17.8
USGS 21h52m21.9s 31.9S 178.2W			
h=33km mb=5.0 Ms=4.8			
Kermadec Islands Region			
Jul 25	FHC	ePc	23 53 54.7
	WDC	eP	23 53 58.8
		e	23 57 36.3
	MIN	ePc	23 54 03.2
	ORV	e(P)	23 54 04.5
	BRK	eP	23 54 07.4
		eS	24 04 55
		eLr	24 22 53
		e	24 35 06
			AMP(μm) PER(s)
		PZ	0.24 1.7
		LZ	2.2 20.
	PCC	e(P)	23 54 08.3
	MHC	eP	23 54 10.2
	JAS1	ePc	23 54 12.4
		ePP	23 57 47.0
	PRS	eP	23 54 13.8
	FRI	eP	23 54 16.9
		ePP	23 57 55.8
	PRI	eP	23 54 17.0
	MNA	eP	23 54 18.0
BRK Ms=5.6 Distance=94°			
USGS 23h41m08.6s 26.4N 125.9E			
h=21km mb=5.6 Ms=6.2			
Northeast of Taiwan			
Jul 26	MHC	iPc	07 12 20.7
	GCC	iPd	07 12 27.2
	PCC	iPd	07 12 27.3
	BRK	iPc	07 12 27.9
		iS	07 12 36.8
	ZSP	iPc	07 12 29.1
	SAO	iPc	07 12 31.7
	LLA	iPc	07 12 36.1

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	JAS1	iPd	07 12 36.3
		iS	07 12 51.2
	PRS	iPd	07 12 38.4
	PRI	ePd	07 12 44.0
	FRI	eP	07 12 45.0
	ORV	e(P)c	07 12 51.8
BRK 07h12m16.9s 37.5N 121.7W			
h=8km ML=3.3(3) Mo=1.0E21(2)			
Mt. Lewis area, 26 km NE of San Jose, CA			
Jul 26	MNA	iPd	14 39 58.6
	FRI	iPc	14 40 01.2
	JAS1	iPc	14 40 09.4
	LLA	iPc	14 40 18.5
	PRI	ePc	14 40 19.5
	SAO	eP	14 40 22.8
	MHC	eP	14 40 23.5
	PRS	iPc	14 40 24.8
	GCC	ePc	14 40 27.7
	PCC	eP	14 40 30.6
	BRK	ePc	14 40 30.7
		iS	14 41 10.8
	ORV	e	14 40 31.5
	ZSP	eP	14 40 31.6
	MIN	e	14 40 45.0
	WDC	e	14 40 54.9
BRK 14h39m41.0s 37.5N 118.5W			
h=7km ML=4.2(3) Mo=1.1E22(2)			
Chalfant Valley, 20 km NNW of Bishop, CA			
Jul 26	PRS	eP	15 02 13.2
	GCC	ePd	15 02 13.6
	PRI	ePd	15 02 15.1
	MHC	eP	15 02 16.1
	FRI	ePd	15 02 20.0
	JAS1	ePd	15 02 20.9
	WDC	e	15 02 24
	MNA	ePd	15 02 28.9
USGS 14h49m38.4s 30.5S 177.7W			
h=33km mb=5.4 Ms=4.8			
Kermadec Islands			
Jul 26	WDC	ePc	18 59 16.3
	ORV	e	18 59 25.7
	MHC	e	18 59 38.4
	JAS1	ePc	18 59 41.8
	PRS	e	18 59 48.5
USGS 18h52m44.9s 53.3N 167.2W			
h=33km mb=4.7 Ms=4.4			
Fox Islands, Aleutian Islands			
Jul 26	PRS	ePc	20 18 30.5
	PCC	ePc	20 18 30.7
	SAO	eP	20 18 31.2
	BRK	eP	20 18 32.7
	PRI	ePc	20 18 32.8
	MHC	ePc	20 18 33.3
	FRI	ePc	20 18 38.7
	JAS1	ePc	20 18 39.4
	ORV	ePc	20 18 41.1
	WDC	ePc	20 18 41.7
	MNA	iPc	20 18 49.8
USGS 20h07m02.7s 18.1S 173.2W			
h=33km mb=5.2			
Tonga Islands			
Jul 26	MNA	iPd	21 59 03.7
		iS	21 59 15.8
	FRI	iPc	21 59 08.3
		iS	21 59 23.3

DATE	STA	PHASE	TIME (UTC)
	JAS1	iPc	21 59 15.7
		iS	21 59 36.7
	LLA	ePd	21 59 26.0
	PRI	eP	21 59 26.9
	SAO	eP	21 59 29.3
	MHC	eP	21 59 30.2
	PRS	ePd	21 59 32.0
	BRK	ePd	21 59 37.7
	PCC	ePd	21 59 38.6
	GCC	e(P)	21 59 38.8
	ORV	e	21 59 42.2
BRK 21h58m47.3s 37.6N 118.5W			
h=8km ML=3.6(3)			
Chalfant Valley, 25 km NNW of Bishop, CA			
Jul 27	MNA	iPc	03 50 00.4
		iS	03 50 13.3
	FRI	iPc	03 50 02.1
		iS	03 50 17.0
	JAS1	iPc	03 50 11.9
		iS	03 50 34.1
	PRI	ePc	03 50 19.7
		iS	03 50 50.7
	LLA	iPd	03 50 19.9
	SAO	iPd	03 50 24.7
	PRS	ePc	03 50 25.3
	MHC	ePd	03 50 25.5
	GCC	eP	03 50 29.3
	BRK	eP	03 50 32.5
		eS	03 51 18.3
	ZSP	ePd	03 50 33.6
	PCC	ePc	03 50 33.7
	ORV	e(P)	03 50 34.0
BRK 03h49m40.6s 37.4N 118.3W			
h=2km ML=4.2(3)			
9 km E of Bishop, CA			
Jul 27	MNA	iPd	10 08 19.8
		iS	10 08 31.9
	FRI	iPc	10 08 23.2
		iS	10 08 38.4
	JAS1	iPc	10 08 31.7
		iS	10 08 54.3
	LLA	eP	10 08 41.5
	PRI	eP	10 08 41.6
	SAO	eP	10 08 45.4
	MHC	eP	10 08 46.9
	PRS	ePc	10 08 47.5
	GCC	eP	10 08 51.5
	BRK	e(P)	10 08 52.7
		i	10 09 40.2
	PCC	eP	10 08 53.2
	ZSP	e	10 08 56
	ORV	e(P)	10 08 56.0
	MIN	e	10 09 07.4
	WDC	e	10 09 21.7
BRK 10h08m02.2s 37.5N 118.4W			
h=7km ML=3.9(3)			
Chalfant Valley, 16 km N of Bishop, CA			
Jul 27	GCC	ePd	10 55 28.4
	PRS	ePd	10 55 28.4
	PCC	eP	10 55 28.7
	SAO	eP	10 55 29.0
	PRI	ePd	10 55 30.2
	BRK	eP	10 55 30.5
			AMP(μm) PER(s)
		PZ	0.39 2.0
	LLA	e(P)	10 55 30.7
	MHC	ePd	10 55 31.0

DATE	STA	PHASE	TIME (UTC)
	FRI	ePd	10 55 35.2
	JAS1	iPd	10 55 36.0
		e	10 58 45.8
	FHC	ePd	10 55 36.0
	ORV	ePd	10 55 38.4
	WDC	iPd	10 55 38.9
		e	10 58 49.7
	MIN	ePd	10 55 40.3
	MNA	ePd	10 55 44.9
USGS 10h43m26.1s 25.8S 177.5W			
h=147km mb=5.8			
South of Fiji Islands			
Jul 27	PRS	e	13 11 04.3
	MHC	e	13 11 07.0
	FRI	e	13 11 10.5
	JAS1	iPd	13 11 11.6
	WDC	ePd	13 11 15.0
	MNA	ePd	13 11 19.5
USGS 12h58m17.7s 33.1S 178.6W			
h=33km mb=5.1 Ms=4.7			
South of Kermadec Islands			
Jul 27	MHC	iPc	22 58 43.8
		iS	22 58 46.8
	GCC	iPd	22 58 50.4
	PCC	iPc	22 58 50.5
	BRK	iPc	22 58 51.2
		iS	22 58 59.5
	ZSP	ePc	22 58 52.3
	SAO	iPc	22 58 55.0
	LLA	ePc	22 58 59.3
	JAS1	iPd	22 58 59.7
	PRS	eP	22 59 01.6
	PRI	eP	22 59 07.0
	FRI	ePc	22 59 08.3
BRK 22h58m40.1s 37.5N 121.7W			
h=7km ML=2.9(2) Mo=2.0E20(2)			
Mt. Lewis area, 26 km NE of San Jose, CA			
Jul 28	WDC	eP	04 13 56.7
	MIN	e(P)	04 14 03.6
	BRK	eP	04 14 11.8
		e	04 14 30.8
		e	04 14 41.2
		eS	04 19 58
		e	04 23 21
		eLr	04 24 39
			AMP(μm) PER(s)
		PZ	0.026 1.0
		LZ	0.90 20.
	MHC	eP	04 14 17.4
	JAS1	eP	04 14 21.6
	PRS	eP	04 14 24.5
	FRI	eP	04 14 29.5
	PRI	eP	04 14 29.6
	MNA	eP	04 14 30.5
BRK Ms=4.6 Distance=38°			
USGS 04h06m50.3s 51.6N 174.1W			
h=33km mb=5.4 Ms=4.8			
Andreanof Islands, Aleutian Islands			
Jul 28	WDC	eP	05 08 25.8
	MIN	e(P)	05 08 32.0
	JAS1	eP	05 08 50.8
USGS 05h01m59.7s 52.9N 166.6W			
h=33km mb=5.0 Ms=4.6			
Fox Islands, Aleutian Islands			
Jul 28	PRS	e	20 41 24.1
	LLA	e	20 41 25.0

DATE	STA	PHASE	TIME (UTC)
	MNA	e	20 41 27.6
	JAS1	eP	20 41 31.7
	ORV	e	20 41 40.9
	WDC	e	20 41 45.8
USGS 20h29m02.8s 33.3S 71.9W			
h=40km mb=5.1 Ms=5.3			
Near Coast of Central Chile			
Jul 28	WDC	ePc	22 04 26.0
		eScP	22 10 24.8
	ORV	eP	22 04 35.8
	JAS1	eP	22 04 49.6
		eScP	22 10 36.0
	MHC	e	22 04 50.3
		eScP	22 10 34.6
	PRS	eP	22 04 52.7
		eScP	22 10 37.7
	LLA	eP	22 04 54.2
		eScP	22 10 38.6
	MNA	ePc	22 04 59.2
		eScP	22 10 41.0
	PRI	eP	22 04 59.2
		eScP	22 10 41.1
	FRI	eScP	22 10 40.0
USGS 21h57m13.1s 51.8N 175.3W			
h=33km mb=5.4 Ms=4.9			
Andreanof Islands, Aleutian Islands			
Jul 29	MNA	iPd	07 12 15.9
	FRI	iPc	07 12 19.5
	JAS1	iPc	07 12 27.5
		iS	07 12 48.4
	LLA	ePc	07 12 36.8
	PRI	eP	07 12 37.9
	MHC	ePc	07 12 41.2
	SAO	iPd	07 12 41.8
	PRS	eP	07 12 43.2
	GCC	ePc	07 12 45.9
	ORV	e(P)	07 12 49
	BRK	ePc	07 12 49.0
		eS	07 13 27.5
	PCC	eP	07 12 49.7
	ZSP	eP	07 12 49.7
	MIN	e	07 12 59.3
BRK 07h11m58.8s 37.5N 118.4W			
h=8km ML=4.2(2) Mo=1.4E22(1)			
Chalfant Valley, 21 km NNW of Bishop, CA			
Jul 29	PRI	ePc	08 18 41.8
	FRI	e(P)	08 18 47.7
	PRS	iPc	08 18 47.9
	LLA	ePd	08 18 49.2
	SAO	iPc	08 18 53.3
	GCC	ePc	08 18 58.9
	JAS1	iPd	08 19 03.0
		i	08 20 27.2
	MHC	e(P)	08 19 03.0
	MNA	eP	08 19 05.5
		i	08 20 41.5
	PCC	eP	08 19 06.5
	BRK	eP	08 19 10.6
BRK Mag=4.0			
PAS 08h17m41.6s 32.9N 117.8W			
h=10km ML=4.3			
Off Coast NW of San Diego, CA			
Jul 29	GCC	eP	08 26 41.2
	PRS	ePd	08 26 41.4
	PCC	ePd	08 26 41.5
	SAO	ePd	08 26 42.4
	PRI	ePd	08 26 43.4

DATE	STA	PHASE	TIME (UTC)
	BRK	eP	08 26 43.4
	MHC	ePd	08 26 43.9
	FRI	ePd	08 26 48.9
	JAS1	iPd	08 26 49.7
	ORV	ePd	08 26 51.4
	WDC	ePd	08 26 51.8
	MIN	ePd	08 26 53.7
	MNA	iPd	08 26 59.5
USGS 08h14m59.5s 21.3S 175.5W			
h=110km mb=5.4			
Tonga Islands			
Jul 29	MNA	iPd	09 58 13.4
	FRI	iPd	09 58 18.1
	JAS1	iPc	09 58 25.3
	LLA	ePc	09 58 34.7
	PRI	ePd	09 58 36.4
	SAO	iPc	09 58 39.1
	MHC	ePc	09 58 39.6
	PRS	iPc	09 58 41.7
	GCC	ePc	09 58 43.3
	BRK	ePc	09 58 45.7
		iS	09 59 30.8
	ZSP	ePc	09 58 46.1
	ORV	ePc	09 58 46.3
	PCC	ePc	09 58 46.8
	MIN	ePc	09 58 55.6
	WDC	e(P)c	09 59 04.0
BRK 09h57m57.2s 37.6N 118.5W			
h=7km ML=4.6(4) Mo=3.8E22(2)			
Chalfant Valley, 27 km NNW of Bishop, CA			
Jul 29	GCC	eP	12 08 38.6
	PRS	ePd	12 08 40.0
	SAO	eP	12 08 40.5
	MHC	ePd	12 08 42.1
	PRI	eP	12 08 42.2
	FRI	eP	12 08 47.5
	JAS1	ePd	12 08 47.7
	WDC	e(P)	12 08 48.8
	MIN	eP	12 08 50.8
	MNA	ePd	12 08 57.4
USGS 11h57m47.5s 17.6S 178.5W			
h=560km mb=5.1			
Fiji Islands Region			
Jul 29	MNA	iPd	15 14 44.0
		iS	15 14 56.5
	FRI	iPd	15 14 46.4
	JAS1	iPc	15 14 55.3
		iS	15 15 16.4
	LLA	eP	15 15 03.5
	PRI	eP	15 15 04.0
	SAO	eP	15 15 08.7
	PRS	ePc	15 15 09.5
	MHC	ePd	15 15 10.2
	GCC	eP	15 15 15.3
	BRK	eP	15 15 19.0
		eS	15 15 58.2
	PCC	iPd	15 15 19.9
BRK 15h14m25.4s 37.5N 118.4W			
h=8km ML=4.2(2) Mo=6.8E21(1)			
Chalfant Valley, 10 km NNE of Bishop, CA			
Jul 30	FRI	ePc	00 47 18.3
	JAS1	eP	00 47 18.5
		iS	00 47 38.7
	LLA	eP	00 47 28.0
	PRI	ePc	00 47 28.5
	MHC	e(P)c	00 47 30.5

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DATE	STA	PHASE	TIME (UTC)
	PRS	eP	00 47 30.8
	SAO	eP	00 47 32.5
	BRK	ePd	00 47 40.0
		eS	00 48 18.9
	ORV	eP	00 47 40.2
	PCC	eP	00 47 40.8

BRK 00h46m50.7s 37.5N 118.5W
h=11km ML=3.6(3)
Chalfant Valley, 21 km NW of Bishop, CA

Jul 30	PCC	eP	04 14 12.1
	PRS	eP	04 14 12.7
	SAO	eP	04 14 13.0
	BRK	iP	04 14 14.2
			AMP(μm) PER(s)
		PZ	0.017 0.8
	PRI	eP	04 14 14.5
	MHC	eP	04 14 14.8
	JAS1	eP	04 14 20.7
	WDC	eP	04 14 22.6
	MIN	eP	04 14 24.5
	MNA	eP	04 14 30.9

USGS 04h02m53.5s 18.0S 174.9W
h=173km mb=5.0
Tonga Islands

Jul 30	MNA	ePd	06 03 48.4
		iS	06 04 00.5
	FRI	iPd	06 03 53.2
	JAS1	iPc	06 04 00.3
		iS	06 04 20.3
	LLA	ePc	06 04 10.7
	PRI	eP	06 04 11.7
	MHC	eP	06 04 15.3
	SAO	eP	06 04 15.4
	PRS	ePd	06 04 16.8
	GCC	eP	06 04 20.0
	ORV	eP	06 04 21.5
	BRK	eP	06 04 22.1
		eS	06 05 03.7
	PCC	ePc	06 04 23.0

BRK 06h03m32.2s 37.6N 118.5W
h=8km ML=4.0(3)
Chalfant Valley, 28 km NNW of Bishop, CA

Jul 30	MNA	iPd	06 42 09.4
		iS	06 42 21.5
	FRI	iPc	06 42 13.7
	JAS1	iPc	06 42 21.2
		iS	06 42 41.5
	LLA	eP	06 42 30.3
	PRI	iPc	06 42 32.1
	SAO	eP	06 42 34.8
	MHC	ePc	06 42 35.4
	PRS	eP	06 42 36.4
	GCC	eP	06 42 39.0
	BRK	eP	06 42 41.4
		eS	06 43 23.5
	PCC	eP	06 42 42.6
	ORV	eP	06 42 42.7
	MIN	eP	06 42 51.8

BRK 06h41m52.9s 37.6N 118.5W
h=7km ML=4.8(5) Mo=5.1E22(2)
Chalfant Valley, 25 km NNW of Bishop, CA

Jul 30	FHC	e(P)	11 44 53.6
	WDC	eP	11 44 57.2
	MIN	eP	11 45 00.2
	ORV	eP	11 45 02.4
	GCC	eP	11 45 08.0
	MHC	eP	11 45 08.3
	JAS1	eP	11 45 10.5
	PRS	eP	11 45 12.1
	PRI	eP	11 45 15.4
	MNA	eP	11 45 16.0

USGS 11h31m50.2s 24.6N 121.8E
h=33km mb=5.6 Ms=5.6
Taiwan

Jul 30	MNA	eP	19 29 38.5
		ePP	19 31 46.2
	JAS1	eP	19 29 47.0
		ePP	19 31 49.9
	GCC	eP	19 29 52.3
	MHC	eP	19 29 52.4
	MIN	eP	19 30 04.0
	PRI	eP	19 31 48.3
	WDC	eP	19 31 58.5

USGS 19h22m07.1s 11.1N 86.0W
h=33km mb=5.0 Ms=4.6
Near Coast of Nicaragua

Jul 30	FRI	ePKP	21 45 18.7
	MNA	ePKP	21 45 19.4
	PRI	ePKP	21 45 20.0
	JAS1	ePKP	21 45 22.5
	WDC	ePKP	21 45 28.7

USGS 21h25m35.4s 52.4S 18.2E
h=10km mb=5.4 Ms=4.7
Southwest of Africa

Jul 30	MNA	ePKP	23 18 23.4
	FRI	ePKP	23 18 25.5
	PRI	ePKP	23 18 26.8
	JAS1	ePKP	23 18 27.3
	MIN	ePKP	23 18 34.9
	ORV	ePKP	23 18 35.5
	WDC	ePKP	23 18 35.5

USGS 22h58m40.5s 52.6S 17.9E
h=10km mb=5.1 Ms=5.3
Southwest of Africa

Jul 30	JAS1	ePKP	23 55 42.5
	WDC	ePKP	23 55 49.1

USGS 23h35m53.5s 52.4S 18.3E
h=10km mb=5.0 Ms=4.8
Southwest of Africa

Jul 31	FRI	ePKP	00 32 26.0
	PRI	ePKP	00 32 27.5
	WDC	ePKP	00 32 36.4

USGS 00h12m42.6s 52.5S 18.5E
h=10km mb=5.2 Ms=5.0
Southwest of Africa

Jul 31	MNA	ePKP	03 13 45.5
	JAS1	ePKP	03 13 47.2

USGS 02h53m58.9s 52.5S 18.0E
h=10km mb=5.0
Southwest of Africa

Jul 31	MNA	ePKP	04 20 06.2
	JAS1	ePKP	04 20 08.6
	WDC	ePKP	04 20 14.8

USGS 04h00m20.4s 52.5S 18.6E
h=10km mb=5.4 Ms=4.9
Southwest of Africa

Jul 31	MNA	iPd	07 22 58.5
	FRI	iPd	07 23 01.5
	JAS1	iPc	07 23 10.2
	LLA	ePc	07 23 18.0
	PRI	ePd	07 23 19.4
	SAO	ePc	07 23 22.6
	MHC	iPc	07 23 23.8
		iS	07 23 55.9
	PRS	iPc	07 23 24.1
	GCC	ePc	07 23 27.1
	BRK	ePd	07 23 30.3
		iS	07 24 08.3
	PCC	ePc	07 23 31.1
	ORV	ePc	07 23 31.6
	MIN	ePc	07 23 40.5
	WDC	ePc	07 23 49.0

BRK 07h22m40.2s 37.5N 118.4W
h=7km ML=5.8(7) Mo=1.6E24(2)
Chalfant Valley, 11 km NNE of Bishop, CA

Jul 31	MNA	iPd	07 28 23.2
		iS	07 28 35.4
	FRI	iPd	07 28 25.55
	JAS1	iPc	07 28 34.3
	LLA	iPc	07 28 43.4
	SAO	eP	07 28 47.8
	MHC	eP	07 28 47.8
	PRS	iPd	07 28 50.7
	GCC	eP	07 28 52.2
	PCC	eP	07 28 55.9
	BRK	eP	07 28 55.9

BRK 07h28m04.7s 37.4N 118.4W
h=11km ML=4.5(3) Mo=1.8E22(2)
Chalfant Valley, 10 km NNE of Bishop, CA

Jul 31	MNA	iPd	07 36 20.5
	FRI	iPc	07 36 23.4
	JAS1	iPc	07 36 32.2
		iS	07 36 53.7
	LLA	eP	07 36 40.1
	PRI	iPd	07 36 42.1
	SAO	eP	07 36 45.7
	MHC	eP	07 36 46.1
	PRS	eP	07 36 46.9
	GCC	eP	07 36 50.4
	BRK	eP	07 36 52.4
		eS	07 37 36.8
	PCC	eP	07 36 54.3

BRK 07h36m02.4s 37.5N 118.4W
h=8km ML=4.0(3)
Chalfant Valley, 12 km NNE of Bishop, CA

Jul 31	MNA	iPd	07 51 04.1
		i	07 51 19.9
	FRI	iPc	07 51 07.4
		iS	07 51 22.6
	JAS1	iPc	07 51 16.1
	LLA	eP	07 51 26.1
	PRI	ePd	07 51 26.2
	SAO	iPc	07 51 30.3
	MHC	ePd	07 51 31.3
	BRK	e(P)	07 51 37.0
	GCC	e	07 51 38.2
	PCC	ePd	07 51 38.4
	ORV	e(P)	07 51 39.7

BRK 07h50m46.2s 37.5N 118.4W
h=6km ML=3.8(3)
Chalfant Valley, 14 km NNE of Bishop, CA

Jul 31	MNA	iPd	08 11 01.7
	FRI	iPc	08 11 04.0
	JAS1	iPc	08 11 13.0
	LLA	ePd	08 11 21.5
	PRI	iPd	08 11 22.1
	SAO	iPd	08 11 26.4
	MHC	ePd	08 11 27.0
	PRS	eP	08 11 27.3
	GCC	ePd	08 11 31.2
	BRK	eP	08 11 32.9
	PCC	ePd	08 11 34.0
	ZSP	e(P)	08 11 34.6
	ORV	e	08 11 35.6
	MIN	e	08 11 50.3

BRK 08h10m42.8s 37.4N 118.4W
h=9km ML=3.9(3)
Chalfant Valley, 9 km NE of Bishop, CA

Jul 31	MNA	iPd	08 15 57.3
	FRI	iPd	08 16 00.6
	JAS1	iPc	08 16 09.3
	LLA	eP	08 16 18.5
	PRI	iPc	08 16 18.7
	SAO	iPd	08 16 22.8
	PRS	e	08 16 23.9
	MHC	iPd	08 16 24.5
	GCC	e	08 16 30.5
	ORV	e	08 16 31.5
	PCC	e	08 16 31.6
	BRK	e	08 16 32.0
	MIN	e	08 16 43.8

BRK 08h15m39.3s 37.5N 118.4W
h=7km ML=4.0(3)
Chalfant Valley, 13 km NNE of Bishop, CA

Jul 31	MNA	ePKP	09 57 08.5
	FRI	ePKP	09 57 09.0
	JAS1	ePKP	09 57 12.6
	WDC	ePKP	09 57 25.3

USGS 09h37m24.0s 52.6S 18.4E
h=10km mb=5.1 Ms=5.5
Southwest of Africa

Jul 31	ARC	eP	15 19 38.7
		iS	15 19 49.5
	FHC	iPc	15 19 39.7
		iS	15 19 49.6
	WDC	iPc	15 19 52.6
	MIN	eP	15 20 02.3
		iS	15 20 29.1
	ORV	eP	15 20 05.8
	PCC	e	15 20 15.8
	SAO	e	15 20 29.2

BRK 15h19m25.3s 40.3N 124.7W
h=10km ML=3.4(3)
Off Coast 30 km WSW of Cape Mendocino, CA

Jul 31	MNA	ePKP	18 50 19.0
	FRI	ePKP	18 50 20.0
	JAS1	ePKP	18 50 21.3
		i	18 50 32.0
	WDC	ePKP	18 50 28.6

USGS 18h30m36.0s 52.4S 18.5E
h=10km mb=4.9
Southwest of Africa

Jul 31	FRI	ePKP	19 53 41.2
	PRI	ePKP	19 53 42.4
	MNA	ePKP	19 53 43.0
	LLA	ePKP	19 53 43.6
	JAS1	ePKP	19 53 45.0
	MHC	ePKP	19 53 46.0
	WDC	ePKP	19 53 46.7
	ORV	e	19 53 50.1
	MIN	e	19 53 51.0

USGS 19h33m58.4s 52.4S 18.1E
h=10km mb=5.1 Ms=4.7
Southwest of Africa

Aug 1	MNA	iPd	06 35 00.2
	FRI	iPc	06 35 03.9
	JAS1	iPc	06 35 10.5
	LLA	eP	06 35 21.1
	PRI	iPc	06 35 22.5
	MHC	ePc	06 35 25.6
	SAO	iP	06 35 25.9
	PRS	eP	06 35 27.4
	GCC	eP	06 35 30.3
	BRK	eP	06 35 33.3
		eS	06 36 20.6
	ZSP	eP	06 35 33.4
	PCC	eP	06 35 34.1
	ORV	e	06 35 37.1

BRK 06h34m43.3s 37.6N 118.5W
h=11km ML=3.9(3)
Chalfant Valley, 23 km NNE of Bishop, CA

Aug 1	PRI	eP	14 21 00.4
	PRS	eP	14 21 02.0
	FRI	e	14 21 03
	LLA	eP	14 21 03.0
	GCC	eP	14 21 06.5
	MHC	eP	14 21 08.4
	MNA	eP	14 21 09.1
	JAS1	iPd	14 21 09.8
	BRK	eP	14 21 12.2
			AMP(μm) PER(s)
		PZ	0.055 1.4
	ORV	eP	14 21 20.0
	MIN	eP	14 21 23.5
	WDC	eP	14 21 24.2

USGS 14h09m25.0s 35.9S 103.7W
h=10km mb=5.5 Ms=5.8
Southern Pacific Ocean

Aug 1	MNA	iPd	14 27 33.9
	FRI	iPc	14 27 37.7
	JAS1	iPc	14 27 46.0
	LLA	iPd	14 27 55.6
	PRI	iPc	14 27 56.2
	SAO	iPd	14 28 00.0
	MHC	iPd	14 28 00.3
	PRS	iPd	14 28 01.6
	GCC	eP	14 28 04.7
	BRK	eP	14 28 06.7
		eS	14 28 54.3
	PCC	ePc	14 28 06.8
	ORV	eP	14 28 07.8
	MIN	e	14 28 19
	WDC	e	14 28 26.6

BRK 14h27m16.4s 37.5N 118.4W
h=6km ML=4.8(2)
Chalfant Valley, 16 km N of Bishop, CA

Aug 1	MNA	iP	14 28 37.5
		iS	14 28 51.1
	FRI	iP	14 28 39.9
	JAS1	iP	14 28 48.1
	PRI	iP	14 28 57.5
		i(S)	14 29 27.4
	SAO	i(P)	14 29 02.8
	MHC	iPd	14 29 04.4
		iS	14 29 38.1
	ZSP	iPd	14 29 14.4
		iS	14 29 57.1
	WDC	iPd	14 29 37.2
		iS	14 30 37.1
	BRK	eS	14 29 48.3

BRK 14h28m19.6s 37.5N 118.4W
h=14km ML=5.1(5) Mo=2.1E23(2)
Chalfant Valley, 13 km NW of Bishop, CA

Aug 1	MNA	iPd	15 11 01.9
		iS	15 11 15.0
	FRI	iPd	15 11 05.4
		iS	15 11 19.3
	JAS1	iPc	15 11 13.8
		iS	15 11 35.8
	LLA	eP	15 11 23.1
	PRI	ePd	15 11 23.4
	SAO	eP	15 11 27.9
	MHC	eP	15 11 28.3
	PRS	eP	15 11 29.0
	BRK	iPc	15 11 35.8
	PCC	e	15 11 38.0

BRK 15h10m44.2s 37.5N 118.4W
h=6km ML=3.8(3)
Chalfant Valley, 16 km N of Bishop, CA

Aug 1	PCC	eP	16 31 54.4
	GCC	eP	16 31 54.4
	PRS	eP	16 31 54.8
	SAO	eP	16 31 55.4
	MHC	ePd	16 31 57.0
	PRI	eP	16 31 57.2
	JAS1	eP	16 32 02.5
	FRI	e	16 32 02.6
	ORV	e(P)	16 32 03.4
	WDC	ePd	16 32 03.4
	MIN	eP	16 32 05.5
	MNA	ePd	16 32 12.4

USGS 16h20m59.2s 16.9S 179.1W
h=516km mb=4.9
Fiji Islands Region

Aug 1	WDC	ePc	21 12 48.0
	ORV	e	21 12 58.5
	MHC	eP	21 13 09.0
	JAS1	ePc	21 13 15.6
	MNA	eP	21 13 20.3
	PRI	e	21 13 20.8
	FRI	eP	21 13 21.6

USGS 21h05m39.8s 51.4N 174.3W
h=33km mb=5.5 Ms=5.0
Andreanof Islands, Aleutian Islands

Aug 2	PRS	eP	11 31 29.9
	SAO	eP	11 31 31.0
	MHC	eP	11 31 31.2
	PRI	eP	11 31 32.5
	WDC	eP	11 31 34.8
	ORV	eP	11 31 35.9
	JAS1	ePc	11 31 36.4
		e	11 31 41.9
	FRI	eP	11 31 36.8
	MIN	eP	11 31 [illegible].0
	MNA	eP	11 31 [illegible].4

USGS 11h18m52.1s 18.2S 168.0[illegible]
h=33km mb=5.8
Vanuatu Islands

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DATE	STA	PHASE	TIME (UTC)
Aug 2	PRI	eP	12 54 39.4
	FRI	eP	12 54 44.5
	JAS1	eP	12 54 45.5
	WDC	eP	12 54 48.4
	MIN	eP	12 54 49.6
	MNA	eP	12 54 53.9
USGS 12h42m12.4s 28.3S 177.7W			
h=33km mb=5.2 Ms=5.3			
Kermadec Islands Region			
Aug 2	MNA	iPd	14 51 52.9
	FRI	iPc	14 51 58.6
		iS	14 52 13.7
	JAS1	iPc	14 52 05.7
	LLA	eP	14 52 15.8
	PRI	eP	14 52 16.8
	SAO	ePc	14 52 20.4
	MHC	ePc	14 52 20.5
	PRS	ePc	14 52 22.0
	GCC	ePc	14 52 24.7
	BRK	eP	14 52 28.0
	PCC	eP	14 52 28.4
BRK 14h51m37.0s 37.6N 118.4W			
h=7km ML=3.6(3)			
Chalfant Valley, 29 km WNW of Bishop, CA			
Aug 2	MNA	ePd	17 56 24.2
		epP	17 56 39.2
		ePcP	17 58 47.7
		epPcP	17 59 03.2
		eScP	18 02 31.7
	FRI	ePd	17 56 24.3
		epP	17 56 39.0
		ePcP	17 58 47.7
		epPcP	17 59 03.3
		eScP	18 02 31.5
	PRI	eP	17 56 27.2
		ePcP	17 58 49.3
		epPcP	17 59 04.8
		eScP	18 02 33.8
	LLA	eP	17 56 30.0
		ePcP	17 58 50.7
		eScP	18 02 35.2
	PRS	eP	17 56 31.6
		ePcP	17 58 50.9
		eScP	18 02 35.7
	JAS1	ePd	17 56 33.2
		epP	17 56 48.1
		ePcP	17 58 51.0
		epPcP	17 59 06.7
		iScP	18 02 35.9
	SAO	eP	17 56 33.6
	MHC	ePd	17 56 38.3
		ePcP	17 58 53.2
		epPcP	17 59 08.7
		eScP	18 02 38.3
	GCC	eP	17 56 38.5
		ePcP	17 58 53.3
		eScP	18 02 38.3
	PCC	eP	17 56 43
		eScP	18 02 40.3
	BRK	eP	17 56 44.5
		ePcP	17 58 54.3
		eScP	18 02 40.6
		AMP(μm)	PER(s)
		PZ 0.089	1.5
		PZ 0.089	1.5
	ORV	eP	17 56 47.1
		ePcP	17 58 55.9
		eScP	18 02 41.9
	WDC	eP	17 56 54.2

DATE	STA	PHASE	TIME (UTC)
		ePcP	17 58 58.7
		epPcP	17 59 14.3
		eScP	18 02 45.3
	FHC	eP	17 57 05.7
		ePcP	17 59 03.9
		eScP	18 02 51.3
	MIN	ePcP	17 59 06.8
		eScP	18 02 43.2
USGS 17h49m25.7s 13.1N 88.8W			
h=80km mb=5.4			
El Salvador			
Aug 3	MNA	eP	00 17 44.6
	JAS1	eP	00 17 56.7
	MHC	eP	00 18 03.9
	ORV	eP	00 18 04.1
	WDC	eP	00 18 08.3
USGS 00h08m35.0s 17.1N 62.1W			
h=100km mb=4.9			
Leeward Islands			
Aug 3	LLA	iPc	09 00 18.9
	SAO	iPc	09 00 19.0
	PRS	iP	09 00 20.0
	PRI	iPd	09 00 26.6
		iS	09 00 37.8
	GCC	ePc	09 00 28.0
	MHC	iPd	09 00 30.4
	FRI	iPc	09 00 36.8
	PCC	iPc	09 00 36.9
	JAS1	iPc	09 00 40.0
	BRK	e(P)	09 00 40.0
		i	09 00 42.2
		e	09 00 43.5
		e	09 00 47
	ZSP	eP	09 00 41.0
		i	09 00 43.5
	MNA	e(P)	09 01 08.6
	MIN	e	09 01 15
BRK 09h00m14.2s 36.6N 121.2W			
h=7km ML=3.4(3) Mo=2.6E21(2)			
Bear Valley, 35 km SE of Hollister, CA			
Aug 3	MNA	iPd	10 33 21.2
	FRI	iPc	10 33 26.6
	JAS1	iPc	10 33 33.7
		iS	10 33 55.3
	LLA	ePc	10 33 43.9
	PRI	ePd	10 33 45.0
	SAO	eP	10 33 47.5
	MHC	eP	10 33 48.1
	PRS	ePd	10 33 50.4
	GCC	eP	10 33 53.0
	BRK	eP	10 33 54.3
		e	10 33 54.5
		i d	10 33 55.9
		e	10 33 56
		e	10 33 57
		i	10 34 03.7
	ZSP	eP	10 33 55.1
	PCC	eP	10 33 55.4
	MIN	eP	10 34 07.1
	WDC	eP	10 34 12.3
BRK 10h33m05.3s 37.6N 118.5W			
h=7km ML=4.3(3) Mo=2.3E22(2)			
Chalfant Valley, 29 km NNW of Bishop, CA			
Aug 3	WDC	e(P)	13 36 29.0
	MIN	eP	13 36 37.5
	BRK	eP	13 36 45.5

DATE	STA	PHASE	TIME (UTC)
		eS	13 42 54
		e	13 46 08
		e(Lr)	13 47 50
		AMP(μm)	PER(s)
		PZ 0.037	1.5
		LZ 11	20.
	GCC	eP	13 36 51.3
	MHC	eP	13 36 52
	JAS1	eP	13 36 55.3
	PRS	e(P)	13 37 02.2
	LLA	e(P)	13 37 02.5
	PRI	eP	13 37 03.5
	FRI	eP	13 37 03.8
	MNA	eP	13 37 04.2
BRK Ms=5.7 Distance=41°			
USGS 13h29m10.2s 51.2N 176.8W			
h=33km mb=5.4 Ms=5.6			
Andreanof Islands, Aleutian Islands			
Aug 3	ARC	iP	16 15 49.8
		iS	16 16 03.2
	FHC	iPc	16 15 50.7
		iS	16 16 03.8
	WDC	iPc	16 16 05.5
		iS	16 16 30.9
	MIN	iPc	16 16 15.6
	ORV	ePc	16 16 17.7
	BRK	ePc	16 16 23.1
	ZSP	ePd	16 16 23.7
	PCC	eP	16 16 26.1
	GCC	eP	16 16 32.4
	MHC	ePc	16 16 33.6
	SAO	eP	16 16 39.5
	JAS1	iPc	16 16 40.4
	LLA	e	16 16 44.7
	PRS	e	16 16 45.4
	FRI	eP	16 16 54.0
BRK 16h15m30.4s 40.4N 125.4W			
h=7km ML=4.3(4) Mo=9.6E21(1)			
Off Coast 80 km W of Cape Mendocino, CA			
Aug 3	GCC	e(P)	23 57 18.8
	MHC	ePc	23 57 20.4
	PRS	eP	23 57 20.4
	LLA	ePc	23 57 22.3
	PRI	ePc	23 57 23.3
	JAS1	ePc	23 57 25.3
	FRI	ePc	23 57 27.0
	MNA	ePc	23 57 34.9
USGS 23h44m53.4s 8.2S 161.8E			
h=66km mb=4.7			
Solomon Islands			
Aug 4	MHC	iPc	03 41 44.9
	GCC	iPd	03 41 50.3
	PCC	iPc	03 41 51.0
	BRK	eP	03 41 53.0
		eS	03 42 02
	ZSP	iPd	03 41 54.5
		iS	03 42 04.4
	SAO	iPd	03 41 55.7
	LLA	iPd	03 42 00.7
	PRS	eP	03 42 02.0
	JAS1	iPc	03 42 03.4
		iS	03 42 19.3
	PRI	ePd	03 42 09.0
	FRI	ePc	03 42 10.8
	ORV	eP	03 42 15.8
	MIN	ePc	03 42 29.6
	WDC	e	03 42 30.4
	MNA	e	03 42 37.0

DATE	STA	PHASE	TIME (UTC)
BRK 03h41m41.9s 37.4N 121.8W			
h=8km ML=3.4(2) Mo=1.7E21(2)			
Calaveras Reservoir, 14 km NE of San Jose, CA			
Aug 4	MIN	eP	10 59 02.6
		e	10 59 13.4
	WDC	e	10 59 04.0
		e	10 59 09.2
	ORV	eP	10 59 05.4
		e	10 59 16.6
	JAS1	e(P)	10 59 16.7
		i	10 59 27.6
	FRI	eP	10 59 22.8
		e	10 59 33.6
	MNA	eP	10 59 22.9
		i	10 59 34.6
	PRI	e(P)	10 59 23
		e	10 59 33.9
	GCC	e	10 59 24.4
	PRS	e	10 59 29.8
USGS 10h48m11.9s 42.3N 144.6E			
h=33km mb=5.0 Ms=5.0			
Hokkaido, Japan, Region			
Aug 4	MIN	e	22 44 41.1
	ORV	eP	22 44 42.1
	JAS1	eP	22 44 55.1
	PRS	eP	22 44 57.0
	LLA	eP	22 44 57.9
	MNA	eP	22 45 02.3
USGS 22h34m37.9s 46.3N 153.2E			
h=33km mb=5.5 Ms=5.1			
Kuril Islands			
Aug 5	MNA	iPd	02 32 27.1
		iS	02 32 40.9
	FRI	iPc	02 32 29.3
		iS	02 32 44.4
	JAS1	iPc	02 32 38.5
	LLA	eP	02 32 47.1
	PRI	eP	02 32 47.2
	SAO	eP	02 32 52.0
	PRS	eP	02 32 53.3
	MHC	iPd	02 32 53.4
	PCC	eP	02 33 00.6
BRK 02h32m08.1s 37.4N 118.3W			
h=6km ML=3.7(2)			
Chalfant Valley, 9 km NE of Bishop, CA			
Aug 5	PRI	eP	11 27 41.2
	MHC	eP	11 27 42.3
	FRI	eP	11 27 46.7
	JAS1	eP	11 27 47.6
	ORV	eP	11 27 49.5
	WDC	eP	11 27 50.0
	MIN	eP	11 27 51.8
	MNA	eP	11 27 56.8
USGS 11h15m31.4s 24.2S 177.2W			
h=33km mb=5.3 Ms=5.0			
South of Fiji Islands			
Aug 5	GCC	eP	15 57 01.7
	PCC	eP	15 57 01.9
	PRS	eP	15 57 02.7
	SAO	e(P)	15 57 02.9
	PRI	ePd	15 57 04.1
	MHC	eP	15 57 04.1
	JAS1	iPd	15 57 09.7
	FRI	eP	15 57 09.7
	ORV	eP	15 57 10.6

DATE	STA	PHASE	TIME (UTC)
	WDC	iPc	15 57 10.6
	MIN	eP	15 57 12.8
	MNA	ePd	15 57 19.0
USGS 15h46m12.1s 18.8S 179.2W			
h=683km mb=4.8			
Fiji Islands Region			
Aug 5	WDC	eP	19 29 29.9
	FRI	e	19 29 30.7
	JAS1	eP	19 29 31.4
	ORV	e	19 29 33.2
	MIN	e	19 29 35.6
	MNA	e	19 29 40.7
USGS 19h17m11.8s 24.1S 177.3W			
h=33km mb=5.1 Ms=5.0			
South of Fiji Islands			
Aug 5	WDC	ePc	21 08 14.9
	ORV	eP	21 08 22.9
	MHC	ePc	21 08 33.4
	JAS1	iPc	21 08 35.7
	PRS	eP	21 08 39.2
	LLA	e(P)	21 08 40.9
	MNA	ePc	21 08 41.6
	FRI	ePc	21 08 42.2
	PRI	e	21 08 43.7
USGS 20h59m25.0s 53.0N 153.3E			
h=512km mb=4.7			
Sea of Okhotsk			
Aug 6	GCC	eP	10 06 15.3
	PCC	eP	10 06 15.7
	PRI	eP	10 06 17.3
	BRK	eP	10 06 17.6
		AMP(μm)	PER(s)
		PZ 0.0099	0.6
	MHC	eP	10 06 17.9
	FRI	eP	10 06 22.5
	JAS1	eP	10 06 23.0
	WDC	eP	10 06 25.0
	ORV	eP	10 06 25.6
	MIN	eP	10 06 26.3
USGS 09h54m52.6s 23.8S 179.9E			
h=544km mb=5.1			
South of Fiji Islands			
Aug 6	LLA	iPd	14 44 40.5
	PRI	iPd	14 44 40.9
	PRS	iPc	14 44 41.6
	SAO	iPc	14 44 45.5
	GCC	eP	14 44 54.4
	FRI	eP	14 44 55.7
		iS	14 45 11.3
	MHC	eP	14 44 56.1
	PCC	e(P)	14 45 03.2
	JAS1	eP	14 45 03.7
BRK 14h44m34.8s 36.3N 120.9W			
h=6km ML=2.6(2)			
Eagle Mountain, 22 km NE of King City, CA			
Aug 7	PCC	eP	03 02 19.2
	GCC	eP	03 02 19.3
	PRS	eP	03 02 19.6
	SAO	eP	03 02 20.1
	BRK	eP	03 02 20.9
		AMP(μm)	PER(s)
		PZ 0.030	1.0
	PRI	eP	03 02 21.7
	MHC	eP	03 02 21.7
	FHC	eP	03 02 25.0
	FRI	eP	03 02 27.1

DATE	STA	PHASE	TIME (UTC)
	JAS1	ePc	03 02 27.5
	WDC	ePc	03 02 28.4
	ORV	eP	03 02 28.5
	MIN	eP	03 02 30.4
USGS 02h51m29.0s 18.0S 178.4W			
h=594km mb=5.0			
Fiji Islands Region			
Aug 7	SAO	iPc	03 32 25.6
	LLA	iPc	03 32 28.1
	PRS	iPd	03 32 28.6
	GCC	iPd	03 32 35.0
	PRI	ePc	03 32 36.0
	MHC	ePd	03 32 37.0
	PCC	eP	03 32 43.7
	FRI	eP	03 32 45.6
	BRK	e(P)	03 32 45.7
	JAS1	iPc	03 32 47.9
BRK 03h32m22.4s 36.6N 121.3W			
h=7km ML=2.9(2)			
Stone Canyon, 24 km SSE of Hollister, CA			
Aug 7	SAO	iPc	19 09 32.6
	LLA	iPc	19 09 32.7
		eS	19 09 36.5
	PRS	iPd	19 09 33.7
	PRI	ePc	19 09 40.5
	GCC	ePd	19 09 41.9
		iS	19 09 54.5
	MHC	ePd	19 09 43.9
	PCC	ePc	19 09 50.3
	FRI	ePc	19 09 50.5
	JAS1	eP	19 09 54.6
	BRK	eP	19 09 57.1
BRK 19h09m28.0s 36.6N 121.2W			
h=7km ML=2.5(2)			
Bear Valley, 32 km SE of Hollister, CA			
Aug 7	FRI	eP	22 41 15.0
	PRI	eP	22 41 18.2
	LLA	ePd	22 41 20.8
	PRS	e(P)	22 41 21.2
	JAS1	ePd	22 41 23.2
	MHC	eP	22 41 26.7
	GCC	eP	22 41 28
	PCC	eP	22 41 32.4
	BRK	eP	22 41 33.3
		eLr	23 00 22
		AMP(μm)	PER(s)
		PZ 0.063	1.2
		LZ 4.5	20.
	ORV	eP	22 41 34.8
	MIN	eP	22 41 39.0
	WDC	eP	22 41 44.7
	FHC	eP	22 41 52.8
USGS 22h32m50.4s 7.4N 81.2W			
h=8km mb=5.4 Ms=5.4			
Panama			
Aug 7	WDC	ePc	23 19 32.0
	ORV	eP	23 19 41.5
	MHC	eP	23 19 52.3
	JAS1	ePc	23 19 56.0
	FRI	eP	23 20 04.7
USGS 23h12m10.3s 51.8N 178.3W			
h=91km mb=4.5			
Andreanof Islands, Aleutian Islands			
Aug 8	FHC	eP	04 37 44.0
	WDC	ePd	04 37 52.2

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DATE	STA	PHASE	TIME (UTC)
	MIN	eP	04 37 57.8
	BRK	eP	04 38 08.2
			AMP(μm) PER(s)
		PZ	0.0087 0.8
	JAS1	iPd	04 38 17.8
	PRS	eP	04 38 22.0
	LLA	eP	04 38 22.6
	PRI	eP	04 38 26.9
	FRI	eP	04 38 28.4
USGS 04h31m21.4s 53.6N 167.3W			
h=33km mb=4.5 Ms=4.3			
Fox Islands, Aleutian Islands			
Aug 8	FHC	iPc	17 31 41.1
		iPc	17 31 45.4
	ARC	iP	17 31 45.9
		iS	17 31 51.0
	WDC	iPc	17 31 50.9
		iP	17 31 55.4
		iS	17 32 06.6
	MIN	iPc	17 32 05.6
	ORV	eP	17 32 08.6
		e	17 32 13.0
BRK 17h31m35.3s 40.9N 123.7W			
h=42km ML=3.8(2) Mo=1.1E22(1)			
Near Salyer, 37 km ENE of Eureka, CA			
Aug 10	WDC	eP	05 55 03.3
	MHC	e	05 55 04.6
	MIN	eP	05 55 06.0
	ORV	eP	05 55 06.0
	PRI	eP	05 55 07.8
	JAS1	eP	05 55 09.1
	FRI	eP	05 55 11.0
	MNA	eP	05 55 18.2
USGS 05h42m08.2s 7.6S 154.8E			
h=33km mb=5.2			
Solomon Islands			
Aug 11	WDC	e	03 03 21.5
	ORV	e	03 03 22.5
	JAS1	eP	03 03 23.0
	FRI	e	03 03 23.5
USGS 02h50m37.2s 18.3S 168.2E			
h=22km mb=4.7			
Vanuatu Islands			
Aug 11	MNA	ePKP	06 19 02.5
	FRI	ePKP	06 19 05.3
	MIN	ePKP	06 19 06.1
	JAS1	ePKP	06 19 06.6
	PRI	ePKP	06 19 08.0
Aug 11	PRI	ePc	22 19 12.9
	MNA	ePc	22 19 14.2
	LLA	ePc	22 19 15.3
		e	22 19 23.4
	PRS	ePc	22 19 15.4
	JAS1	iPc	22 19 18.3
	GCC	ePc	22 19 19.8
		e	22 19 27.6
	MHC	ePc	22 19 19.9
	ORV	ePc	22 19 27.0
		e	22 19 35.1
	WDC	ePc	22 19 31.8
USGS 22h06m43.3s 30.9S 67.7W			
h=5km mb=5.4 Ms=4.9			
San Juan Province, Argentina			
Aug 12	MNA	eP	04 15 39.5
	FRI	eP	04 15 41.5
	PRI	e(P)	04 15 42.6

DATE	STA	PHASE	TIME (UTC)
	PRS	e	04 15 48
	JAS1	eP	04 15 48.6
	MHC	e(P)	04 15 53.5
	BRK	eP	04 16 00
		ePP	04 17 58
		ePPP	04 19 00
		eS	04 23 00
		e(SS)	04 27 20
		e	04 32 27
			AMP(μm) PER(s)
		LZ	1.7 20.
	ORV	e(P)	04 16 01.8
	MIN	e(P)	04 16 05.7
	WDC	e	04 16 09.8
BRK Ms=5.1 Distance=50°			
USGS 04h07m16.8s 6.0N 82.6W			
h=10km mb=5.4 Ms=5.1			
South of Panama			
Aug 12	MNA	iPd	09 30 06.1
		iS	09 30 17.9
	FRI	iPc	09 30 09.5
		iS	09 30 24.4
	JAS1	iPc	09 30 18.1
		iS	09 30 39.2
	PRI	ePc	09 30 27.9
	LLA	ePc	09 30 27.9
	SAO	iPd	09 30 31.8
	MHC	iPd	09 30 33.3
	PRS	eP	09 30 33.5
	GCC	e(P)	09 30 36.2
	PCC	ePd	09 30 40.4
	BRK	e	09 30 41.5
		e	09 30 48.5
BRK 09h29m48.3s 37.5N 118.4W			
h=5km ML=3.7(2)			
Chalfant Valley, 15 km NNE of Bishop, CA			
Aug 12	MHC	iPc	13 02 31.1
		iS	13 02 32.6
	GCC	ePd	13 02 37.0
	PCC	ePc	13 02 39.4
	SAO	iPd	13 02 41.6
	BRK	ePd	13 02 41.9
	ZSP	ePd	13 02 44.0
	LLA	ePc	13 02 46.8
	PRS	ePc	13 02 48.6
	JAS1	iPc	13 02 50.5
		iS	13 03 06.3
	FRI	ePc	13 02 57.4
BRK 13h02m29.1s 37.4N 121.7W			
h=5km ML=2.6(2) Mo=3.7E19(2)			
Halls Valley area, 13 km ENE of San Jose, CA			
Aug 12	MNA	iPd	15 37 46.1
	FRI	iPc	15 37 48.2
	JAS1	iPc	15 37 56.6
	LLA	ePc	15 38 05.6
	PRI	ePc	15 38 06.6
	SAO	eP	15 38 10.5
	MHC	eP	15 38 10.8
	PRS	ePd	15 38 12.2
	GCC	eP	15 38 15.2
	BRK	ePc	15 38 18.8
	ZSP	ePd	15 38 18.9
		eS	15 39 04.6
	PCC	e	15 38 20.5
BRK 15h37m28.1s 37.5N 118.5W			
h=3km ML=3.8(2)			
Chalfant Valley, 18 km NW of Bishop,			

DATE	STA	PHASE	TIME (UTC)
CA			
Aug 13	FRI	ePc	04 20 07.9
	MNA	ePc	04 20 08.4
	PRI	iPc	04 20 10.6
	LLA	ePc	04 20 13.4
	PRS	ePc	04 20 14.8
	JAS1	iPc	04 20 16.6
	MHC	ePc	04 20 21.0
	GCC	ePc	04 20 21.1
	ORV	iPc	04 20 29.5
	MIN	ePc	04 20 32.3
	WDC	ePc	04 20 36.3
	FHC	ePc	04 20 46.6
	BRK	e(S)	04 27 35
		e	04 36 04
			AMP(μm) PER(s)
		LZ	1.0 20.
USGS 04h11m41.1s 5.8N 82.4W			
h=10km mb=5.4 Ms=5.2			
South of Panama			
Aug 13	MNA	iPd	15 36 09.8
		i	15 36 20.7
	FRI	iPd	15 36 12.0
	PRI	ePd	15 36 16.0
	LLA	ePd	15 36 18.3
	JAS1	eP	15 36 20
		i	15 36 39.2
	MHC	ePd	15 36 25.3
	GCC	ePd	15 36 26.0
	ORV	iPd	15 36 30.8
		i	15 36 51.8
	WDC	iPd	15 36 36.5
		i	15 36 57.8
		i	15 37 06.7
	FHC	iPd	15 36 47.4
		i	15 37 05.5
USGS 15h27m21.8s 7.7N 74.7W			
h=59km mb=5.0			
Northern Colombia			
Aug 14	ARC	iP	00 50 50.7
		iS	00 50 58.3
	FHC	iPd	00 50 50.8
		eS	00 50 59.0
	WDC	iPc	00 51 03.0
		eS	00 51 22.0
	MIN	iPc	00 51 12.9
	ORV	iPc	00 51 15.9
	BRK	ePc	00 51 26.2
	PCC	eP	00 51 28.8
	MHC	ePd	00 51 35.8
	GCC	ePd	00 51 36.1
	JAS1	ePd	00 51 39.7
	SAO	eP	00 51 42.1
	PRS	eP	00 51 49.3
	FRI	ePc	00 51 53.6
BRK 00h50m40.8s 40.4N 124.3W			
h=18km ML=3.7(2) Mo=3.6E21(1)			
Near Petrolia, 47 km SSW of Eureka, CA			
Aug 14	GCC	eP	02 05 41.4
	PRS	eP	02 05 41.4
	PRI	eP	02 05 43.4
	MHC	eP	02 05 44.1
	FRI	ePd	02 05 48.6
	JAS1	eP	02 05 49.6
	WDC	ePd	02 05 52.1
USGS 01h53m35.9s 23.6S 177.2W			
h=33km mb=4.7			

DATE	STA	PHASE	TIME (UTC)
South of Fiji Islands			
Aug 14	JAS1	iPd	13 03 29.7
	WDC	iPd	13 03 32.9
	MNA	ePd	13 03 37.8
	BRK	e	13 32 32
			AMP(μm) PER(s)
		LZ	0.80 20.
USGS 12h50m51.6s 30.0S 177.2W			
h=33km mb=5.2 Ms=4.7			
Kermadec Islands			
Aug 14	SAO	iPc	14 15 52.5
	LLA	iPd	14 15 52.5
	PRS	iPd	14 15 53.5
	PRI	iPd	14 16 00.2
	GCC	iPd	14 16 01.9
	MHC	iPd	14 16 03.9
	FRI	iPc	14 16 10.2
	PCC	iPc	14 16 10.4
	JAS1	iPc	14 16 14.8
BRK 14h15m47.8s 36.6N 121.2W			
h=7km ML=2.6(2)			
Bear Valley, 33 km SE of Hollister, CA			
Aug 14	WDC	iPc	19 53 19.5
		iPP	19 57 32.8
		e	20 09 13.3
	FHC	e	19 53 20.3
	PCC	e(P)	19 53 23.3
	BRK	eP	19 53 23.4
		ePP	19 57 46
		eSKKS	20 07 00
		ePPS	20 08 08
		ePSPS	20 13 21
		iLr	20 26 42
			AMP(μm) PER(s)
		PZ	0.024 1.0
		LZ	110 20.
	ORV	eP	19 53 23.7
	GCC	eP	19 53 25.5
	MHC	ePc	19 53 28.2
	LLA	eP	19 53 28.4
	JAS1	ePc	19 53 28.5
		e	19 57 55.4
		e	20 09 05.5
	FRI	eP	19 53 31.8
	PRI	eP	19 53 32.1
		ePP	19 57 45.8
	MNA	eP	19 53 36.0
		ePP	19 58 00.6
		e	20 09 00.8
BRK Ms=7.4 Distance=104°			
USGS 19h39m13.7s 1.8N 126.5E			
h=33km mb=6.6 Ms=7.2			
Molucca Passage			
Aug 14	GCC	eP	21 00 50.6
	MHC	eP	21 00 52.9
	FRI	eP	21 00 56.1
	JAS1	ePd	21 00 57.8
	WDC	ePd	21 01 01.0
	MNA	ePd	21 01 05.7
USGS 20h48m08.4s 32.3S 178.5W			
h=33km mb=5.7			
South of Kermadec Islands			
Aug 15	PRI	iPd	08 45 22.4
	LLA	iPd	08 45 26.3
	PRS	iPc	08 45 26.8
	SAO	iPc	08 45 31.4

DATE	STA	PHASE	TIME (UTC)
	FRI	iPc	08 45 39.7
	GCC	eP	08 45 40.2
	MHC	ePc	08 45 41.5
	PCC	eP	08 45 47.4
	JAS1	ePd	08 45 47.4
		iS	08 46 10.6
	BRK	eP	08 45 51.2
		e	08 46 36.5
BRK 08h45m18.5s 36.2N 120.8W			
h=5km ML=2.8(2)			
Peachtree Valley, 25 km E of King City, CA			
Aug 15	PRS	ePc	11 01 48.1
	FRI	ePc	11 01 54.4
	JAS1	ePc	11 01 55.2
	WDC	iPc	11 01 58.8
	MIN	eP	11 01 59.7
	MNA	ePc	11 02 03.2
USGS 10h49m42.0s 23.9S 177.3W			
h=55km mb=5.0			
South of Fiji Islands			
Aug 15	PRI	e	16 47 22.4
	JAS1	eP	16 47 27.5
	WDC	eP	16 47 30.9
	MNA	eP	16 47 37.7
USGS 16h35m17.0s 24.0S 177.3W			
h=71km mb=5.1			
South of Fiji Islands			
Aug 15	GCC	eP	23 46 21.0
	PCC	eP	23 46 21.2
	PRS	e	23 46 21.3
	SAO	eP	23 46 21.7
	BRK	eP	23 46 22.5
	PRI	eP	23 46 23.2
	LLA	e	23 46 23.3
	MHC	eP	23 46 23.5
	FRI	eP	23 46 27.9
	JAS1	iPd	23 46 28.4
	ORV	eP	23 46 29.8
	WDC	eP	23 46 30.0
	MIN	eP	23 46 31.6
	MNA	eP	23 46 36.9
USGS 23h34m58.4s 23.3S 179.1E			
h=552km mb=5.0			
South of Fiji Islands			
Aug 16	PRS	eP	20 36 41.2
	PCC	eP	20 36 41.5
	GCC	eP	20 36 41.7
	SAO	eP	20 36 41.8
	BRK	eP	20 36 43.0
			AMP(μm) PER(s)
		PZ	0.015 0.6
	PRI	eP	20 36 43.2
	MHC	eP	20 36 43.4
	LLA	eP	20 36 44.4
	FHC	eP	20 36 47.5
	FRI	eP	20 36 47.8
	JAS1	ePd	20 36 48.4
	ORV	eP	20 36 49.9
	WDC	ePd	20 36 50.2
	MIN	eP	20 36 51.5
	MNA	ePd	20 36 56.8
USGS 20h25m12.8s 25.4S 178.4E			
h=600km mb=5.3			
South of Fiji Islands			
Aug 16	GCC	eP	20 37 22.0
	PCC	eP	20 37 22.1

DATE	STA	PHASE	TIME (UTC)
	PRS	eP	20 37 22.1
	PRI	eP	20 37 24.0
	BRK	eP	20 37 24.4
			AMP(μm) PER(s)
		PZ	0.0088 0.7
	MHC	eP	20 37 24.4
	FRI	eP	20 37 28.2
	JAS1	eP	20 37 29.2
	ORV	eP	20 37 30.8
	WDC	eP	20 37 31.2
	MNA	eP	20 37 37.7
Fiji Islands Region			
Aug 16	WDC	eP	21 26 50.7
	MIN	eP	21 26 52.0
	ORV	eP	21 26 57.2
	JAS1	eP	21 27 08.1
	MNA	eP	21 27 19.3
USGS 21h08m28.2s 1.8N 126.4E			
h=33km mb=5.7 Ms=5.4			
Molucca Passage			
Aug 17	JAS1	e	11 48 04.2
		e	11 48 15.1
	LLA	e	11 48 11.6
	PRS	e	11 48 12.4
	PRI	e	11 48 14.1
		e	11 48 26.4
	GCC	e	11 48 17.3
	MHC	e	11 48 17.9
	MNA	e	11 48 26.8
USGS 11h37m13.8s 14.3S 75.7W			
h=50km mb=5.1			
Near Coast of Peru			
Aug 17	PRS	e	17 52 21.8
	FRI	e	17 52 29.3
	JAS1	eP	17 52 29.8
	WDC	eP	17 52 32.2
	MNA	eP	17 52 38.8
USGS 17h40m14.6s 24.0S 177.2W			
h=33km mb=5.1			
South of Fiji Islands			
Aug 18	PCC	eP	02 11 38.6
	PRS	eP	02 11 38.7
	GCC	eP	02 11 39.0
	PRI	eP	02 11 40.8
	SAO	eP	02 11 40.8
	LLA	eP	02 11 41.3
	MHC	eP	02 11 41.7
	BRK	eP	02 11 42.3
		eS	02 21 30.0
		eLr	02 35 06
			AMP(μm) PER(s)
		PZ	0.0088 0.7
		LZ	4.5 20.
	FRI	eP	02 11 46.7
	JAS1	iPc	02 11 47.5
	ORV	eP	02 11 50.0
	WDC	ePc	02 11 50.0
	MIN	ePc	02 11 51.7
	MNA	iPc	02 11 57.5
BRK Ms=5.8 Distance=77°			
USGS 01h59m54.5s 20.5S 174.2W			
h=19km mb=5.9 Ms=5.9			
Tonga Islands			
Aug 18	MNA	iPd	10 49 36.2
	FRI	iPc	10 49 59.6
		iS	10 50 14.4
	JAS1	iPc	10 50 07.3

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
	LLA	eP	10 50 16.8
	PRI	ePd	10 50 18.1
	SAO	eP	10 50 20.5
		i	10 50 21.8
	MHC	eP	10 50 21.2
	PRS	eP	10 50 22.9
	GCC	eP	10 50 25.1
	BRK	eP	10 50 28.5
	PCC	eP	10 50 28.7
	ZSP	eP	10 50 28.8
	ORV	eP	10 50 29.1
	MIN	eP	10 50 38.5

BRK 10h49m39.0s 37.5N 118.5W
h=10km ML=3.9(3)
Chalfant Valley, 21 km NNW of Bishop, CA

Aug 18	WDC	eP	20 00 57.3
		e	20 04 28.3
	JAS1	e	20 00 57.6
		e	20 04 27
	MNA	ePc	20 01 03.8
		e	20 04 34.9

USGS 19h48m37.0s 24.1S 177.4W
h=33km mb=4.9 Ms=4.9
South of Fiji Islands

Aug 20	MHC	iPc	02 37 40.0
	GCC	ePd	02 37 46.1
	PCC	eP	02 37 48.6
	SAO	iPd	02 37 50.9
	BRK	eP	02 37 51.1
		iS	02 38 03.1
	LLA	eP	02 37 56.0
	PRS	iPc	02 37 58.0
	JAS1	iPd	02 38 00.0
		iS	02 38 15.5
	FRI	ePd	02 38 06.8

BRK 02h37m38.1s 37.4N 121.7W
h=3km ML=2.5(2) Mo=6.1E19(2)
Halls Valley area, 12 km ENE of San Jose, CA

Aug 20	MNA	ePc	03 50 08.3
		i	03 50 26.4
	FRI	iPc	03 50 08.6
		iS	03 50 24.5
	JAS1	iPc	03 50 19.8
		iS	03 50 44.5
	LLA	eP	03 50 26.1
	PRI	eP	03 50 26.8
	MHC	eP	03 50 32.9
	SAO	eP	03 50 33.0

BRK 03h49m46.3s 37.2N 118.2W
h=7km ML=3.3(2)
23 km SE of Bishop, CA

Aug 20	MHC	iPc	07 02 21.6
	GCC	iPd	07 02 24.2
	SAO	iPd	07 02 24.5
	LLA	iPc	07 02 29.9
	PCC	ePc	07 02 31.0
	PRS	iPc	07 02 32.2
	BRK	iPc	07 02 34.5
		eS	07 02 49.0
	JAS1	iPd	07 02 38.5
	PRI	ePc	07 02 38.8
	FRI	iPc	07 02 42.3

BRK 07h02m16.8s 37.1N 121.6W
h=6km ML=3.3(3) Mo=1.3E21(2)
12 km N of Gilroy, CA

DATE	STA	PHASE	TIME (UTC)
Aug 20	WDC	ePc	07 17 56.1
	GCC	eP	07 17 57.6
	BRK	eP	07 17 57.8
			AMP(μm) PER(s)
		PZ	0.037 1.0
	MIN	ePc	07 17 58.8
	MHC	eP	07 17 59.8
	ORV	eP	07 18 00.2
	JAS1	ePc	07 18 02.7
	PRI	ePc	07 18 03.0
	FRI	eP	07 18 04.8
	MNA	ePc	07 18 11.3

USGS 07h05m01.6s 5.3S 151.3E
h=79km mb=5.8
New Britain Region

Aug 20	MHC	iPc	09 50 25.8
	GCC	iPd	09 50 28.4
	SAO	iPd	09 50 28.7
	LLA	iPc	09 50 34.0
	PCC	ePd	09 50 35.2
	PRS	ePc	09 50 36.3
	BRK	eP	09 50 38.7
		eS	09 50 53.0
	JAS1	iPd	09 50 42.7
	PRI	eP	09 50 43.8
	FRI	ePc	09 50 46.5

BRK 09h50m21.0s 37.1N 121.6W
h=6kmR ML=2.8(3) Mo=3.6E20(2)
12 km N of Gilroy, CA

Aug 20	MHC	iPd	09 57 09.8
	GCC	iPd	09 57 12.3
	SAO	iPd	09 57 12.6
	LLA	iPc	09 57 18.0
	PCC	ePc	09 57 19.0
	PRS	eP	09 57 20.2
	BRK	iPc	09 57 22.7
		iS	09 57 36.9
	JAS1	iPd	09 57 26.6
	PRI	ePc	09 57 27.4
	FRI	iPc	09 57 30.3
	ORV	eP	09 57 45.3

BRK 09h57m05.0s 37.1N 121.6W
h=7km ML=3.2(3) Mo=1.2E21(2)
12 km N of Gilroy, CA

Aug 20	GCC	ePd	10 20 56.8
	PRS	ePd	10 20 57.0
	SAO	eP	10 20 57.6
	PRI	ePd	10 20 59.0
	MHC	eP	10 20 59.6
	FRI	ePd	10 21 05.0
	JAS1	ePd	10 21 05.8
	ORV	eP	10 21 07.5
	WDC	ePd	10 21 08.0
	MNA	ePd	10 21 16.0

USGS 10h09m32.6s 16.9S 173.5W
h=33km mb=5.6 Ms=4.7
Tonga Islands

Aug 21	MHC	iPc	01 04 33.2
	PCC	iPd	01 04 39.8
	GCC	iPd	01 04 39.9
	BRK	iPc	01 04 40.5
	SAO	iPc	01 04 44.3
	LLA	ePc	01 04 48.6
	JAS1	iPd	01 04 48.8
	PRS	eP	01 04 50.9
	PRI	e(P)	01 04 56.5
	FRI	ePc	01 04 57.5
	ORV	eP	01 05 04.1

DATE	STA	PHASE	TIME (UTC)
BRK	01h04m29.3s 37.5N 121.7W		
	h=6km ML=3.2(3) Mo=6.8E20(2)		
Mt. Lewis area, 28 km NE of San Jose, CA			
Aug 21	LLA	eP	03 10 23.1
	PRS	e	03 10 23.5
	JAS1	eP	03 10 25.7
	GCC	e	03 10 27.8
	MHC	eP	03 10 28.2
	ORV	e	03 10 35.0
	WDC	eP	03 10 39.8

USGS 02h58m36.8s 24.2S 66.9W
h=189km mb=4.6
Salta Province, Argentina

Aug 21	PRI	eP	04 21 37.5
	PCC	e(P)	04 21 37.7
	MHC	eP	04 21 38.3
	FRI	eP	04 21 41.5
	JAS1	eP	04 21 42.9
	WDC	eP	04 21 46.0
	MIN	eP	04 21 48.3
	MNA	eP	04 21 50.5

USGS 04h08m38.2s 34.8S 179.0E
h=33km mb=5.2
South of Kermadec Islands

Aug 21	FHC	eP	06 46 07.6
	WDC	eP	06 46 13.5
	JAS1	eP	06 46 36.0
	MNA	eP	06 46 42.8

USGS 06h37m09.1s 53.8N 160.4E
h=33km mb=5.4 Ms=3.9
Near East Coast of Kamchatka

Aug 21	PRI	e	17 09 47.2
	FRI	e	17 10 01.6
	MNA	eP	17 10 07.8
	JAS1	eP	17 10 09.5
	MHC	e	17 10 09.5
	ORV	e	17 10 24.0
	WDC	e	17 10 28.5

USGS 17h01m27.2s 9.1S 109.6W
h=10km mb=5.0 Ms=5.3
Northern Easter Island Cordillera

Aug 21	PRI	e	17 18 59.8
	FRI	e	17 19 02.3
	MHC	e	17 19 09.2
	JAS1	eP	17 19 11.2
	MNA	eP	17 19 12.2
	WDC	e	17 19 31.8

USGS 17h10m30.4s 9.0S 109.7W
h=10km mb=4.9 Ms=4.9
Northern Easter Island Cordillera

Aug 22	PRI	eP	01 19 23.1
	FRI	e	01 19 28.3
	JAS1	eP	01 19 34.0
	MNA	eP	01 19 35.5
	WDC	e	01 19 55.9

USGS 01h10m55.0s 8.9S 109.8W
h=10km mb=4.6 Ms=4.4
Northern Easter Island Cordillera

Aug 22	LLA	iPd	16 54 54.1
	SAO	iPc	16 54 56.3
	PRS	iPd	16 54 57.6
	PRI	iPc	16 55 02.4
		iS	16 55 12.6
	GCC	iPc	16 55 04.6

DATE	STA	PHASE	TIME (UTC)
	MHC	iPd	16 55 06.3
	FRI	iPd	16 55 11.3
	PCC	eP	16 55 13.0
	JAS1	i	16 55 15.4
		i	16 55 16.3
	BRK	e	16 55 18.5

BRK 16h54m50.7s 36.6N 121.1W
h=13km ML=2.9(2)
Bear Valley area, 35 km SE of Hollister, CA

Aug 23	MNA	iPd	03 01 48.1
	FRI	iPc	03 01 51.4
	JAS1	iPc	03 02 00.0
	PRI	eP	03 02 08.8
	LLA	eP	03 02 09.2
	SAO	iP	03 02 13.8
	PRS	eP	03 02 14.4
	MHC	iP	03 02 15.3
	GCC	e	03 02 21
	BRK	eP	03 02 21.5
	ORV	e	03 02 21.8
	PCC	eP	03 02 22.2
	ZSP	e	03 02 22.6
	MIN	e	03 02 38.3

BRK 03h01m30.3s 37.5N 118.4W
h=5km ML=3.9(3)
Chalfant Valley, 15 km N of Bishop, CA

Aug 23	WDC	eP	12 01 35.3
	MIN	eP	12 01 41.2
	ORV	e	12 01 45.5
	JAS1	eP	12 02 01.1
	MNA	eP	12 02 09.8
	PRI	eP	12 02 09.8
	FRI	eP	12 02 09.8

USGS 11h55m12.1s 53.5N 165.9W
h=33km mb=4.8
Fox Islands, Aleutian Islands

Aug 24	PRS	eP	00 00 44.5
	GCC	eP	00 00 45.0
	SAO	eP	00 00 45.3
	PCC	eP	00 00 45.5
	PRI	eP	00 00 46.6
	LLA	ePc	00 00 46.8
	BRK	eP	00 00 47.1
		e	00 00 54.0
		e	00 07 52
		eS	00 11 48
		i(PS)	00 13 04
		i(PPS)	00 13 55
		eSS	00 18 05
		eLr	00 28 28
			AMP(μm) PER(s)
		PZ	0.19 1.8
		LZ	13 20.
	MHC	ePc	00 00 47.4
	FRI	ePc	00 00 50.5
	JAS1	ePc	00 00 51.8
	FHC	eP	00 00 52.8
	ORV	eP	00 00 54.1
	WDC	eP	00 00 54.9

BRK Ms=6.3 Distance=89°
USGS 23h47m48.9s 34.5S 179.3E
h=32km mb=6.1 Ms=6.5
South of Kermadec Islands

Aug 24	GCC	e	10 57 07.4
	PRS	e	10 57 07.6
	PRI	e	10 57 10.2

DATE	STA	PHASE	TIME (UTC)
	MHC	e	10 57 13.7
	BRK	e(P)	10 57 15
			AMP(μm) PER(s)
		PZ	0.011 1.0
	FRI	eP	10 57 15.7
	JAS1	eP	10 57 16.8
	WDC	ePc	10 57 19.1
	MIN	eP	10 57 20.7
	MNA	eP	10 57 25.8

USGS 10h45m00.2s 24.1S 177.1W
h=33km mb=5.4 Ms=5.1
South of Fiji Islands

Aug 24	FRI	e	13 16 00.0
	JAS1	eP	13 16 01.1
	WDC	eP	13 16 04.0
	MIN	eP	13 16 06.5
	MNA	eP	13 16 09.5

USGS 13h03m35.7s 27.3S 176.4W
h=33km mb=5.3 Ms=4.9
Kermadec Islands Region

Aug 24	MHC	e	19 50 21.5
	GCC	e	19 50 22.0
	PRS	e	19 50 22.0
	FRI	e	19 50 27.3
	JAS1	eP	19 50 28.0
	WDC	eP	19 50 29.1
	ORV	e	19 50 29.5
	MIN	e	19 50 32.0
	MNA	e	19 50 35.6

USGS 19h38m11.0s 23.9S 177.2W
h=33km mb=5.3 Ms=5.1
South of Fiji Islands

Aug 25	JAS1	e	06 47 34.5
	WDC	e	06 47 34.5
	FRI	e	06 47 34.7
	MNA	e	06 47 41.1
	MIN	e	06 47 47.0

USGS 06h35m13.9s 23.9S 177.2W
h=33km mb=5.0 Ms=4.9
South of Fiji Islands

Aug 25	JAS1	iPd	11 45 16.4
	ORV	eP	11 45 18.0
	WDC	eP	11 45 18.4
	MIN	eP	11 45 20.1
	MNA	eP	11 45 26.4

USGS 11h33m31.3s 19.5S 175.1W
h=79km mb=4.9
Tonga Islands

Aug 25	BRK	iPc	11 47 56.5
		iS	11 48 00.9
	ZSP	iPc	11 47 57.6
		iS	11 48 03.0
	PCC	iPd	11 47 59.1
	MHC	iPd	11 48 00.9
		iS	11 48 08.5
	GCC	iPd	11 48 04.7
	SAO	iP	11 48 10.8
	JAS1	iPc	11 48 13.1
		iS	11 48 31.2
	PRS	e	11 48 17.0
	LLA	e	11 48 17.3
	FRI	e	11 48 26.3
	PRI	e	11 48 29.4

BRK 11h47m51.2s 37.7N 122.0W
h=4km ML=2.6(2)
San Ramon, 29 km SE of Berkeley, CA

DATE	STA	PHASE	TIME (UTC)
Aug 25	PRS	eP	15 51 51.6
	PRI	ePd	15 51 54.6
	MHC	e	15 51 58
	FRI	eP	15 51 59.6
	JAS1	eP	15 52 00.5
	WDC	eP	15 52 03.0
	MIN	eP	15 52 05.5
	MNA	ePd	15 52 10.9
			AMP(μm) PER(s)
		LZ	1.0 20.

USGS 15h40m31.5s 16.3S 173.1W
h=33km mb=4.9 Ms=5.0
Tonga Islands

Aug 25	ORV	ePc	17 07 00.8
		iS	17 07 17.7
	MIN	ePc	17 07 05.2
		eS	17 07 25.5
	JAS1	iPc	17 07 08.9
		iS	17 07 31.6
	WDC	iPd	17 07 17.7
	FRI	e(P)	17 07 24.0
		e	17 07 58.9
	MHC	e	17 07 25.7
	PRS	e(P)	17 07 33.8

BRK 17h06m37.3s 39.6N 119.8W
h=5km Mag=2.9
13 km N of Reno, NV

Aug 26	FRI	ePKP	07 03 14.8
	MNA	ePKPd	07 03 15.9
	JAS1	ePKPd	07 03 17.3
	BRK	ePKP	07 03 18.2
	ORV	ePKP	07 03 21
	MIN	ePKP	07 03 21.2
	WDC	ePKPd	07 03 22.1

USGS 06h44m40.2s 56.0S 27.8W
h=154km mb=5.3
South Sandwich Islands Region

Aug 26	WDC	ePc	09 56 12.8
	MIN	ePc	09 56 15.5
	ORV	ePc	09 56 18.4
	BRK	eP	09 56 24.0
		e	09 56 32.3
		eLr	10 30 00
			AMP(μm) PER(s)
		PZ	0.0085 1.0
		LZ	1.0 20.
	PCC	eP	09 56 24.7
	MHC	eP	09 56 27.3
	GCC	e(P)	09 56 27.5
	JAS1	ePc	09 56 27.6
	MNA	eP	09 56 30.1
	PRS	eP	09 56 31.8
	FRI	ePc	09 56 32.0

USGS 09h43m00.4s 37.7N 101.5E
h=8km mb=6.2 Ms=5.9
Tsinghai Province, China

Aug 26	FHC	eP	10 43 08.5
	WDC	ePc	10 43 10.1
	MIN	ePc	10 43 13.8
	ORV	eP	10 43 16.8
	JAS1	ePc	10 43 25.6
	MHC	e(P)	10 43 25.8
	FRI	e(P)	10 43 30.4
	MNA	e(P)	10 43 32.4

USGS 10h29m59.0s 37.7N 101.6E
h=10km mb=5.4
Tsinghai Province, China

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
Aug 26	MNA	iPd	19 07 38.5
	FRI	iPc	19 07 41.7
	JAS1	iPc	19 07 50.0
	LLA	eP	19 07 59.5
	PRI	eP	19 08 00.2
	SAO	eP	19 08 04.0
	MHC	eP	19 08 05.3
	PRS	eP	19 08 05.9
	ORV	eP	19 08 11.0
	PCC	eP	19 08 12.1
BRK 19h07m21.1s 37.5N 118.4W			
h=11km ML=3.6(2)			
Chalfant Valley, 19 km NNW of Bishop, CA			
Aug 26	GCC	epP	22 03 49.9
	PRS	epP	22 03 50.4
	FHC	e(P)	22 03 51.6
	BRK	e(P)	22 03 52
		e(S)	22 13 16
		e	22 13 44
		eLr	22 24 42
		AMP(μm)	PER(s)
		LZ	2.5 20.
	PRI	epP	22 03 52.7
	FRI	eP	22 03 52.9
		epP	22 03 59.0
	MHC	epP	22 03 52.9
	JAS1	eP	22 03 53.6
		ipP	22 04 00.4
	ORV	eP	22 03 54.8
	WDC	eP	22 03 55.3
		epP	22 04 02.0
	MIN	eP	22 03 57.1
	MNA	eP	22 04 04.0
		ipP	22 04 10.4
USGS 21h52m26.7s 15.2S 173.5W			
h=20km mb=5.6 Ms=5.8			
Tonga Islands			
Aug 26	PRI	eP	23 16 02.0
		epP	23 16 17.2
	FRI	eP	23 16 03.3
	MNA	eP	23 16 03.9
		epP	23 16 19.2
	LLA	eP	23 16 04.6
		epP	23 16 19.9
	PRS	eP	23 16 04.7
		epP	23 16 20.0
	SAO	eP	23 16 06.7
	JAS1	e(P)	23 16 08.0
		epP	23 16 23.0
	MHC	eP	23 16 09.5
		epP	23 16 24.9
	ORV	eP	23 16 16.7
		epP	23 16 32.2
	WDC	eP	23 16 21.7
		epP	23 16 37.2
	GCC	epP	23 16 24.2
	FHC	eP	23 16 28.2
		epP	23 16 43.7
USGS 23h03m45.7s 31.7S 71.1W			
h=52km mb=5.4 Ms=5.7			
Near Coast of Central Chile			
Aug 27	MNA	iPd	09 20 56.8
		iS	09 21 08.1
	FRI	iPd	09 21 01.9
	JAS1	iPc	09 21 09.1
		iS	09 21 32.4
	LLA	eP	09 21 19.8
	PRI	eP	09 21 20.9
	SAO	eP	09 21 23.5
	MHC	eP	09 21 24.8
	PRS	eP	09 21 25.5
	GCC	eP	09 21 28.3
	BRK	eP	09 21 30.8
	PCC	eP	09 21 32.1
	ORV	eP	09 21 34.1
	MIN	eP	09 21 45.0
BRK 09h20m40.8s 37.6N 118.5W			
h=5km ML=3.5(2)			
Chalfant Valley, 28 km NNW of Bishop, CA			
Aug 27	PRS	eP	10 54 36.2
	PRI	eP	10 54 37.8
	MHC	eP	10 54 39.1
	FRI	eP	10 54 42.3
	JAS1	eP	10 54 43.7
		epP	10 54 48.9
	WDC	eP	10 54 47.3
	MIN	eP	10 54 48.2
	MNA	eP	10 54 51.2
USGS 10h41m50.9s 34.2S 177.4W			
h=33km mb=5.3			
South of Kermadec Islands			
Aug 27	WDC	eP	11 58 00.6
	ORV	eP	11 58 05.3
	BRK	e(P)	11 58 05.6
	MHC	eP	11 58 07.6
	JAS1	eP	11 58 12.0
	PRI	eP	11 58 13.6
	FRI	eP	11 58 15.4
	MNA	eP	11 58 20.2
USGS 11h45m47.6s 14.9N 146.9E			
h=33km mb=5.1 Ms=4.8			
Mariana Islands			
Aug 28	MHC	iPd	06 34 56.8
	GCC	eP	06 35 02.1
		iS	06 35 08.0
	SAO	iPd	06 35 05.2
	PCC	ePd	06 35 06.8
		iS	06 35 18.0
	BRK	eP	06 35 10.0
		iS	06 35 21.5
	LLA	ePd	06 35 10.7
	ZSP	eP	06 35 11.2
	PRS	eP	06 35 12.5
	JAS1	eP	06 35 16.3
		iS	06 35 31.8
BRK 06h34m54.8s 37.3N 121.7W			
h=5km ML=2.5(2) Mo=3.3E19(2)			
San Felipe Valley, 22 km SE of San Jose, CA			
Aug 29	MNA	eP	04 41 42.5
		e	04 41 42.9
	JAS1	ePc	04 41 48.5
		e	04 41 58.5
	ORV	eP	04 41 58.7
	WDC	ePc	04 42 03.7
		e	04 42 13.9
USGS 04h30m09.6s 20.7S 70.7W			
h=40km mb=5.0 Ms=4.1			
Near Coast of Northern Chile			
Aug 29	PRI	iPc	06 44 49.0
	PRS	iPc	06 44 58.4
	LLA	iPc	06 44 58.6
	SAO	iPc	06 45 03.3
		i(S)	06 45 20.5
	FRI	iPd	06 45 04.8
	GCC	iPc	06 45 10.5
	MHC	ePc	06 45 11.8
	JAS1	iPc	06 45 16.6
		iS	06 45 45.6
	PCC	ePd	06 45 17.1
	BRK	eP	06 45 21.7
		e	06 45 29.4
	ZSP	e(P)	06 45 22.8
	MNA	eP	06 45 34.5
	ORV	e	06 45 41.1
BRK 06h44m42.5s 35.9N 120.5W			
h=5km ML=3.3(2)			
Parkfield, CA			
Aug 29	BRK	eP	10 33 49.0
	MHC	e(P)	10 33 50.0
	PRS	e(P)	10 33 50.0
	WDC	e(P)	10 33 52.6
	ORV	eP	10 33 54.2
	JAS1	ePd	10 33 55.4
	MIN	ePd	10 33 55.7
	FRI	e(P)	10 33 56.8
	MNA	ePd	10 34 05.6
USGS 10h21m33.1s 12.5S 166.7E			
h=108km mb=4.9			
Santa Cruz Islands			
Aug 29	FHC	iPc	23 03 22.2
		iS	23 03 32.2
	ARC	iS	23 03 29.4
	WDC	ePc	23 03 37.4
	MIN	iPd	23 03 48.1
	ORV	ePc	23 03 52.1
BRK 23h03m09.9s 40.6N 124.8W			
h=11km ML=3.3(2) Mo=2.7E20(2)			
Off Coast 55 km WSW of Eureka, CA			
Aug 30	WDC	eP	21 41 19.5
		ipP	21 41 55.7
		iPP	21 44 25.7
		iSKS	21 51 35.3
		iPKKP1	21 58 50.6
		iPKPPKP	22 07 01.5
	MIN	eP	21 41 20.0
		ePKKP1	21 58 51.0
		ePKPPKP	22 07 00.5
	FHC	eP	21 41 21.6
		epPP	21 45 30.8
		ePKKP1	21 58 51.0
		ePKPPKP	22 07 02.4
	ORV	eP	21 41 23.2
		e	21 41 26.1
		eSKS	21 51 42.5
	MNA	eP	21 41 24.0
		e	21 41 27.4
		eSKS	21 51 38.2
	JAS1	eP	21 41 29.5
		ipP	21 42 06.0
		ePP	21 45 07.5
		epPP	21 45 40.6
		iSKS	21 51 49.5
		iPKKP1	21 58 47.5
		iPKKP2	21 59 24.5
		iPcPPKP	22 03 19.6
		ePKPPKP	22 06 55.8
	FRI	eP	21 41 32.0
		epP	21 42 07.9
		ePKKP1	21 58 44.3
		ePKKP2	21 59 22.0
		ePcPPKP	22 03 16.4
	BRK	eP	21 41 32.1
		i	21 42 59
		ePP	21 45 10
		iSKS	21 51 50
		ePKKP1	21 58 44.7
		isSS	21 58 48
		AMP(μm)	PER(s)
		PZ 0.057	0.8
		LZ 51	20.
	MHC	eP	21 41 33.9
		epP	21 42 08.7
		ePKKP1	21 58 44.6
		ePKKP2	21 59 22.8
		ePcPPKP	22 03 16.0
	PCC	eP	21 41 34.0
	GCC	eP	21 41 35.2
		epP	21 42 10.7
		ePcPPKP	22 03 13.6
	LLA	eP	21 41 36.2
		epP	21 42 11.0
	SAO	eP	21 41 36.3
	PRI	eP	21 41 38.2
		e	21 41 42.0
		epP	21 42 13.6
		ePP	21 45 18.0
		eSKS	21 52 03.5
		ePKKP1	21 58 43.1
		ePKKP2	21 59 21.7
	PRS	epP	21 42 11.8
		eP	21 42 37.5
		ePKKP1	21 58 41.6
		ePKKP2	21 59 21.0
		ePcPPKP	22 03 11.5
		ePcPPKP	22 03 11.5
BRK mb=5.8 h=136km Distance=89°			
USGS 21h28m35.5s 45.5N 26.3E			
h=132km mb=6.4 Ms=6.9			
Romania			
Aug 31	FRI	ePd	08 50 03.8
		epP	08 50 54.2
	JAS1	ePd	08 50 04.6
		epP	08 50 54.4
	ORV	eP	08 50 06.0
		epP	08 50 56.3
	WDC	ePd	08 50 06.8
		epP	08 50 57.2
	MIN	ePd	08 50 09.3
		epP	08 51 00.0
	MNA	eP	08 50 14.7
		epP	08 51 05.1
	PRS	epP	08 50 47.9
	MHC	epP	08 50 49.0
USGS 08h38m39.4s 18.5S 175.1W			
h=207km mb=5.3			
Tonga Islands			
Aug 31	WDC	ePd	09 34 59.0
	MIN	eP	09 35 02.5
	ORV	ePd	09 35 04.4
	BRK	eP	09 35 06
		iS	09 45 03
		ePPS	09 46 10
		iSS	09 50 22
		eLr	09 58 56
		AMP(μm)	PER(s)
		LZ	5.0 20.
	MHC	e(P)	09 35 09.0
	JAS1	ePd	09 35 12.4
	LLA	e	09 35 14.3
	PRI	e	09 35 16.3
	FRI	ePd	09 35 16.7
	MNA	ePd	09 35 20.3
BRK mb=5.8 h=136km Distance=89°			
USGS 21h28m35.5s 45.5N 26.3E			
h=132km mb=6.4 Ms=6.9			
Romania			
Aug 31	PRS	eP	15 06 44.8
	SAO	eP	15 06 45.6
	MHC	ePc	15 06 47.7
	FRI	ePc	15 06 52.7
	JAS1	eP	15 06 53.5
	WDC	ePc	15 06 55.7
	MIN	ePc	15 06 57.7
	MNA	ePc	15 07 03.7
USGS 14h55m15.7s 17.6S 173.9W			
h=33km mb=4.9			
Tonga Islands			
Aug 31	ARC	eP	23 30 06.1
		iS	23 30 29.3
	FHC	iPc	23 30 08.0
		i	23 30 15.1
		iS	23 30 33.3
	WDC	iPc	23 30 23.8
		i	23 30 30.7
		iS	23 31 03.4
	MIN	iPd	23 30 34.7
	ORV	ePc	23 30 39.5
	BRK	eP	23 30 49.4
	PCC	ePc	23 30 53.1
	MHC	ePd	23 31 00.5
	GCC	ePd	23 31 00.6
	JAS1	e	23 31 04.4
	PRS	e	23 31 13.8
	FRI	eP	23 31 20.5
	MNA	eP	23 31 21.3
BRK 23h29m33.9s 41.8N 126.5W			
h=5kmR ML=4.3(2) Mo=5.4E21(1)			
Off Coast 190 km W of Crescent City, CA			
Sep 2	MNA	iPd	00 50 05.5
		iS	00 50 17.2
	FRI	ePc	00 50 10.5
		iS	00 50 25.7
	JAS1	iPc	00 50 17.8
		iS	00 50 38.9
	LLA	iPd	00 50 28.4
	PRI	eP	00 50 29.3
	SAO	ePd	00 50 32.6
	MHC	eP	00 50 32.6
		i	00 50 33.7
	PRS	ePc	00 50 34.0
	GCC	e(P)	00 50 37.0
	BRK	eP	00 50 38.3
	PCC	ePc	00 50 40.3
	ORV	e	00 50 42.3
BRK 00h49m48.6s 37.6N 118.5W			
h=5km ML=3.5(3)			
Chalfant Valley, 28 km NNW of Bishop, CA			
Sep 2	ARC	eP	14 00 03.0
		iS	14 00 07.7
	FHC	iPc	14 00 03.4
		iS	14 00 08.5
	WDC	iPc	14 00 15.1
		iS	14 00 29.2
	MIN	ePd	14 00 25.6
		i	14 00 28.8
	ORV	ePd	14 00 33.3
BRK 13h59m56.1s 41.1N 123.8W			
h=12km ML=3.4(3) Mo=8.4E20(2)			
Near Hoopa, 50 km NE of Eureka, CA			
Sep 3	MHC	iPd	04 31 16.9
	GCC	iPd	04 31 22.5
	SAO	iPd	04 31 25.8
	PCC	iPc	04 31 26.3
	BRK	iPd	04 31 29.0
		eS	04 31 41
	LLA	iPc	04 31 30.9
	PRS	iPd	04 31 32.4
	JAS1	ePd	04 31 35.5
	PRI	eP	04 31 38.7
	FRI	ePc	04 31 41.0
	ORV	eP	04 31 50.0
	MIN	eP	04 32 03.0
	MNA	eP	04 32 03.4
	WDC	eP	04 32 06.0
BRK 04h31m14.8s 37.3N 121.7W			
h=10km ML=4.0(1)			
San Felipe Valley, 19 km ESE of San Jose, CA			
Sep 4	MNA	eP	04 40 04.0
	MIN	eP	04 40 12.7
	WDC	eP	04 40 20.8
	JAS1	eP	04 40 31.6
		e	04 40 41.8
		e	04 40 53.2
USGS 04h38m20.0s 44.1N 114.7W			
h=5km			
Western Idaho			
Sep 4	GCC	eP	23 12 47.7
	PRS	ePd	23 12 47.7
	PCC	eP	23 12 47.8
	SAO	eP	23 12 48.5
	PRI	eP	23 12 50.0
	MHC	eP	23 12 50.0
	LLA	e(P)	23 12 50.0
	FRI	eP	23 12 54.7
	JAS1	eP	23 12 55.4
	ORV	ePd	23 12 56.8
	WDC	iPd	23 12 56.9
	MNA	ePd	23 13 04.7
USGS 23h01m50.0s 20.0S 178.4W			
h=609km mb=4.9			
Fiji Islands Region			
Sep 5	SAO	e(P)	03 22 57.4
	PRS	eP	03 22 57.7
	MHC	ePd	03 22 59.5
	PRI	eP	03 22 59.9
	FRI	ePd	03 23 05.2
	JAS1	iPd	03 23 05.8
	ORV	eP	03 23 07.7
	WDC	iPd	03 23 08.0
	MIN	eP	03 23 09.7
	MNA	iPd	03 23 15.5
USGS 03h11m11.0s 20.9S 175.7W			
h=62km mb=5.1			
Tonga Islands			
Sep 5	FRI	ePd	06 18 46.8
	PRI	ePd	06 18 47.3
	PRS	ePd	06 18 49.5
	LLA	eP	06 18 49.8
	MNA	ePc	06 18 50.6
	JAS1	iPd	06 18 53.1
	GCC	ePd	06 18 53.5
	MHC	ePd	06 18 54.1
	PCC	ePd	06 18 55.7
	BRK	eP	06 18 57.2

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DATE	STA	PHASE	TIME (UTC)
	ORV	eP	06 19 01.7
	MIN	eP	06 19 03.5
	WDC	ePd	06 19 05.9
USGS 06h06m15.6s 37.1S 71.8W			
h=92km mb=5.6			
S. Chile-Argentina Border Region			
Sep 5	PRI	eP	14 24 52.7
	FRI	ePc	14 24 55.3
	PRS	eP	14 24 59.2
	LLA	eP	14 24 59.9
	MNA	ePc	14 25 02.7
		e	14 28 38.4
	JAS1	ePc	14 25 09.8
		e	14 29 07.3
	MHC	e(P)	14 25 11.2
	GCC	e	14 25 13.4
	BRK	e(P)	14 25 18
	PCC	e	14 25 18.7
	ORV	e	14 25 36.8
	MIN	ePc	14 25 44.4
	WDC	ePd	14 25 50.5
	FHC	e	14 26 02.8
USGS 14h22m09.1s 28.1N 111.4W			
h=10km mb=5.0			
Gulf of California			
Sep 6	PCC	eP	00 21 58.6
	GCC	iPd	00 21 58.9
	PRS	iPd	00 21 59.5
	SAO	eP	00 22 00.1
	BRK	eP	00 22 00.8
	MHC	iPd	00 22 01.7
	PRI	eP	00 22 02.0
	LLA	eP	00 22 02.0
	FHC	eP	00 22 04.5
	FRI	iP	00 22 07.3
	JAS1	iPd	00 22 07.5
	WDC	iPd	00 22 08.2
	ORV	ePd	00 22 09.4
	MIN	eP	00 22 10.2
USGS 00h11m05.6s 15.8S 177.9W			
h=438km mb=5.0			
Fiji Islands Region			
Sep 6	PCC	eP	02 35 00.4
	PRS	eP	02 35 01.0
	BRK	e	02 35 02.0
		e(P)	02 35 02.5
			AMP(μm) PER(s)
		PZ	0.030 1.0
	LLA	eP	02 35 03.3
	MHC	eP	02 35 03.4
	PRI	eP	02 35 03.5
	FHC	eP	02 35 06.0
	FRI	ePd	02 35 08.8
	JAS1	iPd	02 35 09.1
	WDC	ePd	02 35 09.7
	ORV	eP	02 35 10.7
	MNA	ePd	02 35 19.4
USGS 02h24m06.0s 15.0S 177.7W			
h=383km mb=4.8			
Fiji Islands Region			
Sep 6	GCC	eP	09 04 18.3
	PCC	eP	09 04 18.5
	SAO	eP	09 04 19.1
	PRI	eP	09 04 20.0
	BRK	e(P)	09 04 20.7
			AMP(μm) PER(s)
		PZ	0.044 1.2
	MHC	ePd	09 04 20.8
	FRI	ePd	09 04 25.3
	JAS1	iPd	09 04 26.3
	ORV	ePd	09 04 28.0
	WDC	ePd	09 04 29.7
	MIN	eP	09 04 30.0
	MNA	ePd	09 04 35.2
USGS 08h52m25.6s 23.3S 176.7W			
h=122km mb=5.6			
South of Fiji Islands			
Sep 6	PCC	eP	20 15 25.6
	GCC	eP	20 15 25.8
	PRS	eP	20 15 25.9
	SAO	eP	20 15 26.8
	BRK	eP	20 15 27.5
			AMP(μm) PER(s)
		PZ	0.013 0.8
	PRI	ePc	20 15 27.8
	MHC	ePc	20 15 28.2
	FRI	eP	20 15 33.0
	JAS1	iPc	20 15 33.5
		epP	20 17 38.8
	ORV	ePc	20 15 34.8
		epP	20 17 40.8
	WDC	iPc	20 15 35.0
		epP	20 17 40.8
	MNA	ePc	20 15 42.7
		epP	20 17 56.0
USGS 20h04m23.8s 20.7S 178.5W			
h=586km mb=5.5			
Fiji Islands Region			
Sep 7	GCC	eP	01 55 30.3
	PRS	eP	01 55 31.7
	SAO	e	01 55 31.8
	MHC	eP	01 55 32.6
	PRI	eP	01 55 33.7
	WDC	eP	01 55 35.5
	ORV	eP	01 55 36.9
	JAS1	iPd	01 55 37.9
	MIN	eP	01 55 38.0
	FRI	eP	01 55 38.7
	MNA	eP	01 55 47.1
USGS 01h44m19.9s 12.8S 169.5E			
h=665km mb=4.9			
Santa Cruz Islands Region			
Sep 7	GCC	eP	02 25 34.5
	PRS	eP	02 25 34.6
	PRI	e	02 25 37.7
	FRI	e	02 25 42.6
	ORV	eP	02 25 44.3
	JAS1	e	02 25 45.0
		e	02 26 24.5
	WDC	eP	02 25 45.7
		e	02 26 27.0
	MIN	eP	02 25 47.4
	MNA	e	02 25 52.5
		e	02 26 33.8
USGS 02h13m49.1s 23.0S 177.1W			
h=189km mb=5.4			
South of Fiji Islands			
Sep 7	PRI	eP	07 59 30.0
	FRI	eP	07 59 31.0
	MNA	eP	07 59 38.1
	JAS1	eP	07 59 39.3
	ORV	eP	07 59 54.2
	WDC	eP	08 00 01.8
USGS 07h50m39.5s 8.1S 97.6W			
h=10km mb=4.8 Ms=3.9			
Southwest of Galapagos Islands			
Sep 8	ARC	eP	03 37 50.9
		iS	03 37 58.3
	FHC	iPd	03 37 51.0
		iS	03 37 58.4
	WDC	iPc	03 38 04.2
	MIN	iPc	03 38 13.9
	ORV	eP	03 38 17.2
	MHC	eP	03 38 36.2
	GCC	e	03 38 36.5
	SAO	eP	03 38 42.5
BRK 03h37m41.3s 40.4N 124.4W			
h=18km ML=3.2(3) Mo=3.9E20(2)			
Cape Mendocino, 46 km SSW of Eureka, CA			
Sep 8	SAO	iPd	16 22 46.9
	LLA	iPc	16 22 53.1
	GCC	iPd	16 22 54.3
	PRS	eP	16 22 54.4
	MHC	ePd	16 22 55.3
		iS	16 23 04.0
	PRI	iPc	16 23 02.3
	PCC	ePd	16 23 03.8
	JAS1	eP	16 23 08.4
		iS	16 23 26.0
	FRI	ePc	16 23 08.4
	ZSP	e	16 23 09.2
	BRK	e	16 23 09.7
		e(P)	16 23 09.7
BRK 16h22m44.8s 36.8N 121.4W			
h=7km ML=2.4(2)			
Hollister, CA			
Sep 9	FRI	e	03 31 25.3
	MNA	ePd	03 31 27.0
	PRI	eP	03 31 27.1
	LLA	ePd	03 31 29.3
	PRS	eP	03 31 29.8
	SAO	eP	03 31 30.9
	JAS1	ePd	03 31 31.9
	GCC	ePd	03 31 34.2
	MHC	eP	03 31 34.5
	PCC	e	03 31 37.0
	BRK	eP	03 31 37.9
			AMP(μm) PER(s)
		PZ	0.0074 1.0
	ORV	ePd	03 31 41.3
	MIN	ePd	03 31 42.8
	WDC	ePd	03 31 45.9
USGS 03h19m49.0s 23.1S 66.5W			
h=208km mb=5.0			
Juyjuy Province, Argentina			
Sep 10	PRS	eP	01 58 54.3
	BRK	eP	01 58 56.2
	FRI	eP	01 59 02.2
	JAS1	eP	01 59 03.4
	WDC	eP	01 59 05.1
	MNA	eP	01 59 13.2
USGS 01h47m30.2s 19.1S 174.8W			
h=164km mb=5.0			
Tonga Islands			
Sep 10	MHC	eP	11 06 03.9
	JAS1	eP	11 06 10.2
	WDC	eP	11 06 12.5
	MIN	e	11 06 14.2
	MNA	eP	11 06 20.5
USGS 10h54m42.1s 16.1S 172.9W			
h=33km mb=4.8			
Samoa Islands Region			
Sep 10	GCC	eP	22 33 40.5
	PRS	eP	22 33 41.5
	WDC	eP	22 33 43.2
	LLA	eP	22 33 44.1
	ORV	eP	22 33 44.4
	PRI	eP	22 33 45.4
	JAS1	eP	22 33 46.9
	FRI	eP	22 33 47.8
	MNA	eP	22 33 55.1
USGS 22h20m48.6s 8.8S 157.5E			
h=10km mb=5.5 Ms=5.2			
Solomon Islands			
Sep 11	FHC	eP	00 31 13.8
	WDC	ePc	00 31 18.3
	GCC	eP	00 31 18.5
	BRK	ePc	00 31 19.6
		ePP	00 34 50.0
		eS	00 42 07.2
		ePS	00 43 22.0
		eSS	00 48 34.4
		eSSS	00 52 08.8
		e(Lq)	00 58 22.0
		eLr	00 59 34.0
			AMP(μm) PER(s)
		LZ	29 20.
	MHC	e(P)	00 31 19.9
	PRS	eP	00 31 20.5
	ORV	e(P)	00 31 20.8
	MIN	e(P)	00 31 21.2
	LLA	e(P)	00 31 22.6
	PRI	eP	00 31 23.5
	JAS1	ePc	00 31 24.4
	FRI	eP	00 31 26.6
	MNA	ePc	00 31 33.2
BRK Ms=6.7 Distance=91°			
USGS 00h18m25.6s 5.2S 152.4E			
h=51km mb=5.8 Ms=6.4			
New Britain Region			
Sep 11	MIN	e	03 57 01.6
	MNA	eP	03 57 02.3
		eS	03 58 29.5
	PRI	e	03 58 13.7
	WDC	e	03 58 18.5
	JAS1	e	03 58 26.1
		e	03 59 09.4
USGS 03h55m12.7s 44.1N 114.7W			
h=5km			
Western Idaho			
Sep 12	WDC	e	01 20 39.6
	MIN	eP	01 20 52.8
	ORV	ePd	01 20 59.4
	JAS1	ePd	01 21 20.8
	MNA	e	01 21 36.8
	FRI	e	01 21 37.6
USGS 01h19m12.3s 44.0N 128.9W			
h=10km mb=4.3 Ms=4.5			
Off Coast of Oregon			
Sep 12	PRI	eP	10 51 18.2
	MNA	ePd	10 51 18.9
	LLA	eP	10 51 20.6
	PRS	ePd	10 51 21.0
	SAO	eP	10 51 22.3
	JAS1	ePd	10 51 23.7
	GCC	ePd	10 51 25.6
	MHC	ePd	10 51 26.1
	BRK	eP	10 51 31.3
	ORV	ePd	10 51 33.5
		e	10 51 51.8
		e	10 51 58.8
	MIN	ePd	10 51 35.7
	WDC	ePd	10 51 38.7
	FHC	ePd	10 51 46.1
USGS 10h39m40.6s 22.5S 70.2W			
h=79km mb=5.1			
Near Coast of Northern Chile			
Sep 12	PRI	iPd	23 38 14.8
	LLA	iPc	23 38 20.8
	PRS	ePc	23 38 24.2
	FRI	ePc	23 38 27.1
	SAO	ePd	23 38 28.0
	MHC	eP	23 38 35.2
	GCC	e(P)	23 38 36.3
	JAS1	iPc	23 38 39.0
		iS	23 39 00.8
	PCC	e	23 38 44.7
	BRK	iPc	23 38 51.0
		e	23 38 51.5
		i	23 39 32.7
	ZSP	eP	23 38 53.6
	MNA	e	23 38 57.9
	ORV	e	23 39 04.8
BRK 23h38m11.2s 36.2N 120.5W			
h=8km ML=3.4(4)			
17 km NW of Coalinga, CA			
Sep 13	FHC	eP	00 02 32.7
	WDC	iPd	00 02 42.8
		i	00 03 23.6
		eScP	00 09 53.0
	MIN	ePd	00 02 48.2
		eScP	00 09 57.4
	ORV	eP	00 02 53.5
		eScP	00 09 59.0
	BRK	e(P)	00 03 02.3
		eS	00 07 52
		eLq	00 08 44
			AMP(μm) PER(s)
		PZ	0.15 1.3
	PCC	e	00 03 04.0
	MHC	e	00 03 08.6
		eScP	00 10 03.6
	JAS1	iPd	00 03 10.4
		e	00 04 05.9
		e	00 06 29.1
		eScP	00 10 01.0
	MNA	eP	00 03 15.9
		eScP	00 10 06.0
	SAO	eP	00 03 16.0
	PRS	e	00 03 18.4
		eScP	00 10 04.5
	LLA	e	00 03 18.5
	FRI	ePd	00 03 19.7
		e	00 06 29.0
		eScP	00 10 04.5
	PRI	e	00 03 22.2
		eScP	00 10 07.5
BRK Ms=6.0 Distance=30°			
USGS 23h57m15.6s 56.2N 153.4W			
h=31km mb=6.1 Ms=6.3			
Kodiak Island Region			
Sep 13	JAS1	ePKP	09 47 11.6
	PRI	e	09 47 17.3
	MNA	e	09 47 20.6
	WDC	e	09 47 26.5
USGS 09h28m24.5s 60.8S 36.8W			
h=10km mb=5.8 Ms=6.1			
Scotia Sea			
Sep 13	FHC	e	10 10 25.4
	WDC	iPc	10 10 30.6
		e	10 11 20.1
	MIN	iPc	10 10 34.3
		e	10 11 20.6
	PCC	eP	10 10 35.2
	BRK	e	10 10 35.2
	ORV	iPc	10 10 35.9
		e	10 11 22.3
	MHC	e	10 10 38.9
		e	10 11 28.7
	PRS	eP	10 10 41.8
		e	10 11 29.2
	LLA	e	10 10 42.5
	JAS1	iPc	10 10 42.9
		i	10 11 32.2
	PRI	eP	10 10 45.4
	FRI	ePc	10 10 46.9
		e	10 11 34.6
	MNA	iPc	10 10 51.2
		e	10 11 38.5
USGS 09h58m43.5s 18.6N 145.6E			
h=195km mb=5.1			
Mariana Islands			
Sep 13	PRS	iPd	15 29 45.2
	GCC	iPd	15 29 45.4
		i	15 31 15.7
	PCC	iPd	15 29 45.6
	SAO	eP	15 29 45.8
	PRI	iPd	15 29 46.7
		i	15 31 17.1
	LLA	iPd	15 29 47.0
	BRK	ePd	15 29 47.3
		ipP	15 30 42.0
		isP	15 31 03.6
		iPP	15 33 10.0
		iS	15 40 14.4
		iSP	15 41 02.0
			AMP(μm) PER(s)
		PZ	0.87 1.5
	MHC	iPd	15 29 47.7
	FRI	e	15 29 51.3
		i	15 31 22.2
	JAS1	iPd	15 29 52.3
	FHC	ePd	15 29 52.8
	ORV	iP	15 29 54.4
	WDC	iPd	15 29 55.1
		i	15 31 26.6
	MIN	iPd	15 29 56.1
	MNA	iPd	15 30 00.0
		i	15 31 16.5
BRK mb=6.4 h=225km Distance=84°			
USGS 15h17m21.0s 31.8S 179.9W			
h=215km mb=5.9			
Kermadec Islands Region			
Sep 13	WDC	eP	17 38 02.1
	MIN	eP	17 38 05.0
	MNA	e	17 38 06.3
		e	17 41 58.5
	ORV	eP	17 38 07.3
	JAS1	eP	17 38 12.4
	FRI	eP	17 38 13.1
	BRK	iPc	17 38 14
		eS	17 40 36
		e	17 41 10
		eSS	17 44 10
		iLq	17 48 00
		eLr	17 48 32
		e	17 48 06

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DATE	STA	PHASE	TIME (UTC)
		e	18 23 10
			AMP(μm) PER(s)
		LZ	2.5 20.
	MHC	e	17 38 18.0
	PRS	e	17 38 20.8
	PRI	e	17 38 21.0
BRK Ms=5.7 Distance=95°			
USGS 17h24m31.5s 37.0N 22.2E			
h=11km mb=6.0 Ms=5.8			
Southern Greece			
Sep 13	MNA	eP	18 12 26.3
	PRI	eP	18 12 26.5
	JAS1	eP	18 12 31.4
		e	18 13 31.5
	ORV	e	18 12 36.5
		eP	18 12 40.6
	MIN	e	18 12 41.5
USGS 18h00m47.7s 23.0S 66.4W			
h=197km mb=4.9			
Juyjuy Province, Argentina			
Sep 13	WDC	eP	21 47 57.7
	ORV	eP	21 48 02.9
	MHC	eP	21 48 06.0
	PRS	eP	21 48 08.5
	JAS1	ePd	21 48 10.1
	PRI	eP	21 48 12.8
	FRI	eP	21 48 14.4
	MNA	eP	21 48 17.8
USGS 21h36m29.2s 17.9N 145.5E			
h=398km mb=4.8			
Mariana Islands			
Sep 14	PRI	eP	00 17 20.2
	MHC	eP	00 17 20.5
	FRI	eP	00 17 25.1
		ePKKP	00 35 34.3
	JAS1	iPd	00 17 25.6
		e	00 19 25.2
		ePKKP	00 35 33.6
	ORV	eP	00 17 27.0
		e	00 19 27.0
		ePKKP	00 35 33.0
	WDC	ePd	00 17 27.2
		e	00 19 25.3
		ePKKP	00 35 31.5
	MIN	eP	00 17 28.8
	MNA	eP	00 17 34.2
		e	00 19 34.3
		ePKKP	00 35 42.3
USGS 00h05m54.5s 23.4S 179.1E			
h=549km mb=5.2			
South of Fiji Islands			
Sep 14	WDC	eP	01 16 57.3
	MIN	eP	01 17 03.2
	ORV	eP	01 17 08.2
	JAS1	i	01 17 25.5
	MNA	eP	01 17 32.0
USGS 01h11m29.5s 56.3N 153.5W			
h=33km mb=4.5			
Kodiak Island Region			
Sep 14	SAO	iPd	08 15 58.7
	LLA	iPd	08 16 03.2
	MHC	iPd	08 16 05.5
		iS	08 16 14.1
	GCC	iPc	08 16 05.5
	PRS	iPd	08 16 05.9
	PRI	ePd	08 16 12.8
	PCC	i	08 16 14.2
	BRK	iPc	08 16 16.6
		iS	08 16 34.9
	JAS1	ePc	08 16 18.0
		iS	08 16 35.3
	ZSP	ePd	08 16 18.2
	FRI	iPc	08 16 18.6
	ORV	ePd	08 16 38.8
	MNA	e	08 16 47.3
	MIN	e	08 16 50.1
	WDC	e	08 16 58.6
BRK 08h15m55.4s 36.9N 121.3W			
h=6km ML=3.4(4) Mo=1.9E21(2)			
6 km NE of Hollister, CA			
Sep 14	WDC	ePc	12 54 33.8
	MIN	ePc	12 54 37.4
	ORV	e	12 54 39.5
	BRK	eP	12 54 40.3
	MHC	eP	12 54 44.3
	JAS1	iPc	12 54 47.5
	PRS	e	12 54 47.5
	PRI	eP	12 54 50.8
	FRI	eP	12 54 52.0
USGS 12h42m32.3s 24.1N 141.9E			
h=33km mb=5.2			
Volcano Islands Region			
Sep 15	WDC	ePc	06 36 58.1
		e	06 37 23.6
	MIN	eP	06 37 03.5
	ORV	ePc	06 37 07.5
	BRK	eP	06 37 12.4
	PCC	eP	06 37 13.2
	GCC	ePc	06 37 17.5
	MHC	ePc	06 37 18.4
	JAS1	iPc	06 37 22.0
	PRS	ePc	06 37 24.9
	FRI	eP	06 37 29.8
	MNA	ePc	06 37 30.8
	PRI	ePc	06 37 31.4
USGS 06h29m35.9s 51.6N 177.1W			
h=33km mb=4.9 Ms=4.0			
Andreanof Islands, Aleutian Islands			
Sep 15	PRS	ePc	09 00 06.5
	GCC	ePc	09 00 06.7
	PCC	eP	09 00 06.9
	SAO	e(P)	09 00 07.2
	PRI	ePc	09 00 08.3
	BRK	e(P)	09 00 08.9
	MHC	ePc	09 00 09.3
	FRI	ePc	09 00 13.9
	FHC	e(P)	09 00 14.5
	JAS1	ePc	09 00 14.8
	ORV	ePc	09 00 17.0
	WDC	iPc	09 00 17.7
	MIN	ePc	09 00 19.3
	MNA	ePc	09 00 24.2
USGS 08h48m11.4s 22.7S 175.3W			
h=33km mb=5.7 Ms=5.8			
Tonga Islands Region			
Sep 15	MHC	iPd	20 17 51.7
		iS	20 17 52.9
	GCC	iPd	20 17 57.8
	PCC	iPc	20 18 01.7
	SAO	iPd	20 18 01.7
	BRK	ePc	20 18 04.7
		iS	20 18 16.1
	ZSP	ePc	20 18 06.0
		iS	20 18 18.8
	LLA	ePc	20 18 07.0
	PRS	iPc	20 18 09.0
	JAS1	ePc	20 18 11.6
		iS	20 18 27.7
	PRI	ePc	20 18 15.4
	FRI	e(P)	20 18 17.0
	ORV	e	20 18 29.8
BRK 20h17m50.3s 37.3N 121.7W			
h=4km ML=3.1(2) Mo=1.6E20(2)			
Halls Valley, 18 km ESE of San Jose, CA			
Sep 16	MNA	iPd	06 37 13.4
		iS	06 37 25.2
	FRI	iPc	06 37 19.3
		iS	06 37 34.5
	JAS1	iPd	06 37 26.3
		iS	06 37 47.5
	LLA	iPd	06 37 37.1
	PRI	eP	06 37 38.1
	MHC	eP	06 37 40.7
	SAO	eP	06 37 41.2
	PRS	ePc	06 37 42.6
	GCC	e	06 37 45.7
	BRK	eP	06 37 48.5
	PCC	eP	06 37 49.1
	ORV	eP	06 37 49.6
BRK 06h36m57.7s 37.6N 118.4W			
h=7km ML=3.5(4)			
Chalfant Valley, 29 km NNW of Bishop, CA			
Sep 16	GCC	eP	09 09 22.2
		e	09 09 55.2
	BRK	eP	09 09 23.5
		e	09 09 55.9
	PRS	eP	09 09 23.6
		e	09 09 56.6
	MHC	eP	09 09 24.7
		e	09 09 57.9
	WDC	ePc	09 09 26.7
		e	09 10 00.4
		ePP	09 13 11.3
	LLA	eP	09 09 27.0
	ORV	eP	09 09 28.3
		e	09 10 01.4
	JAS1	eP	09 09 29.5
		e	09 10 02.7
		ePP	09 13 17.7
	FRI	eP	09 09 29.6
		e	09 10 03.6
	MIN	eP	09 09 29.9
		e	09 10 02.3
	MNA	eP	09 09 39.7
		e	09 10 12.3
		ePP	09 13 33.0
	PCC	e	09 09 54.7
	FHC	e	09 09 56.1
	PRI	e	09 10 59.9
USGS 08h57m10.7s 12.4S 166.6E			
h=134km mb=5.5			
Santa Cruz Islands			
Sep 16	MNA	iPd	13 14 41.8
		iS	13 14 53.2
	FRI	iPc	13 14 47.5
		iS	13 15 03.1
	JAS1	iP	13 14 54.4
		iS	13 15 16.0
	LLA	eP	13 15 05.3
	PRI	e	13 15 06.7
	SAO	eP	13 15 09.6
	MHC	iPd	13 15 10.7
	PRS	ePd	13 15 11.5
	GCC	eP	13 15 14.8
	BRK	e(P)	13 15 16.2
	PCC	eP	13 15 17.7
	ORV	iPc	13 15 17.8
	MIN	i	13 15 33.3
	WDC	e	13 15 43.5
BRK 13h14m26.1s 37.6N 118.4W			
h=5km ML=3.5(4)			
Chalfant Valley, 29 km NNW of Bishop, CA			
Sep 16	FHC	ePd	18 32 10.7
	WDC	iPd	18 32 16.1
	MIN	iPd	18 32 20.3
	PCC	ePd	18 32 21.0
	BRK	iPd	18 32 21.2
		ePP	18 35 18
		eS	18 42 08
		eLr	18 56 10
			AMP(μm) PER(s)
		PZ	0.97 1.2
		LZ	46 20.
	ORV	iPd	18 32 21.4
	GCC	ePd	18 32 23.4
	MHC	ePd	18 32 24.9
	PRS	ePd	18 32 27.4
	SAO	ePd	18 32 27.8
		eS	18 42 28.8
	LLA	ePd	18 32 28.6
	JAS1	iPd	18 32 28.7
		eS	18 43 05.6
	PRI	ePd	18 32 30.9
		e	18 32 44.1
		ePP	18 35 49.8
	FRI	iPd	18 32 32.9
	MNA	ePd	18 32 37.0
		e	18 33 44.1
		ePP	18 35 44.9
BRK Ms=6.8 Distance=78°			
USGS 18h20m17.8s 19.4N 146.3E			
h=47km mb=6.5 Ms=6.7			
Mariana Islands Region			
Sep 16	FHC	eP	21 02 41.8
	WDC	eP	21 02 49.8
	MIN	eP	21 02 55.0
	ORV	eP	21 03 00.0
	BRK	ePc	21 03 10.4
		eS	21 07 58
		eLr	21 10 26
			AMP(μm) PER(s)
		LZ	4.0 20.
	JAS1	eP	21 03 16.8
	MNA	eP	21 03 24.6
	FRI	eP	21 03 25.2
	PRI	e	21 03 31.7
BRK Ms=5.1 Distance=30°			
USGS 20h57m22.0s 56.2N 153.6W			
h=33km mb=5.3 Ms=5.5			
Kodiak Island Region			
Sep 17	MNA	iPd	05 58 40.0
		iS	05 58 52.0
	FRI	eP	05 58 46.8
	JAS1	iPc	05 58 53.0
		iS	05 59 14.0
	LLA	eP	05 59 03.7
	PRI	eP	05 59 05.0
	MHC	eP	05 59 07.5
	SAO	eP	05 59 08.0
	PRS	eP	05 59 10.3
	GCC	eP	05 59 12.8
	BRK	iPd	05 59 15.4
	PCC	eP	05 59 15.5
	ORV	eP	05 59 16.4
BRK 05h58m24.2s 37.6N 118.4W			
h=7km ML=3.5(2)			
Chalfant Valley, 27 km NNW of Bishop, CA			
Sep 17	WDC	ePKP	21 44 27.2
	MNA	ePKP	21 44 33.0
		e	21 44 54.7
	JAS1	ePKP	21 44 33.3
		e	21 46 48.8
	MHC	e(PKP)	21 44 35.0
	FRI	ePKP	21 44 35.3
	LLA	e(PKP)	21 44 36.4
	BRK	e	21 46 53.2
		e	21 53 16
		e	21 56 52
		e	22 04 24
		e	22 09 32
		e	22 15 20
		e	22 21 30
		e	22 28 16
		e	22 30 12
		e	22 43 20
USGS 21h25m15.1s 10.5N 57.0E			
h=10km mb=5.8 Ms=6.0			
Carlsberg Ridge			
Sep 18	FHC	iPd	02 37 49.3
		iS	02 37 57.8
	ARC	eP	02 37 49.3
		iS	02 37 58.0
	WDC	ePd	02 38 01.8
		eS	02 38 17.6
	MIN	ePd	02 38 11.8
		iS	02 38 37.0
	ORV	ePc	02 38 15.2
	SAO	e	02 38 43.0
BRK 02h37m36.8s 40.3N 124.6W			
h=15km ML=3.3(1)			
Off Coast 18 km SW of Cape Mendocino, CA			
Sep 18	PRS	eP	06 12 18.0
		e	06 12 58.5
	WDC	eP	06 12 23.5
		e	06 12 34.0
		e	06 13 04.0
		e	06 13 14.5
	JAS1	eP	06 12 24.3
		e	06 12 35.0
		e	06 13 04.9
		e	06 13 15.6
	ORV	eP	06 12 24.5
		e	06 13 04.6
		e	06 13 15.6
	FRI	eP	06 12 24.8
		e	06 13 05.0
		e	06 13 15.8
	MNA	eP	06 12 33.4
		e	06 13 13.4
		e	06 13 24.2
	MHC	e	06 13 00.0
		e	06 13 10.8
	FHC	e	06 13 00.5
		e	06 13 11.3
	PRI	e	06 13 01.0
	GCC	e	06 13 57.5
	BRK	eLr	06 41 12
	GCC	eP	05 59 12.8
	BRK	iPd	05 59 15.4
	PCC	eP	05 59 15.5
	ORV	eP	05 59 16.4
BRK 05h58m24.2s 37.6N 118.4W			
h=7km ML=3.5(2)			
Chalfant Valley, 27 km NNW of Bishop, CA			
Sep 17	WDC	ePKP	21 44 27.2
	MNA	ePKP	21 44 33.0
		e	21 44 54.7
	JAS1	ePKP	21 44 33.3
		e	21 46 48.8
	MHC	e(PKP)	21 44 35.0
	FRI	ePKP	21 44 35.3
	LLA	e(PKP)	21 44 36.4
	BRK	e	21 46 53.2
		e	21 53 16
		e	21 56 52
		e	22 04 24
		e	22 09 32
		e	22 15 20
		e	22 21 30
		e	22 28 16
		e	22 30 12
		e	22 43 20
USGS 21h25m15.1s 10.5N 57.0E			
h=10km mb=5.8 Ms=6.0			
Carlsberg Ridge			
Sep 18	FHC	iPd	02 37 49.3
		iS	02 37 57.8
	ARC	eP	02 37 49.3
		iS	02 37 58.0
	WDC	ePd	02 38 01.8
		eS	02 38 17.6
	MIN	ePd	02 38 11.8
		iS	02 38 37.0
	ORV	ePc	02 38 15.2
	SAO	e	02 38 43.0
BRK 02h37m36.8s 40.3N 124.6W			
h=15km ML=3.3(1)			
Off Coast 18 km SW of Cape Mendocino, CA			
Sep 18	PRS	eP	06 12 18.0
		e	06 12 58.5
	WDC	eP	06 12 23.5
		e	06 12 34.0
		e	06 13 04.0
		e	06 13 14.5
	JAS1	eP	06 12 24.3
		e	06 12 35.0
		e	06 13 04.9
		e	06 13 15.6
	ORV	eP	06 12 24.5
		e	06 13 04.6
		e	06 13 15.6
	FRI	eP	06 12 24.8
		e	06 13 05.0
		e	06 13 15.8
	MNA	eP	06 12 33.4
		e	06 13 13.4
		e	06 13 24.2
	MHC	e	06 13 00.0
		e	06 13 10.8
	FHC	e	06 13 00.5
		e	06 13 11.3
	PRI	e	06 13 01.0
	GCC	e	06 13 57.5
	BRK	eLr	06 41 12
	GCC	eP	05 59 12.8
	BRK	iPd	05 59 15.4
	PCC	eP	05 59 15.5
	ORV	eP	05 59 16.4
BRK 05h58m24.2s 37.6N 118.4W			
h=7km ML=3.5(2)			
Chalfant Valley, 27 km NNW of Bishop, CA			
Sep 17	WDC	ePKP	21 44 27.2
	MNA	ePKP	21 44 33.0
		e	21 44 54.7
	JAS1	ePKP	21 44 33.3
		e	21 46 48.8
	MHC	e(PKP)	21 44 35.0
	FRI	ePKP	21 44 35.3
	LLA	e(PKP)	21 44 36.4
	BRK	e	21 46 53.2
		e	21 53 16
		e	21 56 52
		e	22 04 24
		e	22 09 32
		e	22 15 20
		e	22 21 30
		e	22 28 16
		e	22 30 12
		e	22 43 20
USGS 21h25m15.1s 10.5N 57.0E			
h=10km mb=5.8 Ms=6.0			
Carlsberg Ridge			
Sep 18	FHC	iPd	02 37 49.3
		iS	02 37 57.8
	ARC	eP	02 37 49.3
		iS	02 37 58.0
	WDC	ePd	02 38 01.8
		eS	02 38 17.6
	MIN	ePd	02 38 11.8
		iS	02 38 37.0
	ORV	ePc	02 38 15.2
	SAO	e	02 38 43.0
BRK 02h37m36.8s 40.3N 124.6W			
h=15km ML=3.3(1)			
Off Coast 18 km SW of Cape Mendocino, CA			
Sep 18	PRS	eP	06 12 18.0
		e	06 12 58.5
	WDC	eP	06 12 23.5
		e	06 12 34.0
		e	06 13 04.0
		e	06 13 14.5
	JAS1	eP	06 12 24.3
		e	06 12 35.0
		e	06 13 04.9
		e	06 13 15.6
	ORV	eP	06 12 24.5
		e	06 13 04.6
		e	06 13 15.6
	FRI	eP	06 12 24.8
		e	06 13 05.0
		e	06 13 15.8
	MNA	eP	06 12 33.4
		e	06 13 13.4
		e	06 13 24.2
	MHC	e	06 13 00.0
		e	06 13 10.8
	FHC	e	06 13 00.5
		e	06 13 11.3
	PRI	e	06 13 01.0
	GCC	e	06 13 57.5
	BRK	eLr	06 41 12
USGS 05h59m39.2s 20.2S 169.0E			
h=46km mb=5.1 Ms=4.8			
Loyalty Islands			
Sep 18	PRS	eP	06 52 25.6
	GCC	eP	06 52 25.8
	PCC	eP	06 52 26.0
	PRI	eP	06 52 27.2
	MHC	eP	06 52 28.1
	FRI	eP	06 52 32.3
	JAS1	eP	06 52 33.2
	ORV	eP	06 52 35.2
	WDC	eP	06 52 36.1
	MIN	eP	06 52 37.2
	MNA	eP	06 52 41.7
USGS 06h40m00.7s 27.6S 178.3W			
h=3rkm mb=Eas Ms=t C			
Kermadec Islands Region			
Sep 18	MNA	iPd	08 00 03.7
	FRI	iPc	08 00 09.5
		iS	08 00 24.4
	JAS1	iPc	08 00 16.6
		i(S)	08 00 39.0
	LLA	ePc	08 00 26.8
	PRI	ePc	08 00 28.1
		iS	08 01 03.2
	MHC	ePc	08 00 31.0
	SAO	iPc	08 00 31.7
	PRS	ePc	08 00 33.0
	GCC	eP	08 00 35.0
	PCC	ePc	08 00 38.0
	BRK	iP	08 00 38.0
		iS	08 01 18.5
	ORV	ePc	08 00 38.1
	ZSP	ePc	08 00 38.2
	MIN	e	08 00 48.0
	WDC	e	08 00 57.8
BRK 07h59m48.0s 37.6N 118.4W			
h=6km ML=4.0(4)			
Chalfant Valley, 28 km NNW of Bishop, CA			
Sep 18	FRI	ePKP	12 39 13.7
		epPKP	12 39 23.4
	MNA	ePKP	12 39 14.7
		epPKP	12 39 24.4
		esPKP	12 39 31.9
	PRI	ePKP	12 39 15.0
		epPKP	12 39 24.5
	JAS1	ePKP	12 39 16.5
		epPKP	12 39 26.4
	GCC	ePKP	12 39 17.5
		epPKP	12 39 27.0
	MHC	ePKP	12 39 17.8
South of Africa			
Sep 18	FHC	e	21 01 40.8
	WDC	ePc	21 01 44.2
	MIN	ePc	21 01 48.8
	ORV	e(P)	21 01 54.5
	JAS1	e(P)	21 02 11.8
	MNA	ePc	21 02 15.6
	LLA	eP	21 02 20.5
	PRS	ePc	21 02 21.2
	PRI	ePc	21 02 25.6
	BRK	e	21 02 [illegible]
		e	21 [illegible]
		e	21 [illegible]
		e	21 [illegible]
USGS 20h56m05.9s 61.3N 149.4W			

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DATE	STA	PHASE	TIME (UTC)
	h=56km mb=4.6		
Southern Alaska			
Sep 19	PRI	ePd	06 26 40.1
		iS	06 26 44.8
	LLA	iPc	06 26 44.3
	FRI	iPc	06 26 49.1
		iS	06 27 00.7
	PRS	eP	06 26 49.2
	SAO	iPc	06 26 51.7
	MHC	ePd	06 26 58.5
	GCC	ePc	06 26 59.6
	JAS1	iPc	06 27 01.6
		iS	06 27 21.8
	PCC	ePd	06 27 06.2
	BRK	e	06 27 08.9
	MNA	e	06 27 22.9
	ORV	e	06 27 27.0
BRK 06h26m34.6s 36.3N 120.4W			
h=9km Mag=2.8			
17 km NNW of Coalinga, CA			
Sep 19	FHC	eP	13 53 22.5
	WDC	eP	13 53 29.0
	MIN	eP	13 53 33.6
	ORV	ePc	13 53 37.8
	BRK	eP	13 53 44.0
	PCC	eP	13 53 45.4
	MHC	eP	13 53 49.9
	JAS1	ePc	13 53 51.9
	PRS	ePc	13 53 56.2
	LLA	eP	13 53 56.8
	MNA	ePc	13 53 58.5
	FRI	ePc	13 53 59.2
	PRI	eP	13 54 00.8
USGS 13h44m35.3s 55.8N 161.9E			
h=33km mb=4.9			
Near East Coast of Kamchatka			
Sep 20	MNA	eP	01 44 09.0
	FRI	e	01 44 13.5
	JAS1	e	01 44 19.0
USGS 01h31m14.0s 0.8N 29.2W			
h=10km mb=5.4 Ms=4.7			
Central Mid-Atlantic Ridge			
Sep 20	FHC	eP	02 23 53.6
	WDC	iPc	02 24 02.9
	MIN	eP	02 24 08.5
	ORV	e	02 24 12.9
	BRK	e	02 24 18.8
	MHC	e	02 24 25.3
	JAS1	iPc	02 24 28.6
	PRS	e	02 24 32.4
	LLA	e	02 24 33.2
	MNA	e	02 24 37.0
	FRI	eP	02 24 37.0
	PRI	e	02 24 37.7
USGS 02h17m32.1s 53.6N 167.2W			
h=33km mb=4.6			
Fox Islands, Aleutian Islands			
Sep 21	WDC	eP	12 30 08.8
	MIN	eP	12 30 12.3
	ORV	eP	12 30 13.9
	BRK	e	12 30 14.2
	MHC	eP	12 30 16.8
	LLA	e	12 30 18.5
	PRS	e	12 30 19.1
	JAS1	eP	12 30 20.5
	FRI	eP	12 30 24.7
	MNA	eP	12 30 29.4

DATE	STA	PHASE	TIME (UTC)
USGS 12h18m06.7s 17.0N 147.3E			
h=47km mb=5.1 Ms=4.5			
Mariana Islands Region			
Sep 23	SAO	iPc	06 15 54.7
	LLA	iPc	06 15 57.0
	PRS	iPd	06 15 57.5
	GCC	ePc	06 16 03.8
	PRI	ePd	06 16 04.8
	MHC	iPd	06 16 06.3
	PCC	iPc	06 16 13.1
	FRI	ePc	06 16 14.6
	JAS1	iPc	06 16 17.3
	BRK	e(P)	06 16 18.0
	ZSP	e(P)	06 16 18.5
	ORV	ePd	06 16 38.4
BRK 06h15m51.3s 36.6N 121.3W			
h=2km ML=2.8(2)			
Stone Canyon area, 25 km SE of Hollister, CA			
Sep 23	SAO	iPc	06 19 49.7
	LLA	iPc	06 19 52.0
	PRS	iPd	06 19 52.6
	GCC	e(P)	06 19 59.1
	PRI	ePc	06 20 00.0
	MHC	ePd	06 20 01.3
	PCC	iPc	06 20 08.1
	FRI	ePc	06 20 09.6
	JAS1	ePc	06 20 12.3
	BRK	e	06 20 14.2
		iPc	06 20 14.4
	ZSP	e	06 20 14.5
BRK 06h19m46.3s 36.6N 121.3W			
h=3km ML=2.5(2)			
Stone Canyon area, 25 km SE of Hollister, CA			
Sep 23	FHC	ePc	11 50 27.9
	WDC	iPc	11 50 34.5
		ePcP	11 51 59.1
	MIN	ePc	11 50 39.2
	ORV	ePc	11 50 43.5
		ePcP	11 52 03.5
	BRK	ePc	11 50 50.1
	PCC	ePc	11 50 51.5
	GCC	ePc	11 50 55.7
	MHC	ePc	11 50 56.1
	JAS1	ePc	11 50 57.7
		ePcP	11 52 10.6
	SAO	ePc	11 51 00.0
	PRS	ePc	11 51 02.5
	LLA	ePc	11 51 02.9
	FRI	ePc	11 51 05.5
		ePcP	11 52 14.4
	PRI	ePc	11 51 06.8
		ePcP	11 52 14.8
USGS 11h41m51.3s 56.6N 164.0E			
h=31km mb=5.3 Ms=4.6			
Komandorsky Islands Region			
Sep 23	PRI	e	13 42 55.0
	MHC	e	13 42 55.9
	JAS1	eP	13 42 59.5
		e	13 45 58
	FRI	eP	13 42 59.6
	BRK	e	13 43 02
		eLr	14 09 10
	WDC	e	13 43 16.6
USGS 13h30m15.4s 16.6S 167.3E			
h=19km mb=5.5 Ms=5.7			
Vanuatu Islands			

DATE	STA	PHASE	TIME (UTC)
Sep 23	MHC	iPc	14 41 17.1
		iS	14 41 18.9
	GCC	iPd	14 41 23.1
	PCC	iPc	14 41 25.3
	SAO	iPd	14 41 27.8
	BRK	iPc	14 41 27.9
	ZSP	ePc	14 41 29.3
		iS	14 41 40.6
	LLA	ePc	14 41 32.5
	FRI	iPc	14 41 33.5
	PRS	ePc	14 41 34.7
	JAS1	iPc	14 41 36.5
	ORV	e	14 41 40.4
	PRI	eP	14 41 40.9
BRK 14h41m15.1s 37.4N 121.7W			
h=6km ML=3.2(2) Mo=3.4E20(2)			
Halls Valley, 13 km ENE of San Jose, CA			
Sep 23	PRS	iPd	19 28 05.4
	SAO	iPd	19 28 09.9
	LLA	ePc	19 28 13.0
	GCC	iPd	19 28 13.4
	PRI	iPc	19 28 13.6
		iS	19 28 24.8
	MHC	ePd	19 28 18.7
		eS	19 28 37.9
	PCC	e(P)d	19 28 20.6
	FRI	iPc	19 28 27.3
	BRK	e(P)	19 28 28.9
		eS	19 28 54.0
	ZSP	eP	19 28 30.2
	JAS1	ePc	19 28 31.2
		eS	19 28 56.2
	ORV	e	19 28 49.7
BRK 19h27m56.7s 36.1N 121.8W			
h=18km ML=3.7(3) Mo=1.8E21(2)			
Off Coast 62 km SSE of Monterey, CA			
Sep 24	FRI	eP	14 21 09.3
	JAS1	eP	14 21 17.8
	PRI	eP	14 21 26.7
		iS	14 22 08.8
	LLA	eP	14 21 26.8
	SAO	eP	14 21 30.0
	PRS	e(P)	14 21 33.4
	MHC	eP	14 21 35.7
		iS	14 22 25.5
	ORV	e(P)	14 21 45.8
	PCC	e(P)	14 21 48.8
BRK 14h20m33.2s 37.4N 117.1W			
h=3km ML=4.0(2)			
72 km SSE of Tonopah, NV			
Sep 24	PCC	eP	14 30 40.5
	GCC	e(P)	14 30 40.7
	PRS	eP	14 30 42.0
	SAO	eP	14 30 42.2
	MHC	eP	14 30 43.4
	LLA	e(P)	14 30 44.0
	PRI	ePd	14 30 45.0
	WDC	iPd	14 30 47.0
	ORV	eP	14 30 48.2
	JAS1	iPd	14 30 48.7
	FRI	eP	14 30 49.1
USGS 14h19m37.5s 13.6S 173.1E			
h=619km mb=5.4			
Fiji Islands Region			
Sep 24	FRI	iPd	14 36 36.2
	JAS1	iPc	14 36 39.0

DATE	STA	PHASE	TIME (UTC)
	LLA	e(P)	14 36 48.5
	PRI	eP	14 36 49.5
		iS	14 37 30.4
	SAO	eP	14 36 55.2
	MHC	eP	14 36 57.6
		iS	14 37 47.5
	PRS	e(P)	14 36 57.8
BRK 14h35m55.9s 37.3N 117.2W			
h=10km ML=4.1(2)			
83 km S of Tonopah, NV			
Sep 24	FRI	eP	17 13 23.8
	JAS1	eP	17 13 37.3
	LLA	e	17 13 39.0
	MHC	eP	17 13 39.5
	ORV	eP	17 13 56.5
	BRK	e	17 14 02
		e	17 19 31
		e	17 20 38.0
	WDC	eP	17 14 10.4
USGS 17h09m22.3s 22.8N 108.1W			
h=33km mb=4.7			
Off Coast of Central Mexico			
Sep 25	PRI	eP	06 19 55.5
	FRI	eP	06 19 57.3
	PRS	eP	06 20 01.3
	LLA	eP	06 20 01.6
	SAO	e(P)	06 20 06.0
	JAS1	eP	06 20 10.0
	GCC	eP	06 20 11.4
	MHC	e(P)	06 20 11.7
	BRK	e(P)	06 20 19.8
		iS	06 24 11
		eLr	06 25 51
		AMP(μm)	PER(s)
		LZ	19 20.
	BKS	e(P)	06 20 21.7
		AMP(μm)	PER(s)
		PZ	0.22 1.4
	ORV	eP	06 20 30.8
	MIN	ePd	06 20 38.5
	WDC	eP	06 20 42.2
	FHC	eP	06 20 53.8
BRK Ms=5.4 Distance=20°			
USGS 06h15m54.8s 23.0N 108.1W			
h=10km mb=5.3 Ms=5.7			
Gulf of California			
Sep 26	FHC	eP	04 15 22.7
		e	04 15 37.5
	WDC	ePc	04 15 31.0
		e	04 15 44.9
		e	04 16 07.8
	MIN	ePc	04 15 36.4
		e	04 15 50.6
	ORV	ePc	04 15 41.2
		e	04 15 55.2
	BRK	ePc	04 15 47.7
	PCC	ePc	04 15 48.9
	GCC	ePc	04 15 53.4
	MHC	ePc	04 15 53.9
	JAS1	ePc	04 15 57.2
		e	04 16 10.9
	SAO	eP	04 15 57.9
	PRS	ePc	04 16 01.6
	LLA	ePc	04 16 02.3
		e	04 16 16.8
	FRI	ePc	04 16 05.6
	PRI	ePc	04 16 06.8
USGS 04h09m10.7s 54.1N 165.2W			
h=33km mb=5.0 Ms=4.1			

DATE	STA	PHASE	TIME (UTC)
Fox Islands, Aleutian Islands			
Sep 26	WDC	ePc	21 07 12.9
	ORV	e	21 07 29.6
USGS 21h04m52.2s 49.0N 128.7W			
h=10km mb=4.3			
Vancouver Island Region			
Sep 27	FHC	iPc	07 06 56.6
		iS	07 07 15.5
	WDC	iPd	07 07 12.3
	MIN	eP	07 07 21.8
	ORV	eP	07 07 24.8
	GCC	e	07 07 38.2
	MHC	e	07 07 38.8
	SAO	e	07 07 45.4
	JAS1	e	07 07 47.7
BRK 07h06m30.5s 40.5N 126.0W			
h=5kmR ML=3.7(3)			
Off Coast 160 km WSW Eureka, CA			
Sep 28	FRI	eP	04 21 27.8
	JAS1	eP	04 21 33.3
	ORV	eP	04 21 41.6
	MIN	e	04 21 42.4
	WDC	eP	04 21 44.7
USGS 04h12m56.7s 19.1N 69.5W			
h=36km mb=4.9 Ms=4.4			
Dominican Republic Region			
Sep 28	JAS1	eP	06 26 27.3
	WDC	e	06 26 35.9
	FRI	e	06 26 35.9
USGS 06h14m35.1s 21.0S 174.1W			
h=33km mb=4.7			
Tonga Islands			
Sep 30	FRI	iPc	22 30 45.7
	JAS1	iPc	22 30 53.8
	PRI	iPc	22 30 59.0
	LLA	eP	22 31 00.9
	SAO	iP	22 31 04.0
	PRS	ePc	22 31 05.3
	MHC	iPc	22 31 07.1
		iS	22 32 12
	ORV	ePc	22 31 12.0
	ZSP	e(P)	22 31 14.2
	BRK	e(P)	22 31 14.2
	PCC	ePc	22 31 14.5
	MIN	ePc	22 31 19.8
	WDC	ePc	22 31 29.4
	FHC	e(P)	22 31 45.0
BRK 22h30m00.1s 37.3N 116.3W			
h=0kmR ML=5.3(6)			
Underground Nuclear Explosion, N.T.S.			
Oct 1	FRI	eP	02 22 12.9
	JAS1	e(P)	02 22 28.4
	PRI	e	02 22 31.6
	MHC	e	02 22 43.8
	MIN	e	02 23 04.7
Oct 1	FRI	e(P)	03 29 25.7
	JAS1	eP	03 29 25.9
	WDC	eP	03 29 27.1
	ORV	e(P)	03 29 27.4
USGS 03h17m35.4s 16.6S 177.6W			
h=33km mb=5.4 Ms=4.6			
Fiji Islands Region			
Oct 1	PRS	eP	05 52 53.8

DATE	STA	PHASE	TIME (UTC)
	FRI	eP	05 53 00.6
	JAS1	ePd	05 53 01.6
	ORV	eP	05 53 03.4
	WDC	eP	05 53 04.1
	MIN	e(P)	05 53 06.8
USGS 05h40m52.5s 25.4S 177.6W			
h=142km mb=5.0			
South of Fiji Islands			
Oct 1	WDC	eP	16 03 21.0
		epP	16 03 33.9
	MIN	e	16 03 39.1
	GCC	eP	16 03 41.1
		epP	16 03 53.9
	MHC	eP	16 03 41.6
		epP	16 03 54.5
	JAS1	eP	16 03 45.0
		epP	16 03 58.0
	LLA	eP	16 03 50.0
		epP	16 04 03.0
	FRI	eP	16 03 55.3
		epP	16 04 06.0
	BKS	eLr	16 14 28
USGS 15h56m03.4s 51.8N 176.0W			
h=33km mb=5.3 Ms=4.5			
Andreanof Islands, Aleutian Islands			
Oct 3	MNA	ePKP	09 54 11.0
	FRI	ePKP	09 54 11.1
	JAS1	ePKP	09 54 11.4
	LLA	e	09 54 13.0
	MHC	ePKP	09 54 13.4
	BKS	ePKP	09 54 15.7
	BRK	e(PKP)	09 54 16.7
	MIN	e	09 54 18.7
	WDC	ePKP	09 54 19.1
	ORV	e	09 54 19.3
USGS 09h34m32.3s 52.3S 13.5E			
h=10km mb=5.3 Ms=4.5			
Southwest of Africa			
Oct 3	FHC	ePd	13 34 10.6
		iS	13 34 23.7
	WDC	ePc	13 34 23.7
	MIN	ePd	13 34 34.0
	ORV	e(P)	13 34 36.9
	SAO	ePc	13 35 00.1
BRK 13h33m51.9s 40.3N 125.1W			
h=4km ML=3.0(4)			
Off Coast 65 km SW of Cape Mendocino, CA			
Oct 4	JAS1	ePKP	02 18 15.0
		ePKKP	02 30 04.7
	WDC	e	02 18 15.6
	ORV	e	02 18 17.3
	FRI	ePKP	02 18 21.8
		ePKKP	02 30 00.6
	MNA	e	02 18 38.4
		ePKKP	02 29 58.2
	PRI	ePKKP	02 30 04.0
	LLA	ePKKP	02 30 05.4
	PRS	ePKKP	02 30 06.2
	GCC	e	02 30 07.2
	MHC	ePKKP	02 30 09.0
USGS 02h00m08.1s 3.0N 128.0E			
h=106km mb=5.8			
Halmahera			
Oct 5	MHC	ePKP	03 31 35.5
	JAS1	ePKP	03 31 36.5
	WDC	ePKP	03 31 36.6

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
	FRI	ePKP	03 21 38.6
	MNA	ePKP	03 21 44.0
	BKS	ePKP	03 21 45.7
		AMP(μm)	PER(s)
		0.018	0.9

USGS 03h01m57.5s 48.1S 104.6E
h=10km mb=4.5 Ms=4.3
Southeast Indian Rise

Oct 5	JAS1	eP	03 53 11.2
	WDC	eP	03 53 16.3
	MNA	eP	03 53 17.7
Oct 5	PRI	eP	07 31 48.6
	FRI	eP	07 31 52.4
	MHC	eP	07 31 57.8
	JAS1	iPc	07 32 00.0
		i	07 32 05.5
	MNA	iPc	07 32 02.5
	ORV	eP	07 32 11.5
	MIN	eP	07 32 16.0
	WDC	iPc	07 32 18.5
		e	07 32 23.5

USGS 07h21m37.4s 23.8S 112.0W
h=10km mb=5.2 Ms=4.9
Easter Island Region

Oct 5	PRI	eP	13 25 57.1
	FRI	e	13 25 59.5
	MHC	eP	13 26 04.5
	JAS1	ePc	13 26 06.8
	MNA	eP	13 26 09.0
	ORV	eP	13 26 18.2
	MIN	eP	13 26 24.9
	WDC	eP	13 26 24.9

USGS 13h15m45.5s 23.7S 112.0W
h=10km mb=5.4 Ms=5.1
Easter Island Region

Oct 5	SAO	iPd	21 57 04.1
	GCC	iPc	21 57 04.2
	MHC	iPd	21 57 07.2
	PRS	iPd	21 57 11.6
	LLA	iPd	21 57 12.3
	PCC	eP	21 57 13.4
	BRK	eP	21 57 17.8
		iS	21 57 33.8
	BKS	eP	21 57 18.4
		eS	21 57 33.8
	PRI	iPc	21 57 20.4
		iS	21 57 42.2
	JAS1	iPc	21 57 24.4
		iS	21 57 45.1
	FRI	eP	21 57 25.9

BRK 21h56m59.1s 36.9N 121.7W
h=6km ML=2.7(4)
Near Watsonville, 13 km SW of Gilroy, CA

Oct 5	FHC	eP	21 58 17.6
	WDC	iPc	21 58 30.7
	MIN	i	21 58 44.3
	ORV	iPc	21 58 51.5
	BRK	e	21 59 00.6
	BKS	eP	21 59 01.2
		eS	22 00 30
		e	22 01 36
		e	22 03 05
		e	22 05 40
		AMP(μm)	PER(s)
	PZ	0.21	0.4
	PCC	e	21 59 04.3

	GCC	eP	21 59 11.8
	MHC	eP	21 59 12.0
	JAS1	i	21 59 16.0
	PRS	eP	21 59 23.3
	LLA	eP	21 59 24.3
	MNA	eP	21 59 28.6
	FRI	e	21 59 30.5
	PRI	eP	21 59 31.3

USGS 21h57m20.6s 43.5N 127.3W
h=10km mb=5.1 Ms=5.1
Off Coast of Oregon

Oct 6	WDC	eP	04 29 03.7
		ipP	04 29 15.6
		ePcP	04 31 16.4
	ORV	eP	04 29 12.6
	BKS	eP	04 29 18.4
		epP	04 29 30.8
		AMP(μm)	PER(s)
	PZ	0.018	0.6
	BRK	e(P)	04 29 19.5
		ePcP	04 31 22.5
	MHC	eP	04 29 23.7
		ePcP	04 31 25.1
	JAS1	eP	04 29 27.4
		ipP	04 29 40.0
	PRS	eP	04 29 30.2
		ePcP	04 31 27.5
	LLA	eP	04 29 31.0
		ePcP	04 31 28.0
	PRI	eP	04 29 33.2
		e	04 29 48.8
	FRI	eP	04 29 35.2
		ePcP	04 31 29.6
	MNA	eP	04 29 36.1
		ePcP	04 31 30.4

USGS 04h21m46.8s 51.9N 176.3W
h=43km mb=5.1 Ms=4.2
Andreanof Islands, Aleutian Islands

Oct 6	WDC	eP	07 04 57.7
	ORV	eP	07 05 13.9
	MIN	e	07 05 26.2
	JAS1	e	07 05 37.7
	FRI	eP	07 05 52.1

USGS 07h03m20.7s 44.2N 129.5W
h=10km mb=4.5
Off Coast of Oregon

Oct 6	FRI	ePKPd	07 29 47.4
	PRI	ePKP	07 29 48.3
	MNA	ePKP	07 29 48.6
	PRS	ePKP	07 29 48.9
	LLA	ePKP	07 29 48.9
	SAO	ePKP	07 29 49.2
	JAS1	ePKP	07 29 50.0
	GCC	ePKP	07 29 50.0
	MHC	ePKP	07 29 50.9
	PCC	ePKP	07 29 51.0
	BRK	ePKP	07 29 51.8
	BKS	ePKP	07 29 52.4
	ORV	ePKP	07 29 52.9
	MIN	ePKP	07 29 53.9
	WDC	ePKP	07 29 55.0

USGS 07h11m03.0s 56.8S 26.6W
h=87km mb=5.4
South Sandwich Islands Region

Oct 7	FHC	ePc	11 51 59.7
	WDC	ePc	11 52 04.8
	ORV	ePc	11 52 10.9
	BRK	ePc	11 52 13.2

	PCC	ePc	11 52 13.4
	BKS	ePc	11 52 13.5
		AMP(μm)	PER(s)
	PZ	0.23	0.7
	GCC	ePc	11 52 16.3
	MHC	ePc	11 52 17.2
	SAO	eP	11 52 18.9
	JAS1	ePc	11 52 19.7
		e	11 55 24.3
	PRS	ePc	11 52 21.0
	LLA	ePc	11 52 21.7
	PRI	ePc	11 52 24.7
	FRI	ePc	11 52 24.8
	MNA	ePc	11 52 26.7
		e	11 53 00.6

USGS 11h40m55.1s 31.9N 137.7E
h=400km mb=5.1
South of Honshu, Japan

Oct 7	JAS1	eP	14 16 30.3
		e	14 16 50.0
	FRI	eP	14 16 30.5
		e	14 16 48.9
	ORV	eP	14 16 31.4
	WDC	eP	14 16 32.9
	MNA	eP	14 16 38.8

USGS 14h03m44.6s 16.6S 167.3E
h=10km mb=5.7 Ms=5.2
Vanuatu Islands

Oct 7	BKS	eP	20 07 37.0
		AMP(μm)	PER(s)
	PZ	0.038	0.8
	MHC	eP	20 07 38.5
	PRS	eP	20 07 38.5
	WDC	eP	20 07 39.2
	LLA	eP	20 07 40.2
	ORV	e	20 07 41.3
	JAS1	iPd	20 07 43.4
	FRI	eP	20 07 44.8
	MNA	eP	20 07 52.9

USGS 19h55m07.9s 10.1S 161.0E
h=110km mb=4.9
Solomon Islands

Oct 8	WDC	eP	00 18 54.9
	FHC	eP	00 18 56.3
	MIN	eP	00 18 56.6
	MNA	eP	00 19 06.8
	JAS1	eP	00 19 12.4
	BKS	eP	00 19 15.3
		eLq	00 35 36
		AMP(μm)	PER(s)
	PZ	0.025	0.8
	LZ	2.1	20.
	LN	2.9	20.
	LE	3.0	20.
	MHC	eP	00 19 18.1
	FRI	eP	00 19 18.5
	LLA	eP	00 19 22.8
	PRS	eP	00 19 24.9
	PRI	eP	00 19 26.3

USGS 00h09m22.5s 80.3N 1.7W
h=10km mb=5.1 Ms=4.7
North of Svalbard

Oct 9	MHC	iPd	02 06 24.5
		iS	02 06 26.05
	GCC	iPd	02 06 30.5
	SAO	iPd	02 06 34.5
	PCC	iPc	02 06 34.5
	BRK	ePc	02 06 37.3

	BKS	ePc	02 06 37.8
		eS	02 06 49.2
	LLA	ePc	02 06 39.7
	PRS	ePd	02 06 41.3
	JAS1	iPc	02 06 44.5
	PRI	eP	02 06 48.4
	ORV	iPc	02 07 03.4

BRK 02h06m23.0s 37.3N 121.7W
h=5km ML=3.0(4) Mo=2.0E20(2)
Halls Valley, 18 km ESE of San Jose, CA

Oct 9	MNA	iPd	05 37 45.9
	FRI	iPc	05 37 45.9
	JAS1	iPc	05 37 55.6
	LLA	ePc	05 38 02.5
	PRI	iPc	05 38 03.3
	SAO	eP	05 38 07.8
	MHC	ePc	05 38 08.8
	PRS	eP	05 38 08.8
	GCC	eP	05 38 13.0
	PCC	eP	05 38 15.6
	BRK	eP	05 38 16.3
	BKS	iPnc	05 38 16.4
		eP*	05 38 23.5
		ePg	05 38 28.4

BRK 05h37m25.7s 37.4N 118.4W
h=11km ML=4.4(6) Mo=1.7E22(2)
Bishop, CA

Oct 9	MHC	ePc	18 48 22.4
	JAS1	iPc	18 48 23.2
Oct 10	PRI	eP	06 27 45.8
	MNA	eP	06 27 46.3
	FRI	ePd	06 27 46.8
	PRS	ePd	06 27 48.9
	SAO	e(P)	06 27 49.9
	JAS1	ePd	06 27 51.3
	GCC	eP	06 27 53.3
	MHC	ePd	06 27 53.7
	PCC	eP	06 27 55.9
	BRK	ePd	06 27 56.9
	BKS	ePc	06 27 57.5
		AMP(μm)	PER(s)
	PZ	0.019	0.7
	ORV	ePd	06 28 00.8
	MIN	eP	06 28 03
	WDC	ePd	06 28 05.9
	FHC	e	06 28 12.9

USGS 06h16m00.1s 23.6S 68.7W
h=85km mb=5.1
Northern Chile

Oct 10	FRI	eP	17 56 25.0
	PRI	e	17 56 28.4
	JAS1	eP	17 56 34.2
	MHC	eP	17 56 39.1
	BRK	e	17 56 43
		AMP(μm)	PER(s)
	LZ	11	20.
	ORV	eP	17 56 48.1
	BKS	eS	18 02 42
		eLq	18 07 42
		eLr	18 10 42
		AMP(μm)	PER(s)
	LZ	17	20.
	LN	19	20.
	LE	14	20.

BRK Ms=6.0 Distance=37°
USGS 17h49m24.1s 13.8N 89.1W

	h=7km mb=5.0 Ms=5.4		
El Salvador			
Oct 10	WDC	ePKPd	18 07 18.3
	ORV	ePKP	18 07 20.5
	MHC	ePKP	18 07 22.9
	JAS1	ePKP	18 07 23.7
	LLA	ePKP	18 07 23.9
	PRS	ePKP	18 07 24.1
	FRI	ePKPd	18 07 25.6
	PRI	ePKP	18 07 25.7

USGS 17h48m24.6s 7.5S 107.2E
h=81km mb=5.6
Java

Oct 10	PRI	ePKP	20 31 13.7
	FRI	ePKP	20 31 14.0
	MNA	ePKP	20 31 19.1
	JAS1	ePKP	20 31 20.5
	ORV	ePKP	20 31 29.5
	WDC	ePKP	20 31 33.6

USGS 20h18m36.3s 42.1S 84.0W
h=10km mb=5.4 Ms=4.5
West Chile Rise

Oct 11	BKS	iPc	05 17 41.1
	BRK	iPc	05 17 41.2
	ZSP	iPc	05 17 41.9
	PCC	iPd	05 17 45.2
	MHC	iPc	05 17 47.3
		iS	05 17 57.1
	GCC	iPd	05 17 51.4
	SAO	ePc	05 17 56.0
	JAS1	ePd	05 17 57.7
	LLA	iPd	05 18 01.0
	PRS	iPd	05 18 02.8
		i	05 18 05.7
	ORV	ePd	05 18 05.3
	PRI	eP	05 18 08.5
	FRI	iPc	05 18 08.7
	MIN	eP	05 18 16.7
	WDC	eP	05 18 19.0
	MNA	eP	05 18 26.2

BRK 05h17m36.4s 37.8N 122.0W
h=6km ML=4.2(6) Mo=8.3E21(2)
Danville, 25 km ESE of Berkeley, CA

Oct 11	BKS	ePc	06 39 43.0
		iS	06 39 47.0
	BRK	iPc	06 39 43.2
	ZSP	iPc	06 39 43.8
		iS	06 39 50.6
	PCC	iPd	06 39 47.1
	MHC	iPc	06 39 49.1
		iS	06 39 59.2
	GCC	iPd	06 39 53.3
	SAO	eP	06 39 57.8
	JAS1	iPd	06 39 59.5
		iS	06 40 16.4
	PRS	eP	06 40 03.7
	LLA	eP	06 40 05.5
	ORV	e	06 40 07.7
	FRI	ePc	06 40 10.4
	PRI	eP	06 40 11.0
	MIN	e	06 40 19.3
	MNA	e	06 40 23.5

BRK 06h39m38.2s 37.8N 122.0W
h=5km ML=3.2(6) Mo=1.9E21(4)
Danville, 25 km ESE of Berkeley, CA

Oct 11	PRI	e	12 56 11.5
	FRI	e	12 56 11.5

	MNA	eP	12 56 13.0
	JAS1	eP	12 56 17.7
	ORV	eP	12 56 27.5
	WDC	eP	12 56 31.5

USGS 12h43m46.0s 33.4S 72.2W
h=17km mb=5.0 Ms=4.4
Off Coast of Central Chile

Oct 11	FHC	e	13 27 19.8
	WDC	iPc	13 27 25.6
	MIN	eP	13 27 29.8
	ORV	eP	13 27 32.9
	BRK	e	13 27 37.1
	GCC	eP	13 27 41.0
	MHC	eP	13 27 41.4
	SAO	e	13 27 44.0
	JAS1	iPc	13 27 44.1
	PRS	eP	13 27 46.3
	LLA	e	13 27 47.1
	FRI	eP	13 27 50.0
	PRI	eP	13 27 50.2
	MNA	iPc	13 27 51.2

USGS 13h16m43.9s 42.5N 145.0E
h=47km mb=5.2 Ms=4.5
Hokkaido, Japan, Region

Oct 11	FHC	e	22 28 35.1
	WDC	eP	22 28 45.2
	MIN	eP	22 28 52.3
	ORV	eP	22 29 02.0
		e	22 29 45.1
	JAS1	eP	22 29 27.9
	MNA	eP	22 29 33.5
	MHC	e	22 29 34.3
	FRI	e	22 29 43.8
	PRI	e	22 29 48.0

USGS 22h26m30.3s 48.9N 127.9W
h=10km mb=4.5
Vancouver Island Region

Oct 11	FHC	e	22 56 26.5
	WDC	iPc	22 56 36.5
	MIN	iPc	22 56 43.3
	ORV	ePc	22 56 53.0
	JAS1	eP	22 57 18.0
	MHC	eP	22 57 23.1
	MNA	eP	22 57 24.5
	FRI	eP	22 57 32.3
	PRI	eP	22 57 39.0

USGS 22h54m20.6s 49.0N 128.0W
h=10km mb=4.2
Vancouver Island Region

Oct 12	ZSP	iPc	06 43 23.8
		iS	06 43 39.6
	BRK	eP	06 43 24.1
	BKS	iPc	06 43 24.4
		eS	06 43 41.8
	PCC	eP	06 43 26.8
	ORV	eP	06 43 31.0
	MHC	eP	06 43 34.6
	GCC	eP	06 43 34.6
	WDC	eP	06 43 35.4
	MIN	eP	06 43 37.4
	FHC	eP	06 43 37.9
	SAO	eP	06 43 41.2
	JAS1	eP	06 43 42.8
	PRS	eP	06 43 [illegible]
	LLA	eP	06 43 44.[illegible]
	PRI	eP	06 43 [illegible]
	FRI	eP	06 43 [illegible]
	MNA	ePc	06 43 06.1

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DATE	STA	PHASE	TIME (UTC)
BRK 06h43m01.9s 38.7N 123.5W			
h=11km ML=4.0(8) Mo=1.6E22(4)			
Along Coast, 55 km SW of Ukiah, CA			
Oct 12	FRI	ePKPc	07 12 41.6
		e	07 12 56.0
	PRI	ePKP	07 12 42.0
		e	07 12 57.0
	MNA	ePKP	07 12 42.5
		e	07 12 57.2
	PRS	ePKP	07 12 42.6
	JAS1	ePKPc	07 12 44.0
		e	07 12 59.0
		e	07 13 04.2
	GCC	ePKPc	07 12 44.0
	MHC	ePKPc	07 12 44.8
		e	07 12 59.5
	BRK	e	07 12 46.0
	ORV	e(PKP)	07 12 47.7
	MIN	ePKP	07 12 48.0
	WDC	ePKP	07 12 49.0
		e	07 13 03.6
		e	07 13 09.0
USGS 06h53m48.8s 57.8S 25.6W			
h=33km mb=5.0			
South Sandwich Islands Region			
Oct 13	PRS	eP	01 51 32.7
	MHC	eP	01 51 34.0
	PRI	eP	01 51 34.5
	WDC	eP	01 51 38.9
	JAS1	eP	01 51 39.1
		epP	01 52 03.8
	FRI	eP	01 51 39.1
	MIN	eP	01 51 40.5
	MNA	eP	01 51 47.0
USGS 01h39m00.2s 22.4S 171.3E			
h=94km mb=5.2			
Loyalty Islands Region			
Oct 13	FHC	eP	21 29 00.7
		ePcP	21 29 14.4
	WDC	eP	21 29 04.9
		iPcP	21 29 19.5
	MIN	eP	21 29 09.1
		ePcP	21 29 24
	ORV	eP	21 29 11.9
		ePcP	21 29 25.9
	BRK	eP	21 29 15.2
		ePcP	21 29 29.2
	PCC	eP	21 29 15.5
		ePcP	21 29 30.0
	MHC	eP	21 29 19.5
		ePcP	21 29 34.0
	SAO	e(P)	21 29 21
	JAS1	eP	21 29 21.8
		ePcP	21 29 36.5
		e	21 32 19.9
	PRS	eP	21 29 24.0
		ePcP	21 29 38.5
	LLA	eP	21 29 24.7
		ePcP	21 29 39.1
	PRI	eP	21 29 27.7
		ePcP	21 29 42.1
	FRI	ePc	21 29 27.8
		ePcP	21 29 41.6
	MNA	eP	21 29 29.6
		ePcP	21 29 43.6
	BKS	iPcP	21 29 30.4
USGS 21h17m50.9s 37.1N 141.0E			
h=65km mb=5.7			
Near East Coast of Honshu, Japan			

DATE	STA	PHASE	TIME (UTC)
Oct 14	MNA	ePc	12 19 43.2
		iS	12 21 08.9
	MIN	e(P)	12 19 44.2
	ORV	eP	12 19 46.8
	WDC	eP	12 19 53.1
	JAS1	ePc	12 19 56.7
		e	12 20 11.8
		e	12 21 51.8
USGS 12h17m53.3s 44.0N 114.7W			
h=5km			
Western Idaho			
Oct 14	PRI	eP	12 28 11.9
	FRI	eP	12 28 13.1
	PRS	eP	12 28 14.7
	GCC	eP	12 28 18.6
	MHC	eP	12 28 20.0
	MNA	eP	12 28 20.4
	JAS1	ePd	12 28 20.6
	BRK	e(P)	12 28 23.6
	BKS	e(P)	12 28 25
	WDC	ePd	12 28 36.3
USGS 12h16m20.9s 37.0S 95.9W			
h=10km mb=5.0 Ms=4.6			
Southern Pacific Ocean			
Oct 14	BKS	ePc	17 05 56
		ePP	17 09 40
		iSKS	17 16 20
		eS	17 16 42
		iPS	17 17 40
		eSS	17 22 36
		eLq	17 29 20
		eLr	17 33 36
		AMP(μm)	PER(s)
		LN 8.9	20.
		LE 72	20.
	WDC	ePc	17 05 59.1
	MHC	eP	17 06 00.6
	GCC	e(P)	17 06 02.3
	PRS	e(P)	17 06 02.3
	LLA	e(P)	17 06 02.7
	ORV	e(P)	17 06 02.8
	PRI	eP	17 06 04.1
	JAS1	eP	17 06 04.6
		ePP	17 09 38.7
	FRI	eP	17 06 07.2
	MNA	ePc	17 06 13.0
BRK Ms=7.1 Distance=90°			
USGS 16h53m08.2s 5.0S 153.6E			
h=40km mb=6.2 Ms=6.6			
New Ireland Region			
Oct 14	PRS	eP	21 30 38.2
	SAO	e(P)	21 30 40.7
	MHC	eP	21 30 40.8
	FRI	eP	21 30 44.3
	JAS1	eP	21 30 45.5
	FHC	eP	21 30 46.5
	ORV	eP	21 30 47.7
	MIN	e(P)	21 30 48.2
	WDC	eP	21 30 49.0
	MNA	eP	21 30 53.5
USGS 21h18m00.5s 31.8S 178.7W			
h=63km mb=5.6			
Kermadec Islands Region			
Oct 15	FRI	ePc	02 29 48.3
		i	02 30 04.8
		i	02 30 50.0
	PRI	eP	02 29 49.4

DATE	STA	PHASE	TIME (UTC)
	LLA	e(P)	02 29 54.1
	PRS	eP	02 29 56.2
	MNA	eP	02 29 59.4
		e	02 30 14.8
	SAO	iPc	02 30 00.9
	JAS1	eP	02 30 04.0
	MHC	eP	02 30 06.8
	GCC	e(P)	02 30 08.6
	BKS	e()	02 30 14.5
BRK ML=4.5(6)			
PAS 02h28m47.8s 34.0N 116.6W			
h=9km ML=4.7			
Palm Springs area, CA			
Oct 15	PCC	ePc	22 15 36.8
	FHC	eP	22 15 37.3
	GCC	eP	22 15 37.6
	BRK	eP	22 15 37.8
	BKS	ePc	22 15 38.4
		e	22 16 13.2
		eLr	22 43 00
		AMP(μm)	PER(s)
		PZ 0.14	0.9
		LZ 2.3	20.
		LN 0.0	20.
		LE 1.6	20.
	PRS	eP	22 15 39.4
	MHC	eP	22 15 39.6
	LLA	eP	22 15 41.3
	WDC	eP	22 15 41.7
	PRI	eP	22 15 42.1
	ORV	eP	22 15 43.5
	MIN	eP	22 15 43.8
	JAS1	eP	22 15 45.2
	FRI	eP	22 15 46.2
	MNA	eP	22 15 54.5
BRK Ms=5.4 Distance=88°			
USGS 22h03m05.3s 9.9S 163.0E			
h=10km mb=5.6 Ms=5.2			
Solomon Islands			
Oct 15	PRI	ePKP	23 23 08.7
	MNA	ePKP	23 23 09.0
	PRS	ePKP	23 23 09.2
	JAS1	ePKP	23 23 10.0
	MHC	ePKP	23 23 11.2
	WDC	ePKP	23 23 15.2
USGS 23h04m15.2s 56.4S 25.6W			
h=33km mb=5.5 Ms=5.0			
South Sandwich Islands Region			
Oct 16	FHC	iPd	06 16 50.3
		iS	06 16 57.4
	WDC	iPd	06 17 00.6
		iS	06 17 06.0
	MIN	ePc	06 17 10.2
	ORV	ePc	06 17 13.8
		iS	06 17 39.3
BRK 06h16m40.7s 40.3N 123.9W			
h=6km ML=2.4(2)			
Weott, 55 km SE of Eureka, CA			
Oct 16	BRK	iPc	11 20 40.7
		iS	11 20 43.6
	BKS	iPc	11 20 40.7
		iSs	11 20 43.5
	ZSP	iPc	11 20 42.2
		iS	11 20 46.6
	PCC	iPd	11 20 43.8
	MHC	eP	11 20 48.7
		eS	11 21 00.2
	GCC	eP	11 20 51.4

DATE	STA	PHASE	TIME (UTC)
		eS	11 21 01.0
	SAO	eP	11 20 57.1
	JAS1	eP	11 21 03.0
		iS	11 21 17.7
	LLA	e(P)	11 21 04.2
BRK 11h20m37.6s 37.8N 122.1W			
h=7km ML=2.2(4)			
Lake Chabot Area, 17 km SE of Berkeley, CA			
Oct 16	MNA	iPc	19 25 32.4
	FRI	iPc	19 25 43.8
	JAS1	iPc	19 25 52.0
	PRI	ePnc	19 25 56.9
		iP*	19 26 06.4
	LLA	ePc	19 25 57.5
	SAO	ePc	19 26 03.0
	PRS	ePc	19 26 03.4
	MHC	iPnc	19 26 05.5
		iP*	19 26 14.6
		iSg	19 27 10.9
	GCC	eP	19 26 08.1
	ORV	iPc	19 26 11.2
	BRK	ePn	19 26 11.9
		iP*	19 26 22.8
	BKS	ePnc	19 26 12.0
		eP*	19 26 22.5
	ZSP	iPnc	19 26 12.7
		iP*	19 26 23.4
	PCC	iPc	19 26 12.8
	MIN	iPc	19 26 18.8
	WDC	iPc	19 26 28.0
		iPg	19 26 47.1
	FHC	e	19 26 43.2
BRK ML=5.4(8)			
USGS 19h25m00.0s 37.2N 116.5W			
h=0km mb=5.6			
Underground Nuclear Explosion, N.T.S.			
Oct 17	WDC	ePdifc	07 46 54.5
		ePKPc	07 51 09.3
		ePKKP1	08 02 32.1
		ePKKP2	08 02 49.7
		ePKPPKP	08 10 53.5
	MIN	ePdif	07 46 57.7
		ePKP	07 51 10.6
		ePKKP1	08 02 31.8
		ePKKP2	08 02 47.0
	BRK	ePdif	07 46 58.7
	MHC	ePdifc	07 47 01.7
		ePKPc	07 51 12.1
	PRS	ePdif	07 47 03.2
		ePKPc	07 51 12.8
	PRI	e	07 47 04.5
		ePKPc	07 51 14.4
	LLA	ePdif	07 47 04.5
		ePKPc	07 51 13.4
		ePKKP1	08 02 30.1
		ePKKP2	08 02 43.8
	JAS1	ePdifc	07 47 05.3
		ePKPc	07 51 13.3
		ePKKP1	08 02 27.9
		ePKKP2	08 02 42.5
		ePKPPKP	08 10 45.7
	FRI	ePdifc	07 47 08.2
		ePKPc	07 51 14.8
		ePKKP1	08 02 26.3
		ePKKP2	08 02 38.2
		ePKPPKP	08 10 49.7
	MNA	ePdif	07 47 12.3
		ePKPc	07 51 17.2

DATE	STA	PHASE	TIME (UTC)
		ePKKP1	08 02 23.9
		ePKKP2	08 02 35.0
	GCC	ePKP	07 51 11.2
	BKS	eSKS	07 57 32
		eSKKS	07 58 20
		eS	07 59 40
		ePS	08 00 44
		ePKKP	08 01 56
		eSS	08 06 40
		eLq	08 16 32
		eLr	08 21 20
		AMP(μm)	PER(s)
		LZ 3.9	20.
		LN 4.8	20.
		LE 4.5	20.
BRK Ms=6.1 Distance=110°			
USGS 07h32m61.3s 5.3S 131.4E			
h=67km mb=6.3			
Banda Sea			
Oct 17	MNA	ePc	09 15 13.8
	MIN	e(P)	09 15 19.6
	ORV	ePc	09 15 22.9
	JAS1	eP	09 15 25.4
	FRI	eP	09 15 25.9
	LLA	eP	09 15 33.2
	MHC	eP	09 15 33.4
	WDC	e	09 15 42.0
USGS 09h04m36.1s 43.1N 29.3W			
h=10km mb=5.0			
North Atlantic Ridge			
Oct 17	FHC	eP	09 49 08.5
	WDC	eP	09 49 14.5
	ORV	ePd	09 49 22.2
	MHC	eP	09 49 31.1
	JAS1	ePd	09 49 33.9
	PRS	eP	09 49 36.2
	LLA	eP	09 49 37.0
	FRI	eP	09 49 40.1
	MNA	eP	09 49 41.1
USGS 09h38m59.9s 45.1N 149.8E			
h=33km mb=5.4			
Kurile Islands			
Oct 17	PRI	eP	20 32 33.6
		epP	20 33 05.8
	FRI	eP	20 32 41.2
		epP	20 33 11.5
	JAS1	e(P)	20 32 41.6
		epP	20 33 09.9
	ORV	eP	20 32 43.2
		epP	20 33 10.4
	WDC	eP	20 32 43.6
		epP	20 33 10.7
	MNA	ePc	20 32 51.3
		epP	20 33 19.4
	MHC	epP	20 33 06.0
USGS 20h21m19.0s 16.3S 173.9W			
h=108km mb=5.2			
Tonga Islands			
Oct 18	WDC	eP	01 10 04.4
	MIN	eP	01 10 10.2
	ORV	eP	01 10 13.9
	MHC	eP	01 10 25.3
	JAS1	eP	01 10 28.9
	PRS	eP	01 10 32.8
	FRI	eP	01 10 36.8
	MNA	eP	01 10 37.7
	PRI	eP	01 10 37.9
USGS 01h02m52.1s 51.7N 175.3W			

DATE	STA	PHASE	TIME (UTC)
h=33km mb=5.4 Ms=4.9			
Andreanof Islands, Aleutian Islands			
Oct 18	FHC	ePc	09 59 14.2
	WDC	iPc	09 59 19.0
	MIN	iPc	09 59 22.2
	PCC	ePc	09 59 22.5
	BRK	ePc	09 59 22.9
	BKS	eP	09 59 23.3
		AMP(μm)	PER(s)
		PZ 0.21	1.0
	ORV	iPc	09 59 23.7
	GCC	ePc	09 59 24.4
	MHC	ePc	09 59 26.2
	SAO	eP	09 59 26.9
	PRS	iPc	09 59 28.4
	LLA	ePc	09 59 29.4
	JAS1	iPc	09 59 29.8
		i	09 59 52.4
		e	10 01 54.5
	PRI	iPc	09 59 32.8
	FRI	iPc	09 59 33.5
	MNA	iPc	09 59 38.0
USGS 09h46m44.0s 12.1N 142.9E			
h=52km mb=5.7 Ms=4.9			
South of Mariana Islands			
Oct 18	FHC	ePKP	22 27 14.7
	WDC	iPKPd	22 27 15.9
	MIN	ePKPd	22 27 17.4
	ORV	ePKPd	22 27 18.1
	PCC	ePKP	22 27 18.9
	BRK	ePKP	22 27 18.9
	BKS	ePKP	22 27 19.1
		AMP(μm)	PER(s)
		PKPZ 0.064	0.7
	GCC	ePKP	22 27 19.9
	MHC	ePKP	22 27 20.6
	JAS1	iPKPd	22 27 21.1
		e	22 40 49
	PRS	ePKP	22 27 21.6
	LLA	ePKP	22 27 21.9
	FRI	ePKP	22 27 23.1
	PRI	ePKP	22 27 23.2
	MNA	ePKP	22 27 24.5
USGS 22h09m31.7s 5.6S 110.0E			
h=643km mb=5.7			
Java Sea			
Oct 19	MNA	iPc	00 42 57.0
	JAS1	iPc	00 42 58.4
		iS	00 43 10.3
	FRI	iPd	00 43 06.6
	ORV	iPc	00 43 16.1
	MHC	ePc	00 43 17.9
	LLA	ePc	00 43 18.9
	SAO	eP	00 43 20.6
	ZSP	eP	00 43 21.1
	BRK	eP	00 43 21.8
	BKS	eP	00 43 21.8
	GCC	eP	00 43 23.9
	PRS	eP	00 43 24.5
	PRI	e	00 43 24.7
	PCC	eP	00 43 24.8
	MIN	e	00 43 27.4
	WDC	e	00 43 33.4
BRK 00h42m40.3s 38.4N 119.3W			
h=5km ML=3.7(6)			
19 km NW of Bridgeport, CA			
Oct 19	PRS	eP	01 36 00.2
	PRI	eP	01 36 02.2

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DATE	STA	PHASE	TIME (UTC)
	MHC	eP	03 36 02.7
	FRI	eP	03 36 07.5
	JAS1	ePd	03 36 08.4
	ORV	e	03 36 10.4
	WDC	eP	03 36 11.2
	MIN	eP	03 36 12.8
	MNA	eP	03 36 17.8
USGS 03h24m16.1s 22.6S 175.2W			
h=125km mb=4.9			
Tonga Islands Region			
Oct 19	WDC	eP	18 38 32.4
		i	18 38 41.7
	MIN	eP	18 38 37.0
		i	18 38 46.3
	ORV	eP	18 38 42.5
		e	18 38 51.3
	JAS1	eP	18 38 57.3
		i	18 39 02.1
	MNA	eP	18 39 03.0
		e	18 39 10.7
	FRI	eP	18 39 06.4
		i	18 39 15.7
	PRI	eP	18 39 09.8
		e	18 39 18.9
USGS 18h30m57.2s 63.9W 178.7W			
h=10km mb=5.4 Ms=4.9			
Bering Sea			
Oct 20	MHC	iPc	02 49 02.6
		iS	02 49 04.8
	GCC	iPd	02 49 09.5
	PCC	iPc	02 49 10.2
	BKS	iPc	02 49 11.6
	BRK	iPc	02 49 11.7
		iS	02 49 21.8
	ZSP	iPd	02 49 12.9
		iS	02 49 22.6
	SAO	iPc	02 49 13.8
	LLA	eP	02 49 18.3
	JAS1	iPd	02 49 20.1
		iS	02 49 35.1
	PRS	eP	02 49 20.3
	PRI	e	02 49 26.8
	FRI	e	02 49 27.6
BRK 02h48m59.9s 37.5N 121.7W			
h=6km ML=2.7(4) Mo=7.6E19(2)			
Mt. Lewis area, 21 km NE of San Jose, CA			
Oct 20	WDC	ePc	05 48 30.3
		epP	05 48 51.3
	JAS1	ePc	05 48 35.7
		epP	05 48 56.6
	MNA	ePc	05 48 44.9
		epP	05 49 05.6
	MIN	epP	05 48 53.7
	ORV	epP	05 48 55.5
	FRI	epP	05 48 57.5
USGS 05h35m40.7s 4.8S 153.5E			
h=77km mb=5.5			
New Ireland Region			
Oct 20	PRS	eP	06 58 30.6
	GCC	ePc	06 58 31.0
	SAO	eP	06 58 31.2
	PCC	eP	06 58 31.3
	LLA	ePc	06 58 33.0
	BRK	ePc	06 58 33.1
	MHC	ePc	06 58 33.5
		e	07 08 06.1
	BKS	ePc	06 58 33.6

DATE	STA	PHASE	TIME (UTC)
		ePP	07 01 56
		e	07 07 50
		eS	07 08 56
		eSS	07 13 43
		eSSS	07 17 40
		eLq	07 19 30
		eLr	07 23 20
		AMP(μm)	PER(s)
		PZ 1.2	1.6
		LN 1200	20.
		LE 1000	20.
		LZ 900	20.
		LNE 850	20.
		LNW 140	20.
	FRI	ePc	06 58 37.4
		ePKPPKP	07 25 06.6
	JAS1	iPc	06 58 38.5
		e	07 08 07.7
		ePKKP	07 16 57.9
		ePKPPKP	07 25 07.0
	FHC	eP	06 58 39.3
	ORV	eP	06 58 40.8
	WDC	iPc	06 58 41.9
		e	07 08 13.5
		ePKKP	07 17 02.9
		ePKPPKP	07 25 03.5
	MIN	ePc	06 58 42.8
		ePKPPKP	07 25 05.3
	MNA	ePc	06 58 47.1
	PRI	ePKPPKP	07 25 04.5
BRK Ms=8.3 Distance=85°			
USGS 06h46m10.0s 28.1S 176.4W			
h=29km mb=6.6 Ms=8.1			
Kermadec Islands Region			
Oct 20	PRI	e	07 39 00
	JAS1	iPd	07 39 06.8
	ORV	eP	07 39 09.2
	WDC	iPd	07 39 10.5
USGS 07h26m34.6s 28.4S 176.7W			
h=33km mb=5.2			
Kermadec Islands Region			
Oct 20	MHC	ePc	08 16 44.7
	LLA	eP	08 16 45.8
	FRI	ePc	08 16 49.6
	JAS1	ePc	08 16 50.7
	WDC	ePc	08 16 53.9
	MIN	ePc	08 16 55.4
USGS 08h04m22.3s 28.2S 176.3W			
h=33km mb=5.1			
Kermadec Islands Region			
Oct 20	PCC	e	08 23 47.1
	PRS	ePc	08 23 50.3
	GCC	iPc	08 23 50.6
	PRI	eP	08 23 52.0
	BRK	eP	08 23 52.6
	MHC	iPc	08 23 52.9
	BKS	eP	08 23 53.0
		AMP(μm)	PER(s)
		PZ 0.047	0.9
	FRI	iPc	08 23 56.9
	JAS1	iPc	08 23 58.1
	ORV	eP	08 24 00.5
	WDC	iP	08 24 01.3
	MIN	eP	08 24 02.4
	MNA	e	08 24 10.7
USGS 08h11m30.7s 27.7S 176.6W			
h=33km mb=5.4			
Kermadec Islands Region			

DATE	STA	PHASE	TIME (UTC)
Oct 20	GCC	e(P)	08 35 39.1
	PRS	eP	08 35 39.4
	MHC	eP	08 35 42.0
	FRI	ePc	08 35 45.6
		e	08 35 52.3
	BKS	e(P)	08 35 46.4
		AMP(μm)	PER(s)
		PZ 0.022	1.0
	JAS1	eP	08 35 47.0
		i	08 35 53.4
	PRI	e	08 35 47.5
	ORV	eP	08 35 49.0
		e	08 35 55.7
	WDC	ePc	08 35 50.2
		e	08 35 56.5
	MIN	eP	08 35 51.8
		e	08 35 58.0
USGS 08h23m19.1s 28.0S 176.4W			
h=33km mb=5.2			
Kermadec Islands Region			
Oct 20	MHC	ePc	09 00 36.5
	BRK	eP	09 00 36.6
	FRI	eP	09 00 40.6
	JAS1	ePc	09 00 41.8
	WDC	eP	09 00 43.8
	ORV	eP	09 00 44.0
	MIN	eP	09 00 46.4
	MNA	ePc	09 00 50.3
USGS 08h48m13.0s 28.4S 176.1W			
h=33km mb=4.8			
Kermadec Islands Region			
Oct 20	JAS1	ePc	09 01 21.5
	WDC	ePc	09 01 24.7
	MIN	eP	09 01 26.2
	MNA	ePc	09 01 30.2
USGS 08h50m39.5s 28.4S 176.2W			
h=33km mb=5.2			
Kermadec Islands Region			
Oct 20	PRS	ePc	09 03 00.2
	GCC	ePc	09 03 00.6
	MHC	ePc	09 03 03.2
	BKS	eP	09 03 03.3
		AMP(μm)	PER(s)
		PZ 0.022	0.9
	BRK	eP	09 03 03.6
	FRI	ePc	09 03 07.0
	JAS1	ePc	09 03 08.2
	ORV	ePc	09 03 10.5
	WDC	iPc	09 03 11.3
	MIN	ePc	09 03 13.6
	MNA	ePc	09 03 16.8
USGS 08h50m39.5s 28.4S 176.2W			
h=33km mb=5.2			
Kermadec Islands Region			
Oct 20	MHC	ePc	09 11 42.4
	FRI	eP	09 11 46.3
	JAS1	ePc	09 11 47.7
	WDC	iPc	09 11 50.8
	MIN	eP	09 11 52.2
	MNA	eP	09 11 56.0
USGS 08h59m19.7s 27.6S 176.8W			
h=33km mb=4.6			
Kermadec Islands Region			
Oct 20	PRS	eP	09 14 51.3
	GCC	ePd	09 14 51.8
	PRI	eP	09 14 53.3
	BRK	eP	09 14 53.9

DATE	STA	PHASE	TIME (UTC)
	MHC	eP	09 14 54.4
	FRI	ePd	09 14 58.3
		epP	09 15 10.0
	JAS1	iPd	09 14 59.4
	ORV	ePd	09 15 01.5
	WDC	iPd	09 15 02.6
		ipP	09 15 14.3
	MIN	ePd	09 15 03.9
	MNA	iPd	09 15 08.1
		epP	09 15 19.7
USGS 09h02m33.7s 27.3S 176.4W			
h=33km mb=5.3			
Kermadec Islands Region			
Oct 20	FRI	eP	09 55 17.5
	JAS1	ePc	09 55 18.6
	ORV	eP	09 55 21.1
	WDC	ePc	09 55 22.0
	MIN	eP	09 55 23.3
	MNA	ePc	09 55 27.0
USGS 09h42m49.4s 28.3S 176.4W			
h=33km mb=4.8			
Kermadec Islands Region			
Oct 20	JAS1	ePc	10 11 01.5
	ORV	eP	10 11 04
	WDC	ePc	10 11 04.7
		epP	10 11 16.8
	MIN	e(P)	10 11 07.0
		epP	10 11 18.2
	MNA	eP	10 11 09.4
		epP	10 11 22.2
USGS 09h58m34.2s 27.7S 176.4W			
h=33km mb=4.9			
Kermadec Islands Region			
Oct 20	FRI	eP	10 39 33.0
	JAS1	ePc	10 39 33.9
	WDC	ePc	10 39 37.0
	MIN	ePc	10 39 38.4
	MNA	ePc	10 39 42.4
USGS 10h27m06.7s 27.8S 176.5W			
h=33km mb=4.8			
Kermadec Islands Region			
Oct 20	FRI	eP	10 42 18.7
	JAS1	ePc	10 42 19.9
	WDC	ePc	10 42 21.8
	MIN	e(P)	10 42 24.3
	MNA	eP	10 42 28.2
USGS 10h29m51.2s 28.1S 176.4W			
h=33km mb=4.9			
Kermadec Islands Region			
Oct 20	PRS	ePc	10 44 07.8
	GCC	ePc	10 44 08.2
	PCC	ePc	10 44 08.6
	MHC	ePc	10 44 10.6
	FRI	ePc	10 44 14.7
	JAS1	iPc	10 44 15.8
	ORV	eP	10 44 17.9
	WDC	iPc	10 44 19.0
	MIN	ePc	10 44 20.5
	MNA	ePc	10 44 23.6
USGS 10h31m53.6s 26.9S 175.9W			
h=33km mb=5.0			
South of Tonga Islands			
Oct 20	JAS1	ePc	10 52 15.8
		epP	10 52 28.5
	WDC	ePc	10 52 19.0
		epP	10 52 31.9

DATE	STA	PHASE	TIME (UTC)
	MIN	eP	10 52 20.3
	MNA	ePc	10 52 24.2
		epP	10 52 37.2
Kermadec Islands Region			
Oct 20	SAO	e(P)	11 19 21.9
	PRS	ePc	11 19 22.2
	BRK	eP	11 19 24.9
	BKS	eP	11 19 25.0
		AMP(μm)	PER(s)
		PZ 0.028	1.1
	MHC	ePc	11 19 25.1
	FRI	ePc	11 19 29.1
	JAS1	iPc	11 19 30.2
	ORV	ePc	11 19 32.4
	WDC	iPc	11 19 33.4
		epP	11 19 46.6
	MNA	iPc	11 19 38.9
		epP	11 19 52.0
USGS 11h07m04.1s 27.7S 176.2W			
h=33km mb=5.2			
Kermadec Islands Region			
Oct 20	PRS	ePc	11 20 31.0
	GCC	ePc	11 20 31.2
	PCC	ePc	11 20 31.8
	SAO	eP	11 20 32
	PRI	ePc	11 20 32.9
	LLA	eP	11 20 33.4
	BKS	eP	11 20 33.6
		AMP(μm)	PER(s)
		PZ 0.031	1.2
	BRK	eP	11 20 33.9
	MHC	ePc	11 20 34.0
	FRI	iPc	11 20 37.7
		epP	11 20 50.3
	JAS1	iPc	11 20 39.1
		ipP	11 20 51.6
	ORV	ePc	11 20 41.1
		epP	11 20 52.7
	WDC	iPc	11 20 42.2
	MIN	ePc	11 20 43.5
	MNA	ePc	11 20 47.7
USGS 11h08m13.2s 27.6S 176.2W			
h=33km mb=5.3			
Kermadec Islands Region			
Oct 20	PRS	eP	11 24 54.7
	PCC	eP	11 24 55.6
	SAO	e(P)	11 24 55.7
	GCC	ePc	11 24 56.1
	PRI	ePc	11 24 56.7
	BRK	eP	11 24 57.5
	MHC	ePc	11 24 57.6
	BKS	eP	11 24 57.7
		AMP(μm)	PER(s)
		PZ 0.022	1.0
	FRI	eP	11 25 01.7
	JAS1	ePc	11 25 03.0
	ORV	eP	11 25 05.3
	WDC	ePc	11 25 06.3
	MIN	eP	11 25 07.4
	MNA	ePc	11 25 11.4
USGS 11h12m35.4s 28.1S 176.2W			
h=33km mb=5.4 Ms=5.3			
Kermadec Islands Region			
Oct 20	JAS1	eP	11 43 49.9
	WDC	eP	11 43 53.3
	MIN	e(P)	11 43 54.7
	MNA	eP	11 43 58.7
USGS 11h31m23.6s 27.8S 176.3W			

DATE	STA	PHASE	TIME (UTC)
h=33km mb=4.6			
Kermadec Islands Region			
Oct 20	PRS	ePd	11 49 12.8
	GCC	e	11 49 13.6
	PCC	ePd	11 49 15.1
	PRI	eP	11 49 15.8
	MHC	ePd	11 49 16.1
	BKS	eP	11 49 16.3
		AMP(μm)	PER(s)
		PZ 0.031	1.2
	FRI	eP	11 49 19.2
	JAS1	ePd	11 49 21.1
		epP	11 49 33.4
	ORV	eP	11 49 23.2
	WDC	iPd	11 49 24.3
	MIN	eP	11 49 25.5
	MNA	ePd	11 49 29.6
USGS 11h36m56.1s 27.4S 176.3W			
h=33km mb=5.3			
Kermadec Islands Region			
Oct 20	PRS	ePd	12 14 00.2
	GCC	ePd	12 14 00.6
	SAO	eP	12 14 01
	PCC	eP	12 14 01.3
		epP	12 14 05.8
	PRI	ePd	12 14 01.8
		epP	12 14 06.8
	LLA	ePd	12 14 02.5
	BRK	ePd	12 14 02.6
		epP	12 14 07.4
	MHC	eP	12 14 03.0
	BKS	eP	12 14 03.7
		AMP(μm)	PER(s)
		PZ 0.057	1.0
	FRI	ePd	12 14 07.0
		epP	12 14 11.7
	JAS1	ePd	12 14 08.2
		ipP	12 14 12.9
	FHC	eP	12 14 08.7
	ORV	ePd	12 14 10.7
	WDC	ePd	12 14 11.5
		ipP	12 14 16.1
	MIN	eP	12 14 12.9
	MNA	ePd	12 14 17.0
		epP	12 14 21.4
USGS 12h01m42.1s 27.7S 176.2W			
h=33km mb=5.7 Ms=5.5			
Kermadec Islands Region			
Oct 20	FRI	e(P)	12 30 19.7
	JAS1	ePc	12 30 22.7
	WDC	ePc	12 30 26.3
	MIN	eP	12 30 27.5
USGS 12h17m55.3s 28.0S 176.2W			
h=33km mb=4.8			
Kermadec Islands Region			
Oct 20	PRS	eP	12 45 03.9
	GCC	eP	12 45 04.5
	PCC	eP	12 45 04.8
	PRI	eP	12 45 05.7
	MHC	eP	12 45 06.8
	SAO	e	12 45 07.0
	BRK	e	12 45 08.6
	FRI	eP	12 45 10.9
	JAS1	eP	12 45 13.1
	WDC	ePd	12 45 [illegible]
	ORV	e	12 45 16.7
	MIN	ePd	12 45 17.7
	MNA	eP	12 45 20.8

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DATE	STA	PHASE	TIME (UTC)
USGS 12h32m45.7s 27.9S 176.4W			
h=33km mb=5.5 Ms=5.7			
Kermadec Islands Region			
Oct 20	PRI	eP	12 56 00.7
	MHC	ePc	12 56 02.0
	FRI	eP	12 56 05.2
		epP	12 56 18.3
	JAS1	ePc	12 56 07.2
		epP	12 56 19.4
	WDC	ePc	12 56 10.2
		epP	12 56 22.3
	MIN	eP	12 56 11.5
	MNA	ePc	12 56 15.7
		epP	12 56 28.0
USGS 12h43m40.9s 27.7S 176.2W			
h=33km mb=5.0			
Kermadec Islands Region			
Oct 20	MHC	eP	13 38 27.4
	JAS1	ePc	13 38 32.3
	WDC	ePc	13 38 35.2
	MNA	ePc	13 38 40.7
USGS 13h26m00.1s 28.3S 177.1W			
h=33km mb=4.6			
Kermadec Islands Region			
Oct 20	PRS	eP	14 53 44.9
	GCC	eP	14 53 45.7
	PRI	eP	14 53 47.2
	LLA	eP	14 53 47.7
	MHC	eP	14 53 47.9
	FRI	eP	14 53 51.7
	JAS1	ePd	14 53 53.1
		ipP	14 54 05.3
	ORV	eP	14 53 55.4
	WDC	ePd	14 53 56.4
	MIN	ePd	14 53 57.4
	MNA	eP	14 54 01.8
		epP	14 54 13.6
USGS 14h41m26.1s 27.9S 176.1W			
h=33km mb=5.6 Ms=6.1			
Kermadec Islands Region			
Oct 20	PRS	eP	16 05 11.2
	GCC	e(P)	16 05 12.3
	SAO	e(P)	16 05 12.6
	MHC	eP	16 05 14.0
	FRI	eP	16 05 17.2
	JAS1	e(P)	16 05 18.2
	ORV	eP	16 05 20.6
	WDC	ePd	16 05 21.5
	MIN	eP	16 05 23.0
	MNA	ePd	16 05 27.2
USGS 15h52m52.9s 27.2S 176.3W			
h=33km mb=5.1 Ms=5.5			
Kermadec Islands Region			
Oct 20	GCC	eP	16 13 51.2
		epP	16 14 05.1
	PRI	eP	16 13 53.6
	FRI	e(P)	16 13 57.7
		epP	16 14 11.3
	JAS1	e(P)	16 13 58.6
		ipP	16 14 12.6
	WDC	eP	16 14 01.7
		ipP	16 14 16.0
	MNA	eP	16 14 06.9
		epP	16 14 21.1
	MHC	epP	16 14 07.5
	PRS	epP	16 14 14.3
	ORV	epP	16 14 14.7

DATE	STA	PHASE	TIME (UTC)
USGS 16h01m33.9s 27.7S 176.1W			
h=33km mb=5.4			
Kermadec Islands Region			
Oct 20	PRI	e(P)	17 26 00.5
	MHC	ePd	17 26 00.9
	FRI	eP	17 26 04.3
	JAS1	ePd	17 26 05.3
		ipP	17 26 17.3
	WDC	ePd	17 26 08.3
		ipP	17 26 20.3
	MNA	ePd	17 26 13.7
USGS 17h13m37.7s 28.0S 176.6W			
h=33km mb=5.0			
Kermadec Islands Region			
Oct 20	PRS	e(P)	18 28 24.5
	MHC	e(P)	18 28 26.5
	FRI	eP	18 28 30.3
	JAS1	eP	18 28 31.9
	ORV	e(P)	18 28 33.7
	WDC	ePd	18 28 34.8
	MIN	ePd	18 28 36.2
	MNA	ePd	18 28 40.2
	BKS	eLr	18 55 35
		AMP(μm)	PER(s)
		LZ 19	20.
		LN 8.2	20.
		LE 15	20.
USGS 18h16m04.1s 28.0S 176.3W			
h=33km mb=5.3 Ms=5.6			
Kermadec Islands Region			
Oct 20	FRI	eP	18 44 04.7
	JAS1	eP	18 44 05.7
		epP	18 44 17.4
	ORV	eP	18 44 08.2
	WDC	eP	18 44 09.2
		epP	18 44 20.5
		e	18 44 34.0
	MNA	eP	18 44 14.8
		epP	18 44 26.0
USGS 18h31m41.7s 27.2S 176.0W			
h=33km mb=5.2			
Kermadec Islands Region			
Oct 20	PRS	eP	19 51 35.8
	MHC	eP	19 51 36.8
	FRI	eP	19 51 42.8
	JAS1	eP	19 51 43.4
		epP	19 51 54.2
	ORV	eP	19 51 46.2
	WDC	eP	19 51 47.0
		epP	19 51 57.8
	MIN	eP	19 51 48.1
	MNA	eP	19 51 52.5
USGS 19h39m15.5s 27.8S 176.6W			
h=33km mb=5.5 Ms=5.5			
Kermadec Islands Region			
Oct 20	PRS	e(P)	21 35 32.5
	PRI	eP	21 35 34.3
	MHC	eP	21 35 35.4
	FRI	eP	21 35 39.4
	JAS1	eP	21 35 40.4
	ORV	eP	21 35 42.8
	WDC	eP	21 35 43.7
	MNA	eP	21 35 49.1
USGS 21h23m10.7s 28.2S 176.7W			
h=33km mb=5.4 Ms=5.5			
Kermadec Islands Region			

DATE	STA	PHASE	TIME (UTC)
Oct 20	PRS	e(P)	21 38 38.5
	PRI	eP	21 38 40.5
	MHC	eP	21 38 41.7
	FRI	eP	21 38 45.8
	JAS1	eP	21 38 46.6
	ORV	eP	21 38 48.9
	WDC	eP	21 38 50.0
	MIN	eP	21 38 51.0
	MNA	eP	21 38 54.5
USGS 21h26m17.5s 27.9S 176.6W			
h=33km mb=5.6 Ms=5.8			
Kermadec Islands Region			
Oct 20	PRS	eP	22 02 35.0
	GCC	eP	22 02 35.4
	PRI	eP	22 02 36.5
	MHC	eP	22 02 37.8
	FRI	eP	22 02 41.8
	JAS1	eP	22 02 42.9
		epP	22 02 55.4
	ORV	eP	22 02 45.2
	WDC	eP	22 02 46.2
		epP	22 02 58.6
	MIN	e(P)	22 02 47.7
	MNA	eP	22 02 51.5
		epP	22 03 04.0
USGS 21h50m15.7s 27.8S 176.4W			
h=33km mb=5.1			
Kermadec Islands Region			
Oct 20	MHC	e(P)	22 31 52.0
	FRI	e(P)	22 31 56.3
	JAS1	eP	22 31 57.5
	WDC	eP	22 32 01.0
	MNA	eP	22 32 06.1
USGS 22h19m29.2s 28.2S 176.4W			
h=33km mb=4.9 Ms=5.2			
Kermadec Islands Region			
Oct 20	PRS	eP	23 03 39.6
	PRI	eP	23 03 41.1
	MHC	eP	23 03 42.5
	FRI	eP	23 03 46.4
	JAS1	eP	23 03 47.3
		epP	23 04 00.0
	ORV	eP	23 03 49.9
	WDC	eP	23 03 51.0
	MIN	eP	23 03 51.9
	MNA	eP	23 03 56.0
		epP	23 04 12.9
USGS 22h51m19.0s 28.2S 176.3W			
h=33km mb=5.3 Ms=5.1			
Kermadec Islands Region			
Oct 21	PRS	eP	00 56 00.7
	GCC	eP	00 56 01.2
	PCC	eP	00 56 01.4
	PRI	eP	00 56 02.5
	LLA	e(P)	00 56 03.0
	MHC	eP	00 56 03.7
	FRI	eP	00 56 07.5
	JAS1	eP	00 56 08.7
	ORV	eP	00 56 11.1
	WDC	eP	00 56 11.6
	MIN	eP	00 56 13.1
	MNA	eP	00 56 17.2
USGS 00h43m41.3s 27.8S 176.4W			
h=33km mb=5.5 Ms=5.5			
Kermadec Islands Region			
Oct 21	JAS1	eP	01 51 02.0
	WDC	eP	01 51 05.4

DATE	STA	PHASE	TIME (UTC)
	MIN	e(P)	01 51 06.4
	MNA	e(P)	01 51 10.8
USGS 01h38m36.7s 27.3S 176.3W			
h=33km mb=5.1			
Kermadec Islands Region			
Oct 21	PRS	eP	02 45 06.7
	MHC	eP	02 45 10.5
	FRI	eP	02 45 13.4
	JAS1	ePd	02 45 14.8
	WDC	eP	02 45 17.9
	MIN	eP	02 45 18.9
	MNA	ePd	02 45 23.0
USGS 02h32m45.0s 28.3S 176.5W			
h=33km mb=5.2 Ms=5.2			
Kermadec Islands Region			
Oct 21	JAS1	eP	03 23 40.3
	WDC	eP	03 23 44.1
	MNA	e(P)	03 23 49.8
USGS 03h11m16.3s 27.1S 176.5W			
h=33km mb=4.8 Ms=4.9			
Kermadec Islands Region			
Oct 21	PRS	eP	06 04 17.7
		epP	06 04 31.0
	PCC	eP	06 04 18.5
	SAO	eP	06 04 18.6
	PRI	eP	06 04 19.4
	BRK	eP	06 04 20.4
	BKS	eP	06 04 20.4
		AMP(μm)	PER(s)
	PZ	0.035	1.0
	MHC	eP	06 04 20.6
		epP	06 04 34.1
	FRI	eP	06 04 24.7
		epP	06 04 38.0
	JAS1	eP	06 04 25.6
		epP	06 04 39.2
	FHC	eP	06 04 26.6
	ORV	eP	06 04 28.3
	WDC	eP	06 04 29.1
		epP	06 04 42.4
	MIN	eP	06 04 30.2
		epP	06 04 43.7
	MNA	eP	06 04 34.4
		epP	06 04 47.7
USGS 05h52m00.0s 27.9S 176.3W			
h=45km mb=5.5 Ms=5.2			
Kermadec Islands Region			
Oct 21	MHC	e(P)	07 03 11.0
	FRI	e(P)	07 03 15.1
	JAS1	eP	07 03 16.2
	WDC	eP	07 03 19.3
	MNA	eP	07 03 24.3
USGS 06h50m50.9s 27.3S 176.5W			
h=33km mb=5.4 Ms=5.6			
Kermadec Islands Region			
Oct 21	JAS1	eP	09 44 52.9
	WDC	eP	09 44 56.1
USGS 09h32m25.1s 28.0S 176.5W			
h=33km mb=4.9			
Kermadec Islands Region			
Oct 21	PRS	eP	11 15 19.3
	GCC	eP	11 15 19.5
	SAO	eP	11 15 20.0
	PCC	eP	11 15 20.8
	PRI	eP	11 15 21.3
	LLA	eP	11 15 21.5

DATE	STA	PHASE	TIME (UTC)
	BKS	eP	11 15 22.0
		e(S)	11 25 06
		eLr	11 41 54
		AMP(μm)	PER(s)
	PZ	0.15	1.3
	LZ	7.1	20.
	LN	5.4	20.
	LE	8.2	20.
	BRK	eP	11 15 22.2
	MHC	eP	11 15 22.5
	FRI	eP	11 15 26.5
	JAS1	eP	11 15 27.5
	FHC	eP	11 15 28.0
	ORV	eP	11 15 29.9
	WDC	eP	11 15 30.5
	MIN	eP	11 15 31.5
	MNA	eP	11 15 36.0
BRK Ms=6.2 Distance=85°			
USGS 11h03m00.0s 27.8S 176.5W			
h=33km mb=5.7 Ms=5.9			
Kermadec Islands Region			
Oct 21	FHC	eP	11 38 48.2
	WDC	eP	11 39 04.5
	MIN	e(P)	11 39 13.5
	ORV	eP	11 39 21.5
	MHC	e(P)	11 39 42.2
	JAS1	eP	11 39 45.1
	MNA	eP	11 39 59.4
	FRI	e(P)	11 40 01.0
USGS 11h37m38.6s 44.0N 128.5W			
h=10km mb=5.0			
Off Coast of Oregon			
Oct 21	PRS	eP	11 39 44.9
	PRI	e(P)	11 39 46.7
	MHC	eP	11 39 48.0
	FRI	eP	11 39 51.8
	MNA	eP	11 40 01.5
Kermadec Islands Region			
Oct 21	FHC	eP	11 44 32.5
	WDC	eP	11 44 47.5
	MIN	e(P)	11 44 57.5
	ORV	e(P)	11 45 03.0
	JAS1	eP	11 45 27.7
	MNA	eP	11 45 42.5
	FRI	e(P)	11 45 43.3
USGS 11h43m20.9s 44.0N 128.5W			
h=10km mb=5.0			
Off Coast of Oregon			
Oct 21	WDC	eP	11 49 51.2
	ORV	eP	11 50 08.5
	JAS1	eP	11 50 33.2
	FRI	e(P)	11 50 46.1
USGS 11h48m28.0s 44.1N 128.0W			
h=10km mb=4.4			
Off Coast of Oregon			
Oct 21	WDC	e(P)	12 06 53.9
	ORV	e(P)	12 07 08.8
	JAS1	eP	12 07 32.3
Oct 21	FHC	e(P)	12 09 47.7
	WDC	eP	12 10 03.0
	MIN	eP	12 10 13.6
	ORV	eP	12 10 20.6
	JAS1	eP	12 10 44.9
	MNA	eP	12 10 58.1
	FRI	eP	12 10 58.7
USGS 12h08m37.3s 43.8N 128.6W			

DATE	STA	PHASE	TIME (UTC)
h=10km mb=4.6			
Off Coast of Oregon			
Oct 21	PRS	eP	12 42 03.2
	PRI	eP	12 42 05.1
	BKS	eP	12 42 06
		eLr	13 09 38
		AMP(μm)	PER(s)
	LZ	3.9	20.
	LN	3.9	20.
	LE	3.6	20.
	BRK	eP	12 42 06.2
	MHC	eP	12 42 06.6
	FRI	eP	12 42 10.2
	JAS1	eP	12 42 11.7
	ORV	eP	12 42 14.1
	WDC	eP	12 42 14.4
	MNA	eP	12 42 20.0
USGS 12h29m44.1s 27.6S 176.6W			
h=33km mb=5.4 Ms=5.6			
Kermadec Islands Region			
Oct 21	SAO	iPc	13 15 00.8
	LLA	iPc	13 15 05.7
	PRS	iPd	13 15 06.9
	GCC	iPd	13 15 09.3
	MHC	iPd	13 15 10.7
		iS	13 15 21.4
	PRI	ePc	13 15 14.5
	PCC	ePc	13 15 17.4
	BRK	e(P)	13 15 21.5
	BKS	eP	13 15 21.5
	FRI	ePc	13 15 21.7
	ZSP	eP	13 15 22.1
	JAS1	iPd	13 15 22.4
		iS	13 15 40.6
	ORV	ePc	13 15 43.2
	MNA	e	13 15 53.5
	MIN	e	13 15 57.4
BRK 13h14m58.6s 36.8N 121.4W			
h=11km ML=3.3(4) Mo=7.8E20(2)			
10 km SSE of Hollister, CA			
Oct 21	PRS	eP	15 24 02.0
	PRI	eP	15 24 03.7
	BKS	eP	15 24 04.6
		AMP(μm)	PER(s)
	PZ	0.043	1.0
	MHC	eP	15 24 04.8
	FRI	eP	15 24 08.8
	JAS1	eP	15 24 09.8
	ORV	eP	15 24 12.0
	WDC	eP	15 24 13.2
	MIN	eP	15 24 14.2
	MNA	eP	15 24 18.3
USGS 15h11m42.2s 27.7S 176.6W			
h=33km mb=5.3 Ms=4.6			
Kermadec Islands Region			
Oct 21	WDC	e(P)	19 10 02.3
	ORV	eP	19 10 13.7
	JAS1	eP	19 10 44.7
USGS 19h08m32.7s 44.0N 128.1W			
h=10km mb=4.3			
Off Coast of Oregon			
Oct 21	PRS	eP	19 31 12.8
	MHC	eP	19 31 15.2
	FRI	eP	19 31 19.3
	JAS1	eP	19 31 20.8
	ORV	e(P)	19 31 21.9
	WDC	eP	19 31 23.7

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DATE	STA	PHASE	TIME (UTC)
	MIN	eP	19 31 24.0
	MNA	eP	19 31 29.3
USGS 19h18m56.0s 27.1S 176.4W			
h=33km mb=5.2 Ms=5.1			
Kermadec Islands Region			
Oct 21	FRI	e(P)	21 16 30.4
		ePcP	21 19 01.9
	MNA	eP	21 16 30.6
		ePcP	21 19 01.6
	PRI	eP	21 16 32.3
		ePcP	21 19 03.1
	LLA	eP	21 16 36.0
		ePcP	21 19 04.0
	PRS	eP	21 16 36.7
		ePcP	21 19 04.3
	JAS1	eP	21 16 40.2
		ePcP	21 19 04.7
	MHC	eP	21 16 44.2
	ORV	eP	21 16 55.2
	WDC	eP	21 17 01.0
	FHC	eP	21 17 12.5
USGS 21h09m36.3s 13.3N 90.1W			
h=44km mb=5.2 Ms=5.1			
Near Coast of Guatemala			
Oct 22	MHC	eP	00 05 50.0
	FRI	eP	00 05 54.0
	JAS1	eP	00 05 56.1
	WDC	eP	00 05 58.5
	MNA	eP	00 06 03.7
USGS 23h53m26.3s 28.2S 176.5W			
h=33km mb=5.0			
Kermadec Islands Region			
Oct 22	PRS	e(P)	02 51 03.6
	PRI	eP	02 51 05.2
	MHC	eP	02 51 06.6
	FRI	eP	02 51 10.5
	JAS1	eP	02 51 11.6
	ORV	eP	02 51 13.9
	WDC	eP	02 51 15.2
	MIN	eP	02 51 16.2
	MNA	eP	02 51 20.0
USGS 02h38m44.2s 28.1S 176.3W			
h=33km mb=5.3 Ms=5.2			
Kermadec Islands Region			
Oct 22	FRI	eP	08 59 20.7
	JAS1	eP	08 59 22.0
	WDC	eP	08 59 25.1
	MIN	eP	08 59 26.7
	MNA	eP	08 59 30.7
USGS 08h46m56.7s 26.9S 176.7W			
h=33km mb=5.0			
South of Fiji Islands			
Oct 22	PCC	ePc	09 11 32.7
	GCC	eP	09 11 33.8
	BRK	eP	09 11 34.0
	BKS	ePc	09 11 34.0
		AMP(μm)	PER(s)
		PZ 0.75	0.9
	FHC	eP	09 11 34.5
	SAO	eP	09 11 35.3
	PRS	eP	09 11 35.3
		eSKPPKP	09 41 19.1
	MHC	eP	09 11 36.0
		ePP	09 14 47.2
		eSKPPKP	09 41 18.9
	LLA	eP	09 11 37.3
		eSKPPKP	09 41 17.9
	WDC	iPc	09 11 37.7
		ePP	09 14 50.0
		ePKPPKP	09 38 05.1
	PRI	eP	09 11 38.1
		eSKPPKP	09 41 17.9
	ORV	eP	09 11 39.5
		ePP	09 14 53.4
	MIN	eP	09 11 40.0
		ePP	09 14 54.9
		eSKPPKP	09 41 13.3
	JAS1	iPc	09 11 40.2
		ePP	09 14 56.0
		ePKPPKP	09 37 55.8
		eSKPPKP	09 41 14.4
	FRI	eP	09 11 42.3
		ePP	09 14 57.6
		ePKPPKP	09 38 03.5
		eSKPPKP	09 41 12.8
	MNA	eP	09 11 50.8
		ePP	09 15 12.0
USGS 08h59m28.9s 10.6S 166.0E			
h=165km mb=5.9			
Santa Cruz Islands			
Oct 22	PRS	ePc	12 27 09.4
	PRI	ePc	12 27 11.1
	BRK	eP	12 27 11.8
	MHC	ePc	12 27 12.1
	BKS	e(P)	12 27 12.1
		AMP(μm)	PER(s)
		PZ 0.022	1.0
	JAS1	ePc	12 27 17.5
		epP	12 27 46.2
	FRI	ePc	12 27 18.0
	ORV	eP	12 27 19.6
	WDC	ePc	12 27 20.5
		epP	12 27 49.4
	MIN	ePc	12 27 21.8
	MNA	ePc	12 27 26.0
		epP	12 27 54.5
USGS 12h14m59.6s 27.6S 176.5W			
h=109km mb=4.7			
Kermadec Islands Region			
Oct 22	GCC	ePc	19 53 09.5
		e	19 54 19.0
	PRI	eP	19 53 11.0
	MHC	eP	19 53 12.4
		e	19 54 21.5
		e	19 54 33.2
	FRI	ePc	19 53 16.0
		e	19 54 25.7
		e	19 54 37.4
	JAS1	ePc	19 53 17.2
		e	19 53 40.8
		e	19 54 26.7
		e	19 54 38.8
	FHC	ePc	19 53 17.8
	ORV	ePc	19 53 19.7
	WDC	iPc	19 53 20.9
		e	19 53 44.0
		e	19 54 29.9
		e	19 54 41.1
	MNA	ePc	19 53 25.4
		e	19 54 35.4
		e	19 54 47.5
	PRS	e	19 54 18.6
USGS 19h40m48.6s 28.3S 176.3W			
h=33km mb=5.4 Ms=5.5			
Kermadec Islands Region			
Oct 22	PRS	eP	22 32 44.7
	PRI	eP	22 32 45.5
	MHC	eP	22 32 47.5
	FRI	eP	22 32 51.5
	JAS1	eP	22 32 52.8
	ORV	eP	22 32 54.8
	WDC	ePc	22 32 56.0
	MIN	eP	22 32 57.3
	MNA	eP	22 33 01.5
USGS 22h20m26.8s 27.4S 176.6W			
h=33km mb=5.3			
Kermadec Islands Region			
Oct 23	FHC	eP	01 48 57.9
	WDC	ePd	01 49 05.6
	MIN	eP	01 49 12.7
	BRK	e(P)	01 49 22.0
	MHC	eP	01 49 27.9
	JAS1	eP	01 49 30.5
	PRS	ePd	01 49 34.3
	LLA	ePd	01 49 34.9
	SAO	e	01 49 36.8
	FRI	eP	01 49 38.9
	PRI	eP	01 49 39.3
	MNA	ePd	01 49 40.5
USGS 01h42m31.6s 52.5N 168.2W			
h=33km mb=5.0			
Fox Islands, Aleutian Islands			
Oct 23	PRS	eP	02 31 07.8
	MHC	eP	02 31 09.1
	PRI	eP	02 31 10.5
	BKS	e(P)	02 31 10.5
		AMP(μm)	PER(s)
		PZ 0.015	0.6
	WDC	ePd	02 31 12.0
		epP	02 31 54.5
	JAS1	ePd	02 31 14.0
		epP	02 31 56.7
	MIN	eP	02 31 14.4
		epP	02 31 57.0
	FRI	eP	02 31 14.5
	MNA	eP	02 31 23.3
		epP	02 32 06.0
USGS 02h18m51.9s 15.6S 167.6E			
h=159km mb=5.7			
Vanuatu Islands			
Oct 23	WDC	eP	04 07 30.8
		epP	04 08 03.1
		esP	04 08 17.5
	BRK	e	04 07 32
	MHC	e(P)	04 07 32.2
	MIN	eP	04 07 32.5
		esP	04 08 21.9
	ORV	ePc	04 07 32.9
		esP	04 08 22.1
	PRS	ePc	04 07 33.1
	PRI	eP	04 07 36.0
	JAS1	iPc	04 07 36.5
		ePP	04 11 31.5
		epPP	04 12 03.0
	FRI	ePc	04 07 38.8
	MNA	ePc	04 07 45.3
		ePP	04 11 45.1
USGS 03h54m20.9s 6.1S 146.3E			
h=126km mb=5.8			
East New Guinea Region			
Oct 23	PRS	eP	09 15 39.7
	MHC	eP	09 15 40.2
	WDC	eP	09 15 42.2
	PRI	eP	09 15 42.4
	ORV	eP	09 15 43.8
	MIN	eP	09 15 44.5
	JAS1	ePc	09 15 45.4
	FRI	eP	09 15 46.7
	MNA	ePc	09 15 54.9
USGS 09h03m14.2s 11.1S 165.3E			
h=33km mb=5.1			
Santa Cruz Islands			
Oct 23	GCC	ePc	12 37 10.7
	BKS	eP	12 37 11.5
		AMP(μm)	PER(s)
		PZ 0.036	0.9
	PRS	eP	12 37 12.2
	MHC	ePc	12 37 12.8
	WDC	ePc	12 37 14.7
	PRI	ePc	12 37 15.1
	ORV	eP	12 37 16.5
	MIN	ePc	12 37 17.2
	JAS1	ePc	12 37 18.1
	FRI	ePc	12 37 19.3
	MNA	eP	12 37 27.6
USGS 12h24m46.5s 11.1S 165.4E			
h=33km mb=5.2			
Santa Cruz Islands			
Oct 23	PCC	eP	16 01 08.9
	FHC	eP	16 01 09.4
	GCC	eP	16 01 09.9
	BRK	eP	16 01 10.0
	SAO	eP	16 01 11.2
	PRS	eP	16 01 11.3
	BKS	eP	16 01 11.8
		eS	16 11 41
		ePPS	16 12 24
		eLr	16 26 08
		AMP(μm)	PER(s)
		PZ 0.025	0.9
		LN 22	20.
		LE 11	20.
		LZ 19	20.
	MHC	eP	16 01 12.0
	LLA	eP	16 01 13.6
	PRI	eP	16 01 14.0
	WDC	iPc	16 01 15.2
		ePP	16 04 32.9
		epPP	16 04 41.8
	ORV	eP	16 01 15.3
	MIN	eP	16 01 16.7
	JAS1	eP	16 01 16.8
		ipP	16 01 23.5
		ePP	16 04 33
	FRI	eP	16 01 18.3
	MNA	eP	16 01 26.6
BRK Ms=6.5 Distance=82°			
USGS 15h48m43.8s 11.0S 165.2E			
h=18km mb=5.4 Ms=6.5			
Santa Cruz Islands			
Oct 23	GCC	ePc	16 08 54.9
	BRK	e(P)	16 08 55.0
	BKS	e(P)	16 08 55.9
		AMP(μm)	PER(s)
		PZ 0.018	0.9
	PRS	eP	16 08 56.4
	MHC	ePc	16 08 57.0
	LLA	eP	16 08 58.5
	WDC	ePc	16 08 58.8
	PRI	ePc	16 08 59.3
	ORV	ePc	16 09 00.5
	MIN	eP	16 09 01.5
	JAS1	ePc	16 09 02.1
		ipP	16 09 10.9
	FRI	ePc	16 09 03.3
	MNA	eP	16 09 11.7
USGS 15h56m31.3s 11.0S 165.4E			
h=33km mb=5.2			
Santa Cruz Islands			
Oct 23	PCC	ePc	16 36 12.8
	GCC	eP	16 36 13.7
	BRK	eP	16 36 14.2
	BKS	eP	16 36 14.5
		AMP(μm)	PER(s)
		PZ 0.043	1.0
		LZ 22	20.
		LN 30	20.
		LE 11	20.
	PRS	ePc	16 36 15.2
	MHC	ePc	16 36 16.0
	LLA	ePc	16 36 17.3
	PRI	ePc	16 36 18.1
	WDC	iPc	16 36 18.1
	ORV	eP	16 36 19.4
	MIN	ePc	16 36 20.4
	JAS1	iPc	16 36 21.3
	FRI	ePc	16 36 22.1
	MNA	ePc	16 36 30.8
USGS 16h23m49.3s 11.1S 165.5E			
h=23km mb=5.5 Ms=6.4			
Santa Cruz Islands			
Oct 23	PCC	eP	18 57 20.7
	FHC	eP	18 57 21.2
	GCC	eP	18 57 21.4
	BRK	ePd	18 57 21.8
	BKS	eP	18 57 22.4
		AMP(μm)	PER(s)
		PZ 0.052	1.0
	SAO	eP	18 57 22.8
	PRS	ePd	18 57 23.1
	MHC	ePd	18 57 23.8
	LLA	ePd	18 57 25.2
		epP	18 57 37.2
	WDC	ePd	18 57 25.6
	PRI	ePd	18 57 25.9
	ORV	eP	18 57 27.2
	MIN	eP	18 57 28.0
	JAS1	ePd	18 57 28.7
		ePP	19 00 41.8
	FRI	ePd	18 57 29.9
		epP	18 57 42.1
	MNA	eP	18 57 38.3
		ipP	18 57 50.6
USGS 18h44m57.4s 11.1S 165.2E			
h=38km mb=5.7 Ms=5.5			
Santa Cruz Islands			
Oct 24	FRI	eP	02 54 42.4
		epP	02 54 57.4
	PRI	ePd	02 54 44.0
		epP	02 54 58.8
	MNA	ePd	02 54 45.5
		ipP	02 55 00.0
	LLA	ePd	02 54 46.6
		epP	02 55 01.2
	PRS	ePd	02 54 46.9
		epP	02 55 01.7
	JAS1	iPd	02 54 50.0
		ipP	02 55 04.5
	MHC	eP	02 54 51.9
		epP	02 55 06.8
	ORV	eP	02 54 59.2
		ipP	02 55 14.3
	MIN	e(P)	02 55 02.0
		epP	02 55 16.4
	WDC	ePd	02 55 04.3
		ipP	02 55 18.8
	GCC	epP	02 55 06.1
	FHC	ePd	02 55 11.5
		pP	02 55 26.3
USGS 02h42m51.6s 25.3S 70.2W			
h=50km mb=5.6			
Near Coast of Northern Chile			
Oct 24	PRS	e	03 11 37.7
	JAS1	ePc	03 11 41.8
		e	03 12 04.6
		e	03 15 17.2
		e	03 16 42.5
	PRI	e	03 11 44.5
	WDC	eP	03 11 44.7
	FRI	e	03 11 44.9
	MNA	ePc	03 11 50.7
		e	03 12 22.5
		i	03 12 46.6
		e	03 15 29.0
USGS 02h58m47.0s 5.6S 153.9E			
h=52km mb=5.7 Ms=6.3			
New Ireland Region			
Oct 24	BRK	eP	05 39 59.6
	RKS	eP	05 39 59.6
		AMP(μm)	PER(s)
		PZ 0.031	0.8
	PRS	eP	05 40 01.0
	MHC	eP	05 40 01.4
	SAO	e(P)	05 40 02
	LLA	eP	05 40 03.0
	WDC	eP	05 40 03.4
		ePP	05 43 21.8
	PRI	eP	05 40 03.8
	MIN	eP	05 40 05.5
	JAS1	ePc	05 40 06.4
		ePP	05 43 27.5
	FRI	ePc	05 40 07.7
	MNA	ePc	05 40 16.4
		ePP	05 43 37
USGS 05h27m36.5s 11.0S 165.0E			
h=47km mb=5.6 Ms=6.0			
Santa Cruz Islands Region			
Oct 24	GCC	eP	06 05 41.3
	BRK	e(P)	06 05 41.4
	SAO	e(P)	06 05 42.6
	PRS	ePc	06 05 42.8
	BKS	e(P)	06 05 43.1
		AMP(μm)	PER(s)
		PZ 0.022	0.9
	MHC	eP	06 05 43.3
	LLA	eP	06 05 44.5
	WDC	ePc	06 05 45.2
	PRI	ePc	06 05 45.6
	ORV	e(P)	06 05 47
	MIN	ePc	06 05 47.5
	JAS1	ePc	06 05 48.5
	FRI	ePc	06 05 49.7
	MNA	ePc	06 05 58.3
USGS 05h53m17.8s 10.9S 165.2E			
h=33km mb=5.6 Ms=5.9			
Santa Cruz Islands			
Oct 24	PRS	eP	10 25 05.[illegible]
	GCC	eP	10 25 [illegible].8
	PCC	eP	10 25 06.2
	LLA	eP	10 25 06.7

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DATE	STA	PHASE	TIME (UTC)
	PRI	eP	10 25 07.2
	BRK	eP	10 25 08.0
	MHC	ePd	10 25 08.3
	BKS	eP	10 25 08.4
		AMP(μm)	PER(s)
	PZ	0.022	0.9
	FRI	eP	10 25 12.2
		epP	10 25 25.3
	JAS1	ePd	10 25 13.3
		epP	10 25 26.5
	ORV	ePd	10 25 15.6
	WDC	ePd	10 25 16.6
		epP	10 25 29.5
	MIN	e(P)	10 25 18.0
	MNA	ePd	10 25 22.0
		epP	10 25 34.9
USGS 10h12m45.4s 28.1S 176.8W			
h=43km mb=4.9 Ms=4.9			
Kermadec Islands Region			
Oct 24	WDC	eP	10 29 25.2
	MIN	eP	10 29 27.1
	ORV	eP	10 29 29.1
	JAS1	ePc	10 29 36.1
	PRS	eP	10 29 36.6
	FRI	ePc	10 29 40.4
	MNA	ePc	10 29 44.8
USGS 10h17m30.0s 19.2N 146.4E			
h=88km mb=4.9			
Mariana Islands Region			
Oct 24	WDC	iPc	11 08 08.0
	MIN	eP	11 08 13.7
	ORV	eP	11 08 17.6
	BRK	eP	11 08 22.5
	BKS	eP	11 08 22.5
		AMP(μm)	PER(s)
	PZ	0.017	0.7
	MHC	ePc	11 08 28.6
	JAS1	ePc	11 08 32.1
	PRS	eP	11 08 35.0
	LLA	eP	11 08 35.9
	PRI	ePc	11 08 40.0
	FRI	ePc	11 08 40.0
	MNA	ePc	11 08 41.1
USGS 11h00m47.2s 51.4N 176.9W			
h=33km mb=5.2 Ms=4.3			
Andreanof Islands, Aleutian Is.			
Oct 24	PRS	eP	22 47 51.7
	GCC	eP	22 47 52.2
	LLA	e	22 47 53.9
	PRI	eP	22 47 54.3
	BKS	e(P)	22 47 55.4
	MHC	eP	22 47 55.6
	FRI	eP	22 48 00.2
	JAS1	iPc	22 48 00.6
	ORV	eP	22 48 02.6
	WDC	eP	22 48 03.8
	MIN	eP	22 48 05.2
	MNA	eP	22 48 08.5
USGS 22h35m35.7s 27.6S 176.1W			
h=43km mb=5.2 Ms=4.6			
Kermadec Islands Region			
Oct 25	PRS	eP	01 59 42.8
	PRI	eP	01 59 44.8
	MHC	eP	01 59 45.2
	FRI	eP	01 59 49.9
	JAS1	eP	01 59 51.1
	WDC	eP	01 59 54.3
	MIN	eP	01 59 55.0
	MNA	eP	02 00 00.5
USGS 01h47m26.2s 27.3S 176.2W			
h=33km mb=5.2 Ms=4.8			
Kermadec Islands Region			
Oct 25	PRS	e	07 18 07.7
	GCC	e	07 18 08.0
	PRI	e	07 18 09.3
	BKS	e(P)	07 18 10.4
		AMP(μm)	PER(s)
	PZ	0.026	1.0
	MHC	eP	07 18 10.6
	FRI	eP	07 18 14.5
	JAS1	iPc	07 18 15.8
	ORV	eP	07 18 18.0
	WDC	eP	07 18 18.9
	MIN	eP	07 18 20.2
	MNA	eP	07 18 24.3
USGS 07h05m48.9s 27.9S 176.2W			
h=33km mb=5.2			
Kermadec Islands Region			
Oct 25	PCC	ePc	20 59 37.4
	GCC	ePc	20 59 38.0
	BRK	ePc	20 59 38.7
	SAO	eP	20 59 39.0
	PRS	iPc	20 59 39.0
	BKS	iPc	20 59 39.2
		i	20 59 41.2
		e	20 59 45.0
		i	20 59 51.9
		eS	21 10 20
		ePPS	21 11 28
		e	21 14 10
		eLq	21 22 00
		e	21 22 46
		e	21 23 12
		eLr	21 26 00
		AMP(μm)	PER(s)
	PZ	0.11	1.0
	LZ	6.1	20.
	LN	2.9	20.
	LE	6.1	20.
	FHC	ePc	20 59 39.8
	MHC	iPc	20 59 40.2
	LLA	ePc	20 59 40.9
	PRI	ePc	20 59 41.4
	WDC	iPc	20 59 43.5
		i	20 59 56.1
	ORV	iPc	20 59 44.8
	JAS1	iPc	20 59 45.3
		i	20 59 57.4
	MIN	ePc	20 59 45.7
	FRI	iPc	20 59 45.8
		i	20 59 57.1
	MNA	iPc	20 59 54.4
		i	21 00 05.6
BRK Ms=6.2 Distance=86°			
USGS 20h47m01.8s 17.7S 168.1E			
h=30km mb=5.8 Ms=5.9			
Vanuatu Islands			
Oct 26	PRS	eP	03 11 50.8
	BKS	e(P)	03 11 52.4
		epP	03 12 06.7
		eLr	03 40 00
		AMP(μm)	PER(s)
	LZ	1.8	20.
	LN	0.0	20.
	LE	1.4	20.
	PRI	eP	03 11 52.5
	MHC	eP	03 11 53.6
	FRI	eP	03 11 57.7
	JAS1	ePd	03 11 58.9
	WDC	ePd	03 12 02.4
	MIN	eP	03 12 03.4
	MNA	eP	03 12 07.4
BRK Ms=5.4 Distance=91°			
USGS 02h59m34.1s 27.7S 176.2W			
h=44km mb=5.3 Ms=5.3			
Kermadec Islands Region			
Oct 26	FHC	iPd	04 49 47.0
		ePcP	04 52 23.9
		eScP	04 55 48.4
	WDC	iPd	04 49 55.0
		iPcP	04 52 25.8
		iScP	04 55 51.2
		eScS	04 59 53.6
	MIN	iPd	04 50 00.6
		iPcP	04 52 28.0
		eScP	04 55 53.5
		eScS	04 59 57.5
	ORV	iPd	04 50 05.0
		ePcP	04 52 32.4
		iScP	04 55 55.4
	BRK	ePd	04 50 10.8
		ePcP	04 52 31.9
		eScP	04 55 58.5
	BKS	iPd	04 50 11.0
		e	04 50 19.5
		e	04 50 23.6
		e	04 50 30.1
		e	04 50 37.4
		epP	04 51 02.8
		e	04 51 39.5
		iPcP	04 52 31.8
		eS	04 55 40
		iScP	04 55 58.6
		eG	04 58 20
		eScS	05 00 40
		AMP(μm)	PER(s)
	PZ	0.27	0.8
PCC	ePd		04 50 11.9
	ePcP		04 52 32.1
	eScP		04 55 58.7
GCC	iPd		04 50 16.5
	ePcP		04 52 33.8
	iScP		04 56 01.0
MHC	iPd		04 50 17.0
	iPcP		04 52 34.3
	iScP		04 56 01.5
JAS1	iPd		04 50 20.2
	ipP		04 51 12.1
	iScP		04 56 02.2
	eScS		05 00 07.5
SAO	ePd		04 50 20.9
	ePcP		04 52 35.3
	eScP		04 56 02.5
PRS	iPd		04 50 24.1
	ePcP		04 52 36.5
	iScP		04 56 04.4
LLA	iPd		04 50 24.8
	iPcP		04 52 37.1
	eScP		04 56 04.8
FRI	iPd		04 50 28.5
	ipP		04 51 20.4
	iPcP		04 52 38.0
	iScP		04 56 06.2
MNA	iPd		04 50 28.6
	ipP		04 51 20.5
	ePcP		04 52 38.5
	eScP		04 56 06.7
	eScS		05 00 17.5
	PRI	iPd	04 50 29.2
		iScP	04 56 07.1
BRK mb=5.9 h=252km Distance=35°			
USGS 04h43m27.5s 53.8N 170.0W			
h=213km mb=5.4			
Fox Islands, Aleutian Islands			
Oct 26	FHC	e	05 20 42.5
	WDC	ePc	05 20 57.5
	MIN	eP	05 21 07.0
	ORV	iPc	05 21 15.0
	JAS1	eP	05 21 39.1
	MNA	eP	05 21 52.5
	FRI	e	05 21 53.5
USGS 05h19m23.4s 44.1N 129.4W			
h=10km mb=4.9			
Off Coast of Oregon			
Oct 27	MNA	eP	00 20 07.3
	MIN	eP	00 20 11.8
	JAS1	eP	00 20 18.2
	FRI	eP	00 20 19.5
	LLA	e	00 20 25.9
	MHC	e	00 20 26.1
	PRI	e	00 20 30.5
	BKS	eLr	00 42 50
		AMP(μm)	PER(s)
	LZ	1.8	20.
	LN	1.4	20.
	LE	2.1	20.
USGS 00h09m31.9s 46.0N 27.6W			
h=10km mb=5.3 Ms=5.2			
North Atlantic Ridge			
Oct 27	MHC	iPd	02 06 49.2
	GCC	iPc	02 06 52.9
	SAO	iPc	02 06 54.1
	PCC	iPc	02 06 58.8
	LLA	iPc	02 06 59.4
	PRS	iPd	02 07 01.5
	BKS	iPd	02 07 02.0
		eS	02 07 15.0
	BRK	iPd	02 07 02.2
	ZSP	iPd	02 07 03.0
		iS	02 07 17.7
	JAS1	iPd	02 07 06.6
	PRI	iPd	02 07 08.1
	FRI	iPc	02 07 11.1
		iS	02 07 30.5
	ORV	eP	02 07 24.0
	MNA	e	02 07 34.3
	MIN	e	02 07 36.1
	WDC	e	02 07 38.6
BRK 02h06m45.5s 37.2N 121.6W			
h=8km ML=3.6(6) Mo=5.8E21(4)			
Anderson Reservoir, 19 km N of Gilroy, CA			
Oct 27	MNA	eP	04 01 35.7
	JAS1	eP	04 01 45.9
	FRI	eP	04 01 46.0
USGS 03h50m59.9s 46.1N 27.6W			
h=10km mb=4.5			
North Atlantic Ridge			
Oct 27	MHC	e	06 51 28.0
	JAS1	eP	06 51 33.6
	MNA	e	06 51 40.2
	BKS	eLr	07 22 40
		AMP(μm)	PER(s)
	LZ	1.1	20.
	LN	0.0	20.
	LE	0.0	20.
USGS 06h39m04.5s 28.1S 176.6W			
h=33km mb=4.7 Ms=4.6			
Kermadec Islands Region			
Oct 27	PRI	e	08 15 05.7
	MNA	e	08 15 09.4
	JAS1	eP	08 15 11.2
	ORV	e	08 15 22.0
USGS 08h02m52.4s 34.2S 78.9W			
h=10km mb=5.0 Ms=4.5			
Juan Fernandez Islands Region			
Oct 27	MNA	ePc	14 24 03.8
	FRI	eP	14 24 09.5
	JAS1	iPc	14 24 13.8
	LLA	eP	14 24 14.1
	PRI	eP	14 24 15.0
	ORV	e	14 24 16.7
	MIN	eP	14 24 17.1
	MHC	e	14 24 17.8
	WDC	eP	14 24 19.9
USGS 14h11m58.3s 7.5N 36.7W			
h=10km mb=5.3 Ms=4.9			
Central Mid-Atlantic Ridge			
Oct 28	WDC	ePc	07 25 49.1
	MIN	e(P)	07 25 52.8
	ORV	e(P)	07 25 54.2
	BRK	eP	07 25 55.2
	MHC	eP	07 25 56.6
	PRS	eP	07 25 58.2
	LLA	eP	07 26 00.4
	JAS1	ePc	07 26 00.6
	FRI	eP	07 26 04.4
	MNA	eP	07 26 08.6
USGS 07h13m38.5s 15.2N 146.8E			
h=45km mb=5.0			
Mariana Islands			
Oct 28	MHC	e	11 18 34.4
	FRI	eP	11 18 37.0
		e	11 18 50.8
	JAS1	ePd	11 18 37.3
		e	11 18 52.0
	ORV	e	11 18 41.4
	WDC	ePd	11 18 41.5
		i	11 18 55.2
	MIN	eP	11 18 42.0
USGS 11h06m10.9s 28.0S 176.3W			
h=34km mb=4.9			
Kermadec Islands Region			
Oct 28	MNA	ePKPd	15 24 12.6
	FRI	ePKPd	15 24 15.6
	MIN	ePKPd	15 24 16.4
	JAS1	ePKPd	15 24 16.5
	ORV	ePKP	15 24 16.8
	WDC	ePKPd	15 24 17.0
	PRI	ePKPd	15 24 18.6
	LLA	ePKP	15 24 18.8
	MHC	ePKP	15 24 19.4
	PRS	ePKP	15 24 19.4
	BRK	ePKP	15 24 19.5
	GCC	ePKP	15 24 19.8
	PCC	ePKP	15 24 20.0
USGS 15h04m21.4s 27.0S 26.7E			
h=5km mb=5.2 Ms=5.3			
Union of South Africa			
Oct 28	WDC	ePKPc	15 31 31.8
		e	15 36 35
	MIN	ePKP	15 31 32.7
		e	15 36 37.3
	ORV	ePKP	15 31 32.7
	JAS1	ePKPc	15 31 34.7
		e	15 36 50.2
	MNA	ePKPc	15 31 35.0
		e	15 36 49.3
	FRI	ePKPc	15 31 35.0
		e	15 33 07.7
		e	15 37 03.9
	MHC	ePKP	15 31 35.4
		e	15 36 54.0
	PRS	ePKP	15 31 35.8
	LLA	ePKP	15 31 36.0
	PRI	e	15 31 36.3
	BKS	eL	16 36 00
		AMP(μm)	PER(s)
	LZ	2.9	20.
	LN	1.4	20.
	LE	0.0	20.
USGS 15h11m23.3s 30.5S 60.2E			
h=10km mb=5.6 Ms=5.5			
Atlantic-Indian Rise			
Oct 28	WDC	ePKP	17 38 26.6
		e	17 43 27.1
	ORV	ePKP	17 38 27.5
	JAS1	ePKP	17 38 29.2
		e	17 43 44.0
	MNA	ePKP	17 38 29.2
	FRI	ePKP	17 38 29.5
		e	17 40 05.3
	PRI	ePKP	17 38 31.1
USGS 17h18m18.0s 30.5S 60.1E			
h=10km mb=5.4 Ms=5.1			
Atlantic-Indian Rise			
Oct 29	PRI	eP	02 39 24.0
		eS	02 40 22.0
	FRI	eP	02 39 28.1
	PRS	eP	02 39 30.0
	LLA	eP	02 39 31.1
	SAO	eP	02 39 35.3
	GCC	eP	02 39 41.6
	JAS1	eP	02 39 44.2
		e(S)	02 41 21.3
	MHC	e(P)	02 39 44.3
	MNA	eP	02 39 44.4
		eS	02 41 25.6
	PCC	eP	02 39 49.2
	BKS	eL	02 41 36
BRK ML=4.4(4)			
PAS 02h38m15.3s 32.6N 117.2W			
h=15km ML=4.7			
South of San Diego, CA			
Oct 30	PRS	eP	00 44 23.7
	GCC	eP	00 44 24.2
	PCC	eP	00 44 24.8
	PRI	eP	00 44 25.6
	BRK	eP	00 44 26.4
	MHC	eP	00 44 26.7
	FRI	eP	00 44 30.6
	JAS1	ePc	00 44 31.8
	ORV	eP	00 44 34.2
	WDC	eP	00 44 35.1
	MIN	eP	00 44 36.6
	MNA	eP	00 44 40.2
USGS 00h32m03.6s 27.9S 176.6W			
h=33km mb=5.0 Ms=5.1			
Kermadec Islands Region			

International Seismological Centre

DATE	STA	PHASE	TIME (UTC)
Oct 30	GCC	eP	01 40 33.1
		eS	01 50 14.7
	PCC	eP	01 40 33.5
		e(S)	01 50 16.2
	PRS	eP	01 40 33.7
		eS	01 50 12.5
		ePKPPKP	02 07 43.8
		epRPKP	02 08 35.6
	SAO	eP	01 40 33.9
		ePcP	01 41 18
		eS	01 50 17.2
	PRI	eP	01 40 35.2
		epP	01 41 28.0
		e(PcP)	01 41 39.2
		esP	01 41 47.8
		eS	01 50 19.3
	BRK	eP	01 40 35.3
		eS	01 50 16.3
	LLA	eP	01 40 35.3
		eS	01 50 17.0
	MHC	eP	01 40 35.5
		ePcP	01 40 46.2
		esP	01 41 51.2
		e(S)	01 50 19.8
		ePKPPKP	02 07 42.8
		epRPKP	02 08 35.1
	BKS	iPc	01 40 35.6
		e	01 40 46.8
		i	01 40 58.5
		i	01 41 04.9
		i	01 41 12
		ipP	01 41 19
		esP	01 41 48.4
		iS	01 50 14
		e(ScS)	01 50 45.2
		i(PS)	01 51 20
		iSSS	01 58 28
		eG	02 00 08
		eLr	02 03 16
		e	02 17 58
		e	02 32 44
		e	02 41 42
		e	03 25 40
			AMP(μm) PER(s)
		PZ	0.73 0.9
	FRI	eP	01 40 40.5
		eS	01 50 29.1
		epRPKP	02 08 29.3
	FHC	eP	01 40 40.5
	JAS1	iPc	01 40 41.0
		iS	01 50 31.2
		eSS	01 51 01.9
		ePKPPKP	02 07 39.0
		epRPKP	02 08 27.2
		e	02 09 18.3
	ORV	eP	01 40 43.1
	WDC	iPc	01 40 43.6
		ePcP	01 40 52.4
		ePcP	01 41 33.0
		eS	01 50 28.1
		ePKPPKP	02 07 38.7
		e	02 09 16.2
	MIN	eP	01 40 45.2
		eS	01 50 39.5
	MNA	eP	01 40 50.7
		ePcP	01 41 00.0
		epP	01 41 36.0
		esP	01 42 05.1
		eS	01 50 32.3
		ePKPPKP	02 07 36.9
		epRPKP	02 08 27.0

BRK mb=6.4 h=180km Distance=78°

DATE	STA	PHASE	TIME (UTC)
USGS 01h28m54.6s 21.7S 176.6W			
h=188km mb=6.4			
Fiji Islands Region			
Oct 30	JAS1	iPc	04 02 10.0
		iS	04 02 21.9
	MNA	iPc	04 02 10.4
	FRI	iPd	04 02 14.2
		iS	04 02 29.3
	LLA	iPc	04 02 28.6
	MHC	ePc	04 02 28.7
	SAO	iPd	04 02 31.2
	ORV	iPc	04 02 32.3
	PRI	eP	04 02 32.9
	BRK	eP	04 02 33.5
	GCC	eP	04 02 33.6
	BKS	eP	04 02 33.7
		e	04 02 41.7
	ZSP	e(P)	04 02 34.0
	PRS	eP	04 02 34.4
	PCC	ePc	04 02 35.5
	MIN	e(P)	04 02 47.3
	WDC	eP	04 02 50.7
BRK 04h01m53.2s 38.1N 119.3W			
h=4km ML=3.6(6)			
13 km NW of Mono Lake, CA			
Oct 30	PRI	eP	06 03 03.2
	PRS	eP	06 03 06.6
	MNA	eP	06 03 11.7
	JAS1	eP	06 03 14.5
	ORV	eP	06 03 30.8
	WDC	eP	06 03 39.6
	BKS	eL	06 12 00
			AMP(μm) PER(s)
		LZ	1.4 20.
		LN	1.8 20.
		LE	1.1 20.
USGS 05h56m33.9s 8.5N 102.9W			
h=10km mb=4.8 Ms=4.5			
Off Coast of Mexico			
Oct 30	SAO	iPc	18 12 10.4
	GCC	iPc	18 12 15.6
	PRS	iPd	18 12 18.2
	MHC	iPd	18 12 18.9
		iS	18 12 26.6
	LLA	iPc	18 12 19.1
		iS	18 12 27.9
	PCC	ePd	18 12 25.3
		i	18 12 25.7
	PRI	iPc	18 12 27.5
	BKS	iPc	18 12 29.3
		i	18 12 31.0
		eS	18 12 47.1
		e	18 12 47.5
		e	18 12 48.3
	BRK	iPc	18 12 30.7
		iS	18 12 47.3
	ZSP	iPc	18 12 32.3
		iSg	18 12 50.7
	JAS1	e(P)	18 12 33.1
		i	18 12 50.3
		i	18 12 53.2
	FRI	ePc	18 12 34.7
	ORV	eP	18 12 53.1
BRK 18h12m08.3s 36.8N 121.6W			
h=4km ML=3.1(4)			
16 km W of Hollister, CA			
Oct 31	MNA	iPc	03 57 45.6
	JAS1	iPc	03 57 47.0

DATE	STA	PHASE	TIME (UTC)
	FRI	iPc	03 57 55.2
	ORV	iPd	03 58 04.4
	MHC	iPc	03 58 06.4
		eS	03 58 34.5
	LLA	iPc	03 58 07.1
	BKS	eP	03 58 09.1
		i	03 58 10.3
		e	03 58 11.7
		eS	03 58 40.5
		i	03 58 42.5
		eS	03 59 42.4
	SAO	iPc	03 58 09.3
	BRK	ePc	03 58 09.4
		iS	03 58 40.1
	ZSP	iPn	03 58 09.9
		iP*	03 58 11.1
		iS*	03 58 41.1
		i	03 58 44.6
	GCC	iPc	03 58 11.1
	PRI	iPc	03 58 12.0
		iS*	03 58 45.0
	PCC	ePc	03 58 12.3
	MIN	iPd	03 58 12.9
	PRS	iPc	03 58 13.4
	WDC	iPd	03 58 21.7
		iP*	03 58 29.5
		iS*	03 59 08.4
		i	03 59 12.1
	FHC	e	03 58 42.1
BRK 03h57m28.9s 38.4N 119.3W			
h=1km ML=4.6(6) Mo=4.7E22(6)			
20 km NNW of Bridgeport, CA			
Oct 31	MNA	ePd	07 14 43.5
	FRI	ePd	07 14 45.8
	PRI	eP	07 14 49.6
	LLA	eP	07 14 51.6
	JAS1	ePd	07 14 53.3
		iPcP	07 16 01.6
	PRS	eP	07 14 53.4
	SAO	eP	07 14 56.0
	MHC	ePd	07 14 58.9
	GCC	eP	07 14 59.7
	PCC	eP	07 15 02.8
	BRK	ePd	07 15 03.4
	BKS	ePd	07 15 03.5
			AMP(μm) PER(s)
		PZ	0.078 0.8
	ORV	eP	07 15 04.0
	MIN	ePd	07 15 06.0
	WDC	iPd	07 15 10.0
	FHC	ePd	07 15 20.6
USGS 07h05m52.8s 6.8N 73.0W			
h=166km mb=5.2			
Northern Colombia			
Oct 31	SAO	iPd	18 46 18.7
	GCC	iPc	18 46 21.0
	MHC	iPd	18 46 22.5
	LLA	iPc	18 46 25.6
	PRS	iPd	18 46 26.2
	PCC	ePd	18 46 29.8
	BKS	iP	18 46 33.1
		eS	18 46 48.6
	BRK	iPc	18 46 33.4
	PRI	iPd	18 46 34.3
	ZSP	iPc	18 46 34.5
		iS	18 46 52.2
	JAS1	eP	18 46 37.8
	FRI	iPc	18 46 39.6
	ORV	eP	18 46 56.6
BRK 18h46m14.2s 36.9N 121.6W			

DATE	STA	PHASE	TIME (UTC)
h=7km ML=3.5(6) Mo=7.6E21(4)			
7 km S of Gilroy, CA			
Nov 1	ZSP	ePc	08 40 30.2
		i	08 40 40.3
	BRK	ePc	08 40 31.1
		iS	08 40 45.6
	BKS	eP	08 40 31.3
		eS	08 40 45.3
	ORV	eP	08 40 33.9
	PCC	iPc	08 40 35.5
	MHC	eP	08 40 41.6
	WDC	e	08 40 42.2
	GCC	e	08 40 43.5
	JAS1	ePc	08 40 46.4
		iS	08 41 12.1
	SAO	iPc	08 40 48.9
	FRI	e	08 41 01.2
	MNA	e	08 41 17.8
BRK 08h40m12.7s 38.8N 122.7W			
h=3km ML=3.0(4) Mo=9.9E20(2)			
The Geysers area, 26 km S of Clear Lake, CA			
Nov 1	PRS	eP	11 10 52.5
	GCC	eP	11 10 52.8
	PRI	eP	11 10 53.2
	MHC	eP	11 10 54.3
	LLA	eP	11 10 54.4
	FRI	ePd	11 10 59.6
	JAS1	ePd	11 11 00.2
	ORV	eP	11 11 02.8
	WDC	ePd	11 11 03.6
	MNA	ePd	11 11 09.2
USGS 10h58m34.7s 27.1S 176.7W			
h=33km mb=5.0			
Kermadec Islands Region			
Nov 1	PRS	eP	11 13 57.7
	MHC	eP	11 14 00.3
	FRI	eP	11 14 04.5
	JAS1	iPd	11 14 05.5
	ORV	eP	11 14 07.8
	WDC	iPd	11 14 08.7
	MNA	eP	11 14 14.3
USGS 11h01m39.9s 27.0S 176.7W			
h=33km mb=4.9			
Kermadec Islands Region			
Nov 1	MHC	iPc	14 22 04.8
		iS	14 22 06.5
	GCC	iPd	14 22 10.8
		iS	14 22 17.7
	PCC	iPc	14 22 13.4
		iS	14 22 23.0
	SAO	iPc	14 22 15.2
	BRK	iPc	14 22 16.0
		iS	14 22 28.0
	BKS	iP	14 22 16.1
	ZSP	iPc	14 22 17.6
		iS	14 22 29.6
	LLA	ePd	14 22 20.3
	PRS	iPc	14 22 22.2
	JAS1	iPc	14 22 24.3
		iS	14 22 38.7
	PRI	e	14 22 28.7
	FRI	eP	14 22 30.6
	ORV	e	14 22 41.5
BRK 14h22m02.9s 37.3N 121.7W			
h=6km ML=2.9(4) Mo=1.5E20(2)			
Halls Valley, 14 km E of San Jose, CA			

DATE	STA	PHASE	TIME (UTC)
Nov 1	MHC	iPc	14 50 59.2
		iS	14 51 00.9
	GCC	iPd	14 51 05.2
	PCC	iPc	14 51 07.9
	SAO	iPd	14 51 09.7
	BRK	ePc	14 51 10.5
	BKS	iPc	14 51 11.6
		iS	14 51 21.3
	ZSP	iPc	14 51 12.1
		iS	14 51 24.4
	LLA	iPc	14 51 14.6
	PRS	iPc	14 51 16.6
	JAS1	iPc	14 51 18.8
		iS	14 51 34.4
	PRI	ePc	14 51 22.6
	FRI	iPc	14 51 25.5
	ORV	eP	14 51 33.3
	MIN	eP	14 51 46.8
	MNA	eP	14 51 50.2
BRK 14h50m57.4s 37.3N 121.7W			
h=6km ML=3.4(6) Mo=2.1E21(4)			
Halls Valley, 14 km E of San Jose, CA			
Nov 1	JAS1	iPc	19 23 56.9
	MNA	iPc	19 23 58.3
	FRI	iPd	19 24 08.7
	ORV	iPc	19 24 08.8
	MHC	ePc	19 24 14.2
		iS	19 24 44.9
	ZSP	iPc	19 24 16.4
		i	19 24 20.0
		iS	19 24 46.1
	BKS	iP	19 24 16.7
		eS	19 24 48.7
	BRK	iPc	19 24 16.8
	LLA	eP	19 24 17.6
	SAO	iPc	19 24 19.0
	MIN	iPd	19 24 19.1
	PCC	iPd	19 24 20.5
	GCC	eP	19 24 20.5
	PRS	eP	19 24 23.1
	PRI	eP	19 24 23.3
		iS	19 24 52.0
	WDC	iPc	19 24 25.9
	FHC	e	19 24 42
BRK 19h23m38.3s 38.7N 119.5W			
h=17km ML=4.6(6) Mo=4.2E22(6)			
Topaz Lake, 21 km E of Markleeville, CA			
Nov 2	PCC	iPd	03 46 17.6
	BRK	iPc	03 46 20.5
		iS	03 46 24.6
	BKS	iPc	03 46 21.2
		iS	03 46 25.4
	ZSP	iPc	03 46 22.0
		iS	03 46 27.5
	GCC	eP	03 46 27.5
	MHC	iPc	03 46 28.3
		iS	03 46 39.6
	SAO	eP	03 46 35.1
	JAS1	iPc	03 46 42.5
		i	03 47 01.3
BRK 03h46m14.4s 37.6N 122.5W			
h=10km ML=3.0(4) Mo=4.1E20(2)			
Pacifica, 17 km SW of San Francisco, CA			
Nov 3	PRS	eP	02 18 36.4
	PRI	eP	02 18 38.4

DATE	STA	PHASE	TIME (UTC)
	BRK	eP	02 18 39.0
	MHC	e(P)	02 18 39.5
	LLA	e	02 18 41.5
	BKS	eP	02 18 42.0
		eS	02 27 53.0
		e	02 29 04.0
		eLg	02 40 14.0
		eLr	02 46 08.0
			AMP(μm) PER(s)
		LZ	4.1 20.
		LN	3.6 20.
		LE	2.8 20.
	FRI	eP	02 18 43.6
	JAS1	ePd	02 18 44.5
	ORV	eP	02 18 46.8
	WDC	ePd	02 18 47.8
	MIN	eP	02 18 49.3
	MNA	ePd	02 18 53.4
BRK Ms=5.9 Distance= 86°			
USGS 02h06m19.5s 27.5S 176.2W			
h=33km mb=5.4 Ms=5.6			
Kermadec Islands Region			
Nov 3	FRI	eP	05 04 10.1
	JAS1	ePc	05 04 11.6
	WDC	ePc	05 04 14.5
	MNA	eP	05 04 20.1
USGS 04h51m46.0s 27.4S 176.3W			
h=33km mb=4.7			
Kermadec Islands Region			
Nov 3	MNA	ePc	05 09 37.8
	PRI	ePc	05 09 37.9
	FRI	e	05 09 37.9
	LLA	iPc	05 09 40.4
	PRS	ePc	05 09 40.9
	JAS1	ePc	05 09 43.2
		e	05 11 38.7
	ORV	ePc	05 09 52.9
	MIN	ePc	05 09 54.7
	WDC	iPc	05 09 57.8
	FHC	ePc	05 10 05.3
USGS 04h58m04.2s 21.4S 68.2W			
h=133km mb=4.9			
Chile-Bolivia Border Region			
Nov 3	PCC	ePc	10 40 22.7
	GCC	ePc	10 40 23.1
	PRS	ePc	10 40 23.5
	SAO	eP	10 40 24.0
	BRK	eP	10 40 24.7
	MHC	ePc	10 40 25.6
	PRI	ePc	10 40 25.7
	LLA	e(P)	10 40 25.7
	FRI	ePc	10 40 30.8
	JAS1	iPc	10 40 31.2
		e	10 42 31.8
	WDC	ePc	10 40 32.1
		e	10 42 32.2
	ORV	eP	10 40 32.3
	MIN	eP	10 40 34.1
	MNA	iPc	10 40 40.8
		e	10 42 41.8
USGS 10h29m31.9s 17.9S 178.6W			
h=589km mb=5.1			
Fiji Islands Region			
Nov 3	MNA	iPc	14 20 33.4
	LLA	eP	14 20 [illegible]
	JAS1	ePc	14 20 31.9
	MHC	eP	14 20 36.7
	WDC	eP	14 20 53.7

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DATE	STA	PHASE	TIME (UTC)
	FHC	eP	14 21 04.9
USGS 14h13m31.2s 13.4N 90.4W			
h=48km mb=3.8			
Near Coast of Guatemala			
Nov 3	WDC	eP	15 31 40.4
	MNA	eP	15 31 45.9
USGS 15h19m10.0s 27.9S 176.0W			
h=33km mb=4.8			
Kermadec Islands Region			
Nov 3	PRS	eP	18 31 28.6
	LLA	eP	18 31 31.9
	FRI	ePc	18 31 36.6
	JAS1	ePc	18 31 38.1
	WDC	ePc	18 31 41.1
	ORV	e	18 31 41.8
	MIN	eP	18 31 42.3
	MNA	ePc	18 31 46.3
USGS 18h19m12.7s 27.4S 176.1W			
h=33km mb=5.2 Ms=5.4			
Kermadec Islands Region			
Nov 4	FRI	eP	02 03 29.8
	PRI	eP	02 03 30.7
	MNA	iPd	02 03 33.8
		e	02 03 42.0
	LLA	eP	02 03 34.4
	PRS	e(P)	02 03 36.0
	JAS1	ePd	02 03 40.4
	ORV	eP	02 03 56.7
USGS 01h58m14.1s 18.1N 101.5W			
h=66km mb=4.8			
Guerrero, Mexico			
Nov 4	WDC	eP	16 31 51.2
	MIN	eP	16 31 53.2
	ORV	eP	16 31 56.8
	JAS1	eP	16 32 06.7
	MNA	eP	16 32 07.2
	FRI	eP	16 32 11.5
	LLA	eP	16 32 12.1
	PRI	eP	16 32 15.0
USGS 16h19m15.1s 50.9N 89.3E			
h=10km mb=5.3 Ms=4.9			
USSR-Mongolia Border Region			
Nov 6	GCC	eP	00 27 30.8
	PCC	eP	00 27 31.2
	PRS	eP	00 27 31.3
	SAO	eP	00 27 31.6
	BKS	eP	00 27 32.3
			AMP(μm) PER(s)
		PZ	0.15 1.2
	BRK	e(P)	00 27 32.8
	LLA	eP	00 27 33.4
	PRI	eP	00 27 33.5
	MHC	eP	00 27 33.5
	FRI	eP	00 27 38.6
	JAS1	eP	00 27 39.1
		epP	00 29 41.9
	WDC	eP	00 27 39.6
		epP	00 29 43.3
	ORV	eP	00 27 40.0
USGS 00h16m39.9s 18.0S 178.4W			
h=588km mb=5.4			
Fiji Islands Region			
Nov 6	WDC	eP	03 02 11.2
	JAS1	eP	03 02 14.4
USGS 02h48m23.7s 9.0N 126.2E			
h=62km mb=5.6			

DATE	STA	PHASE	TIME (UTC)
Mindanao, Philippine Islands			
Nov 6	WDC	iPc	18 34 20.4
	MIN	eP	18 34 25.8
	ORV	eP	18 34 29.5
	BKS	eP	18 34 33.0
		e	18 34 40.6
		e	18 35 03.7
		ePPP	18 36 32.0
		eS	18 40 42.0
		eLq	18 43 48.0
		eLr	18 45 26.0
			AMP(μm) PER(s)
		PZ	0.041 0.8
		LZ	7.3 20.
		LN	4.1 20.
		LE	7.7 20.
	BRK	ePc	18 34 34.5
	MHC	eP	18 34 40.9
	GCC	eP	18 34 41.5
	JAS1	iPc	18 34 46.1
	PRS	eP	18 34 47.5
	LLA	eP	18 34 48.3
	SAO	e	18 34 48.4
	FRI	ePc	18 34 52.2
	PRI	eP	18 34 52.8
BRK Ms=5.6 Distance=42°			
USGS 18h27m00.2s 51.5N 176.7W			
h=33km mb=5.1 Ms=5.5			
Andreanof Islands, Aleutian Islands			
Nov 6	FHC	eP	20 59 17.3
	WDC	iPd	20 59 21.5
	MIN	ePd	20 59 25.0
	ORV	ePd	20 59 26.6
	MHC	ePd	20 59 29.4
	PRS	ePd	20 59 31.8
	CMB	eP	20 59 33.2
	FRI	eP	20 59 36.9
USGS 20h47m57.9s 17.0N 145.6E			
h=474km mb=4.7			
Mariana Islands			
Nov 7	ARC	iP	01 04 12.2
		iS	01 04 18.3
	FHC	iPc	01 04 12.4
		iS	01 04 19.0
	WDC	iPd	01 04 28.6
		i	01 04 31.8
		iS	01 04 51.7
	MIN	iPd	01 04 38.9
	ORV	ePd	01 04 42.8
BRK 01h04m03.1s 40.6N 124.6W			
h=9km ML=3.3(4) Mo=3.9E20(2)			
Off Coast 39 km SW of Eureka, CA			
Nov 7	PRS	eP	20 01 21.8
	GCC	eP	20 01 22.4
	PCC	e	20 01 22.8
	PRI	eP	20 01 23.5
	LLA	eP	20 01 23.9
	BRK	eP	20 01 24.4
	MHC	eP	20 01 24.8
	BKS	iP	20 01 25.0
		e	20 01 36.2
		iSKS	20 11 52
		eSS	20 17 15
		eSSS	20 21 52
		eLq	20 24 28
		eLr	20 28 40
		e	20 29 52
			AMP(μm) PER(s)

DATE	STA	PHASE	TIME (UTC)
		PZ	0.13 1.1
		LZ	34 20.
		LN	26 20.
		LE	25 20.
	FRI	eP	20 01 28.7
	CMB	eP	20 01 29.8
	ORV	eP	20 01 32.2
	MIN	eP	20 01 33.1
		e	20 01 47.8
	WDC	iPd	20 01 33.2
BRK Ms=6.8 Distance=88°			
USGS 19h48m58.9s 28.6S 176.4W			
h=33km mb=5.7 Ms=6.3			
Kermadec Islands Region			
Nov 7	MHC	eP	21 11 20.8
	FRI	eP	21 11 23.5
	CMB	eP	21 11 25.0
	ORV	eP	21 11 26.8
	WDC	eP	21 11 27.9
	MIN	eP	21 11 28.2
USGS 20h58m53.9s 28.6S 176.6W			
h=33km mb=5.3			
Kermadec Islands Region			
Nov 8	PRS	eP	00 21 48.5
	MHC	eP	00 21 51.2
	FRI	eP	00 21 55.3
	CMB	eP	00 21 56.8
	WDC	ePc	00 21 57.2
	ORV	eP	00 21 57.9
USGS 00h09m25.7s 28.4S 176.6W			
h=33km mb=5.3 Ms=4.9			
Kermadec Islands Region			
Nov 8	PRS	eP	00 46 08.5
	MHC	eP	00 46 11.2
	FRI	eP	00 46 15.7
	CMB	eP	00 46 16.8
	ORV	eP	00 46 18.0
	WDC	eP	00 46 18.3
	MIN	eP	00 46 20.7
	BKS	e	00 50 06
		e	00 50 12
		e	00 52 52
		e	00 53 06
USGS 00h34m42.0s 24.1S 179.8W			
h=493km mb=4.6			
South of Fiji Islands			
Nov 8	MHC	e	04 35 03.9
	FRI	e	04 35 09.2
	CMB	eP	04 35 09.6
	ORV	e	04 35 11.5
	WDC	e	04 35 11.6
	MIN	eP	04 35 13.0
	MNA	eP	04 35 17.6
	BKS	e	05 02 55
		e	05 03 14
		e	05 03 17
		e	05 06 15
		e	05 06 18
USGS 04h22m38.8s 28.2S 176.6W			
h=33km mb=5.3 Ms=5.2			
Kermadec Islands Region			
Nov 8	FRI	eP	11 33 39.5
	CMB	eP	11 33 40.7
	WDC	eP	11 33 42.0
	MIN	eP	11 33 43.9
	MNA	eP	11 33 49.1
USGS 11h22m19.1s 15.6S 174.0W			

DATE	STA	PHASE	TIME (UTC)
h=105km mb=5.0			
Tonga Islands			
Nov 8	FRI	eP	15 07 12.1
	CMB	eP	15 07 13.7
	WDC	ePc	15 07 13.7
	ORV	eP	15 07 15.5
	MIN	eP	15 07 17.9
	MNA	eP	15 07 21.0
USGS 14h54m42.8s 28.5S 176.3W			
h=33km mb=4.9			
Kermadec Islands Region			
Nov 9	CMB	e	12 17 25.7
	FRI	e	12 17 25.8
	WDC	ePd	12 17 30.6
USGS 12h04m56.1s 29.1S 176.3W			
h=33km mb=4.8			
Kermadec Islands Region			
Nov 9	FHC	e	12 22 54.0
	WDC	eP	12 23 00.4
	MIN	eP	12 23 05.0
	ORV	eP	12 23 12.4
	BKS	ePc	12 23 15.7
		e	12 23 26.1
		iS	12 28 25.0
		i	12 28 40.7
		eLr	12 31 39
		eScS	12 33 44
		e	12 33 47
		eLr	12 37 28
			AMP(μm) PER(s)
		PZ	0.043 1.0
	BRK	e	12 23 19.2
	CMB	eP	12 23 26.3
	FRI	eP	12 23 34.0
	MNA	eP	12 23 34.9
	PRI	e	12 23 37.8
BRK mb=5.3 h=33km Distance= 34°			
USGS 12h16m24.4s 52.3N 168.4W			
h=33km mb=5.3 Ms=4.7			
Fox Islands, Aleutian Islands			
Nov 9	BRK	eP	13 17 03.5
	WDC	eP	13 17 07.0
	ORV	eP	13 17 08.7
	MIN	eP	13 17 09.4
	CMB	eP	13 17 10.8
	FRI	eP	13 17 11.8
	MNA	eP	13 17 19.7
	BKS	e	13 49 33.6
		e	13 49 44
		e	13 52 30
USGS 13h04m27.6s 11.1S 162.4E			
h=33km mb=5.3			
Solomon Islands			
Nov 9	PRI	e	15 05 25.5
	FRI	eP	15 05 33.0
	MHC	e	15 05 36.7
	PRS	e	15 05 36.7
	MNA	eP	15 05 41.0
	CMB	eP	15 05 46.0
	BKS	eP	15 05 51
		e	15 06 32
		eS	15 10 08
		e	15 10 18.8
		eLq	15 11 00.2
		e	15 12 04.8
		e	15 12 12.8
		eLr	15 12 13.6

DATE	STA	PHASE	TIME (UTC)
		e	15 12 52.0
		e	15 13 00.2
			AMP(μm) PER(s)
		LZ	5.7 20.
		LN	6.0 20.
		LE	4.6 20.
	ORV	eP	15 06 04.1
	MIN	e	15 06 11.1
BRK Ms=5.2 Distance=26°			
USGS 15h00m42.8s 18.6N 106.8W			
h=10km mb=4.9 Ms=5.1			
Off Coast of Jalisco, Mexico			
Nov 9	GCC	eP	15 38 11.6
	PRI	eP	15 38 13.5
	MHC	eP	15 38 14.5
	FRI	eP	15 38 18.6
	CMB	eP	15 38 20.2
	WDC	eP	15 38 23.0
	ORV	eP	15 38 23.5
	MIN	eP	15 38 24.2
	MNA	eP	15 38 28.4
USGS 15h25m52.4s 28.0S 176.1W			
h=33km mb=4.8			
Kermadec Islands Region			
Nov 9	FRI	eP	19 02 21.8
	MNA	eP	19 02 28.3
USGS 18h49m22.1s 6.6S 154.7E			
h=39km mb=4.8			
Solomon Islands			
Nov 9	MNA	ePc	22 36 46.6
	FRI	eP	22 36 52.5
	CMB	eP	22 36 58.4
	LLA	eP	22 37 00.4
	PRS	eP	22 37 03.0
	ORV	eP	22 37 05.5
	MHC	eP	22 37 06.0
	WDC	iPc	22 37 09.8
	PCC	eP	22 37 09.8
	FHC	eP	22 37 20.7
USGS 22h27m28.1s 17.3N 61.4W			
h=52km mb=5.1 Ms=4.0			
Leeward Islands			
Nov 10	PRS	eP	20 51 07.6
	GCC	eP	20 51 08.0
	PCC	eP	20 51 08.3
	PRI	eP	20 51 09.6
	SAO	e(P)	20 51 09.8
	LLA	e(P)	20 51 10.2
	BRK	eP	20 51 10.4
	MHC	eP	20 51 10.6
	BKS	ePc	20 51 11.0
		e	20 51 17.4
		e	20 51 24.7
		i	21 01 34.4
		eS	21 01 41.6
		e	21 13 18
		eLq	21 13 29
		iLr	21 18 07.2
		e	21 19 00
			AMP(μm) PER(s)
		PZ	0.083 1.3
		LZ	4.2 20.
		LN	3.6 20.
		LE	3.2 20.
	FRI	eP	20 51 14.4
		e	20 51 30.9
	CMB	ePd	20 51 16.1
		e	20 51 34.9

DATE	STA	PHASE	TIME (UTC)
	ORV	eP	20 51 18.0
	WDC	eP	20 51 18.7
	MIN	eP	20 51 20.2
	MNA	ePd	20 51 24.1
		e	20 51 42.9
BRK Ms=5.9 Distance=87°			
USGS 20h38m46.6s 28.3S 176.5W			
h=33km mb=5.4 Ms=5.7			
Kermadec Islands Region			
Nov 10	WDC	eP	22 05 31.6
	PRS	e	22 05 32.6
	ORV	eP	22 05 34.3
	CMB	ePc	22 05 37.2
		e	22 08 11.5
	FRI	ePc	22 05 39.0
	MNA	ePc	22 05 45.8
	BKS	eLr	22 38 22
		e	22 44 43
		e	22 45 00
			AMP(μm) PER(s)
		LZ	1.4 20.
		LN	1.1 20.
		LE	1.1 20.
USGS 21h52m43.7s 7.4S 155.9E			
h=51km mb=5.5 Ms=5.4			
Solomon Islands			
Nov 11	PCC	ePc	02 55 37.5
	GCC	eP	02 55 37.5
	PRS	eP	02 55 37.7
	SAO	e(P)	02 55 38.3
	BRK	eP	02 55 39.5
	PRI	eP	02 55 39.7
	BKS	ePc	02 55 39.7
			AMP(μm) PER(s)
		PZ	0.069 .8
	MHC	ePc	02 55 39.9
	FRI	ePc	02 55 44.2
	CMB	ePc	02 55 45.5
	ORV	eP	02 55 46.7
	WDC	ePc	02 55 47.0
	MIN	ePc	02 55 48.3
	MNA	ePc	02 55 53.4
USGS 02h44m04.2s 25.2S 180.0E			
h=473km mb=5.0			
South of Fiji Islands			
Nov 11	FHC	eP	13 14 44.5
	WDC	iPc	13 15 01.3
	MIN	ePc	13 15 08.7
	ORV	ePc	13 15 18.6
	BRK	eP	13 15 33.9
	BKS	ePd	13 15 35.4
			AMP(μm) PER(s)
		PZ	0.055 1.4
	CMB	ePc	13 15 43.2
	MHC	eP	13 15 44.0
	MNA	eP	13 15 51.8
	FRI	eP	13 15 57.4
	LLA	e	13 15 58.5
	GCC	e	13 16 00.0
	PRI	e	13 16 03.0
USGS 13h12m56.1s 47.8N 128.5W			
h=10km mb=4.3			
Off Coast of Washington			
Nov 11	PRI	e(PKP)	19 17 07.5
		e	19 17 37.2
	MNA	ePKP	19 17 08.3
	FRI	ePKP	19 17 08.4
		e	19 17 35.6

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DATE	STA	PHASE	TIME (UTC)
	CMB	ePKP	19 17 09.5
		e	19 17 41.0
	LLA	e(PKP)	19 17 09.5
		e	19 17 39.1
	WDC	e(PKP)	19 17 10.8
	PRS	e	19 17 39.5
	MHC	e	19 17 42.6
	BKS	ePKPd	19 17 44.6
		AMP(μm)	PER(s)
		PKPZ 0.10	1.2
	PCC	e	19 17 45.0
	BRK	e	19 17 45.7
	ORV	ePKP	19 17 48.0
USGS 18h57m12.4s 48.7S 31.2E			
h=10km mb=5.7 Ms=5.8			
South of Africa			
Nov 11	PRS	eP	19 45 07.5
	GCC	eP	19 45 07.7
	PCC	eP	19 45 08.1
	SAO	eP	19 45 08.2
	PRI	eP	19 45 09.2
	BRK	eP	19 45 09.8
	BKS	ePd	19 45 09.8
		e	20 14 48
		e	20 25 32
		e	20 26 00
		AMP(μm)	PER(s)
		PZ 0.066	0.8
	MHC	eP	19 45 10.0
	FRI	eP	19 45 14.0
	CMB	eP	19 45 15.2
	ORV	eP	19 45 16.8
	WDC	eP	19 45 17.1
	MIN	eP	19 45 19.1
	MNA	eP	19 45 23.0
USGS 19h33m02.8s 29.3S 179.0W			
h=280km mb=4.7			
Kermadec Islands Region			
Nov 12	GCC	eP	00 38 30.6
	BKS	ePd	00 38 31.2
		e	00 38 37.2
		eLr	01 04 31
		AMP(μm)	PER(s)
		PZ 0.062	1.3
	PRS	eP	00 38 31.8
	MHC	eP	00 38 33.8
	LLA	eP	00 38 33.9
	WDC	eP	00 38 36.0
	ORV	eP	00 38 37.5
	MIN	eP	00 38 38.4
	CMB	eP	00 38 38.6
	FRI	eP	00 38 39.2
	MNA	eP	00 38 47.8
BRK mb=5.7 h=33km Distance=85°			
USGS 00h26m04.6s 14.3S 167.7E			
h=33km mb=5.3			
Vanuatu Islands			
Nov 12	WDC	eP	12 51 43.8
	CMB	eP	12 52 06.8
	FRI	eP	12 52 15.2
	MNA	eP	12 52 16.0
USGS 12h44m03.3s 51.2N 179.4E			
h=33km mb=4.8			
Rat Islands, Aleutian Islands			
Nov 12	PRS	eP	17 12 11.7
	PRI	eP	17 12 12.2
	LLA	eP	17 12 14.3
	GCC	eP	17 12 15.0
	PCC	eP	17 12 17.1
	MHC	eP	17 12 18.0
	FRI	eP	17 12 18.3
	BKS	eP	17 12 20.2
		AMP(μm)	PER(s)
		PZ 0.019	0.7
	CMB	eP	17 12 24.1
	MNA	eP	17 12 31.0
	WDC	eP	17 12 35.9
USGS 17h01m58.3s 21.9S 139.1W			
h=0km mb=5.3			
Tuamotu Archipelago Region			
Nov 12	ORV	eP	20 12 56.2
	CMB	e(P)	20 13 15.3
	MHC	eP	20 13 16.9
Nov 12	PRS	eP	21 06 49.3
	GCC	e(P)	21 06 49.7
	BKS	eP	21 06 50.7
		e	21 29 13
		eLr	21 34 12.4
		AMP(μm)	PER(s)
		PZ 0.055	1.3
		LZ 1.8	20.
		LN 1.2	20.
		LE 1.4	20.
	PRI	eP	21 06 51.1
	MHC	eP	21 06 51.9
	FRI	eP	21 06 55.8
	CMB	eP	21 06 57.5
	ORV	eP	21 06 59.4
	WDC	eP	21 07 00.4
	MNA	eP	21 07 05.7
BRK Ms=5.9 Distance=88°			
USGS 20h54m27.8s 28.2S 176.6W			
h=32km mb=5.1 Ms=5.6			
Kermadec Islands Region			
Nov 12	PRI	iPc	22 07 25.3
	LLA	ePc	22 07 31.9
		iS	22 07 44.9
	FRI	iPd	22 07 32.8
	PRS	ePc	22 07 34.9
	SAO	iP	22 07 39.0
	MHC	eP	22 07 45.2
	GCC	eP	22 07 46.1
	CMB	iPc	22 07 49.0
		iS	22 08 14.8
BRK 22h07m17.2s 36.1N 120.2W			
h=3km ML=3.1(3)			
17 km ESE of Coalinga, CA			
Nov 13	WDC	eP	00 39 03.7
	ORV	eP	00 39 21.1
	CMB	eP	00 39 45.6
Nov 13	WDC	eP	12 55 01.0
	MIN	e(P)	12 55 05.0
	ORV	e(P)	12 55 12.0
	CMB	eP	12 55 19.2
USGS 12h44m07.6s 43.9N 141.8E			
h=15km mb=5.4 Ms=5.0			
Hokkaido, Japan, Region			
Nov 13	BKS	e	13 13 35.2
	FRI	eP	13 20 39.7
		epP	13 20 49.2
	CMB	eP	13 20 41.2
		epP	13 20 51.0
	WDC	eP	13 20 44.0
		epP	13 20 53.5
	MIN	eP	13 20 45.3
	MNA	eP	13 20 49.3
		epP	13 20 58.8
	ORV	epP	13 20 54.1
USGS 13h08m12.5s 27.8S 176.5W			
h=32km mb=4.6			
Kermadec Islands Region			
Nov 13	BKS	eP	13 36 17.8
		e	13 36 32.9
		AMP(μm)	PER(s)
		PZ 0.019	0.8
	WDC	eP	13 36 22.4
		epP	13 36 38.3
	CMB	eP	13 36 25.1
		epP	13 36 40.9
	FRI	eP	13 36 26.2
		epP	13 36 42.6
	MNA	eP	13 36 34.2
		epP	13 36 50.0
USGS 13h23m47.2s 10.3S 161.3E			
h=91km mb=5.0			
Solomon Islands			
Nov 13	MNA	iPd	16 55 57.1
		iS	16 56 10.3
	FRI	iPc	16 55 57.8
	CMB	iPc	16 56 06.8
		iS	16 56 27.5
	LLA	ePc	16 56 15.2
	PRI	ePd	16 56 16.5
		iS	16 56 46.7
	SAO	iPc	16 56 20.4
	MHC	ePc	16 56 20.4
	PRS	eP	16 56 20.7
	GCC	ePc	16 56 24.8
	BRK	eP	16 56 26.8
	BKS	iPd	16 56 28.1
		i	16 56 35.0
		i	16 56 42.9
		e	16 57 10.2
		e	16 57 21.3
		e	16 57 22.5
		e	16 57 35.5
		e	16 57 40.0
	ZSP	ePd	16 56 28.6
	PCC	iPc	16 56 28.8
	ORV	e(P)	16 56 29.1
	MIN	eP	16 56 41.8
BRK 16h55m38.5s 37.5N 118.5W			
h=2km ML=3.9(6)			
17 km NW of Bishop, CA			
Nov 13	MNA	iPd	18 45 41.2
		iS	18 45 54.4
	FRI	iPc	18 45 41.8
		iS	18 45 56.0
	CMB	iPc	18 45 51.0
		iS	18 46 11.2
	LLA	ePc	18 45 59.3
	PRI	eP	18 46 00.4
		iS	18 46 30.2
	SAO	iPd	18 46 04.5
	MHC	ePd	18 46 05.0
	PRS	ePd	18 46 06.0
	GCC	e(P)	18 46 09.0
	BRK	e	18 46 12.5
	BKS	ePc	18 46 12.7
		e	18 46 17.2
		i	18 46 19.1
		e	18 46 23.7
		e	18 46 27.0
		e	18 46 47.5
		e	18 47 07.0
	PCC	eP	18 46 12.8
	ZSP	e	18 46 13.2
	ORV	e	18 46 13.5
	MIN	e	18 46 31.0
BRK 18h45m22.5s 37.5N 118.5W			
h=3km ML=3.5(4)			
16 km NW of Bishop, CA			
Nov 13	FRI	eP	20 11 27.4
	MNA	eP	20 11 30.8
Nov 13	WDC	eP	21 49 25.8
	PCC	eP	21 49 30.2
	ORV	eP	21 49 30.9
	BKS	ePc	21 49 30.9
		AMP(μm)	PER(s)
		PZ 0.025	0.8
	GCC	eP	21 49 32.5
	MHC	eP	21 49 34.0
	PRS	eP	21 49 36.5
	CMB	eP	21 49 37.7
	LLA	eP	21 49 37.7
	PRI	eP	21 49 40.0
	FRI	eP	21 49 41.6
	MNA	eP	21 49 45.9
USGS 21h37m35.2s 17.4N 145.8E			
h=193km mb=5.1			
Mariana Islands			
Nov 14	FHC	eP	00 57 47.6
	WDC	ePd	00 57 52.6
	MIN	iPd	00 57 56.7
	ORV	ePd	00 57 59.1
	BKS	eP	00 58 01.9
		i	00 58 03.0
		AMP(μm)	PER(s)
		PZ 0.083	0.7
	BRK	eP	00 58 02.1
	PCC	eP	00 58 02.8
	GCC	eP	00 58 05.8
	MHC	eP	00 58 06.6
	CMB	ePd	00 58 08.5
	SAO	eP	00 58 08.7
	PRS	eP	00 58 10.9
	LLA	eP	00 58 11.6
	FRI	eP	00 58 13.8
	PRI	eP	00 58 14.4
	MNA	eP	00 58 15.5
USGS 00h46m41.5s 36.0N 136.9E			
h=271km mb=5.1			
Southern Honshu, Japan			
Nov 14	PRS	eP	01 58 44.5
	PRI	eP	01 58 46.8
	MHC	eP	01 58 46.9
	FRI	ePc	01 58 50.4
	CMB	ePc	01 58 52.7
	ORV	eP	01 58 53.8
	WDC	ePc	01 58 54.0
	MIN	eP	01 58 55.8
	MNA	eP	01 59 00.9
USGS 01h47m33.9s 22.1S 179.7W			
h=592km mb=4.7			
South of Fiji Islands			
Nov 14	ZSP	ePd	04 26 36.6
	BKS	ePc	04 26 36.9
		e	04 26 37.0
		i	04 26 38.5
		iS	04 26 49.6
		e	04 26 55.5
		e	04 27 03.4
	BRK	iPd	04 26 37.0
		eS	04 26 49.2
	PCC	eP	04 26 40.7
	MHC	e(P)	04 26 48.6
BRK 04h26m20.4s 38.5N 123.0W			
h=2km ML=2.6(4)			
Near Guerneville, 25 km NW of Santa Rosa, CA			
Nov 14	FRI	ePKP	06 52 18.8
	PRI	ePKP	06 52 19.9
	MNA	ePKP	06 52 20.3
	PRS	ePKP	06 52 20.3
	LLA	ePKP	06 52 20.4
	SAO	ePKP	06 52 21.3
	CMB	ePKPc	06 52 21.4
	GCC	ePKP	06 52 21.6
	PCC	ePKP	06 52 22.3
	BRK	ePKP	06 52 23.3
	MHC	ePKP	06 52 23.3
	BKS	ePKPd	06 52 23.7
		e	06 52 41.3
		e	07 37 06
		e	07 38 00
		e	07 38 17
		AMP(μm)	PER(s)
		PKPZ 0.061	0.6
	ORV	ePKP	06 52 25.8
	WDC	ePKPc	06 52 26.1
	MIN	ePKP	06 52 26.3
USGS 06h33m22.9s 58.7S 25.3W			
h=18km mb=5.6 Ms=5.2			
South Sandwich Islands Region			
Nov 14	PRS	e	13 11 49.4
	PRI	e	13 11 52.4
	MHC	e	13 11 52.5
	FRI	eP	13 11 56.7
	CMB	ePc	13 11 58.1
	ORV	eP	13 12 00.0
	WDC	ePc	13 12 00.7
	MIN	eP	13 12 02.0
	MNA	eP	13 12 06.7
	BKS	e	13 38 18
		eLr	13 39 22
		e	13 39 24
		e	13 45 52.8
		e	13 46 10.4
USGS 12h59m33.3s 27.3S 176.5W			
h=44km mb=5.3 Ms=5.1			
Kermadec Islands Region			
Nov 14	MNA	iPc	16 00 36.9
	FRI	iPc	16 00 48.3
	CMB	iP	16 00 57.0
	PRI	iPc	16 01 01.1
	LLA	iPc	16 01 02.0
	PRS	iPc	16 01 07.2
	SAO	ePc	16 01 07.3
	MHC	iPc	16 01 12.2
	GCC	eP	16 01 13.8
	ORV	iPc	16 01 15.8
	BRK	eP	16 01 16.5
	BKS	ePc	16 01 16.6
		e	16 01 35
	PCC	ePc	16 01 17.3
	ZSP	eP	16 01 18.1
	MIN	iPc	16 01 23.1
	WDC	iPc	16 01 32.4
	FHC	eP	16 01 50.5
BRK ML=5.5(8)			
USGS 16h00m00.0s 37.1N 116.0W			
h=0km mb=5.8 Ms=4.5			
Underground Nuclear Explosion, N.T.S.			
Nov 14	FHC	eP	21 33 10.3
	WDC	eP	21 33 13.1
		i	21 33 23.1
		i	21 33 30.4
		i	21 33 43.6
	ORV	eP	21 33 18.3
	MIN	eP	21 33 19.4
	PCC	eP	21 33 22.1
	BRK	eP	21 33 22.7
	BKS	ePc	21 33 22.7
		i	21 33 33.3
		ePP	21 37 12
		iSKS	21 44 00
		e	21 44 39.5
		iLg	21 58 20
		iLr	22 03 44
		AMP(μm)	PER(s)
		PZ 0.13	0.9
		LZ 140	20.
		LNE 97	20.
		LNW 130	20.
	MHC	eP	21 33 24.0
	CMB	eP	21 33 25.1
		i	21 33 32.9
		i	21 33 41.2
		i	21 33 56.0
	GCC	e	21 33 26.7
	PRS	eP	21 33 28.9
	LLA	eP	21 33 30.1
	PRI	eP	21 33 30.6
	FRI	eP	21 33 30.8
		i	21 33 40.4
	MNA	eP	21 33 31.9
	SAO	eP	21 33 32.8
BRK Ms=7.5 Distance=95°			
USGS 21h20m10.6s 23.9N 121.6E			
h=33km mb=6.3 Ms=7.8			
Taiwan			
Nov 14	WDC	eP	22 47 32.8
	ORV	eP	22 47 37.9
	CMB	eP	22 47 43.6
	FRI	eP	22 47 49.0
USGS 22h34m22.7s 24.0N 122.0E			
h=33km mb=5.3			
Taiwan			
Nov 14	FHC	eP	23 17 41.8
	WDC	eP	23 17 44.0
	ORV	eP	23 17 51.0
	MIN	eP	23 17 52.1
	BRK	eP	23 17 55.0
	BKS	ePc	23 17 55.1
		AMP(μm)	PER(s)
		PZ 0.18	1.1
	PCC	eP	23 17 56.0
	CMB	eP	23 17 57.1
	MHC	eP	23 17 57.3
	GCC	e	23 17 57.7
	PRS	eP	23 18 00.5
	LLA	eP	23 18 01.0
	SAO	eP	23 18 01.4
	MNA	eP	23 18 03.0
	FRI	eP	23 18 03.1
	PRI	eP	23 18 03.3
USGS 23h04m37.1s 23.9N 121.7E			

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DATE	STA	PHASE	TIME (UTC)
h=33km mb=6.1 Ms=6.3			
Taiwan			
Nov 14	WDC	eP	23 42 34.9
	MIN	eP	23 42 39.5
	ORV	eP	23 42 40.0
	CMB	eP	23 42 44.3
	FRI	eP	23 42 50.0
USGS 23h29m23.3s 24.0N 121.8E			
h=33km mb=5.0			
Taiwan			
Nov 15	WDC	eP	00 30 51.3
	MIN	eP	00 30 54.3
	ORV	eP	00 30 56.5
	BKS	eP	00 30 59.7
			AMP(μm) PER(s)
		PZ	0.033 1.1
	MHC	eP	00 31 02.7
	CMB	eP	00 31 04.4
	PRS	eP	00 31 06.0
	LLA	eP	00 31 06.8
	FRI	eP	00 31 09.0
	PRI	eP	00 31 09.1
	MNA	eP	00 31 09.8
	BRK	e	00 31 10.5
Taiwan Region			
Nov 15	WDC	eP	00 51 19.8
	CMB	e	00 51 32.8
	FRI	e	00 51 37.0
USGS 00h38m10.3s 23.7N 121.9E			
h=33km mb=4.5			
Taiwan			
Nov 15	WDC	eP	01 13 12.7
	MIN	e	01 13 15.0
	ORV	e	01 13 18.2
	CMB	e	01 13 22.0
	FRI	e	01 13 29.8
USGS 01h00m02.2s 24.0N 121.8E			
h=33km mb=5.1 Ms=5.4			
Taiwan			
Nov 15	PRI	eP	03 52 08.5
	MHC	e	03 52 08.6
	CMB	e	03 52 13.3
	WDC	e	03 52 13.4
	FRI	eP	03 52 13.4
	ORV	e	03 52 14.0
	MIN	eP	03 52 16.7
	MNA	e	03 52 22.4
USGS 03h39m40.4s 21.9S 174.6E			
h=33km mb=4.8			
Vanuatu Islands Region			
Nov 15	FHC	e	06 17 58.7
	WDC	ePc	06 18 04.3
	MIN	ePc	06 18 08.1
	ORV	e	06 18 11.1
	BRK	eP	06 18 13.9
	BKS	ePc	06 18 14.0
			AMP(μm) PER(s)
		PZ	0.031 0.7
	PCC	eP	06 18 14.3
	GCC	eP	06 18 17.5
	MHC	eP	06 18 18.2
	CMB	ePc	06 18 20.7
	PRS	eP	06 18 22.5
	LLA	eP	06 18 23.0
	PRI	eP	06 18 26.1
	FRI	ePc	06 18 26.3
	MNA	eP	06 18 27.8
USGS 06h06m45.2s 36.4N 140.9E			
h=53km mb=5.3			
Near East Coast of Honshu, Japan			
Nov 15	WDC	ePc	07 37 17.3
		i	07 37 26.5
	MIN	eP	07 37 20.2
	ORV	e	07 37 20.2
	BRK	eP	07 37 25.8
	BKS	ePc	07 37 27.5
		epP	07 37 39.5
			AMP(μm) PER(s)
		PZ	0.022 0.8
	MHC	eP	07 37 29.2
	CMB	ePc	07 37 30.2
	LLA	eP	07 37 32.4
	PRS	eP	07 37 32.5
	FRI	e	07 37 34.0
	PRI	e	07 37 35.3
	MNA	eP	07 37 36.1
USGS 07h24m07.2s 23.9N 121.7E			
h=28km mb=5.5 Ms=5.8			
Taiwan			
Nov 16	WDC	e	07 20 32.8
	MIN	e	07 20 36.7
	CMB	eP	07 20 47.1
	FRI	e	07 20 51.4
USGS 07h07m24.6s 23.8N 121.9E			
h=33km mb=4.9			
Taiwan			
Nov 17	WDC	eP	11 34 26.3
	MIN	e	11 34 29.0
	MHC	eP	11 34 37.3
	FRI	eP	11 34 43.7
	PRI	e	11 34 44.8
USGS 11h21m15.7s 23.8N 121.6E			
h=33km mb=4.9			
Taiwan			
Nov 18	FHC	eP	09 02 18.9
	WDC	ePc	09 02 23.0
		e	09 02 32.6
	MIN	eP	09 02 25.5
	ORV	eP	09 02 27.8
	CMB	ePc	09 02 35.6
	FRI	eP	09 02 40.1
	MNA	eP	09 02 41.7
USGS 08h49m13.9s 24.0N 121.8E			
h=33km mb=5.1 Ms=5.2			
Taiwan			
Nov 18	FRI	ePKP	12 21 16.6
		ePKiKP	12 25 25.2
	PRI	ePKP	12 21 17.2
	MNA	ePKP	12 21 17.8
		ePKiKP	12 25 25.0
		e	12 25 35.1
	SAO	ePKP	12 21 17.8
	PRS	ePKP	12 21 17.8
		e	12 25 17.8
	LLA	ePKP	12 21 17.9
	CMB	ePKP	12 21 19.0
		ePKiKP	12 25 25.9
	GCC	ePKP	12 21 19.0
	MHC	ePKP	12 21 19.7
	BRK	ePKP	12 21 20.6
	BKS	ePKP	12 21 21.4
		e	12 21 33
		e	12 21 39
	ORV	ePKP	12 21 22.0
	MIN	ePKPc	12 21 22.9
	WDC	ePKPc	12 21 23.9
		ePKiKP	12 25 26.3
USGS 12h02m27.8s 57.9S 25.4W			
h=66km mb=5.6			
South Sandwich Islands Region			
Nov 18	MHC	iPc	13 45 59.6
		iS	13 46 02.8
	PCC	iPd	13 46 06.3
		iS	13 46 13.5
	GCC	iPd	13 46 06.3
	BRK	iPc	13 46 06.9
		eS	13 46 16.0
	BKS	iPc	13 46 07.0
		iS	13 46 15.6
	ZSP	ePc	13 46 07.8
	SAO	iPc	13 46 10.8
	LLA	iPc	13 46 15.2
	CMB	ePd	13 46 16.3
		iS	13 46 32.8
	PRS	ePd	13 46 17.5
	PRI	eP	13 46 23.0
	FRI	e(P)	13 46 23.5
		iS	13 46 45.9
BRK 13h45m55.8s 37.5N 121.7W			
h=6km ML=2.7(2) Mo=1.3E20(2)			
Mt. Lewis area, 27 km NE of San Jose, CA			
Nov 18	PRI	iPd	14 07 14.4
		iS	14 07 19.1
	LLA	iPd	14 07 19.1
		iS	14 07 28.5
	PRS	iPc	14 07 19.5
	SAO	iPc	14 07 24.2
	FRI	iPc	14 07 31.6
		iS	14 07 48.0
	GCC	eP	14 07 32.6
		eS	14 07 51.0
	MHC	eP	14 07 33.9
	CMB	eP	14 07 41.8
BRK 14h07m10.9s 36.2N 120.8W			
h=9km ML=2.8(2)			
Peachtree Valley, 28 km E of King City, CA			
Nov 18	GCC	eP	22 59 54.0
	PRS	eP	22 59 54.1
	PCC	eP	22 59 54.3
	SAO	eP	22 59 54.9
	PRI	eP	22 59 56.0
	BRK	eP	22 59 56.0
	BKS	iPc	22 59 56.0
			AMP(μm) PER(s)
		PZ	0.14 0.8
	MHC	eP	22 59 56.5
	FHC	eP	23 00 00.5
	FRI	eP	23 00 00.9
	CMB	iPc	23 00 03.0
	ORV	eP	23 00 03.1
	WDC	iPc	23 00 03.5
	MIN	eP	23 00 05.4
	MNA	eP	23 00 10.2
USGS 22h48m27.6s 24.1S 180.0E			
h=511km mb=5.4			
South of Fiji Islands			
Nov 19	WDC	eP	00 47 37.5
	CMB	eP	00 47 40.0
		e	00 47 51.5
	ORV	e	00 47 43.5
	FRI	eP	00 47 56.8
		e	00 48 07.2
USGS 00h35m17.4s 30.0N 131.1E			
h=33km mb=5.1 Ms=5.0			
Ryukyu Islands Region			
Nov 19	MHC	eP	05 05 52.8
	FRI	eP	05 05 55.5
	CMB	eP	05 05 57.3
	WDC	eP	05 06 00.0
USGS 04h53m31.9s 27.2S 176.4W			
h=33km mb=5.3 Ms=5.2			
Kermadec Islands Region			
Nov 19	PRS	eP	06 33 54.3
	GCC	e(P)	06 33 54.5
	MHC	eP	06 33 57.2
	FRI	eP	06 34 01.4
	CMB	eP	06 34 03.0
	ORV	e(P)	06 34 04.8
	WDC	eP	06 34 05.5
	MIN	eP	06 34 07.0
	MNA	eP	06 34 11.0
USGS 06h21m37.0s 27.3S 176.4W			
h=33km mb=5.2 Ms=5.0			
Kermadec Islands Region			
Nov 19	PCC	eP	08 39 57.8
	BRK	eP	08 39 58.9
	GCC	eP	08 39 59.1
	BKS	iP	08 39 59.7
			AMP(μm) PER(s)
		PZ	0.087 1.0
	MHC	eP	08 40 01.3
	PRS	eP	08 40 01.3
	WDC	iPc	08 40 02.7
	LLA	eP	08 40 03.5
	ORV	eP	08 40 04.4
	PRI	eP	08 40 04.9
	CMB	iPc	08 40 07.4
	FRI	eP	08 40 09.2
	MNA	eP	08 40 18.3
USGS 08h28m33.0s 0.3N 169.8E			
h=33km mb=5.3 Ms=4.8			
Gilbert Islands Region			
Nov 19	GCC	eP	09 33 35.6
	PRS	eP	09 33 35.7
	PCC	eP	09 33 36.1
	SAO	e(P)	09 33 36.5
	BRK	eP	09 33 37.7
	MHC	eP	09 33 38.0
	PRI	eP	09 33 38.3
	BKS	iPd	09 33 38.4
			AMP(μm) PER(s)
		PZ	0.061 0.7
	FRI	eP	09 33 42.4
	CMB	eP	09 33 43.5
	ORV	eP	09 33 44.5
	WDC	eP	09 33 45.0
	MIN	eP	09 33 46.5
	MNA	eP	09 33 51.8
USGS 09h22m11.4s 24.0S 179.8W			
h=518km mb=5.5			
South of Fiji Islands			
Nov 19	GCC	eP	12 05 19.0
	BKS	ePc	12 05 20.2
		epP	12 05 31.1
			AMP(μm) PER(s)
		PZ	0.022 0.8
	PRS	eP	12 05 20.3
		epP	12 05 31.0
	MHC	eP	12 05 21.6
		epP	12 05 32.4
	PRI	eP	12 05 22.6
		epP	12 05 33.3
	WDC	eP	12 05 25.6
		epP	12 05 36.2
	ORV	eP	12 05 26.5
		epP	12 05 37.0
	FRI	eP	12 05 26.9
		epP	12 05 37.6
	CMB	eP	12 05 27.0
		epP	12 05 37.0
	PCC	epP	12 05 29.5
	BRK	pP	12 05 30.9
	SAO	epP	12 05 31.2
	MNA	eP	12 05 35.5
		epP	12 05 46.0
	MIN	epP	12 05 38.3
USGS 11h52m37.2s 19.6S 167.7E			
h=33km mb=5.3 Ms=4.7			
Vanuatu Islands Region			
Nov 19	PRS	e(P)	12 16 20.0
		e	12 16 30.4
	WDC	e(P)	12 16 24.6
		e	12 16 35.6
	CMB	eP	12 16 25.6
		e	12 16 37.1
	FRI	e(P)	12 16 26.2
		e	12 16 37.1
	MHC	e	12 16 31.8
	ORV	e	12 16 36.4
	MNA	e	12 16 45.6
USGS 12h03m34.8s 19.4S 167.5E			
h=33km mb=4.4			
Vanuatu Islands Region			
Nov 19	MHC	e(P)	14 22 06.5
	BKS	ePd	14 22 10.0
			AMP(μm) PER(s)
		PZ	0.062 1.3
	FRI	eP	14 22 10.3
	CMB	eP	14 22 13.3
	WDC	eP	14 22 14.5
	MNA	eP	14 22 20.0
USGS 14h09m46.4s 27.1S 176.5W			
h=33km mb=5.2 Ms=5.2			
Kermadec Islands Region			
Nov 19	ARC	iP	16 19 22.7
		iS	16 19 34.3
	FHC	iPc	16 19 22.8
		i	16 19 30.7
	WDC	iPc	16 19 37.3
		i(S)	16 19 58.5
	MIN	eP	16 19 47.0
	ORV	eP	16 19 50.2
		iS	16 20 22.4
	BRK	eP	16 19 56.4
	BKS	iPc	16 19 56.8
	ZSP	e(P)	16 19 57
	PCC	iPc	16 19 59.8
	PRS	eP	16 20 06.6
	LLA	eP	16 20 07.6
	CMB	eP	16 20 12.3
	SAO	eP	16 20 13.0
	MHC	eP	16 20 16.5
	GCC	eP	16 20 16.9
	FRI	eP	16 20 27.1
	PRI	eP	16 20 27.9
BRK 16h19m06.0s 40.4N 125.1W			
h=8km ML=3.9(5) Mo=3.4E21(1)			
Off Coast 55 km W of Cape Mendocino, CA			
Nov 19	PRI	e(P)	17 24 33.9
	MHC	eP	17 24 35.0
	WDC	eP	17 24 38.7
	ORV	eP	17 24 39.6
	CMB	eP	17 24 40.2
	FRI	eP	17 24 40.2
USGS 17h11m55.4s 18.9S 168.1E			
h=47km mb=5.3 Ms=5.0			
Vanuatu Islands			
Nov 20	WDC	e(P)	11 25 12.1
	ORV	eP	11 25 15.7
	CMB	eP	11 25 25.5
	FRI	eP	11 25 30.8
	MNA	eP	11 25 32.5
USGS 11h13m45.1s 34.7N 140.8E			
h=59km mb=5.0			
Near East Coast of Honshu, Japan			
Nov 20	GCC	e(P)	13 26 54.4
	PRS	eP	13 26 56.1
	MHC	e(P)	13 26 56.5
	BKS	iPc	13 26 56.9
			AMP(μm) PER(s)
		PZ	0.076 1.3
	PRI	e(P)	13 26 59.5
	WDC	eP	13 26 59.7
		ePP	13 30 20.7
	FRI	e(P)	13 27 02.0
		ePP	13 30 23.2
	ORV	eP	13 27 02.5
	CMB	eP	13 27 02.6
		ePP	13 30 22.7
	MNA	eP	13 27 10.5
USGS 13h14m25.0s 16.3S 167.5E			
h=60km mb=5.7			
Vanuatu Islands			
Nov 21	WDC	e	08 21 22.3
	ORV	eP	08 21 29.6
	MHC	e	08 21 32.4
	BKS	iPc	08 21 33.5
			AMP(μm) PER(s)
		PZ	0.025 0.8
	CMB	eP	08 21 38.5
	PRS	e	08 21 41.3
	LLA	e	08 21 42.3
	FRI	eP	08 21 45.4
	MNA	eP	08 21 46.3
USGS 08h09m46.0s 34.6N 139.4E			
h=10km mb=5.0 Ms=5.1			
Near South Coast of Honshu, Japan			
Nov 21	WDC	e	08 24 18.8
	ORV	eP	08 24 23.8
	BRK	eP	08 24 26.4
	CMB	ePd	08 24 33.4
	FRI	ePd	08 24 38.8
	MNA	eP	08 24 40.8
USGS 08h12m40.8s 34.7N 139.3E			
h=10km mb=5.0			
Near South Coast of Honshu, Japan			
Nov 21	ARC	eP	23 33 12.5
	FHC	iPd	23 33 12.7
		i	23 33 15.2
		iS	23 33 21.2

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DATE	STA	PHASE	TIME (UTC)
	WDC	iPc	23 33 25.4
	MIN	iPc	23 33 35.6
	ORV	iPc	23 33 38.8
	ZSP	eP	23 33 47.0
	BKS	ePd	23 33 47.6
	PCC	iPd	23 33 50.5
	MHC	iPd	23 33 57.7
		eS	23 34 51.0
	CMB	ePd	23 34 01.0
	SAO	iPc	23 34 03.8
	LLA	eP	23 34 09.9
	PRS	eP	23 34 11.9
	FRI	iPc	23 34 16.9
	PRI	eP	23 34 17.8
	MNA	iPc	23 34 19.2
BRK 23h33m01.7s 40.4N 124.4W			
h=15km ML=5.1(7) Mo=6.1E23(2)			
Cape Mendocino area, 51 km SW of Eureka, CA			
Nov 21	ARC	iP	23 34 28.0
	FHC	e(P)	23 34 30.3
BRK 23h34m18.0s 40.4N 124.5W			
h=15kmR ML=5.1(7) Mo=4.6E23(2)			
Cape Mendocino area, 51 km SW of Eureka, CA			
Nov 22	ARC	eP	00 05 34.2
		iS	00 05 41.1
	FHC	iP	00 05 34.3
		i	00 05 37.0
		iS	00 05 41.8
	WDC	iPc	00 05 48.0
		iS	00 06 07.9
	MIN	iPc	00 05 57.9
	ORV	eP	00 06 01.2
		iS	00 06 28.2
	MHC	eP	00 06 20.5
	SAO	iPd	00 06 27.0
BRK 00h05m24.7s 40.5N 124.5W			
h=23km ML=3.5(3) Mo=8.9E20(1)			
Cape Mendocino area, 42 km SW of Eureka, CA			
Nov 22	WDC	ePc	00 53 21.4
		i	00 53 24.5
	MIN	eP	00 53 23.5
	FHC	e	00 53 26.2
	ORV	eP	00 53 26.6
	BRK	eP	00 53 29.7
	BKS	eP	00 53 29.9
		e	01 03 55
		eLr	01 21 16
		AMP(μm)	PER(s)
		PZ 0.091	0.9
		LZ 2.1	20.
		LN 3.6	20.
		LE 3.9	20.
	PCC	eP	00 53 30.5
	GCC	e	00 53 32.5
	MHC	e	00 53 33.6
	CMB	ePc	00 53 36.1
		i	00 53 41.1
	SAO	e	00 53 36.5
	PRS	eP	00 53 37.1
	LLA	eP	00 53 38.5
	PRI	eP	00 53 41.2
	FRI	eP	00 53 41.2
	MNA	ePc	00 53 43.2
		i	00 53 48.6
USGS 00h41m42.9s 34.4N 139.5E			
h=9km mb=5.8 Ms=5.8			

DATE	STA	PHASE	TIME (UTC)
Near South Coast of Honshu, Japan			
Nov 22	ARC	eP	00 58 02.2
		iS	00 58 09.8
	FHC	iP	00 58 02.3
		i	00 58 04.9
		iS	00 58 09.2
	WDC	iPc	00 58 15.4
		iS	00 58 33.1
	MIN	iPc	00 58 25.8
	FRI	e	00 59 07.7
BRK 00h57m52.4s 40.4N 124.5W			
h=24km ML=3.2(3) Mo=2.3E20(1)			
Cape Mendocino area, 46 km SW of Eureka, CA			
Nov 22	FHC	iP	01 30 07.3
		i	01 30 10.3
	ARC	eP	01 30 07.7
		iS	01 30 15.7
	WDC	iPc	01 30 20.6
		iS	01 30 40.5
	MIN	iPd	01 30 30.6
	ORV	ePd	01 30 33.5
	GCC	e	01 30 54.2
	FRI	e	01 31 12.0
	SAO	e	01 31 30.3
BRK 01h29m55.9s 40.4N 124.6W			
h=19km ML=3.2(4) Mo=1.9E21(1)			
Cape Mendocino area, 57 km SW of Eureka, CA			
Nov 22	FHC	iP	03 18 09.2
	ARC	iP	03 18 09.5
		iS	03 18 17.5
	WDC	iPc	03 18 22.5
		iS	03 18 39.9
	MIN	e	03 18 32.2
	ORV	iPd	03 18 35.3
	BRK	eP	03 18 43.8
	BKS	eP	03 18 44.5
	ZSP	e	03 18 44.8
	PCC	eP	03 18 47.8
	MHC	eP	03 18 54.6
	GCC	eP	03 18 55.8
	CMB	ePd	03 18 58.1
	SAO	e	03 19 00.7
	FRI	iPd	03 19 14.0
	MNA	e	03 19 16.4
BRK 03h17m58.4s 40.4N 124.5W			
h=18km ML=3.8(5) Mo=1.3E22(3)			
Cape Mendocino area, 54 km SW of Eureka, CA			
Nov 22	GCC	eP	17 20 55.1
	BKS	e(P)	17 20 55.5
		AMP(μm)	PER(s)
		PZ 0.028	0.7
	LLA	eP	17 20 55.5
	PRS	eP	17 20 56.5
	MHC	eP	17 20 57.4
	PRI	ePc	17 20 59.1
	WDC	iPc	17 21 00.5
	ORV	eP	17 21 01.5
	CMB	iPc	17 21 02.7
	MIN	eP	17 21 02.8
	FRI	ePc	17 21 03.2
	MNA	eP	17 21 11.9
USGS 17h08m38.1s 15.3S 167.4E			
h=158km mb=5.8			
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DATE	STA	PHASE	TIME (UTC)
Nov 22	PRI	iPc	18 37 07.4
	FRI	iPd	18 37 13.1
	LLA	iPd	18 37 14.0
		iS	18 37 26.7
	PRS	ePc	18 37 16.6
	SAO	iPc	18 37 20.6
	MHC	eP	18 37 26.9
	GCC	e	18 37 28.5
	CMB	ePd	18 37 30.1
	MNA	e	18 37 47.2
BRK 18h36m58.2s 36.1N 120.1W			
h=6km ML=3.2(4)			
28 km ESE of Coalinga, CA			
Nov 23	FHC	i	01 21 57.2
		iP	01 21 59.4
		iS	01 22 07.7
	ARC	iP	01 21 59.7
		iS	01 22 07.5
	WDC	iPc	01 22 12.3
		eS	01 22 32.3
	MIN	iPc	01 22 22.2
	ORV	eP	01 22 25.0
	MHC	e	01 22 44.8
	GCC	e	01 22 46.1
	CMB	eP	01 22 48.2
	SAO	e	01 22 52.5
	FRI	e	01 23 03.5
BRK 01h21m48.3s 40.4N 124.5W			
h=19km ML=3.5(4) Mo=1.6E21(2)			
Cape Mendocino area, 55 km SW of ERureka, CA			
Nov 23	FRI	ePd	01 48 53.6
		ePKPPKP	02 18 32.3
	MNA	iPd	01 48 54.8
		ePKPPKP	02 18 34.5
	PRI	ePd	01 48 55.8
	LLA	eP	01 48 58.8
	PRS	ePd	01 49 00.0
	CMB	iPd	01 49 02.1
		ePKPPKP	02 18 36.1
	SAO	eP	01 49 02.5
	MHC	ePd	01 49 05.6
	GCC	eP	01 49 05.6
	PCC	eP	01 49 09.4
	BKS	ePd	01 49 10.5
		ePP	01 51 22.8
		eS	01 57 08
		eSS	02 01 12
		eLq	02 04 00
		eLr	02 07 58
		AMP(μm)	PER(s)
		PZ 0.22	0.9
		LZ 8.6	20.
		LN 6.1	20.
		LE 8.2	20.
	BRK	ePd	01 49 10.5
	ORV	iPd	01 49 14.0
	MIN	ePd	01 49 16.5
	WDC	iPd	01 49 19.6
		ePKPPKP	02 18 39.2
	FHC	iPd	01 49 29.7
BRK Ms=5.9 Distance= 58°			
USGS 01h39m23.9s 3.3S 77.4W			
h=105km mb=6.4			
Peru-Ecuador Border Region			
Nov 23	MNA	eP	02 59 10.5
	MIN	eP	02 59 10.8
	ORV	e	02 59 15.2
	CMB	eP	02 59 21.1

DATE	STA	PHASE	TIME (UTC)
	FRI	eP	02 59 25.1
	MHC	eP	02 59 29.7
USGS 02h49m01.4s 64.7N 17.3W			
h=10km mb=5.2			
Iceland			
Nov 23	ARC	iP	05 41 17.6
		iS	05 41 25.7
	FHC	iP	05 41 17.9
	WDC	iPc	05 41 30.7
		iS	05 41 49.4
	MIN	iPc	05 41 40.5
	ORV	iPc	05 41 43.4
	ZSP	ePc	05 41 51.8
		iS	05 42 27.3
	BRK	ePc	05 41 52.1
	BKS	ePc	05 41 52.5
	PCC	ePc	05 41 54.8
	MHC	ePc	05 42 02.4
	GCC	eP	05 42 02.4
		i	05 42 04.3
	CMB	ePc	05 42 06.1
	SAO	eP	05 42 08.9
	PRS	e	05 42 15.1
	FRI	iPd	05 42 22.1
	PRI	e	05 42 23.4
	MNA	iPd	05 42 24.8
BRK 05h41m06.3s 40.4N 124.5W			
h=20km ML=4.0(6) Mo=2.9E22(2)			
Cape Mendocino area, 56 km SW of Eureka, CA			
Nov 23	ARC	eP	09 13 47.3
	FHC	iPd	09 13 47.5
		iS	09 13 53.0
	WDC	ePc	09 14 00.4
	MIN	eP	09 14 10.2
	ORV	eP	09 14 13.2
	PCC	e	09 14 26.8
	CMB	eP	09 14 36.4
	SAO	e	09 14 38.2
	FRI	ePc	09 14 52.0
BRK 09h13m37.7s 40.4N 124.3W			
h=17km ML=3.2(2) Mo=4.2E20(1)			
Cape Mendocino area, 43 km SSW of Eureka, CA			
Nov 23	FHC	iPc	16 00 55.2
		iS	16 01 02.0
	WDC	ePc	16 01 08.0
	MIN	eP	16 01 18.3
	ORV	eP	16 01 21.9
	PCC	e	16 01 32.5
	FRI	eP	16 01 34.8
	SAO	e	16 01 46.7
BRK 16h00m45.0s 40.4N 124.4W			
h=18km ML=3.0(2)			
Cape Mendocino area, 49 km SW of Eureka, CA			
Nov 24	PRI	ePc	04 31 59.2
		iS	04 32 06.7
	LLA	eP	04 32 05.1
	FRI	iPc	04 32 05.1
		iS	04 32 17.2
	PRS	ePc	04 32 08.2
	SAO	eP	04 32 12.0
	MHC	e(P)	04 32 18.6
	GCC	eP	04 32 19.5
	CMB	iPc	04 32 22.0
		eS	04 32 46.3
	PCC	e	04 32 27.2

DATE	STA	PHASE	TIME (UTC)
	MNA	eP	04 32 37.0
	BRK	e	04 32 45.0
BRK 04h31m49.5s 36.1N 120.0W			
h=7km ML=3.1(6)			
30 km E of Coalinga, CA			
Nov 24	FHC	eP	11 37 00.2
	WDC	ePc	11 37 07.8
		eScP	11 42 45.4
	MIN	ePc	11 37 13.2
		eScP	11 42 47.5
	ORV	ePc	11 37 17.3
		eScP	11 42 49.7
	BRK	eP	11 37 22.1
	PCC	eP	11 37 23.1
	BKS	eP	11 37 23.1
		AMP(μm)	PER(s)
		PZ 0.087	1.0
	GCC	eP	11 37 27.7
	MHC	ePc	11 37 28.2
	CMB	ePc	11 37 30.9
		eScP	11 42 56.9
	SAO	eP	11 37 31.5
	PRS	eP	11 37 34.5
	LLA	ePc	11 37 35.2
	FRI	ePc	11 37 39.1
		eScP	11 43 01.2
	PRI	ePc	11 37 39.4
	MNA	iPc	11 37 39.8
		eScP	11 43 02.0
USGS 11h29m27.4s 51.7N 178.3E			
h=78km mb=5.0			
Rat Islands, Aleutian Islands			
Nov 24	SAO	i(P)	15 08 05.6
	LLA	iPc	15 08 06.2
	PRS	iPd	15 08 07.2
	PRI	iPd	15 08 14.1
	GCC	iPd	15 08 15.2
	MHC	iPd	15 08 17.3
	PCC	iPc	15 08 23.7
	FRI	iPc	15 08 24.1
		iS	15 08 41.1
	BRK	e(P)	15 08 27.2
		e	15 08 30.3
	BKS	eP	15 08 27.2
	ZSP	e(P)	15 08 27.8
		e	15 08 30.5
	CMB	iPc	15 08 29.1
		iS	15 08 49.9
	ORV	iPd	15 08 49.1
	MNA	eP	15 08 55.3
BRK 15h08m01.3s 36.6N 121.2W			
h=4km ML=3.1(4)			
Stone Canyon area, 31 km SE of Hollister, CA			
Nov 25	MIN	eP	14 12 30.5
	WDC	eP	14 12 30.7
	MNA	eP	14 12 32.6
	ORV	eP	14 12 33.6
	CMB	eP	14 12 38.1
	FRI	e(P)	14 12 40.7
	LLA	e(P)	14 12 44.4
USGS 13h59m42.4s 44.1N 16.3E			
h=30km mb=5.3 Ms=5.5			
Yugoslavia			
Nov 26	FRI	ePc	06 58 25.0
	PRI	eP	06 58 26.0
	MNA	iPc	06 58 29.1
		e	06 58 46.1

DATE	STA	PHASE	TIME (UTC)
		e	06 58 53.1
	LLA	ePc	06 58 29.7
	PRS	e(P)	06 58 30.6
	SAO	ePc	06 58 33.7
	CMB	ePc	06 58 35.9
		e	07 02 17.5
	GCC	iPc	06 58 38.1
		e	06 58 52.0
	MHC	ePc	06 58 38.7
	PCC	e(P)	06 58 42.8
	BRK	e(P)	06 58 44.9
	ORV	ePc	06 58 52.0
	MIN	e(P)	06 58 57.1
	WDC	e(P)	06 58 59.8
USGS 06h53m18.4s 18.8N 102.3W			
h=71km mb=4.9			
Michoacan, Mexico			
Nov 26	ARC	iP	08 22 26.7
		iS	08 22 34.5
	FHC	iP	08 22 27.0
		iS	08 22 35.7
	WDC	iPc	08 22 39.3
		iS	08 22 57.8
	MIN	iPc	08 22 49.0
		iS	08 23 18.5
	ORV	ePc	08 22 51.9
	BRK	eP	08 22 57.1
	PCC	e(P)	08 23 04.0
	MHC	e(P)	08 23 11.0
	GCC	ePd	08 23 12.9
	CMB	eP	08 23 15.1
	SAO	eP	08 23 17.3
	FRI	ePd	08 23 30.7
	MNA	ePd	08 23 33.3
BRK 08h22m15.4s 40.4N 124.5W			
h=18km ML=3.5(3) Mo=4.4E21(1)			
Cape Mendocino area, 54 km SW of Eureka, CA			
Nov 27	FHC	eP	03 39 38.9
	WDC	eP	03 39 43.8
	MIN	eP	03 39 47.8
	ORV	eP	03 39 51.0
		epP	03 40 02.7
	BRK	eP	03 39 54.6
		epP	03 40 06.5
	BKS	eP	03 39 54.6
		AMP(μm)	PER(s)
		PZ 0.022	1.0
	GCC	eP	03 39 59.0
		epP	03 40 10.7
	MHC	eP	03 39 59.5
	CMB	eP	03 40 02.0
		epP	03 40 13.4
	PRS	eP	03 40 04.1
		epP	03 40 15.9
	LLA	eP	03 40 04.9
		epP	03 40 16.8
	FRI	eP	03 40 07.8
		epP	03 40 19.8
	PRI	eP	03 40 08.2
	MNA	eP	03 40 09.1
		epP	03 40 20.9
USGS 03h28m59.5s 42.4N 144.5E			
h=46km mb=5.4 Ms=4.9			
Hokkaido, Japan, Region			
Nov 27	PRS	eP	11 43 30.6
	PRI	eP	11 44 32.7
	MHC	eP	11 46 52.8
	FRI	eP	11 48 58.0

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DATE	STA	PHASE	TIME (UTC)
	CMB	eP	11 48 58.9
	ORV	eP	11 48 59.3
	WDC	eP	11 49 00.0
	MNA	eP	11 49 08.2
USGS 11h37m52.9s 18.2S 178.3W			
h=517km mb=5.0			
Fiji Islands Region			
Nov 28	MHC	iPd	09 59 37.0
	GCC	eP	09 59 42.7
	SAO	iPd	09 59 46.0
	PCC	eP	09 59 46.7
	BRK	eP	09 59 49.7
	BKS	eP	09 59 49.7
	ZSP	e(P)	09 59 51.1
	LLA	eP	09 59 51.4
	PRS	eP	09 59 53.3
	CMB	eP	09 59 58.0
	FRI	eP	10 00 02.4
	ORV	eP	10 00 15.0
BRK 09h59m35.2s 37.3N 121.7W			
h=5km ML=2.6(4) Mo=4.2E19(2)			
San Felipe Valley, 19 km SE of San Jose, CA			
Nov 28	WDC	ePc	22 40 58.1
		i	22 41 07.6
	MIN	eP	22 40 59.9
	ORV	eP	22 41 01.5
	MHC	e	22 41 08.3
	CMB	ePc	22 41 11.3
		e	22 41 13.0
	PRS	eP	22 41 13.1
	LLA	eP	22 41 13.9
	FRI	eP	22 41 16.6
	PRI	eP	22 41 16.9
	MNA	eP	22 41 18.7
		i	22 41 31.5
USGS 22h29m35.2s 36.3N 141.2E			
h=41km mb=5.7 Ms=5.6			
Near East Coast of Honshu, Japan			
Nov 29	BRK	eP	17 05 30.6
		epP	17 05 57.5
	BKS	eP	17 05 30.7
		AMP(μm)	PER(s)
	PZ	0.14	1.2
	PRI	e	17 05 34.8
	FRI	eP	17 05 36.8
	CMB	eP	17 05 37.4
		ipP	17 06 05.0
	ORV	eP	17 05 38.5
	WDC	eP	17 05 38.8
		ipP	17 06 06.5
	MIN	eP	17 05 40.8
	MNA	eP	17 05 47.3
		ipP	17 06 15.1
	PRS	e	17 05 54.9
	MHC	e	17 05 56.6
	LLA	e	17 05 57.2
USGS 16h54m13.7s 16.3S 173.9W			
h=105km mb=5.3			
Tonga Islands			
Nov 29	WDC	iPd	20 49 39.1
	MIN	eP	20 49 43.5
	ORV	eP	20 49 46.8
	CMB	eP	20 49 58.0
	MNA	eP	20 50 05.5
USGS 20h39m25.0s 44.6N 148.5E			
h=98km mb=4.9			
Kurile Islands			

DATE	STA	PHASE	TIME (UTC)
Nov 30	PRS	e	00 24 49.8
	MHC	e	00 24 50.3
	WDC	eP	00 24 52.6
	ORV	ePc	00 24 54.3
	CMB	ePc	00 24 55.8
	PRI	e	00 24 56.2
	MIN	e	00 24 56.5
	FRI	ePc	00 24 56.5
	MNA	ePc	00 25 05.1
USGS 00h12m47.3s 11.9S 166.8E			
h=213km mb=5.0			
Santa Cruz Islands			
Nov 30	MHC	eP	09 06 44.1
	PRS	eP	09 06 44.2
	FRI	eP	09 06 51.0
	CMB	eP	09 06 52.3
	ORV	eP	09 06 53.2
	WDC	eP	09 06 53.7
	MIN	eP	09 06 54.5
	MNA	eP	09 07 00.9
USGS 08h55m38.1s 21.5S 179.3W			
h=605km mb=5.0			
Fiji Islands Region			
Nov 30	PRS	eP	09 29 40.3
	BKS	eP	09 29 41.2
	PRI	eP	09 29 42.0
	MHC	eP	09 29 42.4
	FRI	eP	09 29 47.5
	CMB	iPc	09 29 48.3
	ORV	eP	09 29 48.4
	WDC	eP	09 29 48.5
	MIN	eP	09 29 50.7
	MNA	ePc	09 29 57.3
USGS 09h18m43.2s 17.8S 179.5E			
h=595km mb=4.8			
Fiji Islands			
Nov 30	PRI	e	09 44 12.0
	FRI	eP	09 44 14.1
	MNA	iPc	09 44 22.4
		e	09 48 23.0
	CMB	eP	09 44 30.3
	ORV	eP	09 44 57.4
	MIN	eP	09 45 02.5
	WDC	eP	09 45 09.4
USGS 09h41m09.2s 26.5N 111.1W			
h=10km mb=4.7			
Gulf of California			
Nov 30	ORV	eP	20 26 34.9
	WDC	ePc	20 26 38.3
	BKS	e(P)	20 26 49.3
		eLq	20 48 08.0
		eLr	20 48 12.0
		AMP(μm)	PER(s)
	PZ	0.069	1.2
	LZ	2.5	20.
	LN	0.0	20.
	LE	1.8	20.
	CMB	eP	20 26 55.3
	MHC	e	20 26 58.7
	FRI	eP	20 27 00.9
	MNA	eP	20 27 02.0
USGS 20h15m30.3s 38.9N 141.9E			
h=36km mb=6.0 Ms=6.0			
Near East Coast of Honshu, Japan			
Nov 30	MNA	eP	23 30 00.9
	PRI	eP	23 30 01.4

DATE	STA	PHASE	TIME (UTC)
	LLA	iP	23 30 03.7
	PRS	ePc	23 30 04.3
	CMB	e	23 30 06.7
	GCC	eP	23 30 09.2
	MHC	eP	23 30 09.7
	ORV	eP	23 30 16.8
	WDC	iPc	23 30 21.9
USGS 23h18m41.0s 18.1S 70.2W			
h=65km mb=5.0			
Near Coast of Northern Chile			
Dec 1	PRS	eP	12 42 19.4
	PRI	eP	12 42 21.1
	MHC	e	12 42 22.0
	BKS	eP	12 42 22.5
		eScS	12 52 56
		eLq	13 03 43
		eLr	13 07 08.0
		AMP(μm)	PER(s)
	PZ	0.070	1.1
	LZ	13	20.
	LN	13	20.
	LE	5.0	20.
	FRI	eP	12 42 26.5
	CMB	eP	12 42 28.1
	ORV	eP	12 42 29.8
	MIN	eP	12 42 31.8
	WDC	iPd	12 42 32.7
	MNA	eP	12 42 36.3
BRK Ms=6.3 Distance=80°			
USGS 12h30m02.1s 27.3S 176.4W			
h=33km mb=5.6 Ms=6.0			
Kermadec Islands Region			
Dec 1	BKS	eP	13 06 8.8
		AMP(μm)	PER(s)
	PZ	0.043	1.0
	PRI	e	13 06 04.6
	PRS	e	13 06 06.4
	MHC	e	13 06 08.2
	SAO	e	13 06 10.8
	CMB	eP	13 06 13.7
	FRI	e	13 06 13.7
	ORV	e	13 06 16.5
	WDC	eP	13 06 17.0
		e	13 34 24
	MIN	e	13 06 17.9
	MNA	eP	13 06 22.8
USGS 12h53m49.2s 27.2S 176.4W			
h=33km mb=5.4 Ms=6.1			
Kermadec Islands Region			
Dec 1	FRI	e(P)	20 07 32.1
	CMB	ePc	20 07 33.9
	WDC	ePc	20 07 36.5
	MNA	eP	20 07 42.1
USGS 19h55m07.5s 27.5S 176.3W			
h=33km mb=4.7			
Kermadec Islands Region			
Dec 2	PRI	eP	05 31 20.9
	BRK	e(P)	05 31 21.0
	MHC	e(P)	05 31 21.5
	FRI	eP	05 31 25.1
	CMB	eP	05 31 26.8
	WDC	eP	05 31 29.3
	MIN	eP	05 31 30.9
	MNA	eP	05 31 35.5
USGS 05h19m01.1s 27.4S 176.5W			
h=33km mb=5.1 Ms=5.0			
Kermadec Islands Region			

DATE	STA	PHASE	TIME (UTC)
Dec 2	WDC	iPd	12 40 40.9
	MIN	ePd	12 40 44.3
	PCC	eP	12 40 45.3
	BRK	eP	12 40 45.5
	ORV	eP	12 40 45.9
	MHC	e(P)	12 40 49.2
	PRS	ePd	12 40 51.8
	LLA	ePd	12 40 52.7
	CMB	ePd	12 40 52.9
	PRI	eP	12 40 55.2
	FRI	ePd	12 40 56.9
	MNA	ePd	12 41 01.2
USGS 12h28m51.5s 18.3N 145.6E			
h=181km mb=4.8			
Mariana Islands			
Dec 3	WDC	eP	02 51 26.9
	ORV	eP	02 51 44.0
	CMB	eP	02 52 07.6
	FRI	e(P)	02 52 22.1
USGS 02h49m47.1s 44.1N 130.1W			
h=10km			
Off Coast of Oregon			
Dec 3	WDC	e	02 53 20.7
	ORV	eP	02 53 34.4
	CMB	eP	02 53 57.7
	FRI	eP	02 54 13.3
USGS 02h52m05.1s 43.6N 127.1W			
h=10km mb=4.3			
Off Coast of Oregon			
Dec 3	WDC	eP	05 37 02.0
	MIN	e(P)	05 37 09.0
	MNA	eP	05 37 50.2
	FRI	e(P)	05 37 58.8
USGS 05h34m28.6s 49.8N 129.6W			
h=10km mb=4.5			
Vancouver Island Region			
Dec 3	WDC	eP	05 47 45.5
	MIN	eP	05 47 52.4
	ORV	eP	05 48 04.0
	CMB	e(P)	05 48 24.3
	MHC	e(P)	05 48 27.0
	MNA	eP	05 48 33.6
	FRI	eP	05 48 39.8
USGS 05h45m11.8s 49.8N 129.7W			
h=10km mb=4.7 Ms=3.6			
Vancouver Island Region			
Dec 3	PRS	eP	08 29 16.3
	SAO	eP	08 29 17.0
	PRI	eP	08 29 18.8
	MHC	eP	08 29 18.8
	FRI	e(P)	08 29 21.6
	CMB	eP	08 29 25.4
	WDC	eP	08 29 26.7
	MIN	eP	08 29 28.6
	MNA	eP	08 29 35.0
	BKS	eLr	08 57 48.0
		AMP(μm)	PER(s)
	LZ	1.4	20.
USGS 08h17m52.3s 15.7S 174.6W			
h=33km mb=4.8 Ms=5.2			
Tonga Islands			
Dec 3	FRI	eP	14 33 17.8
	MNA	eP	14 33 18.7
	PRI	eP	14 33 20.7
	LLA	e(P)	14 33 23.2
	CMB	eP	14 33 27.3

DATE	STA	PHASE	TIME (UTC)
	MHC	eP	14 33 31.9
	ORV	eP	14 33 42.1
	MIN	eP	14 33 45.8
	WDC	eP	14 33 49.4
USGS 14h26m44.7s 14.5N 91.7W			
h=88km mb=4.9			
Guatemala			
Dec 3	WDC	eP	16 59 50.6
	MIN	eP	16 59 59.5
	CMB	e(P)	17 00 32.5
USGS 16h57m19.2s 49.8N 129.4W			
h=10km mb=4.3			
Vancouver Island Region			
Dec 3	GCC	eP	17 11 21.0
	PCC	eP	17 11 21.1
	PRS	eP	17 11 21.1
	BRK	eP	17 11 22.8
	PRI	eP	17 11 23.0
	BKS	eP	17 11 23.2
		AMP(μm)	PER(s)
	PZ	0.081	0.8
	MHC	eP	17 11 23.6
	FRI	eP	17 11 27.9
	CMB	iPc	17 11 29.0
	ORV	eP	17 11 30.1
	WDC	iPc	17 11 30.5
	MIN	eP	17 11 32.0
	MNA	eP	17 11 37.2
USGS 16h59m56.9s 24.1S 179.9W			
h=527km mb=5.3			
South of Fiji Islands			
Dec 3	WDC	eP	17 49 07.0
	MIN	eP	17 49 14.5
	CMB	eP	17 49 48.8
	MNA	e(P)	17 49 54.5
	FRI	e(P)	17 50 02.3
USGS 17h46m35.0s 49.7N 129.5W			
h=10km mb=4.1			
Vancouver Island Region			
Dec 3	WDC	eP	21 29 15.4
	MIN	e(P)	21 29 22.6
	ORV	eP	21 29 34.2
	CMB	eP	21 29 54.7
	MHC	eP	21 29 56.9
	MNA	eP	21 30 02.7
	FRI	e(P)	21 30 10.3
	LLA	e(P)	21 30 19.5
	BKS	e	21 32 24
USGS 21h26m42.1s 49.7N 129.6W			
h=10km mb=4.8 Ms=4.0			
Vancouver Island Region			
Dec 3	GCC	eP	23 02 06.6
		epP	23 02 19.9
	PRI	eP	23 02 08.4
		epP	23 02 21.6
	MHC	eP	23 02 09.5
		epP	23 02 22.5
	FRI	eP	23 02 13.2
		epP	23 02 26.5
	CMB	eP	23 02 15.0
		epP	23 02 28.3
	WDC	eP	23 02 17.7
		epP	23 02 30.7
	MIN	eP	23 02 19.0
		epP	23 02 32.1
	PRS	epP	23 02 19.6
	PCC	epP	23 02 20.3

DATE	STA	PHASE	TIME (UTC)
	BRK	epP	23 02 22.0
	MNA	eP	23 02 23.2
		epP	23 02 36.5
	ORV	epP	23 02 29.8
	BKS	eLq	23 31 00.0
		eLr	23 31 28.0
		AMP(μm)	PER(s)
	LZ	1.1	20.
	LN	1.1	20.
	LE	0.89	20.
USGS 22h49m51.0s 27.4S 176.3W			
h=44km mb=5.3 Ms=5.1			
Kermadec Islands Region			
Dec 4	MHC	eP	07 57 51.3
	FRI	eP	07 57 55.3
	CMB	eP	07 57 57.0
	WDC	eP	07 57 59.8
	MNA	eP	07 58 05.1
USGS 07h45m30.2s 27.4S 176.5W			
h=33km mb=5.1 Ms=4.6			
Kermadec Islands Region			
Dec 4	MNA	eP	12 41 45.7
	PRI	eP	12 41 47.4
	LLA	eP	12 41 49.4
	CMB	eP	12 41 54.7
	MHC	eP	12 41 58.6
	MIN	e(P)	12 42 13.0
USGS 12h35m31.4s 15.8N 94.8W			
h=33km mb=5.1 Ms=3.9			
Near Coast of Oaxaca, Mexico			
Dec 5	WDC	iPd	01 07 23.6
	PCC	e	01 07 26.5
	ORV	ePc	01 07 26.5
	PRS	eP	01 07 26.7
	PRI	eP	01 07 29.6
	CMB	eP	01 07 30.3
	FRI	ePd	01 07 32.6
	MNA	e	01 07 34.9
USGS 00h54m29.5s 5.5S 147.2E			
h=217km mb=5.3			
East New Guinea Region			
Dec 5	PRI	e(P)	01 57 21.3
	PRS	e	01 57 22.5
	FRI	eP	01 57 25.4
	MHC	e(P)	01 57 27.9
	MNA	ePd	01 57 30.5
	CMB	eP	01 57 30.8
	WDC	iPd	01 57 44.8
USGS 01h45m36.1s 36.5S 97.6W			
h=10km mb=5.3 Ms=5.5			
West Chile Rise			
Dec 5	WDC	iPc	02 16 22.4
		e	02 16 37.5
	BKS	eP	02 16 26.6
		e	02 18 12.0
		e	02 20 28.0
		eLq	02 40 21.0
		AMP(μm)	PER(s)
	PZ	0.031	0.8
	BRK	eP	02 16 26.9
	ORV	eP	02 16 27.5
		i	02 16 42.7
	PCC	eP	02 16 28.3
	MHC	eP	02 16 30.9
	PRS	eP	02 16 33.4
	CMB	iP	02 16 34.8
		i	02 16 49.6

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DATE	STA	PHASE	TIME (UTC)
	PRI	eP	02 16 36.8
	FRI	ePc	02 16 39.0
		e	02 16 53.8
	MNA	iPc	02 16 43.2
		i	02 16 58.2

USGS 02h04m25.6s 18.3N 146.5E
h=85km mb=5.3
Mariana Islands

Dec 5	BKS	e(PKP)	07 15 28.2
		e	07 34 14
		ePKPPKP	07 34 25
		eLq	07 47 54
		eLr	07 52 11

	AMP(μm)	PER(s)
PKPZ	0.023	0.6
LZ	3.0	20.
LN	1.3	20.
LE	2.0	20.

	BRK	e(PKP)	07 15 29.2
	PRI	e(PKP)	07 15 29.4
	FRI	ePKP	07 15 34.5
	CMB	ePKP	07 15 36.2
	ORV	ePKP	07 15 36.4
	WDC	ePKP	07 15 36.6
	MIN	ePKP	07 15 39.8
	MNA	ePKPc	07 15 40.2

BRK Ms=6.0 Distance=123°
USGS 06h56m34.7s 51.3S 139.2E
h=10km mb=5.5 Ms=5.9
South of Australia

Dec 5	FRI	e(P)	09 14 14.9
	CMB	ePc	09 14 16.6
	ORV	e(P)	09 14 18.6
	WDC	ePc	09 14 19.5
	MIN	eP	09 14 20.8
	MNA	eP	09 14 25.1

USGS 09h01m52.1s 27.0S 176.4W
h=33km mb=5.1 Ms=4.8
Kermadec Islands Region

Dec 5	PRS	eP	11 46 12.9
	PCC	eP	11 46 13.3
	PRI	ePd	11 46 14.5
	BRK	e(P)	11 46 15.2
	MHC	ePd	11 46 15.5
	BKS	e(P)	11 46 15.8

	AMP(μm)	PER(s)
PZ	0.025	1.1

	FRI	ePd	11 46 19.0
	CMB	ePd	11 46 20.5
	ORV	eP	11 46 22.0
	WDC	ePd	11 46 22.9
	MIN	e(P)	11 46 23.8
	MNA	eP	11 46 28.0

USGS 11h34m14.7s 31.1S 179.9E
h=439km mb=5.1
Kermadec Islands Region

Dec 5	PRS	eP	22 42 46.3
		epP	22 42 56.6
	GCC	eP	22 42 46.3
		ipP	22 42 56.8
	PRI	eP	22 42 47.4
		ipP	22 42 59.6
	LLA	eP	22 42 48.5
		epP	22 42 58.9
	BKS	eP	22 42 49.0
		epP	22 42 59.1
		e	23 06 08
		e	23 09 29

DATE	STA	PHASE	TIME (UTC)

	AMP(μm)	PER(s)
PZ	0.075	1.0

	MHC	eP	22 42 49.1
		ipP	22 42 59.6
	FRI	eP	22 42 53.6
		ipP	22 43 04.2
	CMB	eP	22 42 55.3
		ipP	22 43 05.7
	ORV	eP	22 42 56.8
		ipP	22 43 07.3
	PCC	epP	22 42 57.2
	SAO	epP	22 42 57.5
	WDC	iPc	22 42 57.6
		ipP	22 43 08.1
	BRK	epP	22 42 59.1
	MIN	eP	22 43 00.5
		epP	22 43 09.5
	MNA	ePc	22 43 04.6
		ipP	22 43 15.0

USGS 22h31m00.4s 21.7S 173.6W
h=33km mb=5.6 Ms=5.3
Tonga Islands

Dec 6	WDC	eP	05 36 33.8
	MIN	eP	05 36 40.8
	ORV	eP	05 36 51.6
	CMB	eP	05 37 12.1
	MNA	eP	05 37 20.5
	FRI	e	05 37 27.8
	PRI	e	05 37 40.0
	BKS	e	05 41 54

USGS 05h33m54.3s 50.2N 129.8W
h=10km mb=4.6 Ms=3.7
Vancouver Island Region

Dec 6	WDC	eP	21 07 08.6
	MIN	eP	21 07 14.8
	ORV	eP	21 07 24.3
	CMB	eP	21 07 53.5
	MNA	eP	21 07 54.8
	LLA	eP	21 08 06.9
	FRI	eP	21 08 07.0
	PRI	eP	21 08 09.2

USGS 21h04m15.7s 51.2N 130.1W
h=10km mb=4.3
Queen Charlotte Islands Region

Dec 7	PRI	iPd	12 33 24.9
		iS	12 33 37.1
	PRS	ePc	12 33 27.6
	LLA	ePc	12 33 31.7
	SAO	iPc	12 33 33.8
	GCC	eP	12 33 39.0
	FRI	iPc	12 33 41.2
	MHC	iPc	12 33 41.2
	PCC	eP	12 33 49.1
	BKS	eP	12 33 54.4
		eS	12 34 41.2

BRK 12h33m08.8s 35.4N 121.0W
h=6km ML=3.3(4)
Off Coast 30 km WNW of San Luis Obispo, CA

Dec 7	PRI	eP	17 01 19.6
	FRI	eP	17 01 23.2
	PRS	e	17 01 26.3
	LLA	e	17 01 29.4
	MNA	eP	17 01 30.5
	SAO	e	17 01 34.3
	CMB	eP	17 01 35.4
	GCC	e	17 01 36.1
	MHC	e	17 01 37.3
	BRK	e	17 01 45.5
	BKS	eP	17 01 48
		e	17 01 56.2
		eS	17 06 06
		e	17 06 52
		e(Lr)	17 07 56

	AMP(μm)	PER(s)
LZ	21	20.
LN	16	20.
LE	19	20.

	ORV	eP	17 01 54.4
	MIN	eP	17 01 59.7
	WDC	eP	17 02 02.9

BRK Ms=5.7 Distance=26°
USGS 16h56m36.3s 18.8N 107.2W
h=10km mb=5.0 Ms=5.6
Off Coast of Jalisco, Mexico

Dec 8	MNA	eP	03 13 59.3
	MIN	eP	03 14 04.0
	ORV	eP	03 14 06.4
	CMB	eP	03 14 10.0
	WDC	eP	03 14 10.0
	FRI	eP	03 14 11.9
	LLA	eP	03 14 18.9
	PRI	eP	03 14 20.0
	BKS	e	03 35 52

USGS 03h03m26.0s 46.9N 27.5W
h=10km mb=5.1 Ms=4.9
North Atlantic Ridge

Dec 8	FRI	eP	16 17 52.6
	CMB	eP	16 17 53.0
	MNA	eP	16 18 02.8

USGS 16h05m58.4s 21.8S 173.7W
h=33km mb=4.9
Tonga Islands

Dec 9	MNA	iPc	04 16 25.9
	CMB	iPc	04 16 33.3
		iS	04 16 48.0
	FRI	iPc	04 16 36.1
		iS	04 16 52.5
	LLA	ePd	04 16 51.3
	MHC	ePd	04 16 52.6
	SAO	iPd	04 16 54.5
	PRI	eP	04 16 55.2
	ORV	iPc	04 16 57.1
	PRS	ePd	04 16 57.4
	BRK	eP	04 16 59.8
	GCC	e(P)	04 16 59.8
	BKS	iP	04 16 59.9
		iS	04 17 37.7
	PCC	eP	04 17 01.9
	MIN	eP	04 17 09.0

BRK 04h16m12.9s 38.1N 119.0W
h=9km ML=3.4(6)
N of Mono Lake, 28 km SE of Bridgeport, CA

Dec 9	MHC	iPc	22 15 45.2
		iS	22 15 47.9
	GCC	eP	22 15 51.5
	PCC	eP	22 15 51.8
	BKS	iP	22 15 52.8
		iS	22 16 02.6
	BRK	iPc	22 15 53.1
	ZSP	eP	22 15 54.4
	SAO	iPd	22 15 56.7
	LLA	eP	22 16 00.7
	PRS	e(P)	22 16 02.8
	CMB	eP	22 16 03.5
		iS	22 16 19.8
	PRI	eP	22 16 09.0
	FRI	eP	22 16 10.9

BRK 22h15m42.1s 37.5N 121.7W
h=6km ML=2.5(4) Mo=4.9E19(2)
Mt. Lewis area, 21 km NE of San Jose, CA

Dec 9	MNA	eP	23 56 01.2
		epP	23 56 30.3
	LLA	eP	23 56 07.4
		epP	23 56 36.1
	CMB	eP	23 56 10.8
		epP	23 56 39.7
	MHC	eP	23 56 15.5
		epP	23 56 44.2
	ORV	eP	23 56 23.9
		epP	23 56 53.0
	MIN	eP	23 56 26.8
		epP	23 56 56.0
	GCC	epP	23 56 44.4
	FHC	epP	23 57 11.2

USGS 23h48m50.3s 12.4N 86.6W
h=123km mb=4.8
Nicaragua

Dec 10	PRS	eP	08 53 40.2
	BRK	eP	08 53 42.1
	MHC	eP	08 53 42.8
	FRI	eP	08 53 47.1
	CMB	eP	08 53 48.3
	WDC	eP	08 53 50.5

USGS 08h42m18.9s 24.1S 179.7E
h=571km mb=4.5
South of Fiji Islands

Dec 10	PRS	eP	17 25 11.0
	PRI	eP	17 25 11.8
	LLA	e(P)	17 25 14.0
	GCC	eP	17 25 14.3
	PCC	eP	17 25 16.7
	MHC	eP	17 25 17.7
	FRI	eP	17 25 18.0
	CMB	eP	17 25 23.7
	MNA	eP	17 25 30.5
	WDC	eP	17 25 35.6

USGS 17h14m58.3s 21.9S 138.9W
h=0km mb=5.2
Tuamotu Archipelago Region

Dec 11	MNA	eP	04 55 28.3
		epP	04 55 44.2
	FRI	eP	04 55 34.7
	CMB	eP	04 55 40.3
		epP	04 55 57.8
	LLA	eP	04 55 42.5
	PRS	eP	04 55 44.6
	SAO	eP	04 55 45.3
	ORV	eP	04 55 47.3
	MHC	eP	04 55 47.7
	MIN	eP	04 55 48.2
	BRK	eP	04 55 50.9
	BKS	eP	04 55 51.3

	AMP(μm)	PER(s)
PZ	0.025	0.8

	PCC	eP	04 55 51.5
	WDC	eP	04 55 51.5
	FHC	eP	04 56 02.3

USGS 04h46m09.7s 17.2N 61.4W
h=54km mb=5.4
Leeward Islands

Dec 11	MHC	iPc	09 17 13.3
		iS	09 17 17.2
	PCC	iPc	09 17 19.8
	BRK	iPc	09 17 19.9
	BKS	iPg	09 17 19.9
		iSg	09 17 27.9
		iS*	09 17 31.5
		iSn	09 17 38.1
		i	09 17 50.0
	GCC	iPd	09 17 20.2
	ZSP	iPc	09 17 20.8
		i	09 17 23.8
	SAO	iPc	09 17 25.0
	CMB	iPd	09 17 28.8
		iS	09 17 44.1
	LLA	ePc	09 17 29.0
	PRS	e	09 17 31.2
	PRI	e	09 17 37.1
	FRI	iPc	09 17 38.0
	ORV	e	09 17 44.0

BRK 09h17m08.7s 37.6N 121.7W
h=5km ML=2.8(6) Mo=5.8E20(2)
16 km SE of Livermore, CA

Dec 11	FRI	ePd	09 43 15.0
		e	09 43 29.7
	CMB	ePd	09 43 16.4
		e	09 43 31.3
	WDC	ePd	09 43 19.2
		e	09 43 34.0
	MNA	ePd	09 43 24.1

USGS 09h30m38.0s 30.0S 177.8W
h=49km mb=5.2 Ms=4.2
Kermadec Islands

Dec 11	MHC	iPc	14 18 09.8
		iS	14 18 13.8
	PCC	iP	14 18 16.2
	BKS	iPc	14 18 16.3
		iPn	14 18 20.0
		iS	14 18 24.5
		eS*	14 18 28.9
		eSn	14 18 35.4
	BRK	iPc	14 18 16.4
	GCC	iPd	14 18 16.6
	ZSP	iPc	14 18 17.3
	SAO	ePd	14 18 21.1
	CMB	iPd	14 18 25.3
		iS	14 18 39.9
	LLA	ePc	14 18 25.4
	PRS	ePc	14 18 27.6
	PRI	ePc	14 18 33.3
	FRI	ePc	14 18 33.7
	ORV	iPc	14 18 38.1
	MIN	eP	14 18 49.8
	WDC	ePc	14 18 52.2
	MNA	ePd	14 18 52.3

BRK 14h18m05.3s 37.6N 121.7W
h=4km ML=4.1(6) Mo=2.6E22(2)
16 km SE of Livermore, CA

Dec 11	MHC	iPc	15 14 52.9
		iS	15 14 56.7
	PCC	iPc	15 14 59.4
	BRK	iPc	15 14 59.5
	BKS	iP	15 14 59.5
		iS	15 15 07.8
	GCC	iPd	15 15 00.4
	ZSP	eP	15 15 00.7
	SAO	iP	15 15 04.8
	CMB	ePd	15 15 08.4
		iS	15 15 24.0
	LLA	ePc	15 15 08.7
	PRS	e(P)	15 15 10.8
	FRI	ePc	15 15 17.8

BRK 15h14m48.3s 37.6N 121.7W
h=4km ML=2.5(4) Mo=1.5E20(2)
17 km SE of Livermore, CA

Dec 11	PRS	eP	20 08 51.7
	MHC	eP	20 08 51.9
	WDC	eP	20 08 52.6
	LLA	e(P)	20 08 52.9
	PRI	e	20 08 54.4
	ORV	e	20 08 54.6
	CMB	eP	20 08 56.9
	FRI	eP	20 08 58.4
	BKS	e	20 09 00.3
	MNA	eP	20 09 06.1

USGS 19h56m12.6s 10.5S 160.7E
h=61km mb=5.5
Solomon Islands

Dec 11	WDC	ePc	22 38 41.5
		ePP	22 41 34.3
	MIN	eP	22 38 45.2
	ORV	eP	22 38 46.7
	MHC	ePc	22 38 49.9
	PRS	ePc	22 38 52.3
	CMB	ePc	22 38 53.7
		ePP	22 41 50.2
	LLA	ePc	22 38 53.8
	PRI	ePc	22 38 56.0
	FRI	ePc	22 38 58.0
	MNA	ePc	22 39 02.5

USGS 22h26m42.8s 18.4N 146.9E
h=51km mb=5.4 Ms=5.0
Mariana Islands

Dec 11	MHC	iPc	23 07 28.6
	PCC	iPd	23 07 35.0
	BRK	iPc	23 07 35.1
	BKS	iPg	23 07 35.1
		iSg	23 07 43.1
		eSn	23 07 47.4
		i	23 08 05.1
	ZSP	iPc	23 07 36.1
	SAO	iPc	23 07 40.2
	CMB	iPd	23 07 44.0
		iS	23 07 59.1
	LLA	iPc	23 07 44.1
	PRS	iPd	23 07 46.5
	PRI	ePc	23 07 51.9
	FRI	iPd	23 07 52.8
	ORV	ePc	23 07 58.9
	MNA	e	23 08 14.0

BRK 23h07m23.9s 37.6N 121.7W
h=6km ML=3.3(4) Mo=2.0E21(2)
16 km SE of Livermore, CA

Dec 12	PRS	e(P)	01 17 04.9
	FRI	ePd	01 17 11.8
	CMB	eP	01 17 13.4
	WDC	ePd	01 17 16.2
	MIN	eP	01 17 17.6
	MNA	eP	01 17 21.5

USGS 01h04m47.1s 27.6S 176.2W
h=33km mb=5.0
Kermadec Islands Region

Dec 12	MNA	iPd	02 19 [illegible]
		iS	02 20 12.7
	FRI	iPc	02 [illegible] 59.9
		iS	02 20 13.8

International Seismological Centre

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REGISTRATION OF EARTHQUAKES 1986

DATE	STA	PHASE	TIME (UTC)
	CMB	iPd	02 20 09.1
		iS	02 20 30.1
	LLA	ePc	02 20 17.4
	PRI	eP	02 20 18.4
	SAO	ePc	02 20 22.3
	PRS	ePc	02 20 23.7
	MHC	ePd	02 20 24.1
	GCC	e	02 20 28.5
	PCC	e(P)	02 20 30.6
	ORV	iP	02 20 31.5
	BKS	iPn	02 20 31.5
		eP*	02 20 38.4
		ePg	02 20 44.4
		iS	02 21 08.1
	BRK	eP	02 20 32.0
	ZSP	eP	02 20 32.3
	MIN	e	02 20 43.7
BRK 02h19m40.6s 37.5N 118.5W			
h=2km ML=3.8(6)			
17 km NW of Bishop, CA			
Dec 12	FRI	eP	02 25 34.5
	CMB	eP	02 25 36.0
	WDC	ePc	02 25 38.2
	MNA	e	02 25 42.5
USGS 02h13m07.6s 26.7S 177.7W			
h=33km mb=4.9 Ms=4.5			
South of Fiji Islands			
Dec 12	PRS	e(P)	03 30 14.5
	FRI	eP	03 30 21.3
	CMB	eP	03 30 22.8
	ORV	e(P)	03 30 24.1
	WDC	ePc	03 30 24.8
	MIN	e(P)	03 30 26.3
	MNA	eP	03 30 30.9
USGS 03h17m55.9s 26.7S 177.7W			
h=33km mb=4.9 Ms=4.8			
South of Fiji Islands			
Dec 12	PRS	ePc	03 45 11.4
	MHC	e(P)	03 45 13.9
	FRI	ePc	03 45 18.3
	CMB	ePc	03 45 19.6
	ORV	eP	03 45 21.3
	WDC	iPc	03 45 21.8
	MIN	ePc	03 45 23.3
	MNA	ePc	03 45 27.9
USGS 03h32m51.6s 26.6S 177.8W			
h=33km mb=5.2 Ms=4.6			
South of Fiji Islands			
Dec 12	PRS	eP	04 40 44.8
		epP	04 41 03.4
	GCC	e(P)	04 40 44.9
		epP	04 41 03.3
	SAO	eP	04 40 45.4
		epP	04 41 03.6
	PRI	ePc	04 40 46.9
		epP	04 41 05.0
	LLA	eP	04 40 47.2
		epP	04 41 05.3
	MHC	e(P)	04 40 47.6
		epP	04 41 05.7
	FRI	ePc	04 40 51.7
		epP	04 41 10.0
	CMB	ePc	04 40 53.2
		epP	04 41 11.6
	WDC	iPc	04 40 55.3
		ipP	04 41 13.8
	MIN	ePc	04 40 56.9
		ipP	04 41 15.2

DATE	STA	PHASE	TIME (UTC)
	MNA	ePc	04 41 01.5
		ipP	04 41 19.7
	BRK	epP	04 41 05.4
	ORV	epP	04 41 13.0
USGS 04h28m29.7s 26.6S 177.9W			
h=68km mb=5.1			
South of Fiji Islands			
Dec 12	PRS	eP	07 11 12.4
	CMB	eP	07 11 19.3
	FRI	ePc	07 11 19.3
	WDC	ePc	07 11 21.5
	MIN	ePc	07 11 23.2
	MNA	ePc	07 11 27.6
USGS 06h58m51.3s 26.9S 177.7W			
h=33km mb=5.1 Ms=4.6			
South of Fiji Islands			
Dec 12	PRS	e(P)	10 42 11.2
	PRI	eP	10 42 14.2
	FRI	eP	10 42 17.0
	CMB	eP	10 42 18.5
	WDC	ePd	10 42 20.8
	MIN	eP	10 42 22.2
	MNA	ePd	10 42 26.6
USGS 10h29m50.7s 26.9S 177.7W			
h=33km mb=4.9 Ms=4.7			
South of Fiji Islands			
Dec 12	PCC	iPc	15 53 23.5
	GCC	ePc	15 53 23.6
	PRS	ePc	15 53 23.8
	SAO	eP	15 53 25.1
	BKS	eP	15 53 25.1
		AMP(μm)	PER(s)
	PZ	0.069	0.9
	BRK	eP	15 53 25.3
	MHC	ePc	15 53 26.0
	PRI	iPc	15 53 26.2
	LLA	ePc	15 53 26.2
	FHC	ePc	15 53 29.1
	FRI	ePc	15 53 31.4
	CMB	iPc	15 53 32.1
	WDC	iPc	15 53 32.6
	ORV	iPc	15 53 32.7
	MIN	eP	15 53 34.8
	MNA	iPc	15 53 41.3
USGS 15h42m32.7s 17.9S 178.6W			
h=587km mb=5.3			
Fiji Islands Region			
Dec 12	PRS	e(P)	16 03 06.3
	LLA	e	16 03 11.6
	FRI	eP	16 03 13.2
	CMB	e(P)	16 03 15.0
	ORV	eP	16 03 16.2
	WDC	ePc	16 03 16.8
	MNA	ePc	16 03 22.5
USGS 15h50m48.9s 26.4S 177.8W			
h=48km mb=4.9 Ms=5.4			
South of Fiji Islands			
Dec 13	ZSP	iPd	01 47 14.1
		iS	01 47 20.1
	BRK	ePd	01 47 15.3
		eS	01 47 22.6
	BKS	iPd	01 47 15.3
		e	01 47 22.1
		e(S)	01 47 22.8
	PCC	eP	01 47 21.9
		iS	01 47 33.4
	MHC	eP	01 47 24.8

DATE	STA	PHASE	TIME (UTC)
	ORV	e(P)	01 47 28.2
	GCC	eP	01 47 28.2
	CMB	eP	01 47 30.9
	SAO	eP	01 47 33.5
	LLA	eP	01 47 37.7
	PRS	eP	01 47 39.8
	MIN	e	01 47 41.5
	WDC	e	01 47 42.9
	FRI	ePc	01 47 44.7
BRK 01h47m06.5s 38.3N 122.2W			
h=7km ML=2.9(6) Mo=2.5E21(2)			
12 km E of Napa, 47 km NNE of Berkeley, CA			
Dec 13	MHC	e	08 01 38.6
	FRI	eP	08 01 42.4
	CMB	e	08 01 44.8
	WDC	eP	08 01 46.6
	MIN	ePc	08 01 47.9
USGS 07h49m17.4s 27.4S 176.6W			
h=33km mb=5.2			
Kermadec Islands Region			
Dec 13	MHC	iPc	10 20 22.0
	PCC	iPd	10 20 28.4
		iS	10 20 37.2
	BKS	iPc	10 20 28.6
		i	10 20 36.7
	BRK	ePc	10 20 28.7
	GCC	iPd	10 20 28.9
	ZSP	ePc	10 20 29.7
	SAO	iPc	10 20 33.4
	CMB	ePd	10 20 37.6
		eS	10 20 52.8
	LLA	ePc	10 20 37.7
	PRS	ePd	10 20 40.0
	PRI	ePd	10 20 45.3
	FRI	eP	10 20 46.0
		iS	10 21 07.7
	ORV	e(P)	10 20 50.3
	MIN	e	10 21 03.4
BRK 10h20m17.5s 37.6N 121.7W			
h=4km ML=3.1(6) Mo=9.8E20(2)			
16 km SE of Livermore, CA			
Dec 13	FRI	iPc	17 50 49.3
	CMB	iPnc	17 50 57.5
		iP*	17 51 04.8
	PRI	ePn	17 51 02.5
		iP*	17 51 11.4
	LLA	ePc	17 51 03.1
	SAO	iPd	17 51 08.9
	PRS	iPc	17 51 09.0
	MHC	iPnc	17 51 10.9
		iP*	17 51 20.9
		iS	17 52 19.4
	GCC	e(P)	17 51 13.7
	ORV	iPc	17 51 16.3
	BRK	ePc	17 51 17.4
	BKS	eP	17 51 17.4
		e	17 51 25.1
		e	17 51 28.6
		e	17 51 36.6
		e	17 51 45.2
	PCC	ePc	17 51 17.9
	ZSP	ePn	17 51 17.9
		iP*	17 51 28.6
		iPg	17 51 39.2
	MIN	iPc	17 51 23.3
	WDC	iPnc	17 51 33.2
		iPg	17 51 52.0
	FHC	e	17 51 49.2

DATE	STA	PHASE	TIME (UTC)
BRK 17h50m05.1s 37.3N 116.4W			
h=0kmR ML=5.4(6)			
Underground Nuclear Explosion, N.T.S.			
Dec 13	PRS	eP	18 14 41.7
	PRI	ePc	18 14 43.1
	MHC	eP	18 14 44.0
	LLA	e	18 14 44.3
	FRI	eP	18 14 48.0
	CMB	ePc	18 14 49.8
	ORV	eP	18 14 51.2
	WDC	ePc	18 14 52.0
	MIN	ePc	18 14 53.3
USGS 18h02m21.5s 26.7S 177.8W			
h=33km mb=5.6 Ms=5.1			
South of Fiji Islands			
Dec 13	GCC	e(P)	18 44 32.2
	BRK	eP	18 44 33.2
	PRS	ePc	18 44 33.2
	BKS	eP	18 44 33.7
		e	18 44 39.1
		AMP(μm)	PER(s)
	PZ	0.14	1.2
	SAO	ePc	18 44 34.2
	MHC	eP	18 44 34.5
	LLA	ePc	18 44 35.3
	PRI	ePc	18 44 35.7
	WDC	iPc	18 44 38.1
		i	18 44 46.7
	ORV	iPc	18 44 39.0
	CMB	iPc	18 44 39.9
		e	18 44 48.5
	FRI	ePc	18 44 40.0
		e	18 44 48.8
	MIN	eP	18 44 40.1
USGS 18h31m52.5s 18.0S 167.7E			
h=17km mb=5.5 Ms=5.6			
Vanuatu Islands			
Dec 14	FHC	eP	00 22 37.6
	WDC	iPc	00 22 40.8
	MIN	ePc	00 22 46.2
	ORV	iPc	00 22 49.0
	BRK	iPc	00 22 51.5
	BKS	ePc	00 22 51.8
		AMP(μm)	PER(s)
	PZ	0.11	0.8
	PCC	eP	00 22 51.9
	GCC	ePc	00 22 54.8
	MHC	ePc	00 22 55.5
	SAO	ePc	00 22 57.4
	CMB	iPc	00 22 58.0
	PRS	ePc	00 22 59.3
	LLA	ePc	00 23 00.1
	PRI	ePc	00 23 02.9
	FRI	ePc	00 23 03.0
USGS 00h11m31.3s 32.7N 137.7E			
h=351km mb=5.1			
South of Honshu, Japan			
Dec 14	GCC	eP	07 53 26.3
	PRS	ePc	07 53 26.6
	PCC	eP	07 53 26.7
	SAO	eP	07 53 27.3
	BKS	ePd	07 53 28.2
		AMP(μm)	PER(s)
	PZ	0.081	0.8
	BRK	eP	07 53 28.4
	PRI	ePc	07 53 28.7
	LLA	ePc	07 53 29.0

DATE	STA	PHASE	TIME (UTC)
	MHC	ePc	07 53 29.1
	FRI	ePc	07 53 34.2
	CMB	ePc	07 53 35.3
	ORV	eP	07 53 36.5
	WDC	iPc	07 53 37.0
	MIN	ePc	07 53 38.5
USGS 07h42m17.9s 18.0S 175.0W			
h=264km mb=5.0			
Tonga Islands			
Dec 14	ZSP	ePc	23 00 39.1
	BRK	iPd	23 00 40.2
		iS	23 00 55.8
	BKS	iPd	23 00 40.6
		e	23 00 42.3
		e	23 00 44.6
		e	23 00 49.8
		eS	23 00 53.5
	ORV	iPc	23 00 40.9
	PCC	ePc	23 00 44.9
	MHC	e(P)	23 00 49.8
	MIN	iPd	23 00 50.7
	WDC	iPc	23 00 51.0
	CMB	ePd	23 00 53.0
	GCC	e(P)	23 00 53.2
	SAO	e	23 00 58.6
	LLA	e(P)	23 01 02.0
	FHC	ePd	23 01 09.3
BRK 23h00m23.5s 38.8N 122.4W			
h=15km ML=3.3(6) Mo=1.2E22(2)			
19 km SE of Clear Lake, CA			
Dec 14	PRS	ePc	23 47 23.7
	GCC	ePc	23 47 23.8
	PRI	ePc	23 47 25.5
	MHC	ePc	23 47 26.1
	FRI	ePc	23 47 30.6
	WDC	ePc	23 47 34.0
	MIN	e(P)	23 47 36.4
	ORV	eP	23 47 36.8
USGS 23h35m08.3s 26.8S 176.4W			
h=33km mb=5.3			
South of Fiji Islands			
Dec 15	GCC	ePc	20 42 12.3
	PCC	iPc	20 42 12.4
	PRS	ePc	20 42 12.9
	SAO	ePc	20 42 13.2
	BRK	eP	20 42 14.0
	BKS	eP	20 42 14.3
		AMP(μm)	PER(s)
	PZ	0.075	0.8
	MHC	ePc	20 42 14.9
	PRI	ePc	20 42 15.2
	LLA	iPc	20 42 15.2
	FHC	e(P)	20 42 18.0
	FRI	iPc	20 42 20.6
	CMB	iPc	20 42 21.3
	WDC	iPc	20 42 21.7
	ORV	ePc	20 42 21.8
	MIN	ePc	20 42 23.8
USGS 20h31m20.5s 15.8S 177.6W			
h=438km mb=5.1			
Fiji Islands Region			
Dec 16	PRS	eP	04 14 56.5
	PRI	e(P)	04 14 58.5
	FRI	eP	04 15 03.4
	CMB	iPd	04 15 04.5
	WDC	iPd	04 15 06.0
	MIN	ePd	04 15 07.6
USGS 04h03m23.3s 25.1S 179.9E			

DATE	STA	PHASE	TIME (UTC)
	h=480km mb=4.9		
South of Fiji Islands			
Dec 16	PRS	eP	08 31 10.5
	ORV	eP	08 31 16.6
	CMB	eP	08 31 17.3
		e	08 31 34.9
	WDC	eP	08 31 17.5
USGS 08h18m27.8s 18.0S 167.7E			
h=10km mb=5.2 Ms=5.1			
Vanuatu Islands			
Dec 16	WDC	eP	10 34 41.3
	MIN	e(P)	10 34 45.1
	CMB	eP	10 35 02.5
	FRI	eP	10 35 07.3
USGS 10h27m21.6s 51.6N 175.4W			
h=33km mb=5.1 Ms=4.4			
Andreanof Islands, Aleutian Islands			
Dec 16	FHC	iPd	17 48 53.7
	ARC	iP	17 48 53.9
		iS	17 49 01.7
	WDC	iPd	17 49 06.5
	MIN	ePc	17 49 15.8
		eS	17 49 43.7
	ORV	ePc	17 49 19.3
BRK 17h48m42.9s 40.4N 124.4W			
h=17km ML=3.1(4) Mo=9.4E20(2)			
Cape Mendocino area, 52 km SW of Eureka, CA			
Dec 17	BKS	eP	20 57 09.8
		AMP(μm)	PER(s)
	PZ	0.033	0.6
	ORV	eP	20 57 19.2
	BRK	eP	20 57 23.9
	CMB	eP	20 57 24.7
	MHC	e(P)	20 57 25.2
Dec 18	WDC	iPc	03 54 09.2
		epP	03 54 25.9
		eScP	03 59 50.4
	MIN	ePc	03 54 14.4
		epP	03 54 31.3
	ORV	ePc	03 54 18.6
		epP	03 54 35.3
	BRK	ePc	03 54 23.3
		epP	03 54 40.0
	BKS	ePc	03 54 23.8
		e	03 54 40.5
		AMP(μm)	PER(s)
	PZ	0.21	0.8
	PCC	ePc	03 54 24.1
	GCC	ePc	03 54 28.7
		epP	03 54 45.4
	MHC	ePc	03 54 29.3
	CMB	iPc	03 54 32.3
		epP	03 54 49.0
		eScP	04 00 02.0
	SAO	eP	03 54 32.6
	PRS	ePc	03 54 35.7
		epP	03 54 52.4
	LLA	ePc	03 54 36.5
		epP	03 54 53.4
	PRI	ePc	03 54 [illegible]
		e	03 55 33.0
		eScP	04 00 07.0
	FRI	iPc	03 54 40.5
		eScP	04 00 06.1
USGS 03h46m30.7s 51.7N 179.0E			
h=67km mb=5.[illegible]			

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DATE	STA	PHASE	TIME (UTC)
Rat Islands, Aleutian Islands			
Dec 18	PRS	eP	04 08 46.8
	PRI	eP	04 08 49.2
	WDC	eP	04 08 52.6
	CMB	eP	04 08 53.4
	FRI	eP	04 08 53.6
Vanuatu Islands Region			
Dec 18	CMB	iPc	18 40 43.9
		iS	18 40 56.0
	FRI	iPc	18 40 53.3
		iS	18 41 12.1
	ORV	ePc	18 41 02.9
	MHC	ePc	18 41 04.9
	BRK	e	18 41 05.3
	LLA	ePd	18 41 05.9
	SAO	e(P)	18 41 08.5
	PRI	e	18 41 12.0
BRK 18h40m27.4s 38.4N 119.3W			
h=10km ML=3.0(4)			
18 km NW of Bridgeport, CA			
Dec 19	WDC	iPd	13 57 32.1
		ePP	13 59 42.9
	MIN	eP	13 57 38.3
	ORV	eP	13 57 41.4
	BRK	eP	13 57 45.9
	BKS	eP	13 57 46.9
		AMP(μm)	PER(s)
		PZ 0.030	0.4
	MHC	eP	13 57 52.5
	CMB	ePd	13 57 54.7
		ePP	13 59 52.3
	SAO	eP	13 57 55.6
	PRS	eP	13 57 58.9
	LLA	ePd	13 58 00.0
	FRI	eP	13 58 03.6
		ePP	13 59 55.7
	PRI	ePd	13 58 04.1
USGS 13h50m10.3s 51.5N 177.0W			
h=33km mb=5.3			
Andreanof Islands, Aleutian Islands			
Dec 20	MHC	iPd	02 19 45.4
	PCC	iPc	02 19 50.5
	GCC	iPd	02 19 50.5
	BRK	iPd	02 19 52.3
	BKS	iPd	02 19 52.4
		iS	02 20 01.0
	ZSP	iPd	02 19 53.4
		iS	02 20 02.7
	SAO	iPd	02 19 56.1
	LLA	iPc	02 20 01.0
	PRS	iPc	02 20 02.4
	CMB	iPc	02 20 04.3
	PRI	iPc	02 20 09.0
	FRI	iPc	02 20 10.6
	ORV	e	02 20 15.3
	MIN	i	02 20 28.8
	WDC	e	02 20 29.2
	MNA	e	02 20 45.5
BRK 02h19m41.8s 37.5N 121.8W			
h=6km ML=3.6(4) Mo=6.9E21(2)			
Calaveras Reservoir, 15 km NE of San Jose, CA			
Dec 20	FRI	eP	05 14 47.2
	PRI	eP	05 14 50.3
	LLA	eP	05 14 52.2
	PRS	eP	05 14 53.2
	CMB	ePc	05 14 55.8
	MHC	e	05 14 58.9
	GCC	e(P)	05 15 01.9
	ORV	ePc	05 15 07.0
		e	05 15 17.8
	MIN	eP	05 15 09.0
	WDC	eP	05 15 12.7
		e	05 15 23.6
USGS 05h04m38.7s 7.7S 75.5W			
h=36km mb=5.4 Ms=4.3			
Northern Peru			
Dec 20	FRI	eP	08 08 56.0
		i	08 09 02.3
	PRI	e	08 09 01.8
	PRS	e	08 09 06.6
	CMB	e	08 09 09.8
	ORV	e	08 09 34.7
	MIN	e	08 09 36.5
	WDC	e	08 09 47.2
	FHC	e	08 09 57.8
Dec 20	PRS	eP	08 11 18.7
		e	08 11 38.2
	SAO	e(P)	08 11 19.2
		e	08 11 38.1
	GCC	ePc	08 11 19.2
		e	08 11 39.4
	PRI	e(P)	08 11 19.8
		e	08 11 41.5
	BRK	e(P)	08 11 21.7
		e	08 11 41.7
	MHC	e(P)	08 11 22.9
		e	08 11 41.7
	FRI	ePc	08 11 26.1
		e	08 11 45.7
	CMB	eP	08 11 28.4
		e	08 11 47.6
	ORV	eP	08 11 29.3
		e	08 11 49.3
	WDC	ePc	08 11 30.5
		i	08 11 50.3
	MIN	ePc	08 11 32.8
		e	08 11 51.4
USGS 07h59m01.5s 28.2S 176.7W			
h=33km mb=5.4 Ms=5.5			
Kermadec Islands Region			
Dec 20	PRS	eP	08 33 44.8
	SAO	eP	08 33 45.0
	GCC	eP	08 33 45.3
	PRI	eP	08 33 46.7
	LLA	e	08 33 46.9
	BRK	eP	08 33 47.5
	MHC	eP	08 33 47.7
	BKS	ePc	08 33 48.2
		eS	08 44 08
		e	08 45 44
		eLq	08 55 24
		eLr	08 59 56
		AMP(μm)	PER(s)
		PZ 0.057	1.0
		LZ 18	20.
		LN 13	20.
		LE 7.9	20.
	FRI	eP	08 33 51.5
	CMB	ePd	08 33 52.8
	WDC	ePd	08 33 53.2
	ORV	ePd	08 33 55.1
	MIN	eP	08 33 57.1
BRK Ms=6.4 Distance=85°			
USGS 08h21m23.3s 28.2S 176.9W			
h=44km mb=5.5 Ms=5.9			
Kermadec Islands Region			
Dec 20	FHC	iPd	19 45 45.0
		iS	19 45 53.7
	ARC	iP	19 45 45.1
		iS	19 45 53.7
	WDC	iPc	19 45 57.8
		i	19 46 03.6
		iS	19 46 16.8
	MIN	iPc	19 46 07.8
	ORV	iPc	19 46 11.7
	BRK	eP	19 46 19.8
	BKS	eP	19 46 20.4
	PCC	e	19 46 23.0
	MHC	e	19 46 30.2
	GCC	iPc	19 46 31.9
	CMB	eP	19 46 34.2
	SAO	eP	19 46 36.7
	FRI	eP	19 46 49.4
BRK 19h45m32.9s 40.4N 124.6W			
h=13km ML=3.7(6) Mo=8.7E21(2)			
Cape Mendocino area, 59 km SW of Eureka, CA			
Dec 20	MHC	eP	21 39 27.7
	FRI	eP	21 39 29.2
	CMB	eP	21 39 31.3
	ORV	eP	21 39 33.0
	WDC	eP	21 39 33.5
	BKS	eLr	22 10 16
		AMP(μm)	PER(s)
		LZ 4.3	20.
		LN 3.9	20.
		LE 2.3	20.
USGS 21h27m01.4s 28.2S 176.6W			
h=33km mb=5.3 Ms=5.5			
Kermadec Islands Region			
Dec 21	PRS	eP	01 23 15.0
	GCC	eP	01 23 15.3
	SAO	eP	01 23 16.8
	PCC	eP	01 23 17.7
	MHC	eP	01 23 17.7
	PRI	eP	01 23 18.8
	FHC	eP	01 23 19.1
	LLA	eP	01 23 19.2
	BRK	eP	01 23 19.6
	BKS	eP	01 23 19.6
		iS	01 33 40
		iSS	01 39 20
		eSSS	01 42 20
		eLq	01 44 48
		eLr	01 48 56
		AMP(μm)	PER(s)
		PZ 0.13	1.0
		LE 43	20.
		LZ 39	20.
		LNE 49	20.
		LNW 6.0	20.
	FRI	eP	01 23 21.2
	CMB	iPc	01 23 23.4
	WDC	ePc	01 23 25.0
	ORV	eP	01 23 26.0
	MIN	eP	01 23 27.0
BRK Ms=6.4 Distance=82°			
USGS 01h10m51.2s 28.1S 176.7W			
h=17km mb=6.1 Ms=6.6			
Kermadec Islands Region			
Dec 22	PRS	eP	23 20 19.4
	LLA	eP	23 20 21.4
	PRI	eP	23 20 21.5
	MHC	eP	23 20 21.7
	FRI	eP	23 20 26.2
	CMB	ePd	23 20 27.3
	ORV	eP	23 20 28.2
	WDC	eP	23 20 28.2
USGS 23h09m03.6s 22.6S 179.2E			
h=598km mb=5.3			
South of Fiji Islands			
Dec 25	ARC	iP	02 25 27.6
		iS	02 25 36.1
	FHC	iPc	02 25 27.7
		iS	02 25 37.2
	WDC	iPc	02 25 40.5
	MIN	iPd	02 25 50.3
	ORV	eP	02 25 53.5
	PCC	eP	02 26 03.6
	MHC	eP	02 26 10.9
	GCC	eP	02 26 11.1
	SAO	iPc	02 26 17.2
BRK 02h25m15.7s 40.3N 124.6W			
h=22km ML=3.4(4) Mo=1.2E21(2)			
Cape Mendocino area, 62 km SW of Eureka, CA			
Dec 25	BRK	iPc	13 28 33.6
		iS	13 28 37.7
	PCC	iPc	13 28 33.8
		iS	13 28 37.9
	BKS	iPc	13 28 34.2
		iS	13 28 38.6
	ZSP	iPc	13 28 34.8
		iS	13 28 40.2
	GCC	eP	13 28 43.5
	MHC	iPc	13 28 44.0
		iS	13 28 56.2
	SAO	iPd	13 28 50.2
	CMB	eP	13 28 57.2
BRK 13h28m28.1s 37.7N 122.6W			
h=9km ML=2.7(4) Mo=3.6E20(2)			
Off Coast 5 km W of San Francisco, CA			
Dec 26	PCC	eP	07 15 15.2
	PRS	eP	07 15 15.4
	GCC	ePc	07 15 15.50
	SAO	eP	07 15 15.7
	BRK	eP	07 15 16.7
	PRI	eP	07 15 17.0
	LLA	eP	07 15 17.0
	BKS	ePc	07 15 17.2
		AMP(μm)	PER(s)
		PZ 0.062	0.9
	MHC	ePc	07 15 17.3
	FRI	ePc	07 15 21.7
	CMB	iPc	07 15 23.1
	ORV	ePc	07 15 24.3
	WDC	iPc	07 15 24.3
	MIN	eP	07 15 26.0
USGS 07h03m47.5s 24.4S 179.8E			
h=514km mb=4.9			
South of Fiji Islands			
Dec 26	FRI	iPd	09 56 49.0
	CMB	iPc	09 56 57.1
		iS	09 57 19.6
	PRS	eP	09 57 12.8
	GCC	eP	09 57 15.8
	PCC	ePd	09 57 18.3
	BKS	ePc	09 57 18.5
	BRK	eP	09 57 18.6
	ZSP	eP	09 57 18.6
	ORV	eP	09 57 18.8
BRK 09h56m27.6s 37.6N 118.4W			
h=4km ML=4.0(6)			
Chalfant Valley, 23 km NNW of Bishop, CA			
Dec 27	PRI	eP	02 40 49.0
	LLA	eP	02 40 51.3
		epP	02 41 03.2
	PRS	eP	02 40 51.8
	CMB	eP	02 40 54.8
	MHC	eP	02 40 56.9
		epP	02 41 08.6
	ORV	eP	02 41 02.1
		epP	02 41 15.8
	GCC	e	02 41 08.0
	WDC	eP	02 41 08.5
		epP	02 41 20.8
USGS 02h29m00.6s 23.8S 70.1W			
h=41km mb=5.2 Ms=5.6			
Near Coast of Northern Chile			
Dec 27	WDC	ePd	18 30 22.7
	MIN	eP	18 30 26.1
	ORV	eP	18 30 28.0
	BKS	eP	18 30 28.7
	MHC	eP	18 30 31.7
	PRS	eP	18 30 34.1
	CMB	ePd	18 30 34.9
	LLA	eP	18 30 35.4
	PRI	eP	18 30 36.4
	FRI	eP	18 30 39.1
USGS 18h19m00.4s 19.9N 144.3E			
h=438km mb=5.1			
Mariana Islands			
Dec 28	FRI	eP	20 47 23.3
	PRI	ePd	20 47 25.4
	LLA	eP	20 47 27.3
	PRS	eP	20 47 27.8
	CMB	ePd	20 47 30.2
	GCC	eP	20 47 32.2
	MHC	eP	20 47 32.5
	BKS	eP	20 47 36.1
		AMP(μm)	PER(s)
		PZ 0.043	1.0
		LZ 6.6	20.
		LN 3.9	20.
		LE 4.9	20.
	ORV	ePd	20 47 39.2
	WDC	eP	20 47 44.0
USGS 20h35m44.4s 24.0S 66.7W			
h=208km mb=5.1			
Juyjuy Province, Argentina			
Dec 29	FRI	eP	13 04 29.2
	PRI	eP	13 04 31.0
	LLA	eP	13 04 33.2
	PRS	eP	13 04 33.6
	SAO	eP	13 04 34.6
	CMB	eP	13 04 36.2
	MHC	eP	13 04 37.8
	BKS	eP	13 04 40.7
		AMP(μm)	PER(s)
		PZ 0.039	1.0
	ORV	eP	13 04 43.8
USGS 12h53m01.4s 28.2S 63.1W			
h=596km mb=5.2			
Santiago Del Estero Province, Argentina			
Dec 29	BKS	iPc	15 28 15.5
	ZSP	iPc	15 28 16.8
		iS	15 28 28.1
	CMB	iPc	15 28 27.4
		iS	15 28 43.6
	FRI	eP	15 28 33.7
	MIN	iPc	15 28 50.8
	WDC	iPc	15 28 52.9
BRK 15h28m04.9s 37.5N 121.8W			
h=6km ML=4.0(3)			
Calaveras Reservoir, 16 km NE of San Jose, CA			
Dec 29	WDC	eP	16 03 40.0
	CMB	eP	16 03 53.3
USGS 15h49m59.2s 15.2N 119.9E			
h=53km mb=6.0			
Luzon, Philippine Islands			
Dec 29	WDC	eP	19 54 23.6
	ORV	ePc	19 54 30.4
	BKS	eP	19 54 33.7
		AMP(μm)	PER(s)
		PZ 0.043	.8
	CMB	iPc	19 54 39.7
	PRS	eP	19 54 41.2
	LLA	eP	19 54 41.9
	FRI	eP	19 54 44.7
	PRI	e	19 54 46.8
USGS 19h43m14.7s 34.6N 136.9E			
h=338km mb=4.6			
Southern Honshu, Japan			
Dec 30	WDC	eP	00 50 05.4
	MIN	eP	00 50 11.7
	ORV	eP	00 50 12.1
	BKS	e(P)	00 50 20.4
		AMP(μm)	PER(s)
		PZ 0.15	1.4
	CMB	eP	00 50 21.1
	GCC	e(P)	00 50 22.8
	PRS	eP	00 50 23.8
	MHC	e(P)	00 50 23.9
	LLA	eP	00 50 24.5
	FRI	eP	00 50 27.4
	PRI	eP	00 50 28.8
USGS 00h38m30.4s 36.7N 137.9E			
h=10km mb=5.5 Ms=5.3			
Honshu, Japan			
Dec 30	GCC	eP	06 24 02.5
	PCC	eP	06 24 02.6
	PRS	eP	06 24 02.8
	BKS	ePd	06 24 04.6
		AMP(μm)	PER(s)
		PZ 0.063	0.8
	BRK	eP	06 24 04.7
	PRI	eP	06 24 05.0
	LLA	eP	06 24 05.0
	MHC	eP	06 24 05.2
	FRI	ePd	06 24 10.1
	CMB	iPd	06 24 11.0
	ORV	eP	06 24 11.8
	WDC	iPd	06 24 12.0
	MIN	eP	06 24 13.9
USGS 06h13m08.1s 19.0S 177.8W			
h=563km mb=5.1			
Fiji Islands Region			
Dec 30	ARC	eP	06 29 15.8
		i	06 29 19.9
		iS	06 29 23.4
	FHC	iPd	06 29 16.0

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DATE	STA	PHASE	TIME (UTC)
		i	06 29 19.1
		iS	06 29 22.3
		i	06 29 25.6
	WDC	iPc	06 29 28.3
		i	06 29 35.1
		i	06 29 39.5
		iS	06 29 45.2
	MIN	iPc	06 29 38.0
		i	06 30 04.3
	ORV	iPd	06 29 41.7
	PCC	eP	06 29 53.9
	MHC	e	06 30 01.4
	GCC	e	06 30 01.7
		i	06 30 03.2
	PRS	e	06 30 14.9
	FRI	e	06 30 19.9

BRK 06h29m06.6s 40.4N 124.3W
h=18km ML=3.2(4) Mo=1.4E21(1)
Cape Mendocino area, 46 km SSW of Eureka, CA

Dec 30	PRS	ePc	15 43 56.4
	GCC	ePc	15 43 56.7
	PCC	eP	15 43 56.8
	PRI	iPc	15 43 58.6
	BRK	eP	15 43 58.7
	BKS	eP	15 43 59.0
			AMP(μm) PER(s)
		PZ	0.14 1.3
	LLA	eP	15 43 59.0
	MHC	ePc	15 43 59.3
	FRI	iPc	15 44 04.2
	CMB	iPc	15 44 05.7
	ORV	iPc	15 44 07.0
	WDC	ePc	15 44 07.5
	MIN	ePc	15 44 09.0

USGS 15h32m13.6s 20.4S 174.1W
h=23km mb=6.1 Ms=5.8
Tonga Islands

Dec 31	FHC	eP	12 17 59.1
	WDC	eP	12 18 12.0
	MIN	eP	12 18 24.6
	ORV	eP	12 18 31.5
		i	12 18 38.2
	PCC	e	12 18 40.6
	BRK	e	12 18 41.4
	BKS	ePd	12 18 42.4
			AMP(μm) PER(s)
		PZ	0.044 .7
	MHC	eP	12 18 52.5
	GCC	eP	12 18 53.4
	CMB	iPd	12 18 56.1
	SAO	e	12 19 00.2
	PRS	e	12 19 04.1
	LLA	e	12 19 04.4
	FRI	iPd	12 19 11.9
	PRI	e	12 19 12.0

USGS 12h17m00.1s 43.6N 127.4W
h=10km mb=4.9 Ms=4.4
Off Coast of Oregon

Dec 31	ARC	eP	14 27 09.0
		iS	14 27 18.0
	FHC	ePc	14 27 09.1
		iS	14 27 19.6
	WDC	iPc	14 27 22.6
	MIN	eP	14 27 32.4
	ORV	eP	14 27 41.8

BRK 14h26m56.0s 40.4N 124.7W
h=11km ML=3.1(4) Mo=5.8E20(2)
Cape Mendocino area, 63 km SW of Eureka, CA

Dec 31	MHC	iPc	17 05 52.5
	GCC	iPd	17 05 59.6
	BRK	ePc	17 06 02.4
	BKS	iPc	17 06 02.5
		eS	17 06 14.1
	ZSP	iPd	17 06 03.7
		iS	17 06 20.9
	SAO	iPd	17 06 04.0
	LLA	ePd	17 06 06.5
	PRS	ePc	17 06 10.7
	CMB	iPd	17 06 11.8
	FRI	eP	17 06 18.0
	PRI	e	17 06 19.1
	ORV	eP	17 06 27.2

BRK 12h05m50.5s 37.4N 121.7W
h=5km ML=3.0(4) Mo=3.5E20(1)
Mt. Lewis area, 21 km NE of San Jose, CA

Dec 31	ZSP	eP	18 34 05.8
		iS	18 34 21.4
	BKS	ePc	18 34 07.5
		eS	18 34 22.9
	BRK	ePc	18 34 07.9
	ORV	iPd	18 34 11.7
	MHC	eP	18 34 18.1
	MIN	eP	18 34 19.2
	GCC	eP	18 34 20.0
	WDC	eP	18 34 23.0
	CMB	iPc	18 34 23.1
	SAO	e	18 34 25.5
	LLA	eP	18 34 30.5
	PRS	eP	18 34 30.6
	FHC	e	18 34 32.8
	FRI	e	18 34 37.0

BRK 19h33m48.6s 38.8N 122.8W
h=5km ML=3.1(5) Mo=4.6E21(2)
The Geysers, 23 km S of Clear Lake, CA

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APPENDIX A - THE 1986 CHALFANT VALLEY EARTHQUAKE SEQUENCE

Commencing with an event on July 18 (M_L=3.9) through the end of the year, a sequence of at least 126 earthquakes ($3.5 \leq M_L \leq 6.4$) occurred in the general vicinity of Bishop (Q11 on maps). The majority of the events had epicenters along the Chalfant Valley north of Bishop. The first strong earthquake (M_L=5.9) occurred on July 20 at 14:29 UTC. It was followed on July 21 at 14:42 UTC by the largest earthquake in the sequence (M_L=6.4). Two other strong earthquakes followed on the same day at 14:51 UTC (M_L=5.7) and 22:07 UTC (M_L=5.6). Within the coda (14:42 - 14:55 UTC) there are at least seven events ($M_L \approx 3.5$ and larger) for which insufficient data could be read to determine location and magnitude. The final strong earthquake in the sequence (M_L=5.8) occurred on July 31 at 07:22 UTC.

The region is bounded by permanent station networks operated by the University of California at Berkeley (UCB), the University of Nevada at Reno (UNR), the California Institute of Technology (CIT), the California Division of Mines and Geology (CDMG) and the United States Geological Survey (USGS). Phase readings from these sources were combined, as available, in determining the listed hypocenters for the events.

Four events (see Table A1) spanning the region were choosen as master events to develop station adjustments for consistantly locating the events in the sequence. Phase onset times from eight stations surrounding the region (see Table A2) and the velocity model developed for the Sierra region (see Appendix B, Vol. 48) were used to locate these master events. The resulting locations and origin times of the master events were adopted and station adjustments (see region s, Table on page 15) were determined for all stations used in locating the earthquakes in the sequence.

All earthquakes in the sequence were then located using the Sierra model and the new station adjustments. The standard error of the residuals averaged about 0.09 sec for the 126 events and the precision of the hypocenter locations is about 1 km.

TABLE A1 - Adopted Hypocenters for Master Events

Event No.	Date	Origin Time (UTC)	Latitude N	Longitude W	Depth (km)	M_L	σ (sec)
1	July 24	19:03:25.92	37° 25.95'	118° 22.27'	7.16	4.3	0.138
2	July 25	10:11:04.46	37° 34.88'	118° 29.14'	8.02	3.6	0.130
3	July 27	03:49:40.54	37° 22.24'	118° 17.50'	4.61	4.2	0.100
4	August 20	03:49:46.17	37° 14.24'	118° 11.44'	8.28	3.3	0.110

Table A2 - Stations Used in Locating Master Events

Station	Latitude N	Longitude W	Network	Distance Range (km)	Azimuth Range (Deg)
BCK	37° 41.85'	118° 22.32'	UNR	16 - 54	343 - 038
BEN	37° 42.93'	118° 34.40'	UNR	17 - 63	327 - 333
CAS	37° 34.49'	118° 33.09'	UNR	6 - 49	263 - 320
LCH	37° 14.08'	117° 38.83'	USGS	48 - 84	090 - 117
PPK	37° 25.58'	117° 54.43'	USGS	33 - 54	050 - 109
SCH	37° 21.95'	118° 41.22'	UNR	30 - 46	217 - 288
SVP	37° 42.90'	117° 48.05'	USGS	57 - 63	033 - 076
WMD	37° 26.61'	118° 38.22'	UNR	20 - 46	221 - 300

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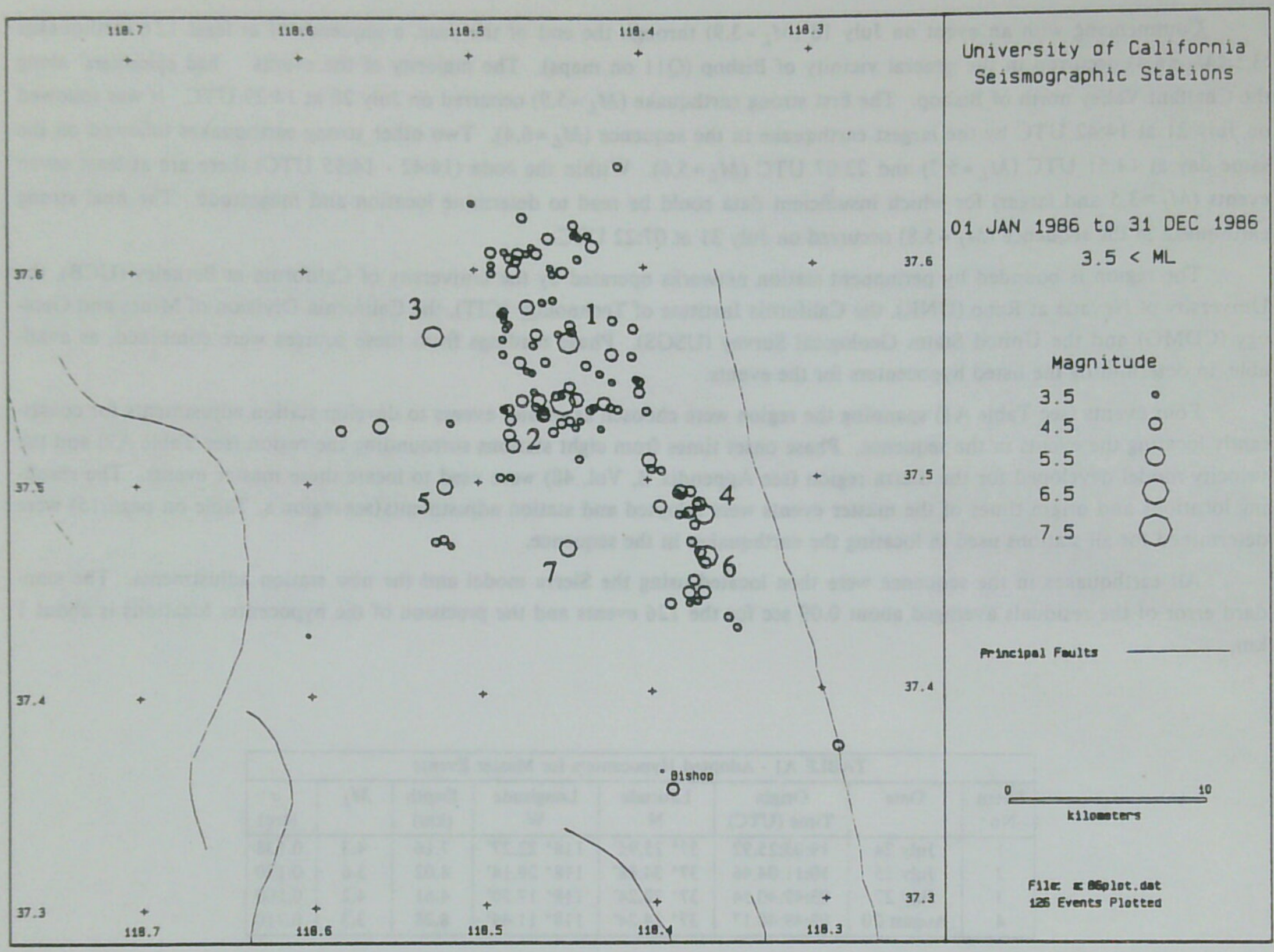


Figure A1. All earthquakes, $M_L \geq 3.5$, occurring in the Chalfant Valley and Bishop region during 1986. Earthquakes of $M_L \geq 5.0$ are numbered chronologically. The first event ($M_L = 3.9$) occurred on July 18 at 16:00 UTC, and was followed by an $M_L = 5.9$ earthquake in almost the same location at 14:29 UTC on July 20 (1). Fourteen smaller events followed in the same region (37.5°-37.6° N x 118.4°-118.5° W) prior to the main shock ($M_L = 6.4$) at 14:42 UTC on July 21 (2). The last earthquake of $M_L \geq 5$ occurred on August 1 at 14:28 UTC (7).

(1)	7/18	16:00 UTC	37.57°N	118.44°W	h=4 km	M_L=3.9	
	7/20	14:29 UTC	37.57°N	118.45°W	h=6 km	M_L=5.9	
(2)	7/21	14:42 UTC	37.54°N	118.45°W	h=9 km	M_L=6.4	Main Shock
(3)	7/21	14:51 UTC	37.57°N	118.53°W	h=1 km	M_L=5.7	
(4)	7/21	22:07 UTC	37.48°N	118.37°W	h=6 km	M_L=5.6	
(5)	7/22	13:49 UTC	37.50°N	118.52°W	h=19km	M_L=5.0	
(6)	7/31	07:22 UTC	37.46°N	118.37°W	h=7 km	M_L=5.8	
(7)	8/01	14:28 UTC	37.47°N	118.45°W	h=14km	M_L=5.1	

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APPENDIX B - MODIFIED MERCALLI INTENSITY SCALE (1956 VERSION)*

I. Not felt. Marginal and long-period effects of large earthquakes.

II. Felt by persons at rest, on upper floors, or favorably located.

III. Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.

IV. Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV, wooden walls and frames creak.

V. Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.

VI. Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knicknacks, books, etc. off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D† cracked. Small bells ring (church, school). Trees, bushes shaken visibly, or heard to rustle.

VII. Difficult to stand. Noticed by drivers. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stone, tiles, cornices also unbraced parapets and architectural ornaments. Some cracks in masonry C. Waves on ponds, water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.

VIII. Steering of cars affected Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground ad on steep slopes.

IX. General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. General damage to foundations. Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluviated areas sand and mud ejected, earthquake fountains, sand craters.

X. Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.

XI. Rails bent greatly. Underground pipelines completely out of service.

XII. Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

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* 1956 version prepared by Charles F. Richter, in *Elementary Seismology* , 1958, pp. 137-138. W. H. Freeman and Company.

† Masonry A, B, C, D. To avoid ambiguity of language, the quality of masonry, brick or otherwise, is specified by the following lettering.

Masonry A. Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces.

Masonry B. Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.

Masonry C. Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.

Masonry D. Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.