



HAWAIIAN VOLCANO OBSERVATORY 1981 Annual Administrative Report

INTRODUCTORY NOTE BY THOMAS L. WRIGHT AND JENNIFER S. NAKATA

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SUMMARY 81, PART 1

SEISMIC DATA, JANUARY TO DECEMBER 1981

BY JENNIFER S. NAKATA, WILFRED R. TANIGAWA, AND FRED W. KLEIN

CHRONOLOGICAL SUMMARY

BY ROBERT W. DECKER

OPEN-FILE REPORT 2007-1341

U.S. DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

U.S. Department of the Interior
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U.S. Geological Survey, Reston, Virginia 2007

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INTRODUCTORY NOTE

The Hawaiian Volcano Observatory Summaries have been published in the current format since 1956. The Quarterly Summaries (1956 through 1973) and the Annual Summaries (1974 through 1985) were originally published as Administrative Reports. These reports have been compiled and published as U.S. Geological Survey Open-File Reports. The quarterly reports have been combined and published as one annual summary. All the summaries from 1956 to the present are now available as .pdf files at <http://www.usgs.gov/pubprod>.

The earthquake summary data are presented as a listing of origin time, depth, magnitude, and other location parameters. Network instrumentation, field station sites, and location algorithms are described. Tilt and other deformation data are included until Summary 77, January to December 1977. From 1978, the seismic and deformation data are published separately, due to differing schedules of data reduction.

There are eight quarters—from the fourth quarter of 1959 to the third quarter of 1961—that were never published. Two of these (4th quarter 1959, 1st quarter 1960) have now been published, using handwritten notes of Jerry Eaton (HVO seismologist at the time) and his colleagues. The seismic records for the remaining six summaries went back to California in 1961 with Jerry Eaton. Other responsibilities intervened, and the seismic summaries were never prepared.

Chronology

The following Kīlauea eruption chronology covers the two recent reports and the six missing quarters:

Location	Beginning Date	Ending Date	Comment
Kīlauea Iki crater (Kīlauea's summit)	11/14/1959	12/20/1959	19 eruptive episodes
Kapoho (lower east rift zone)	1/13/1960	2/18/1960	4 eruption stages
Halemaumau (Kīlauea's summit)	2/24/1961	2/24/1961	Intermittent activity during uninterrupted inflation following the 1960 eruption
Halemaumau (Kīlauea's summit)	3/22/1961	3/25/1961	Same as above.
Halemaumau (Kīlauea's summit)	7/10/1961	7/17/1961	Same as above.
Heiheiāhulu (middle east rift zone)	9/22/1961	9/25/1961	First historical east rift eruption at this location

The 1959-1960 eruptions were among two of the most spectacular Kīlauea eruptions. The HVO staff was kept busy with acquisition of unusually high quantities of instrumental data and observations of the two sequences, which were separated by less than one month. Even with a year's interval before the beginning of the summit-east rift sequence in 1961, the staff never caught up, and the seismic records were set aside for later study.

A total of 1,672 earthquakes—1,106 for 1960 and 566 for 1961—are part of HVO's cataloged database. The annual listings have been appended to the 1st Quarter Report of 1960 and to the 4th Quarter Report for 1961. The number of earthquakes is probably low, biased toward the larger magnitudes. The entire HVO catalog, including 1960 and 1961, is accessible from the ANSS CATALOG SEARCH site at <http://www.ncedc.org/anss/catalog-search>.

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

HAWAIIAN VOLCANO OBSERVATORY

SUMMARY 81, PART 1

SEISMIC DATA, JANUARY TO DECEMBER 1981



This report (map) is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards (and stratigraphic nomenclature). Any use of trade names is for descriptive purposes only and does not imply endorsement by the U.S.G.S.

*Menlo Park, California
1982*

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CHRONOLOGICAL SUMMARY

BY

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INTRODUCTION

The Hawaiian Volcano Observatory (HVO) summaries present data gathered during the year together with a chronological narrative intended to describe in geologic terms the volcanic activity associated with the seismic events included. The summaries are issued in two parts. Seismic data appears in Part 1, and deformation data appears in Part 2. The seismic summaries are offered without interpretation as a source of preliminary data. The seismic summary is complete in the sense that all data routinely gathered by the observatory are included. The emphasis in collection of tilt and deformation data has recently shifted from quarterly measurements at a few water-tube tilt stations ("wet" tilt) to a larger number of continuously recording borehole tiltmeters, repeated measurements at numerous spirit-level tilt stations ("dry" tilt), and surveying of level and trilateration networks. Because of the large quantity of deformation data now gathered and differing schedules of data reduction, the seismic and deformation summaries will be published separately.

The HVO summaries have been published in various formats since 1956. Summaries prior to 1974 were issued quarterly, but cost, convenience of preparation and distribution, and the large quantities of data dictated an annual format beginning with summary 74 for the year 1974. Summary 74 includes an extensive description of the seismic instrumentation, calibration and processing used in recent years. The present summary includes enough background information on the seismic network and processing to use the data and understand the essentials of how it was gathered.

A report tabulating the instrumentation, calibration and recording history of each seismic station in the network by Klein and Koyanagi is available as a USGS open file report ("Hawaiian Volcano Observatory Seismic Network History 1950-79," U.S.G.S. open file report 80-302, 1980). It is designed as a reference for users of seismograms and phase data, and so includes and goes a bit beyond the information in the station table in this summary.

CHRONOLOGICAL SUMMARY - 1981

by

Robert W. Decker

Yearly summary: The most notable activity of Kilauea Volcano during 1981 was the major intrusive event into the southwest rift on August 10-12. About 40 million cubic meters of magma moved from the summit storage chamber into a dike 18km long, 4km high, and up to 1m wide. Deformation of the ground surface above the intruding dike indicates that it dips 85° to the SE and reaches to within 250 m of the surface. Since the major M 7.2 earthquake in 1975, there have been 14 intrusions at Kilauea and only 2 eruptions nearly the reverse of the ratio of intrusions to eruptions before the 1975 earthquake. The August 1981 intrusion is the largest one to occur during the last 25 years of geophysical monitoring of Kilauea. The tendency since 1975 for intrusions to not culminate in eruptions is apparently related to the major strain release and reduction of stress on the east and southwest rift zones of Kilauea from the 1975 earthquake. Dikes can now more easily dilate the rift zones than erupt to the surface. Even Mother Nature believes in the principle of least effort. The major question is when will the present slack be used up and Kilauea return to its 1959 to 1975 eruptive habits?

In addition to the major August 10-12 intrusion, there were three other Kilauea intrusive events during 1981. A south summit to upper southwest rift intrusion occurred on January 20. This was followed by a middle southwest rift intrusion that began on January 25, intensified on February 6, and continued intermittently into early June. On June 25, there was a small but rapid intrusion in the south caldera area. It should be mentioned that these rift and summit intrusions are distinguished from the more or less continuous slow filling of the summit magma chamber by the occurrence of earthquake swarms and sudden tilt changes. Both the formation of new dikes by magma fracturing, and the more continuous and more passive upwelling of magma into the summit magma reservoirs are intrusive processes, but their distinction is important in understanding the dynamics of the system. A major change between the intrusions of 1980 (see December 1980 monthly report) and the 1981 intrusions listed in the following table is their location. Until this year, all post-1975 intrusions were into the east rift of Kilauea; beginning in 1981, they have all been into the southwest rift.

KILAUEA INTRUSIONS 1981

Starting Date	Location	Length	Height	Minimum Depth	Volume	Propagation Rate	Local Gases	Electrical Anomalies
Jan. 20	South Caldera	1.5 km	1 km	2.5 km	unknown	20 m/hr	no	no
Jan. 25	SW Rift	18 km	3 km	2 km	$>8 \times 10^6 \text{ m}^3$	30 m/hr	CO ₂ increase	yes
Jun. 25	South Caldera	1 km	1 km	2 km	unknown	unknown	no	not measured
Aug. 10	SW Rift	18 km	4 km	250 m	$40 \times 10^6 \text{ m}^3$	2 km/hr	yes	yes

The experiment in eruption forecasting for Kilauea based on earthquake, tilt, and tidal data shows considerable promise from its first full year of

trial. The results were 77% better than random guessing, but 23% poorer than a perfect forecasting system. The only time during 1981 that the forecasting estimates exceeded the long-term statistical estimates based on historical eruption frequency was a period of 6 weeks preceding the August 1981 intrusive event.

Gas emissions at the summit and along the rift zones of Kilauea have been characterized high and variable in CO₂ content. Major changes in gas composition and volume have both preceded, accompanied, and followed the intrusive events. Confidence in interpreting the seismic and deformation changes related to Kilauea have grown over the years, as long-term and short-term patterns, and "noise" became recognizable. The same can be expected for the gas monitoring program after several more years of sampling and analysis.

Self-potential (SP) and controlled-source electromagnetic induction (EM) surveys on Kilauea have shown marked changes related to the intrusive events near the sensors. Large EM amplitude changes preceded the January 20 intrusion. The EM surveys have also provided a more detailed picture of the resistivity structure beneath the summit area of Kilauea to depths of 6 km.

Mauna Loa Volcano continues to slowly inflate at a more or less steady rate of about 12 million cubic meters per year. This estimate is based on deformation data which indicates the top of the inflating magma chamber beneath Mauna Loa is at a depth of about 5km. Although inflation of Mauna Loa has been continuous since its last eruption 1975, seismicity beneath Mauna Loa has remained at relatively low levels compared to the high number of earthquakes in 1974 and 1975 which preceded the July 1975 eruption.

Twenty-three earthquakes of magnitude 4 or greater occurred beneath or near the Island of Hawaii in 1981. The largest of these, a magnitude 5.3 earthquake occurred on March 5 at 04:09:41 Hawaiian Standard Time about 30 km west of Hawaii. The total number of recorded microearthquakes exceeded 100,000 during 1981. The observatory staff of 26 people consisted of 10 scientists and 16 support personnel, plus several students and volunteers. This group monitored 48 seismic stations, 535 horizontal distance lines, 275km of level lines, 135 tilt stations, 1 tide gage, 127 gravity stations, 12 self-potential lines, 1 electromagnetic induction loop, 4 controlled-source induction loop sensors, and 21 gas-sampling and temperature sites. Some of these monitors are continuously recording; others are observed at various intervals. Most of the data reduction and graphics are handled by an in-house computer system. Ten members of the staff were involved with investigations of eruptions at Pagan Volcano in the Northern Marianas Islands, at Mount St. Helens Volcano in the Cascades, and at various Indonesian volcanoes. Geologic mapping was continued by two USGS geologists closely associated with the Observatory. HVO cooperated with 79 guest investigators on 42 research projects ranging in duration from 2 days to 2 months. HVO staff members and guest investigators presented 31 papers at scientific meetings and published or contributed to 20 papers and 6 open-file reports. HVO also issued weekly, monthly, and annual reports. Hawaii Volcanoes National Park estimated their 1981 visitors at 2,369,000. About 70% of these visitors (1,658,000) stopped at HVO to view Kilauea Caldera and observed our seismic exhibit through the observatory windows. A small fraction of these visitors (980 in 1980), mostly professional geologists, students, and junketing VIPs, were shown the inner workings of the observatory.

It's been a busy year at HVO even without eruptions. From the standpoint of subsurface activity and gas emissions, the volcanoes are continuously active, and we continued to learn a few more answers and many more questions.

The network. The Hawaiian Volcano Observatory has installed and maintains an extensive telemetering seismometer network on the island of Hawaii. In 1981 the seismometer network consisted of 48 stations; two are low-gain multicomponent stations (optical), ten are three-component, and 38 are vertical only. During 1981, one new station (HTC) was installed on Kilauea's southwest rift. The coverage is most complete on and around Kilauea Volcano. With the exception of HIL, all seismometer signals from the short period network are telemetered to the observatory for recording.

Figure 1 is a map of selected geographic and geologic features, and Figure 2 shows the seismic stations which were operated on the Island of Hawaii during the year. Table 1 lists all seismic stations operated by the U.S. Geological Survey in Hawaii during 1981. Listed are station names, three and four letter codes, coordinates in degrees and minutes, elevation in meters, and other data described below. In addition to seismometers listed in Table 1, a horizontal seismometer of Type 3 or H1 and a long-period, three-component set of Press-Ewing seismometers are operated in the Uwekahuna vault, all recorded on photographic paper.

Instrumentation and recording. Each telemetering station has a voltage controlled oscillator (VCO) for FM multiplex transmission to HVO via either hardwire or radio. These telemetering stations are now all of Type 1, the NCER standard system used in USGS seismic networks (see Table 2 for details). After discrimination, the analog signals from 36 stations are recorded on two Develocorders using 16mm microfilm. FM signals from the telemetering network are also recorded directly on one-inch magnetic tape. Selected larger events are copied onto condensed FM library tapes which are currently archived in Menlo Park and archived in digital form at HVO as part of the routine location processing. The type of recording used for each station (in addition to magnetic tape for the telemetered stations) is coded in Table 1 as follows: D - Develocorder film, S - smoked paper drum, P - photographic paper, H - Helicorder paper.

In addition to the standard stations, optical seismographs are maintained at Uwekahuna (HVO), Hilo, Maui, and on Oahu (Kipapa station operated by the Pacific Tsunami Warning Center). The less sensitive optical records are used primarily for amplitude measurements for magnitude calculations to supplement readings from the high-gain stations. The paper (optical) records as well as the 16mm Develocorder microfilm are archived at HVO.

Seismograph response and calibration. Displacement response curves for the four short-period seismograph types in use are given in Figure 3. Types three and four are electro-mechanical systems recorded on paper records. The Type 1 curve gives the displacement magnification of the standard NCER system from ground motion at the seismometer to the seismic trace as seen on a 20x Develocorder film viewer. The curves plot the unit response which should be multiplied by a constant but known factor (CAL, table 1) to get the response for an individual station. Individual CAL factors for Type 1 seismographs are equal to the peak-to-peak amplitude measured in mm on the 20x Develocorder viewer of a 10 microvolt 5 Hz signal introduced to the preamp/VCO in place of the geophone. Calibration is normally done each time a station is visited. CAL factors range from about 1 to 8, averaging about 4. A detailed history of Cal factors and other data is given in F.W. Klein and R.Y. Koyanagi, Hawaiian Volcano Observatory Seismic Network History 1950-79, U.S. Geological Survey Open File Report 80-302, 1980.

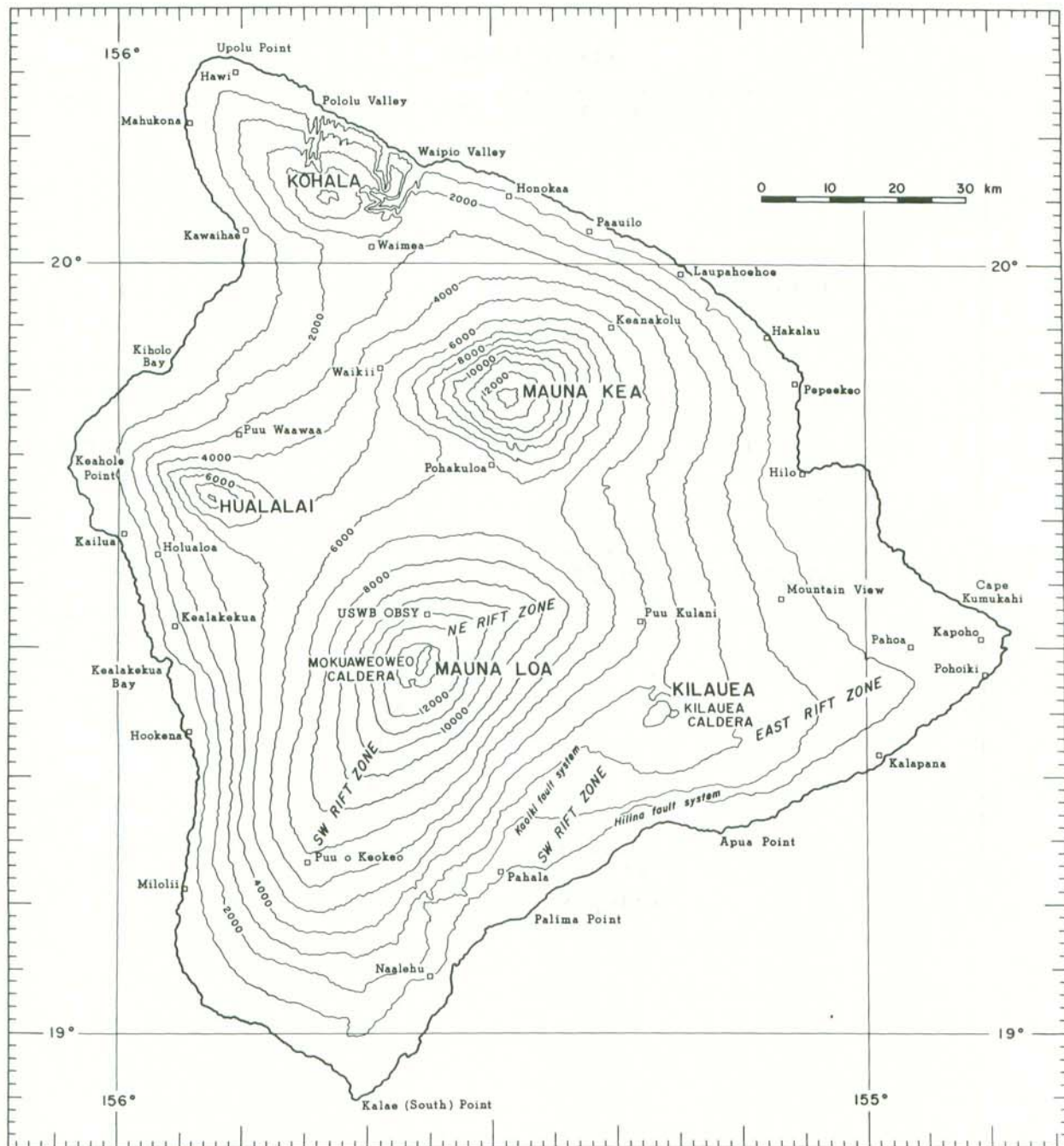


Figure 1. Map of the island of Hawaii showing principal settlements and selected geographic and geologic features.

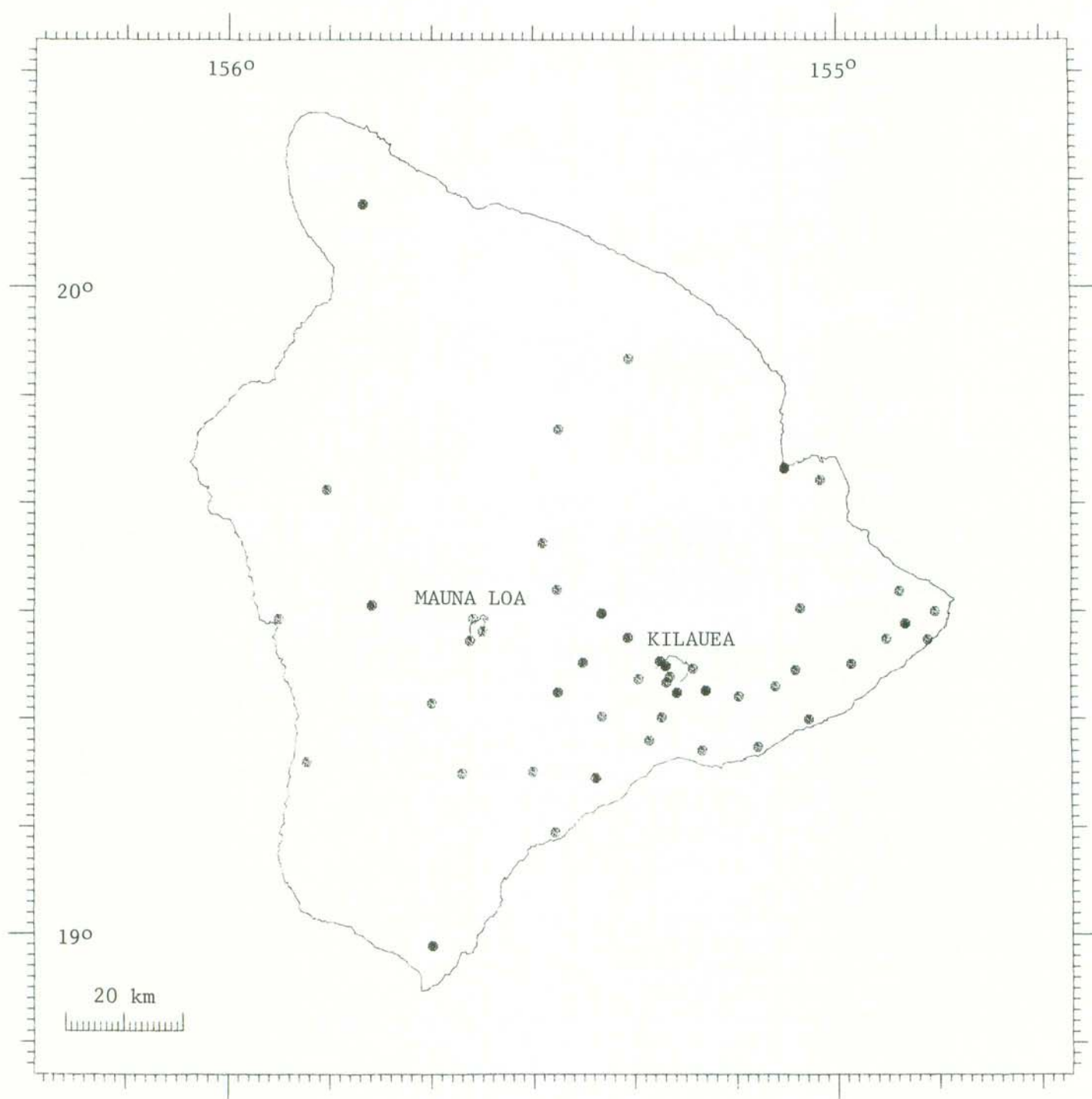


Figure 2. Map of the island of Hawaii showing seismic stations operational during 1981.

Table 1. Seismometer stations in Hawaii operated by the U.S. Geological Survey, 1981.

STATION NAME	CODE	--LAT--		---LON---		ELEV (M)	DELAY 1	DELAY 2	CAL	SEIS TYPE	OPTIC RECORD
		D	M	D	M						
AHUA	AHU Z	19	22.40	155	15.90	1070	-.10	-.13	2.7	E4	SD
AHUA	AHUE E	19	22.40	155	15.90	1070	-.10	-.13	.0	E4	
AHUA	AHUN N	19	22.40	155	15.90	1070	-.10	-.13	.0	E4	
AINAPO	AIN Z	19	22.50	155	27.62	1524	.13	.17	5.5	L4	D
AINAPO	AINE E	19	22.50	155	27.62	1524	.13	.17	.0	L4	
AINAPO	AINN N	19	22.50	155	27.62	1524	.13	.17	.0	L4	
CAPTAIN COOK	CAC Z	19	29.29	155	55.09	323	.00	-.16	3.6	L4	D
CONE PEAK	CPK Z	19	23.70	155	19.70	1038	-.26	-.07	6.0	L4	D
DANDELION	DAN Z	19	21.42	155	40.04	3003	-.27	.03	7.0	L4	D
DESERT	DES Z	19	20.20	155	23.30	815	-.29	-.13	3.0	E4	SD
ESCAPE ROAD	ESR Z	19	24.68	155	14.33	1177	-.17	-.19	2.1	L	D
HAWAIIAN BEACHES	HAB Z	19	31.89	154	53.89	92	-.09	-.24	1.0	L4	
HALEAKALA, MAUI	HAE E	20	46.00	156	15.00	2090	.00	.00	1.0	W	P
HALEAKALA, MAUI	HAL Z	20	46.00	156	15.00	2090	.00	.00	.7	H1	P
HALEAKALA, MAUI	HAN N	20	46.00	156	15.00	2090	.00	.00	1.0	W	P
HILO	HIE E	19	43.20	155	5.30	20	.54	.30	1.0	W	P
HILO	HIL Z	19	43.20	155	5.30	20	.54	.30	1.0	H1	P
HILO	HIN N	19	43.20	155	5.30	20	.54	.30	1.0	W	P
HILINA PALI	HLP Z	19	17.96	155	18.63	707	.02	.07	2.6	L4	D
HALE POHAKU	HPU Z	19	46.85	155	27.50	3396	.31	.17	3.7	L4	D
HUMUULA SHEEP ST	HSS Z	19	36.31	155	29.13	2445	.20	.35	2.7	L4	D
HOT CAVES	HTC Z	19	14.33	155	24.02	381	-.16	-.07	.0	E4	
HUALALAI	HUA Z	19	41.25	155	50.32	2189	.67	.38	2.8	L4	D
HEIHEIAHULU	HUL Z	19	25.13	154	58.72	369	-.17	-.16	1.6	E4	DS
HEIHEIAHULU	HULE E	19	25.13	154	58.72	369	-.17	-.16	.0	E4	
HEIHEIAHULU	HULN N	19	25.13	154	58.72	369	-.17	-.16	.0	L4	
KAAPUNA	KAA Z	19	15.98	155	52.28	524	-.12	-.01	3.6	L4	
KAENA POINT	KAE Z	19	17.35	155	7.95	37	-.01	.06	3.0	L4	D
KAOIKI FAULTS	KFA Z	19	25.26	155	25.14	1579	.13	.17	.0	E	H
KAOIKI FAULTS	KFB Z	19	25.26	155	25.14	1579	.13	.17	.0	TE	\$
KAHUKU	KHU Z	19	14.90	155	37.10	1939	.03	-.03	2.7	E4	D
KANEKII	KII Z	19	30.56	155	45.90	1841	.15	.37	4.1	L4	D
KIPAPA, OAHU	KIP Z	21	25.40	158	.90	76	.00	.00	.6	H1	P
KEANAKOLU	KKU Z	19	53.39	155	20.58	1863	.68	.24	1.2	L	D
PUU KALIU	KLU Z	19	27.48	154	55.26	271	-.17	-.30	2.9	L4	D
KOHALA	KOH Z	20	7.69	155	46.77	1166	-.03	-.17	1.5	L4	D
KOHALA	KOHE E	20	7.69	155	46.77	1166	-.03	-.17	2.2	L4	
KOHALA	KOHN N	20	7.69	155	46.77	1166	-.03	-.17	2.2	L4	
KIPUKA NENE	KPN Z	19	20.10	155	17.40	924	-.11	-.08	4.3	E	D
KAPOHO	KPO Z	19	30.02	154	50.51	134	-.09	-.24	.0	L4	
KALALUA	LUA Z	19	24.55	155	4.25	622	-.25	-.30	2.8	L4	DH
MAUNA LOA	MLE E	19	29.80	155	23.30	2010	.03	.08	.0	S5	
MAUNA LOA	MLN N	19	29.80	155	23.30	2010	.03	.08	.0	S5	
MAUNA LOA	MLO Z	19	29.80	155	23.30	2010	.03	.08	5.8	L4	SD
MAUNA LOA	MLOE E	19	29.80	155	23.30	2010	.03	.08	.0	L4	D
MAUNA LOA	MLON N	19	29.80	155	23.30	2010	.03	.08	1.5	L4	
MAUNA LOA	MLV Z	19	29.80	155	23.30	2010	.03	.08	.0	S5	
MAUNA LOA X	MLX Z	19	27.60	155	20.70	1475	.06	.15	3.0	L4	
MOKUAWEO	MOK Z	19	29.28	155	35.98	4104	.15	.16	4.0	L4	DH
MAKAOPUHI	MPR Z	19	22.07	155	9.85	881	-.17	-.20	3.0	L4	D
MOUNTAIN VIEW	MTV Z	19	30.25	155	3.75	409	-.02	.01	4.8	E	D
NATIONAL GUARD	NAG Z	19	42.12	155	1.72	18	.54	.30	4.5	E	D
NORTH PIT	NPT Z	19	24.90	155	17.00	1115	-.30	-.18	3.2	E4	SD
NORTH PIT	NPTE E	19	24.90	155	17.00	1115	-.30	-.18	.0	E4	
NORTH PIT	NPTN N	19	24.90	155	17.00	1115	-.30	-.18	.0	E4	
OUTLET	OTL Z	19	23.38	155	16.94	1038	-.19	-.18	4.9	L4	
PAUHI	PAU Z	19	22.62	155	13.10	994	-.21	-.24	4.6	L4	SD
PAUHI	PAUE E	19	22.62	155	13.10	994	-.21	-.24	.0	L4	
PAUHI	PAUN N	19	22.62	155	13.10	994	-.21	-.24	.0	L4	

Table 1 (continued)

PUU HONUAULA	PHD Z	19	28.90	154	53.40	215	-.09	-.24	2.2	L4	D
PUU HONUAULA	PHOE E	19	28.90	154	53.40	215	-.09	-.24	.0	L4	
PUU HONUAULA	PHON N	19	28.90	154	53.40	215	-.09	-.24	.0	L4	
PUU ULAULA	PLA Z	19	32.00	155	27.67	2992	-.03	.13	5.4	L	D
PUU NAHAHA	PNA Z	19	14.96	155	25.62	488	-.16	-.07	.0	L	S
POHOIKI	POI Z	19	27.42	154	51.22	16	-.09	-.24	.0	L4	
POLIOKEAWE PALI	POL Z	19	17.02	155	13.47	169	-.02	.03	3.0	E4	D
PUU PILI	PPL Z	19	9.50	155	27.87	35	-.15	-.15	1.4	E4	D
PUU KAMOAMOA	PUK Z	19	23.00	155	6.25	704	-.25	-.30	.0	E4	D
RIM	RIM Z	19	23.90	155	16.60	1128	-.21	-.13	.0	L4	
SOUTH POINT	SPT Z	18	58.91	155	39.92	244	-.17	-.22	1.4	L4	D
SOUTH POINT	SPTE E	18	58.91	155	39.92	244	-.17	-.22	.0	L4	
SOUTH POINT	SPTN N	18	58.91	155	39.92	244	-.17	-.22	.0	L4	
SOUTHWEST RIFT	SWR Z	19	27.26	155	36.30	4048	.01	.04	6.0	E4	D
UWEKAHUNA	USE E	19	25.40	155	17.60	1240	-.21	.00	1.0	S	P
UWEKAHUNA	USZ Z	19	25.40	155	17.60	1240	-.21	.00	1.0	S	P
WAHAULA	WHA Z	19	19.90	155	2.92	29	-.10	-.04	1.1	E4	D
WILKES CAMP	WIL Z	19	28.15	155	35.02	4037	.22	.17	2.6	E4	D
WOOD VALLEY	WOO Z	19	15.08	155	30.12	909	-.15	-.06	4.6	E4	D

Table 2. Seismic Instrumentation Types

The codes in parentheses refer to the seismometer types listed in Table 1.

Type 1. (Codes E, L, and 4) Consists of:

- a) Geophone - Electrotech EV-17 (E) or Mark Products L4C (L) 1.0 sec. period moving magnet vertical component seismometer or horizontal component adjusted for an output of 0.5 volts/cm/sec. and 0.8 critically damped.
- b) Preamp/VCO - USGS/NCER Model J302 or J402 (4) voltage controlled oscillator. Three db points for bandpass filter at 0.1 Hz and 30 Hz. Signals are transmitted on audio FM carrier over cable or FM radio link to HVO.

Type 3. (Code H1) Consists of:

Electrotech EV-17 or observatory-built 0.8 sec. period moving coil seismometer with HVO-built solid state seismic preamplifier, galvanometer driver, and 2 Hz galvanometer. Peak magnification approximately 40,000 at 4 Hz.

Type 4. (Code S) Consists of:

Sprengnether short period vertical and horizontal seismometers (E-W) with 1.5 sec. galvanometers, coupling factor = 0.25, 2X critically damped. Peak magnification approximately 1500X at 2 Hz.

Type 2 instruments have been discontinued.

Code (W) is a Wood-Anderson torsion seismograph.

Codes (TE) and (S5) are experimental seismometers.

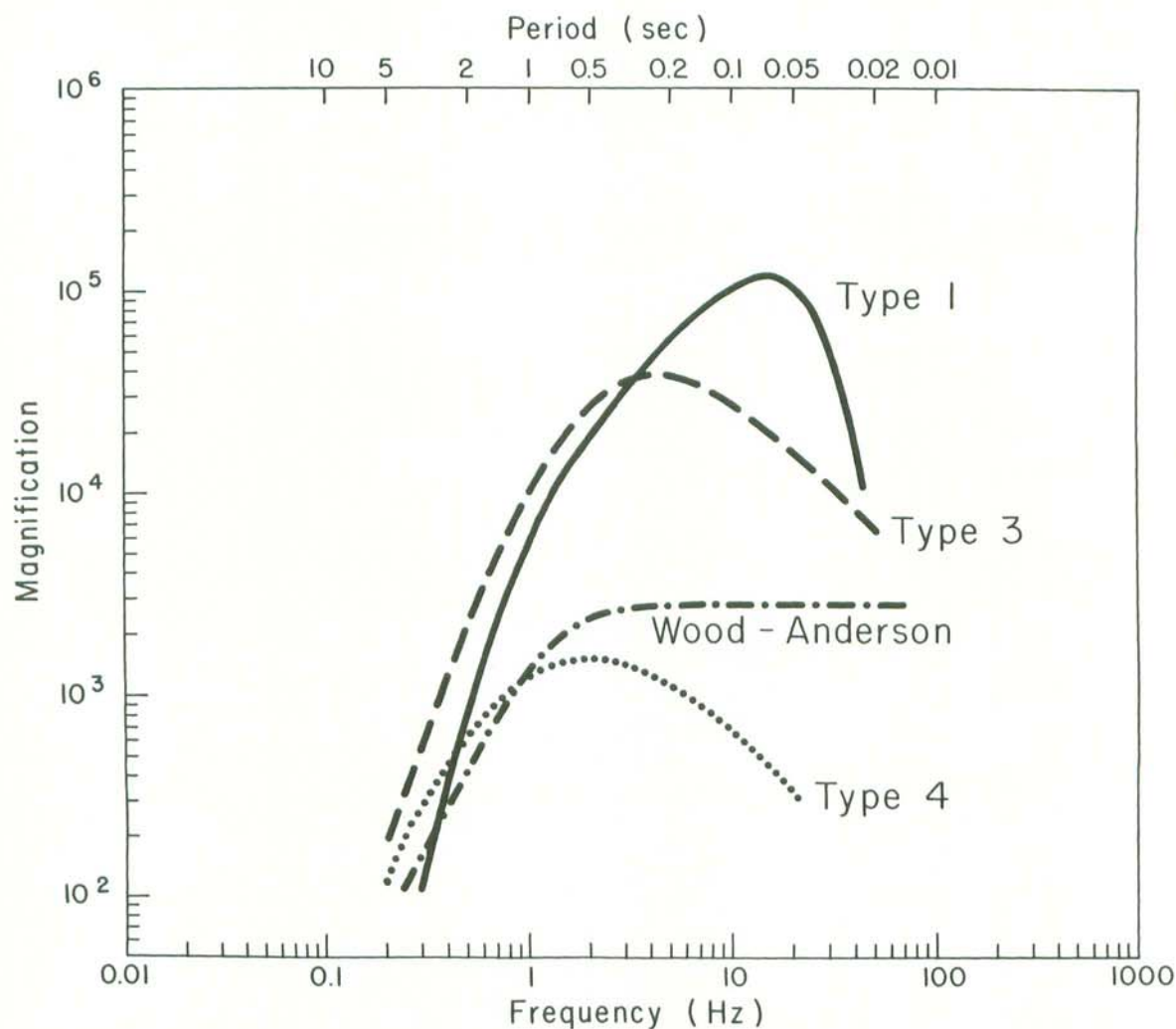


Figure 3. System response curves for the Wood-Anderson torsion seismograph and for the 3 different types of seismometers in use by the Hawaiian Volcano Observatory. Types 3 and 4 are electro-mechanical seismographs recorded optically on photographic paper. Type 1 is the standard NCER seismometer recorded on Develocorder film and magnetic tape. The curve for Type 1 includes response of the geophone, all electronics including telemetry, Develocorder galvanometer, and projection of film by a 20X viewer. The curves plot the unit response which should be multiplied by a constant but known factor (CAL), to get the response for an individual station.

SEISMIC DATA PROCESSING

Develocorder films are scanned for earthquakes, and coda durations are measured for magnitude determination. Events are digitized, timed, and located on the Eclipse computer at HVO. Computer locations are made using the program HYPOINVERSE (Klein, F.W., Hypocenter location program HYPOINVERSE, U.S.G.S. Open file report 78-694, 1978), and problem events are reread and rerun. Magnetic tape copies of all arrival time and output summary data are kept in Menlo Park and HVO.

The crustal model used is specified by velocities at 4 depth points. Velocity at any depth is given by linear interpolation between points and uses a homogeneous half-space below.

VELOCITY (km/sec)	DEPTH (km)
1.9	0.0
6.5	4.6
6.9	15.0
8.3	16.5

Two empirical sets of station delays or corrections were used in the locations, and are given in Table 1. Delay model 1 is used for events on Kilauea and its south flank, and delay model 2 applies to the rest of the island and offshore earthquakes. The delay models are in fact separated by a circle of radius 34 km centered at 19°22'N and 155°10'W.

Magnitudes for most events were computed using both recorded amplitudes on low gain or Wood-Anderson stations and signal or coda duration on short-period vertical stations. Amplitudes read from other than Wood-Anderson instruments are corrected to an equivalent Wood-Anderson amplitude using the curves of Figure 3 and CAL factors. Amplitude magnitudes larger than 2.5 are generally based on the Wood-Anderson instruments in Hilo or Type 4 seismographs at Uwekahuna. Smaller events may occasionally include amplitude readings from stations AHU, KAA, OTL, PPL, KHU, PHO, or WIL.

Duration magnitudes are determined from the length of signal in seconds read from the Develocorder viewer. This time, also called the "F-P time" is measured from the first P arrival to the point where the earthquake signal has decayed nearly to the noise level. A bilinear relation is an appropriate fit to the data sample and is used to compute all duration magnitudes. Duration times are only read from Type 1 seismographs. Because duration magnitudes are relatively insensitive to station response and can be determined using the high-gain short-period stations, it is felt that duration magnitudes are more accurate and complete at the lower magnitudes (below 2).

The equations used in magnitude determination are:

$$\begin{aligned} \text{duration} < 210 \text{ sec} \quad M &= -5.2 + 3.89 \log (F-P) + .013 Z + .0037 D \\ \text{duration} > 210 \text{ sec} \quad M &= -.905 + 2.026 \log (F-P) + .013 Z + .0037 D \end{aligned}$$

where Z and D are the depth and epicentral distance in km.

SEISMIC SUMMARY

The emphasis in both station coverage and detailed data analysis is on the highly active south half of the island of Hawaii. Hundreds of earthquakes too small to locate are counted daily, and the set of located earthquakes in the Kilauea region is nearly complete above magnitude about 2.0. Many smaller events are located also. Substantial effort is made to locate earthquakes elsewhere on the island and within about 150 km of the island. Such coverage cannot be as complete as on the south flank, but nearly all events above magnitude 3.0 to 3.5 are located.

Data presented in the seismic summary is in four parts. Table 3 gives duration of harmonic tremor and numbers of earthquakes (most too small to locate) from several source regions around Kilauea. The source region is determined visually from signal character and pattern of arrival times at key stations. Maps showing computer located epicenters are given in Figures 8-13. The epicenter maps are on different scales, and show both all located earthquakes and large events only.

The list of computer locations constitutes the bulk of this summary, and is given in Table 5. Each earthquake in the list is assigned a three-letter code based on its location and depth. Figures 4-7 are maps of the regions used to assign the location codes. The latitude and longitude limits of rectangular regions are listed in Table 4. When the listed coordinates imply an overlap, precedence is given according to Figures 4-7. Table 6 relists the events in Table 5 for which either duration or amplitude magnitude is 3.0 or larger. It is felt that this list is a more objective measure of large earthquakes than a list of felt earthquakes.

Table 3. Number of earthquakes and minutes of tremor recorded on seismographs around Kilauea.

Earthquake categories are:

- 1) Kilauea summit, short period caldera: shallow earthquakes beneath the caldera.
- 2) Kilauea summit, long period caldera: earthquakes characterized by low frequency signatures, often originating 5-10 km below the caldera.
- 3) Kilauea summit 30 km: from about 30 km depth.
- 4) Kaoiki and southwest rift: southwest rift of Kilauea, western parts of the Koae faults and adjacent Kaoiki fault system.
- 5) Upper east rift zone of Kilauea including the eastern parts of the Koae faults.
- 6) Lower east rift zone of Kilauea.
- 7) Offshore PPL: earthquakes from offshore areas south of the Puu Pili station, including Loihi seamount.
- 8) Mauna Loa long period: low frequency events near Mauna Loa summit.
- 9) Mauna Loa short period: shallow earthquakes in the Mauna Loa caldera region.

Tremor is separated into four categories: shallow, intermediate and deep Kilauea, and Mauna Loa. Depth is inferred on the basis of relative amplitudes on seismographs.

KILAUEA SUMMIT					KILAUEA FLANK			MAUNA LOA		TREMOR (MINUTES)		
I	ISHORT	LONG	I	KA0.	UP.	LOW.	OFF-	I	I	KILAUEA	MAUNAI	I
I DATE	I PER.	I PER.	30	I & SW	EAST	EAST	SHORE	ILONG	SHORT	I NT.	LOA	I
I 1981	I CALDERA	KM	I RIFT	RIFT	RIFT	PPL	I PER.	I PER.	I	SHAL.	DEEP	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I JAN	1	I 125	4	2	I 19	132	15	I	I	I	I	I
I	2	I 126	6	I	I 27	98	19	I	I	I	I	I
I	3	I 83	10	I	I 30	104	17	I	I	I 15	I	I
I	4	I 220	9	I	I 36	158	8	I	I	I 40	I	I
I	5	I 171	6	I	I 24	145	10	I	I 1	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	6	I 461	25	I	I 30	136	10	1	I	I	I	I
I	7	I 446	94	I	I 32	153	10	I	I 2	I	I	I
I	8	I 290	9	I	I 22	150	8	I	I 2	I	I	I
I	9	I 240	29	I	I 31	133	10	I	I 1	I	I	I
I	10	I 154	6	I	I 32	138	8	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	11	I 294	40	60	I 47	176	13	1	I	I	I	I
I	12	I 242	26	I	I 38	165	8	I	I	I	I	I
I	13	I 239	30	11	I 40	166	17	I 1	I 1	I	I	I
I	14	I 182	31	I	I 23	144	5	I	I 4	I	I	I
I	15	I 103	9	I	I 32	164	12	I	I 8	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	16	I 225	18	5	I 13	103	15	I	I	I	I	I
I	17	I 762	21	I	I 13	113	19	I	I 1	I	I	I
I	18	I 252	19	I	I 41	120	5	I	I	I	I	I
I	19	I 311	5	2	I 25	192	12	I	I	I	I	I
I	20	I 1380	11	4	I 20	122	12	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	21	I 199	10	1	I 21	137	13	I	I 1	I 6	I	I
I	22	I 215	33	I	I 17	153	15	I	I 4	I	I	I
I	23	I 206	12	3	I 31	155	23	I	I 2	I	I	I
I	24	I 226		2	I 34	389	31	I	I 1	I	I	I
I	25	I 176	6	I	I 29	403	9	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	26	I 224	9	2	I 40	344	16	I	I	I	I	I
I	27	I 158	10	I	I 11	222	8	1	I 1	I	I	I
I	28	I 188	15	I	I 28	185	15	I	I	I 5	I	I
I	29	I 165	8	I	I 30	217	9	I	I 4	I	I	I
I	30	I 168	15	1	I 14	142	13	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	31	I 82	4	I	I 24	120	15	I	I	I	I	I
IFEB	1	I 102	8	I	I 30	202	22	I	I 1	I	I	I
I	2	I 67	5	2	I 47	148	24	I	I	I	I	I
I	3	I 185	5	I	I 39	168	11	I	I	I	I	I
I	4	I 172	2	4	I 40	159	27	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	5	I 141	1	I	I 60	163	4	I	I	I	I	I
I	6	I 86	2	I	I 140	94	18	I	I	I 5	I	I
I	7	I 62		I	I 333	147	33	I	I	I 18	I	I
I	8	I 36	3	I	I 421	190	8	I	I 5	I	I	I
I	9	I 32	1	I	I 1262	124	17	I	I 1	I	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	10	I 30	13	I	I 1846	96	3	I	I	I	I	I
I	11	I 16		2	I 984	78	12	I	I	I 55	I	I
I	12	I 38	1	I	I 1523	144	3	I	I 1	I	I	I
I	13	I 41	7	4	I 818	89	23	I	I 3	I 28	I	I
I	14	I 18	5	I	I 830	82	23	I 1	I 3	I 25	I	I

KILAUEA SUMMIT					KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)					
I	ISHORT	LONG	I	KAO.	UP.	LOW.	OFF-	I	I	KILAUEA	MAUNAI					
I	DATE	I	PER.	PER.	30	I	& SW	EAST	EAST	SHORE	INT.	LOA				
I	1981	I	CALDERA	KM	I	RIFT	RIFT	RIFT	PPL	I	PER.	PER.	I	SHAL.	DEEP	I
I	FEB 15	I	15	1	I	756	101	18	I	2	1	I	5			I
I	16	I	22	5	1	I	739	110	16	I	2	2	I			I
I	17	I	44	1	I	351	133	7	I		3	I	30			I
I	18	I	36	1	I	267	85	6	I		2	I				I
I	19	I	36	8	I	409	108	7	I		2	I				I
I	20	I	17		I	501	58	14	I		5	I				I
I	21	I	11	1	I	504	40	13	I		1	I				I
I	22	I	25	6	2	I	529	87	7	I	4	7	I			I
I	23	I	23	5	I	432	53	8	I	1	1	I				I
I	24	I	39	1	I	153	78	6	I		1	I				I
I	25	I	38	3	I	135	66	13	I			I				I
I	26	I	23		I	108	59	3	I		2	I				I
I	27	I	29	2	1	I	71	77	6	I		4	I			I
I	28	I	33	4	I	120	161	12	I	1	16	I				I
I	MAR 1	I	17	4	2	I	332	141	5	I		1	I			I
I	2	I	47	2	I	410	85	7	I		7	I	2			I
I	3	I	17	4	I	273	56	6	I			I				I
I	4	I	47	3	1	I	294	83	10	I		1	I			I
I	5	I	53	41	I	339	91	8	I		2	I				I
I	6	I	99	31	I	340	81	16	I		12	I				I
I	7	I	108	53	I	272	101	27	I		3	I				I
I	8	I	57	48	I	339	108	10	I		5	I				I
I	9	I	31	4	I	530	103	7	I		7	I				I
I	10	I	33	2	I	648	129	2	I		4	I				I
I	11	I	56	3	I	390	97	10	I		4	I				I
I	12	I	31	47	1	I	354	114	5	I		2	I	10		I
I	13	I	30	21	1	I	319	114	11	I		1	I	4		I
I	14	I	73	5	I	425	125	15	I		2	I		3		I
I	15	I	40	6	7	I	939	123	13	I		1	I			I
I	16	I	22	4	I	417	118	8	I		2	I				I
I	17	I	31	1	1	I	349	114	10	I	1	2	I			I
I	18	I	117	10	1	I	367	139	4	I		1	I			I
I	19	I	79	140	I	380	161	10	I		4	I	15			I
I	20	I	78	34	4	I	194	123	14	I	25	29	I			I
I	21	I	154	22	1	I	108	170	14	I	42	50	I		8	I
I	22	I	73	2	2	I	214	156	20	I	8	11	I	4		I
I	23	I	67	5	1	I	346	113	17	I	10	31	I			I
I	24	I	56	10	I	383	159	13	I	4	31	I				I
I	25	I	39	61	I	314	100	12	I	1	7	I		5		I
I	26	I	90	16	I	349	130	14	I	1	7	I				I
I	27	I	60	2	1	I	321	103	7	I	1	17	I			I
I	28	I	46	9	1	I	176	86	9	I		2	I			I
I	29	I	110	32	I	111	92	8	I		5	I				I
I	30	I	118	10	2	I	164	147	10	I	4	25	I			I
I	31	I	123	14	1	I	172	144	2	I	3	16	I			I

KILAUEA SUMMIT				KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)	
I	ISHORT	LONG	I	KAO.	UP.	LOW.	OFF-	I	I	KILAUEA	MAUNAI
I DATE	I PER.	PER.	30	I & SW	EAST	EAST	SHORE	I LONG	SHORT	INT.	LOA
I 1981	I CALDERA	KM	I	RIFT	RIFT	RIFT	PPL	I PER.	PER.	SHAL.	DEEP
I	I	I	I	I	I	I	I	I	I	I	I
I APR 1	I 83	2	1	I 303	87	9		I	1		
I 2	I 192	10		I 199	128	1		I	4		
I 3	I 111	22	1	I 122	110	4		I 6	7		
I 4	I 96	11	2	I 124	179	13		I 2	8		
I 5	I 140	21		I 302	236	12		I		4	
I	I	I	I	I	I	I	I	I	I	I	I
I 6	I 110	1	1	I 204	113	6		I	2		
I 7	I 95	6		I 260	138	4		I	5	7	
I 8	I 144	3	2	I 147	139	7		I	4		5
I 9	I 127	16		I 133	335	3		I	5	15	
I 10	I 70	4		I 85	174	12		I 5	11		33
I	I	I	I	I	I	I	I	I	I	I	I
I 11	I 69	2		I 101	148	23	1	I 10	15		
I 12	I 104	15		I 146	178	12		I 1	5		15
I 13	I 124	2		I 125	145	12		I 1	2		
I 14	I 119	15	2	I 138	189	6		I	1	6	
I 15	I 89	8		I 98	174	8		I	7		28
I	I	I	I	I	I	I	I	I	I	I	I
I 16	I 84	9	2	I 94	173	17		I	6		5
I 17	I 101	2	2	I 55	197	10		I 1	22		2
I 18	I 114	1	1	I 63	137	11		I	7		10
I 19	I 165	4		I 59	207	12		I	5		
I 20	I 229	18	1	I 49	180	6		I	5		15
I	I	I	I	I	I	I	I	I	I	I	I
I 21	I 118	11	1	I 50	147	11		I	3		
I 22	I 102	23		I 59	144	15		I	5		30
I 23	I 67	1		I 43	129	7		I	2		
I 24	I 245	6	3	I 56	137	17		I 5	3		
I 25	I 223	10	1	I 33	113	8		I	3		
I	I	I	I	I	I	I	I	I	I	I	I
I 26	I 389	9		I 91	277	12		I	4		
I 27	I 253	8		I 47	205	11		I 3	1		4
I 28	I 235	12		I 101	299	6		I		15	
I 29	I 292	5	1	I 68	580	18		I 2			
I 30	I 142	2	1	I 68	154	36		I 2			
I	I	I	I	I	I	I	I	I	I	I	I
I MAY 1	I 63	4		I 51	118	18		I 8	7		4
I 2	I 119	17	4	I 64	120	21		I 8	3	5	
I 3	I 120	12		I 125	164	14		I			
I 4	I 272	15		I 216	144	18		I			
I 5	I 292	18		I 101	215	8		I			
I	I	I	I	I	I	I	I	I	I	I	I
I 6	I 203	10		I 111	188	13		I			
I 7	I 265	6		I 100	322	17		I 1	3		
I 8	I 115	3		I 99	87	12		I 2	3		
I 9	I 201	24		I 165	144	9		I 3	2		3
I 10	I 148	2		I 174	203	13	1	I			41
I	I	I	I	I	I	I	I	I	I	I	I
I 11	I 127	3		I 207	157	10		I	6		
I 12	I 77	5		I 187	123	5		I 2	1		4
I 13	I 240	12		I 169	151	11		I			
I 14	I 170	5		I 187	161	5		I 1			49
I 15	I 198	3		I 187	172	9		I	1		5

KILAUEA SUMMIT					KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)					
I	IS	SHORT	LONG	I	KAO.	UP.	LOW.	OFF-	I	I	KILAUEA	MAUNAI				
I	DATE	I	PER.	PER.	30	I	& SW	EAST	EAST	SHORE	LONG	SHORT	INT.	LOA	I	
I	1981	I	CALDERA	KM	I	RIFT	RIFT	RIFT	PPL	I	PER.	PER.	I	SHAL.	DEEP	I
I	MAY 16	I	150	61	I	222	227	6	I	I	2	I	64			I
I	17	I	80	187	I	110	111	10	I	I	1	I				I
I	18	I	166	103	I	92	117	7	I	I		I				I
I	19	I	161	28	I	83	101	5	I	I	1	I				I
I	20	I	220	44	I	131	141	13	I	2	3	I				I
I	21	I	202	39	1	I	130	158	4	I		2	I	4		I
I	22	I	129	10	1	I	97	145	6	I	1	I				I
I	23	I	301	18	I	99	193	11	I	I		3	I	5		I
I	24	I	217	22	I	146	341	18	I	2	1	I				I
I	25	I	152	11	I	252	330	10	I	I	1	I	21			I
I	26	I	212	15	I	205	232	10	I	I	1	I	26			I
I	27	I	202	14	I	226	182	8	I	I	2	I	47			I
I	28	I	164	35	I	189	180	13	I	I	1	I				I
I	29	I	186	6	I	119	87	6	I	1	3	I				I
I	30	I	109	52	3	I	102	80	8	I	I	4	I			I
I	31	I	107	29	1	I	154	133	14	I	I		20			I
I	JUN 1	I	97	32	I	129	129	8	I	I	3	I	60			I
I	2	I	116	23	I	81	184	1	I	I	2	I				I
I	3	I	121	10	I	121	129	6	I	1	10	I				I
I	4	I	151	21	I	111	112	12	I	I	5	I				I
I	5	I	242	9	I	41	105	19	I	I	4	I				I
I	6	I	485	43	1	I	47	117	8	I	I	5	I			I
I	7	I	320	10	2	I	35	123	7	I	I	2	I			I
I	8	I	215	6	1	I	30	113	14	I	I	1	I	38		I
I	9	I	135	20	1	I	55	107	2	I	I	3	I	25		I
I	10	I	109	22	1	I	38	113	12	I	I	3	I			I
I	11	I	69	8	I	49	125	8	I	I		I				I
I	12	I	166	33	I	45	157	1	I	2	1	I	3			I
I	13	I	413	53	I	51	147		I	I	1	I	9			I
I	14	I	308	23	I	65	96		I	1	1	I				I
I	15	I	498	18	1	I	70	146	7	I	I	2	I			I
I	16	I	129	1	1	I	46	126	16	I	2	4	I			I
I	17	I	258	42	I	61	156	1	I	I	6	I				I
I	18	I	179	9	1	I	46	102	10	I	2	4	I			I
I	19	I	141	10	I	69	123	6	I	1	2	I				I
I	20	I	123	1	2	I	57	129	16	I	I	5	I			I
I	21	I	112	7	1	I	42	117	5	I	I	2	I			I
I	22	I	110	13	I	58	140	13	I	I	6	I				I
I	23	I	108	11	I	61	99	33	I	3	7	I				I
I	24	I	197	27	2	I	59	150	3	I	I	9	I			I
I	25	I	1442		4	I	38	145	19	I	1	4	I	65	3	I
I	26	I	910	21	1	I	33	112	15	I	2	2	I	3		I
I	27	I	572	4	1	I	36	124	18	I	I	4	I			I
I	28	I	225	9	I	47	97	3	I	I	1	I				I
I	29	I	64	3	I	25	74	10	I	I	I					I

KILAUEA SUMMIT				KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)	
I	ISHORT	LONG	I	KAO.	UP.	LOW.	OFF-	I	I	KILAUEA	MAUNAI
I DATE	I PER.	I PER.	30	I & SW	EAST	EAST	SHORE	LONG	SHORT	INT.	LOA
I 1981	I CALDERA	KM	I	RIFT	RIFT	RIFT	PPL	I PER.	I PER.	I SHAL.	I DEEP
I JUN30	I 148		1	I 31	103	4	I 1	I		5	I
I JUL 1	I 184	26		I 36	159		I	1	I		I
I 2	I 130	29		I 13	112	24	I 18	6	I 11		I
I 3	I 199	20		I 14	100	12	I 9	6	I 4	4	I
I 4	I 127	29	3	I 21	109	15	I 6	1	I 6		I
I 5	I 305	6	3	I 35	120	7	I 2	9	I	48	I
I 6	I 243	3		I 40	124	3	I	1	I		I
I 7	I 268			I 20	125	21	I 4	4	I	99	I
I 8	I 308			I 28	151	6	I 1	2	I		I
I 9	I 250	9	1	I 32	105	9	I	3	I		I
I 10	I 264	8		I 28	123	16	I 1	5	I		I
I 11	I 314	23	3	I 30	149	18	I	1	I		I
I 12	I 258	72	1	I 25	94	5	I 1	2	I		I
I 13	I 167	65		I 33	124	2	I	1	I		I
I 14	I 192	4	1	I 19	92	7	I 1	3	I	41	I
I 15	I 190	30		I 23	107	10	I 2		I		I
I 16	I 419	16	2	I 38	133	2	I	6	I		I
I 17	I 451	19	1	I 22	95	17	I 3	6	I	10	I
I 18	I 246	3		I 34	78	12	I 3	3	I		I
I 19	I 241	15	1	I 32	79	14	I 3	1	I		I
I 20	I 433	20		I 24	150	6	I		I		I
I 21	I 232	6		I 28	67	16	I	1	I		I
I 22	I 303	37		I 27	105	9	I	2	I		I
I 23	I 307	8		I 30	95	34	I	1	I	5	I
I 24	I 377	36	1	I 15	61	20	I 6	4	I		I
I 25	I 383	26		I 30	63	18	I 7	5	I		I
I 26	I 489	13	1	I 31	85	27	I 1	3	I		I
I 27	I 262	32		I 57	168	11	I	4	I	55	I
I 28	I 342	12		I 18	101	35	I	3	I		4 I
I 29	I 319	14		I 26	124	6	I	1	I		I
I 30	I 351	31		I 41	89	28	I		I	27	I
I 31	I 515	28		I 26	93	17	I	5	I	6	I
I AUG 1	I 384	26	5	I 23	166	14	I	4	I		I
I 2	I 155	1	4	I 27	200	16	I	1	I		I
I 3	I 117			I 23	237	5	I	1	I		I
I 4	I 284	6	1	I 16	226	11	I	1	I		I
I 5	I 136	1	1	I 38	374	3	I	10	I		I
I 6	I 408	19	1	I 24	118	13	I	1	I		I
I 7	I 433	1		I 39	106	4	I 2		I		I
I 8	I 337	109		I 26	131	14	I 6	2	I	3	I
I 9	I 1082	42	1	I 46	106	7	I	5	I	300	I
I 10	I 320	29		I 2783	143	3	I	2	I	1200	I
I 11	I 129	130	1	I 5760	58	2	I 1	1	I		I
I 12	I 80	547	1	I 4152	100	4	I	8	I		I
I 13	I 29	914		I 2634	78	12	I 2	2	I		I

KILAUEA SUMMIT					KILAUEA FLANK			MAUNA LOA		TREMOR (MINUTES)	
I	ISHORT LONG		I	KAO.	UP.	LOW.	OFF-	I	I	KILAUEA	MAUNAI
I DATE	I PER.	I PER.	30	I & SW	EAST	EAST	SHORE	ILONG	SHORT	INT.	LOA
I 1981	I CALDERA	I KM	I	I RIFT	RIFT	RIFT	PPL	I PER.	I PER.	I SHAL.	I DEEP

IAUG 14	I 44	1851	I	904	61	1	I	5	I	287	I
I 15	I 33	148	I	476	62	10	I	1	7	I 1440	I
I 16	I 12		9	I 404	105	4	I		20	I 1440	I
I 17	I 11	4	I	501	66	11	I		5	I 1440	I
I 18	I 18		I	666	106	9	I		1	I 1440	I

I 19	I 21	15	2	I 403	90	8	I		11	I 1440	I
I 20	I 40	61	I	394	105	14	I	3	17	I 650	I
I 21	I 25	36	1	I 312	101	15	I	1	13	I	I
I 22	I 29	76	2	I 353	125	7	I		8	I	9
I 23	I 42	82	I	353	143	10	I	3	3	I 2	I

I 24	I 38	27	I	407	124	5	I		15	I	I
I 25	I 31	74	I	355	122	11	I	7	8	I 13	26
I 26	I 25	21	I	292	118	10	I		9	I	I
I 27	I 37	20	I	286	81	10	I	2	5	I	I
I 28	I 29	14	1	I 271	109	22	I	1	3	I	I

I 29	I 28	13	2	I 292	103	11	I	1	11	I	I
I 30	I 26	5	2	I 231	117	9	I		14	I	I
I 31	I 31	8	I	223	108	4	I		2	I	16
ISEP 1	I 32	23	I	214	134	13	I	3	6	I	I
I 2	I 29	3	1	I 171	86	8	I			I	I

I 3	I 21	5	2	I 86	103	1	I		7	I	3
I 4	I 18	9	I	114	99	21	I	1	8	I 23	I
I 5	I 15	9	1	I 80	121	8	I	2	9	I	I
I 6	I 12	1	I	86	80	11	I		7	I 38	I
I 7	I 43	18	I	185	110	5	I		4	I	I

I 8	I 38	3	1	I 99	104	5	I		7	I	6
I 9	I 43	8	2	I 170	138	2	I		4	I	3
I 10	I 26	12	3	I 149	105	6	I	2	10	I	I
I 11	I 51	21	1	I 137	93	10	I		9	I	I
I 12	I 36	10	2	I 82	128	10	I		12	I	I

I 13	I 59	11	3	I 74	132	7	I		20	I	I
I 14	I 29	10	2	I 117	100	3	I		17	I	I
I 15	I 40	7	4	I 107	101	13	I	1	11	I 2	I
I 16	I 49	9	2	I 127	100	6	I		45	I	I
I 17	I 39	8	1	I 66	70	4	I		7	I	I

I 18	I 41	8	1	I 103	101	12	I		12	I	I
I 19	I 53	8	2	I 87	118	10	I		7	I	I
I 20	I 50	8	3	I 97	117	6	I		9	I	I
I 21	I 36	4	I	122	149	2	I		4	I	4
I 22	I 29	3	I	41	139	4	I		1	I	I

I 23	I 36	14	I	77	114		I		1	I	I
I 24	I 53	5	I	84	106	1	I		4	I	I
I 25	I 27	4	8	I 49	65	7	I		7	I	58
I 26	I 28	7	I	34	87	5	I		11	I	34
I 27	I 51	76	3	I 75	115		I		3	I	I

KILAUEA SUMMIT				KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)	
I	ISHORT	LONG	I	KAD.	UP.	LOW.	OFF-	I	I	KILAUEA	MAUNAI
I DATE	I PER.	PER.	30	I & SW	EAST	EAST	SHORE	ILONG	SHORT	INT.	LOA
I 1981	I CALDERA	KM	I RIFT	RIFT	RIFT	PPL	IPER.	PER.	I SHAL.	DEEP	I
<hr/>											
SEP 28	67	12		78	136	1		9			
29	48	13	1	75	113	15		1	1		
30	34	14	2	95	94	1		5			
OCT 1	49	8	2	55	134	30		2		4	
2	37	10	2	69	101			9		6	
<hr/>											
3	71	7		60	131		2	3	19		
4	63	3	3	59	121	6		2	27	12	
5	69	11	1	54	123	5			18		
6	75	21	1	38	117	28		1	4	3	10
7	106	19		87	124	2			6		
<hr/>											
8	65	9	3	37	115	3			6		6
9	63	25	2	43	105	13		2	2	15	
10	71	3	1	58	112	20			5		
11	54	4	3	54	96	18		4	13		
12	114	9		96	157	3			51		
<hr/>											
13	93	5	2	79	114	9			10		
14	113	7		95	122	8			12	22	
15	98	37	1	52	115	10			16		
16	39	5	2	25	98	18			8	9	
17	48	1		27	94	20			7		
<hr/>											
18	125	14	5	42	119	21			9		
19	134	18		72	180	1		3	8		
20	119	8	2	42	116	14			2		
21	90	10		51	109	2			17		
22	82	7	3	51	116	3		1	22	27	
<hr/>											
23	108	3	2	38	137	4		2	23		
24	143	6	2	36	154	1		1	30	4	
25	111	10	2	27	129	1			24	4	
26	93	2		69	96				17		
27	82	3	23	72	132	2			21		
<hr/>											
28	94	8	3	52	154	2			9		
29	94	4	5	75	105	1		1	14	7	
30	71	4	3	43	100	19		3	8	6	
31	81	4	4	35	106	10		1	11	4	
NOV 1	122	8	1	38	104	4			10		
<hr/>											
2	103	56	1	64	140				8	6	
3	146	7		45	83	3			9	8	
4	125	25		53	152	2			12		
5	97	8	1	40	135	5			20		
6	59	20		17	66	5			13	25	
<hr/>											
7	40	16	1	16	72	9			13		
8	112	5		50	135	12			10	40	
9	102	18		53	442	6			14		
10	104	20	2	46	232	12		1	5		
11	71	33	1	40	160	3			6		

KILAUEA SUMMIT				KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)	
I	ISHORT	LONG	I	KAO.	UP.	LOW.	OFF-	I	I	KILAUEA	MAUNAI
I DATE I	I PER. I	I PER. I	30 I	I & SW I	EAST I	EAST I	SHORE I	I	I	INT.	LOA I
I 1981 I	I CALDERA I	I KM I	I RIFT I	RIFT I	RIFT I	PPL I	IPER. I	PER. I	I SHAL. I	DEEP I	I
I NOV 12 I	I 68 I	I 8 I	1 I	I 29 I	109 I	19 I	I	I	I 1 I	I 5 I	I
I 13 I	I 115 I	I 15 I	1 I	I 29 I	112 I	16 I	I	I	I 2 I	I 4 I	I
I 14 I	I 106 I	I 24 I	2 I	I 36 I	111 I	15 I	I	I	I 3 I	I	I
I 15 I	I 103 I	I 15 I	I	I 31 I	92 I	17 I	I	I	I 5 I	I	I
I 16 I	I 126 I	I 24 I	1 I	I 72 I	133 I	4 I	I	I	I 1 I	I	I
I 17 I	I 186 I	I 4 I	3 I	I 27 I	122 I	9 I	I	I 1 I	I 5 I	I	I
I 18 I	I 136 I	I 1 I	I	I 46 I	110 I	6 I	I	I	I 4 I	I	I
I 19 I	I 96 I	I	I	I 18 I	70 I	19 I	I	I	I 4 I	I	I
I 20 I	I 71 I	I	2 I	I 24 I	57 I	11 I	I 1 I	I	I 1 I	I	I
I 21 I	I 69 I	I 4 I	1 I	I 13 I	79 I	16 I	I	I	I 2 I	I	I
I 22 I	I 154 I	I 2 I	1 I	I 37 I	94 I	5 I	I 2 I	I	I 3 I	I	I
I 23 I	I 118 I	I 5 I	I	I 34 I	91 I	9 I	I	I	I	I	I
I 24 I	I 59 I	I	I	I 50 I	89 I	5 I	I	I	I 1 I	I	I
I 25 I	I 70 I	I 2 I	I	I 39 I	77 I	8 I	I	I	I 2 I	I 25 I	I
I 26 I	I 101 I	I 1 I	I	I 44 I	82 I	8 I	I	I	I 1 I	I	I
I 27 I	I 122 I	I 3 I	2 I	I 56 I	92 I	2 I	I	I	I 3 I	I	I
I 28 I	I 145 I	I 7 I	2 I	I 38 I	76 I	12 I	I	I	I 1 I	I	I
I 29 I	I 128 I	I 2 I	I	I 37 I	95 I	17 I	I	I	I 5 I	I	I
I 30 I	I 96 I	I 5 I	I	I 35 I	67 I	3 I	I	I	I 1 I	I	I
I DEC 1 I	I 33 I	I 1 I	I	I 36 I	73 I	5 I	I	I	I 3 I	I 2 I	I
I 2 I	I 53 I	I 12 I	I	I 18 I	65 I	6 I	I	I	I 2 I	I	I
I 3 I	I 77 I	I 18 I	I	I 51 I	70 I	9 I	I	I	I 2 I	I	I
I 4 I	I 84 I	I 2 I	2 I	I 52 I	71 I	6 I	I	I	I	I	I
I 5 I	I 131 I	I 1 I	1 I	I 35 I	74 I	8 I	I	I 2 I	I	I 2 I	I
I 6 I	I 113 I	I	I	I 37 I	89 I	17 I	I	I	I 2 I	I	I
I 7 I	I 80 I	I 43 I	1 I	I 44 I	70 I	2 I	I	I	I	I	I
I 8 I	I 49 I	I 53 I	3 I	I 15 I	59 I	10 I	I	I	I 2 I	I 5 I	I
I 9 I	I 132 I	I 1 I	I	I 31 I	60 I	1 I	I	I	I 3 I	I	I
I 10 I	I 161 I	I 2 I	1 I	I 25 I	57 I	11 I	I	I	I 2 I	I	I
I 11 I	I 128 I	I 3 I	I	I 33 I	63 I	23 I	I	I	I 2 I	I 9 I	I
I 12 I	I 82 I	I 2 I	1 I	I 33 I	78 I	20 I	I	I 4 I	I	I	I
I 13 I	I 69 I	I 2 I	2 I	I 36 I	67 I	11 I	I	I 2 I	I 3 I	I	I
I 14 I	I 91 I	I 1 I	1 I	I 39 I	72 I	21 I	I	I 3 I	I 3 I	I	I
I 15 I	I 147 I	I 1 I	3 I	I 43 I	78 I	25 I	I	I 3 I	I	I 4 I	I
I 16 I	I 61 I	I 7 I	2 I	I 36 I	103 I	I	I	I 8 I	I 3 I	I	I
I 17 I	I 129 I	I 3 I	I	I 43 I	102 I	I	I	I 1 I	I 3 I	I	I
I 18 I	I 234 I	I	I	I 29 I	73 I	8 I	I	I	I 2 I	I	I
I 19 I	I 176 I	I 5 I	1 I	I 18 I	103 I	14 I	I	I	I 3 I	I	I
I 20 I	I 93 I	I 11 I	1 I	I 16 I	74 I	14 I	I	I	I	I 13 I	I
I 21 I	I 308 I	I 6 I	3 I	I 44 I	82 I	20 I	I	I	I	I 3 I	I
I 22 I	I 176 I	I 2 I	1 I	I 28 I	90 I	2 I	I	I	I 4 I	I	I
I 23 I	I 253 I	I 5 I	1 I	I 41 I	86 I	6 I	I	I	I	I	I
I 24 I	I 305 I	I 1 I	I	I 22 I	90 I	13 I	I	I 3 I	I	I 5 I	I
I 25 I	I 562 I	I 1 I	I	I 19 I	44 I	4 I	I	I	I	I	I
I 26 I	I 311 I	I 10 I	2 I	I 28 I	78 I	6 I	I	I	I 2 I	I	I

KILAUEA SUMMIT				KILAUEA FLANK				MAUNA LOA		TREMOR (MINUTES)				
I	ISHORT	LONG	I	KA0.	UP.	LOW.	OFF-	I	T	KILAUEA	MAUNAI			
I DATE	I PER.	PER.	30	I & SW	EAST	EAST	SHORE	LONG	SHORT	I INT.	LOA			
I 1981	I CALDERA	KM	I RIFT	RIFT	RIFT	PPL	IPER.	PER.	I SHAL.	DEEP	I			
I	I	I	I	I	I	I	I	I	I	I	I			
IDE	27	I	256	2	1	I	49	78	16	I	3	3	I	I
I	28	I	277	10	1	I	32	118	2	I		7	I	I
I	29	I	239	6		I	57	120	1	I	3	6	I	I
I	30	I	232	4		I	53	116		I	3	6	I	I
I	31	I	140	8	2	I	14	79	12	I	5		I	I

Table 4. Coordinates of named earthquake regions.

--All earthquakes are in one of the following groups.

--Identified by a numerical class or 3-letter code:

--Shallow:

- 1 SNC - Shallow north caldera (0-5 km)
- 2 SSC - Shallow south caldera (0-5 km)
- 3 SEC - Shallow east caldera (0-5 km)
- 4 SER - Shallow east rift (0-5 km)
- 5 SME - Shallow middle east rift (0-5 km)
- 6 KOA - Koaie fault zone (0-5 km)
- 7 SSF - Shallow south flank (0-5 km)
- 8 SLF - Shallow lower east rift (0-5 km)

--Intermediate depth:

- 9 SF1 - Kilauea south flank (5-13 km) (west end)
- 10 SF2 - Kilauea south flank (5-13 km)
- 11 SF3 - Kilauea south flank (5-13 km)
- 12 SF4 - Kilauea south flank (5-13 km)
- 13 SF5 - Kilauea south flank (5-13 km) (east end)
- 14 LER - Lower east rift (5-99 km)
- 15 MLO - Mauna Loa (0-13 km)
- 16 LSW - Lower SW rifts of Kilauea & Mauna Loa (0-13 km)
- 17 GLN - Glenwood (0-13 km)
- 18 SWR - SW rift (0-13 km)
- 19 INT - Intermediate caldera (5-13 km)
- 20 KAO - Kaoiki (0-13 km)

--Deep:

- 21 DEP - Deep Kilauea (>13 km) (below regions 1-13, 17-19)
- 22 DLS - Deep lower SW rift (>13 km) (below region 14)
- 23 DML - Deep Mauna Loa (>13 km) (below regions 15, 20)

--Outer regions, all depths:

- 24 LOI - Loihi (all depths)
- 25 KON - South Kona (all depths)
- 26 HUA - Hualalai (all depths)
- 27 KOH - Kohala (all depths)
- 28 KEA - Mauna Kea (all depths)
- 29 HIL - Hilo (all depths)
- 30 DIS - Distant, everywhere else

Table 4 (continued)

 --The latitude and longitude limits of the regions are given below.
 --When the coordinates imply an overlap, precedence is given as in the maps.

No.	Code	N.Lat.	S.Lat.	W.Lon.	E.Lon.
1	SNC	19 28	19 24.5	155 19	155 14
2	SSC	19 24.5	19 22	155 19	155 16.5
3	SEC	19 24.5	19 22	155 16.5	155 14
4	SER	19 26	19 20.5	155 14	155 07.2
5	SME	19 26	-----	155 07.2	155 00
6	KOA	19 22	19 20.5	155 17	155 14
7	SSF	-----	19 10	155 17	155 00
8	SLE	19 32	19 16	155 00	154 40
9	SF1	19 22	19 10	155 17	155 14.5
10	SF2	19 26	19 10	155 14.5	155 12.3
11	SF3	19 26	19 10	155 12.3	155 09.1
12	SF4	19 26	19 10	155 09.1	155 05.3
13	SF5	19 26	19 10	155 05.3	155 00
14	LER	19 32	19 16	155 00	154 40
15	MLO	19 43	19 19	155 35	155 19
16	LSW	19 19	18 40	155 43	155 25
17	GLN	19 43	19 26	155 19	155 00
18	SWR	19 22	19 10	155 25	155 17
19	INT	19 28	19 22	155 19	155 14
20	KAO	19 30	19 19	155 32	155 19
21	DEP	19 43	19 10	155 25	155 00
22	DLS	19 19	18 40	155 43	155 25
23	DML	19 43	19 19	155 35	155 19
24	LOI	19 10	18 40	155 25	155 00
25	KON	19 39	19 00	156 20	155 43
26	HUA	19 55	19 39	156 20	155 43
27	KOH	20 25	19 55	156 20	155 34
28	KEA	20 25	19 43	155 43	154 40
29	HIL	19 47	19 32	155 09	154 40

Figure 4. Earthquake classification, shallow 0-5 km deep Kilauea and east flank Mauna Loa.

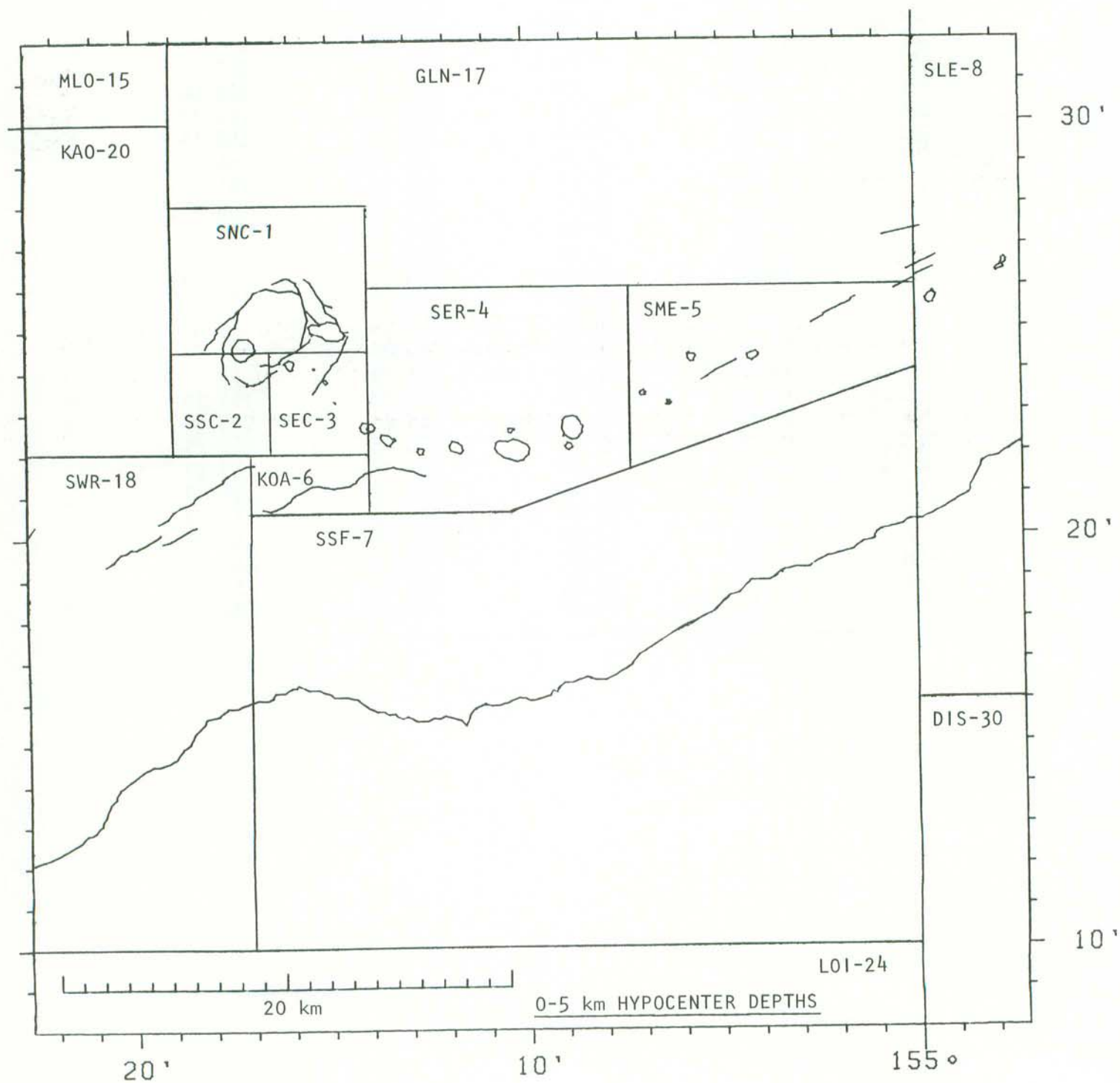


Figure 5. Earthquake classification, intermediate 5-13 km
Kilauea and east flank Mauna Loa.

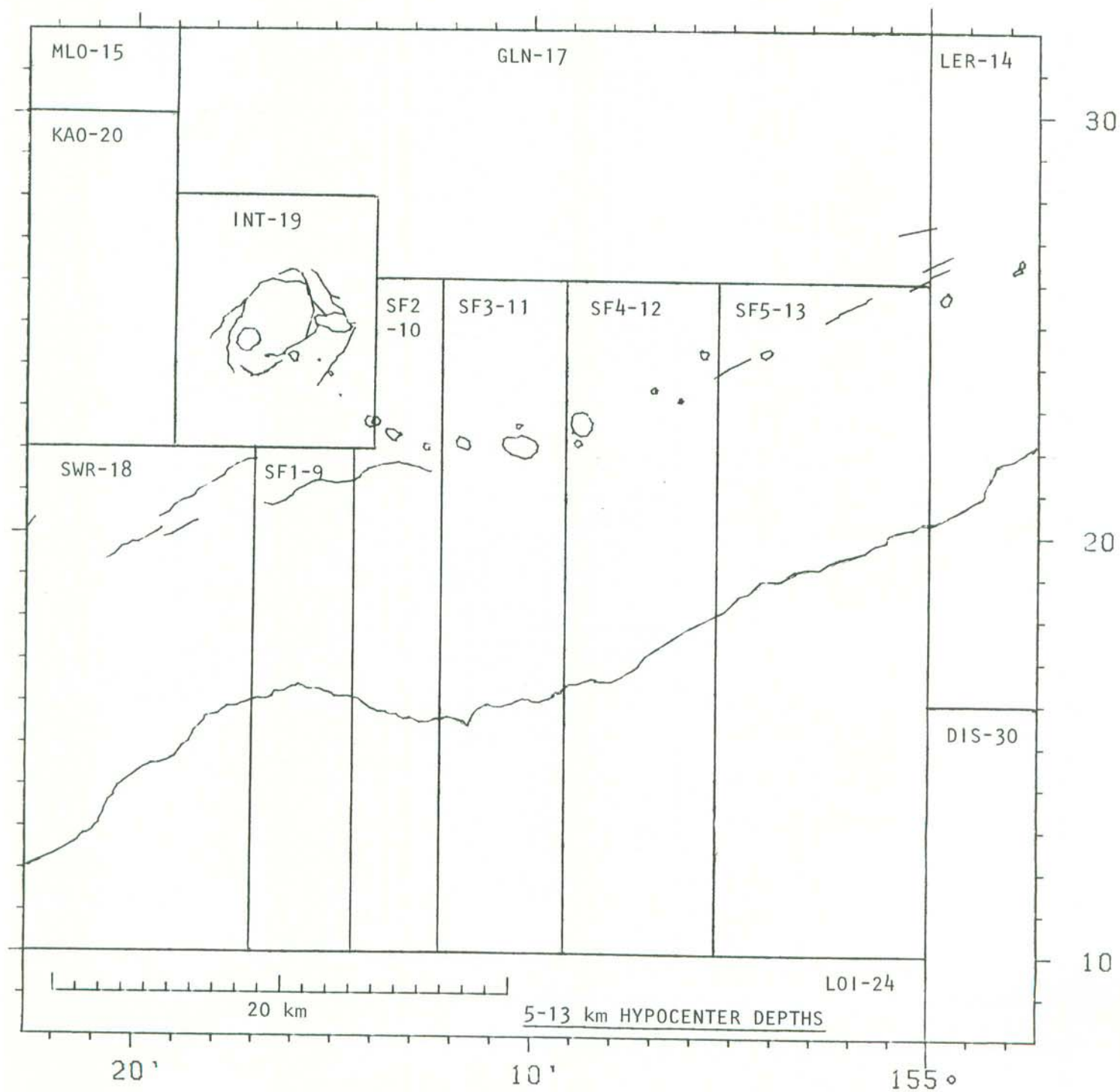


Figure 6. Earthquake classification, crustal 0-13 km deep island of Hawaii.

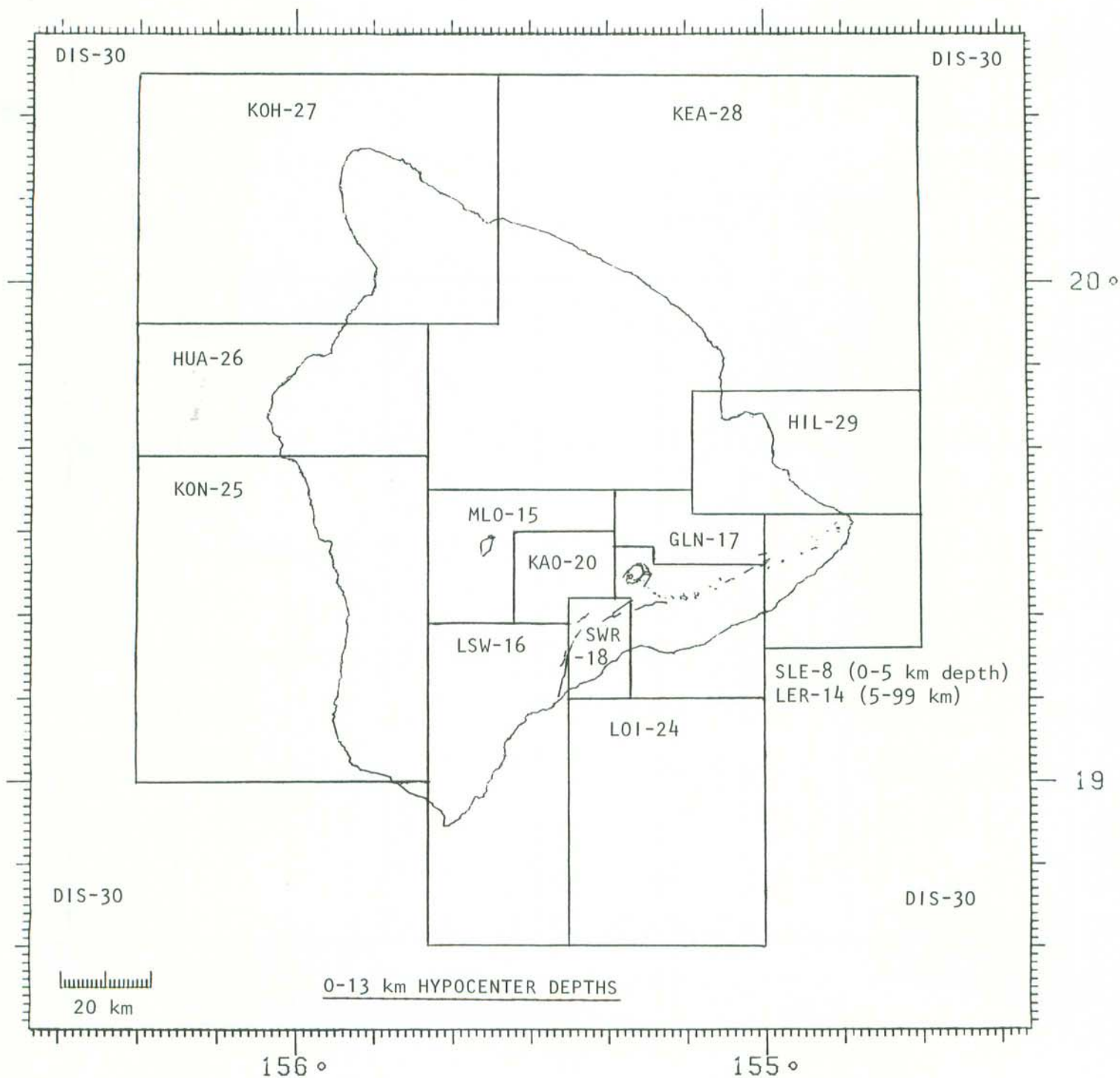
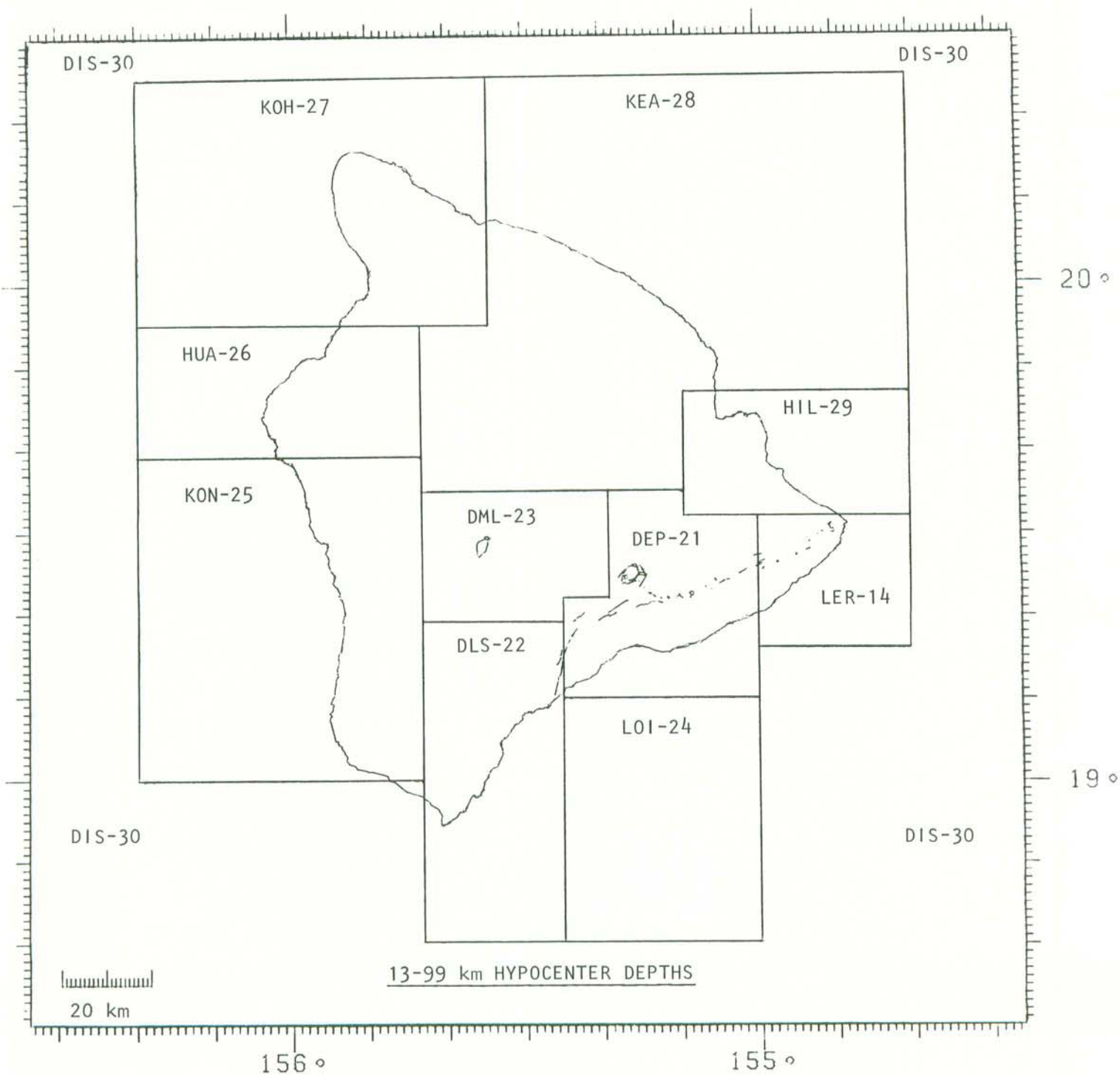
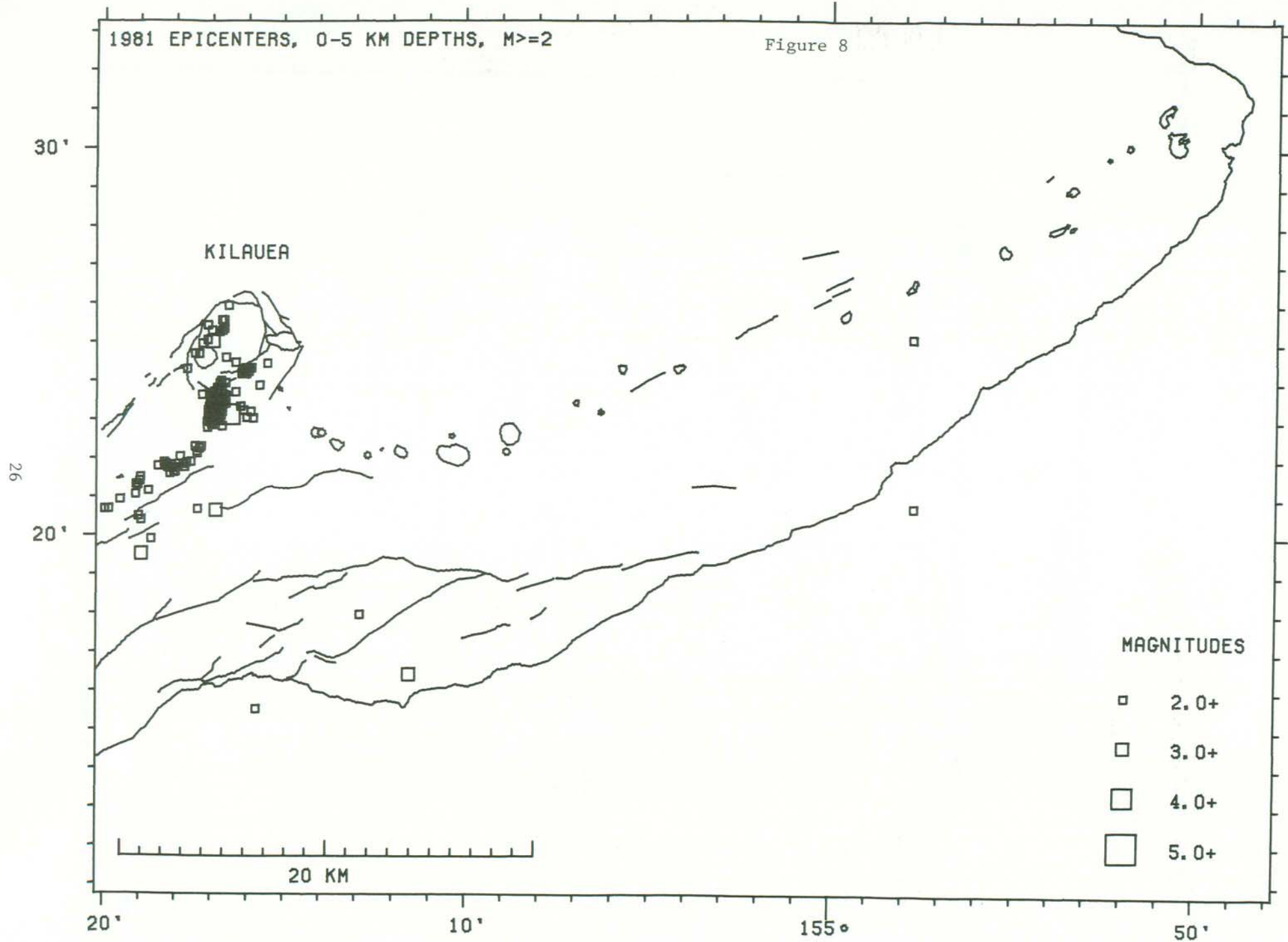


Figure 7. Earthquake classification mantle >13 km deep
island of Hawaii.



1981 EPICENTERS, 0-5 KM DEPTHS, $M \geq 2$

Figure 8



1981 EPICENTERS, 5-13 KM DEPTHS, $M \geq 2$

Figure 9

30'

KILAUEA

20'

MAGNITUDES

▣ 2.0+

□ 3.0+

□ 4.0+

□ 5.0+



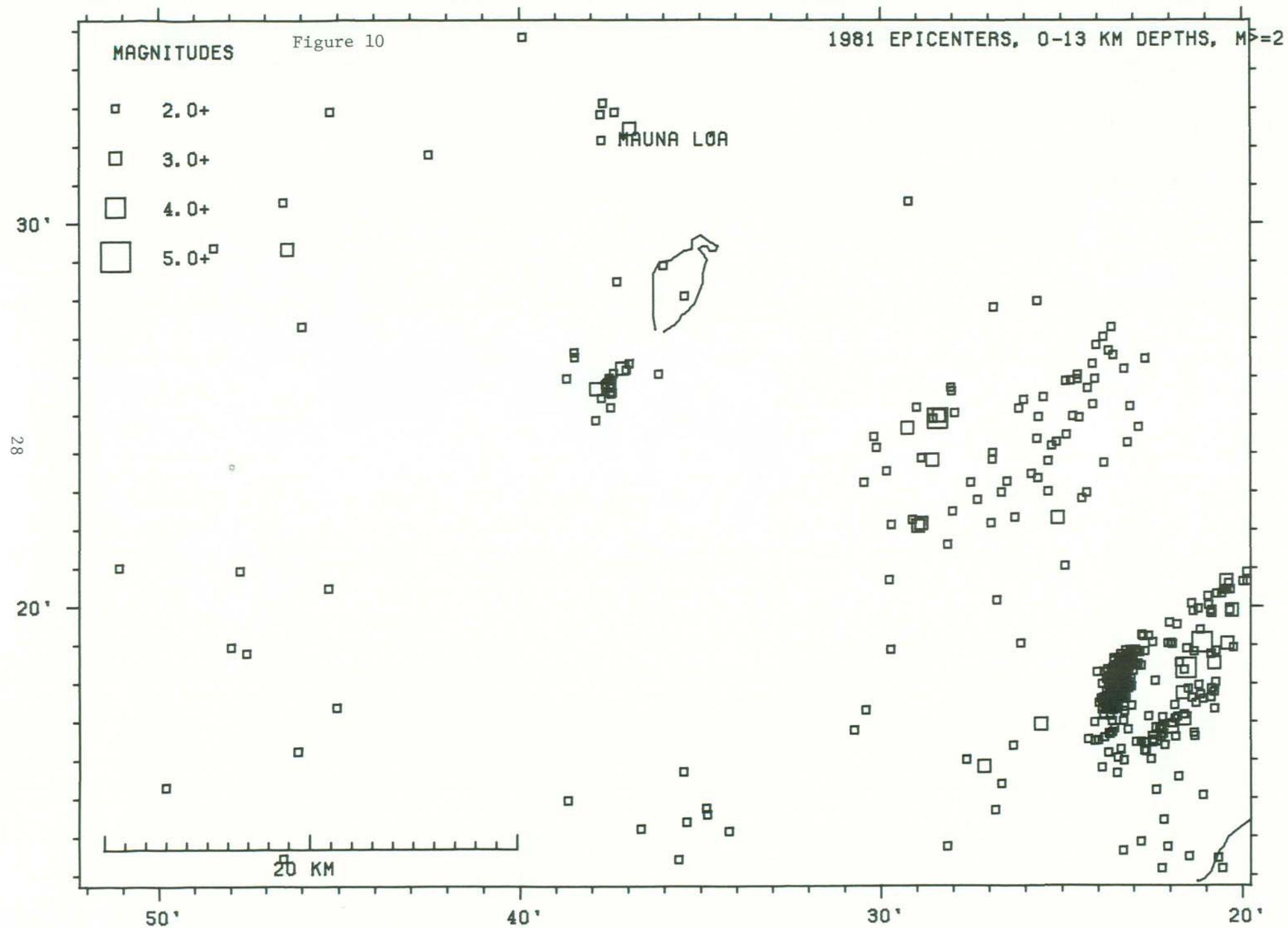
20 KM

20'

10'

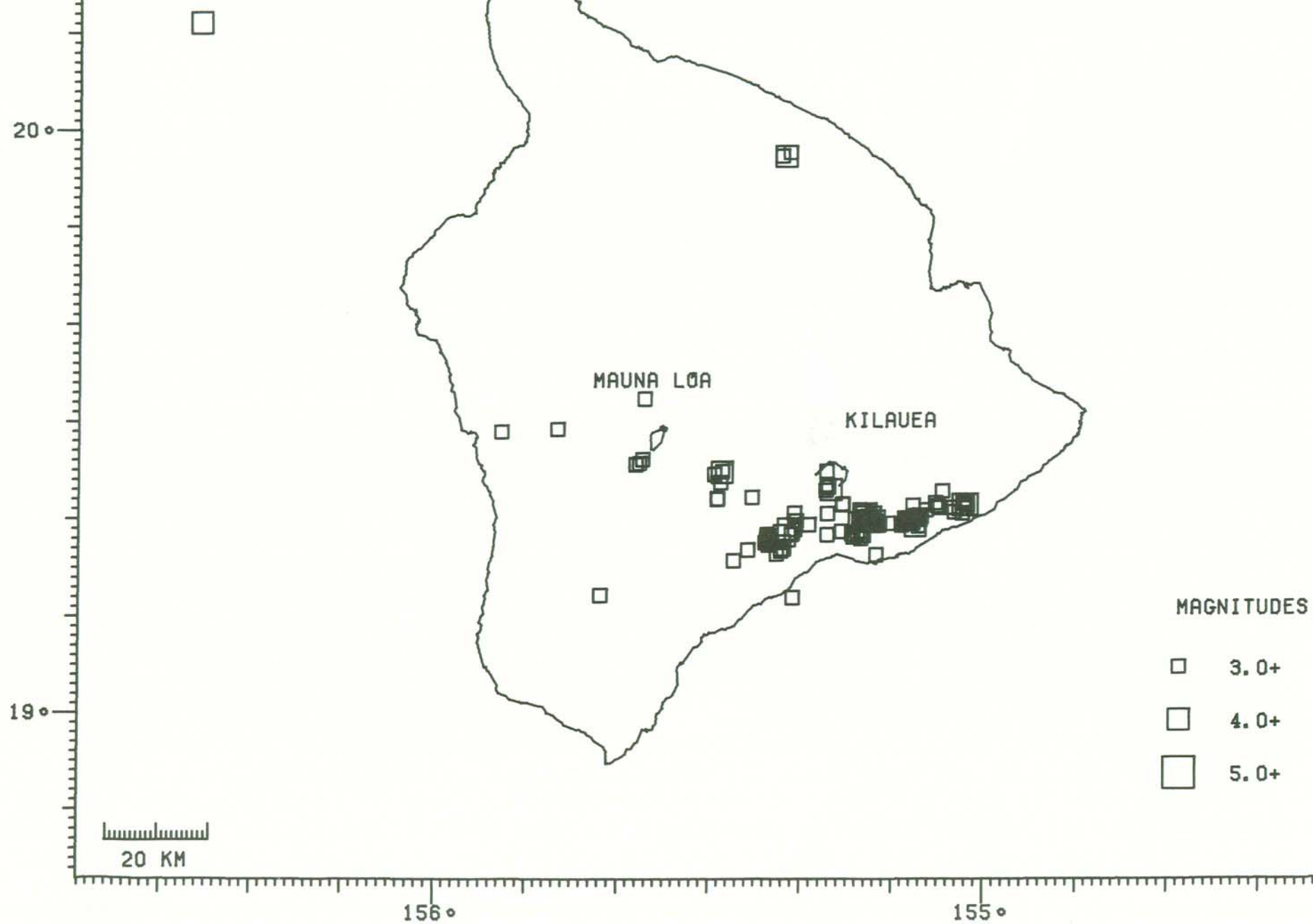
155°

50'



1981 EPICENTERS, 0-13 KM DEPTHS, $M \geq 3$

Figure 11



1981 EPICENTERS, 13-60 KM DEPTHS, $M \geq 2$

Figure 12

20°
30

19°

MAUNA LOA

KILAUEA

MAGNITUDES

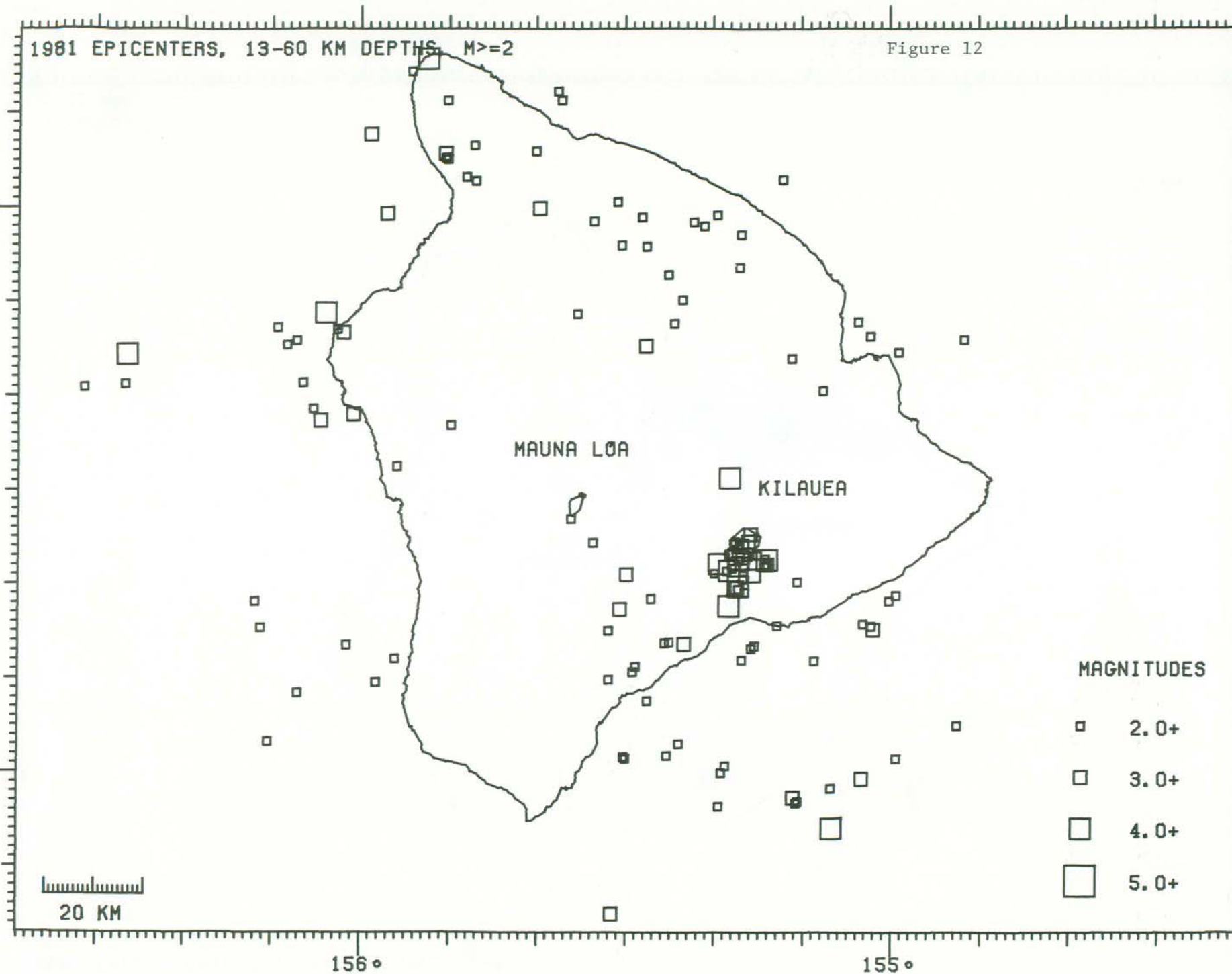
- 2.0+
- 3.0+
- 4.0+
- 5.0+



20 KM

156°

155°



1981 EPICENTERS, 0-5 KM DEPTHS, $M \geq 1$

Figure 13

MAGNITUDES

- ▣ 1.0+
- ▣ 2.0+
- ▣ 3.0+
- ▣ 4.0+

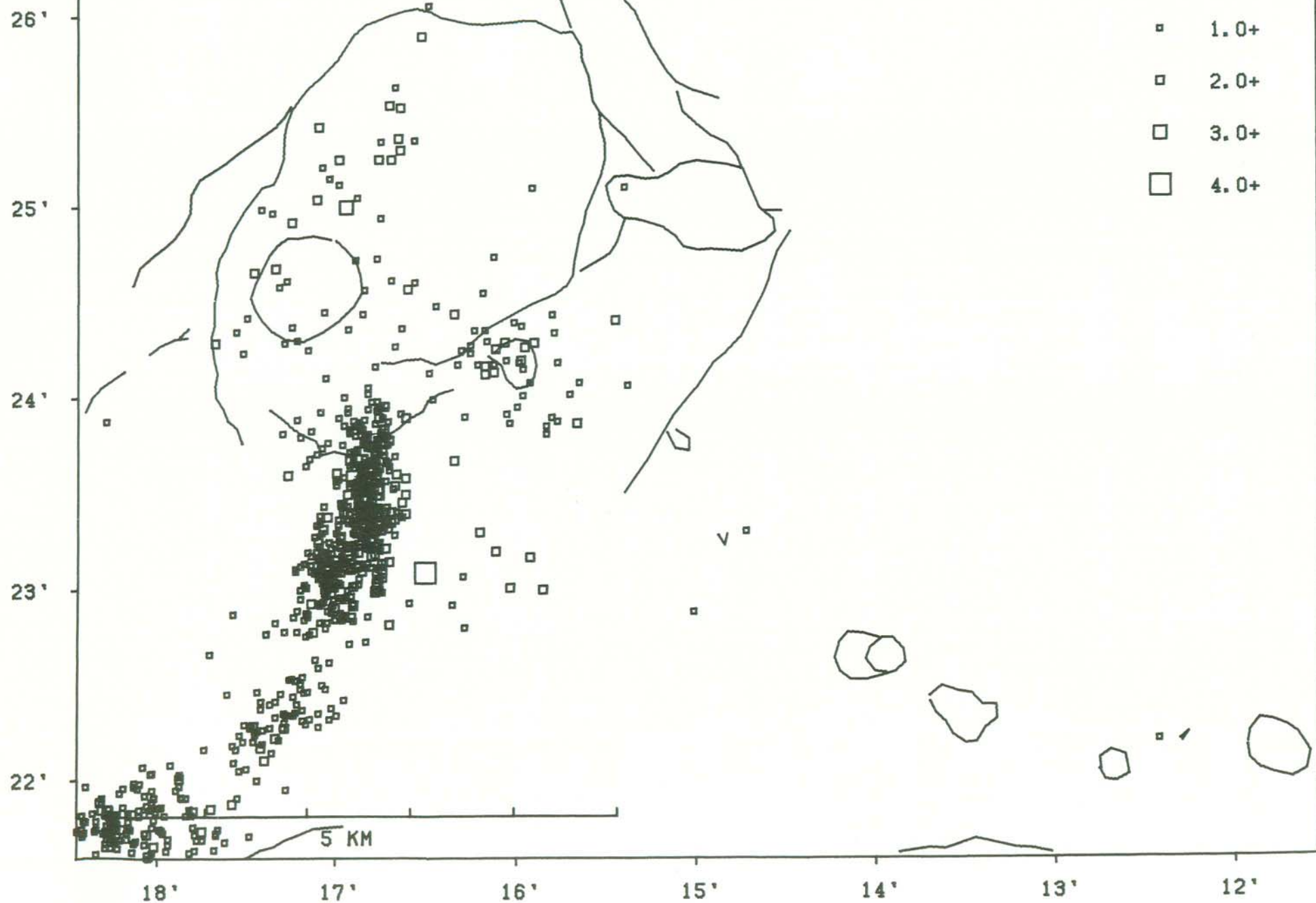


Table 5 is a chronological listing of successfully located earthquakes. For each event the following data are presented:

Origin time in Hawaiian Standard Time: date, hour (HR), minute (MN), and second (SEC).

Epicenter in degrees and minutes of north latitude (LAT N) and west longitude (LON W).

DEPTH - Depth of focus in km.

AMP MAG - Amplitude magnitude, if determined.

DUR MAG - Duration magnitude, if determined.

NR - Number of arrivals (P or S) used for solution.

NS - Number of S arrivals used for solution.

GAP DEG - Largest azimuthal separation in degrees between stations.

RMS SEC - Root mean square error of time residuals in sec.

$$RMS = (\sum R_i^2 / NR)^{1/2}$$

MIN DIS - Epicentral distance in km to the third nearest station.

ERH km - Standard error of the epicenter in km.

ERZ km - Standard error of depth of focus in km.

REMK - Remarks, three letter code for geographic location of event. See Figure 2 for location of mnemonic code. Additional one letter codes have the following meanings:

F - felt

L - long period character

T - associated with harmonic tremor

B - quarry or other blast

* - the location program had a convergence problem, which usually means that the depth may be unreliable.

Table 5 lists all events located during 1981. Table 6 lists only events of magnitude 3.0 or larger.

Table 5.

HVO EARTHQUAKE SUMMARY LIST

PAGE 1

YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	JAN	1	222	18.70	19 24.29	155 17.68	3.15	2.3	2.3 25	1 43	.07	2	.3	.3 22	SSC
		1	250	11.01	19 19.39	155 12.35	7.53	1.5	1.2 21	3 88	.07	5	.5	1.0 15	SF2
		1	340	38.05	19 30.61	155 42.38	8.14	2.1	1.3 25	1 75	.12	6	.6	1.2 20	MLO
		1	346	55.37	19 20.70	155 2.78	6.90	1.5	1.3 26	0 134	.11	1	.6	.9 21	SF5
		1	616	20.25	19 20.63	155 11.16	7.81	2.1	1.8 36	4 75	.11	4	.5	.7 20	SF3
		1	1151	12.26	19 19.05	155 10.90	8.24	1.9	1.8 26	1 110	.06	6	.5	.9 17	SF3
		1	1312	43.54	19 18.56	155 23.44	3.96	1.7	1.9 23	1 106	.09	3	.4	1.0 13	SWR
		1	2134	49.15	19 19.64	155 7.25	8.25	2.7	2.9 39	2 111	.09	4	.4	.5 26	SF4
		1	2231	49.52	19 20.94	155 29.95	29.85	3.4	3.4 47	2 65	.08	5	.5	1.0 45	DML
		1	2335	7.86	19 20.51	155 12.82	8.52	2.1	2.3 40	3 66	.10	4	.4	.6 25	SF2
		2	043	55.45	19 19.77	155 7.70	6.36	2.0	1.8 31	1 98	.11	5	.5	1.1 22	SF4
		2	556	34.46	19 21.61	155 2.70	8.08	2.1	1.9 29	1 127	.09	3	.5	.6 19	SF5
		2	742	8.00	19 18.27	155 14.15	10.19	3.6	3.7 42	1 138	.11	7	.5	.4 41	SF2 F
		2	15 8	11.17	19 23.88	155 18.29	3.06	1.6	1.1 17	2 54	.09	3	.4	.5 13	SF2
		2	2043	40.10	19 19.61	155 7.73	8.94	2.1	2.2 34	2 100	.08	4	.4	.6 20	SF4
		3	3 4	40.11	20 15.69	155 52.39	27.57	3.9	4.3 47	3 160	.12	18	.9	1.1 43	KOH F
		3	318	17.98	19 22.67	155 2.75	8.20	2.0	1.9 34	1 118	.12	4	.4	.7 19	SF5
		3	1123	44.69	19 27.76	155 20.86	8.54	1.9	1.6 24	2 119	.10	0	.5	.8 17	KA0
		3	1217	9.54	19 19.88	155 12.79	7.25	1.4	1.1 27	2 75	.09	5	.4	.9 16	SF2
		4	458	10.12	19 19.97	155 12.74	8.56	1.5	1.2 26	3 74	.06	5	.4	.8 16	SF2
		4	1323	.18	19 23.54	155 16.89	2.90	2.1	2.1 26	3 38	.09	0	.3	.2 20	SSC
		4	1533	42.28	19 19.84	155 12.41	9.06	1.5	1.2 25	1 80	.07	5	.5	.9 19	SF2
		4	18 2	32.57	19 23.31	155 16.77	3.12	1.3	1.3 20	3 67	.07	0	.3	.3 11	SSC
		4	2051	15.53	19 19.95	155 11.25	8.13	1.9	1.4 33	4 87	.08	5	.5	.7 20	SF3
		4	2055	52.13	19 19.77	155 11.25	7.71	1.8	1.3 31	3 91	.07	5	.4	.7 16	SF3
		5	041	46.37	19 16.36	155 26.33	9.68	2.6	2.4 38	2 106	.11	7	.4	.6 29	LSW
		5	337	25.86	19 18.30	155 13.72	8.71	1.8	1.2 26	1 98	.08	2	.5	1.0 18	SF2
		5	6 4	37.12	19 27.28	155 23.62	8.41	3.1	2.8 40	2 73	.11	5	.3	.7 32	KA0
		5	629	53.11	19 19.20	155 11.71	8.43	1.6	1.1 24	3 101	.07	5	.6	1.0 17	SF3
		5	10 3	20.60	19 27.03	155 23.85	7.31	2.7	2.2 41	3 43	.13	4	.4	.8 29	KA0
		5	1151	17.20	19 23.39	155 17.09	2.76	1.1	1.2 21	3 55	.08	0	.3	.3 16	SSC
		5	1712	50.96	19 19.59	155 13.25	7.71	1.6	1.3 27	2 71	.10	5	.5	.9 20	SF2
		6	8 7	39.26	19 22.33	155 2.63	7.98	2.0	1.7 29	0 123	.14	5	.6	.7 15	SF5
		6	1242	18.94	19 19.56	155 15.25	8.43	2.0	1.7 32	4 98	.08	4	.5	.6 22	SF1
		6	1535	49.73	19 24.19	155 24.02	9.95	1.8	1.1 30	3 44	.08	3	.4	.8 23	KA0
		6	1814	5.43	18 54.01	155 6.75	51.98	4.1	4.4 46	2 256	.09	43	1.8	2.4 44	LOI F
		6	1927	57.51	19 45.35	156 8.23	35.50	2.6	1.9 34	2 250	.13	38	1.3	2.3 27	HUA
		7	021	32.35	19 24.26	155 16.12	1.59	2.0	2.4 24	2 112	.11	1	.3	.2 18	SEC
		7	149	40.14	19 26.43	154 55.75	5.78	1.8	1.3 25	1 150	.09	2	.6	.9 12	LER
		7	318	3.18	19 19.69	155 12.06	8.32	1.8	1.3 29	2 82	.09	5	.5	.8 22	SF3
		7	515	16.63	19 20.26	155 13.91	8.50	1.6	1.1 23	2 66	.08	4	.6	1.0 16	SF2
		7	527	27.08	19 23.66	155 16.13	2.87	1.6	1.4 23	2 54	.08	1	.3	.2 15	SSC
		7	711	10.42	19 23.57	155 16.73	2.54	1.2	1.0 19	4 45	.09	1	.3	.2 10	SSC
		7	837	51.93	19 23.64	155 16.89	2.87	1.2	.5 20	4 50	.06	1	.3	.3 12	SSC
		7	838	9.41	19 23.71	155 16.79	2.77	1.7	1.5 23	2 53	.10	1	.3	.2 17	SSC
		7	1016	46.40	19 25.21	155 15.84	15.83	3.4	3.2 47	2 36	.11	2	.4	.3 43	DEP F
		7	1118	56.80	19 18.43	155 13.37	9.94	1.9	1.1 27	3 83	.10	3	.6	.9 19	SF2
		7	1129	5.25	19 22.95	155 16.96	2.72	1.8	1.0 23	4 57	.08	1	.3	.2 15	SSC

HVO EARTHQUAKE SUMMARY LIST

PAGE 2

YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	JAN	7	1129	43.11	19 24.35	155 17.47	2.98	1.0	.8 12	1 80	.04	1	.6	.5 9	SSC
		7	1238	25.90	19 24.74	155 16.13	1.57	1.4	1.1 17	3 120	.05	2	.3	.3 9	SNC
		7	1314	19.41	19 12.40	155 37.44	8.44	2.4	1.4 23	1 206	.17	5	1.2	1.0 17	LSW
		7	1450	41.33	19 21.08	155 5.98	8.05	2.0	1.3 27	2 95	.07	4	.5	.9 19	SF4
		7	1458	55.29	19 22.84	155 3.45	8.44	2.0	1.1 28	1 108	.10	3	.5	.7 24	SF5
		7	2154	7.88	19 25.38	155 24.22	9.66	2.3	1.6 39	4 44	.12	2	.4	.6 27	KA0
		8	023	36.74	19 21.20	155 7.12	8.45	2.2	1.8 29	3 85	.06	4	.4	.8 19	SF4
		8	259	23.00	19 23.75	155 16.82	3.15	1.3	.8 14	3 79	.06	1	.5	.4 9	SSC
		8	6 6	33.36	19 23.24	155 17.01	2.93	1.8	1.4 23	4 46	.10	0	.2	.3 16	SSC
		8	6 7	2.17	19 23.30	155 17.00	2.83	1.6	1.5 19	4 57	.09	0	.3	.3 11	SSC
		8	1026	37.12	19 19.89	155 11.90	7.99	1.9	1.1 27	4 84	.08	5	.4	.8 18	SF3
		8	1344	26.54	19 23.89	155 15.75	2.98	1.0	.9 17	3 107	.11	2	.4	.4 10	SEC
		9	1 0	43.86	19 23.00	155 16.77	2.89	2.1	2.1 30	4 40	.10	1	.2	.3 22	SSC
		9	821	19.18	19 24.02	155 23.89	11.16	2.1	1.3 20	1 70	.07	7	.5	1.0 19	KA0
		9	1048	51.66	19 25.42	155 17.10	1.44	1.7	2.4 19	1 156	.10	1	.5	.2 13	SNC
		9	1114	46.72	19 20.33	155 6.65	7.68	1.7	1.8 27	1 107	.08	5	.5	1.0 21	SF4
		9	1954	48.34	19 14.95	155 38.67	7.52	2.4	2.5 24	1 246	.15	3	1.4	.9 15	LSW
		9	2032	21.62	19 20.46	155 13.23	9.31	1.5	1.3 21	2 63	.06	4	.5	.9 16	SF2
		9	2337	10.00	19 23.04	155 4.12	8.47	1.9	1.8 28	1 93	.08	3	.4	.7 17	SF5
		10	3 1	23.66	19 24.25	155 25.79	10.59	1.9	.31	1 39	.11	2	.3	.6 23	KA0
		10	3 1	54.81	19 24.15	155 25.86	9.29	1.6	1.7 23	2 47	.11	2	.4	.8 17	KA0
		10	736	41.34	19 25.83	155 24.23	9.24	1.4	1.6 21	1 50	.10	2	.5	1.1 14	KA0
		10	758	29.46	19 10.62	155 38.75	4.92	1.7	1.8 21	0 107	.12	6	.7	1.9 12	LSW
		10	827	56.72	19 23.09	155 16.97	3.09	.9	1.1 18	2 48	.08	1	.3	.3 12	SSC
		10	1437	50.17	19 18.79	155 16.10	8.00	1.6	1.5 22	2 127	.05	3	.5	.9 16	SF1
		10	2155	25.50	19 25.36	155 16.66	2.16	1.8	2.4 21	2 122	.07	1	.4	.2 16	SNC
		11	020	44.30	19 18.53	155 13.31	7.41	1.4	1.3 28	2 83	.10	3	.5	1.0 19	SF2
		11	032	47.29	19 19.48	155 11.13	9.20	1.9	1.7 28	1 97	.08	5	.5	.9 24	SF3
		11	058	56.76	19 19.67	155 8.29	7.26	1.6	1.5 26	3 85	.06	4	.4	.9 14	SF4
		11	1 7	45.25	19 19.04	155 15.40	8.07	1.8	1.7 27	1 95	.06	4	.5	.8 18	SF1
		11	1228	19.88	19 23.58	155 16.99	2.09	1.0	1.5 17	1 49	.09	0	.4	.2 6	SSC
		11	1256	41.41	19 24.20	155 16.06	3.27	.9	1.3 13	2 124	.04	1	.4	.4 8	SFC
		11	13 0	40.39	19 24.29	155 17.29	3.62	1.2	1.1 15	2 58	.11	1	.7	.6 7	SSC
		11	1748	40.95	19 20.58	155 2.16	6.72	1.6	1.7 23	1 173	.09	2	.6	.8 13	SF5
		11	21 7	7.33	19 25.04	155 17.11	1.86	1.9	2.8 20	0 117	.07	0	.3	.2 15	SNC
		11	2122	50.54	19 21.75	155 1.52	7.58	1.5	1.4 30	0 158	.12	4	.6	1.0 18	SF5
		11	2224	40.71	19 24.82	155 15.83	19.50	1.6	1.7 30	1 72	.10	2	.6	.9 25	DEP
		11	2345	31.27	19 23.84	155 1.31	8.06	1.7	1.6 27	1 133	.10	5	.5	.9 14	SF5
		11	2347	13.24	19 23.81	155 1.93	8.90	1.7	1.6 31	1 124	.12	4	.5	.9 18	SF5
		12	022	41.11	19 9.81	155 31.99	38.04	2.5	2.7 42	3 194	.08	7	.9	1.1 33	DLS
		12	047	1.93	19 23.87	155 16.04	3.04	.9	1.5 20	2 102	.08	1	.3	.3 10	SEC
		12	1 8	58.23	19 23.57	155 16.91	3.06	.8	1.1 12	1 83	.08	0	.4	.3 9	SSC
		12	111	51.97	19 20.10	155 10.58	8.54	1.9	2.0 34	2 86	.10	4	.4	.7 23	SF3
		12	234	6.97	19 26.05	155 24.57	6.72	2.2	2.2 31	2 47	.11	2	.4	1.0 22	KA0
		12	418	10.63	19 21.35	155 18.28	31.06	4.5	4.6 43	0 40	.10	3	.6	1.0 43	DEP F
		12	423	19.23	19 22.11	155 16.81	32.70	2.9	3.9 45	2 48	.09	2	.6	.9 38	DEP F
		12	436	17.11	19 17.60	155 18.31	33.28	4.0	4.3 43	0 132	.09	1	.7	1.0 43	DEP F
		12	441	23.42	19 21.60	155 17.96	27.99	2.2	2.2 36	2 130	.10	3	.7	1.1 27	DEP

HVO EARTHQUAKE SUMMARY LIST

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		ORIGIN TIME			LAT N		LON W		DEPTH		AMP		DUR		GAP		RMS		MIN		ERM		ERZ NO		
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK					
1981	JAN	12	5	7	48.91	19 19.68	155 17.26	33.42	4.0	4.4	45	1	92	.10	1	.6	1.0	44	DEP	F					
		12	518	35.77	19 17.73	155 17.78	32.46	1.8	1.6	29	1	130	.07	2	.9	1.5	24	DEP							
		12	653	44.58	19 20.67	155 18.13	29.85	2.1	1.5	35	0	61	.08	2	.8	1.0	29	DEP							
		12	810	49.40	19 20.27	155 12.81	7.91	2.2	2.4	33	3	69	.09	4	.4	.5	26	SF2							
		12	1121	41.15	19 31.27	155 18.18	32.92	4.3	4.5	44	0	50	.10	8	.6	1.2	44	DEP	F						
		12	2349	11.93	19 20.38	155 11.97	9.28	1.8	1.5	30	2	75	.08	5	.5	.8	24	SF3							
		13	1	2	30.49	19 23.04	155 4.52	9.00	2.3	1.7	30	1	141	.06	3	.5	.8	21	SF5						
		13	139	52.93	19 23.52	155 16.82	2.76	2.3	2.2	31	1	37	.10	0	.3	.2	28	SSC							
		13	220	39.58	19 21.85	155 14.27	30.76	2.5	1.9	42	1	57	.09	3	.7	.9	41	DEP							
		13	417	55.68	19 20.15	155 7.73	6.93	1.8	1.1	28	3	93	.08	5	.4	.9	16	SF4							
		13	450	46.90	19 20.50	155 20.75	30.42	2.2	1.4	37	2	71	.09	4	.6	1.1	31	DEP							
		13	6	8	1.77	19 27.04	155 30.10	9.23	2.3	1.3	28	2	72	.09	4	.4	1.2	19	KAO						
		13	958	44.02	19 23.87	155 16.88	2.97	1.1	1.3	17	3	77	.07	1	.4	.2	13	SSC							
		13	1058	24.91	19 23.12	155 16.89	2.79	2.2	2.6	30	3	40	.09	1	.2	.2	22	SSC							
		13	1131	8.14	19 23.24	155 16.84	5.05	1.2	1.6	18	4	57	.06	0	.2	.3	10	SSC							
		13	1141	11.04	19 23.10	155 16.86	2.94	2.3	2.8	27	3	40	.09	1	.2	.3	21	SSC							
		13	1143	37.15	19 23.46	155 16.88	2.95	1.9	2.3	21	2	36	.08	0	.3	.3	17	SSC							
		13	1530	1.36	19 23.90	155 15.81	3.09	1.4	1.9	18	2	108	.06	1	.3	.3	11	SEC							
		13	1722	41.43	19 21.59	155 1.97	7.35	1.6	1.6	27	0	157	.10	4	.7	1.0	20	SF5							
		13	18	0	5.19	19 19.15	155 16.11	7.26	1.3	1.1	18	1	114	.07	3	.5	1.1	12	SF1						
		13	18	3	40.19	19 23.67	154 58.82	6.49	1.6	1.6	27	0	164	.13	3	.8	1.1	18	LER						
		13	18	8	41.82	19 19.08	155 11.39	8.49	1.5	1.5	21	1	107	.05	5	.6	1.2	15	SF3						
		13	18	9	43.90	19 23.34	155 16.86	2.97	2.1	2.7	27	2	39	.09	0	.3	.2	21	SSC						
		13	1813	31.52	19 20.80	155 15.48	15.37	3.1	3.4	41	0	74	.11	3	.6	.4	41	DEP							
		13	1820	16.51	19 22.08	155 19.42	28.88	4.3	4.8	44	0	44	.10	3	.6	.9	44	DML	F						
		13	19	3	45.40	19 20.24	155 13.42	8.80	2.5	2.8	41	3	65	.09	4	.4	.5	29	SF2						
		14	411	4.00	19 23.10	155 27.68	9.46	1.4	1.5	25	1	50	.10	1	.5	.9	17	KAO							
		14	418	57.40	20 5.92	155 40.03	21.98	2.8	3.1	43	2	197	.10	12	1.4	2.3	38	KOH							
		14	423	7.80	19 11.18	155 28.90	33.89	2.3	1.9	29	1	77	.08	4	.8	1.7	25	DLS							
		14	527	40.13	19 23.07	155 17.07	2.65	.9	1.5	20	3	66	.06	1	.3	.3	14	SSC							
		14	741	47.53	19 20.65	155 12.44	9.05	1.8	2.2	32	2	68	.10	4	.5	.6	24	SF2							
		14	1317	59.77	19 18.72	155 13.55	7.08	2.1	1.7	34	1	72	.10	3	.4	.9	24	SF2							
		14	1426	15.17	19 24.02	155 15.71	3.32	1.4	1.0	20	2	114	.09	2	.3	.3	12	SEC							
		14	1436	53.03	19 25.78	155 37.51	.00	3.1	3.4	33	1	93	.10	7	.4	1.4	29	MLO	*						
		14	1438	45.52	19 25.58	155 37.43	.00	2.5	1.6	20	0	91	.15	7	.4	2.7	8	MLO	*						
		14	2142	17.23	19 21.44	155 2.44	7.55	1.6	1.2	25	1	150	.10	3	.6	1.0	10	SF5							
		14	2316	34.35	19 17.68	158 19.54	15.02	3.3	4.5	22	0	315	.12264		7.9	99.0	5	DLS	*						
		15	0	9	16.11	19 21.32	155 .64	5.51	1.9	1.6	32	2	183	.10	5	.6	.9	23	SF5						
		15	019	35.17	19 20.66	155 9.77	8.59	1.7	1.1	26	3	72	.08	3	.5	1.0	21	SF3							
		15	233	56.72	19 20.18	155 13.32	7.59	1.6	1.3	31	1	64	.14	5	.6	.9	24	SF2							
		15	242	46.51	19 25.02	155 37.55	1.11	2.2	1.4	14	0	124	.09	8	.6	6.3	5	MLO	*						
		15	859	48.06	19 22.66	155 17.71	3.65	1.3	1.0	20	2	55	.07	2	.3	.5	13	SSC							
		15	1437	11.96	19 19.50	155 17.39	34.35	3.8	3.7	44	1	95	.10	1	.6	1.0	43	DEP	F						
		15	1651	6.97	19 23.25	155 26.50	9.71	2.8	2.2	41	0	52	.13	2	.4	.6	31	KAO							
		15	19	0	10.61	19 19.51	155 6.92	8.52	2.2	1.9	35	2	122	.08	4	.5	.6	24	SF4						
		15	1937	36.39	19 24.54	154 59.55	6.33	1.6	1.1	25	0	145	.11	2	.6	1.1	9	LER							
		15	21	4	57.70	19 20.29	155 16.80	26.98	2.1	1.4	40	4	82	.08	1	.7	.8	33	DEP						
		15	2316	34.81	19 21.16	155 5.96	7.35	1.8	1.1	25	1	94	.10	3	.5	.9	16	SF4							

HVO EARTHQUAKE SUMMARY LIST

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		ORIGIN TIME			LAT N		LON W		DEPTH AMP DUR				GAP RMS MIN		ERM	ERZ NO					
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK	
1981	JAN	16	317	14.08	19	21.01	155	2.47	5.27	1.6	1.1	24	1	144	.13	2	.7	1.1	11	SF5	
		17	623	1.70	19	19.84	155	12.07	9.11	2.6	2.8	34	1	84	.10	5	.4	.5	26	SF3	
		17	1021	55.33	19	21.16	155	1.65	8.76	2.9	3.2	40	1	168	.10	3	.6	.4	34	SF5	
		17	1049	2.73	19	21.69	155	1.56	5.62	2.2	2.5	34	2	158	.13	4	.6	.9	23	SF5	
		17	11	8	26.56	19	23.16	155	17.07	2.65	1.6	1.6	18	2	72	.10	0	.3	.2	13	SSC
		17	1821	16.30	19	23.34	155	16.99	2.82	1.2	1.3	18	2	64	.08	0	.4	.2	14	SSC	
		17	1822	17.83	19	25.25	155	16.77	1.88	2.2	2.8	28	2	39	.09	1	.2	.3	24	SNC F	
		17	19	6	34.03	19	23.88	155	15.78	2.95	1.4	1.7	24	4	107	.06	1	.3	.3	15	SEC
		17	1956	9.48	19	24.37	155	16.64	2.18	1.3	1.3	16	2	96	.10	1	.3	.2	9	SSC	
		17	2133	43.16	19	20.14	155	12.70	9.90	1.7	1.7	20	1	72	.06	5	.6	1.0	16	SF2	
		18	1	0	16.08	19	25.15	155	17.04	1.67	1.8	2.1	17	1	118	.07	0	.4	.2	15	SNC
		18	115	14.80	19	19.66	155	11.91	7.77	1.6	1.1	19	2	89	.04	6	.5	1.2	14	SF3	
		18	125	53.54	19	25.00	155	16.95	1.67	3.4	3.8	32	1	39	.10	0	.3	.2	23	SNC F	
		18	128	35.61	19	23.87	155	15.67	3.13	1.8	2.3	18	1	106	.08	2	.4	.3	14	SEC	
		18	253	46.44	19	20.71	155	11.34	7.28	1.7	1.3	28	3	73	.11	4	.5	.8	18	SF3	
		18	438	57.07	19	21.62	155	6.43	8.30	2.0	2.3	31	2	82	.08	3	.4	.7	13	SF4	
		18	459	27.03	19	23.00	155	26.87	11.32	1.6	1.3	20	2	96	.08	3	.5	1.0	13	KAO	
		18	636	54.08	19	25.35	155	16.57	1.69	1.5	1.4	14	0	121	.08	1	.4	.3	9	SNC	
		18	643	59.75	19	24.68	155	17.34	1.41	2.4	2.9	26	2	41	.10	1	.3	.2	22	SNC F	
		18	917	31.37	19	26.06	155	16.49	2.16	1.6	1.3	14	2	192	.09	2	.5	.4	9	SNC	
		18	1255	39.53	19	26.66	155	24.56	6.90	2.0	1.2	23	4	117	.11	3	.4	1.1	13	KAO	
		18	1336	51.62	19	22.20	155	29.02	10.95	2.1	1.5	25	0	62	.08	3	.4	1.2	20	KAO	
		19	510	53.17	19	14.63	155	32.26	5.40	2.1	1.3	33	2	122	.16	4	.5	1.2	24	LSW	
		19	529	33.95	19	16.91	155	14.28	9.62	2.2	1.7	25	4	185	.07	1	.8	.5	13	SF2	
		19	8	2	9.39	19	20.79	155	3.28	7.22	2.5	2.0	35	3	100	.10	2	.5	.7	24	SF5
		19	8	3	6.14	19	19.16	155	12.27	7.85	1.7	1.0	21	2	95	.07	4	.6	1.1	17	SF3
		19	8	3	31.89	19	19.23	155	12.45	7.90	1.7	1.0	17	1	91	.07	4	.6	1.3	12	SF2
		19	1526	43.90	19	17.74	155	12.99	6.37	2.0	2.1	32	2	119	.10	2	.5	1.0	17	SF2	
		19	1547	30.95	19	20.23	155	7.37	9.04	1.3	1.1	18	1	97	.06	5	.7	1.6	16	SF4	
		19	1821	40.44	19	18.39	155	12.95	9.32	3.0	3.6	43	3	136	.11	8	.5	.6	34	SF2 F	
		19	1858	53.46	19	18.11	155	12.85	5.18	1.5	1.7	23	2	110	.10	2	.5	1.1	10	SF2	
		19	19	5	15.08	19	17.75	155	12.91	6.83	1.7	30	3	123	.11	2	.5	.9	15	SF2	
		19	19	5	50.07	19	17.99	155	12.97	5.35	1.7	1.7	26	2	109	.09	2	.5	1.1	15	SF2
		19	1912	23.42	19	20.26	155	7.35	8.93	1.6	1.5	20	2	98	.05	5	.6	1.3	17	SF4	
		19	1934	7.07	19	20.14	155	12.90	8.72	1.7	1.2	18	2	70	.05	5	.5	1.2	13	SF2	
		19	2112	24.62	19	26.87	155	19.91	7.82	1.4	1.2	15	3	165	.09	5	.7	1.2	7	KAO	
		19	2249	45.05	19	20.10	155	7.20	7.06	1.2	1.1	16	1	103	.07	5	.6	1.5	12	SF4	
		20	028	8.48	19	20.27	155	7.13	8.46	2.8	1.2	37	3	101	.10	5	.4	.6	28	SF4	
		20	226	4.36	19	24.01	154	57.90	6.00	1.8	1.6	23	1	169	.13	3	.8	1.1	18	LER	
		20	251	56.58	19	19.94	155	11.30	7.93	1.9	1.5	25	2	87	.06	5	.5	.9	19	SF3	
		20	310	35.83	19	23.16	155	17.10	2.89	1.0	1.5	16	2	72	.09	1	.4	.3	13	SSC	
		20	339	51.02	19	23.16	155	17.04	2.75	.9	1.1	14	1	62	.05	0	.4	.3	10	SSC	
		20	344	8.30	19	22.83	155	17.05	2.47	1.0	1.3	16	3	86	.06	1	.3	.3	10	SSC	
		20	358	11.74	19	22.85	155	17.00	2.62	2.3		24	2	48	.07	1	.3	.3	20	SSC	
		20	359	29.51	19	23.14	155	16.75	2.46	2.3		24	3	46	.09	1	.3	.3	20	SSC	
		20	4	3	44.82	19	23.03	155	16.98	2.92	1.3	1.3	19	3	48	.08	1	.3	.3	11	SSC
		20	526	35.42	19	21.38	155	8.39	8.84	1.7	2.0	31	2	69	.08	3	.4	.6	19	SF4	
		20	538	13.01	19	23.35	155	16.91	3.17	1.3	1.3	18	3	46	.10	0	.5	.3	11	SSC	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HR	MIN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	JAN	20	618	53.36	19 23.31	155 16.83	2.95 2.4	2.2 27	3	46 .08	0	.3	.2 21	SSC	F			
		20	630	57.05	19 23.02	155 17.04	2.73 .9	1.1 17	3	78 .08	1	.3	.3 11	SSC				
		20	7 8	24.57	19 23.11	155 16.93	3.28 1.7	2.0 22	4	47 .10	1	.3	.3 14	SSC				
		20	719	44.12	19 22.92	155 17.02	2.53 1.6	2.3 21	2	49 .08	1	.3	.2 14	SSC				
		20	934	2.67	19 22.98	155 16.90	3.06 1.0	.8 19	3	48 .07	1	.3	.3 8	SSC				
		20	944	1.09	19 23.03	155 17.10	2.45 .9	.8 15	2	67 .06	1	.3	.3 7	SSC				
		20	10 0	38.16	19 22.77	155 17.39	2.49 1.7	1.8 22	4	52 .11	1	.3	.3 13	SSC				
		20	10 1	53.66	19 23.15	155 16.94	3.19 .9	1.3 12	1	63 .04	0	.4	.4 8	SSC				
		20	10 7	22.81	19 23.09	155 17.06	2.55 1.6	1.8 20	4	47 .08	1	.3	.3 12	SSC				
		20	10 9	4.42	19 22.86	155 16.97	2.59 2.3	2.8 24	4	49 .09	1	.3	.3 19	SSC				
		20	1042	59.69	19 23.28	155 17.12	2.82 .9	1.1 14	2	85 .09	0	.3	.3 10	SSC				
		20	11 0	17.23	19 23.31	155 17.19	2.52 .8	.9 14	2	81 .07	0	.3	.3 7	SSC				
		20	11 8	50.38	19 23.20	155 17.11	2.81 1.3	1.3 17	2	47 .07	0	.3	.3 10	SSC				
		20	1158	7.69	19 23.06	155 17.10	2.84 1.2	1.1 18	3	66 .09	1	.3	.3 14	SSC				
		20	12 2	29.41	19 23.35	155 16.77	3.22 2.9	2.4 26	1	39 .10	0	.3	.3 21	SSC				
		20	1210	11.36	19 23.23	155 17.08	2.50 .8	1.0 13	2	85 .07	0	.4	.2 8	SSC				
		20	1237	23.56	19 23.20	155 17.08	2.85 1.0	1.3 16	2	61 .08	0	.3	.3 11	SSC				
		20	13 0	59.93	19 23.20	155 16.99	2.82 2.0	2.3 22	4	47 .08	0	.3	.3 16	SSC				
		20	1319	33.80	19 23.13	155 16.88	2.98 2.1	2.3 24	3	47 .07	0	.2	.3 16	SSC				
		20	1358	42.91	19 23.14	155 17.19	2.58 .8	.9 14	1	79 .07	1	.3	.3 10	SSC				
		20	1446	9.35	19 23.16	155 17.08	2.57 1.0	1.3 14	1	48 .07	0	.3	.3 8	SSC				
		20	15 1	31.37	19 23.03	155 16.88	2.87 1.8	1.8 21	2	48 .09	1	.3	.3 15	SSC				
		20	1541	52.52	19 23.25	155 17.06	2.71 .8	.9 13	2	77 .05	0	.3	.3 8	SSC				
		20	1542	15.78	19 22.99	155 16.79	2.77 2.4	2.1 29	3	40 .11	1	.2	.2 22	SSC				
		20	1551	2.14	19 23.23	155 16.91	3.33 1.4	1.8 21	3	46 .09	0	.3	.3 14	SSC				
		20	1559	18.75	19 23.09	155 16.78	2.91 2.3	2.4 25	3	43 .07	1	.2	.2 21	SSC				
		20	1617	39.54	19 23.24	155 17.05	2.49 .8	.5 8	1	154 .03	0	.4	.4 5	SSC				
		20	1620	31.47	19 23.00	155 16.94	2.90 1.8	1.8 21	3	48 .09	1	.3	.3 17	SSC				
		20	1623	33.45	19 23.36	155 16.99	2.61 .8	.4 9	2	146 .04	0	.5	.4 7	SSC				
		20	1623	49.16	19 23.34	155 16.96	2.62 .8	.4 9	2	145 .04	0	.4	.4 7	SSC				
		20	1628	56.62	19 23.23	155 17.03	3.04 .9	.4 14	3	79 .07	0	.3	.4 9	SSC				
		20	1629	8.66	19 23.04	155 16.78	2.89 2.4	2.8 29	3	40 .09	1	.2	.3 14	SSC				
		20	1631	51.59	19 23.16	155 17.14	2.65 .9	.7 12	2	81 .04	1	.3	.3 7	SSC				
		20	1634	1.04	19 23.23	155 17.00	2.59 .9	.4 7	0	153 .03	0	.6	.5 7	SSC				
		20	1634	44.51	19 23.15	155 16.96	2.71 1.4	1.2 19	3	62 .07	0	.3	.3 11	SSC				
		20	1642	12.76	19 23.23	155 17.00	2.63 .8	.7 9	2	153 .03	0	.4	.4 7	SSC				
		20	1644	4.31	19 23.23	155 17.09	2.41 1.3	1.8 22	4	47 .11	0	.3	.2 13	SSC				
		20	1646	35.32	19 23.24	155 17.05	2.72 .8	.9 12	2	85 .05	0	.3	.3 5	SSC				
		20	1648	31.71	19 23.30	155 17.03	2.64 .8	.9 10	1	113 .05	0	.3	.3 7	SSC				
		20	1651	2.90	19 23.32	155 17.07	2.66 2.1	2.1 22	2	45 .10	0	.3	.3 18	SSC				
		20	1651	35.12	19 23.25	155 17.04	2.77 1.2	1.5 11	1	85 .06	0	.4	.4 9	SSC				
		20	1652	51.21	19 23.24	155 17.04	2.68 1.1	.7 11	2	94 .04	0	.3	.3 7	SSC				
		20	1654	3.01	19 23.04	155 17.10	2.56 .9	.9 12	0	71 .04	1	.4	.3 7	SSC				
		20	1658	.65	19 23.28	155 16.97	2.44 .9	1.1 15	2	55 .06	0	.3	.2 8	SSC				
		20	1659	4.89	19 23.23	155 16.97	2.64 2.1	2.0 22	2	40 .08	0	.3	.3 20	SSC				
		20	17 2	27.68	19 23.22	155 17.05	2.47 .9	1.0 11	3	95 .05	0	.3	.4 7	SSC				
		20	17 5	27.31	19 23.19	155 17.07	2.86 1.3	1.1 14	2	71 .09	0	.4	.3 11	SSC				
		20	17 7	26.02	19 23.11	155 16.92	2.50 2.1	2.3 23	2	40 .11	1	.3	.2 15	SSC				

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HR	MIN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	JAN	20	1715	45.83	19 22.96	155 17.06	2.85 1.0	.7 16	2	48 .08	1	.3	.3 9	SSC				
		20	1717	46.55	19 23.03	155 17.05	2.49 2.1	2.6 26	3	64 .08	1	.2	.3 17	SSC				
		20	1719	40.94	19 23.10	155 17.14	2.79 1.8	1.8 24	2	41 .09	1	.3	.3 17	SSC				
		20	1743	47.84	19 23.27	155 17.09	2.92 .9	.8 13	2	84 .07	0	.3	.3 7	SSC				
		20	1745	23.65	19 22.83	155 17.09	3.05 1.3	.9 18	3	49 .10	1	.3	.4 9	SSC				
		20	1752	43.64	19 22.91	155 17.18	2.79 .9	.4 12	1	92 .07	1	.4	.4 7	SSC				
		20	18 3	16.81	19 23.39	155 16.80	2.79 .8	1.0 13	3	76 .06	0	.3	.3 8	SSC				
		20	18 4	4.68	19 23.22	155 16.73	2.84 2.3	2.5 26	3	47 .08	0	.3	.2 21	SSC				
		20	1812	20.34	19 22.94	155 17.07	2.85 1.3	1.5 19	3	71 .09	1	.3	.3 9	SSC				
		20	1815	15.07	19 23.21	155 17.03	2.98 1.0	.9 17	2	47 .09	0	.3	.3 9	SSC				
		20	1817	6.92	19 23.22	155 17.04	2.66 .8	.9 17	2	60 .08	0	.3	.3 11	SSC				
		20	1817	36.64	19 23.15	155 17.05	2.84 2.4	2.3 25	2	41 .08	0	.2	.3 18	SSC				
		20	1828	56.08	19 23.20	155 17.02	2.96 .9	.9 18	3	47 .06	0	.3	.3 11	SSC				
		20	1829	40.07	19 23.14	155 17.11	2.74 .9	.7 13	2	66 .08	1	.3	.4 8	SSC				
		20	1836	41.17	19 23.37	155 16.94	2.76 1.2	1.0 19	3	46 .08	0	.3	.3 10	SSC				
		20	1837	30.40	19 23.13	155 17.14	2.83 1.4	.7 16	1	48 .10	1	.4	.3 9	SSC				
		20	1838	14.51	19 23.31	155 16.84	3.19 2.0	1.9 24	3	40 .09	0	.3	.3 16	SSC				
		20	1843	16.28	19 23.22	155 17.03	2.89 1.3	.9 17	3	48 .09	0	.3	.3 11	SSC				
		20	1844	57.35	19 23.09	155 17.09	2.59 1.8	2.1 26	4	41 .08	1	.2	.3 18	SSC				
		20	1847	54.27	19 23.24	155 16.93	2.76 1.6	1.5 23	4	47 .08	0	.3	.2 18	SSC				
		20	1848	21.00	19 23.57	155 17.00	2.81 1.5	.9 19	4	49 .09	0	.3	.3 10	SSC				
		20	1850	40.26	19 23.74	155 23.96	9.86 1.8	1.5 21	2	73 .06	4	.5	1.0 19	KAD				
		20	1851	28.65	19 23.00	155 17.20	2.54 1.4	1.3 18	2	50 .08	1	.3	.4 13	SSC				
		20	1852	49.98	19 23.09	155 17.12	2.58 1.9	1.8 20	0	48 .09	1	.3	.3 14	SSC				
		20	1943	15.52	19 23.85	155 16.87	2.84 1.2	1.3 15	3	76 .06	1	.3	.3 9	SSC				
		20	20 3	59.72	19 23.55	155 17.00	3.19 .8	.8 14	2	47 .08	0	.4	.4 8	SSC				
		20	2016	39.44	19 23.70	155 16.90	2.85 .8	.5 13	3	74 .05	1	.3	.3 8	SSC				
		20	2017	6.71	19 23.76	155 16.91	2.82 .9	.7 10	2	87 .05	1	.4	.4 8	SSC				
		20	2027	49.70	19 23.41	155 16.83	3.20 1.2	1.5 15	3	52 .09	0	.4	.3 10	SSC				
		20	2057	11.17	19 23.28	155 16.84	3.05 2.8	2.9 34	2	38 .08	0	.2	.2 21	SSC				
		20	2121	25.50	19 23.42	155 16.87	3.23 1.6	1.6 18	2	51 .09	0	.4	.3 15	SSC				
		20	2128	8.21	19 22.99	155 17.15	2.66 1.1	.7 16	2	49 .06	1	.3	.3 8	SSC				
		20	2129	11.18	19 23.23	155 16.91	2.88 2.7	2.0 36	3	37 .09	0	.2	.2 26	SSC				
		20	2146	.85	19 23.18	155 17.07	2.72 .9	.9 15	3	71 .07	0	.3	.3 10	SSC				
		20	2150	54.52	19 24.69	155 22.71	10.15 1.5	1.5 20	2	54 .09	4	.5	1.2 17	KAD				
		20	2153	1.43	19 23.40	155 16.93	3.15 .9	1.1 15	2	53 .06	0	.3	.3 11	SSC				
		20	23 7	44.90	19 23.05	155 17.05	2.53 .6	.7 10	2	88 .02	1	.4	.4 5	SSC				
		21	183	51.69	19 23.86	155 16.96	2.92 1.1	.9 14	3	73 .05	1	.3	.3 9	SSC				
		21	242	55.50	19 23.14	155 17.01	2.65 .9	.9 13	2	142 .03	0	.3	.2 8	SSC				
		21	443	.72	19 23.05	155 17.11	2.47 .9	.9 13	2	77 .07	1	.4	.3 7	SSC				
		21	518	1.09	19 23.88	155 16.72	2.69 1.0	1.1 11	2	84 .08	0	.5	.4 8	SSC				
		21	618	56.53	19 22.92	155 17.09	2.47 1.2	1.4 15	2	83 .05	1	.3	.3 11	SSC				
		21	620	10.25	19 20.55	155 12.74	8.89 2.0	2.0 32	4	66 .10	4	.4	.6 23	SF2				
		21	1029	57.40	19 20.44	155 13.66	8.87 1.5	1.3 21	2	67 .05	4	.5	.9 16	SF2				
		21	1242	8.04	19 19.42	155 14.89	7.75 1.9	2.0 31	1	98 .10	5	.5	.8 21	SF1				F
		21	1635	7.12	19 22.82	155 16.71	3.29 2.6	2.3 31	2	42 .09	1	.2	.3 25	SSC				
		21	1748	27.88	19 20.23	155 12.84	9.22 1.8	1.4 25	2	69 .06	4	.5	.9 17	SF2				
		21	1744	37.73	19 22.59	155 17.10	2.60 1.1	1.3 18	3	50 .09	2	.3	.4 9	SSC				

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERM KM	ERZ KM	NO FM	REMK	
1981	JAN	21	1817	38.83	19 23.54	155 16.86	2.91	2.5	2.8	28	3	36	.09	0	.3	.2	21	SSC
		21	1847	27.44	19 24.31	155 16.43	8.85	1.8		26	4	79	.10	1	.5	.6	14	INT T
		21	1848	45.79	19 24.23	155 16.80	9.08	1.7		24	4	78	.08	1	.5	.5	7	INT T
		21	2236	7.08	19 20.91	155 10.51	9.10	1.7	1.4	23	2	71	.04	2	.5	.9	19	SF3
		22	339	2.48	19 46.66	156 1.85	40.63	3.8	4.1	47	5	186	.09	23	.8	1.6	41	HUA F
		22	540	49.03	19 23.55	155 17.00	2.69	.8	1.3	13	1	77	.05	0	.4	.2	11	SSC
		22	1020	29.15	19 23.14	155 16.83	3.01	1.7	1.3	20	3	46	.06	0	.3	.3	14	SSC
		22	1448	19.48	19 17.96	155 12.86	5.81	1.7	1.2	25	1	115	.07	2	.5	1.1	14	SF2
		22	16	4	10.67	19 23.35	3.01	1.0	1.0	15	2	56	.08	0	.3	.3	10	SSC
		23	215	15.02	19 18.76	155 15.43	8.37	1.9	1.2	20	3	124	.05	4	.6	1.1	14	SF1
		23	233	26.72	19 26.61	155 29.88	10.69	2.2	1.4	26	2	69	.09	9	.4	.9	22	KA0
		23	354	3.95	19 9.09	155 42.06	3.50	2.5	1.3	12	1	138	.22	14	.9	7.2	10	LSW
		23	439	21.29	19 17.95	155 12.89	4.50	2.3	1.9	34	2	114	.11	2	.4	1.0	22	SSF
		23	616	3.29	19 21.05	155 19.91	31.89	2.5	1.6	35	0	56	.08	5	.7	1.3	33	DEP
		23	853	48.35	19 20.20	155 13.82	7.46	1.8	1.9	27	2	105	.09	5	.5	.9	19	SF2
		23	957	37.97	19 22.20	155 17.46	2.56	1.4	1.4	16	1	87	.08	2	.3	.5	13	SSC
		23	1049	35.28	19 23.23	155 16.78	2.98	2.0	2.3	19	2	56	.06	0	.3	.3	14	SSC
		23	1220	35.80	19 10.07	155 39.89	7.64	2.4	1.8	15	0	116	.12	10	.6	2.1	11	LSW
		23	1453	25.45	19 17.53	155 12.49	10.32		1.3	17	4	228	.08	10	1.0	1.6	10	SF2
		23	1615	41.99	19 22.53	155 17.26	3.04	1.0	1.1	15	2	89	.07	2	.3	.5	9	SSC
		23	2024	25.14	19 17.70	155 13.48	7.20	2.2	2.3	37	4	84	.09	1	.4	.7	23	SF2
		24	224	28.99	19 21.79	155 18.23	2.80	1.5	1.6	15	2	89	.08	3	.3	.6	8	SWR
		24	321	41.80	19 20.14	155 13.08	8.74	2.0	2.1	28	1	68	.08	5	.5	.8	20	SF2
		24	611	31.15	19 22.37	154 58.76	5.61	1.6	1.4	19	0	194	.08	5	.7	1.9	9	LEW
		24	644	42.55	19 20.35	155 12.99	9.32	1.5	1.6	18	1	179	.05	4	.9	1.2	14	SF2
		24	715	46.90	19 26.20	155 23.27	8.58	2.2	2.2	34	4	46	.10	4	.4	.8	30	KA0
		24	740	1.17	19 19.66	155 7.78	8.07	2.1	2.1	29	1	98	.06	4	.4	.8	18	SF4
		24	934	.27	19 19.20	155 10.96	8.41	1.4	1.2	17	2	212	.06	6	.9	1.2	11	SF3
		24	1525	3.98	19 18.89	155 26.18	9.08	1.9	1.6	20	0	116	.08	6	.5	.9	12	LSW
		24	1530	34.47	19 21.57	155 15.19	9.23	3.4	3.6	40	2	63	.10	2	.4	.5	38	SF1
		24	1551	34.62	19 21.23	155 14.97	8.95	1.4	1.0	14	1	147	.03	3	.8	1.2	8	SF1
		24	1642	1.13	19 20.50	155 13.24	9.50	1.4	1.2	15	0	175	.03	4	.9	1.4	11	SF2
		24	2023	28.71	19 22.07	155 18.08	3.19	1.2	1.0	14	1	71	.06	3	.3	.7	9	SSC
		24	2030	56.17	19 21.82	155 16.42	2.81	1.2	1.1	21	4	68	.08	4	.3	.6	11	SWR
		24	21	2	30.64	19 22.36	2.90	1.0	.9	15	1	63	.06	2	.3	.4	9	SSC
		24	2117	15.43	19 21.73	155 18.54	1.82	1.2	1.1	16	2	70	.10	4	.3	.7	13	SWR
		24	2124	47.34	19 23.47	155 16.88	2.95	.9	1.1	19	3	50	.07	0	.3	.3	11	SSC
		24	2134	39.13	19 21.97	155 18.13	3.26	1.5	1.1	24	2	52	.07	3	.3	.5	15	SWR
		24	2140	55.11	19 22.09	155 17.57	3.34	1.4	1.1	19	3	57	.06	3	.3	.5	13	SSC
		24	2224	32.02	19 23.25	155 17.10	2.43	2.1	2.4	27	1	41	.09	0	.2	.2	21	SSC
		24	2253	53.81	19 18.15	155 13.34	4.90	1.8		30	2	88	.10	2	.4	1.1	19	SSF
		24	2254	23.50	19 18.57	155 13.63	7.39	2.3	2.7	35	2	135	.11	7	.5	.9	19	SF2
		24	2255	19.92	19 18.24	155 13.64	4.83	1.6	.9	16	1	72	.09	2	.6	1.5	12	SSF
		24	2256	15.64	19 17.91	155 13.53	6.16	1.3	1.0	22	1	80	.09	2	.6	1.3	16	SF2
		24	2326	53.30	19 23.91	155 37.64	11.64	1.7	1.5	26	2	70	.10	6	.4	.8	18	ML0
		24	2342	32.54	19 20.15	155 12.31	8.70	1.8	1.4	24	3	76	.06	5	.5	.8	17	SF2
		25	2	4	55.95	19 27.01	7.74	1.6	1.2	25	2	63	.10	5	.4	1.0	14	KAU
		25	2	9	17.53	19 23.30	2.69	1.1	.9	15	3	63	.09	0	.3	.4	11	SSC

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HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	ORIGIN TIME			LAT N		LON W		DEPTH KM	AMP				DUR NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO		
		DA	HRMN	SEC	DEG	MIN	DEG	MIN		MAG	MAG	NR	FM							REMK		
1981	JAN	25	240	7.23	19	23.31	155	16.79	2.92	2.1	2.3	17	1	43	.08	0	.3	.3	15	SSC		
		25	256	24.59	19	23.69	155	16.91	3.17	1.6	1.5	24	3	58	.09	1	.3	.2	17	SSC		
		25	321	35.33	19	23.65	155	28.71	9.42	1.6	1.1	24	2	70	.08	3	.4	.9	16	KA0		
		25	326	14.67	19	18.23	155	13.19	7.69	2.1	1.9	37	2	92	.11	2	.5	.7	27	SF2		
		25	435	47.09	19	21.79	155	18.41	2.73	1.1	.9	19	2	69	.07	4	.3	.6	13	SWR		
		25	519	48.48	19	20.60	155	6.09	9.06	1.9	1.4	16	0	235	.05	4	2.2	1.1	8	SF4		
		25	539	57.19	19	21.74	155	18.29	2.87	1.1	.9	14	2	73	.05	3	.4	.8	9	SWR		
		25	615	51.77	19	21.89	155	20.50	12.22	1.6	1.6	24	3	79	.07	4	.5	.9	15	SWR		
		25	623	12.14	19	23.95	155	16.96	2.85	1.0	.9	11	1	74	.02	1	.3	.3	7	SSC		
		25	640	37.94	19	23.65	155	17.17	2.48	1.3	1.1	18	2	57	.07	1	.3	.2	8	SSC		
		25	643	15.96	19	21.75	155	18.24	3.12	1.1	.9	13	1	75	.08	3	.4	.9	8	SWR		
		25	647	14.22	19	21.77	155	18.23	2.69	2.1	2.0	29	3	54	.12	3	.3	.5	18	SWR		
		25	71	33.35	19	17.81	155	23.28	3.33	1.7	1.4	15	1	189	.05	4	.5	.9	7	SWR		
		25	732	22.11	19	23.22	155	2.19	9.61	2.3	2.1	27	2	134	.07	4	.4	.8	14	SF5		
		25	751	19.78	19	23.83	155	17.14	2.24	1.6	1.6	18	1	56	.09	1	.3	.2	9	SSC		
		25	851	11.29	19	21.79	155	18.24	3.38	1.7	1.4	15	1	73	.07	3	.4	.7	10	SWR		
		25	1051	31.46	19	21.89	155	18.03	3.01	1.4	1.1	19	3	63	.08	3	.3	.6	14	SWR		
		25	12	0	19.64	19	22.40	155	17.22	2.58	1.4	1.1	17	3	65	.06	2	.3	.4	11	SSC	
		25	1532	6.19	19	23.51	155	16.90	2.99	1.8	1.9	21	1	45	.07	0	.3	.2	20	SSC		
		25	1721	58.99	19	23.37	155	16.73	3.26	2.2	2.0	22	2	47	.08	0	.3	.2	15	SSC		
		25	1731	15.51	19	21.86	155	17.99	2.94	1.4	1.0	18	2	63	.07	3	.3	.6	9	SWR		
		25	1814	57.49	19	24.18	155	16.13	3.11	1.7	1.3	19	0	110	.06	1	.3	.2	14	SEC		
		25	1845	20.81	19	22.35	155	17.29	3.22	1.7	1.5	21	1	53	.08	2	.3	.4	16	SSC		
		25	19	0	9.97	19	5.65	155	29.41	40.27	1.6	2.8	0	181	.11	8	3.5	4.4	21	DLS		
		25	1937	7.93	19	26.08	155	23.39	8.73	1.9	1.2	30	4	42	.09	3	.4	.8	17	KA0		
		26	231	38.90	19	22.02	155	17.88	3.37	1.4	1.1	19	3	84	.08	3	.3	.6	14	SWR		
		26	723	7.21	19	21.77	155	18.28	4.14	1.8	1.1	21	3	67	.10	3	.3	.9	12	SWR		
		26	854	12.65	19	21.41	155	5.99	8.40	1.4	1.6	17	0	88	.08	3	.6	1.3	14	SF4		
		26	917	53.11	19	21.81	155	18.24	2.91	1.9	2.1	28	4	54	.10	3	.3	.6	21	SWR		
		26	929	11.18	19	22.35	155	17.10	2.79	1.5	1.4	17	2	96	.08	2	.3	.4	12	SSC		
		26	1021	59.18	19	26.31	155	23.86	9.87	1.9	1.2	17	1	111	.09	3	.5	1.2	12	KA0		
		26	1053	11.66	19	23.10	155	17.12	2.39	1.2	1.0	13	2	77	.04	1	.3	.3	9	SSC		
		26	1053	21.29	19	23.11	155	17.08	2.55	1.7	1.6	17	2	41	.07	1	.3	.3	12	SSC		
		26	1054	15.97	19	22.25	155	29.12	9.36	2.6	2.8	33	3	61	.08	3	.3	.6	29	KA0		
		26	11	4	50.59	19	22.24	155	17.45	2.70	1.0	1.1	12	1	94	.06	2	.4	.6	7	SSC	
		26	1144	38.67	19	24.63	156	.11	1.27	2.2	2.6	13	1	226	.13	20	2.2	1.6	5	HUA		
		26	1222	51.33	19	23.69	155	16.85	2.49	1.3	1.3	16	2	88	.06	1	.3	.2	8	SSC		
		26	1226	43.48	19	23.77	155	16.83	2.00	1.6	1.6	20	2	66	.11	0	.3	.2	11	SSC		
		26	1315	17.51	19	21.80	155	18.02	2.87	1.1	1.2	13	1	80	.08	3	.4	.9	10	SWR		
		26	1336	28.63	19	21.75	155	18.34	2.94	1.4	1.6	17	2	68	.05	3	.3	.7	9	SWR		
		26	1351	18.98	19	19.64	155	11.11	9.55	1.8	1.3	20	0	94	.06	5	.6	1.2	15	SF3		
		26	15	8	38.33	19	21.95	155	18.03	3.23	1.4	1.5	15	2	88	.05	3	.3	.7	11	SWR	
		26	1512	8.07	19	25.68	155	29.36	8.31	2.0	1.5	20	1	73	.08	7	.4	1.2	16	KA0		
		26	1735	14.12	19	21.74	155	18.26	2.99	1.1	1.0	11	1	89	.07	3	.4	.9	8	SWR		
		26	1835	34.44	19	22.73	155	3.26	8.94	2.1	2.1	11	0	113	.05	4	.8	1.3	9	SF5		
		26	2014	53.38	19	26.62	155	29.67	9.92	1.6	1.4	22	1	68	.08	8	.5	1.2	17	KA0		
		26	2016	54.49	19	23.00	155	17.07	2.56	1.2	1.4	17	2	69	.06	1	.3	.3	10	SSC		
		26	2322	47.11	19	23.09	155	16.99	2.88	1.6	1.7	21	3	41	.08	1	.3	.3	12	SSC		

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	JAN	26	2358	25.41	19 22.80	155 17.06	2.73	1.4	1.4 20	3	60 .08	1	.3	.3 9 SSC
		27	022	55.83	19 23.02	155 17.06	2.74	1.3	1.6 15	3	68 .06	1	.3	.4 11 SSC
		27	145	23.35	19 23.09	155 18.26	30.35	2.6	2.9 46	2	30 .11	2	.6	.9 40 DEP
		27	250	26.28	19 22.34	155 17.28	3.01	1.1	1.5 17	1	53 .08	2	.3	.4 8 SSC
		27	415	1.55	19 21.74	155 18.45	1.79	1.0	1.2 13	1	69 .06	4	.3	.8 6 SWR
		27	512	59.33	19 23.42	155 16.84	2.67	.8	1.3 14	3	57 .09	0	.3	.3 10 SSC
		27	515	20.82	19 23.20	155 17.15	2.44	.8	.7 13	1	78 .04	1	.3	.3 8 SSC
		27	516	16.96	19 23.60	155 16.87	2.95	1.2	1.6 14	3	57 .06	0	.3	.3 8 SSC
		27	627	47.53	19 55.78	155 23.72	10.31	2.8	2.9 44	3	243 .12	7	1.0	.4 34 KEA
		27	657	2.13	19 22.46	155 17.18	2.59	1.3	1.6 21	2	54 .07	2	.3	.3 12 SSC
		27	955	21.87	19 23.31	155 16.81	2.44	2.1	2.0 27	3	54 .10	0	.3	.2 20 SSC
		27	1220	.00	19 21.73	155 18.41	2.71	1.9	1.3 20	2	69 .08	4	.3	.6 16 SWR
		27	1338	26.49	19 22.20	155 17.52	2.81	1.4	.9 19	2	56 .07	2	.3	.5 11 SSC
		27	1447	18.72	19 23.45	155 16.87	2.77	2.2	2.1 24	3	47 .08	1	.3	.3 19 SSC
		27	2014	57.55	19 22.29	155 17.51	2.55	1.8	1.3 21	1	56 .09	2	.3	.5 18 SSC
		27	2025	39.09	19 23.51	155 16.85	3.01	1.5	1.3 22	3	37 .07	0	.3	.2 11 SSC
		28	1 5	26.73	19 23.05	155 17.06	2.36	1.2	1.0 19	2	67 .07	1	.2	.2 13 SSC
		28	124	49.79	18 32.21	154 59.63	16.50	2.6	2.5 40	3	297 .13	85	4.6	.3 24 DTS *
		28	517	32.58	19 18.81	155 13.72	8.19	1.7	1.3 25	2	85 .08	3	.5	1.0 18 SF2
		28	925	48.48	19 23.59	155 16.91	3.19	2.8	1.3 37	1	40 .11	0	.2	.2 27 SSC F
		28	1354	9.69	19 20.98	155 3.08	7.53	2.1	2.3 37	1	112 .11	2	.6	.5 30 SF5
		28	1652	17.77	19 23.08	155 17.09	2.37	2.0	2.0 24	3	42 .09	1	.2	.3 18 SSC
		28	2034	29.31	19 19.79	155 12.06	7.90	1.8	1.4 23	3	84 .07	6	.5	.9 18 SF3
		28	2051	33.47	19 21.82	155 17.81	3.00	1.4	1.6 19	0	51 .12	3	.3	.7 15 SWR
		29	032	8.86	19 19.67	155 10.01	8.86	1.9	1.8 29	1	92 .09	4	.5	1.0 21 SF3
		29	3 0	40.93	19 21.72	155 18.22	2.57	1.6	2.0 25	2	54 .11	3	.3	.5 21 SWR
		29	422	28.16	19 21.66	155 18.02	3.09	1.9	2.1 22	1	59 .07	3	.5	.6 17 SWR
		29	846	2.10	19 23.79	155 16.84	2.88	2.3	2.3 20	2	44 .07	0	.3	.3 14 SSC
		29	928	38.16	19 23.41	154 58.12	7.61	2.6	2.2 40	2	175 .13	3	.7	.5 27 LER
		29	1111	41.22	19 19.86	155 11.13	8.43	2.1	1.6 32	1	89 .10	5	.5	.8 25 SF3
		29	1145	29.72	19 18.72	155 15.34	7.19	2.0	1.6 29	0	123 .10	4	.5	.8 24 SF1
		29	13 0	16.73	19 21.06	155 24.91	10.30	2.9	2.8 42	3	76 .12	3	.4	.5 33 SWR
		29	1413	53.19	19 21.72	155 1.89	6.79	2.0	1.4 32	1	157 .15	4	.6	.9 19 SF5
		29	1858	53.50	19 23.37	155 16.94	2.83	1.8	1.7 23	2	54 .10	0	.3	.3 16 SSC
		29	2150	10.24	19 19.96	155 7.10	7.83	2.1	1.7 36	2	108 .09	5	.4	.8 19 SF4
		29	2215	29.66	19 23.58	155 3.48	11.42	2.0	1.4 33	3	101 .10	2	.5	.9 20 SF5
		30	10 5	20.95	19 20.26	155 13.12	9.32	1.7	1.4 15	0	120 .04	4	.7	1.5 14 SF2
		30	1232	27.72	19 21.74	155 2.82	7.14	1.8	1.6 24	0	130 .11	3	.6	1.0 10 SF5
		30	1251	59.40	19 21.34	155 2.56	8.50	2.2	2.4 34	1	143 .09	3	.7	.4 12 SF5
		30	1441	4.60	19 22.88	155 16.98	2.80	1.7	2.2 22	3	48 .07	1	.3	.3 13 SSC
		30	1551	5.99	19 23.08	155 17.06	2.52	.9	1.1 14	2	75 .07	1	.3	.4 9 SSC
		30	18 5	33.91	19 23.49	155 2.39	8.80	1.9	2.1 32	1	125 .10	4	.5	.6 21 SF5
		30	1946	13.24	19 20.42	155 12.94	8.00	1.4	1.2 22	3	66 .05	4	.4	.9 10 SF2
		31	422	52.69	19 19.05	155 12.99	8.11	1.4	1.4 21	1	84 .06	4	.6	1.2 18 SF2
		31	1123	32.29	19 22.35	155 24.43	9.43	1.4	1.8 28	2	43 .11	4	.4	.7 18 KAO
		31	1336	14.25	19 21.73	155 17.97	3.62	1.2	1.6 21	2	50 .16	3	.4	.8 13 SWR
		31	1512	8.91	19 22.50	155 28.88	10.06	1.9	2.0 26	0	60 .10	2	.4	.9 20 KAO
		31	2058	28.99	19 20.34	155 13.22	9.08	1.5	1.1 21	2	63 .06	4	.6	.9 15 SF2

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HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	FEB	1	247	27.52	19 13.57	155 30.03	34.77	1.8	1.8 22	1	97 .07	3	.6	1.7 19 DLS
		1	256	18.35	19 13.16	155 30.39	34.18	2.1	1.8 38	2	68 .07	4	.6	1.2 32 DLS
		1	742	47.70	19 20.07	155 11.02	8.91	2.9	2.6 31	0	171 .12	4	.8	.7 24 SF3
		1	812	19.83	19 19.10	155 11.14	8.22	1.9	1.1 26	2	107 .08	6	.5	1.0 16 SF3
		1	1346	31.86	19 19.50	155 11.85	9.74	2.4	2.6 36	0	92 .08	5	.4	.4 30 SF3
		1	17 6	32.15	19 21.25	155 5.71	8.48	1.7	1.2 20	0	93 .06	3	.6	1.3 16 SF4
		1	2348	19.98	19 21.83	155 18.22	3.16	1.7	1.4 22	2	56 .09	4	.3	.8 14 SWR
		2	1 3	12.83	19 19.60	155 11.65	9.30	2.9	2.9 40	1	92 .09	6	.4	.5 30 SF3
		2	432	44.25	19 8.63	155 37.30	8.33	1.9	1.4 21	2	111 .13	12	.5	1.2 9 LSW
		2	542	27.94	19 22.50	155 17.08	2.77	1.7	1.5 23	1	52 .09	2	.3	.4 16 SSC
		2	12 1	6.62	19 23.08	155 16.93	2.98	.9	.9 15	3	64 .08	1	.4	.4 8 SSC
		2	1436	17.51	19 41.42	155 2.65	1.48	2.2	2.4 24	1	188 .13	21	.8	1.6 6 HIL R
		2	15 4	12.38	19 18.20	155 15.70	7.02	1.0	1.0 16	0	148 .07	4	.7	1.4 13 SF1
		2	1841	44.95	19 20.05	155 11.51	8.72	2.5	2.8 40	2	84 .10	5	.4	.5 31 SF3
		2	1942	42.32	19 19.04	155 15.12	8.23	1.8	1.2 24	2	111 .06	4	.5	.8 16 SF1
		3	532	11.20	19 24.92	155 .87	7.11	2.4	2.2 38	3	118 .14	4	.4	.7 19 SF5
		3	649	26.46	19 21.86	155 6.97	8.02	1.4	1.4 25	1	75 .08	2	.4	.8 15 SF4
		3	1348	12.59	19 20.21	155 11.18	8.82	2.1	1.7 34	1	82 .09	4	.4	.7 26 SF3
		3	1352	59.68	19 24.00	155 24.46	8.20	2.2	1.6 35	2	84 .10	3	.4	.7 26 KAO
		3	19 0	34.53	19 10.53	155 32.26	7.82	2.4	1.5 30	4	109 .17	8	.5	1.0 17 LSW
		3	1935	35.95	19 23.83	155 16.90	2.73	1.4	1.3 19	2	67 .05	1	.3	.2 14 SSC
		3	2131	9.45	19 23.94	155 16.78	2.71	1.7	1.3 21	2	74 .08	0	.3	.3 13 SSC
		3	2146	44.11	19 11.33	155 32.57	9.24	2.5	2.3 35	4	135 .13	8	.5	.7 22 LSW
		3	2149	16.24	19 19.43	155 8.45	8.89	1.6	1.0 20	1	83 .06	4	.6	1.3 17 SF4
		3	2324	4.68	19 23.05	155 17.00	2.63	1.0	.8 17	3	76 .06	1	.3	.2 11 SSC
		4	016	41.92	19 23.60	155 16.86	2.95	1.8	1.6 23	2	45 .09	0	.3	.2 18 SSC
		4	3 8	34.67	19 23.11	155 16.92	2.59	1.4	1.1 14	2	63 .04	1	.3	.3 10 SSC
		4	451	34.56	19 24.14	155 1.66	7.24	1.5	1.1 26	2	125 .13	5	.5	1.0 11 SF5
		4	659	52.74	19 19.75	155 12.71	7.12	1.8	1.2 23	2	77 .11	5	.5	1.2 14 SF2
		4	810	23.98	19 20.87	155 11.29	8.80	2.2	1.9 33	3	71 .08	3	.4	.6 23 SF3
		4	1123	34.37	19 19.52	155 13.27	6.66	1.3	1.3 25	1	72 .11	5	.5	1.0 20 SF2
		4	14 1	57.98	19 23.49	155 16.77	2.63	1.2	1.5 19	3	44 .07	0	.3	.2 11 SSC
		4	2046	46.37	19 20.33	155 4.13	6.90	1.9	1.8 33	0	122 .11	2	.5	.8 20 SF5
		4	23 2	27.72	19 23.31	155 16.81	3.09	2.1	2.2 23	1	46 .09	0	.3	.3 20 SSC
		5	0 4	22.04	19 22.86	155 16.92	2.60	2.4	2.9 22	2	40 .06	1	.3	.3 18 SSC
		5	046	42.65	19 19.83	155 12.72	8.55	1.7	1.5 26	1	76 .08	5	.5	.9 17 SF2
		5	3 2	52.53	19 41.36	156 6.43	39.61	2.2	2.2 26	1	243 .10	41	1.5	2.7 22 HUA
		5	333	41.88	19 20.44	155 13.11	7.40	1.5	1.3 23	2	64 .11	4	.5	1.0 17 SF2
		5	436	48.22	19 19.76	155 11.68	9.66	2.3	2.5 38	0	88 .08	5	.4	.4 31 SF3
		5	624	15.57	19 20.25	155 12.96	7.48	1.9	1.9 29	3	68 .09	4	.5	.8 20 SF2
		5	730	44.31	19 23.54	155 16.89	3.07	1.2	1.1 17	3	58 .06	0	.3	.3 10 SSC

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1981	FEB	5	1552	8.24	19 19.62	155 8.24	7.55 2.0 1.6 24	1 87 .07 4	.5	1.0 20 SF4									
		5	1729	43.40	19 25.83	155 24.66	7.37 2.1 1.5 32	2 40 .13 1	.4	.9 24 KAO									
		5	1744	7.52	19 25.89	155 24.89	7.22 2.6 2.1 35	1 35 .13 1	.4	.9 21 KAO									
		5	2132	.38	19 23.13	155 16.99	2.77 1.4 1.3 19	3 63 .09 0	.5	.3 13 SSC									
		5	2221	10.79	19 19.88	155 12.73	8.91 2.0 1.6 32	1 75 .08 5	.4	.7 20 SF2									
		6	611	5.42	19 19.83	155 6.36	8.63 2.2 1.4 29	1 124 .06 5	.6	.8 22 SF4									
		6	1449	25.12	19 17.95	155 23.15	3.17 1.0 1.1 17	1 113 .06 4	.5	.9 11 SWR									
		6	1531	47.52	19 17.90	155 23.26	3.47 1.7 1.8 23	1 113 .07 4	.4	1.1 17 SWR									
		6	2211	41.02	19 18.52	155 21.75	4.37 1.9 2.4 37	2 113 .12 4	.4	1.4 24 SWR									
		7	2 5	43.08	19 20.36	155 12.45	8.05 2.4 2.4 42	4 72 .09 4	.4	.5 25 SF2									
		7	255	59.48	19 20.39	155 19.47	3.60 1.4 1.0 12	0 107 .07 4	.4	1.0 9 SWR									
		7	330	36.20	19 18.00	155 23.28	3.17 .9 1.1 13	1 151 .07 4	.6	1.2 10 SWR									
		7	349	32.81	19 21.37	155 18.92	3.09 1.2 1.2 18	2 65 .10 4	.4	.9 12 SWR									
		7	656	18.93	19 18.12	155 23.16	3.74 1.3 1.4 17	1 150 .08 4	.5	1.1 11 SWR									
		7	1012	15.77	19 21.09	155 6.81	8.10 1.1 1.2 16	1 90 .06 4	.6	1.3 11 SF4									
		7	1223	20.77	19 18.04	155 23.23	5.45 2.4 3.0 33	0 112 .12 4	.4	.9 22 SWR									
		7	14 9	32.65	19 19.54	155 11.28	8.58 1.8 1.5 27	1 96 .08 5	.5	.8 21 SF3									
		7	1413	4.47	19 15.37	155 28.82	9.68 1.5 1.4 23	2 87 .12 2	.5	1.0 15 LSW									
		7	1720	34.77	19 26.19	155 24.89	6.27 1.6 1.4 17	2 121 .09 2	.5	1.1 11 KAO									
		7	1733	59.56	19 20.43	155 12.67	9.24 1.4 1.2 22	3 69 .08 4	.6	.9 16 SF2									
		7	1735	43.80	19 24.34	155 30.36	9.61 1.8 1.6 20	1 72 .10 6	.4	1.3 14 KAO									
		7	1852	39.10	19 18.01	155 23.15	3.28 2.1 2.5 24	2 112 .09 4	.4	.8 9 SWR									
		7	19 6	28.00	19 25.08	154 57.75	4.96 2.2 2.3 16	1 182 .10 2	1.0	.7 8 SLE									
		7	2032	53.89	19 21.34	155 3.68	7.36 1.2 1.1 14	0 102 .08 3	.7	1.1 9 SF5									
		7	2229	53.04	19 18.00	155 23.19	3.76 1.0 1.1 11	1 113 .05 4	.5	1.1 7 SWR									
		7	2230	2.57	19 18.00	155 23.28	6.04 2.5 3.3 38	2 112 .13 4	.4	.9 25 SWR									
		8	154	38.44	19 18.06	155 13.21	7.95 1.6 1.3 17	2 95 .07 2	.6	1.1 11 SF2									
		8	156	2.06	19 18.21	155 13.38	7.48 1.9 2.1 35	3 85 .11 2	.5	.7 19 SF2									
		8	253	31.34	19 18.32	155 23.12	3.90 1.7 1.9 22	1 146 .09 4	.5	1.0 16 SWR									
		8	3 1	2.11	19 18.26	155 23.21	3.41 1.7 1.8 20	1 110 .09 4	.4	.9 13 SWR									
		8	311	38.66	19 18.03	155 23.36	3.33 1.1 1.5 18	2 150 .08 4	.6	.9 12 SWR									
		8	5 1	7.51	19 15.62	155 28.59	24.62 1.5 . 18	0 108 .14 3	1.7	3.1 6 DLS T									
		8	519	20.45	19 17.82	155 22.91	8.04 1.0 1.3 11	1 116 .11 5	.7	2.1 4 SWR									
		8	953	47.64	19 18.87	155 15.48	8.25 1.7 1.2 24	3 99 .06 4	.5	.9 18 SF1									
		8	1325	42.55	19 24.37	155 25.67	9.89 2.4 2.1 43	4 38 .11 2	.3	.5 30 KAO									
		8	18 3	37.44	19 19.71	155 8.23	7.36 2.2 1.8 37	2 86 .11 4	.4	.7 24 SF4									
		8	18 7	52.83	19 18.25	155 22.85	3.50 1.7 1.3 19	1 112 .08 4	.5	.9 14 SWR									
		8	20 3	59.94	19 21.01	155 51.12	11.22 3.0 2.9 24	0 143 .10 10	.8	.7 21 KON									
		8	2239	5.36	19 21.11	155 6.93	8.22 1.9 1.3 23	2 88 .06 4	.5	1.1 18 SF4									
		9	536	39.17	19 18.54	155 23.07	5.49 2.1 1.8 33	1 108 .12 3	.4	1.2 29 SWR									
		9	543	26.40	19 20.79	155 12.84	9.05 1.7 1.4 29	3 63 .08 3	.5	.6 22 SF2									
		9	553	13.65	19 16.15	155 23.50	7.14 2.2 1.5 23	1 128 .11 8	.6	2.0 20 SWR									
		9	6 2	44.04	19 32.48	155 36.95	11.12 3.8 3.2 42	1 45 .14 6	.4	.5 41 MLO F									
		9	6 5	21.38	19 32.85	155 37.75	10.45 2.8 1.9 41	4 140 .12 7	.5	.4 26 MLO									
		9	629	19.33	19 31.24	155 36.17	8.52 2.5 1.3 29	0 105 .15 4	.8	1.0 22 MLO *									
		9	635	39.84	19 20.72	155 13.14	10.90 2.1 1.8 28	3 61 .07 4	.5	.8 17 SF2									
		9	918	46.74	19 18.35	155 23.26	5.45 2.4 3.1 34	1 109 .12 3	.4	1.0 27 SWR									
		9	1026	30.61	19 20.54	155 11.02	8.79 2.0 1.7 34	4 77 .08 4	.4	.6 22 SF3									

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HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1981	FEB	9	1138	10.22	19 20.80	155 12.83	11.00	2.0	1.8	31	3	63	.07	3	.5	.6	18	SF2	
		9	1234	48.92	19 18.21	155 21.93	3.97	1.7	1.8	24	1	115	.10	4	.5	1.4	20	SWR	
		9	1334	11.13	19 33.14	155 37.68	10.00	3.0	2.7	37	2	95	.14	8	.5	.6	33	MLO	
		9	1430	58.66	19 10.58	155 39.51	5.09	2.4	1.9	26	1	113	.14	9	.5	1.3	16	LSW	
		9	1511	14.94	19 18.67	155 21.81	3.63	1.6	1.0	17	1	110	.07	4	.6	.9	14	SWR	
		9	1638	31.83	19 19.90	155 8.29	8.30	1.5	1.2	20	1	83	.07	5	.6	1.2	17	SF4	
		9	17 1	59.34	19 17.77	155 23.20	2.92	1.0	1.0	17	2	154	.08	5	.5	1.0	12	SWR	
		9	2139	4.72	19 17.77	155 23.35	3.83	1.8	2.0	29	3	114	.11	5	.4	1.4	21	SWR	
		9	2147	34.67	19 20.23	155 7.58	6.77	2.1	1.9	35	2	147	.12	5	.6	.8	23	SF4	
		9	2223	45.62	19 17.49	155 23.20	2.69	.9	1.1	16	1	158	.07	5	.5	1.0	10	SWR	
		9	23 2	57.28	19 17.93	155 23.18	3.20	1.8	2.0	24	2	152	.08	4	.5	1.0	17	SWR	
		9	2310	23.79	19 18.30	155 22.99	3.48	1.7	1.8	16	1	148	.09	4	.5	.9	12	SWR	
		10	018	27.26	19 18.21	155 23.16	3.69	1.1	1.1	17	1	148	.10	4	.5	1.0	10	SWR	
		10	142	50.94	19 17.48	155 23.21	3.06	1.1	1.1	18	2	117	.07	5	.4	1.0	12	SWR	
		10	213	50.03	19 17.91	155 23.25	3.51	1.1	1.4	16	1	113	.04	4	.5	1.1	13	SWR	
		10	258	45.54	19 18.47	155 23.16	4.02	2.0	2.4	31	1	109	.10	3	.4	1.1	23	SWR	
		10	329	13.57	19 17.55	155 23.18	2.65	1.7	1.6	18	1	116	.07	5	.4	1.0	9	SWR	
		10	523	44.86	19 18.49	155 13.05	8.29	1.4	1.0	20	1	93	.07	3	.6	1.1	14	SF2	
		10	6 1	3.19	19 17.47	155 23.65	2.89	1.7	1.9	23	1	115	.10	5	.5	1.4	19	SWR	
		10	6 2	17.61	19 17.55	155 23.48	5.31	1.5	1.6	18	1	156	.08	5	.6	1.9	9	SWR	
		10	6 4	20.16	19 18.66	155 23.17	3.53	.9	. 11	1	144	.04	3	.5	.7	6	SWR		
		10	713	24.99	19 18.05	155 23.07	4.36	1.7	1.7	21	2	112	.08	4	.5	1.6	16	SWR	
		10	755	4.06	19 20.11	155 24.88	10.53	1.8	1.8	26	2	105	.10	3	.5	.7	20	SWR	
		10	831	44.72	19 18.63	155 23.18	3.99	1.8	1.7	22	1	143	.09	3	.5	1.0	20	SWR	
		10	1031	6.78	19 25.27	155 24.14	11.75	2.2	1.8	29	3	44	.08	2	.4	.6	21	KAO	
		10	1045	17.16	19 20.08	155 12.45	8.99	1.9	1.5	33	3	76	.08	5	.4	.7	25	SF2	
		10	1149	36.51	19 25.40	155 24.40	7.86	1.8	1.1	22	2	46	.10	1	.5	1.1	16	KAO	
		10	1319	23.08	19 18.03	155 23.28	3.74	2.3	2.0	25	2	111	.09	4	.4	1.0	16	SWR	
		10	1327	30.47	19 17.81	155 23.49	3.20	1.7	1.2	18	1	113	.11	5	.5	1.2	12	SWR	
		10	1417	21.21	19 18.11	155 23.07	3.52	1.7	1.2	16	1	150	.06	4	.5	1.0	13	SWR	
		10	1425	8.14	19 19.81	155 12.15	9.57	1.6	1.3	23	3	84	.09	5	.6	1.0	19	SF3	
		10	1445	38.79	19 18.29	155 23.18	3.97	1.2	1.1	23	1	110	.09	4	.5	1.2	16	SWR	
		10	1557	54.92	19 17.58	155 23.31	3.26	1.8	1.4	20	1	156	.09	5	.5	1.2	12	SWR	
		10	1916	44.43	19 17.63	155 23.51	2.80	1.7	1.2	20	2	114	.08	5	.4	1.1	12	SWR	
		10	1919	48.89	19 17.62	155 23.54	2.97	1.9	1.7	26	2	114	.10	5	.4	1.1	22	SWR	
		10	1934	2.06	19 20.02	155 8.33	8.68	3.0	3.0	41	2	81	.10	5	.4	.6	32	SF4	
		10	20 2	45.17	19 17.41	155 23.34	2.38	1.1	1.1	20	2	117	.08	5	.4	.9	13	SWR	
		10	20 8	36.27	19 18.02	155 23.35	3.57	1.7	1.2	26	2	112	.10	4	.4	1.0	17	SWR	
		10	2034	30.79	19 18.34	155 22.92	3.49	1.7	1.2	19	1	147	.07	4	.5	.9	16	SWR	
		10	21 3	32.89	19 18.02	155 23.28	4.31	2.1	1.8	30	3	111	.11	4	.4	1.4	17	SWR	
		10	2211	38.63	19 17.84	155 23.17	3.20	1.8	1.6	23	2	114	.09	4	.4	.9	13	SWR	
		11	150	27.34	19 17.85	155 23.13	3.30	2.0	2.1	27	1	114	.09	4	.5	1.2	20	SWR	
		11	3 5	35.91	19 18.23	155 23.04	3.97	2.0	1.7	29	2	111	.10	4	.4	1.1	17	SWR	
		11	440	1.59	19 18.16	155 23.53	3.53	2.4	2.4	32	4	110	.11	4	.4	.8	21	SWR	
		11	444	31.19	19 18.30	155 23.25	2.89	3.0	3.3	42	2	110	.13	4	.3	.8	26	SWR	
		11	539	58.58	19 17.81	155 23.29	3.03	2.0	2.1	21	1	114	.10	4	.4	1.1	15	SWR	
		11	751	43.81	19 17.47	155 23.55	3.34	1.3	1.4	12	0	158	.08	5	.7	1.9	10	SWR	
		11	910	8.44	19 17.44	155 23.60	2.25	1.6	2.2	24	2	124	.10	5	.5	1.0	16	SWR	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	FEB	11	921	7.90	19 18.62	155 23.24	4.03	1.7	1.6	20	1	107	.07	3	.5	1.0 14	SWR
		11	922	37.58	19 17.35	155 23.81	2.10	1.8	1.6	17	2	116	.06	5	.5	.8 9	SWR
		11	1216	3.63	19 17.41	155 23.46	2.35	1.8	1.9	21	1	116	.10	5	.5	1.2 13	SWR
		11	1647	7.49	19 17.46	155 23.43	2.94	2.0	2.1	24	1	116	.08	5	.4	1.1 17	SWR
		11	1738	20.30	19 18.75	155 21.98	3.54	1.8	1.3	15	1	142	.06	4	.6	.9 12	SWR
		11	1846	14.54	19 17.82	155 23.32	3.34	2.1	2.2	20	1	114	.07	4	.5	1.1 16	SWR
		11	19 8	46.02	19 19.10	155 12.47	7.19	2.4	2.4	31	3	93	.13	4	.5	.9 24	SF2
		11	1930	38.69	19 17.39	155 23.14	3.22	1.7	1.2	20	1	159	.08	5	.6	1.4 17	SWR
		11	1932	39.29	19 18.88	155 13.13	8.84	1.5	1.3	23	3	83	.07	3	.6	.9 18	SF2
		11	2130	24.94	19 17.77	155 23.15	3.22	1.7	1.5	16	1	154	.07	5	.6	1.2 13	SWR
		11	2140	12.06	19 17.35	155 23.66	4.22	1.8	2.4	24	1	116	.09	5	.4	2.2 17	SWR
		11	2142	42.04	19 17.80	155 23.27	3.10	1.8	2.4	27	3	114	.07	5	.4	.9 19	SWR
		11	2149	16.30	19 18.47	155 23.47	4.25	2.5	3.1	28	1	107	.12	3	.4	1.2 25	SWR
		11	2235	58.07	19 58.37	155 22.20	14.25	2.7	2.8	28	3	198	.13	10	.8	.4 15	KFA
		12	141	38.25	19 22.12	155 29.71	8.87	2.3	2.1	27	1	73	.09	4	.4	1.0 21	KAD
		12	2 4	13.79	19 18.01	155 23.04	3.49	1.7	2.0	16	1	113	.06	4	.5	1.0 12	SWR
		12	315	14.11	19 17.96	155 23.21	3.13	.9	1.3	19	1	113	.07	4	.4	1.0 14	SWR
		12	325	46.94	19 17.36	155 23.70	2.20	1.8	1.9	23	2	116	.11	5	.4	1.0 15	SWR
		12	421	15.45	19 19.12	155 21.93	3.31	1.6	1.4	19	1	133	.06	3	.5	.7 12	SWR
		12	441	3.47	19 18.14	155 23.10	3.85	1.1	1.5	17	1	112	.07	4	.6	1.1 14	SWR
		12	656	53.60	19 17.96	155 23.19	3.31	1.1	1.3	15	1	152	.06	4	.6	1.1 13	SWR
		12	737	8.44	19 17.26	155 23.43	2.80	1.1	1.3	18	1	118	.06	6	.5	1.3 12	SWR
		12	755	39.53	19 20.05	155 21.40	2.80	1.5	1.3	16	1	111	.07	3	.4	.6 11	SWR
		12	855	45.71	19 18.48	155 23.26	3.65	2.0	2.1	27	2	108	.10	3	.4	.8 18	SWR
		12	945	26.17	19 18.55	155 23.32	3.57	1.8	1.5	20	1	143	.09	3	.5	.8 14	SWR
		12	946	13.78	19 18.73	155 23.07	3.63	2.0	1.6	23	1	119	.10	3	.4	.9 17	SWR
		12	10 7	52.12	19 21.25	155 6.28	9.14	1.9	1.3	20	0	91	.08	3	.7	1.2 15	SF4
		12	1015	18.02	19 17.08	155 20.83	6.37	.3	1.3	4	0	197	.02	4	1.7	2.3 2	SWR
		12	11 3	23.37	19 17.65	155 23.56	3.12	.3	1.0	11	1	191	.08	5	.7	1.2 8	SWR
		12	1113	49.27	19 20.31	155 12.50	8.83	1.8	1.2	21	1	72	.06	4	.6	.9 15	SF2
		12	1134	54.16	19 17.86	155 23.34	3.71	1.7	1.5	23	1	113	.09	4	.4	1.1 16	SWR F
		12	1221	43.43	19 17.51	155 23.27	2.69	.3	1.1	19	2	117	.07	5	.5	.9 12	SWR
		12	1321	15.19	19 17.39	155 23.64	1.96	1.0	1.2	17	1	115	.07	5	.5	1.0 7	SWR
		12	1343	41.27	19 17.88	155 23.25	3.16	1.7	1.3	17	1	152	.08	4	.5	1.1 13	SWR F
		12	1422	13.93	19 18.72	155 23.14	3.90	1.8	1.7	21	1	119	.13	3	.5	1.0 11	SWR
		12	1428	54.33	19 18.43	155 23.28	5.84	2.8	3.0	40	0	108	.13	3	.4	.9 33	SWR
		12	1433	22.98	19 17.92	155 23.23	3.95	2.1	1.9	26	3	113	.11	4	.4	1.3 19	SWR F
		12	1439	39.59	19 17.41	155 23.24	2.84	1.3	1.2	18	1	159	.06	5	.5	1.2 14	SWR
		12	1510	20.81	19 17.78	155 23.48	4.50	2.3	2.7	35	2	113	.10	5	.4	1.7 27	SWR
		12	1624	54.78	19 17.37	155 23.68	3.04	2.3	2.2	36	3	116	.10	5	.4	1.2 22	SWR
		12	1759	21.87	19 20.40	155 19.28	3.56	1.4	1.0	19	2	78	.08	3	.4	.9 15	SWR
		12	1837	48.27	19 18.60	155 12.94	7.32	1.6	1.2	21	1	94	.08	3	.5	1.2 13	SF2
		12	1912	58.63	19 17.54	155 23.52	5.18	1.9	1.7	25	2	115	.10	5	.5	2.2 20	SWR
		12	1949	25.60	19 17.45	155 23.55	2.63	1.8	1.1	21	1	116	.07	5	.4	1.2 14	SWR
		12	1958	46.93	19 23.97	155 25.73	8.54	1.8	1.2	28	2	58	.09	3	.4	.8 21	KAD
		12	2052	10.18	19 18.72	155 15.39	8.03	1.8	1.3	19	3	124	.06	4	.6	1.1 15	SF1
		12	2221	5.51	19 17.71	155 23.29	3.48	1.0	1.1	14	1	154	.07	5	.6	1.3 11	SWR
		12	2325	21.05	19 18.44	155 22.79	5.48	2.1	2.4	35	2	121	.12	3	.4	1.1 25	SWR

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	FEB	12	2338	9.77	19 18.36	155 21.98	4.09	1.6	1.2	18	1	149	.09	4	.6	1.3 16	SWR
		13	0 0	38.69	19 21.44	155 2.41	8.24	1.9	1.1	16	1	147	.05	3	.8	1.4 8	SF5
		13	028	26.08	19 20.95	155 6.03	8.76	1.8	1.3	23	2	98	.08	4	.6	1.2 18	SF4
		13	053	42.44	19 17.75	155 23.57	3.04	2.0	2.2	22	1	113	.10	5	.5	1.2 14	SWR
		13	111	40.07	19 17.44	155 23.49	2.91	1.8	1.2	20	1	116	.07	5	.5	1.1 9	SWR
		13	124	8.67	19 17.90	155 23.10	3.43	.3	1.1	20	1	114	.09	4	.5	1.2 16	SWR
		13	140	13.63	19 17.85	155 23.30	3.71	2.0	2.2	26	2	114	.11	4	.5	1.3 19	SWR
		13	141	42.61	19 18.65	155 22.89	3.64	1.8	1.3	22	2	108	.10	3	.5	.8 16	SWR
		13	213	59.39	19 17.60	155 23.27	2.81	1.0	1.0	19	1	116	.07	5	.4	1.1 15	SWR
		13	235	27.01	19 19.07	155 21.38	3.26	1.6	1.2	21	1	133	.09	4	.5	.9 18	SWR
		13	254	42.83	19 17.76	155 23.43	3.80	1.1	1.3	24	1	126	.11	5	.5	1.5 16	SWR
		13	355	12.06	19 16.01	155 27.62	9.48	2.3	1.9	28	2	97	.12	5	.4	.6 23	LSW
		13	5 4	42.50	19 17.62	155 23.26	2.95	1.0	1.1	18	1	116	.07	5	.5	1.1 12	SWR
		13	518	.96	19 17.70	155 23.35	3.79	1.8	1.6	24	1	114	.09	5	.4	1.5 20	SWR
		13	610	26.46	19 17.48	155 23.24	2.49	1.1	1.0	18	1	117	.09	5	.5	1.2 11	SWR
		13	657	7.22	19 17.91	155 23.13	3.33	1.7	1.3	22	1	114	.10	4	.4	1.0 10	SWR
		13	7 2	22.15	19 17.83	155 23.19	3.06	1.7	1.2	20	1	114	.10	4	.5	1.0 11	SWR
		13	759	44.95	19 18.38	155 23.13	3.56	1.5	1.1	21	2	183	.08	3	.6	.8 13	SWR
		13	823	53.30	19 18.76	155 20.07	6.73	.3	1.7	11	0	100	.07	3	.7	1.4 11	SWR
		13	1147	31.74	19 18.27	155 23.32	4.01	1.0	1.1	18	1	147	.09	4	.6	1.3 13	SWR
		13	1214	29.16	19 18.22	155 23.20	3.89	1.2	1.3	20	1	148	.08	4	.5	1.0 11	SWR
		13	1216	50.22	19 17.89	155 23.35	3.74	1.7	2.1	27	2	112	.11	4	.5	1.2 18	SWR
		13	1225	19.29	19 26.17	155 37.04	2.42	2.5	2.9	32	1	80	.13	2	.4	.7 21	MLO
		13	1255	17.65	19 17.59	155 23.54	2.40	1.2	1.4	21	2	156	.08	5	.5	.9 14	SWR
		13	1314	46.02	19 17.71	155 23.22	5.41	1.7	2.2	23	1	115	.10	5	.5	1.8 16	SWR
		13	1320	39.63	19 18.44	155 23.24	4.60	1.2	1.6	19	1	145	.10	3	.6	1.4 14	SWR
		13	1329	11.43	19 17.83	155 23.02	3.14	1.1	1.4	16	1	153	.06	4	.6	1.1 11	SWR
		13	1334	12.51	19 18.85	155 23.23	5.52	2.1	2.8	29	1	105	.10	3	.4	.9 23	SWR
		13	15 8	52.81	19 18.69	155 23.09	6.73	1.8	2.3	32	2	107	.13	3	.5	.9 20	SWR
		13	1519	20.95	19 19.73	155 7.39	6.72	1.4	1.8	19	0	106	.07	5	.5	1.3 12	SF4
		13	1539	21.91	19 18.19	155 23.04	3.14	1.0	1.4	17	1	149	.09	4	.5	.9 12	SWR
		13	1547	55.34	19 17.22	155 23.80	4.78	1.2	1.8	23	1	116	.	6	.6	3.1 14	SWR
		13	16 0	28.16	19 18.53	155 23.41	3.53	1.1	1.3	17	1	143	.09	3	.5	.9 12	SWR
		13	17 8	53.20	19 17.70	155 23.70	5.88	2.4	3.8	42	0	113	.11	5	.4	.9 26	SWR
		13	1722	4.92	19 17.51	155 23.49	3.09	1.1	1.4	23	1	116	.09	5	.5	1.1 13	SWR
		13	1749	31.45	19 17.82	155 23.28	3.08	1.7	1.9	22	1	154	.07	4	.5	1.0 14	SWR
		13	1815	48.12	19 1.66	155 25.37	44.20	2.3	1.9	24	0	218	.06	15	1.7	3.6 22	DLS
		13	1952	44.20	19 18.07	155 23.46	6.84	3.3	3.9	45	1	110	.15	4	.4	.9 42	SWR
		13	2038	52.57	19 18.30	155 22.91	4.15	1.0	1.4	15	1	147	.06	4	.6	1.2 13	SWR
		13	2040	9.18	19 18.27	155 23.17	4.58	1.0	1.7	21	1	148	.09	4	.6	1.6 17	SWR
		13	21 3	40.62	19 17.07	155 23.57	2.57	1.8	1.8	21	1	119	.09	6	.5	1.4 15	SWR
		13	2257	40.79	19 19.34	155 17.26	32.22	1.9	2.1	30	1	102	.08	1	.9	1.5 27	DEP
		14	046	53.68	19 20.78	155 20.27	1.91	1.3	1.3	17	1	89	.10	5	.4	.8 15	SWR
		14	238	33.66	19 18.46	155 23.21	5.04	1.8	2.0	32	1	109	.12	3	.4	1.1 23	SWR
		14	310	40.84	19 18.78	155 22.83	3.42	1.1	1.7	21	0	141	.12	3	.6	.9 15	SWR
		14	517	2.04	19 19.05	155 15.62	8.59	2.4	2.6	37	4	116	.11	4	.5	.6 24	SF1
		14	552	57.98	19 18.82	155 15.38	8.70	2.8	3.2	46	2	98	.11	4	.4	.4 35	SF1
		14	624	46.31	19 18.28	155 23.08	4.74	1.7	1.9	22	1	111	.11	4	.5	1.6 18	SWR

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HR	MIN	SEC	ORIGIN TIME	LAT N DEG MIN	LOM W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR	GAP NS	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK	
1981	FEB	14	824	11.06	19	18.30	155 21.38	3.09	.9	1.5	15	2 207	.04	5	.8	.6 11	SWR	
		14	955	58.47	19	18.09	155 23.10	3.54	.9	1.2	12	1 155	.04	4	.4	.8 11	SWR	
		14	10	13.21	19	17.51	155 23.34	2.94	.9	1.1	15	1 158	.07	5	.5	1.1 13	SWR	
		14	1010	24.04	19	14.14	155 34.22	8.41	2.5	2.7	37	3 118	.15	5	.5	.6 30	LSW	
		14	14	0	35.43	19	19.01	155 21.32	3.08	.8	1.0	15	1 189	.04	4	.6	.7 14	SWR
		14	1440	.49	19	18.32	155 23.09	3.77	.7	1.3	18	1 147	.06	4	.4	.8 14	SWR	
		14	1556	18.36	19	17.94	155 23.09	3.21	.9	1.2	17	1 152	.06	4	.5	.9 16	SWR	
		14	1648	13.62	19	17.67	155 23.23	3.11	1.1	1.3	16	1 116	.11	5	.5	1.0 13	SWR	
		14	1759	.81	19	17.51	155 23.26	2.91	.8	1.3	14	1 158	.06	5	.5	1.1 13	SWR	
		14	1839	15.34	19	18.58	155 23.41	4.90	1.6	2.1	26	1 106	.12	3	.5	1.3 21	SWR	
		14	19	3	44.69	19	23.80	155 25.68	9.70	1.8	1.6	28	2 59	.09	3	.4	.9 24	KAO
		14	1928	48.68	19	17.34	155 23.32	2.71	.8	1.3	13	1 170	.05	5	.5	1.1 12	SWR	
		14	1940	18.57	19	17.59	155 23.28	3.32	1.8	2.4	27	1 116	.09	5	.4	1.1 22	SWR	
		14	22	3	35.68	19	18.32	155 22.84	4.14	1.4	1.6	18	1 147	.07	4	.6	1.3 16	SWR
		14	2313	2.31	19	20.11	155 3.57	7.93	1.5	1.8	19	0 130	.10	1	.9	1.0 12	SFS	
		14	2346	58.03	19	20.34	155 3.83	8.43	2.5	2.9	35	1 117	.09	2	.5	.7 28	SFS	
		15	012	50.89	19	17.77	155 23.27	3.04	.8	1.3	16	1 154	.06	5	.5	.9 13	SWR	
		15	031	55.22	19	18.21	155 23.00	4.15	1.6	1.8	19	1 149	.07	4	.5	1.2 15	SWR	
		15	055	44.89	19	17.60	155 23.29	3.00	1.1	1.2	17	1 156	.07	5	.5	1.0 13	SWR	
		15	1	2	31.96	19	17.86	155 23.05	2.59	.8	1.1	11	1 223	.08	4	1.4	.9 10	SWR
		15	239	48.44	19	18.16	155 23.25	3.83	1.2	1.6	16	1 149	.07	4	.7	1.1 13	SWR	
		15	251	29.62	19	18.03	155 23.27	3.55	.8	1.1	19	2 150	.08	4	.5	.9 12	SWR	
		15	3	4	58.52	19	20.69	155 10.76	8.89	1.7	1.4	20	3 74	.06	3	.6	.9 13	SF3
		15	635	34.01	19	18.49	155 23.10	3.67	.9	1.1	19	1 144	.10	3	.5	.9 14	SWR	
		15	643	13.91	19	18.24	155 23.22	4.03	1.0	1.3	24	2 148	.09	4	.5	.9 11	SWR	
		15	8	6	36.10	19	17.31	155 23.45	2.26	1.8	2.2	27	2 118	.12	5	.5	1.0 19	SWR
		15	823	51.91	19	17.48	155 23.88	6.09	1.9	2.4	32	1 114	.10	5	.4	1.1 26	SWR	
		15	826	6.02	19	18.40	155 23.34	4.00	1.2	1.3	19	1 157	.10	3	.6	1.0 13	SWR	
		15	932	47.53	19	18.07	155 23.26	5.47	1.9	2.4	26	1 124	.11	4	.5	1.6 20	SWR	
		15	1057	51.27	19	16.44	155 22.93	6.07	1.8	1.2	13	1 190	.03	7	.7	2.0 10	SWR	
		15	1116	18.97	19	17.27	155 23.79	2.39	.9	1.0	20	1 126	.10	6	.5	1.3 15	SWR	
		15	1210	22.42	19	17.29	155 23.97	2.22	1.8	1.8	23	1 115	.09	6	.4	1.4 14	SWR	
		15	1226	14.40	19	18.02	155 22.94	3.09	1.1	1.4	16	2 151	.08	4	.6	.9 13	SWR	
		15	1241	33.83	19	18.48	155 23.25	5.45	2.3	3.2	40	3 108	.13	3	.4	.9 27	SWR	
		15	1254	31.57	19	18.30	155 23.22	4.09	1.5	1.8	23	1 110	.11	4	.5	1.1 21	SWR	
		15	1316	.62	19	17.54	155 23.79	3.48	1.7	2.7	27	0 114	.10	5	.4	1.3 23	SWR	
		15	1325	10.66	19	18.00	155 23.11	3.46	1.5	1.6	16	1 151	.05	4	.5	.9 14	SWR	
		15	1332	22.42	19	18.35	155 23.25	5.45	2.4	3.6	33	1 109	.11	3	.4	1.1 28	SWR	
		15	1346	20.31	19	17.35	155 23.44	2.63	1.0	1.4	20	1 118	.06	5	.4	.9 16	SWR	
		15	1351	59.95	19	17.81	155 20.97	12.26	1.8	1.8	17	3 197	.06	8	.9	.3 16	KEA	
		15	15	7	35.36	19	18.57	155 23.42	4.12	1.7	2.3	25	1 106	.11	3	.4	1.1 22	SWR
		15	1514	46.20	19	18.72	155 23.06	4.58	.9	1.2	16	1 142	.08	3	.6	1.0 13	SWR	
		15	1521	49.58	19	18.72	155 23.22	5.41	1.3	1.6	20	1 141	.11	3	.6	1.4 18	SWR	
		15	1524	4.26	19	18.22	155 22.85	4.07	1.2	1.6	17	1 149	.09	4	.6	1.2 14	SWR	
		15	1537	47.22	19	17.65	155 23.30	3.37	.9	1.2	14	1 164	.05	5	.5	1.1 11	SWR	
		15	1551	.07	19	22.95	155 24.40	9.77	1.5	1.1	22	1 80	.06	4	.5	.9 20	KAO	
		15	1615	55.37	19	17.32	155 23.34	2.71	1.5	1.8	24	1 118	.08	5	.4	1.1 18	SWR	
		15	1618	30.05	19	17.75	155 23.12	3.24	1.7	2.1	24	1 115	.09	5	.5	1.2 18	SWR	

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HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HR	MIN	SEC	ORIGIN TIME	LAT N DEG MIN	LOM W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR	GAP NS	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK	
1981	FEB	15	1644	26.76	19	17.08	155 23.44	2.95	.9	1.1	17	1 163	.08	6	.6	1.5 13 SWR	
		15	18	3	56.83	19	19.21	155 21.70	2.46	.9	1.1	16	1 131	.08	3	.5	.8 15 SWR
		15	19	6	54.32	19	24.94	155 29.54	8.96	1.9	1.3	23	1 71	.06	6	.4	1.0 18 KAO
		15	1958	26.79	19	18.75	155 23.00	4.51	.8	1.1	19	2 142	.09	3	.5	.9 16 SWR	
		15	2055	49.73	19	20.55	155 17.38	2.12	1.1	1.2	17	2 62	.07	1	.3	.3 13 SWR	
		15	2116	30.94	19	18.20	155 23.26	3.56	1.0	1.3	17	1 148	.07	4	.5	1.0 12 SWR	
		15	2129	45.21	19	20.08	155 8.45	8.23	2.1	2.5	33	2 79	.09	4	.4	.9 26 SF4	
		15	22	0	28.86	19	17.60	155 23.35	4.61	1.8	2.2	25	1 123	.10	5	.5	2.2 19 SWR
		15	2235	30.10	19	17.63	155 23.28	3.50	1.3	1.4	22	1 156	.08	5	.5	1.2 16 SWR	
		16	017	53.08	19	17.45	155 23.47	2.46	1.1	1.5	17	1 158	.08	5	.5	1.3 12 SWR	
		16	045	46.35	19	18.70	155 23.09	3.60	1.7	1.6	22	1 119	.07	3	.5	.8 17 SWR	
		16	220	15.48	19	18.63	155 23.30	6.82	2.4	3.4	45	2 107	.14	3	.4	.8 33 SWR	
		16	4	2	42.62	19	17.31	155 23.69	2.70	1.8	1.7	25	1 159	.09	5	.6	1.4 21 SWR
		16	517	35.31	19	17.85	155 23.31	4.96	1.7	2.1	28	2 113	.10	4	.5	1.9 19 SWR	
		16	6	2	28.00	19	19.53	155 17.38	33.90	2.9	3.5	45	0 94	.09	1	.6	1.0 44 DEP F
		16	610	43.11	19	18.97	155 12.26	7.70	1.8	1.1	21	1 100	.06	4	.6	1.2 16 SF3	
		16	728	37.10	19	20.56	155 12.55	4.12	1.5	.9	19	1 72	.06	4	.6	1.0 12 SF2	
		16	918	11.69	19	18.94	155 22.01	3.07	.9	1.4	17	2 138	.08	3	.8	.6 12 SWR	
		16	929	35.53	19	17.49	155 23.60	2.53	.8	1.3	18	2 165	.10	5	.6	1.0 11 SWR	
		16	933	14.72	19	17.53	155 23.58	2.50	.9	1.3	20	2 115	.08	5	.4	1.0 13 SWR	
		16	938	52.68	19	17.55	155 23.31	3.54	1.7	1.8	15	2 157	.06	5	.5	1.2 11 SWR	
		16	944	19.24	19	17.45	155 23.50	3.12	.9	1.3	14	1 155	.08	5	.5	1.0 8 SWR	
		16	953	52.15	19	17.58	155 23.51	4.51	1.8	1.4	25	1 114	.10	5	.5	2.3 17 SWR	
		16	1045	33.68	19	20.87	155 11.39	8.14	1.4	1.2	23	3 71	.07	3	.5	.9 14 SF3	
		16	1344	35.88	19	18.19	155 23.42	5.92	2.4	3.0	34	2 110	.12	4	.4	1.1 27 SWR	
		16	14	8	.01	19	17.92	155 23.36	3.48	1.1	1.4	22	2 152	.10	4	.5	1.0 15 SWR
		16	1412	56.71	19	18.03	155 23.71	5.27	2.6	3.2	44	3 110	.12	4	.4	1.0 30 SWR	
		16	1430	4.55	19	18.11	155 23.30	5.99	1.8	2.5	27	1 111	.11	4	.5	1.4 21 SWR	
		16	1634	28.34	19	23.67	155 28.59	10.38	1.8	1.7	23	1 69	.07	3	.5	.9 20 KAO	
		16	17	4	46.68	19	18.54	155 23.17	4.11	1.1	1.1	16	2 144	.04	3	.5	.9 15 SWR
		16	1716	49.46	19	16.65	155 23.20	6.17	1.7	1.8	22	1 125	.11	7	.5	2.0 17 SWR	
		16	1728	54.54	19	18.78	155 23.37	5.33	1.3	1.7	20	2 105	.09	3	.5	.9 17 SWR	
		16	1831	58.07	19	18.38	155 23.52	4.00	1.5	1.8	23	2 145	.09	3	.5	.9 21 SWR	
		16	1924	16.91	19	19.58	155 7.23	7.51	2.0	1.8	31	3 113	.08	4	.4	.8 22 SF4	
		16	1938	18.61	19	24.29	155 25.14	9.92	2.2	2.2	38	3 52	.10	2	.4	.7 24 KAO	
		16	2037	37.70	19	18.35	155 23.17	5.51	2.7	3.5	46	3 109	.14	4	.3	.9 34 SWR	
		16	2054	15.27	19	18.25	155 23.21	4.30	1.1	1.5	22	2 110	.07	3	.4	1.0 19 SWR	
		16	2230	30.32	19	18.26	155 22.88	3.58	.9	1.1	22	2 149	.07	4	.5	.8 14 SWR	
		16	2259	21.22	19	18.05	155 23.43	4.01	.9	1.1	17	1 149	.10	4	.6	1.5 14 SWR	
		17	012	2.77	19	27.26	154 53.74	6.25	2.3	1.9	28	0 144	.14	3	.7	.9 23 LER	
		17	117	54.01	19	18.21	155 22.95	3.42	1.7	1.8	28	2 112	.10	4	.5	1.0 19 SWR	
		17	126	24.12	19	27.27	154 53.65	6.07	1.8	1.5	29	2 145	.08	3	.5	.7 14 LER	
		17	139	49.71	19	24.71	155 25.57	12.04	1.8	1.4	27	2 51	.08	1	.5	.9 20 KAO	
		17	425	34.27	19	21.73	155 2.70	7.54	1.4	1.1	19	0 134	.11	3	.7	1.1 13 SF5	
		17	441	26.82	19	20.31	155 12.86	8.20	1.4	1.4	25	2 68	.08	4	.5	.7 17 SF2	
		17	7	0	6.97	19	20.51	155 7.46	7.21	.9	1.1	13	1 92	.06	5	.6	1.3 9 SF4
		17	827	39.87	19	19.49	155 28.57	8.52	1.9	1.5	29	2 77	.12	6	.4	1.0 25 KAO	
		17	1912	55.23	19	18.28	155 22.89	4.07	1.1	1.0	26	3 121	.08	4	.4	.9 19 SWR	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HR	MIN	SEC	ORIGIN TIME	LAT N	DEG	MIN	DEG	MIN	DEPTH	KM	AMP	MAG	OUR	NR	NS	GAP	RMS	MIN	DIS	ERH	ERZ	NO	REMK
1981	FEB	18	055	13.65	19	18.46	155	22.94				5.30	1.2	.9	26	3	118	.09	3	.4	1.0	18	SWR			
		18	1	6	20.76	19	18.33	155	22.86			5.28	1.1	1.0	28	3	120	.09	4	.4	1.3	21	SWR			
		18	145	14.81	19	14.43	155	22.18				8.17	1.8	1.7	25	1	156	.08	6	.5	1.1	17	SWR			
		18	5	3	24.11	19	18.85	155	16.11			8.33	1.4	1.1	16	1	125	.04	3	.6	1.4	14	SF1			
		18	522	20.06	19	23.13	155	26.45				8.58	1.6	1.1	29	3	52	.10	2	.4	.8	22	KAO			
		18	648	16.23	19	27.51	154	53.66				7.47	1.7	1.2	22	0	138	.12	3	.8	.7	10	LER			
		18	715	26.09	19	17.07	155	23.50				5.09	1.2	1.1	16	2	163	.04	6	.5	1.3	11	SWR			
		18	745	.05	19	14.62	155	22.14				7.72	1.3	1.0	15	0	154	.05	9	.7	2.4	10	SWR			
		18	1231	8.06	19	19.77	155	10.01				7.84	1.9	1.3	27	3	89	.10	4	.5	.8	23	SF3			
		18	14	4	40.30	19	18.05	155	23.35			3.17	1.4	1.3	20	3	119	.07	4	.4	.8	16	SWR			
		18	20	7	49.69	19	18.51	155	23.48			5.92	1.5	1.2	47	6	107	.13	3	.3	.7	42	SWR			
		18	2029	55.29	19	18.40	155	23.21				3.67	1.6	1.3	21	2	109	.08	3	.4	.8	20	SWR			
		18	2035	42.69	19	18.43	155	23.29				3.67	1.1	1.3	21	3	115	.09	3	.4	.8	19	SWR			
		19	221	22.01	19	19.97	155	12.79				8.53	1.5	1.1	18	1	74	.05	5	.5	1.1	16	SF2			
		19	750	25.45	19	18.38	155	22.91				3.94	.7	.8	15	2	147	.06	3	.5	.8	13	SWR			
		19	9	1	48.56	19	17.89	155	23.48			3.12	1.7	1.2	19	1	112	.09	4	.5	1.1	13	SWR			
		19	1128	1.23	19	20.11	155	8.25				7.44	2.0	1.7	30	3	82	.11	5	.5	1.0	21	SF4			
		19	13	5	1.41	19	17.43	155	23.61			5.58	1.8	1.6	21	1	158	.11	5	.7	2.0	12	SWR			
		19	23	2	9.38	19	17.83	155	16.76			8.65	2.8	2.7	38	2	154	.11	5	.5	.5	28	SF1			
		20	039	5.31	19	17.52	155	23.49				2.42	1.0	1.3	19	2	157	.07	5	.4	1.0	15	SWR			
		20	230	37.69	19	17.63	155	23.91				4.96	1.8	1.5	25	0	126	.10	5	.6	2.1	19	SWR			
		20	250	8.30	19	20.94	155	18.38				31.05	2.2	1.3	38	2	54	.07	2	.7	1.1	30	DEP			
		20	724	22.93	19	17.58	155	23.91				5.74	2.4	2.6	40	1	112	.11	5	.4	.8	30	SWR			
		20	1319	39.60	19	22.91	155	24.08				11.13	1.7	1.2	27	2	73	.07	5	.5	.9	24	KAO			
		20	15	1	22.21	19	43.49	155	2.47			1.11	2.3	2.7	20	0	199	.26	5	1.4	5.3	8	HIL R			
		20	1539	31.00	19	19.90	155	8.67				7.84	1.6	1.0	19	2	87	.06	5	.7	1.1	8	SF4			
		20	1616	11.66	19	24.66	155	25.52				5.15	2.0	1.8	34	3	51	.13	1	.4	1.0	27	KAO			
		20	1733	13.58	19	18.98	155	21.42				8.80	1.4	1.3	24	2	112	.10	4	.6	1.1	18	SWR			
		20	20	4	12.31	19	17.23	155	23.33			2.68	1.1	1.3	21	2	130	.08	6	.4	1.0	11	SWR			
		20	2344	9.13	19	17.40	155	23.33				2.52	1.3	1.4	15	2	159	.08	5	.4	.8	9	SWR			
		21	055	4.72	19	17.50	155	23.79				3.42	1.1	1.1	16	1	157	.07	5	.5	1.4	7	SWR			
		21	517	33.69	19	18.43	155	21.91				3.62	1.6	1.6	25	1	123	.08	4	.5	.9	16	SWR			
		21	637	57.05	19	17.91	155	23.32				3.64	1.7	1.6	21	1	152	.11	4	.5	1.1	9	SWR			
		21	733	6.78	19	17.57	155	23.31				2.58	1.2	1.2	16	1	165	.08	5	.6	1.0	9	SWR			
		21	1019	7.30	19	17.75	155	23.54				5.02	1.9	2.1	27	1	113	.12	5	.5	1.9	20	SWR			
		21	1036	44.99	19	26.21	155	37.15				2.91	2.9	3.1	34	1	82	.15	2	.5	.7	22	MLO			
		21	1137	12.06	19	20.30	155	8.58				8.94	3.1	3.2	44	2	108	.08	5	.4	.5	35	SF4			
		21	1338	5.86	19	17.37	155	23.40				2.77	1.8	1.4	16	1	158	.11	5	.6	1.5	11	SWR			
		21	1520	51.95	19	20.52	155	3.26				7.53	1.7	1.2	17	0	117	.11	1	1.1	.9	9	SF5			
		21	1551	9.46	19	16.24	155	21.81				7.47	1.5	1.4	24	3	178	.09	6	.7	1.2	15	SWR			
		21	1617	11.69	19	18.23	155	22.92				3.53	1.2	1.1	13	1	176	.04	4	.5	.8	8	SWR			
		21	2033	12.53	19	18.98	155	21.96				3.96	1.2	1.1	12	1	169	.05	3	.6	.6	4	SWR			
		21	2148	20.96	19	17.51	155	23.40				3.21	1.2	1.3	20	1	166	.10	5	.5	1.2	9	SWR			
		22	117	50.44	19	20.12	155	6.72				8.49	2.3	2.2	36	0	110	.08	5	.4	.7	24	SF4			
		22	4	3	57.17	19	17.47	155	23.28			3.79	1.9	1.8	23	1	117	.10	5	.5	1.8	18	SWR			
		22	841	28.72	19	18.64	155	21.74				3.96	1.8	1.8	16	1	154	.08	4	.5	1.0	15	SWR			
		22	1213	33.98	19	20.38	155	12.80				8.80	1.7	1.0	25	2	68	.06	4	.5	.8	23	SF2			
		22	14	6	45.45	19	18.70	155	21.54			2.94	1.2	1.2	16	2	200	.07	4	.8	.6	15	SWR			

HVO EARTHQUAKE SUMMARY LIST

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		ORIGIN TIME			LAT N		LON W		DEPTH			AMP			OUR			GAP			RMS		MIN		ERH		ERZ		NO	
YEAR	MON	DA	HR	MIN	SEC	DEG	MIN	DEG	MIN	KM	MAG	KM	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK								
1981	FEB	22	15	2	36.75	19	17.60	155	23.91	2.52	.9	1.1	15	2	162	.08	5	.6	1.0	14	SWR									
		22	1639	3.99	19	17.54	155	23.61	3.10	1.5	1.6	24	2	114	.08	5	.4	1.1	20	SWR										
		22	17	7	48.90	19	17.80	155	23.14	3.18	1.8	1.8	23	2	115	.10	5	.4	1.1	22	SWR									
		22	2038	49.16	19	17.71	155	23.23	3.45	1.5	1.7	18	2	190	.06	5	.7	1.4	16	SWR										
		23	036	18.37	19	21.44	155	1.51	6.76	1.5	1.2	20	2	164	.11	4	.7	1.2	18	SF5										
		23	059	21.93	19	18.28	155	22.87	4.02	1.4	1.4	21	2	149	.05	4	.6	1.0	19	SWR										
		23	134	30.48	19	18.10	155	23.34	3.66	.8	1.1	15	2	149	.06	4	.5	.8	13	SWR										
		23	210	42.58	19	20.95	155	1.46	8.63	2.9	.47	4	178	.11	3	.5	.4	39	SF5											
		23	254	42.72	19	18.49	155	22.88	6.25	2.3	2.8	38	2	109	.14	3	.4	1.0	32	SWR										
		23	259	45.57	19	17.76	155	23.02	2.86	1.4	1.3	21	3	155	.08	5	.5	.9	17	SWR										
		23	422	32.21	19	21.32	155	1.72	7.31	1.2	1.0	21	2	170	.12	3	.6	1.1	18	SF5										
		23	433	7.60	19	21.07	155	1.46	8.15	1.4	1.0	23	2	175	.12	3	.6	.9	18	SF5										
	23	452	55.12	19	17.27	155	23.51	2.40	1.5	1.3	25	2	117	.09	6	.4	1.3	23	SWR											
	23	6	2	41.98	19	17.09	155	23.76	2.41	1.4	1.5	25	2	118	.08	6	.5	1.1	21	SWR										
	23	653	21.04	19	17.12	155	23.93	5.41	1.8	1.9	31	2	117	.10	6	.5	1.6	28	SWR											
	23	1221	10.13	19	17.45	155	23.18	3.18	1.7	1.6	20	1	169	.06	5	.6	1.2	14	SWR											
	23	1222	8.00	19	17.51	155	23.79	6.24	2.4	2.2	39	3	114	.13	5	.5	1.1	26	SWR											
	23	1620	54.85	19	20.49	155	12.95	8.53	2.4	2.4	39	2	.65	.11	4	.4	.5	29	SF2											
	23	1827	37.84	19	17.99	155	23.53	3.37	1.0	1.1	19	2	151	.09	4	.5	.9	9	SWR											
	23	2141	4.25	19	59.12	155	19.53	13.75	2.6	2.6	19	2	206	.13	11	1.0	.4	13	KEA											
	24	055	21.78	19	20.47	155	13.01	7.39	1.4	1.0	23	2	.65	.10	4	.5	1.0	13	SF2											
	24	140	24.82	19	24.17	155	25.10	10.12	1.7	1.2	27	2	52	.10	2	.4	.8	14	KAO											
	24	358	12.23	19	18.04	155	22.41	5.78	2.3	2.2	19	1	162	.11	4	.7	1.6	17	SWR											
	24	12	8	6.69	19	17.80	155	23.12	3.40	1.7	1.7	15	1	161	.05	5	.6	1.1	10	SWR										
24	13	0	47.56	19	17.21	155	23.84	1.95	1.0	1.2	22	2	161	.09	6	.4	1.0	11	SWR											
24	1339	31.42	19	20.21	155	12.84	7.83	1.9	1.7	29	3	.70	.09	5	.5	.8	19	SF2												
24	1345	57.53	19	20.25	155	11.35	7.86	3.0	4.0	40	4	.80	.09	4	.4	.6	30	SF3												
24	1430	26.71	19	17.95	155	20.63	7.35	1.7	.6	23	3	122	.07	4	.5	1.0	15	SWR												
24	1430	47.94	19	19.23	155	22.11	3.47	1.9	1.3	10	1	132	.05	3	.7	.7	7	SWR												
24	15	3	9.38	19	18.09	155	23.42	4.61	2.4	2.8	31	2	111	.12	4	.4	1.5	20	SWR											
24	1545	35.64	19	20.14	155	7.61	7.98	2.2	2.3	25	1	.95	.07	5	.4	.7	16	SF4												
24	1611	42.28	20	7.70	155	58.84	52.49	3.1	3.2	17	1	277	.14	21	1.6	2.3	6	KOH												
24	1630	32.99	19	17.56	155	23.79	2.39	1.0	1.3	19	1	163	.12	5	.6	1.2	11	SWR												
25	020	27.39	19	19.62	155	12.61	9.06	3.0	2.8	40	2	.81	.10	5	.4	.5	27	SF2												
25	140	49.74	19	19.91	155	12.40	7.53	1.6	1.6	26	1	.79	.08	5	.5	.8	19	SF2												
25	4	8	2.88	19	22.15	155	5.06	7.47	2.0	1.7	25	1	.75	.09	6	.6	1.5	18	SF5											
25	440	16.75	19	17.62	155	23.65	2.83	1.7	1.6	16	1	114	.10	5	.6	1.2	10	SWR												
25	518	53.62	20	11.26	155	50.16	14.59	2.3	1.2	0	0	315	.11	9	32.5	6.5	7	KOH												
25	631	4.67	19	20.55	155	8.23	9.01	1.9	1.5	20	2	.78	.07	4	.6	1.0	12	SF4												
25	647	27.21	19	17.38	155	23.33	6.52	1.8	1.7	21	1	127	.10	5	.5	1.5	12	SWR												
25	1647	56.52	19	22.58	155	6.05	8.17	2.8	2.5	41	3	.68	.09	1	.4	.6	29	SF4												
25	1945	18.93	19	18.18	155	23.30	4.61	1.8	2.3	24	2	149	.10	4	.5	1.5	15	SWR												
26	2	5	53.92	19	18.61	155	15.42	6.70	1.5	1.3	24	0	103	.10	4	.5	1.0	14	SF1											
26	414	38.37	19	18.14	155	23.44	4.28	2.3	2.6	29	2	110	.11	4	.4	1.4	23	SWR												
26	746	37.12	19	17.51	155	23.41	2.83	1.1	.9	14	1	158	.04	5	1.0	1.0	.8	SWR												
26	849	49.17	19	22.47	155	1.82	8.32	2.4	2.0	34	0	149	.11	5	.5	.5	24	SF5												
26	18	7	40.87	19	17.97	155	23.51	4.39	2.6	2.9	40	4	111	.13	4	.4	1.5	30	SWR											
26	2226	42.91	19	17.03	155	23.46	1.65	1.3	1.0	17	1	164	.08	6	.6	1.0	.9	SWR												

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	FEB	26	2323	24.01	19 34.75	155 38.62	7.33	2.3	1.2 14	0 139	.12 11	.8	1.8	7 MLO
		26	2348	3.97	19 16.02	155 23.75	2.84	1.8	1.2 18	2 167	.06 6	.6	1.3	7 SWR
		27	13	2 15.47	19 19.54	155 12.51	8.62	1.7	1.4 21	2 84	.05 5	.5	.8	13 SF2
		27	2348	38.59	19 25.19	155 37.48	3.10	2.5	2.4 20	1 160	.13 4	.6	1.2	11 MLO
		28	533	42.45	19 21.17	155 5.82	8.62	1.3	1.3 15	0 94	.09 3	.6	1.3	10 SF4
		28	9	7 28.49	19 17.57	155 23.88	2.67	1.5	2.1 22	1 113	.11 5	.4	1.2	15 SWR
		28	942	35.70	19 19.79	155 7.76	7.33	1.6	1.8 23	2 97	.09 5	.5	1.1	19 SF4
		28	1141	59.47	19 17.10	155 23.97	1.89	1.8	1.9 24	2 126	.10 6	.5	.9	14 SWR
		28	1614	8.39	19 17.11	155 23.23	8.43	1.4	1.3 18	1 163	.12 6	.7	1.3	10 SWR
		28	1723	18.21	19 30.57	155 29.23	3.66	2.2	2.0 30	1 102	.13 4	.4	1.1	17 MLO
		28	1744	42.37	19 17.97	155 23.41	5.88	1.4	1.4 16	0 168	.08 4	.8	1.6	14 SWR
		28	2020	38.41	19 18.07	155 23.19	3.80	1.8	1.8 24	1 112	.09 4	.4	1.1	14 SF2
		28	2049	38.26	19 19.03	155 13.28	8.23	1.4	.9 19	1 77	.06 4	.6	1.1	12 SF2
		28	2110	25.16	19 23.15	155 3.76	8.75	2.8	2.8 39	1 96	.10 3	.4	.5	24 SF5
		28	2254	59.56	19 17.91	155 23.16	3.26	1.1	.9 15	1 152	.08 4	.5	1.0	10 SWR
		28	2349	29.73	19 19.85	155 12.77	9.20	2.0	2.4 23	2 76	.06 5	.4	.8	20 SF2
MAR		1	211	52.52	19 20.03	155 12.88	8.73	1.6	1.3 19	2 72	.06 5	.6	1.2	14 SF2
		1	638	10.16	19 21.64	155 1.67	7.37	1.8	1.5 25	0 164	.12 4	.7	1.0	16 SF5
		1	7	1 21.26	19 21.52	155 2.05	9.07	4.3	4.3 48	1 148	.10 3	.6	.4	44 SF5 F
		1	7	4 36.79	19 21.48	155 2.77	8.23	1.1	.5 13	0 140	.07 3	1.0	1.3	9 SF5
		1	713	30.46	19 21.82	155 1.74	4.87	1.2	.7 17	0 171	.13 4	.9	2.2	12 SSF
		1	716	15.43	19 21.61	155 2.72	7.46	1.4	1.0 20	2 134	.09 3	.5	.7	11 SF5
		1	718	4.58	19 22.08	155 1.59	6.21	1.2	.8 21	2 159	.13 5	.6	1.2	10 SF5
		1	726	25.22	19 18.64	155 13.26	8.81	2.8	2.8 39	3 83	.09 3	.4	.5	25 SF2
		1	11	1 38.30	19 20.76	155 3.56	8.86	2.4	2.3 41	2 87	.11 2	.5	.5	27 SF5
		1	11	8 23.57	19 20.58	155 3.55	8.26	1.9	1.3 25	1 95	.07 2	.5	.7	14 SF5
		1	1133	11.90	19 16.89	155 23.41	7.44	1.8	1.5 22	2 118	.12 6	.5	1.2	13 SWR
		1	1410	22.93	19 11.60	155 32.43	6.29	1.7	1.3 20	1 95	.19 8	.6	2.0	9 LSW
		1	1435	28.33	19 16.58	155 24.05	3.60	1.8	1.4 20	2 121	.12 7	.5	3.8	14 SWR
		1	16	6 8.68	19 17.90	155 23.20	3.48	2.1	2.0 28	4 152	.07 4	.4	.8	18 SWR
		1	1858	11.55	19 17.81	155 23.39	3.18	2.0	2.0 23	2 113	.10 4	.4	.9	15 SWR
		1	2130	37.06	19 17.05	155 23.70	7.01	1.8	1.6 21	2 163	.11 6	.6	1.1	14 SWR
		1	2131	48.15	19 17.34	155 23.28	2.85	1.6	2.6 26	2 118	.10 5	.5	1.0	17 SWR
		1	2219	45.18	19 19.63	155 7.86	9.13	2.0	2.1 43	2 97	.09 4	.4	.4	27 SF4
		1	2328	36.95	19 19.39	155 10.92	8.60	1.8	1.5 25	3 101	.05 5	.5	1.0	17 SF3
		1	2339	22.44	19 12.18	155 32.33	5.17	2.2	1.7 22	2 87	.19 7	.6	2.0	13 LSW
		2	139	37.42	19 20.38	155 11.82	8.83	2.3	2.1 37	3 76	.11 5	.4	.6	25 SF3
		2	310	42.80	19 23.86	155 28.87	10.32	2.4	2.4 46	3 37	.09 3	.3	.5	33 KAO
		2	6	4 32.54	19 19.25	155 11.69	7.83	1.7	1.8 29	2 99	.07 5	.5	.7	19 SF3
		2	1057	38.00	19 16.21	155 23.67	8.47	1.8	1.8 20	2 126	.07 7	.6	1.5	14 SWR
		2	1342	23.27	19 22.80	155 2.30	7.27	2.2	1.6 22	1 126	.11 5	.5	1.0	13 SF5
		2	1846	53.04	19 19.85	155 12.56	7.92	1.9	1.6 35	2 78	.11 5	.4	.7	22 SF2
		2	1920	16.33	19 25.45	155 24.99	11.54	2.0	1.5 41	1 35	.10 0	.4	.5	29 KAO
		2	1923	43.41	19 17.15	155 21.62	6.78	2.0	2.3 38	1 128	.12 5	.5	.9	28 SWR
		2	1956	6.93	19 17.62	155 23.28	3.18	1.8	1.7 27	1 116	.13 5	.5	1.4	19 SWR
		2	21	8 19.40	19 21.10	155 7.54	8.37	1.6	1.1 20	2 82	.07 4	.5	1.1	14 SF4
		2	2311	8.83	19 17.88	155 23.42	3.56	1.7	1.3 24	1 152	.09 4	.5	1.1	15 SWR
		3	119	23.05	19 20.27	155 12.05	9.39	2.5	2.5 42	3 76	.10 5	.3	.4	24 SF3

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	MAR	3	127	2.85	19 16.48	155 23.99	1.90	2.2	2.4 30	3 122	.13 7	.4	1.0	21 SWR
		3	444	34.38	19 16.90	155 28.25	12.06	1.9	1.3 23	2 104	.11 5	.5	.9	15 LSW
		3	527	44.98	19 18.09	155 23.14	3.59	1.7	1.2 15	1 112	.09 4	.5	1.0	8 SWR
		3	858	31.78	19 20.58	155 13.76	8.77	1.8	1.4 34	4 66	.09 4	.5	.6	17 SF2
		3	859	58.24	19 20.02	155 12.10	7.65	1.7	1.1 16	2 80	.05 5	.5	1.0	13 SF3
		3	1025	22.10	19 22.09	155 2.30	8.35	1.8	1.9 29	1 142	.09 4	.6	.5	21 SF5
		3	1119	12.28	19 18.31	155 23.01	5.22	2.0	2.0 29	1 111	.11 4	.5	1.3	19 SWR
		3	1426	39.89	19 17.52	155 23.66	4.60	1.8	1.5 26	2 115	.11 5	.4	1.9	18 SWR
		3	17	3 40.59	19 18.85	155 22.02	3.87	1.9	1.7 27	2 106	.08 3	.4	.8	14 SWR
		3	17	5 17.58	19 16.56	155 23.90	7.61	2.0	1.9 28	4 121	.12 7	.6	1.3	22 SWR
		3	1715	55.31	19 17.31	155 23.79	2.86	1.8	1.2 22	3 168	.07 5	.4	1.0	13 SWR
		3	1818	27.90	19 20.42	155 13.25	9.86	2.2	2.1 40	5 63	.10 4	.4	.5	28 SF2
		3	1920	56.02	19 21.98	155 1.55	8.57	2.4	2.2 33	0 153	.09 5	.6	.4	26 SF5
		3	1924	1.92	19 20.15	155 2.50	8.60	1.6	1.2 17	0 206	.07 1	1.2	1.3	7 SF5
		3	1932	27.69	19 20.08	155 12.86	8.84	1.5	1.3 21	1 71	.07 5	.6	1.0	18 SF2
		3	2025	18.99	19 19.10	155 15.47	8.08	1.4	1.2 20	2 113	.04 4	.5	1.0	14 SF1
		3	21	5 59.17	19 17.22	155 23.83	2.15	1.8	1.7 29	4 116	.09 6	.4	.9	21 SWR
		3	2139	58.08	19 17.87	155 23.43	3.39	1.7	1.3 22	2 152	.11 4	.5	1.0	14 SWR
		3	23	4 52.95	19 16.78	155 23.50	2.61	1.8	1.3 21	2 167	.10 6	.5	1.4	13 SWR
		4	4	2 44.05	19 17.35	155 23.85	2.52	1.8	1.5 24	4 115	.07 5	.4	.8	14 SWR
		4	432	42.01	19 19.81	155 7.79	9.08	1.9	1.5 22	1 96	.06 5	.6	1.2	20 SF4
		4	530	13.95	19 17.83	155 23.68	5.69	2.1	2.2 30	2 112	.11 5	.5	1.0	18 SWR
		4	718	27.23	19 17.82	155 13.57	7.42	2.1	1.8 32	4 91	.11 1	.5	.8	19 SF2
		4	1556	45.69	19 24.90	155 28.42	11.09	4.1	4.1 49	2 30	.12 5	.3	.4	45 KAO F
		4	16	0 27.23	19 24.97	155 28.38	11.07	3.4	3.4 49	3 30	.11 5	.3	.4	43 KAO
		4	16	3 31.01	19 24.90	155 28.55	9.74	2.3	1.8 36	4 89	.10 5	.4	.7	27 KAO
		4	16	7 37.93	19 25.50	155 28.30	10.05	2.0	1.5 22	1 88	.11 6	.5	1.1	16 KAO
		4	1811	32.82	19 21.65	155 15.18	9.95	2.8	2.8 43	1 62	.11 2	.4	.4	32 SF1
		4	2215	56.85	19 17.36	155 23.83	4.27	1.7	1.3 22	2 159	.10 5	.5	2.0	13 SWR
		4	2218	46.86	19 25.61	155 28.28	9.71	2.1	1.4 27	1 59	.10 6	.4	1.1	20 KAO
		5	4	2 34.56	19 16.91	155 24.11	4.46	1.8	1.1 20	2 117	.13 6	.5	4.3	17 SWR
		5	4	9 40.85	21 25.94	156 47.79	.00	5.1	5.3 45	7 226	.50 93	6.8	.8	42 DIS F
		5	416	15.66	21 15.97	156 52.16	1.26	3.4	2.1 26	2 211	.12 85	2.9	.7	21 DIS
		5	9	7 16.49	19 16.92	155 23.58	5.93	1.3	1.3 19	1 165	.12 6	.7	3.5	13 SWR
		5	1255	3.41	19 16.24	155 23.36	8.39	2.3	2.3 34	5 128	.11 7	.4	1.0	17 SWR
		5	13	6 37.74	19 24.97	155 29.02	8.34	2.2	1.5 31	3 56	.11 5	.4	1.0	22 KAO
		5	1610	36.28	19 20.47	155 45.28	11.27	2.6	2.0 30	2 182	.08 9	.7	.5	15 KON
		5	1643	36.41	21 9.52	156 54.58	.31	4.5	4.8 44	2 197	.12 81	1.6	.3	35 DIS
		5	1745	34.56	19 38.57	155 57.75	.63	1.9	1.3 14	2 212	.15 14	1.2	.8	4 KON
		5	1810	.40	19 22.19	155 1.95	8.67	2.5	2.3 38	1 141	.10 5	.6	.5	26 SF5
		5	1813	59.91	19 20.29	155 11.35	9.74	1.6	1.3 18	2 94	.05 4	.7	1.4	14 SF3
		5	1933	30.10	19 18.25	155 23.01	3.84	1.1	1.4 18	2 148	.06 4	.5	.8	12 SWR
		5	2141	45.79	19 17.60	155 23.84	6.23	1.9	2.3 33	3 113	.13 5	.4	1.3	24 SWR
		5	22	8 9.25	19 17.12	155 23.84	8.41	2.3	2.8 35	2 117	.15 6	.5	.9	24 SWR
		5	23	1 20.96	19 20.30	155 17.39	1.66	1.7	2.1 18	1 63	.07 0	.3	.2	13 SWR
		6	1	5 34.81	19 17.45	155 15.14	6.75	1.8	1.2 18	3 133	.08 3	.6	1.1	15 SF1
		6	220	8.91	19 16.27	155 14.91	8.87	1.6	1.2 19	4 236	.07 3	.7	1.2	10 SF1
		6	519	8.10	21 41.04	156 39.48	15.05	3.6	3.9 11	2 243	.14 110	12.2	13.9	3 DIS

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIP MAG NR	GAP NS DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	MAR	6	745	4.95	19 18.36	155 14.70	7.89	1.4	1.2 17	2 127 .03	3	.6	1.2 15	SF1
		6	957	46.90	19 20.68	155 29.76	10.54	3.1	2.6 42	0 86 .11	5	.4	.6 32	KAO
		6	1032	9.82	19 18.61	155 13.51	8.47	1.7	1.3 25	2 80 .06	3	.5	.8 17	SF2
		6	1116	35.42	19 17.96	155 23.18	4.67	1.7	1.6 26	2 125 .11	4	.5	1.8 20	SWR
		6	1229	28.24	19 17.29	155 23.82	2.49	1.8	1.0 21	3 159 .08	6	.5	1.0 12	SWR
		6	13	5 18.90	19 18.03	155 23.37	5.00	2.0	2.0 26	1 111 .11	4	.5	1.7 17	SWR
		6	1615	32.78	19 20.96	155 6.31	8.53	2.7	2.4 40	3 96 .08	4	.4	.5 29	SF4
		6	1756	.74	19 44.34	156 26.57	15.01	4.0	4.1 51	5 234 .13	62	1.1	3.1 45	DIS F
		6	1856	22.66	19 17.91	155 23.29	3.79	2.5	2.9 37	1 113 .10	4	.4	1.1 23	SWR
		6	2015	13.33	19 17.86	155 23.16	3.35	1.7	1.2 19	1 114 .10	4	.6	1.2 15	SWR
		6	2211	1.15	19 20.41	155 11.23	8.68	2.5	2.5 44	2 78 .12	4	.4	.6 31	SF3
		6	2315	59.08	19 18.31	155 23.36	5.25	2.2	2.5 30	1 122 .11	4	.5	.9 21	SWR
		6	2326	58.63	19 18.98	155 12.49	5.62	2.1	1.8 25	2 96 .11	4	.4	1.1 17	SF2
		6	2345	56.84	19 20.23	155 11.74	7.30	1.5	1.1 13	2 92 .04	5	.6	1.1 10	SF3
		7	0	3 27.54	19 26.77	155 52.41	9.41	2.4	2.0 23	1 136 .18	7	.7	.8 14	KON
		7	052	49.04	19 21.38	155 2.21	8.13	1.8	1.1 27	1 150 .10	3	.8	.6 18	SF5
		7	112	20.31	19 21.38	155 11.20	8.53	1.7	1.2 26	0 90 .11	5	.5	.8 21	SF3
		7	2	9 51.31	19 20.02	155 8.23	7.10	1.9	1.9 29	1 83 .10	5	.5	1.0 23	SF4
		7	258	25.03	19 17.66	155 23.98	4.51	1.8	1.9 21	1 112 .08	5	.5	1.8 17	SWR
		7	259	56.67	19 18.27	155 13.31	8.50	1.6	1.3 24	0 87 .11	2	.5	.9 18	SF2
		7	1125	16.57	19 17.17	155 23.94	2.57	1.8	1.2 24	2 116 .09	6	.4	1.4 18	SWR
		7	1351	42.82	19 18.41	155 22.97	6.32	1.7	1.3 26	1 110 .13	3	.5	1.4 20	SWR
		7	15	0 21.01	19 23.86	155 28.42	9.60	2.2	1.7 38	3 32 .11	3	.4	.7 28	KAO
		7	1823	50.26	19 17.42	155 23.89	2.45	1.1	1.3 21	2 114 .08	5	.4	1.2 15	SWR
		7	1933	33.58	19 19.86	155 13.04	9.39	2.7	2.5 40	1 71 .10	5	.3	.4 32	SF2
		7	21	1 55.44	19 40.23	155 57.80	7.35	2.7	1.5 17	2 213 .18	13	1.6	1.3 11	HUA
		7	2214	26.10	19 16.49	155 23.85	8.13	1.9	1.6 21	1 123 .10	7	.5	1.5 18	SWR
		8	315	41.94	19 19.56	155 11.69	8.45	1.7	1.5 29	1 93 .09	6	.5	.8 23	SF3
		8	436	8.27	19 18.53	155 23.36	4.91	1.7	1.8 25	1 107 .10	3	.4	1.4 18	SWR
		8	620	21.64	19 19.31	155 11.25	9.30	1.8	1.3 21	1 101 .05	6	.6	1.2 18	SF3
		8	915	17.32	19 16.47	155 23.68	5.42	1.8	2.1 26	2 124 .12	7	.5	1.5 20	SWR
		8	1314	52.63	19 17.42	155 23.54	4.37	1.8	1.3 18	2 158 .09	5	.6	2.3 15	SWR
		8	1855	57.86	19 19.89	155 6.99	7.24	2.1	1.9 38	2 111 .10	5	.4	.8 24	SF4
		8	1923	43.21	19 18.33	155 23.08	4.17	1.1	1.4 24	2 110 .12	4	.4	1.1 17	SWR
		8	23	9 58.61	19 17.18	155 23.84	2.54	1.8	1.6 24	2 127 .09	6	.5	1.3 18	SWR
		9	041	21.31	19 17.99	155 23.30	4.81	1.9	2.5 27	1 112 .11	4	.5	1.6 16	SWR
		9	1	0 14.78	19 17.44	155 23.51	3.47	1.8	1.4 26	3 158 .11	5	.5	1.2 15	SWR
		9	2	2 49.04	19 18.69	155 23.28	4.21	1.2	1.3 20	1 141 .09	3	.5	.9 10	SWR
		9	317	35.56	19 21.71	155 18.26	2.77	1.1	.9 12	0 101 .05	3	.4	.7 10	SWR
		9	327	45.20	19 21.23	155 3.07	8.52	3.3	3.4 45	1 113 .11	2	.6	.4 40	SF5 F
		9	921	50.96	19 21.75	155 18.42	2.70	1.2	1.1 20	5 69 .08	4	.3	.7 14	SWR
		9	925	2.63	19 24.83	155 25.33	8.12	2.1	1.8 35	1 38 .14	1	.5	1.0 28	KAO
		9	12	2 31.94	19 21.85	155 17.82	3.24	1.6	1.3 25	2 51 .10	3	.3	.6 18	SWR
		9	1220	25.56	19 21.73	155 18.30	2.54	1.1	.9 14	2 73 .08	3	.3	.7 11	SWR
		9	1248	37.39	19 21.72	155 17.79	3.25	1.5	1.5 20	3 84 .08	3	.3	.5 14	SWR
		9	1528	34.07	19 18.91	155 13.24	7.71	1.5	1.2 21	2 80 .06	4	.6	1.1 18	SF2
		9	16	6 7.74	19 18.28	155 23.41	5.18	1.7	1.8 25	1 147 .11	4	.5	1.5 21	SWR
		9	1623	52.53	19 18.26	155 22.90	3.44	1.1	1.1 19	3 149 .08	4	.5	.9 15	SWR

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HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIP MAG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	MAR	9	1739	25.49	19 19.61	155 7.79	9.09	2.8	2.9	45	3 98 .09	4	.4	.4 35	SF4
		9	1851	28.98	19 20.30	155 19.17	3.66	1.4	1.2	21	3 77 .16	3	.4	1.1 16	SWR
		9	2016	52.40	19 17.86	155 23.25	6.17	2.3	2.1	29	1 113 .13	4	.5	1.2 20	SWR
		9	2245	25.41	19 17.81	155 23.30	3.34	1.7	1.3	18	1 154 .08	4	.5	1.1 9	SWR
		9	2313	14.35	19 18.43	155 23.06	3.66	1.0	1.0	16	1 146 .08	3	.6	1.0 13	SWR
		10	4	9 19.09	19 19.44	155 12.34	8.60	1.6	1.1	21	1 88 .06	5	.6	1.0 17	SF2
		10	523	11.08	19 18.87	155 23.10	4.06	1.7	1.1	19	1 140 .07	3	.6	.9 13	SWR
		10	944	15.73	19 17.06	155 23.87	1.52	1.8	1.8	31	4 117 .09	6	.4	.7 20	SWR
		10	1133	47.23	19 17.17	155 23.82	2.35	.9	1.2	24	2 161 .08	6	.4	1.1 15	SWR
		10	12	6 38.03	19 17.16	155 23.49	2.69	.9	1.2	16	2 162 .04	6	.5	1.1 10	SWR
		10	1454	56.14	19 17.44	155 23.51	3.52	1.9	1.8	20	1 138 .09	5	.5	1.3 12	SWR
		10	1630	50.47	19 20.19	155 8.27	8.48	2.3	2.1	32	3 180 .08	4	.9	.7 21	SF4
		10	1631	56.84	19 20.58	155 8.71	7.95	2.4	2.1	36	1 172 .12	3	.8	.7 22	SF4
		10	1632	27.70	19 20.80	155 8.31	7.01	2.2	2.1	23	2 172 .12	4	1.0	1.1 12	SF4
		10	1654	15.08	19 20.74	155 5.69	7.92	1.3	1.2	17	0 211 .08	4	1.7	1.2 11	SF4
		10	1721	7.37	19 21.83	155 18.47	2.56	1.2	1.0	18	5 102 .07	4	.3	.6 11	SWR
		10	19	7 39.19	19 16.57	155 24.10	5.29	1.2	1.4	23	1 91 .10	4	.4	1.9 13	SWR
		10	1957	51.64	19 17.70	155 23.19	3.39	1.7	1.4	20	3 100 .08	5	.4	.9 15	SWR
		10	2146	14.38	19 17.50	155 51.74	7.44	1.4	1.4	18	0 147 .22	3	1.4	1.6 10	KON
		11	034	41.89	19 18.33	155 15.01	8.55	1.5	1.4	21	3 134 .05	4	.6	.9 14	SF1
		11	231	53.29	19 20.76	155 13.60	8.69	1.7	1.6	37	3 55 .10	4	.4	.6 24	SF2
		11	356	57.41	19 18.25	155 23.16	3.96	.9	1.1	17	2 95 .08	4	.4	.9 10	SWR
		11	439	22.37	19 17.30	155 23.55	2.40	1.0	1.2	24	3 98 .07	5	.3	1.0 15	SWR
		11	458	29.62	19 17.80	155 23.63	4.39	2.4	1.1	33	2 92 .12	5	.4	1.6 28	SWR
		11	530	43.47	19 18.36	155 22.85	3.49	1.7	1.1	24	2 98 .11	4	.4	.9 17	SWR
		11	656	50.78	19 16.58	155 23.92	3.28	1.8	1.2	22	1 96 .11	4	.3	1.0 13	SWR
		11	7	7 7.88	19 17.87	155 23.23	3.51	1.7	1.2	22	3 97 .07	4	.4	.9 14	SWR
		11	1019	59.12	19 21.39	155 18.93	3.35	1.4	1.2	22	3 45 .10	4	.3	.8 17	SWR
		11	1259	25.12	19 21.66	155 .54	7.40	2.8	2.6	37	1 177 .09	5	.6	.4 25	SF5 F
		11	1323	8.96	19 21.71	155 1.93	6.50	3.1	3.1	44	2 148 .12	4	.4	.6 32	SF5 F
		11	1848	37.07	19 35.82	155 45.44	11.39	2.0	1.8	13	2 263 .11	10	1.3	1.0	A KON
		11	1858	51.60	19 18.04	155 23.18	3.56	1.1	1.1	18	2 97 .06	4	.4	.8 15	SWR
		11	19	9 56.66	19 18.29	155 23.27	4.44	1.1	1.1	26	2 94 .10	4	.4	1.3 16	SWR
		11	1939	32.33	19 16.38	155 23.68	6.30	1.2	1.3	22	3 103 .10	4	.5	1.3 15	SWR
		11	20	4 15.29	19 16.60	155 23.62	3.55	1.8	1.2	22	1 103 .07	4	.3	1.0 13	SWR
		11	2237	44.93	19 15.10	155 1.99	44.22	3.7	3.4	49	2 207 .10	9	.9	1.4 47	DEP F
		11	2252	3.87	19 17.29	155 23.66	2.51	1.8	1.2	26	2 92 .09	6	.4	1.0 19	SWR
		11	2311	32.66	19 16.94	155 23.41	5.85	1.8	2.1	23	2 104 .08	5	.4	1.9 12	SWR
		12	238	11.26	19 16.36	155 23.84	6.90	1.9	1.6	28	4 114 .11	4	.4	.9 18	SWR
		12	332	37.44	19 24.15	155 25.11	9.85	1.7	1.2	29	2 46 .09	2	.4	.8 23	KAO
		12	438	20.91	19 17.83	155 23.33	4.21	2.0	2.4	31	2 97 .11	4	.4	1.5 18	SWR
		12	441	30.18	19 17.83	155 23.24	3.31	1.7	1.4	23	1 98 .10	4	.4	1.1 16	SWR
		12	455	5.30	19 17.21	155 23.78	3.21	1.8	1.5	25	2 95 .09	5	.3	1.0 16	SWR
		12	833	51.50	19 23.69	155 2.39	7.21	2.0	1.9	24	1 121 .14	4	.6	1.1 16	SF5
		12	9	6 50.96	19 18.65	155 23.35	5.53	2.5	3.1	39	2 90 .13	3	.4	1.0 30	SWR
		12	1030	25.62	19 19.58	155 7.70	7.50	2.0	1.8	31	3 102 .07	4	.4	.9 19	SF4
		12	1130	40.07	19 20.79	155 12.75	9.01	2.1	2.2	38	4 64 .10	10	3	.5 24	SF2
		12	1225	6.19	19 22.97	155 22.08	33.22	1.8	1.6	22	0 57 .09	4	.9	2.4 19	DML

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	ORIGIN TIME			LAT N		LON W		DEPTH KM	AMP DNR				GAP DEG	RMS SEC	MIN DIS	ERM KM	ERZ NO			
		DA	HRMN	SEC	DEG	MIN	DEG	MIN		MAG	MAG	NR	NS					KM	FM	REMK	
1981	MAR	12	1325	17.60	19	18.63	155	23.56	5.59	2.2	2.6	34	2	87	.13	3	.4	1.0	25	SWR	
		12	1344	42.09	19	44.38	155	3.25	.00	1.9	2.1	16	1	201	.36	4	1.3	1.7	2	HTL B*	
		12	1416	21.40	19	20.24	155	19.86	7.30	1.5	1.4	17	2	62	.07	4	.4	1.2	11	SWR	
		12	16	56.20	19	17.78	155	23.59	2.72	1.7	1.6	26	3	93	.10	5	.3	.8	15	SWR	
		12	1630	32.87	19	19.23	155	11.81	6.80	2.7	2.7	47	5	99	.12	5	.4	.6	35	SF3	
		12	17	8	41.50	19	17.28	155	23.82	2.70	1.1	1.4	25	2	93	.10	5	.4	1.0	17	SWR
		12	18	7	15.30	19	17.60	155	23.28	2.91	.8	1.0	15	1	100	.08	5	.5	.9	8	SWR
		12	1847	16.59	19	17.05	155	23.78	2.57	.9	1.2	18	2	95	.07	4	.4	1.0	14	SWR	
		12	1935	1.73	19	16.59	155	23.78	3.20	.9	1.2	19	2	99	.08	4	.4	1.0	10	SWR	
		12	2037	42.70	19	17.20	155	23.97	2.73	1.0	1.4	27	2	92	.09	5	.3	1.1	17	SWR	
		12	2039	58.51	19	31.79	155	42.50	8.65	2.4	2.2	34	2	80	.13	6	.5	.8	26	MLO	
		12	2049	30.27	19	31.84	155	42.40	2.84	2.4	1.3	25	2	82	.13	7	.5	2.4	15	MLO	
		12	2050	15.51	19	18.68	155	22.06	3.80	1.4	1.4	23	3	102	.08	4	.4	.9	16	SWR	
		12	2054	44.62	19	18.56	155	22.08	3.70	1.6	1.4	20	1	104	.05	4	.4	.9	13	SWR	
		12	2125	54.10	19	20.48	155	12.82	9.22	1.5	1.4	23	2	66	.07	4	.5	1.0	15	SF2	
		12	2333	12.33	19	22.00	155	26.64	10.35	1.7	1.8	30	3	59	.10	2	.4	1.0	20	KAO	
		13	138	15.11	19	17.30	155	23.78	2.46	1.2	1.7	25	2	94	.09	6	.3	1.0	15	SWR	
		13	532	51.41	19	22.86	155	16.16	26.72	2.2	1.9	46	2	48	.10	1	.5	.8	39	DEP	
		13	642	52.17	19	17.33	155	23.57	3.23	1.0	1.3	19	2	107	.11	5	.4	1.1	13	SWR	
		13	821	20.43	19	20.34	155	13.25	8.80	1.9	1.7	33	3	64	.11	4	.4	.8	24	SF2	
		13	832	4.44	19	17.14	155	24.08	3.58	1.8	2.0	19	0	170	.09	6	.7	2.5	19	SWR	
		13	10	5	58.35	19	17.58	155	23.37	3.11	.9	1.2	15	2	156	.06	5	.5	1.1	12	SWR
		13	1044	23.06	19	18.20	155	23.23	6.94	2.1	2.7	34	2	94	.12	4	.4	.9	28	SWR	
		13	11	0	24.29	19	18.12	155	23.28	6.41	2.3	2.9	36	3	95	.12	4	.4	.8	25	SWR
13	12	0	46.80	19	17.06	155	23.78	2.76	1.0	1.1	16	2	106	.06	5	.4	1.1	10	SWR		
13	1720	29.92	19	20.20	155	12.20	8.13	2.2	2.0	38	3	76	.12	5	.4	.7	29	SF3			
13	1736	11.85	19	22.08	155	.82	3.76	1.8	1.4	23	3	164	.14	5	.6	1.8	11	SSF			
13	1856	38.11	19	25.21	155	23.10	11.37	2.2	2.0	39	3	39	.09	4	.4	.5	28	KAO			
13	1940	1.89	19	18.23	155	23.14	3.62	.9	1.0	20	1	96	.07	4	.4	.9	14	SWR			
13	20	8	23.97	19	19.54	155	9.02	7.97	1.5	1.0	19	1	85	.05	4	.5	1.2	14	SF4		
13	2156	54.55	19	17.14	155	23.81	2.60	1.1	1.2	22	2	95	.08	5	.3	1.0	16	SWR			
13	2218	33.78	19	17.95	155	23.31	3.38	.9	1.2	18	1	96	.06	4	.4	.9	13	SWR			
13	2225	47.19	19	16.13	155	23.96	6.17	1.0	1.2	19	2	98	.11	3	.5	1.3	11	SWR			
13	23	0	37.64	19	19.81	155	9.48	8.47	1.6	1.0	15	2	103	.04	4	.6	1.3	8	SF3		
14	224	7.75	19	18.99	155	22.60	3.28	.7	1.1	14	0	92	.06	3	.4	.6	10	SWR			
14	414	47.57	19	17.78	155	23.32	3.07	.9	1.1	20	2	97	.07	5	.4	.9	16	SWR			
14	949	33.87	19	19.86	155	11.33	8.05	1.9	1.5	36	1	88	.10	5	.4	.7	30	SF3			
14	953	25.74	19	20.70	155	12.80	8.58	2.1	1.9	39	5	64	.11	4	.4	.6	32	SF2			
14	1324	53.56	19	24.19	155	16.38	16.21	2.0	1.8	48	5	35	.10	1	.4	.3	40	DEP			
15	352	20.80	19	21.26	155	2.48	6.79	2.2	1.8	36	2	139	.10	3	.4	.7	28	SF5			
15	728	22.92	19	17.75	155	23.38	4.95	2.0	2.3	32	2	97	.10	5	.3	1.4	26	SWR			
15	753	4.16	19	18.18	155	23.52	4.13	.9	1.3	15	2	110	.13	4	.6	1.4	10	SWR			
15	853	1.28	19	29.66	157	12.51	30.13	2.8	2.9	20	0	286	.13	135	5.2	4.5	12	DIS			
15	1211	19.28	19	18.64	155	22.26	4.80	.9	1.1	16	1	102	.09	3	.4	1.0	10	SWR			
15	13	3	20.32	19	18.93	155	21.17	2.99	.8	1.2	14	2	100	.07	4	.4	.8	9	SWR		
15	1347	29.64	19	20.33	155	19.18	4.43	1.2	1.4	16	2	102	.07	3	.4	1.3	11	SWR			
15	1845	21.98	19	17.08	155	23.91	2.44	1.1	1.5	23	2	93	.12	5	.4	1.0	15	SWR			
15	2017	19.59	19	22.49	155	14.03	31.32	4.0	4.1	49	1	50	.12	2	.6	1.0	47	DEP F			

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERM KM	ERZ NO KM FM REMK	
1981	MAR	15	2026	14.52	19 17.70	155 23.44	6.52	1.1	1.6	44	0	96	.14	5	.4	.8 39 SWR F	
		15	2038	34.62	19 21.33	155 18.52	30.39	2.0	2.3	46	3	44	.09	3	.6	.9 36 DEP	
		15	2051	14.42	19 17.20	155 23.54	3.53	1.8	1.4	23	2	99	.07	5	.3	1.0 10 SWR	
		15	2131	34.26	19 18.14	155 23.24	3.18	1.7	1.8	26	1	95	.12	4	.4	1.0 19 SWR	
		15	2132	57.02	19 22.00	155 13.99	30.33	2.4	2.6	49	4	53	.11	2	.6	.9 43 DEP	
		15	2134	3.81	19 18.20	155 23.17	3.37	1.7	1.8	20	1	95	.09	4	.4	.9 14 SWR	
		15	2136	35.83	19 17.47	155 23.65	2.47	.8	1.4	23	2	95	.10	5	.4	.9 8 SWR	
		15	2223	21.32	19 22.00	155 14.04	31.01	1.2	1.3	49	1	54	.11	2	.6	.9 47 DEP F	
		15	2336	4.78	19 21.94	155 1.77	7.34	1.6	1.4	24	2	148	.11	4	.6	.8 12 SF5	
		15	2348	40.64	19 18.01	155 23.28	5.62	2.0	2.5	32	2	96	.12	4	.4	1.4 19 SWR	
		15	2352	40.03	19 17.89	155 23.25	3.12	1.1	1.4	16	2	97	.08	4	.4	.8 10 SWR	
		16	034	55.24	19 21.89	155 14.08	30.79	2.9	3.0	49	2	54	.10	2	.6	.9 45 DEP	
		16	116	42.08	19 18.20	155 23.09	3.86	.8	1.1	15	1	96	.10	4	.4	1.1 7 SWR	
		16	131	52.50	19 18.04	155 22.99	3.55	1.7	1.6	18	1	99	.08	4	.4	1.0 10 SWR	
		16	143	44.56	19 17.87	155 23.20	3.33	1.7	1.7	19	2	98	.06	4	.4	1.0 18 SWR	
		16	342	39.44	19 19.94	155 11.48	9.30	1.6	1.3	22	1	86	.05	5	.5	1.0 20 SF3	
		16	4	0	43.82	19 19.57	155 21.62	2.46	1.8	2.1	30	2	85	.11	3	.3	.6 24 SWR
		16	532	18.76	19 46.96	156 1.64	7.16	.9	2.0	16	2	230	.13	22	1.5	1.0 13 HUA	
		16	535	12.99	19 18.82	155 22.07	3.83	1.3	1.4	18	2	103	.07	3	.5	.9 17 SWR	
		16	541	45.35	19 17.30	155 22.77	5.87	2.5	1.2	39	4	135	.09	4	.4	.9 30 SWR	
		16	545	32.65	19 17.92	155 20.98	3.69	.7	1.1	17	3	122	.08	4	.5	1.0 16 SWR	
		16	546	14.50	19 17.94	155 20.85	3.83	1.5	1.4	23	4	123	.10	4	.4	.9 21 SWR	
		16	547	17.29	19 18.44	155 22.81	4.57	1.6	1.7	25	3	97	.07	3	.3	1.0 20 SWR	
		16	553	54.07	19 18.12	155 23.04	3.81	1.0	1.4	18	3	98	.06	4	.4	.9 16 SWR	
		16	558	16.78	19 17.90	155 20.88	3.41	1.6	1.9	27	5	123	.08	4	.4	.8 25 SWR	
		16	646	22.60	19 18.19	155 23.31	4.54	2.3	2.9	38	2	93	.10	4	.3	1.1 35 SWR	
		16	742	59.71	19 24.21	154 58.71	6.36	1.7	1.4	24	1	158	.12	2	.8	1.2 22 LER	
		16	747	34.62	19 18.04	155 23.17	3.60	.9	1.2	18	3	97	.06	4	.4	.8 16 SWR	
		16	1022	7.34	19 18.22	155 22.99	4.35	1.2	1.1	24	1	98	.09	4	.4	1.3 15 SWR	
		16	12	6	54.45	19 17.36	155 23.26	3.06	1.4	1.3	25	2	103	.09	5	.3	1.0 19 SWR
		16	1442	28.47	19 17.04	155 23.94	4.27	1.0	1.2	25	3	93	.10	5	.4	1.9 20 SWR	
		16	17	3	15.69	19 20.77	155 2.97	8.86	2.9	3.2	42	0	119	.10	2	.7	.5 37 SF5
		16	1734	24.53	19 17.44	155 23.46	2.95	2.1	2.2	32	1	98	.11	5	.3	1.0 26 SWR	
		16	22	9	43.45	19 25.45	155 25.50	8.97	2.7	2.5	43	0	30	.12	1	.3	.7 34 KAO
		17	129	54.77	19 18.10	155 23.08	3.63	1.0	1.3	20	2	98	.07	4	.4	1.0 14 SWR	
		17	4	8	42.75	19 1	7.34	1.6	1.4	27	1	100	.09	4	.5	.9 22 SF1	
		17	635	55.75	19 58.68	155 21.95	12.27	2.3	2.4	16	3	216	.06	10	.9	.4 10 KEA	
		17	941	58.35	19 17.93	155 23.22	3.50	1.1	1.1	23	4	103	.07	4	.3	.8 12 SWR	
		17	1014	30.87	19 17.15	155 23.84	5.76	2.1	2.2	30	2	94	.12	5	.4	1.3 25 SWR	
		17	1320	55.17	19 17.47	155 23.43	2.70	1.2	1.3	24	1	99	.09	5	.3	.9 15 SWR	
		17	1437	27.94	19 22.40	155 24.56	10.99	1.7	1.4	29	1	44	.08	5	.5	.8 24 KAO	
		17	1646	54.36	19 27.29	155 45.99	9.85	2.7	2.5	30	2	77	.10	6	.6	.6 15 HON	
		17	1724	28.74	19 41.52	156 1.62	9.46	2.7	2.8	18	1	228	.13	20	1.2	.7 9 KUA	
		17	1824	40.93	19 20.67	155 8.22	8.45	2.4	2.5	43	1	77	.12	4	.4	.7 30 SF4	
		17	1827	44.64	19 41.43	156 .97	9.19	2.6	2.4	13	1	231	.14	19	1.8	.9 9 HUA	
		17	1943	17.82	19 41.39	156 2.25	9.45	2.9	3.0	25	1	229	.14	21	1.3	.7 18 HUA	
		17	2241	14.00	19 20.95	155 19.65	2.94	1.7	1.9	29	4	51	.10	4	.3	.8 21 SWR	
		17	2243	33.53	19 20.92	155 19.56	3.64	2.3	2.5	38	4	52	.10	4	.3	.8 24 SWR	

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	MAR	17	2313	4.68	19 19.80	155 11.37	6.85	2.3	2.3	44	4	89	.15	5	.5	.9 30	SF3
		18	036	36.01	19 21.69	155 18.12	2.72	1.5	1.7	23	4	52	.10	3	.3	.6 15	SWR
		18	313	31.11	19 17.65	155 23.14	3.30	1.2	1.1	22	2	102	.08	5	.4	1.0 14	SWR
		18	434	38.44	19 27.83	155 20.58	6.84	1.9	1.6	26	3	120	.11	0	.5	.9 16	KAO
		18	5 0	34.12	19 51.98	155 34.37	12.79	2.7	2.7	35	3	208	.09	15	.9	.4 20	KEA F
		18	548	27.78	19 17.22	155 23.88	2.60	1.3	1.2	26	3	92	.10	5	.4	1.0 18	SWR
		18	840	38.52	19 17.86	155 23.19	3.84	1.7	1.3	24	2	98	.10	4	.4	1.1 15	SWR
		18	858	47.27	19 20.43	155 16.71	35.50	2.4	2.2	49	3	80	.09	1	.6	1.0 40	DEP
		18	930	53.47	19 18.90	155 21.96	3.54	1.9	1.6	28	2	98	.09	3	.4	.8 20	SWR
		18	11 3	47.53	19 18.15	155 23.24	3.45	2.3	2.8	33	2	95	.11	4	.3	.9 23	SWR
		18	1238	41.84	19 19.95	155 11.07	7.89	2.3	2.3	36	3	87	.10	4	.4	.8 21	SF3
		18	1539	3.81	19 18.98	155 21.82	2.85	1.6	1.1	12	0	97	.08	3	.5	.8 10	SWR
		18	1544	38.50	19 19.12	155 13.53	7.08	2.1	2.0	39	4	70	.12	4	.4	.8 25	SF2
		18	1722	33.57	19 16.23	155 23.89	5.00	1.9	1.6	27	2	99	.09	4	.4	1.6 14	SWR
		18	1742	8.34	19 16.14	155 23.71	6.57	2.4	2.6	36	2	105	.13	3	.4	.9 25	SWR
		19	017	53.60	19 20.16	155 8.78	8.07	1.8	1.3	20	0	72	.06	4	.6	1.2 19	SF4
		19	020	2.79	19 21.20	155 18.19	30.86	2.1	1.5	35	0	73	.10	2	.7	1.2 27	DEP
		19	033	57.42	19 20.38	155 8.84	7.88	2.1	2.0	36	1	40	.09	4	.4	.7 29	SF4
		19	121	.76	19 20.00	155 11.50	7.69	2.0	1.6	35	2	84	.10	5	.5	.8 21	SF3
		19	432	32.28	19 17.28	155 23.89	5.99	2.2	2.5	32	1	92	.12	5	.4	1.5 24	SWR
		19	445	59.16	19 17.33	155 23.89	2.92	1.8	1.8	29	1	92	.10	5	.3	1.1 19	SWR
		19	458	14.14	19 16.16	155 23.97	6.55	1.9	1.3	27	3	48	.15	3	.5	1.3 16	SWR
		19	622	3.90	19 18.42	155 22.84	4.06	1.7	1.4	25	1	98	.09	3	.4	1.1 19	SWR
		19	711	11.63	19 24.93	155 25.64	6.54	2.7	2.7	42	1	38	.16	1	.4	.9 31	KAO
		19	810	35.33	19 17.34	155 45.05	10.45	2.5	1.5	29	1	184	.11	12	.6	.7 18	KON
		19	851	17.91	19 19.53	155 7.48	7.94	2.1	2.3	32	1	108	.08	4	.4	.8 19	SF4
		19	9 9	36.73	19 37.35	155 53.90	2.63	2.1	1.4	0	312	.13	19	10.1	10.6	8	KON
		19	912	36.42	19 41.25	156 2.02	4.52	2.1	1.7	18	1	229	.11	20	1.1	.8 7	HUA
		19	913	19.77	19 18.88	155 11.51	5.00	1.5	1.2	21	2	111	.07	5	.5	1.9 16	SSF
		19	1044	14.53	19 18.03	155 22.98	3.42	1.7	1.8	23	2	99	.07	4	.4	.9 16	SWR
		19	1120	53.73	19 19.02	155 21.97	3.50	2.0	2.2	33	2	95	.09	3	.3	.8 21	SWR
		19	1222	33.51	19 19.74	155 7.31	7.70	1.8	1.7	27	2	108	.09	5	.6	1.1 17	SF4
		19	1257	16.84	19 17.03	155 23.01	7.54	1.4	1.8	19	3	111	.12	5	.5	1.3 10	SWR
		19	1259	18.10	19 16.84	155 23.22	7.15	1.1	1.5	20	2	109	.10	5	.5	1.3 12	SWR
		19	1425	2.91	19 17.72	155 23.41	2.95	.7	1.2	16	2	96	.06	5	.4	.9 14	SWR
		19	1451	2.79	19 18.29	155 30.63	8.53	2.0	1.6	30	3	71	.12	6	.4	1.1 22	LSW
		19	15 6	38.21	19 21.22	155 13.32	9.07	2.5	2.8	45	3	55	.12	3	.4	.6 32	SF2
		19	17 5	45.50	19 15.30	156 11.27	28.66	2.4	2.4	24	0	265	.09	33	3.5	2.3 18	KON
		19	1947	41.56	19 17.86	155 23.41	5.77	2.3	2.6	39	2	96	.12	4	.4	1.0 28	SWR
		19	2010	12.88	19 22.55	155 3.52	9.03	2.0	1.9	31	2	108	.09	4	.5	.5 20	SF5
		19	2057	19.08	19 52.00	155 32.18	17.22	1.8	1.8	20	2	123	.09	13	.5	1.5 11	KEA
		19	2114	12.78	19 17.06	155 23.81	2.65	1.6	1.6	27	2	95	.08	5	.3	.9 15	SWR
		19	2119	44.67	19 20.78	155 10.87	9.14	2.3	2.4	43	5	73	.10	3	.3	.5 31	SF3
		19	2126	32.19	19 16.77	155 23.69	3.56	1.8	1.8	25	1	100	.12	5	.4	1.4 18	SWR
		19	2136	39.46	19 20.77	155 10.63	7.53	1.7	1.6	36	6	73	.08	3	.4	.6 25	SF3
		19	2228	26.94	19 17.53	155 23.38	4.53	1.2	1.5	26	2	98	.10	5	.4	2.0 16	SWR
		19	23 8	27.91	19 20.33	155 12.87	8.96	1.6	1.3	23	3	68	.06	4	.5	.9 14	SF2
		19	23 11	55.07	19 18.28	155 23.44	4.54	2.0	2.6	34	3	92	.12	4	.3	1.4 23	SWR

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	MAR	20	151	7.84	19 18.12	155 23.35	3.81	.8	1.4	21	2	94	.06	4	.4	.9 14	SWR
		20	358	36.64	19 20.94	155 12.92	9.22	1.8	1.8	35	4	61	.10	3	.4	.7 23	SF2
		20	4 4	14.45	20 2.89	155 12.16	45.09	2.4	1.9	39	2	229	.12	23	1.0	1.5 33	KEA
		20	414	36.11	19 19.48	155 8.14	8.73	1.5	1.3	19	0	91	.05	4	.6	1.4 16	SF4
		20	5 5	58.28	19 14.10	155 20.12	45.50	2.1	1.8	34	1	167	.10	7	1.0	1.9 26	DEP
		20	528	28.62	19 18.25	155 23.22	5.80	2.0	2.3	31	2	94	.11	4	.4	1.2 24	SWR
		20	1159	24.54	19 17.30	155 23.97	2.73	.9	1.3	22	1	90	.08	6	.3	1.0 14	SWR
		20	12 3	52.84	19 17.78	155 23.38	4.87	1.2	1.6	25	2	96	.10	5	.4	1.8 15	SWR
		20	1220	3.81	19 18.93	155 12.69	7.52	1.9	1.6	32	4	92	.11	4	.5	.8 25	SF2
		20	1235	12.47	19 16.59	155 23.34	4.74	1.8	1.9	24	3	109	.10	4	.4	1.8 13	SWR
		20	1332	39.98	19 24.45	155 16.11	15.74	2.9	3.1	49	3	36	.11	1	.4	.3 43	DEP
		20	1455	5.49	19 18.49	155 23.11	4.65	1.4	1.5	23	1	93	.08	3	.4	1.3 19	SWR
		20	1831	54.03	18 56.82	155 10.62	46.02	2.6	2.1	33	0	250	.06	38	2.1	3.0 29	LOI
		20	2211	53.08	19 2.96	155 24.01	37.78	2.5	2.2	40	1	208	.06	14	.8	1.4 36	LOI
		20	2329	.27	19 17.33	155 23.41	2.93	1.1	1.2	20	3	100	.08	5	.3	1.0 16	SWR
		21	416	1.66	19 19.36	155 12.67	7.96	1.8	1.7	30	2	84	.14	5	.5	.9 22	SF2
		21	451	41.19	19 14.94	155 19.92	8.50	1.7	1.6	29	2	165	.09	6	.6	1.1 15	SWR
		21	626	18.40	19 20.10	155 12.53	8.79	2.4	2.4	36	0	75	.11	5	.4	.6 30	SF2
		21	635	53.45	19 20.53	155 11.94	7.42	2.3	2.4	39	2	73	.13	4	.4	.8 29	SF3
		21	647	58.75	19 10.63	155 29.25	34.33	2.4	1.9	32	2	91	.06	3	.7	1.4 26	NLS
		21	718	53.91	19 17.56	155 13.06	7.84	2.1	2.1	38	2	125	.13	1	.5	.8 22	SF2
		21	839	4.78	19 21.81	155 2.25	8.38	2.1	1.6	25	0	150	.09	4	.8	.4 12	SF5
		21	911	25.10	19 20.52	155 11.69	8.10	2.2	1.8	34	3	75	.10	4	.4	.6 21	SF3
		21	924	45.03	19 26.33	155 36.47	3.34	2.1	2.3	19	0	111	.14	2	.6	.8 14	ML0
		21	939	21.04	19 17.77	155 12.88	6.70	2.0	1.8	33	2	122	.10	2	.5	.9 23	SF2
		21	940	11.82	19 18.66	155 13.27	8.30	2.0	1.8	35	1	83	.11	3	.4	.7 20	SF2
		21	1235	6.43	19 17.67	155 23.31	3.54	1.1	1.0	22	3	99	.07	5	.4	.9 14	SWR
		21	1258	24.31	19 19.03	155 11.81	8.76	1.8	1.3	26	1	105	.09	5	.5	.8 24	SF3
		21	1446	3.93	19 26.58	155 36.22	2.79	.9	1.4	15	2	178	.13	1	.7	.4 12	ML0
		21	1520	13.21	19 18.58	155 13.54	8.10	1.5	1.4	29	3	86	.09	3	.4	.7 22	SF2
		21	1532	13.46	19 19.62	155 7.56	6.78	1.5	1.0	26	2	104	.09	4	.5	1.2 24	SF4
		21	16 0	1.78	19 21.50	155 8.09	4.25	2.5	2.8	47	3	70	.08	3	.3	.5 38	SF4
		21	1747	37.90	19 17.62	155 23.14	3.05	1.0	1.3	18	2	102	.06	5	.3	.9 15	SWR
		21	1750	28.83	19 17.89	155 13.08	5.33	1.4	1.4	26	2	107	.07	2	.4	1.0 22	SF2
		21	1833	12.19	19 20.57	155 11.31	8.67	2.0	2.1	38	4	75	.09	4	.4	.6 29	SF3
		21	1839	5.19	19 19.04	155 13.59	5.97	2.0	1.9	38	3	69	.11	4	.4	.9 28	SF2
		21	2333	43.21	19 15.61	155 23.47	9.50	2.5	2.9	32	3	138	.10	3	.4	.7 21	SWR
		22	116	38.49	19 20.50	155 6.60	8.57	2.8	2.9	44	2	104	.09	5	.4	.5 34	SF4
		22	315	14.34	19 19.47	155 11.93	8.47	1.5	1.2	21	2	92	.06	5	.6	1.1 18	SF3
		22	330	47.06	19 21.68	155 18.13	3.26	1.5	1.3	21	2	66	.08	3	.3	.6 16	SWR
		22	359	49.25	19 22.48	155 17.06	2.94	1.1	1.1	19	1	94	.09	2	.4	.4 13	SSC
		22	443	14.30	19 21.89	155 18.31	2.47	1.5	1.6	23	1	48	.10	4	.3	.6 18	SWR
		22	710	6.10	19 21.74	155 18.35	2.48	1.5	1.6	25	3	88	.09	5	.3	.5 17	SWR
		22	814	32.98	19 18.30	155 23.39	5.37	1.7	1.8	20	0	109	.13	4	.6	1.6 16	SWR
		22	851	20.39	19 21.62	155 18.34	3.05	1.3	1.1	22	4	69	.09	3	.3	.6 16	SWR
		22	910	13.47	19 18.47	155 13.17	7.93	1.6	1.1	18	0	89	.06	3	.6	1.3 14	SF2
		22	1441	34.49	19 21.33	155 19.11	3.10	2.1	2.0	25	2	44	.11	4	.3	.8 19	SWR
		22	1545	54.83	19 26.57	155 20.17	15.03	1.7	1.4	39	2	76	.11	2	.5	.4 30	DM0

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR	GAP NS	RMS DEG	MIN SEC	ERH DIS	ER7 NO KM FM	REMK
1981	MAR	22	1925	15.97	19 17.27	155 23.59	2.78	1.8	1.3 25	2 97	.09	6	.4	1.1 17	SWR
		22	22 6	59.71	19 17.14	155 23.93	2.36	1.0	1.1 25	2 92	.11	5	.3	1.0 19	SWR
		22	2335	4.10	19 21.53	155 17.33	3.89	1.2	.9 15	1 102	.12	3	.5	.8 12	SWR
		23	0 3	32.90	19 18.45	155 15.36	7.15	1.0	1.2 24	1 116	.07	4	.4	.9 15	SF1
		23	042	49.50	19 17.54	155 23.57	5.61	2.4	1.0 34	2 96	.11	5	.4	1.4 23	SWR
		23	333	24.53	19 17.09	155 23.57	2.90	1.8	1.3 25	1 99	.09	5	.4	1.1 17	SWR
		23	443	10.34	19 21.83	155 18.14	3.24	2.3	2.4 40	3 49	.12	3	.3	.5 27	SWR
		23	659	33.39	19 18.59	155 13.18	8.15	1.4	1.2 20	1 86	.07	3	.6	1.1 16	SF2
		23	729	35.50	19 18.40	155 13.13	7.17	1.5	1.2 26	2 91	.08	3	.5	1.1 20	SF2
		23	741	13.18	19 23.54	154 57.97	6.49	2.3	2.4 37	1 175	.16	3	.6	.6 25	LER
		23	1045	2.07	19 25.33	155 24.58	4.39	1.5	1.0 23	2 46	.10	1	.3	.8 17	KAO
		23	1549	10.76	19 24.41	155 24.42	10.62	1.8	1.5 31	2 46	.10	2	.4	1.0 23	KAO
		23	1735	13.75	19 18.03	155 23.24	5.31	2.2	2.1 34	3 96	.12	4	.4	1.4 24	SWR
		23	1853	22.15	19 18.17	155 23.41	6.72	2.8	1.3 49	1 93	.13	4	.4	.7 40	SWR
		23	19 8	56.98	19 18.47	155 23.20	3.82	1.5	1.5 30	4 93	.08	3	.3	.7 26	SWR
		23	2047	34.42	19 18.47	155 23.16	3.65	1.5	1.8 26	4 94	.12	3	.4	.8 18	SWR
		23	2223	55.18	19 19.99	155 8.22	8.18	1.6	1.2 31	3 84	.08	5	.5	.8 25	SF4
		23	2226	16.50	19 20.25	155 12.00	9.35	1.5	1.0 24	2 77	.05	5	.5	.8 20	SF3
		23	2350	5.75	19 17.23	155 23.71	2.74	1.0	1.2 18	2 95	.06	5	.4	.9 13	SWR
		24	5 1	10.38	19 17.79	155 23.49	5.86	2.3	3.0 47	7 95	.12	5	.3	1.0 36	SWR
		24	6 0	43.99	19 15.50	155 15.77	3.47	2.2	2.2 40	3 168	.08	5	.5	1.0 24	SSF
		24	732	23.47	19 15.58	155 16.38	2.63	1.8	1.5 23	2 164	.08	6	.6	1.0 21	SSF
		24	753	14.16	19 25.70	155 28.90	9.27	2.0	1.7 37	2 51	.09	6	.3	.8 26	KAO
		24	924	58.17	19 20.32	155 4.24	7.19	1.4	1.5 28	1 122	.11	2	.6	.9 14	SF5
		24	947	45.20	19 18.73	155 20.67	7.52	2.3	2.9 47	6 106	.13	4	.3	.6 30	SWR
		24	1124	9.88	19 20.30	155 20.65	3.30	1.4	1.5 24	4 69	.10	5	.4	.9 20	SWR
		24	1128	58.91	19 20.62	155 12.93	7.85	1.6	1.4 32	4 64	.12	4	.5	.8 21	SF2
		24	1336	24.47	19 20.48	155 19.11	3.33	1.3	1.4 22	3 67	.09	3	.3	.8 16	SWR
		24	17 3	19.36	19 23.86	155 26.89	7.34	1.4	1.3 27	2 48	.11	3	.4	.9 20	KAO
		24	1916	8.30	19 15.44	155 2.19	43.64	2.6	2.2 46	2 206	.11	8	1.0	1.4 40	DEP
		24	1937	41.95	19 20.12	155 11.48	8.66	1.4	1.5 29	3 83	.11	5	.5	.8 22	SF3
		24	20 3	41.74	19 15.61	155 15.74	3.36	1.2	1.3 24	0 184	.09	5	.7	1.2 8	SSF
		24	2126	38.81	19 19.01	155 22.06	3.45	2.0	2.0 31	2 95	.09	3	.4	.7 24	SWR
		24	2142	42.94	19 18.68	155 22.80	3.42	1.7	1.5 21	2 95	.10	3	.4	.7 12	SWR
		25	052	17.49	19 19.12	155 21.45	3.25	1.6	1.7 26	3 94	.09	4	.4	.8 17	SWR
		25	053	35.90	19 25.90	155 37.51	2.18	2.3	2.3 24	1 92	.11	3	.4	.9 16	MLO
		25	139	43.73	19 34.12	155 56.16	.64	2.1	1.9 25	2 206	.14	9	1.1	.8 17	KON
		25	3 7	29.00	19 18.27	155 21.45	2.79	1.0	1.3 18	3 113	.10	5	.5	.8 9	SWR
		25	516	44.51	19 18.31	155 21.61	2.80	2.2	2.8 34	2 111	.12	5	.4	.8 24	SWR
		25	625	5.10	19 45.26	155 27.66	24.51	3.3	3.6 50	3 62	.10	3	.5	1.2 34	KEA F
		25	748	45.71	19 17.48	155 23.53	2.36	.9	1.3 17	3 97	.09	5	.4	.9 13	SWR
		25	9 3	8.40	19 33.38	155 41.45	7.46	1.5	1.2 24	2 121	.12	9	.6	1.2 13	MLO
		25	917	37.12	19 17.34	155 23.56	5.44	2.2	1.8 31	3 98	.11	5	.4	1.7 24	SWR
		25	1034	7.09	19 47.18	156 9.38	36.49	2.2	1.8 36	4 254	.10	35	1.6	1.2 26	HUA
		25	1414	55.57	19 18.84	155 11.33	8.84	2.9	2.8 42	3 115	.11	5	.4	.4 35	SF3
		25	16 1	37.47	19 18.96	155 13.58	8.28	1.7	1.1 34	5 70	.08	4	.4	.6 21	SF2
		25	18 4	14.67	19 19.03	155 20.75	8.27	1.4	1.1 26	4 97	.10	4	.5	.9 21	SWR
		26	119	34.28	19 20.77	155 13.60	8.41	1.8	1.5 33	2 59	.11	4	.4	.7 24	SF2

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ER7 NO KM FM	REMK
1981	MAR	26	155	40.21	19 21.24	155 4.54	9.00	3.2	3.2 46	2	89	.10	4	.5	.4 34	SF5 F
		26	1050	33.96	19 19.99	155 9.79	7.24	1.6	1.5 27	3	84	.09	4	.5	1.0 18	SF3
		26	1349	31.64	19 20.68	155 20.38	2.19	1.4	1.4 21	3	61	.08	5	.3	.8 14	SWR
		26	1414	5.18	19 20.96	155 25.47	10.28	1.9	1.7 33	4	54	.11	4	.4	.9 25	KAO
		26	1435	.47	19 17.60	155 23.03	4.11	1.1	1.6 18	1	113	.08	5	.5	1.6 12	SWR
		26	1950	19.67	19 14.78	155 34.64	8.13	1.9	1.4 31	3	106	.17	4	.5	.9 18	LSW
		26	2238	27.23	19 18.16	155 23.23	4.10	1.7	1.8 27	2	96	.11	4	.4	1.3 19	SWR
		27	319	56.35	19 21.59	155 28.15	9.58	2.2	2.1 40	4	40	.13	2	.4	.7 27	KAO
		27	417	55.65	19 17.57	155 23.66	2.56	1.9	2.2 33	4	94	.12	5	.3	.9 24	SWR
		27	458	49.48	19 18.66	155 21.99	3.63	.9	1.2 18	1	102	.07	4	.5	.9 11	SWR
		27	5 1	24.60	19 26.31	155 24.15	9.70	2.2	1.9 37	4	33	.10	3	.4	.7 23	KAO
		27	6 4	4.01	19 18.34	155 23.16	5.59	1.1	1.3 24	2	94	.10	4	.4	1.4 16	SWR
		27	650	45.43	19 20.73	155 6.76	8.45	1.3	1.3 20	1	97	.05	4	.6	1.1 16	SF4
		27	825	41.39	19 19.97	155 11.59	9.05	1.7	1.7 23	0	85	.09	5	.5	.8 20	SF3
		27	932	19.41	19 26.49	155 38.48	3.35	2.7	2.5 32	0	203	.12	4	.9	1.2 25	MLO
		27	1026	34.73	19 23.07	155 2.43	8.09	2.1	1.9 32	2	130	.10	4	.4	.7 22	SF5
		27	1214	38.20	19 20.09	155 12.51	7.06	1.9	1.8 35	2	75	.11	5	.4	.8 25	SF2
		27	1237	41.64	19 21.66	155 16.61	34.74	2.4	1.8 48	4	59	.10	2	.7	.9 43	DEP
		27	1510	6.30	19 21.70	155 15.01	8.72	2.0	1.2 35	4	61	.12	2	.5	.6 22	SF1
		28	043	25.22	19 17.91	155 23.41	3.34	2.0	1.1 20	1	95	.09	4	.4	1.0 16	SWR
		28	057	20.96	19 18.47	155 23.01	5.37	1.8	1.8 26	1	94	.12	3	.5	1.4 22	SWR
		28	315	36.63	19 17.97	155 23.41	3.87	1.7	1.3 25	2	94	.10	4	.4	1.2 19	SWR
		28	325	41.23	19 17.83	155 23.20	5.59	1.2	1.1 20	2	99	.08	4	.4	1.0 13	SWR
		28	949	57.46	19 17.75	155 23.47	5.30	1.3	1.2 18	3	95	.09	5	.4	.9 12	SWR
		28	1636	2.69	19 17.75	155 23.21	3.17	1.6	1.4 21	2	106	.06	5	.3	.8 13	SWR
		28	1742	38.80	19 13.41	155 35.62	9.57	2.4	1.6 34	4	115	.15	4	.4	.7 15	LSW
		28	18 1	1.44	19 20.07	155 6.72	8.09	1.9	1.3 26	1	112	.07	5	.5	1.1 19	SF4
		29	146	43.48	19 19.38	155 11.44	8.25	1.5	1.2 26	2	99	.08	6	.5	.9 19	SF3
		29	148	20.25	19 18.05	155 23.25	5.08	1.7	1.4 23	3	102	.11	4	.4	1.5 10	SWR
		29	513	54.86	19 18.07	155 23.27	5.03	2.0	2.4 35	1	95	.12	4	.3	1.3 24	SWR
		29	653	.26	19 20.16	155 7.85	7.16	1.9	1.1 29	4	90	.10	5	.4	.9 16	SF4
		29	10 3	42.60	19 19.84	155 11.94	7.46	1.9	1.3 32	2	84	.09	6	.5	.8 20	SF3
		29	1255	49.49	19 22.45	155 17.61	3.09	1.3	1.0 13	4	96	.03	2	.3	.5 8	SSC
		29	1952	34.04	19 17.75	155 23.43	4.02	2.1	2.1 32	3	96	.10	5	.5	1.2 17	SWR
		30	022	37.41	19 26.27	155 37.91	2.51	1.3	1.6 9	1	188	.11	3	1.1	.8 4	MLO
		30	242	2.32	19 19.10	155 13.51	7.27	1.4	1.3 32	2	70	.10	4	.5	.8 27	SF2
		30	517	35.41	19 9.88	155 40.84	2.58	2.5	1.8 25	1	125	.15	11	.7	2.3 12	LSW
		30	859	28.79	19 20.55	155 12.26	7.84	2.2	2.1 44	4	70	.14	4	.5	.7 32	SF3
		30	9 6	14.00	19 19.94	155 11.94	9.11	3.6	3.9 46	3	83	.10	5	.3	.4 38	SF3 F
		30	1216	46.51	20 3.03	155 21.17	12.18	2.1	1.9 15	3	217	.13	18	1.2	.7 7	KEA
		30	1344	28.10	19 21.92	155 1.02	5.01	1.9	1.6 24	2	173	.12	5	.6	1.7 12	SF5
		30	1440	43.13	19 20.43	155 18.99	3.44	1.4	1.4 22	2	49	.07	3	.3	.7 15	SWR
		30	1910	53.21	19 19.77	155 7.61	6.81	1.8	1.3 30	2	100	.11	5	.5	1.1 17	SF4
		30	1940	53.17	19 18.30	155 23.29	4.59	1.7	1.8 29	5	93	.10	4	.4	1.3 21	SWR
		31	222	32.22	19 17.88	155 23.19	4.69	1.7	1.6 31	2	98	.11	4	.4	1.8 20	SWR
		31	257	50.33	19 26.06	155 36.16	2.97	2.2	1.9 16	2	102	.14	2	.5	.7 9	MLO
		31	846	9.06	19 19.67	155 13.11	9.49	2.4	2.4 49	4	70	.13	5	.4	.5 31	SF2
		31	951	44.45	19 20.02	155 12.91	8.77	1.4	1.3 20	2	71	.06	5	.6	1.0 15	SF2

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	EPZ NO KM FM	REMK
1981	MAR	31	956	11.51	19 20.40	155 12.93	8.00	1.6	1.5	29	2	67	.09	4	.5	.8 17 SF2
		31	1047	30.74	19 17.76	155 23.97	2.50	1.0	1.3	15	2	129	.07	5	.5	.8 9 SWR
		31	15 8	26.07	19 19.64	155 7.79	6.85	2.0	1.7	31	2	98	.12	4	.5	1.1 17 SF4
		31	1746	42.40	19 20.39	155 18.99	3.46	1.8	1.9	26	4	49	.11	3	.3	.8 17 SWR
		31	2050	20.81	19 32.17	155 37.73	9.86	2.6	1.4	29	0	115	.17	6	.7	.9 16 MLO
		31	2235	32.67	19 16.46	155 24.09	4.70	2.1	2.3	34	3	92	.12	4	.4	1.7 23 SWR
		31	2334	57.82	19 17.68	155 23.46	1.83	.8	1.2	18	3	96	.07	5	.3	.9 10 SWR
APR		1	0 0	39.43	21 13.53	156 52.02	.00	3.7	4.2	31	1	207	.29	42	4.4	.7 9 DIS *
		1	1 5	45.17	19 17.61	155 23.32	3.50	.9	1.2	20	2	99	.08	5	.3	1.0 10 SWR
		1	128	25.87	19 17.23	155 23.67	2.66	.9	1.3	22	3	106	.09	5	.4	1.0 15 SWR
		1	12 2	34.29	19 17.48	155 23.66	5.61	1.8	1.5	25	2	95	.11	5	.4	1.5 14 SWR
		1	1446	25.11	19 17.99	155 23.32	5.27	2.3	2.4	32	1	96	.11	4	.3	1.1 24 SWR
		1	2023	2.64	19 18.16	155 23.17	3.54	1.7	1.2	24	3	96	.08	4	.4	.8 16 SWR
		2	249	11.20	19 20.05	155 11.96	9.46	3.0	3.0	44	2	81	.10	5	.4	.4 37 SF3
		2	6 1	12.34	19 20.42	155 11.63	8.52	2.0	1.9	38	3	76	.11	5	.4	.7 25 SF3
		2	10 4	55.89	19 17.04	155 23.46	3.29	1.8	1.3	19	2	113	.08	5	.4	1.2 13 SWR
		2	1049	29.99	19 19.67	155 11.49	7.54	2.2	1.9	36	5	92	.13	5	.4	.7 23 SF3
		2	11 4	42.84	19 17.59	155 21.40	7.12	2.2	2.3	30	2	124	.12	5	.4	1.2 21 SWR
		2	1318	29.71	19 20.56	155 13.11	7.89	2.1	1.9	35	4	63	.11	4	.4	.6 19 SF2
		2	20 0	40.97	19 18.14	155 23.16	3.83	.8	1.2	18	2	97	.09	4	.4	1.0 12 SWR
		2	2156	52.85	19 21.52	155 1.80	6.82	1.6	1.5	29	4	163	.11	4	.5	.8 18 SF5
		3	713	1.03	19 24.96	155 24.70	9.51	2.5	2.2	40	2	36	.12	1	.4	.6 30 KAO
		3	1051	21.52	19 18.10	155 23.21	3.54	1.7	1.4	26	3	96	.09	4	.4	.9 19 SWR
		3	1155	1.90	19 17.34	155 23.32	2.26	1.3	1.3	24	3	102	.13	5	.3	.8 12 SWR
		3	1320	53.14	19 22.93	155 17.14	2.76	2.4	2.6	35	3	36	.09	1	.2	.3 22 SSC
		3	16 3	30.45	19 22.28	155 17.10	3.28	1.4	1.3	20	2	55	.08	2	.3	.4 12 SSC
		3	1820	23.56	19 21.51	155 18.27	2.77	1.5	1.1	19	3	69	.11	3	.3	.7 13 SWR
		3	1852	49.08	19 21.71	155 18.26	2.29	1.9	1.8	21	1	56	.11	3	.3	.6 9 SWR
		3	2144	31.18	19 21.63	155 18.03	3.48	1.5	1.3	20	2	58	.10	3	.4	.8 11 SWR
		3	22 1	43.89	19 20.04	155 13.31	9.41	1.7	1.5	27	1	66	.08	5	.5	.8 20 SF2
		3	2210	54.99	19 21.76	155 18.03	2.88	1.6	1.5	23	4	50	.14	3	.3	.7 17 SWR
		3	2240	42.10	19 19.61	155 16.26	7.61	1.9	1.8	36	3	94	.10	2	.4	.8 17 SF1
		4	2 1	8.44	19 19.93	155 7.64	7.88	1.9	1.4	31	3	97	.07	5	.5	.8 22 SF4
		4	354	30.30	19 20.61	155 6.47	8.82	2.8	2.7	45	3	103	.09	4	.4	.5 34 SF4
		4	558	21.82	19 32.90	155 37.36	10.49	2.6	2.3	39	1	139	.11	7	.5	.5 26 MLO
		4	722	35.08	19 17.50	155 23.42	3.38	1.8	1.4	29	3	99	.11	5	.3	1.1 20 SWR
		4	855	27.39	19 17.19	155 16.01	7.60	1.7	1.4	30	2	143	.09	4	.5	.9 16 SF1
		4	935	2.79	19 17.58	155 23.38	3.15	1.0	1.3	24	3	98	.09	5	.3	1.0 16 SWR
		4	1039	26.24	19 17.22	155 23.89	2.77	1.8	1.4	29	3	92	.11	5	.3	1.1 18 SWR
		4	1617	54.91	19 18.06	155 23.27	3.46	1.1	1.1	26	3	100	.09	4	.3	.8 13 SWR
		4	21 9	55.09	19 21.95	155 17.90	3.35	1.8	1.7	24	3	50	.11	3	.3	.6 18 SWR
		5	043	4.71	19 23.24	155 16.88	2.75	2.1	2.5	25	4	39	.09	0	.2	.2 16 SSC
		5	328	13.55	19 21.79	155 18.34	2.80	1.4	1.1	21	2	55	.10	4	.3	.7 16 SWR
		5	347	23.65	19 20.19	155 11.23	9.30	2.4	2.4	41	4	122	.11	4	.4	.6 28 SF2
		5	526	20.72	19 18.67	155 13.49	7.19	1.7	1.4	26	1	75	.09	3	.5	.9 15 SF3
		5	540	19.05	19 23.31	155 .13	6.27	1.7	1.1	22	2	154	.11	4	.6	1.1 13 SF5
		5	624	38.20	19 20.10	155 19.14	3.70	1.4	.9	16	2	78	.09	3	.4	1.0 12 SWR
		5	7 2	23.24	19 22.16	155 17.74	3.54	1.4	.8	19	2	58	.08	3	.3	.5 11 SSC

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	EPZ NO KM FM	REMK
1981	APR	5	735	19.07	19 21.85	155 18.10	2.40	1.5	.9	23	2	49	.12	3	.3	.6 18 SWR
		5	1113	5.76	19 19.41	155 15.73	8.15	2.4	2.4	39	2	101	.12	3	.4	.6 29 SF1
		5	1749	3.40	19 53.50	155 23.21	8.49	1.6	1.6	16	0	240	.11	5	1.9	.6 9 KEA
		5	1941	41.09	19 48.26	155 51.32	12.24	2.5	2.3	31	3	181	.13	13	1.0	.8 15 HUA
		5	1943	25.10	19 20.24	155 7.27	8.72	1.6	1.2	21	1	99	.07	5	.6	1.2 14 SF4
		5	2040	60.00	19 25.16	155 23.58	8.45	1.8	1.6	31	2	45	.11	3	.4	.9 21 KAO
		5	22 9	37.93	19 16.64	155 23.67	7.75	2.1	2.5	31	3	102	.13	4	.4	1.0 23 SWR
		5	2243	55.25	19 20.42	155 18.98	3.40	1.3	1.5	20	3	96	.07	3	.3	.8 15 SWR
		5	2246	31.58	19 20.55	155 19.12	2.54	1.3	1.4	20	4	74	.11	3	.3	.8 14 SWR
		5	2258	5.19	19 16.23	155 23.89	5.70	1.9	1.9	26	2	99	.11	4	.4	1.4 21 SWR
		6	135	16.47	19 17.23	155 23.60	6.18	1.8	1.9	32	2	97	.12	5	.4	1.2 21 SWR
		6	210	2.96	19 18.10	155 23.08	5.93	2.2	2.4	43	5	98	.14	4	.4	.9 29 SWR
		6	3 8	11.52	19 17.35	155 23.12	2.97	1.7	1.4	22	1	105	.07	5	.4	1.1 14 SWR
		6	519	56.04	19 21.75	155 18.20	2.97	1.8	2.3	26	3	49	.11	3	.3	.6 16 SWR
		6	542	42.37	19 25.99	155 24.50	6.38	1.6	1.2	23	2	62	.09	2	.4	1.1 14 KAO
		6	743	58.41	19 19.41	155 13.14	7.06	1.7	1.8	33	2	76	.12	4	.5	.8 21 SF2
		6	1022	29.81	19 17.99	155 23.33	5.69	2.0	1.9	30	1	96	.12	4	.4	1.4 21 SWR
		6	1344	44.40	19 18.66	155 23.04	4.44	2.2	1.8	29	1	93	.14	3	.4	1.4 23 SWR
		6	1424	31.65	19 16.09	155 23.44	7.20	1.9	1.4	24	1	113	.10	3	.5	1.2 15 SWR
		6	1633	28.93	19 18.86	155 21.37	3.47	1.8	1.4	26	2	101	.09	4	.4	.9 20 SWR
		6	1813	20.27	19 18.07	156 11.90	38.05	2.5	1.8	35	0	263	.08	35	2.6	1.6 25 KON
		6	1921	54.52	19 19.08	155 13.65	6.95	1.7	1.4	31	1	71	.11	4	.5	1.0 24 SF2
		6	23 6	36.85	19 18.73	155 23.37	5.02	2.4	2.8	42	1	88	.12	3	.4	1.1 30 SWR
		6	23 7	54.16	19 18.63	155 23.08	3.56	2.4	2.6	36	0	93	.12	3	.4	.9 29 SWR
		7	556	43.07	19 17.58	155 23.40	2.46	1.7	1.2	27	3	98	.11	5	.4	1.1 20 SWR
		7	741	49.92	19 22.84	155 24.74	9.06	1.7	1.3	30	2	61	.08	5	.4	.7 24 KAO
		7	1352	46.15	19 15.99	155 23.45	8.66	1.1	1.4	21	2	132	.09	3	.5	1.0 10 SWR
		7	1556	.33	19 16.68	155 23.60	7.82	2.1	2.2	32	2	103	.12	4	.4	.9 20 SWR
		7	16 4	22.12	19 20.58	155 13.30	8.65	1.3	1.2	20	1	61	.08	4	.6	1.0 15 SF2
		7	1647	48.94	19 21.46	155 1.58	8.54	2.9	3.1	42	0	162	.08	4	.6	.4 30 SF5 F
		7	1754	37.54	19 17.48	155 23.71	2.34	.9	1.4	21	3	94	.09	5	.4	.9 15 SWR
		7	19 6	58.74	19 16.50	155 24.27	6.37	2.3	2.5	30	1	87	.13	4	.4	1.2 18 SWR
		7	2035	10.70	19 19.95	155 12.19	7.35	1.6	1.3	20	3	81	.05	5	.5	.9 13 SF3
		7	21 8	22.86	19 17.45	155 23.44	2.21	1.7	1.7	26	3	99	.11	5	.3	.9 17 SWR
		7	2247	33.88	19 17.29	155 23.71	3.68	1.9	2.3	32	2	95	.10	6	.3	1.4 22 SWR
		8	137	20.94	19 23.14	155 2.42	7.59	2.1	1.7	36	2	121	.14	4	.4	.7 19 SF5
		8	359	52.48	19 17.63	155 23.60	2.01	1.0	1.4	17	2	94	.18	5	.4	.8 11 SWR
		8	4 6	53.13	19 9.54	155 58.27	15.35	2.3	2.1	18	2	247	.11	16	2.0	.9 11 KON
		8	452	55.47	19 20.36	155 13.22	8.40	1.5	1.2	29	2	63	.09	4	.5	.8 19 SF2
		8	1236	9.44	19 17.96	155 23.26	3.60	1.7	1.1	21	1	97	.07	4	.4	1.0 12 SWR
		8	1853	24.22	19 19.61	155 10.51	9.13	2.9	3.0	46	4	95	.11	5	.3	.4 33 SF3
		8	21 4	39.98	19 20.48	155 13.30	8.43	1.8	1.5	30	1	62	.12	4	.5	.8 25 SF2
		9	043	51.54	19 21.86	155 18.27	2.77	1.6	1.2	23	4	54	.10	4	.3	.5 13 SWR
		9	439	32.22	19 20.23	155 13.54	7.33	1.5	1.4	29	2	64	.11	4	.5	.8 19 SF2
		9	554	20.47	19 20.80	155 6.01	8.54	1.7	1.2	27	1	103	.10	4	.5	.9 21 SF4
		9	1320	5.49	19 21.49	155 5.96	8.20	2.0	2.0	35	2	87	.10	3	.4	.8 25 SF4
		9	1556	54.86	19 21.85	155 18.04	2.73	1.2	1.2	21	3	58	.11	3	.3	.6 14 SWR
		9	1853	37.50	19 20.11	155 7.80	8.40	1.9	2.1	28	1	92	.08	5	.4	.7 21 SF4

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1981	APR	9	19	1	21.03	19 21.67	155 17.94	2.83	1.2	1.2	22	4	59	.10	3	.3	.6	17	SWR	
		9	1915	11.17	19 15.66	155 25.38	7.94	1.1	1.3	24	2	85	.11	3	.5	1.0	12	LSW		
		9	2033	21.08	19 24.02	155 14.30	13.21	1.8	1.5	41	5	47	.10	1	.4	.4	25	DEP		
		9	2144	11.40	19 20.01	155 10.94	7.80	2.1	2.0	36	5	66	.12	4	.5	.8	25	SF3		
		10	222	.29	19 21.96	155 16.11	2.63	1.4	1.2	23	4	49	.09	3	.3	.5	11	SWR		
		10	3	4	4.99	19 22.17	155 17.42	2.88	2.0	2.2	30	3	53	.10	2	.3	.4	22	SSC	
		10	312	40.39	19 21.70	155 18.17	2.82	1.1	1.0	18	2	66	.09	3	.3	.6	13	SWR		
		10	330	21.43	19 24.80	154 59.28	6.48	2.2	2.2	34	2	145	.14	1	.5	1.0	21	LER		
		10	4	9	47.56	19 20.14	155 19.24	3.08	1.4	1.1	21	4	80	.08	3	.3	.7	15	SWR	
		10	447	24.09	19 21.83	155 18.07	2.70	1.6	1.9	26	2	49	.11	3	.3	.5	15	SWR		
		10	524	32.82	19 20.99	155 17.92	30.54	2.1	1.6	38	1	43	.10	2	.7	1.1	30	KAO		
		10	959	46.30	19 22.98	155 25.37	10.63	2.6	2.6	41	1	39	.11	4	.4	.5	32	DEP		
		10	1547	51.34	19 20.33	155 12.28	7.53	2.0	2.3	39	1	73	.13	4	.5	.8	26	SF3		
		10	1942	6.89	19 19.13	155 8.20	5.63	2.3	2.4	38	3	92	.11	3	.4	1.0	23	SF4		
		11	144	15.04	19 23.00	155 2.95	7.80	1.8	1.6	40	4	111	.17	4	.4	.7	22	SF5		
		11	525	45.31	19 17.94	155 23.45	5.54	1.8	1.8	31	3	94	.12	4	.4	1.2	23	SWR		
		11	542	1.18	19 19.24	155 15.78	7.80	1.5	1.4	27	3	103	.07	3	.4	.7	16	SF1		
		11	1054	59.33	19 32.89	155 45.22	9.19	2.5	2.1	34	5	82	.12	5	.5	.7	22	KON		
		11	14	2	41.24	19 17.91	155 23.15	3.23	1.3	1.1	24	3	98	.09	4	.3	1.0	18	SWR	
		11	14	5	7.21	19 21.75	155 18.15	2.95	1.6	1.2	26	4	49	.11	3	.3	.6	15	SWR	
		11	1422	22.34	19 21.83	155 18.16	3.00	1.6	1.1	19	3	77	.11	3	.4	.8	15	SWR		
		11	1449	30.29	19 26.46	155 22.88	8.50	2.4	2.3	40	5	40	.10	4	.3	.6	27	KAO		
		11	1643	52.52	19 26.84	155 27.60	7.03	1.7	1.1	27	3	64	.11	5	.4	1.2	19	KAO		
		11	1656	41.45	19 19.70	155 11.97	7.36	1.6	1.0	22	3	87	.07	6	.5	1.0	12	SF3		
		11	1746	14.93	19 18.90	155 21.29	8.07	1.7	1.4	30	3	100	.10	4	.4	1.0	22	SWR		
		11	18	0	21.46	19 20.42	155 18.93	3.63	1.7	1.6	23	2	50	.07	3	.3	.7	15	SWR	
		11	1926	49.77	19 22.99	155 16.75	3.26	1.3	1.4	25	4	44	.11	1	.3	.3	14	SSC		
		11	2159	8.60	19 22.78	155 17.13	2.31	1.9	2.4	28	3	40	.10	1	.2	.3	15	SSC		
		11	2247	33.13	19 19.76	155 9.99	10.68	1.8	1.3	23	2	90	.10	4	.5	1.2	17	SF3		
		11	2255	19.47	19 21.73	155 17.67	3.46	1.1	1.2	20	2	52	.09	3	.3	.6	9	SWR		
		12	246	33.95	19 22.83	155 17.34	2.64	1.7	1.8	26	3	40	.08	1	.2	.3	17	SSC		
		12	714	11.31	19 26.67	155 23.70	7.78	2.2	2.2	40	3	39	.12	4	.3	.7	29	KAO		
		12	840	16.85	19 22.66	155 1.46	7.80	1.6	1.5	31	4	157	.15	6	.6	1.0	17	SF5		
		12	1155	16.02	19 17.76	155 21.24	5.82	.9	1.3	21	2	123	.11	5	.5	1.6	9	SWR		
		12	1353	23.30	19 25.66	155 28.53	8.27	1.5	1.2	26	1	60	.09	6	.4	1.1	17	KAO		
		12	14	2	27.15	19 20.84	155 5.87	8.27	1.0	1.2	17	0	102	.08	4	.7	1.5	13	SF4	
		12	1550	39.68	19 20.52	155 9.44	9.09	1.4	1.3	21	1	72	.05	3	.6	1.1	18	SF3		
		13	317	48.44	19 46.72	155 47.79	12.51	2.8	2.6	32	3	158	.11	11	.6	.4	15	HUA		
		13	323	20.52	19 20.31	155 9.62	7.28	1.6	1.6	33	2	76	.09	3	.5	.9	21	SF3		
		13	451	10.61	19 11.44	155 41.19	5.10	2.5	2.4	30	3	120	.25	10	.8	3.4	15	LSW		
		13	534	22.61	19 18.72	154 59.42	39.03	2.2	1.8	37	1	202	.08	7	1.1	1.6	30	LER		
		13	845	29.47	19 19.25	155 11.59	6.28	1.7	1.2	31	0	101	.11	5	.6	1.4	19	SF3		
		13	1113	8.48	19 17.54	155 20.98	8.46	1.7	1.4	28	3	125	.09	4	.4	.8	18	SWR		
		13	1914	47.11	19 19.24	155 15.22	9.01	2.5	2.6	44	3	88	.11	4	.4	.5	32	SF1		
		14	329	38.90	19 21.75	155 18.15	3.15	1.6	1.6	24	1	49	.10	3	.3	.6	16	SWR		
		14	629	32.67	19 21.75	155 17.99	3.28	1.8	2.0	24	3	50	.11	3	.3	.6	18	SWR		
		14	1122	47.61	19 23.11	155 17.02	2.95	1.2	1.3	14	2	87	.06	1	.3	.4	10	SSC		
		14	1149	59.93	19 16.03	155 23.69	7.37	1.2	1.6	22	3	124	.09	3	.4	1.1	16	SWR		

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1981	APR	14	1355	39.68	19 16.61	155 22.33	8.18	1.8	1.8	28	2	129	.09	5	.4	1.1	18 SWR
		14	14	7	8.59	19 21.55	155 6.12	9.06	2.2	2.5	30	3	141	.07	3	.5	.7 18 SF4
		14	2112	16.08	19 18.00	155 23.36	5.44	1.8	2.3	30	2	95	.11	4	.4	1.2 19 SWR	
		14	2117	51.75	19 18.03	155 23.24	3.66	1.7	1.5	23	1	96	.09	4	.4	1.0 11 SWR	
		14	2321	35.81	19 16.99	155 23.48	2.80	1.8	1.8	21	1	102	.08	5	.4	1.1 13 SWR	
		15	234	13.87	19 18.04	155 23.22	5.16	2.1	2.4	32	3	96	.11	4	.4	1.5 21 SWR	
		15	357	33.14	19 21.60	155 18.05	3.02	1.6	1.3	23	3	52	.08	3	.3	.6 17 SWR	
		15	747	11.79	19 21.51	155 18.50	2.32	1.5	1.3	15	1	72	.10	3	.3	.7 9 SWR	
		15	921	39.21	19 21.37	155 18.91	3.31	1.5	1.7	22	2	65	.09	4	.3	.8 15 SWR	
		15	1048	9.92	19 29.35	155 27.75	9.97	2.3	1.4	33	4	82	.12	5	.4	1.0 21 KAO	
		15	1132	41.37	19 18.33	155 22.92	5.03	1.8	1.2	29	2	97	.11	4	.4	1.4 16 SWR	
		15	1226	14.41	19 20.71	155 12.71	8.30	2.0	2.0	37	4	65	.11	4	.4	.7 27 SF2	
		15	15	9	56.28	19 20.95	155 13.18	9.41	1.6	1.1	22	2	63	.06	3	.6	.9 20 SF2
		15	16	8	48.15	19 20.91	155 17.08	1.79	1.2	1.3	18	2	64	.06	2	.3	.3 15 SWR
		15	1658	30.08	19 22.39	155 3.28	8.97	1.6	1.2	26	1	115	.07	4	.5	.9 18 SF5	
		15	2243	30.50	19 21.11	155 5.96	6.37	2.0	1.9	26	3	95	.14	4	.5	1.3 13 SF4	
		15	2254	26.78	19 19.81	155 7.95	8.30	1.9	1.5	34	4	112	.10	5	.5	.7 20 SF4	
		15	2346	1.93	19 18.87	155 19.94	8.37	1.8	1.3	26	3	96	.09	3	.4	.8 21 SWR	
		16	120	2.39	19 20.91	155 10.70	9.63	1.6	1.2	23	3	76	.07	3	.6	.9 17 SF3	
		16	327	32.08	19 18.35	155 23.16	5.91	1.9	2.4	34	1	94	.12	3	.4	1.1 26 SWR	
		16	356	2.75	19 20.49	155 11.43	9.52	1.5	1.4	23	2	77	.07	4	.6	1.0 19 SF3	
		16	523	12.44	19 15.78	155 23.89	8.49	2.2	1.9	26	1	119	.08	3	.4	.7 16 SWR	
		16	657	38.04	19 20.22	155 11.80	9.13	1.7	1.2	23	1	79	.07	5	.6	1.1 21 SF3	
		16	1330	46.30	19 20.03	155 12.96	8.77	1.6	1.4	30	2	70	.09	5	.5	.8 21 SF2	
		16	2017	13.71	19 19.68	155 12.49	5.67	1.8	1.4	39	4	82	.12	5	.4	1.1 23 SF2	
		16	2228	26.14	19 14.70	155 26.82	8.94	2.5	2.7	43	3	94	.13	5	.4	.6 21 LSW	
		17	1148	35.57	19 21.82	155 17.84	2.82	1.8	1.7	26	3	78	.10	3	.3	.5 20 SWR	
		17	1236	24.94	19 20.36	155 12.11	7.80	2.8	2.4	44	4	74	.15	5	.5	.7 35 SF3	
		17	1731	57.15	19 23.71	155 27.42	9.50	1.9	1.2	27	2	48	.09	2	.4	.8 21 KAO	
		17	1855	46.79	19 20.17	155 7.79	6.46	1.9	1.5	31	3	91	.11	5	.5	.9 24 SF4	
		17	2026	19.36	19 20.63	155 16.89	1.68	3.7	0.0	35	2	75	.09	1	.3	.3 18 KOA F	
		17	2059	48.68	19 26.02	155 24.30	8.15	1.8	1.1	25	2	46	.08	2	.4	.9 17 KAO	
		17	21	1	53.95	19 18.33	155 13.53	8.17	2.4	2.2	42	3	77	.12	2	.5	.7 32 SF2
		17	21	3	39.41	19 20.66	155 17.39	2.18	1.8	2.2	28	2	56	.08	1	.2	.3 17 SWR
		17	2350	.70	19 25.32	155 37.71	2.49	2.2	1.3	18	2	95	.09	4	.5	1.0 7 MLO	
		18	1	4	52.78	19 20.93	155 17.17	1.42	1.2	1.4	20	2	58	.07	2	.2	.3 12 SWR
		18	2	9	2.96	19 20.66	155 16.89	1.54	1.3	1.5	15	2	79	.06	2	.3	.8 14 KOA
		18	7	3	40.80	19 21.90	155 5.03	8.40	2.5	2.4	40	2	77	.10	3	.4	.6 23 SF5
		18	746	7.14	19 24.49	155 17.03	9.06	1.4	1.3	15	3	82	.06	1	.6	.8 10 INT	
		18	1049	6.78	19 20.70	154 57.71	.50	2.3	2.2	32	1	209	.21	8	.9	1.3 24 SLE *	
		18	1128	25.18	19 19.79	155 7.31	7.74	2.1	1.8	38	4	107	.10	5	.5	.6 23 SF4	
		18	1524	20.79	19 20.73	155 13.33	8.56	2.4	2.3	45	2	59	.12	4	.4	.6 31 SF2	
		18	1611	37.75	19 23.89	155 16.85	2.98	1.5	1.4	18	3	78	.07	0	.3	.3 12 SSC	
		18	1751	58.16	19 18.24	155 13.23	7.10	2.1	1.9	40	5	91	.11	2	.5	.8 24 SF2	
		18	1834	37.11	19 20.06	155 8.41	8.08	1.8	1.6	28	1	80	.09	5	.4	1.0 18 SF4	
		18	1858	25.00	19 12.58	155 30.23	7.83	2.2	1.2	28	0	137	.14	5	.6	.9 9 LSW	
		18	19	2	17.31	19 41.05	156 2.27	10.62	2.9	2.2	30	0	229	.13	25	1.4	.8 16 HUA
		18	2112	1.07	19 21.69	155 18.24	2.73	1.6	1.7	26	4	54	.10	3	.3	.5 19 SWR	

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1981	APR	18	2254	33.50	19 24.56	155 1.09	7.49	1.9	1.3	30	3	126	.11	4	.4	.7	13	SF5	
		19	037	40.90	19 21.79	155 18.40	2.32	1.6	1.1	23	4	62	.10	4	.3	.6	11	SWR	
		19	336	52.02	19 21.09	155 13.17	8.96	1.8	1.7	35	3	57	.09	3	.4	.5	19	SF2	
		19	413	46.13	19 19.43	155 14.09	8.46	2.6	2.0	44	2	68	.11	5	.4	.5	33	SF2	
		19	811	21.17	19 18.36	155 13.16	7.90	1.5	1.3	9	0	226	.03	8	1.4	2.9	8	SF2	
		19	922	55.25	19 24.42	155 26.47	8.46	1.7	1.4	28	2	50	.11	3	.4	.9	20	KA0	
		19	1053	37.84	19 21.65	155 18.38	.47	.9	.9	9	0	69	.06	3	.5	1.6	8	SWR	
		19	13	4	7.47	19 19.95	155 13.12	8.09	2.3	2.4	41	2	69	.12	5	.4	.6	32	SF2
		19	15	6	55.03	19 20.49	155 19.04	3.54	1.8	2.3	32	4	48	.10	3	.3	.7	24	SWR
		19	1642	10.03	19 21.75	155 18.25	3.42	1.5	1.4	22	4	54	.12	3	.4	.6	13	SWR	
		19	1733	34.00	19 21.85	155 18.27	2.50	1.7	2.3	22	3	48	.11	4	.3	.5	17	SWR	
		19	1748	28.25	19 24.20	155 25.27	8.68	2.1	1.9	40	2	38	.12	2	.4	.7	32	KA0	
		19	1851	27.40	19 22.39	155 25.63	10.90	1.6	1.6	28	2	42	.10	4	.4	.9	19	KA0	
		19	1953	26.36	19 19.90	155 11.26	7.00	1.9	1.8	37	4	87	.13	5	.5	.7	21	SF3	
		19	2132	34.53	19 22.76	155 17.17	2.80	1.4	1.7	23	3	51	.09	1	.3	.3	12	SSC	
		20	12	0	52.66	19 26.51	155 23.99	6.10	1.8	1.2	28	3	59	.11	3	.4	1.0	20	KA0
		20	1220	11.16	19 21.99	155 18.13	3.13	1.7	1.3	21	3	70	.10	3	.3	.6	14	SWR	
		21	2	4	31.89	19 21.85	155 18.31	2.86	2.9	2.7	44	3	48	.12	4	.3	.5	34	SWR
		21	236	32.38	19 18.31	155 13.29	8.88	2.1	1.8	44	4	88	.10	2	.5	.5	24	SF2	
		21	447	44.15	19 21.91	155 18.02	3.17	1.4	1.0	23	3	54	.09	3	.3	.5	14	SWR	
		21	9	0	14.08	19 23.21	155 2.38	6.92	2.0	1.8	28	2	122	.12	4	.5	.7	18	SF5
		21	1748	17.50	19 30.88	155 43.24	8.63	.9	1.0	21	2	164	.11	5	.8	1.2	13	KON	
		21	1849	50.58	19 18.42	155 13.10	7.14	2.0	1.5	41	4	92	.12	3	.5	.8	26	SF2	
		21	1933	19.54	19 20.34	155 12.96	8.58	1.8	1.4	37	4	67	.11	4	.5	.6	26	SF2	
		21	20	7	39.82	19 20.26	155 13.04	8.11	1.5	1.1	31	4	67	.09	4	.5	.7	23	SF2
		21	2212	19.93	19 20.91	155 12.95	8.42	1.5	1.1	30	3	62	.11	3	.5	.8	24	SF2	
		22	1727	31.38	19 18.40	155 13.24	7.08	1.7	1.2	39	6	88	.12	3	.5	.7	22	SF2	
		22	2132	44.69	19 23.71	155 17.11	3.13	1.2	1.0	18	5	64	.13	1	.4	.3	10	SSC	
		22	2322	54.79	19 21.09	155 5.81	8.41	2.4	2.2	37	2	96	.08	4	.4	.5	26	SF4	
		23	228	14.04	19 20.36	155 7.49	8.26	2.3	2.0	42	3	94	.09	5	.4	.5	22	SF4	
		23	344	34.17	19 22.95	155 4.25	8.71	3.4	3.2	47	4	87	.11	3	.4	.4	37	SF5	
		23	635	9.10	19 19.79	155 12.14	9.12	1.5	1.1	22	4	84	.05	6	.5	.8	17	SF3	
		23	1145	8.20	19 18.85	155 13.63	8.87	1.4	1.5	29	3	71	.09	3	.6	.8	17	SF2	
		23	1236	58.49	19 21.09	155 13.18	7.76	1.5	1.8	34	2	57	.11	3	.5	.5	22	SF2	
		23	2138	45.74	19 56.97	155 52.48	10.83	2.8	2.5	22	1	214	.08	22	1.5	1.0	14	KON	
		23	2248	41.03	19 20.14	155 6.76	8.48	3.1	3.4	44	3	110	.11	5	.4	.6	35	SF4	
		24	139	5.03	19 24.60	155 37.53	.03	2.0	1.9	15	1	91	.13	5	.4	.8	9	MLO	
		24	738	48.69	19 19.42	155 8.55	5.87	1.8	1.6	33	4	80	.10	4	.4	.9	20	SF4	
		24	1246	45.43	19 19.31	155 15.32	7.53	2.0	1.1	29	2	89	.09	4	.5	.9	21	SF1	
		24	18	0	5.58	19 23.66	155 16.78	2.89	1.6	1.2	23	4	44	.07	1	.3	.2	14	SSC
		24	2037	24.35	19 23.19	155 16.79	2.90	2.3	2.1	29	4	39	.09	0	.2	.2	20	SSC	
		24	2044	8.85	19 23.62	155 16.77	2.93	1.9	1.7	24	2	40	.09	1	.3	.2	22	SSC	
		24	2213	27.69	19 23.18	155 16.97	3.14	.9	1.1	16	3	56	.08	0	.3	.4	9	SSC	
		25	1	2	49.42	19 17.41	155 21.87	9.16	2.4	1.9	36	4	124	.12	6	.4	.5	26	SWR
		25	323	39.48	19 21.78	155 18.26	2.90	2.1	1.8	23	3	48	.10	3	.3	.6	18	SWR	
		25	426	35.96	19 18.27	155 14.14	8.54	2.2	.40	40	4	84	.12	3	.5	.6	23	SF2	
		25	439	21.77	19 20.64	155 12.55	8.00	2.0	1.6	38	4	67	.12	4	.4	.6	29	SF2	
		25	950	51.60	19 19.89	155 7.77	7.86	2.0	1.6	36	3	96	.08	5	.4	.7	25	SF4	

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HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
1981	APR	25	10	3	1.22	19 20.01	155 12.38	7.47	1.8	1.5	36	1	77	.13	5	.5	.8	26	SF2
		25	1213	56.42	19 19.88	155 11.70	7.44	2.5	2.2	40	5	86	.12	5	.4	.7	29	SF3	
		25	14	6	42.49	19 20.28	155 11.71	8.70	1.7	1.0	32	2	79	.12	5	.6	.8	19	SF3
		25	1534	28.83	19 19.10	155 13.99	9.41	2.1	2.0	46	3	125	.11	6	.3	.4	26	SF2	
		25	1549	58.00	19 18.09	155 13.86	8.19	1.7		19	0	105	.07	2	.7	.8	15	SF2	
		25	1835	11.49	19 19.67	155 8.83	8.64	2.5	2.2	46	4	79	.11	5	.4	.6	24	SF4	
		25	1848	10.43	19 20.60	155 6.83	8.98	2.6	2.6	45	4	99	.09	5	.4	.5	31	SF4	
		25	1920	9.55	19 20.63	155 12.70	8.16	2.2	2.0	40	5	66	.12	4	.4	.6	28	SF2	
		25	1953	31.23	19 20.40	155 13.08	8.68	2.5	2.4	46	3	65	.12	4	.4	.6	35	SF2	
		26	112	26.06	19 20.74	155 6.30	8.44	2.1	1.6	37	1	101	.10	4	.5	.8	24	SF4	
		26	141	3.93	19 20.08	155 13.48	7.55	1.8	1.2	34	3	62	.12	5	.4	.8	24	SF2	
		26	248	8.06	19 19.78	155 11.76	7.77	1.9	1.5	38	3	88	.12	5	.4	.7	26	SF3	
		26	5	28.99	19 20.00	155 11.39	7.60	1.7	1.1	29	4	85	.09	5	.5	.8	21	SF3	
		26	845	2.08	19 22.17	155 26.94	12.04	2.4	2.3	38	2	41	.10	1	.4	.6	28	KA0	
		26	10	2	10.91	19 20.31	155 12.41	7.59	1.5	1.2	26	0	72	.13	4	.5	1.0	23	SF2
		26	1150	43.07	19 21.61	155 6.13	8.34	2.0	2.0	35	1	84	.11	3	.4	.6	24	SF4	
		26	1428	54.10	19 17.85	155 21.69	6.75	1.7	1.5	23	2	118	.08	5	.4	1.2	16	SWR	
		26	1429	57.57	19 22.18	155 17.58	2.95	1.6	1.6	20	2	52	.14	3	.4	.6	14	SSC	
		26	1610	4.97	19 18.88	155 13.56	7.42	2.0	2.1	41	2	70	.11	3	.4	.8	27	SF2	
		26	19	1	4.41	19 21.89	155 18.32	2.76	2.3	2.9	32	3	65	.12	4	.3	.8	26	SWR
		26	2038	39.75	19 19.78	155 10.30	8.03	1.6	1.5	29	1	91	.08	4	.5	1.0	23	SF3	
		26	22	4	27.83	19 18.89	155 13.62	7.52	1.7	1.7	53	2	71	.10	3	.5	.8	21	SF2
		26	23	6	54.94	19 19.53	155 21.81	3.18	1.9	2.1	32	4	85	.11	3	.4	.7	27	SWR
		26	2349	14.30	19 22.82	155 24.44	9.77	2.5	2.7	45	3	35	.12	5	.4	.5	31	KA0	
		26	2353	57.39	19 22.08	155 17.93	3.13	1.5	1.6	24	4	50	.09	3	.3	.5	15	SSC	
		27	043	52.67	20 44.03	155 59.07	3.15	2.4	2.6	20	1	222	.10	28	1.7	1.3	11	DIS	
		27	2	4	6.88	19 19.89	155 11.37	6.45	1.9	1.9	42	4	87	.12	5	.4	.7	30	SF3
		27	221	41.43	19 23.11	155 17.23	2.16	1.3	1.6	20	3	49	.06	1	.2	.3	13	SSC	
		27	333	20.65	19 23.04	155 17.00	2.88	1.4	1.7	22	4	48	.07	1	.3	.3	16	SSC	
		27	334	15.23	19 24.87	155 37.90	1.25	2.1	1.9	17	1	97	.12	5	.5	1.5	11	MLO	
		27	4	0	53.29	19 20.21	155 12.03	8.13	1.9	1.8	35	2	78	.10	5	.4	.7	24	SF3
		27	457	53.63	19 19.34	155 6.86	8.67	3.0	3.4	34	3	127	.09	4	.5	.4	21	SF4	
		27	519	8.40	19 19.58	155 6.77	7.52	2.0	1.7	32	3	123	.12	5	.5	.9	26	SF4	
		27	846	25.47	19 22.93	155 16.91	2.89	1.5	1.6	22	2	47	.08	1	.3	.3	14	SSC	
		27	922	38.33	19 20.48	155 12.97	7.29	1.6	1.2	32	3	65	.11	4	.5	.8	22	SF2	
		27	924	13.97	19 23.20	155 17.16	2.88	1.3	1.2	15	1	62	.10	1	.4	.4	12	SSC	
		27	1129	21.53	19 16.40	155 11.55	3.37	3.4	3.6	43	4	172	.15	4	.6	1.0	39	SSF	
		27	1222	48.34	19 20.50	155 18.95	3.61	1.6	1.3	24	4	49	.10	3	.5	.8	18	SWR	
		27	1310	43.41	19 16.42	155 11.63	5.19	1.8	1.4	28	0	172	.12	3	.7	2.5	20	SF3	
		27	18	8	47.32	19 23.50	155 16.94	2.90	2.4	2.0	39	1	39	.11	0	.2	.2	25	SSC
		27	2123	30.99	19 20.04	155 12.20	8.28	1.6	1.4	31	2	79	.11	5	.5	.8	21	SF3	
		27	7	9	45.55	19 21.49	155 17.97	3.72	1.5	1.4	23	4	73	.18	3	.4	.9	16	SWR
		27	846	29.26	19 19.50	155 11.17	9.75	3.0	3.4	43	4	97	.10	5	.4	.4	35	SF3	
		27	850	39.48	19 21.84	155 17.80	3.52	1.8	1.6	29	4	51	.11	3	.5	.6	22	SWR	
		27	1042	52.88	19 15.70	155 35.47	8.93	2.2	1.8	30	3	148	.15	3	.6	.9	22	LSW	
		28	1223	13.63	19 19.44	155 7.10	8.34	2.0	1.8	35	2	119	.10	4	.4	.6	26	SF4	
		28	1233	52.63	19 19.66	155 6.91	7.55	1.9	1.8	26	3	119	.07	5	.4	.7	19	SF4	
		28	13	5	39.90	19 20.47	155 12.08	8.42	1.6	1.5	29	3	73	.10	4	.5	.8	21	SF4

HVO EARTHQUAKE SUMMARY LIST

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		ORIGIN TIME			LAT N		LON W		DEPTH				AMP		DIR		GAP		RMS	MIN	ERM	ERZ NO		
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	SEC	DIS	KM	KM	FM	REMK	
1981	APR	28	1312	36.11	19	19.69	155	7.23	7.14	1.9	1.5	32	3	111	.11	5	.5				.9	24	SF4	
		28	1352	7.20	19	19.93	155	9.85	6.54	1.8	1.6	29	2	85	.08	4	.5				.9	16	SF3	
		28	1451	50.30	19	19.58	155	7.30	8.58	2.6	3.0	42	1	111	.10	4	.5				.5	29	SF4	
		28	1755	6.26	19	16.67	155	11.68	2.22	1.1	1.4	26	1	167	.09	3	.6				.5	14	SSF	
		28	1756	41.49	19	40.51	155	7.66	35.12	2.2	2.3	44	4	82	.09	6	.6				1.3	37	HIL	
		28	1928	41.07	19	23.23	155	16.90	2.96	1.4	1.6	19	3	46	.07	0	.3				.3	12	SSC	
		29	040	9.10	19	17.55	155	23.60	2.72	1.8	1.9	26	2	95	.09	5	.3				.8	16	SWR	
		29	151	28.35	19	21.64	155	17.79	3.08	1.5	1.6	19	1	52	.12	3	.3				.6	14	SWR	
		29	636	6.52	19	17.46	155	23.59	2.74	.9	1.3	23	3	96	.08	5	.3				.9	17	SWR	
		29	640	35.93	19	22.00	155	3.27	7.26	1.6	1.2	34	5	115	.17	4	.5				.7	23	SF5	
		29	640	59.21	19	22.06	155	3.42	7.63	1.7	1.6	29	3	111	.11	4	.5				.8	21	SF5	
		29	641	49.57	19	21.81	155	3.39	8.64	2.0	2.0	33	1	112	.08	4	.5				.5	21	SF5	
	29	923	8.37	19	23.73	155	16.75	2.93	1.9	2.2	27	4	52	.09	0	.3				.2	16	SSC		
	29	1045	30.37	19	20.82	155	17.96	4.02	1.4	1.3	22	3	51	.12	2	.4				.8	13	SWR		
	29	1449	48.02	19	19.76	155	11.98	5.90	1.5	1.1	26	3	86	.10	6	.5				1.1	16	SF3		
	29	1739	15.51	19	21.65	155	18.22	2.90	1.6	1.6	24	3	48	.08	3	.3				.5	18	SWR		
	29	2241	1.42	19	20.22	155	19.27	3.00	1.5	1.3	19	2	54	.11	3	.4				.8	16	SWR		
	29	2335	30.08	19	23.12	155	16.84	2.95	1.9	1.8	23	2	40	.10	1	.3				.3	17	SSC		
	30	050	51.37	19	23.00	155	16.79	2.90	1.8	1.7	23	2	43	.10	1	.3				.3	14	SSC		
	30	115	33.41	19	23.39	155	16.93	2.62	1.1	1.5	45	3	36	.11	0	.2				.2	31	SSC		
	30	118	2.41	19	23.40	155	16.62	2.81	2.7	2.8	35	2	39	.12	1	.3				.2	24	SSC		
	30	152	15.95	19	22.91	155	17.01	2.71	2.0	2.1	30	3	38	.11	1	.2				.3	16	SSC		
	30	714	59.89	19	19.92	155	13.20	9.68	2.7	2.7	45	3	68	.09	5	.4				.3	35	SF2		
	30	852	32.23	19	21.91	155	17.55	2.97	1.5	1.3	23	4	57	.08	3	.2				.4	17	SWR		
30	1256	19.36	19	21.16	155	18.24	30.30	2.1	1.8	42	1	45	.10	2	.6				1.1	33	DEP			
30	1550	58.36	19	22.47	155	28.01	4.12	2.4	2.2	33	1	43	.12	1	.4				.7	25	KA0			
30	16	1	40.90	19	21.95	155	1.67	7.68	2.1	1.6	34	2	150	.10	4	.5				.5	25	SF5		
30	1647	13.38	19	18.37	155	13.31	7.03	1.6	1.3	34	4	85	.11	3	.5				.8	17	SF2			
30	1959	10.62	19	27.35	154	52.25	7.28	1.9	1.4	25	2	147	.09	2	.7				.4	14	LER			
30	2128	14.92	19	23.86	155	16.89	2.81	1.3	1.0	18	2	76	.07	1	.3				.2	10	SSC			
MAY	30	2327	29.78	19	20.47	155	12.49	7.63	1.6	1.3	31	2	69	.11	4	.5				.8	22	SF2		
	1	1944	43.04	19	20.02	155	11.99	8.68	1.7	1.1	25	2	81	.08	5	.6				.9	19	SF3		
	1	2032	48.36	19	20.30	155	6.89	7.48	1.6	1.3	29	3	104	.09	5	.5				.8	17	SF4		
	1	2039	59.22	19	19.74	155	7.62	7.14	1.6	1.4	31	4	101	.10	4	.5				.9	20	SF4		
	1	2111	3.55	19	32.90	155	37.31	9.90	1.6	1.3	24	1	88	.14	7	.7				1.3	16	MLO		
	1	23	5	31.06	19	19.16	155	12.23	4.50	1.6	1.3	31	3	95	.12	4	.4				1.8	18	SSF	
	1	2323	37.54	19	20.12	155	8.04	9.21	2.2	2.4	37	3	86	.08	5	.4				.5	25	SF4		
	2	127	34.04	19	19.72	155	8.64	7.65	1.8	1.5	28	2	77	.08	5	.5				1.0	19	SF4		
	2	227	33.11	19	25.35	155	29.71	9.37	1.8	1.3	29	2	58	.08	6	.4				1.0	20	KA0		
	2	236	7.46	19	18.11	155	13.24	10.77	3.8	3.8	45	1	93	.12	2	.6				.5	41	SF2		
	2	424	14.61	19	17.79	155	13.17	8.23	2.1	2.3	38	3	106	.11	2	.5				.6	23	SF2		
	2	429	34.34	19	21.92	155	.35	6.27	1.8	1.4	28	3	174	.15	6	.7				1.1	17	SF5		
2	710	46.28	19	20.05	155	8.02	8.81	3.2	3.4	44	2	87	.10	5	.5				.4	35	SF4			
2	10	0	47.74	19	18.00	155	21.60	7.63	1.0	1.3	24	4	115	.09	5	.4				1.0	13	SWR		
2	1624	28.65	19	18.86	155	21.27	7.55	1.4	1.3	27	4	101	.09	4	.4				.9	19	SWR			
2	18	6	58.09	19	19.62	155	10.56	8.04	1.9	1.8	30	1	95	.10	5	.5				.9	22	SF3		
2	1810	3.54	19	20.32	155	7.61	8.24	2.1	2.1	38	2	92	.09	5	.4				.6	21	SF4			
3	042	37.85	19	20.36	155	6.47	7.43	2.0	1.8	33	2	109	.09	5	.4				.7	22	SF4			

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MM	DIR MAG NR	GAP NS	RMS DEG	MIN SEC	ERM DIS	ERZ KM	NO KM FM	REMK
1981	MAY	3	1	2	51.15	19 20.31	155 12.10	8.17	2.1 2.2 43	2	75	.12	5	.4	.6 29	SF3
		3	2	7	21.56	19 18.93	155 13.06	7.40	1.4 1.1 30	1	84	.10	4	.5	.8 17	SF2
		3	624	54.17	19 22.32	155 17.15	3.15	.9 1.4 16	1 54	.07	2			.3	.5 13	SSC
		3	636	20.95	19 24.15	155 30.13	9.97	2.4 2.1 40	0 51	.08	5			.5	.7 28	KA0
		3	945	8.95	19 17.69	155 20.95	7.08	1.0 1.2 21	3 126	.08	4			.4	1.0 13	SWR
		3	14	5	19.18	19 18.31	155 23.36	6.20	1.8 2.2 31	2	92	.12	4	.4	1.1 21	SWR
		3	1456	21.15	19 19.46	155 12.35	6.88	1.5 1.3 25	0 88	.09	5			.5	1.2 16	SF2
		3	1556	46.83	19 18.44	155 23.25	6.19	2.1 2.7 36	2 93	.11	3			.4	.9 27	SWR
		3	1750	44.14	19 11.11	155 28.33	7.04	2.2 1.6 24	1 119	.16	3			.6	1.3 12	LSW
		3	1856	14.51	19 20.29	155 12.67	8.44	1.6 1.4 26	3 75	.09	4			.5	.8 16	SF2
		3	1946	37.49	19 20.81	155 12.73	7.52	1.9 1.9 40	3 64	.14	3			.5	.7 21	SF2
		4	2	9	40.19	19 20.45	155 13.46	8.19	1.4 1.1 21	3 63	.07	4		.5	.9 15	SF2
		4	3	4	50.51	19 19.84	155 12.39	7.88	1.7 1.8 35	3 80	.12	5		.5	.7 19	SF2
		4	314	43.08	19 21.36	155 6.64	7.79	1.9 1.7 29	1 86	.09	3			.5	.9 16	SF4
		4	643	.30	19 16.79	155 30.74	6.50	2.4 2.2 38	1 48	.17	3			.4	1.1 27	LSW
		4	1346	30.36	19 23.93	155 17.09	2.91	1.6 1.8 22	3 69	.09	1			.4	.2 14	SSC
		4	1350	14.27	19 20.44	155 12.93	9.15	2.8 2.8 45	2 66	.12	4			.4	.5 35	SF2
		4	1651	31.02	19 23.93	155 16.94	2.53	1.4 1.5 20	2 76	.08	1			.3	.2 9	SSC
		4	2215	46.67	19 21.39	155 3.04	7.22	1.8 1.4 21	2 115	.07	3			.5	.9 11	SF5
		5	113	28.25	19 17.86	155 23.48	3.72	2.5 2.5 38	2 94	.12	4			.3	1.1 21	SWR
		5	114	4.26	19 18.07	155 23.42	4.53	2.6 2.7 42	3 93	.11	4			.3	1.5 26	SWR
		5	149	58.03	19 17.69	155 23.47	5.38	2.4 2.8 39	2 96	.14	5			.4	1.1 22	SWR
		5	2	6	29.92	19 23.49	155 17.04	3.17	.9 1.4 3	3 79	.07	0		.4	.4	SSC
		5	216	34.44	19 20.32	155 12.39	8.54	1.9 1.6 37	2 73	.10	4			.4	.6 22	SF2
		5	312	49.29	19 18.11	155 23.25	6.13	2.0 2.1 32	2 95	.12	4			.4	1.1 23	SWR
		5	615	40.16	19 21.59	155 1.33	6.53	2.1 1.6 31	2 165	.12	4			.6	.9 21	SF5
		5	636	43.42	19 23.87	155 16.79	3.24	1.6 1.5 24	3 80	.08	0			.3	.2 12	SSC
		5	655	56.31	19 23.96	155 16.74	3.17	1.9 2.1 24	3 76	.09	0			.3	.2 15	SSC
		5	659	4.60	19 23.58	155 16.78	3.35	2.1 2.3 37	5 39	.11	0			.2	.2 22	SSC
		5	15	8	11.17	19 57.09	155 16.83	36.27	2.6 2.7 48	3 205	.11	9		.8	1.4 42	KEA
		5	1720	15.70	19 23.31	155 16.75	3.10	1.5 1.3 21	3 46	.06	0			.3	.3 14	SSC
		5	1859	15.41	19 43.64	155 58.65	7.33	1.9 1.8 12	1 217	.15	15	1.6		1.2	4	HUA
		5	2055	52.30	19 16.22	155 22.70	7.16	2.1 2.2 35	1 130	.12	4			.5	.9 23	SWR
		5	2330	39.59	19 20.21	155 12.70	7.83	1.6 1.3 32	3 71	.12	5			.5	.8 26	SF2
		5	2331	32.08	19 22.34	155 17.24	2.66	1.1 1.1 18	3 92	.07	2			.3	.4 9	SSC
		6	634	51.70	19 20.23	155 6.54	7.26	2.0 1.3 35	3 110	.10	5			.5	1.0 22	SF4
		6	713	40.75	19 25.20	155 24.28	8.39	1.8 1.4 30	3 44	.10	2			.4	.9 24	KA0
		6	943	51.58	19 17.31	155 15.00	5.29	1.1 1.6 21	2 151	.13	3			.6	1.4 10	SF1
		6	1055	51.08	19 19.02	155 21.94	3.84	2.1 2.5 33	3 95	.10	3			.3	.8 24	SWR
		6	1137	14.69	19 19.58	155 26.17	30.10	2.1 1.7 27	2 56	.10	5			.6	1.3 23	DWL
		6	1427	53.93	19 23.34	155 25.65	7.50	2.1 1.9 36	3 44	.10	4			.3	.8 22	KA0
		6	1825	25.01	19 18.82	155 21.34	9.04	2.6 2.9 43	4 102	.12	4			.4	.6 29	SWR
		6	19	1	39.35	19 55.84	155 27.57	33.12	2.3 2.0 37	3 234	.09	13		.8	1.2 23	KEA
		6	1958	12.68	19 20.77	155 19.83	3.57	1.3 1.4 20	3 55	.09	4			.4	.9 12	SWR
		6	2222	41.83	19 18.36	155 15.08	6.44	1.2 1.1 22	3 104	.13	4			.5	1.2 17	SF1
		6	2252	13.54	19 17.46	155 23.49	5.04	1.8 1.8 31	3 98	.10	5			.4	1.3 21	SWR
		6	23	8	24.18	19 18.16	155 13.47	8.30	2.1 2.0 46	5 81	.11	2		.5	.5 32	SF2
		7	247	59.70	19 19.73	155 12.69	9.01	3.2 3.5 43	1 79	.11	5			.4	.4 26	SF2

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERM KM	ERZ NO KM FM	REMK
1981	MAY	7	650	27.44	19 20.17	155 8.40	8.73	2.9	3.1	46	3	79	.09	4	.4	.5 31	SF4
		7	7 1	26.64	19 20.45	155 12.65	8.91	2.0	1.8	39	3	69	.11	4	.4	.6 26	SF2
		7	1043	51.60	19 22.16	155 17.56	2.52	1.3	1.2	20	2	59	.10	3	.3	.5 17	SSC
		7	1310	52.77	19 21.76	155 17.80	2.94	1.4	1.1	21	2	52	.10	3	.3	.6 15	SWR
		7	1320	30.20	19 21.97	155 17.88	3.20	1.7	1.8	25	3	50	.10	3	.3	.6 19	SWR
		7	1330	28.07	19 22.33	155 17.34	2.72	1.0	1.0	22	3	53	.09	2	.3	.4 13	SSC
		7	14 1	4.04	19 22.03	155 17.88	3.34	1.6	1.3	25	3	29	.09	3	.3	.6 17	SSC
		7	19 4	14.89	19 14.68	155 32.79	6.87	2.2	1.7	29	1	137	.12	5	.5	1.1 22	LSW
		7	1926	42.22	19 21.68	155 18.23	2.39	1.4	1.0	19	3	74	.12	3	.3	.7 13	SWR
		7	1929	59.78	19 20.41	155 12.85	8.06	1.5	1.4	35	2	67	.11	4	.5	.7 20	SF2
		7	2024	14.70	19 18.90	155 21.96	3.10	1.8	1.8	25	2	98	.10	3	.4	.8 19	SWR
		7	2146	20.53	19 22.38	155 17.03	2.84	1.4	1.0	26	5	55	.08	2	.3	.4 17	SSC
		8	151	12.00	19 20.45	155 18.89	3.82	1.7	1.9	24	4	51	.09	3	.3	.8 17	SWR
		8	232	28.27	19 21.13	155 17.24	1.89	1.5	2.0	21	2	56	.10	2	.3	.4 14	SWR
		8	534	42.20	19 23.29	155 16.85	3.07	1.6	1.5	22	2	39	.09	0	.3	.3 16	SSC
		8	738	19.46	19 19.01	155 12.31	7.42	1.7	1.2	30	3	98	.09	4	.5	.8 19	SF2
		8	11 1	.08	19 13.77	155 28.16	7.48	2.5	2.6	39	3	136	.16	4	.5	.8 25	LSW
		8	1546	43.61	19 20.63	155 7.39	8.76	2.2	1.9	42	2	91	.10	5	.4	.6 31	SF4
		9	1116	42.11	19 20.80	155 12.83	8.49	1.8	1.3	36	3	63	.10	3	.4	.6 25	SF2
		9	1255	2.88	19 17.46	155 23.47	2.88	1.1	1.1	21	2	98	.08	5	.4	1.0 16	SWR
		9	1825	38.98	19 20.88	155 7.40	6.75	1.4	1.1	30	1	87	.12	4	.5	1.0 17	SF4
		9	1952	1.48	19 24.68	155 22.87	10.58	2.4	2.1	45	1	36	.12	4	.4	.5 33	KA0
		9	2112	29.51	19 23.70	155 16.68	2.84	1.8	2.0	24	2	43	.11	0	.3	.2 16	SSC
		9	2225	24.07	19 29.16	155 33.32	13.71	2.2	1.7	35	4	35	.09	4	.4	.4 27	DML
		9	2247	2.23	19 23.29	155 16.86	2.96	1.4	1.1	19	4	56	.08	0	.3	.3 14	SSC
		9	2251	14.57	19 23.43	155 16.78	3.12	2.4	2.6	32	3	50	.10	0	.2	.2 19	SSC
		9	2343	52.70	19 21.70	155 18.28	2.55	1.5	1.1	22	4	48	.09	3	.3	.6 15	SWR
		10	030	3.59	19 21.70	155 17.94	2.69	1.5	1.1	20	4	75	.10	3	.3	.6 13	SWR
		10	358	40.82	19 21.91	155 18.31	2.78	1.9	1.7	34	4	48	.10	4	.3	.5 18	SWR
		10	359	52.63	19 23.49	155 16.88	2.92	2.7	2.9	38	1	36	.12	0	.2	.3 33	SSC
		10	836	8.69	19 20.06	155 19.42	4.56	1.7	1.4	22	3	58	.12	4	.4	1.4 14	SWR
		10	1532	27.73	19 23.07	155 17.09	2.81	.9	1.0	16	3	66	.07	1	.3	.3 10	SSC
		10	2117	36.37	19 20.52	155 20.60	2.48	1.4	1.2	21	3	65	.09	5	.3	.7 15	SWR
		11	4 1	26.95	19 20.23	155 12.73	7.85	1.5	1.2	28	2	71	.10	4	.5	.9 20	SF2
		11	525	35.29	19 18.98	155 21.95	3.40	1.6	1.2	21	1	96	.08	3	.4	.8 18	SWR
		11	639	32.38	19 20.53	155 13.10	7.70	1.8	1.5	33	3	63	.10	4	.5	.8 20	SF2
		11	9 9	21.55	19 17.48	155 23.97	4.81	1.9	2.3	29	1	89	.13	5	.4	1.7 23	SWR
		11	1044	24.72	19 20.69	155 8.31	8.49	2.1	1.6	34	4	76	.07	4	.4	.8 22	SF4
		11	16 9	27.76	19 23.36	155 16.93	2.93	2.1	2.0	35	5	36	.10	0	.2	.2 25	SSC
		11	2036	44.45	19 18.80	155 20.62	2.32	1.9	1.3	19	1	103	.14	4	.5	.9 17	SWR
		11	2038	24.09	19 18.68	155 23.23	5.68	2.3	2.0	33	4	90	.11	3	.3	1.1 23	SWR
		11	2348	29.57	19 19.98	155 11.62	9.54	2.7	2.4	40	4	84	.10	5	.4	.6 32	SF3
		12	143	41.44	19 20.97	155 22.07	9.33	1.9	1.3	28	4	94	.08	5	.4	.9 19	KA0
		12	2 6	31.85	19 18.58	155 23.36	5.49	2.4	2.8	39	0	40	.14	3	.4	1.0 28	SWR
		12	217	43.07	19 18.23	155 23.12	5.12	1.7	1.2	25	1	96	.10	4	.4	1.5 16	SWR
		12	4 8	23.68	19 21.15	155 17.06	1.88	1.2	1.6	12	0	72	.05	2	.3	.4 10	SWR
		12	410	17.48	19 21.91	155 17.84	3.15	1.9	1.8	29	3	51	.11	3	.3	.6 20	SWR
		12	1132	15.07	19 20.38	155 19.00	3.68	1.8	1.6	21	2	49	.07	3	.3	.8 13	SWR

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YEAR	MON	ORIGIN TIME			LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP		DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERM KM	ERZ NO KM FM	REMK
		DA	HRMN	SEC				MAG	MAG									
1981	MAY	12	1140	3.08	19 19.64	155 11.36	8.75	3.0	3.0	45	1	93	.12	5	.4	.5 37	SF3	
		12	1218	37.46	19 18.79	155 22.03	3.87	1.6	1.2	13	1	103	.05	3	.5	1.0 8	SWR	
		12	1624	9.67	19 17.14	155 23.66	5.48	2.2	2.5	36	2	97	.12	5	.4	1.2 26	SWR	
		12	21 1	29.72	19 18.32	155 23.29	5.48	1.9	2.2	29	2	93	.11	4	.4	1.1 17	SWR	
		12	22 1	46.24	19 21.27	155 19.19	2.82	1.5	1.6	23	3	44	.12	4	.3	.8 15	SWR	
		12	2332	14.86	19 19.23	155 13.50	7.93	2.0	1.9	32	4	70	.10	4	.5	.8 21	SF2	
		13	626	42.08	19 23.53	155 29.84	9.32	2.4	2.3	35	2	48	.09	4	.3	.9 26	KA0	
		13	831	58.22	19 18.65	155 23.25	4.92	1.1	1.1	19	0	156	.10	3	.8	1.3 17	SWR	
		13	1051	7.42	19 19.75	155 8.23	7.18	2.0	1.9	34	3	85	.11	4	.5	.9 21	SF4	
		13	1056	56.67	19 18.46	155 23.14	5.74	2.3	2.8	35	2	96	.12	3	.4	.9 29	SWR	
		13	1624	56.75	19 20.30	155 13.09	8.79	2.2	2.8	41	2	66	.12	4	.4	.6 28	SF2	
		13	18 1	29.99	19 19.44	155 15.76	8.72	2.1	2.2	39	3	93	.10	3	.4	.5 30	SF1	
		13	21 3	30.25	19 19.67	155 13.44	10.02	3.4	3.7	46	2	66	.11	5	.4	.4 41	SF2	
		13	2126	44.39	19 27.50	154 53.71	6.21	1.6	1.5	29	2	137	.13	3	.7	.6 18	LER	
		13	2135	32.01	19 27.13	155 24.34	6.44	1.7	1.6	25	4	62	.12	4	.4	1.1 15	KA0	
		14	016	26.09	19 23.90	155 16.77	3.16	2.0	2.4	27	3	74	.10	0	.3	.2 19	SSC	
		14	020	27.18	19 13.46	155 46.51	8.64	2.5	2.9	13	0	314	.08	17	7.4	1.0 2	KON	
		14	120	58.77	19 23.62	155 16.81	2.83	2.5	2.8	32	2	41	.11	1	.3	.2 23	SSC	
		14	614	39.12	19 18.50	155 22.92	6.79	2.5	3.0	41	2	95	.13	3	.4	1.0 32	SWR	
		14	1051	8.39	19 17.75	155 23.10	3.12	1.7	1.7	23	3	101	.09	5	.4	.9 12	SWR	
		14	1116	6.78	19 21.00	155 13.32	8.97	3.0	3.0	45	3	57	.12	3	.4	.5 33	SF2 F	
		14	1326	4.04	19 20.78	155 13.12	9.30	2.4	2.2	46	4	60	.13	3	.4	.5 28	SF2	
		14	17 3	3.40	19 19.81	155 7.44	8.14	2.5	2.3	42	2	104	.09	5	.4	.5 28	SF4	
		14	1712	22.72	19 21.97	155 18.40	2.60	1.6	1.2	21	4	71	.11	4	.5	.7 15	SWR	
		14	1835	43.79	19 38.57	156 5.30	33.07	2.9	1.8	36	4	239	.10	25	.9	1.5 26	KON	
		14	2255	52.65	19 19.00	155 45.67	10.40	2.1	1.4	27	0	185	.10	11	1.0	.7 19	KON	
		15	121	40.25	19 24.80	155 18.11	9.71	1.6	1.2	24	2	62	.09	4	.4	.9 19	KA0	
		15	347	57.64	19 19.43	155 15.70	8.11	2.6	2.6	44	2	92	.12	3	.4	.6 31	SF1	
		15	5 7	38.86	19 17.61	155 23.56	4.61	1.8	1.2	21	1	98	.12	5	.5	2.2 14	SWR	
		15	7 0	26.95	19 17.66	155 23.63	3.38	1.7	1.3	26	1	94	.11	5	.4	1.2 17	SWR	
		15	7 5	6.90	19 26.94	155 24.24	7.41	2.1	1.5	36	4	46	.14	4	.4	.9 26	KA0	
		15	11 2	19.98	19 26.83	155 24.05	6.77	2.2	1.9	32	3	34	.12	4	.4	.9 26	KA0	
		15	1356	43.66	19 17.45	155 23.78	2.70	2.1	2.1	33	5	93	.10	5	.5	.8 22	SWR	
		15	1357	55.27	19 17.51	155 23.65	2.52	1.8	1.2	20	3	95	.07	5	.4	.8 13	SWR	
		15	18 2	56.51	19 18.64	155 13.01	9.41	2.4	2.2	43	3	132	.10	7	.5	.6 35	SF2	
		15	1945	36.85	19 17.34	155 23.82	3.10	1.8	1.9	32	2	93	.10	5	.3	1.1 22	SWR	
		15	2018	28.39	19 22.32	155 17.04	3.06	1.3	1.1	19	0	55	.07	2	.5	.4 13	SSC	
		15	2124	44.42	19 18.06	155 13.07	6.85	2.0	1.4	37	3	102	.11	2	.5	.9 22	SF2	
		16	357	23.92	19 19.97	155 20.03	8.53	1.9	1.5	29	4	68	.10	4	.4	.8 23	SWR	
		16	813	38.47	19 22.88	155 17.17	2.18	1.4	1.3	9	0	75	.07	2	.4	.7 8	SSC	
		16	816	13.85	19 21.72	155 1.88	6.49	2.0	1.2	25	3	161	.13	4	.6	1.1 23	SF5	
		16	928	54.25	19 21.79	155 18.16	3.04	1.6	1.2	20	2	53	.10	3	.3	.7 14	SWR	
		16	932	36.92	19 21.82	155 18.10	3.01	1.6	1.1	21	5	64	.08	3	.5	.6 15	SWR	
		16	1051	3.74	19 19.70	155 11.62	9.19	1.9	1.4	27	1	90	.06	5	.5	.9 21	SF3	
		16	1243	9.98	19 22.19	155 17.41	2.46	1.9	1.9	26	3	53	.10	2	.5	.4 20	SSC	
		16	1511	43.90	19 23.35	155 17.09	2.84	1.3	1.1	17	3	56	.07	0	.3	.3 12	SSC	
		16	1520	43.09	19 23.20	155 17.07	2.88	1.7	1.5	22	2	41	.10	0	.3	.3 15	SSC	
		16	1531	26.37	19 18.84	155 11.28	8.40	1.8	1.2	25	3	114	.06	5	.5	.9 18	SF3	

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR NS	GAP DEG	RMS SEC	MIN DIS	ERM KM	ERZ NO KM FM	REMK
1981	MAY	16	1558	34.32	19 17.56	155 23.80	6.35	2.3	2.6 38	2	91	.13	5	.4	1.0 28 SWR
		16	17 9	.25	19 21.86	155 18.03	2.74	1.6	1.2 20	3	72	.08	3	.3	.6 15 SWR
		16	1837	33.41	19 17.88	155 23.40	7.19	2.6	2.6 38	2	95	.13	4	.4	.9 22 SWR
		16	1948	52.86	19 17.92	155 23.35	6.70	2.1	1.9 28	1	95	.12	4	.4	1.1 22 SWR
		16	2320	30.45	19 20.09	155 10.64	8.08	1.9	1.2 31	2	85	.10	4	.5	.9 22 SF3
		17	140	53.58	19 23.23	155 30.47	8.54	2.5	1.9 38	0	45	.10	5	.4	1.0 33 KAO
		17	427	59.00	19 21.87	155 1.43	5.97	2.1	1.4 31	2	157	.14	5	.6	1.4 18 SF5
		17	542	5.35	19 17.19	155 23.99	2.43	1.8	1.4 27	2	91	.11	5	.4	1.2 18 SWR
		17	843	52.12	19 20.00	155 6.83	7.76	2.2	2.2 39	4	111	.09	5	.4	.6 25 SF4
		17	921	45.59	19 20.10	155 13.83	9.79	3.2	3.3 46	2	57	.10	5	.3	.3 35 SF2 F
		17	11 6	4.97	19 18.86	155 13.58	6.88	1.5	1.6 30	2	71	.10	3	.5	1.0 20 SF2
		17	1152	5.44	19 25.53	155 24.54	7.71	2.0	1.8 28	1	46	.12	1	.4	.9 20 KAO
		17	1936	4.50	19 18.02	155 23.46	3.28	1.7	1.6 20	2	94	.09	4	.4	1.0 17 SWR
		17	2126	26.38	19 25.47	155 25.69	7.61	1.8	1.5 26	3	52	.11	1	.4	1.0 22 KAO
		17	2316	29.56	19 19.18	155 13.73	7.08	1.7	1.6 33	3	71	.12	4	.5	.8 20 SF2
		18	129	12.52	19 17.64	155 13.08	6.95	2.4	2.4 40	4	118	.10	1	.5	.8 24 SF2
		18	347	58.58	19 18.38	155 23.47	7.14	2.8	3.3 46	2	90	.14	3	.4	.8 37 SWR
		18	6 8	37.27	19 23.21	155 16.76	3.02	1.3	1.3 22	3	57	.06	0	.3	.2 14 SSC
		18	12 9	37.49	19 20.68	155 12.94	7.71	1.8	1.6 30	4	63	.12	4	.5	.7 24 SF4
		18	1229	33.63	19 21.69	155 6.77	6.56	1.5	1.2 29	5	79	.11	3	.5	.8 24 SF2
		18	1339	55.07	19 17.77	155 20.78	4.13	2.2	2.4 37	2	124	.11	4	.4	1.3 24 SWR
		18	2242	31.73	19 27.15	155 51.89	7.46	1.8	1.4 29	3	124	.17	7	.6	.9 19 KON
		19	3 3	35.26	19 20.50	155 13.53	6.84	1.5	1.2 31	4	65	.13	4	.5	.8 22 SF2
		19	841	18.66	19 19.37	155 9.90	8.15	1.8	1.7 19	1	99	.07	5	.4	.8 15 SF3
		19	922	42.59	19 16.69	155 21.56	6.82	1.8	1.8 27	2	133	.10	6	.5	1.2 19 SWR
		19	1117	59.89	19 19.61	155 12.19	7.20	2.2	2.2 43	5	86	.13	5	.4	.7 25 SF3
		19	14 8	28.72	19 23.41	155 16.96	2.88	2.3	2.7 33	2	36	.09	0	.2	.2 21 SSC
		19	1410	33.49	19 24.07	155 15.34	4.38	1.4	1.3 18	3	137	.11	2	.5	.7 10 SEC
		19	1454	21.91	19 19.44	155 11.99	7.27	2.3	2.3 42	3	93	.12	5	.4	.6 32 SF3
		19	15 4	14.78	19 18.63	155 21.97	4.67	1.6	1.4 20	3	104	.08	4	.4	1.1 13 SWR
		19	1623	37.66	19 16.78	155 22.28	7.52	2.1	2.3 45	3	126	.14	5	.4	.7 34 SWR
		19	1849	25.29	19 19.60	155 7.86	6.60	1.8	1.3 30	3	97	.09	4	.5	1.1 19 SF4
		19	2252	14.55	19 23.43	155 16.86	2.67	2.7	3.0 41	2	36	.12	0	.2	.2 28 SEC
		19	23 8	32.26	19 23.05	155 17.04	2.59	2.9	3.3 45	2	37	.13	1	.2	.3 30 SSC
		20	137	32.19	19 30.68	155 39.53	6.91	1.4	1.3 17	4	103	.13	6	.6	1.5 12 MLO
		20	157	46.84	19 21.89	155 1.23	3.43	1.5	1.5 23	4	169	.18	5	.6	1.5 13 SSF
		20	226	8.35	19 19.07	155 10.17	5.90	1.5	1.4 35	5	108	.12	5	.5	1.1 24 SF3
		20	1323	41.21	19 18.06	155 13.42	6.66	1.7	1.3 29	1	85	.11	2	.5	1.0 15 SF2
		20	14 1	31.60	19 17.62	155 23.45	4.03	1.9	1.7 26	2	97	.10	5	.4	1.5 17 SWR
		20	1431	11.56	19 23.43	155 16.73	3.26	2.3	2.4 30	5	46	.11	0	.3	.3 21 SSC
		20	1458	34.67	19 17.00	155 23.61	2.92	2.3	2.2 27	2	100	.10	5	.4	1.1 19 SWR
		21	057	13.07	19 23.32	155 16.71	3.37	1.7	1.4 24	2	48	.09	0	.3	.3 16 SSC
		21	057	39.76	19 12.29	155 41.78	6.82	3.5	3.1 42	3	190	.21	10	.8	1.0 31 LSW
		21	243	11.19	19 16.81	155 23.54	7.71	2.0	2.4 31	2	103	.12	5	.4	.8 25 SWR
		21	1158	48.83	19 21.04	155 7.12	7.46	2.2	2.2 34	2	132	.09	4	.5	.7 23 SF4
		21	12 1	16.04	19 23.64	155 16.81	2.94	2.1	1.9 22	3	45	.07	1	.3	.2 16 SSC
		21	12 1	51.68	19 23.79	155 16.78	2.62	1.9	1.7 23	4	67	.10	0	.3	.2 14 SSC
		21	12 2	24.07	19 23.78	155 16.77	2.95	1.5	1.5 17	3	65	.08	0	.3	.2 11 SSC

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR NS	GAP DEG	RMS SEC	MIN DIS	ERM KM	ERZ NO KM FM	REMK
1981	MAY	21	1624	29.36	19 18.25	155 23.35	3.44	2.1	2.4 34	4	93	.11	4	.3	.9 21 SWR
		21	1715	57.47	19 24.36	155 16.18	1.55	1.3	1.6 13	3	130	.07	1	.3	.3 7 SEC
		21	1958	41.55	19 21.47	155 6.10	7.81	1.3	1.2 28	2	87	.10	3	.5	.8 22 SF4
		22	725	47.22	19 24.06	155 1.89	4.76	1.6	1.4 29	2	124	.13	4	.8	1.6 15 SME
		22	9 6	55.26	19 18.62	155 13.69	8.21	1.9	1.7 34	2	89	.12	5	.5	.7 21 SF2
		22	927	53.72	19 22.44	155 17.24	2.48	1.8	1.5 21	3	53	.09	2	.3	.4 16 SSC
		22	1140	20.20	19 21.73	155 18.29	3.00	2.1	1.7 28	5	55	.11	3	.3	.5 18 SWR
		22	1344	44.81	18 44.92	155 31.65	26.29	3.4	3.9 50	4	287	.08	30	1.6	2.5 46 OLS
		22	1455	43.86	19 20.47	155 13.40	8.20	2.4	2.4 42	4	60	.12	4	.4	.5 30 SF2
		22	2226	59.56	19 22.05	155 17.54	3.18	1.6	1.3 26	4	53	.09	3	.3	.5 12 SSC
		22	2318	59.07	19 20.47	155 12.64	7.72	1.8	1.6 37	4	68	.11	4	.5	.7 29 SF2
		23	417	57.22	19 17.32	155 23.49	3.31	2.1	1.9 31	3	99	.11	5	.3	1.0 20 SWR
		23	443	37.33	19 19.92	155 8.48	7.05	1.4	1.1 31	3	80	.10	5	.5	.9 20 SF4
		23	514	30.68	19 22.22	155 17.34	2.87	2.1	2.0 31	3	53	.10	2	.3	.4 23 SSC
		23	539	52.60	19 21.17	155 4.65	8.62	2.1	1.8 37	0	93	.08	4	.5	.5 18 SF5
		23	1224	31.43	19 25.18	155 26.17	5.74	2.8	2.6 42	3	52	.12	2	.3	.8 33 KAO
		23	1727	58.54	19 22.00	155 17.44	3.25	1.8	1.4 25	4	53	.10	3	.3	.5 17 SWR
		23	1732	46.71	19 21.82	155 17.96	3.11	1.7	1.6 24	4	50	.11	3	.3	.6 14 SWR
		23	1823	48.38	19 21.84	155 18.01	3.10	1.8	1.5 21	3	54	.11	3	.3	.6 16 SWR
		24	056	32.61	19 24.40	155 16.02	1.51	1.6	2.1 17	1	118	.08	1	.3	.3 11 SEC
		24	2 6	30.57	19 21.17	155 15.17	8.99	1.9	1.5 31	3	68	.09	3	.4	.6 22 SF1
		24	3 7	57.30	19 20.08	155 12.26	8.60	2.2	2.1 41	3	78	.12	5	.4	.6 28 SF3
		24	410	51.46	19 22.41	155 28.52	9.49	2.1	1.7 36	1	43	.10	2	.3	.8 30 KAO
		24	12 9	8.73	19 21.14	155 18.03	1.84	1.3	1.8 13	1	77	.09	2	.3	.7 10 SWR
		24	1210	26.56	19 24.86	155 24.39	10.66	2.2	1.7 32	5	37	.09	2	.4	.7 21 KAO
		24	2211	30.80	19 23.43	155 18.79	2.96	1.2	1.1 20	3	50	.05	0	.3	.3 11 SSC
		24	2222	12.75	19 22.25	155 3.69	9.34	1.7	1.3 28	3	97	.07	4	.5	.8 16 SF5
		24	2242	59.73	19 20.49	155 18.94	3.33	1.7	1.7 26	2	50	.10	3	.3	.7 19 SWR
		24	2244	52.47	19 20.37	155 18.96	3.84	2.2	2.2 37	3	50	.12	3	.3	.7 24 SWR
		25	024	28.45	19 12.91	155 37.02	7.74	2.1	1.5 30	2	91	.20	4	.6	.8 21 LSW
		25	2 6	9.80	19 19.89	155 13.04	7.90	1.6	1.1 30	2	71	.09	5	.5	.9 18 SF2
		25	211	19.06	19 20.28	155 12.96	9.40	3.1	3.1 49	4	68	.11	4	.3	.4 35 SF2 F
		25	256	22.27	19 20.60	155 12.71	8.46	2.0	1.6 36	3	67	.11	4	.4	.6 24 SF2
		25	345	.96	19 23.77	155 17.05	2.83	1.6	1.6 25	5	68	.07	1	.3	.2 15 SSC
		25	445	27.96	19 21.74	155 17.75	3.59	2.0	2.0 30	4	52	.10	3	.3	.5 21 SWR
		25	640	57.92	19 16.33	155 22.98	4.53	1.8	1.6 29	1	122	.12	4	.4	1.7 17 SWR
		25	1059	20.64	19 23.42	155 18.75	3.11	1.6	1.8 22	2	45	.09	0	.3	.3 15 SSC
		25	1155	30.51	19 18.63	155 22.10	3.90	1.9	1.6 27	1	102	.10	4	.4	1.0 18 SWR
		25	1136	13.17	19 22.06	155 17.50	2.94	1.6	1.5 21	3	52	.10	3	.3	.5 16 SSC
		25	1154	19.35	19 20.18	155 12.27	7.74	2.1	2.3 46	3	76	.14	5	.4	.6 30 SF3
		25	1256	52.10	19 20.57	155 13.06	8.85	1.6	1.4 28	2	64	.07	4	.5	.7 22 SF2
		25	13 9	13.95	19 15.77	155 27.14	11.57	1.8	1.6 25	2	72	.09	5	.4	.8 17 LSW
		25	1316	22.09	19 25.62	155 37.48	1.25	2.2	2.0 22	1	92	.14	4	.5	1.2 16 MLO
		25	1321	43.48	19 21.58	155 18.16	2.77	1.9	2.3 29	4	49	.11	3	.3	.6 23 SWR
		25	1336	50.37	19 19.74	155 12.96	6.66	1.6	1.7 34	4	74	.12	5	.5	.9 21 SF2
		25	1557	54.24	19 21.21	155 14.99	8.07	1.7	1.5 34	3	67	.11	3	.5	.7 25 SF1
		25	1753	49.78	19 20.07	155 4.18	6.62	1.6	1.4 33	2	136	.13	2	.6	1.0 15 SF5
		25	2010	23.94	19 23.01	155 15.11	30.31	2.2	2.1 45	2	50	.09	2	.6	.9 40 DFP

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	MAY	25	2114	51.30	19 20.47	155 19.15	2.92	1.7	2.1	34	4	48	.11	3	.3	.7 21	SWR
		25	2231	6.81	19 17.42	155 23.58	5.46	1.8	1.9	28	2	96	.12	5	.4	1.6 18	SWR
		25	2235	.53	19 21.72	155 17.67	3.24	1.8	1.9	27	4	52	.10	3	.3	.5 17	SWR
		25	2345	7.35	19 38.14	155 31.24	26.80	2.2	1.7	41	2	54	.08	5	.5	1.2 29	KEA
		26	010	4.64	19 19.71	155 8.15	7.86	3.0	3.2	47	4	88	.09	4	.4	.5 28	SF4
		26	111	6.52	19 20.61	155 20.38	2.25	1.9	2.1	29	5	62	.09	5	.3	.7 23	SWR
		26	121	17.65	19 20.17	155 13.31	8.87	2.6	2.8	46	3	64	.12	5	.4	.5 39	SF2
		26	2	8 39.90	19 24.29	155 23.17	9.73	2.4	2.1	43	3	37	.11	4	.3	.6 30	KAO
		26	232	13.59	19 19.90	155 13.30	7.90	1.5	1.2	27	2	68	.11	5	.5	.9 20	SF2
		26	426	34.66	19 22.81	155 15.17	30.27	1.8	1.7	35	1	67	.08	2	.8	1.2 29	DEP
		26	451	38.87	19 21.91	155 17.86	3.24	1.4	1.5	20	2	58	.09	3	.3	.6 12	SWR
		26	1013	6.79	19 20.39	155 12.44	8.27	2.0	1.8	34	2	72	.12	4	.5	.7 23	SF2
		26	1059	49.56	19 23.09	155 17.01	2.31	1.6	1.2	14	1	57	.09	2	.3	.5 9	SSC
		26	1331	59.27	19 23.20	155 16.88	3.38	2.0	2.0	19	1	46	.07	2	.3	.5 14	SSC
		26	1434	14.69	19 23.75	155 23.83	10.02	2.2	2.1	36	2	36	.11	4	.4	.8 27	KAO
		27	116	14.04	19 23.80	155 17.20	2.35	1.8	1.7	15	1	62	.09	2	.3	.5 11	SSC
		27	124	58.09	19 21.34	155 18.15	3.37	2.1	1.8	19	0	70	.09	3	.3	.7 18	SWR
		27	333	26.69	19 17.97	155 23.30	3.29	1.8	2.1	22	1	96	.09	4	.4	1.1 19	SWR
		27	545	30.48	19 23.22	155 16.91	3.13	1.6	1.3	18	3	46	.08	0	.5	.3 12	SSC
		27	7	2 47.01	19 17.77	155 23.22	6.00	2.0	2.4	35	2	99	.11	5	.4	1.1 19	SWR
		27	831	27.28	19 21.52	155 18.57	3.58	1.5	1.4	17	2	73	.07	3	.3	.8 11	SWR
		27	1418	51.91	19 25.09	155 24.95	9.55	1.7	1.2	26	0	63	.11	7	.5	1.2 19	KAO
		27	1555	13.30	19 11.79	155 8.70	51.62	2.3	1.8	32	0	204	.09	13	1.3	2.5 28	DEP
		27	1646	55.70	19 25.64	155 24.66	8.40	2.0	1.9	36	3	47	.12	1	.4	.8 31	KAO
		27	2229	50.49	19 17.76	155 23.41	2.70	.8	1.2	14	1	103	.06	5	.4	.9 13	SWR
		27	23	2 38.76	19 20.91	155 6.24	7.67	2.0	1.6	31	3	98	.11	4	.5	.9 19	SF4
		28	044	12.59	19 20.43	155 19.23	2.35	1.0	1.3	17	1	52	.09	5	.4	1.0 13	SWR
		28	144	41.78	19 23.06	155 17.02	2.49	1.9	2.4	29	4	37	.10	1	.2	.3 19	SSC
		28	359	29.09	19 18.01	155 23.35	3.64	1.7	1.9	22	1	95	.10	4	.4	1.2 18	SWR
		28	711	30.28	19 19.11	155 11.48	8.21	2.8	3.1	47	4	105	.11	5	.4	.5 33	SF3
		28	727	10.23	19 20.28	155 13.17	9.01	1.6	1.5	23	1	65	.08	4	.5	1.0 20	SF2
		28	811	23.60	19 20.64	155 12.63	8.64	1.6	1.3	24	1	67	.09	4	.4	.6 22	SF2
		28	1011	21.60	19 17.26	155 23.55	3.23	1.8	1.8	26	2	98	.10	5	.4	1.0 17	SWR
		28	1544	36.42	19 19.55	155 9.97	8.59	2.4	2.4	24	1	94	.09	5	.4	.8 22	SF3
		28	17	6 39.19	19 18.86	155 21.67	2.66	1.8	1.8	23	2	101	.09	4	.4	.7 17	SWR
		28	1948	17.48	19 18.85	155 20.73	2.49	2.0	2.4	29	3	102	.10	4	.4	.7 17	SWR
		28	2037	8.84	19 27.03	155 27.24	7.85	1.9	1.3	26	4	64	.09	5	.4	1.1 18	KAO
		29	022	37.00	19 25.76	154 58.28	6.49	1.8	.9	23	1	137	.12	1	.6	1.2 14	LER
		29	026	4.64	19 20.35	155 12.24	7.10	1.5	1.4	35	3	74	.14	4	.6	.9 24	SF3
		29	129	30.27	19 23.37	154 59.45	7.94	2.3	2.1	41	4	162	.16	4	.7	.5 24	LER
		29	137	59.81	19 23.24	155 27.50	10.45	2.7	2.6	43	2	32	.11	1	.4	.6 32	KAO
		29	215	31.71	19 20.31	155 11.21	7.81	2.0	1.6	36	1	80	.13	4	.5	.9 29	SF3
		29	840	14.10	19 19.06	155 22.72	3.49	1.6	1.5	23	1	90	.11	2	.4	.7 16	SWR
		29	940	17.67	19 23.10	155 17.23	2.64	1.7	1.4	22	3	72	.12	1	.3	.3 14	SSC
		29	948	45.56	19 25.75	155 24.65	10.16	2.0	1.2	27	2	47	.10	1	.4	.9 22	KAO
		29	949	28.28	19 23.50	155 16.62	3.09	2.5	2.6	36	4	38	.10	1	.2	.2 27	SSC F
		29	1531	4.67	19 17.36	155 21.04	7.81	1.7	1.5	28	3	131	.10	4	.4	.9 14	SWR
		29	2021	2.49	19 18.61	155 15.58	7.50	2.0	1.5	30	1	104	.10	4	.4	.9 19	SF1

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	MAY	29	2124	11.39	19 11.09	155 41.44	6.49	2.6	2.1	30	4	123	.22	10	.6	2.7 19	LSW
		30	335	10.34	19 19.02	155 13.86	7.92	2.4	2.2	42	3	76	.13	4	.4	.6 31	SF2
		30	628	32.05	19 19.38	155 10.65	8.67	1.9	1.1	27	3	101	.12	5	.5	1.0 19	SF3
		30	2044	1.05	19 24.20	155 17.71	16.03	2.4	2.0	43	3	38	.10	2	.4	.3 32	DEP
		30	2117	25.47	19 23.25	155 26.51	9.84	1.9	1.4	30	2	45	.11	2	.4	.9 23	KAO
		31	5	6 56.93	19 24.14	155 16.13	1.49	2.0		24	3	109	.11	1	.2	.2 17	SEC
		31	6	4 28.16	19 20.38	155 46.35	9.90	2.5	1.4	29	4	86	.10	11	.4	.8 15	KON
		31	1559	2.91	19 19.03	155 16.53	31.96	2.4	2.1	49	3	104	.11	3	.7	.9 38	DEP
		31	1725	25.81	19 29.33	155 46.39	10.00	3.2	2.8	39	4	73	.11	2	.4	.5 22	KON
		31	19	4 3.80	19 25.40	155 26.04	6.12	2.8	2.7	42	3	42	.13	2	.3	.9 25	KAO
		31	1959	46.40	19 18.82	155 13.04	6.21	1.9	1.6	31	1	87	.13	3	.5	1.1 21	SF2
		31	22	9 35.06	19 17.63	155 23.25	5.01	1.9	2.5	28	3	100	.10	5	.4	1.0 20	SWR
		31	2232	.15	19 26.65	156 53.65	31.33	3.0	4.2	30	3	222	.11102		2.8	3.6 18	DIS
	JUN	1	0	9 16.50	19 17.13	155 22.39	6.26	1.7	1.8	27	2	119	.12	6	.4	1.0 11	SWR
		1	2	5 33.28	19 23.07	155 2.02	8.45	1.4	1.4	17	2	140	.12	5	.6	.9 11	SF5
		1	356	59.43	19 23.07	155 16.75	2.81	2.1	2.5	29	3	40	.10	1	.3	.3 21	SSC
		1	12	5 5.75	19 20.53	155 11.19	8.92	1.8	1.3	31	3	76	.08	4	.4	.6 21	SF3
		1	1521	5.21	19 17.54	155 23.47	6.41	2.3	2.6	35	2	97	.12	5	.4	.9 27	SWR
		1	1532	34.27	19 22.00	155 25.79	9.02	1.7	1.6	30	2	40	.12	3	.4	.8 20	KAO
		1	21	3 7.34	19 22.24	155 5.59	8.11	2.0	1.3	21	3	73	.07	2	.5	.9 11	SF4
		2	325	51.20	19 17.34	155 23.44	2.37	1.8	1.6	24	1	100	.10	5	.4	1.0 12	SWR
		2	537	36.70	19 16.57	155 31.31	6.63	2.2	1.4	32	2	43	.15	3	.4	1.3 18	LSW
		2	1024	21.86	19 22.10	155 28.96	10.55	3.2	3.2	44	2	36	.11	2	.4	.6 34	KAO
		2	16	3 58.10	19 20.17	155 8.22	8.65	2.8	2.8	45	1	83	.09	5	.4	.4 25	SF4
		2	16	4 56.80	19 20.45	155 8.08	7.79	2.5	2.7	40	2	81	.09	4	.4	.6 26	SF4
		2	2119	57.42	19 18.89	155 13.51	7.30	1.5	1.2	21	0	82	.11	3	.6	.9 17	SF2
		2	2138	45.32	19 17.92	155 16.57	8.21	2.3	2.3	39	1	126	.11	4	.4	.6 26	SF1
		2	2143	13.80	19 8.35	155 19.43	7.83	1.6	1.6	19	0	247	.14	15	1.7	1.5 9	LOI
		3	155	20.08	19 21.00	155 6.04	8.83	3.1	3.2	46	3	97	.12	4	.4	.5 36	SF4
		3	3	3 25.50	19 23.49	155 16.81	2.85	1.6	1.6	24	3	38	.08	0	.3	.2 14	SSC
		3	717	18.17	19 20.53	155 12.88	9.12	1.6	1.7	28	3	65	.08	4	.5	.8 19	SF2
		3	1010	34.61	19 23.46	155 25.83	10.88	2.6	2.1	42	4	37	.11	4	.3	.5 36	KAO
		3	1035	21.08	19 19.25	155 15.43	7.53	1.3	.6	26	2	100	.09	4	.5	.9 16	SF3
		3	13	6 16.36	19 20.14	155 4.16	6.03	2.5	2.4	35	1	133	.08	2	.5	.7 23	SF5
		3	1336	14.45	19 19.82	155 11.04	8.60	1.9	1.4	30	2	90	.11	5	.5	.9 22	SF3
		3	1352	55.90	19 17.79	155 20.88	8.41	1.7	1.4	27	5	125	.12	4	.5	.9 19	SWR
		4	0	6 48.00	19 19.84	155 10.30	9.35	1.6	1.3	21	1	89	.04	4	.6	1.0 19	SF3
		4	128	2.35	19 18.85	155 11.38	8.88	1.9	1.3	22	2	114	.08	5	.6	1.2 17	SF3
		4	128	25.02	19 23.53	155 16.77	3.09	2.4	2.6	25	2	38	.10	0	.3	.2 17	SSC
		4	156	20.61	19 30.22	155 32.39	12.96	1.9	1.3	23	1	71	.10	6	.4	.7 15	MLO
		4	259	58.10	19 15.66	155 15.52	9.36	1.8	1.5	33	0	167	.10	7	.6	.8 25	SF1
		4	425	5.68	19 54.24	155 20.71	11.58	2.0	1.8	19	0	261	.07	2	1.2	.4 14	KEA
		4	714	37.03	19 18.18	155 23.58	4.38	2.4	3.0	43	2	91	.13	4	.4	1.4 33	SWR
		4	730	12.83	19 17.88	155 23.34	5.94	2.7	3.0	42	2	96	.12	4	.4	.9 30	SWR
		4	937	38.48	19 22.86	155 17.16	2.16	1.2	1.3	16	3	74	.08	1	.3	.3 9	SSC
		4	957	49.63	19 17.61	155 23.56	3.06	2.1	2.2	30	1	95	.13	5	.4	1.2 18	SWR
		4	1133	41.13	20 .51	155 52.93	10.70		2.4	9	0	226	.09	17	3.4	1.2 3	KOH
		4	1651	5.27	19 18.11	155 23.39	3.38	1.8	1.8	27	3	93	.11	4	.4	.9 16	SWR

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR	GAP NS	RMS DEG	MIN SEC	ERH DIS	ERZ NO KM FM REMK
1981	JUN	4	2243	18.64	19 17.97	155 22.82	4.18 1.7 1.4 20	2 103 .08	4	.4	1.2 14 SWR				
		5	135	27.25	19 23.67	155 16.85	2.51 1.2 1.3 16	2 52 .11	1	.4	.3 9 SSC				
		5	6 2	33.57	19 20.33	155 11.28	8.35 1.9 1.9 34	2 79 .11	4	.5	.7 22 SF3				
		5	1028	40.26	19 42.57	155 2.70	.00 2.2 2.4 27	1 172 .39	2	2.2	1.0 13 HIL B				
		5	1125	6.52	19 19.91	155 11.34	7.66 2.2 1.8 40	4 87 .13	5	.5	.7 29 SF3				
		5	1417	26.80	19 20.20	155 11.38	7.67 2.1 1.8 38	3 81 .13	4	.5	.7 27 SF3				
		6	354	1.51	19 22.99	155 3.44	8.57 2.1 1.8 35	1 107 .09	3	.5	.5 20 SF5				
		6	512	8.43	19 23.76	155 16.97	2.62 1.9 2.0 30	5 63 .08	1	.2	.2 19 SSC				
		6	1032	25.25	19 23.43	155 16.86	2.98 3.1 1.3 45	2 36 .12	0	.2	.3 33 SSC F				
		6	1034	33.71	19 23.47	155 16.80	3.22 1.6 1.1 21	3 39 .08	0	.3	.3 13 SSC				
		6	1210	48.94	19 19.30	155 16.21	7.27 1.9 1.1 34	4 106 .08	3	.4	.7 18 SF1				
		6	1429	57.18	19 23.00	155 16.79	2.78 2.0 2.0 28	2 40 .09	1	.3	.3 19 SSC				
		6	1858	42.82	19 23.56	155 16.89	3.27 1.6 1.3 18	2 47 .08	0	.4	.3 13 SSC				
		7	033	51.65	19 20.56	155 11.55	8.91 2.7 2.5 43	2 75 .11	4	.4	.5 31 SF3				
		7	043	29.59	19 24.61	155 16.57	1.60 1.2 1.0 10	1 138 .07	1	.4	.3 8 SNC				
		7	516	10.69	19 19.99	155 11.19	8.32 1.9 1.6 35	1 87 .12	5	.5	.8 28 SF3				
		7	6 7	32.58	19 26.09	155 37.28	2.67 2.0 1.8 18	2 89 .14	3	.5	.7 11 MLO				
		7	811	56.92	19 19.65	155 11.52	7.25 1.8 1.5 33	4 91 .10	5	.4	.6 20 SF3				
		7	9 5	56.55	19 26.15	154 53.27	7.20 1.9 1.4 24	1 179 .11	4	.9	.8 11 LEK				
		7	1050	33.17	19 19.96	155 11.13	8.58 2.2 2.2 40	5 87 .10	5	.4	.5 22 SF3				
		7	1231	29.55	19 23.23	155 16.98	2.95 1.6 1.8 19	3 59 .08	0	.3	.3 15 SSC				
		7	1240	44.09	19 18.27	155 22.91	3.73 1.2 1.3 19	1 98 .09	4	.4	.9 10 SWR				
		7	1327	13.55	19 20.54	155 4.38	8.90 1.8 1.4 29	1 113 .12	3	.5	.9 11 SF5				
		8	026	40.08	19 17.12	155 24.67	8.80 1.3 1.5 19	1 82 .13	5	.5	.9 11 SWR				
		8	223	5.07	19 23.30	155 16.89	2.96 2.0 2.1 24	3 45 .06	0	.2	.2 16 SSC				
		8	4 0	27.03	19 25.91	155 24.75	4.03 2.0 2.0 28	3 40 .10	1	.3	.7 18 KAO				
		8	729	24.53	19 23.53	154 58.01	6.29 2.5 2.3 34	3 175 .14	3	.6	.8 18 LEK				
		8	16 6	35.84	19 21.11	155 13.13	8.69 2.1 1.9 43	4 58 .11	3	.3	.5 31 SF2				
		8	2112	7.82	19 21.49	155 7.45	8.75 3.4 3.2 50	3 77 .12	4	.4	.5 39 SF4 F				
		8	2130	56.40	19 20.86	155 6.51	7.90 1.9 1.1 29	2 97 .10	4	.5	1.0 19 SF4				
		9	610	57.33	19 19.98	155 10.17	7.04 1.7 1.1 29	3 86 .08	4	.5	.9 20 SF3				
		9	649	41.91	19 19.98	155 8.03	8.21 2.1 1.5 31	3 88 .09	5	.5	.9 23 SF4				
		9	920	32.72	19 25.05	155 16.89	1.81 1.8 1.7 19	2 149 .07	0	.4	.2 14 SNC				
		9	11 3	13.58	19 22.77	155 17.15	2.64 1.8 1.6 21	2 50 .09	1	.3	.4 14 SSC				
		9	1324	22.08	19 25.94	155 24.56	7.65 2.8 2.7 44	1 32 .13	2	.4	.7 29 KAO				
		9	1354	53.63	19 20.59	155 11.03	8.81 2.4 2.3 36	3 75 .10	3	.4	.6 27 SF3				
		9	1417	2.51	19 8.42	156 7.11	37.16 2.4 1.8 27	1 278 .11	30	2.6	1.6 20 KDN				
		9	2039	2.58	19 20.55	155 13.56	7.89 1.8 1.5 33	3 60 .13	4	.5	.8 21 SF2				
		10	552	19.33	19 18.10	155 21.51	3.22 1.2 1.4 24	4 116 .08	5	.3	.8 15 SWR				
		10	843	4.55	19 27.27	155 29.15	9.96 2.2 1.3 24	0 94 .07	8	.4	1.2 17 KAO				
		10	2130	6.38	19 19.89	155 10.55	9.52 1.6 1.3 27	2 89 .07	4	.5	1.0 21 SF3				
		10	2320	.71	19 28.84	154 51.30	3.58 1.7 1.1 15	1 146 .11	3	.6	.5 8 SLE				
		11	137	13.10	19 23.58	155 16.82	3.13 1.6 1.8 25	4 40 .09	0	.3	.2 14 SSC				
		11	139	4.42	19 23.56	155 16.93	2.92 1.2 1.4 20	3 53 .07	0	.3	.2 11 SSC				
		11	629	45.18	19 20.75	155 11.76	8.73 2.5 2.6 42	3 71 .11	4	.4	.5 31 SF3				
		11	9 1	25.02	19 21.88	155 17.58	3.59 2.3 2.7 31	2 33 .10	3	.3	.5 26 SWR				
		11	12 6	2.14	19 24.94	155 24.51	10.96 2.9 2.8 43	3 39 .11	1	.5	.4 30 KAO				
		11	2324	1.58	19 20.38	155 4.44	7.41 2.1 1.6 34	3 120 .11	3	.5	.8 16 SF5				

HVO EARTHQUAKE SUMMARY LIST

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		ORIGIN TIME			LAT N		LON W		DEPTH AMP DIR			GAP RMS MIN			ERH NO					
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK
1981	JUN	12	345	29.32	19	18.44	155	7.95	6.68	1.5	1.4	28	1	109	.10	2	.6	1.1	18	SF4
		12	427	18.95	19	23.94	155	26.68	3.63	1.7	1.2	14	0	142	.09	3	.5	.7	13	KAO
		12	713	57.29	19	24.41	155	17.60	15.82	2.4	1.7	34	2	71	.09	1	.5	.4	28	DEP
		12	1121	13.44	19	23.04	155	17.08	2.76	1.6	1.3	22	5	67	.09	1	.2	.3	14	SSC
		12	1122	40.89	19	22.73	155	16.84	2.62	2.0	1.8	24	2	42	.11	1	.3	.3	16	SSC
		12	1133	39.30	19	23.95	155	16.94	3.47	1.5	1.0	18	3	76	.10	1	.4	.3	11	SSC
		12	15 0	16.74	19	23.34	155	16.90	3.42	1.5	1.1	13	2	89	.08	0	.4	.4	10	SSC
		12	17 9	2.43	19	22.97	155	17.06	2.68	1.8	1.7	23	3	48	.09	1	.3	.3	17	SSC
		12	1720	55.31	19	23.14	155	17.18	2.48	1.1	1.0	18	3	63	.09	1	.3	.3	11	SSC
		12	20 8	13.04	19	21.63	155	17.82	2.83	1.1	1.1	19	2	61	.10	3	.3	.6	12	SWR
		12	2047	59.11	19	19.88	155	12.96	8.55	1.6	1.4	28	2	72	.08	5	.5	.9	22	SF2
		12	2312	37.32	19	25.38	155	29.40	10.09	2.0	1.5	27	1	58	.09	6	.4	.9	16	KAO
		13	1 4	51.15	19	20.28	155	18.47	3.20	1.6	1.3	21	3	60	.10	2	.3	.6	13	SWR
		13	412	52.73	19	24.97	155	17.36	1.54	1.2	1.0	12	1	121	.09	1	.4	.3	8	SNC
		13	1653	36.20	19	21.64	155	17.95	3.15	1.6	1.3	25	3	51	.09	3	.3	.5	13	SWR
		13	1744	43.50	19	22.01	155	17.88	3.26	2.1	2.0	32	4	50	.10	3	.3	.5	18	SWR
		13	1748	19.19	19	20.04	155	7.50	9.56	2.4	2.2	32	4	99	.07	5	.5	.8	23	SF4
		13	1830	37.02	19	20.91	155	11.53	8.06	1.9	1.5	35	5	72	.11	4	.5	.7	23	SF3
		13	1840	7.29	19	22.34	155	17.00	2.83	1.9	1.5	26	3	98	.11	2	.3	.4	15	SSC
		13	1923	52.61	19	21.75	155	17.66	3.29	1.8	1.0	20	2	52	.10	3	.3	.6	16	SWR
		13	2114	7.09	19	20.81	155	6.80	7.67	1.9	1.4	31	2	95	.12	4	.6	1.1	24	SF4
		14	341	5.02	19	22.13	155	3.17	8.34	2.1	1.4	28	0	110	.10	4	.5	.5	20	SF5
		14	1014	1.18	19	19.18	155	21.43	8.09	1.4	1.1	24	2	93	.12	4	.5	1.0	16	SWR
		14	2222	39.79	19	9.41	155	35.35	7.94	2.4	1.5	28	3	114	.19	11	.6	1.2	14	LSW
		14	2252	35.29	19	18.33	155	13.21	7.88	1.7	1.2	26	3	90	.09	2	.6	1.0	20	SF2
		14	2356	54.36	19	24.20	155	24.81	8.95	1.7	1.1	28	3	46	.10	2	.4	.8	20	KAO
		15	033	50.10	19	24.62	155	16.70	1.55	1.3	1.5	14	2	132	.09	1	.4	.3	9	SNC
		15	626	8.49	19	19.18	155	15.54	7.38	1.6	1.1	30	2	102	.08	4	.4	.9	20	SF1
		15	955	41.06	19	23.64	155	16.82	3.03	2.2	2.6	28	1	45	.10	1	.3	.2	20	SSC
		15	13 1	57.25	19	23.63	155	16.86	3.22	1.9	2.1	23	2	47	.10	1	.3	.2	12	SSC
		15	13 4	39.72	19	23.82	155	16.76	2.72	1.3	1.0	19	4	72	.07	0	.3	.2	12	SSC
		15	1322	53.15	19	20.56	155	8.80	8.50	1.4	1.1	23	1	70	.06	3	.6	1.1	19	SF4
		15	1543	22.73	19	20.71	155	13.01	9.63	3.5	1.6	48	3	62	.11	4	.4	.4	43	SF2
		15	1728	31.79	19	18.20	155	23.10	3.82	1.1	1.1	21	2	101	.09	4	.4	1.1	15	SWR
		15	1837	7.36	19	24.28	155	16.26	1.59	1.1	1.0	12	3	124	.06	1	.3	.3	7	SEC
		16	059	52.65	19	24.44	155	15.81	1.49	1.4	1.8	17	1	114	.09	2	.3	.3	7	SEC
		16	2 2	26.45	19	8.60	155	37.65	8.20	1.8	1.6	25	2	108	.12	12	.4	1.2	9	LSW
		16	236	3.97	19	21.50	155	15.45	8.01	2.1	2.1	41	5	64	.12	2	.4	.5	24	SF1
		16	257	38.29	19	19.98	155	13.53	7.88	1.5	1.5	34	2	66	.12	5	.5	.9	24	SF2
		16	437	2.92	19	19.59	155	6.73	8.14	2.1	2.2	41	2	124	.11	5	.4	.6	29	SF4
		16	448	59.85	19	24.38	155	15.98	1.72	1.7	2.0	27	4	114	.09	1	.3	.3	16	SEC
		16	452	56.81	19	24.17	155	16.18	1.50	2.2	2.6	26	3	74	.11	1	.2	.2	18	SEC
		16	856	52.33	19	24.19	155	15.78	1.92	1.0		9	0	128	.11	2	.4	.4	2	SEC
		16	918	54.17	19	17.59	155	23.50	4.37	1.8	1.8	29	1	96	.11	5	.4	1.9	21	SWR
		16	17 4	40.78	19	19.70	155	6.84	8.35	1.7	1.2	24	2	119	.07	5	.6	1.0	22	SF4
		16	1859	26.76	19	21.12	155	10.62	8.72	1.9	1.7	32	3	68	.09	2	.5	.6	20	SF3
		16	19 1	56.02	19	23.50	155	16.80	3.04	1.4	1.6	25	4	38	.07	0	.3	.2	18	SSC
		16	1947	29.43	19	20.46	155	12.81	7.77	1.5	1.3	31	2	67	.11	4	.5	.8	25	SF2

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN OIS	ERH KM	ERZ KM	NO FM	REMK
1981	JUN	17	358	18.08	19 21.03	155 6.62	8.54	2.8	2.6	48	4	92	.11	4	.4	.6	35	SF4
		17	4 7	39.95	19 19.00	155 16.11	7.80	1.7	1.1	32	4	111	.10	3	.4	.7	20	SF1
		17	417	57.72	19 17.84	155 23.47	3.25	1.7	1.3	23	2	95	.09	4	.4	.9	11	SWR
		17	859	57.44	19 19.84	155 10.82	8.07	1.7	1.9	31	2	90	.09	4	.5	.8	25	SF3
		17	912	41.11	19 21.63	155 15.21	9.50	3.0	3.0	46	3	62	.10	2	.4	.4	32	SF1
		17	1359	36.44	19 22.21	155 12.43	1.46	1.4	2.0	8	1	153	.07	1	.7	.3	3	SER
		18	115	16.88	19 18.78	155 15.34	7.94	2.2	2.2	42	3	108	.11	4	.4	.6	25	SF1
		18	320	56.59	19 19.94	155 11.81	8.32	2.2	2.3	46	4	84	.12	5	.4	.5	35	SF3
		18	1511	26.99	19 58.87	155 36.11	11.19	2.8	2.6	28	1	158	.12	25	.6	.7	16	KOH F
		18	2131	57.79	19 23.84	155 16.86	2.83	1.3	1.2	19	2	76	.03	1	.3	.2	9	SSC
		19	634	22.29	19 20.57	155 12.14	7.95	1.9	.9	25	1	71	.10	4	.5	.9	18	SF3
		19	911	17.19	19 22.50	155 5.15	8.00	2.3	1.8	32	2	75	.08	2	.4	.7	18	SF5
		19	1334	56.93	19 1.33	154 59.46	37.46	2.7	1.6	24	0	288	.08	35	4.9	3.9	16	DIS
		19	1339	3.63	19 19.53	155 8.34	8.20	2.0	2.0	32	1	85	.08	4	.4	.6	20	SF4
		19	1345	48.47	19 19.72	155 8.25	7.96	2.0	1.5	33	2	86	.07	4	.5	.7	24	SF4
		20	251	23.72	19 21.98	155 1.63	8.49	2.3	1.8	38	1	150	.10	4	.6	.5	25	SF5
		20	542	35.43	19 19.24	155 12.23	6.80	1.5	1.1	29	1	94	.13	5	.6	1.1	25	SF3
		20	659	9.74	19 25.05	155 24.31	8.42	2.2	1.6	30	2	44	.11	2	.4	.9	28	KA0
		20	1216	57.05	19 19.67	155 7.99	7.36	2.0	1.1	37	2	93	.11	4	.5	.9	26	SF4
		20	1627	16.22	19 17.83	155 15.62	9.30	3.0	2.8	43	1	142	.11	5	.5	.6	34	SF1
		20	1641	24.46	19 17.27	155 15.41	8.02	2.2	1.8	35	0	140	.12	3	.6	.8	24	SF1
		21	114	37.31	19 19.69	155 7.70	8.77	3.0	2.2	40	2	100	.10	4	.4	.7	24	SF4
		21	136	32.43	19 22.38	155 27.49	9.11	2.1	1.6	37	1	40	.11	0	.3	.7	29	KA0
		21	156	39.61	19 41.21	156 26.83	35.32	2.9	2.6	38	2	281	.15	60	2.4	2.8	32	DIS
		21	519	32.93	19 18.46	155 13.38	9.51	1.9	1.6	39	2	76	.10	4	.4	.5	24	SF2
		21	1123	58.46	19 20.33	155 13.03	8.34	2.1	1.8	39	3	67	.12	4	.4	.7	28	SF2
		21	1232	5.04	19 18.73	155 13.61	6.56	1.8	1.1	24	1	71	.09	3	.5	1.1	20	SF2
		21	1937	54.23	19 24.98	155 25.51	11.23	1.8	1.1	31	2	50	.10	1	.4	.8	22	KA0
		22	955	52.04	19 23.86	155 2.50	7.58	1.3	1.4	23	0	117	.13	3	.5	.9	14	SF5
		22	2015	54.53	19 17.99	155 14.14	5.75	1.3	1.3	22	0	114	.09	2	.6	1.2	20	SF2
		22	2335	37.63	19 24.32	155 26.34	8.56	1.6	1.5	30	2	49	.11	3	.4	.9	23	KA0
		23	116	23.76	19 20.52	155 12.88	7.96	2.0	2.1	41	3	65	.12	4	.5	.7	24	SF2
		23	130	29.83	19 19.79	155 12.16	8.12	1.5	1.6	30	2	83	.11	6	.5	.9	20	SF3
		23	137	59.99	19 59.55	155 35.90	11.64	2.5	2.3	17	4	164	.12	24	.8	.8	11	KOH
		23	917	15.84	19 20.53	155 6.95	6.87	1.4	1.1	27	1	98	.10	5	.5	1.0	16	SF4
		23	1026	25.54	19 20.04	155 6.65	7.48	2.1	1.7	13	1	205	.06	6	1.2	1.5	12	SF4
		23	1038	38.87	19 25.71	155 24.28	7.65	2.3	1.9	34	3	48	.12	2	.4	.9	26	KA0
		23	18 9	26.26	19 24.80	155 16.84	12.24	1.9	1.2	46	4	36	.12	0	.4	.4	28	INT
		23	2053	18.36	19 19.04	155 11.79	5.59	1.7	1.2	28	3	105	.12	5	.5	1.3	18	SF3
		23	2133	45.65	19 26.80	154 53.61	8.19	2.1	1.8	36	2	157	.15	3	.9	.5	24	LEH
		23	2224	27.69	19 12.43	155 37.21	9.06	2.5	2.6	29	2	94	.17	5	.4	1.0	23	LSW
		23	2233	9.28	19 20.46	155 13.26	7.51	1.6	1.0	27	2	63	.10	4	.5	.8	19	SF2
		23	2333	15.29	19 17.87	155 12.97	7.21	1.7	1.1	28	2	113	.11	2	.5	1.0	15	SF2
		24	0 0	57.16	19 19.72	155 12.28	7.24	1.7	1.4	32	4	83	.10	5	.5	.8	19	SF3
		24	330	46.89	19 16.39	155 23.72	8.81	2.0	1.8	31	3	102	.11	4	.4	.8	22	SWR
		24	531	15.74	19 18.25	155 14.81	6.85	1.6	1.2	29	2	113	.10	3	.4	.9	16	SF1
		24	1355	55.29	19 21.03	155 13.17	9.16	1.8	1.3	28	3	58	.07	3	.5	.7	19	SF2
		24	1444	37.94	19 23.29	155 24.76	12.00	1.7	1.3	30	2	43	.10	4	.4	.9	26	KA0

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		ORIGIN TIME			LAT N		LON W		DEPTH AMP DIR			GAP RMS MIN ERH			ERZ NO					
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	°	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK
1981	JUN	24	1650	29.39	19	19.45	155	13.79	6.45	1.6	1.9	38	3	62	.13	5	.5	.9	24	SF2
		24	1713	42.75	19	19.13	155	9.75	8.40	1.7	1.7	26	1	104	.06	5	.5	.9	16	SF3
		24	2055	28.17	19	22.20	155	2.38	7.73	1.9	1.7	36	2	139	.11	4	.4	.6	20	SF5
		25	615	59.29	19	20.51	155	12.13	8.15	2.0	1.9	33	3	72	.09	4	.4	.7	19	SF3
		25	811	23.25	19	43.89	155	11.20	36.94	2.5	2.3	45	1	139	.10	10	.7	1.7	39	KEA
		25	1043	2.92	19	20.66	155	3.77	8.46	2.1	1.8	37	1	98	.10	2	.6	.5	23	SF5
		25	1517	38.73	19	24.57	155	16.85	1.80	1.4	1.3	15	1	88	.06	1	.3	.2	8	SNC
		25	1522	15.46	19	24.11	155	17.06	2.49	1.8	1.8	19	4	67	.11	1	.4	.3	14	SSC
		25	1526	1.54	19	20.15	155	7.61	8.36	2.1	1.7	24	3	94	.08	5	.5	1.0	20	SF4
		25	1527	1.98	19	24.24	155	16.26	2.75	1.7	1.4	16	3	109	.06	1	.3	.3	9	SEC
		25	1543	22.74	19	24.18	155	16.33	1.67	1.6	1.8	20	4	103	.11	1	.3	.2	11	SEC
		25	1627	27.72	19	24.19	155	15.99	2.05	1.6	1.6	12	2	123	.09	1	.4	.4	10	SEC
		25	1715	3.87	19	24.41	155	16.98	1.46	.9	1.0	11	2	84	.07	1	.3	.2	9	SSC
		25	1730	21.14	19	18.50	155	15.55	5.81	1.9	1.6	34	3	107	.12	4	.4	1.0	27	SF1
		26	121	26.94	19	19.64	155	21.63	4.42	1.5	1.8	29	4	84	.12	3	.4	1.5	19	SWR
		26	554	47.64	19	48.40	155	32.95	8.11	2.0	1.3	16	1	138	.14	23	.8	1.7	8	KEA
		26	10 4	55.02	19	24.41	155	15.46	.05	.2	.1	13	1	152	.10	2	.4	.6	7	SEC
		26	1453	11.78	19	20.81	155	7.08	7.24	1.8	1.5	33	4	92	.10	4	.4	.9	17	SF4
		26	17 5	31.14	19	23.52	155	16.79	2.74	.9	1.8	25	3	47	.08	0	.3	.2	20	SSC
		26	1848	21.65	19	25.21	155	17.08	1.67	1.5	.2	22	1	119	.06	1	.3	.2	11	SNC F
		26	1848	31.53	19	25.90	155	16.53	.39	2.3	2.6	14	3	164	.08	2	.3	.4	7	SNC F
		26	20 0	43.97	19	23.29	155	2.17	8.68	2.2	2.3	39	0	125	.12	4	.6	.5	24	SF5 F
		26	2042	7.45	19	23.31	155	16.84	2.47	1.6	2.0	30	2	40	.10	0	.3	.3	19	SSC
		26	2114	53.08	19	18.91	155	21.54	9.50	2.5	2.7	44	3	100	.13	4	.4	.5	32	SWR
		26	2117	53.67	19	23.44	155	17.07	2.66	1.3	1.3	18	2	56	.08	0	.3	.2	10	SSC
		26	2223	42.30	19	25.25	155	16.70	2.03	2.0	2.3	26	2	74	.08	1	.3	.3	20	SNC
		27	255	21.98	19	25.30	155	16.65	2.14	2.4	2.8	27	1	47	.09	1	.3	.2	17	SNC
		27	1050	40.66	19	16.80	155	13.56	2.48	2.1	1.8	36	0	159	.11	1	.6	.4	18	SSF
		27	1737	50.43	19	20.55	155	12.66	8.47	1.9	1.8	36	3	68	.09	4	.4	.6	23	SF2
		27	2143	34.90	19	16.67	155	12.14	2.21	1.4	1.1	29	0	165	.10	2	.8	.5	15	SSF
		27	22 9	42.09	19	17.07	155	12.18	2.43	1.4	1.1	28	0	172	.08	2	.7	.4	15	SSF
		28	025	54.38	19	20.67	155	11.49	7.82	1.6	1.3	28	2	70	.12	5	.5	1.0	22	SF3
		28	056	33.38	19	19.94	155	10.24	7.27	1.6	1.0	20	3	90	.08	4	.5	1.3	15	SF3
		28	326	26.79	19	24.24	155	17.52	2.42	1.2	1.4	19	0	77	.07	2	.3	.3	10	SSC
		28	524	46.48	19	18.43	155	15.44	8.22	1.8	1.5	27	1	118	.05	4	.4	.7	16	SF1
		28	1140	43.86	19	19.14	155	13.71	8.09	2.1	1.6	41	3	71	.12	4	.4	.7	29	SF2
		28	1631	50.44	19	20.11	155	10.77	8.91	1.6	1.1	30	3	84	.07	4	.5	.8	22	SF3
		29	23 5	7.24	20	12.26	155	37.62	27.54	2.8	2.4	23	4	249	.10	18	1.2	1.5	18	KOH
		29	2348	17.08	19	19.65	155	13.77	6.26	1.9	1.7	35	1	69	.11	5	.4	.7	17	SF2
		30	147	26.16	19	19.88	155	13.82	7.31	2.3	2.2	46	3	68	.12	5	.4	.6	35	SF2
		30	156	59.93	19	23.12	155	16.98	3.03	1.2	1.2	15	2	67	.10	1	.4	.5	10	SSC
		30	229	8.03	19	20.65	155	12.64	8.24	1.6	1.1	29	2	67	.12	4	.6	.9	17	SF2
		30	636	12.81	19	21.25	155	30.21	10.09	2.2	1.6	34	1	38	.09	5	.4	.9	23	KAO
		30	1146	25.71	19	18.86	155	13.26	11.02	3.5	3.5	48	3	126	.11	7	.5	.4	40	SF2 F
		30	1158	19.08	19	18.28	155	13.72	7.45	2.2	1.9	39	5	94	.11	2	.5	.6	23	SF2
		30	1431	32.76	19	20.24	155	11.79	8.07	2.4	1.9	37	3	79	.12	5	.5	.7	27	SF3
		30	2012	19.63	19	22.37	155	17.14	2.65	1.5	1.0	19	3	97	.07	2	.3	.4	13	SSC
		1	141	3.83	19	24.75	155	20.47	10.44	2.1	1.4	33	4	32	.10	2	.4	.7	24	KAO
JUL																				

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YEAR	MON	DA	HR	MIN	SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	JUL	1	214	55.75	19	24.52	155 17.10	11.95	1.9	1.1	36	5	50	.10	1	.3	.5	22 INT
		1	321	13.36	18	56.25	155 19.50	24.65	2.4	1.6	37	1	251	.07	29	1.8	2.8	27 LOI
		1	5	44.41	19	27.53	155 23.72	6.05	1.9	1.3	20	2	104	.11	4	.4	1.1	12 KAO
		1	733	31.75	19	23.64	154 58.95	5.56	1.6	1.1	25	2	164	.15	3	.9	1.3	16 LER
		1	947	40.70	19	18.18	155 23.24	1.34	1.3	1.2	18	1	94	.07	4	.4	.9	13 SWR
		1	1133	42.65	19	19.98	155 11.24	8.22	2.6	2.4	40	1	86	.12	5	.4	.6	32 SF3
		1	2322	28.69	19	36.62	155 26.08	13.43	1.6	1.5	29	3	89	.07	5	.5	.4	23 KEA
		2	231	54.70	19	19.43	155 11.37	10.33	3.6	3.6	43	1	98	.08	6	.5	.4	41 SF3
		2	7	3	11.71	19	19.41	155 11.25	8.47	1.5	1.2	25	2	99	.08	6	.5	1.0 17 SF3
		2	1246	59.89	19	21.40	155 6.45	7.29	1.6	1.2	22	0	86	.09	3	.5	1.0 13 SF4	
		2	1454	25.86	19	23.46	155 16.64	3.22	1.8	2.2	26	4	56	.09	1	.3	.2	17 SSC
		2	1522	25.15	19	23.53	155 16.69	3.18	1.8	2.1	26	4	50	.10	1	.3	.2	17 SSC
		2	2356	18.96	19	19.45	155 11.88	8.37	1.5	1.1	19	1	93	.06	5	.5	1.2	15 SF3
		3	116	34.89	19	21.03	155 24.24	9.44	1.6	1.3	22	3	49	.07	2	.4	1.0 17 SWR	
		3	513	4.80	19	19.94	155 13.52	7.30	1.5	1.4	33	3	62	.11	5	.4	.7	21 SF2
		3	717	55.18	19	19.79	155 12.56	5.95	1.5	1.4	30	2	79	.12	5	.5	1.1 20 SF2	
		3	1129	18.67	19	18.16	155 14.03	5.91	1.2	1.1	23	0	83	.10	2	.6	1.3 15 SF2	
		3	1221	53.53	19	16.98	155 13.88	7.09	1.4	1.1	24	2	197	.06	1	.6	.9	14 SF2
		3	1237	16.78	19	22.11	155 1.61	6.38	1.6	1.7	29	0	149	.12	5	.6	.8	18 SF5
		3	1328	42.62	19	23.41	155 16.85	2.99	3.1	3.4	41	1	36	.11	0	.2	.2	26 SSC F
		3	21	6	54.46	19	19.59	8.01	1.6	1.5	33	3	122	.09	5	.4	.6	22 SF4
		3	2117	.52	19	25.63	155 28.03	9.94	2.2	1.8	40	3	57	.09	5	.3	.7	26 KAO
		3	2212	14.38	19	18.31	155 14.45	8.74	2.0	1.9	43	4	89	.11	3	.4	.5	26 SF2
		3	2332	40.47	19	23.12	155 17.09	2.64	1.5	1.3	22	3	41	.09	1	.3	.3	15 SSC
		4	058	34.57	19	19.47	155 12.23	6.98	1.5	1.1	20	1	144	.11	5	.6	1.0 14 SF3	
		4	224	43.88	19	19.87	155 12.48	8.92	1.6	1.0	23	3	197	.08	5	1.0	.8	11 SF2
		4	5	4	18.70	19	20.85	8.33	1.6	1.6	29	2	158	.11	3	.5	.6	21 SF2
		4	956	46.74	19	22.59	155 14.26	27.40	2.3	2.4	48	3	50	.10	2	.6	.8	43 DEP
		4	1240	.91	19	19.00	155 8.46	7.17	1.3	1.3	20	0	85	.08	3	.6	1.3	20 SF4
		4	1317	46.77	19	22.68	155 24.94	9.16	1.3	1.0	21	1	53	.09	5	.5	1.1 19 KAO	
		4	1648	6.29	19	20.79	155 25.27	10.54	1.5	1.6	28	2	55	.09	4	.4	.9	16 KAO
		4	1712	1.40	19	26.56	155 23.57	3.68	2.1	2.0	29	2	55	.12	4	.3	.9	22 KAO
		4	1821	17.41	19	23.90	155 16.75	3.08	1.8	1.8	24	2	74	.09	0	.4	.3	17 SSC
		5	356	41.92	19	23.22	155 16.83	2.96	1.0	1.1	14	2	57	.06	0	.3	.3	10 SSC
		5	1024	49.25	19	24.17	155 16.79	2.87	1.6	1.5	26	4	78	.11	1	.3	.2	10 SSC
		5	1143	56.75	19	21.50	155 15.17	9.02	2.3	1.8	41	4	63	.10	2	.4	.5	27 SF1
		5	1450	55.23	19	20.01	155 6.62	9.03	2.9	3.0	43	2	115	.10	5	.5	.5	31 SF4
		5	1823	27.84	19	12.97	155 30.48	34.42	2.1	1.5	34	1	69	.06	4	.7	1.4	30 DLS
		5	22	9	55.60	19	23.95	2.91	1.8	1.7	20	3	85	.09	0	.3	.2	14 SSC
		6	140	59.54	19	7.56	155 27.60	46.58	2.6		25	0	172	.12	4	1.6	3.7	8 DLS T
		6	319	5.01	19	23.34	155 16.90	3.15	1.3	1.0	17	4	81	.07	0	.4	.3	10 SSC
		6	531	44.66	19	20.31	155 12.27	7.69	2.0	2.1	40	3	74	.11	5	.4	.6	30 SF3
		6	750	33.06	20	55.95	156 17.67	34.79	2.8	2.4	17	1	333	.14	19	3.6	.9	12 DIS
		6	1026	18.58	19	20.45	155 10.36	7.91	1.8	1.4	29	4	78	.08	3	.5	.6	13 SF3
		6	1030	38.60	19	20.65	155 11.75	9.71	3.0	3.2	47	2	73	.12	4	.3	.4	37 SF3
		6	1155	38.37	19	23.90	155 27.58	9.89	1.8	1.6	32	1	28	.11	3	.4	.7	21 KAO
		6	1250	25.63	19	19.38	155 11.33	8.34	1.8	1.3	29	1	99	.09	6	.5	.8	22 SF3
		6	1531	59.35	19	23.27	155 16.84	2.77	1.3	1.3	20	3	54	.07	0	.3	.2	14 SSC

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HR	TIME	SEC	LAT N DEG MIN	LONG W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK	
1981	JUL	6	1535	48.14	19	9.96	155 42.09	3.06	1.8	1.8	16	1	134	.17	13	.8	3.9 10	LSW	
		6	1828	.60	19	21.32	155 1.98	6.42	2.1	1.6	33	1	162	.16	3	.6	1.0 20	SF5	
		6	20	3	57.37	19	19.76	155 8.60	8.06	1.9	1.6	34	3	77	.09	5	.5	.8 22	SF4
		6	2050	59.08	19	23.29	155 16.68	2.91	1.5	1.4	20	3	53	.07	1	.3	.2 10	SSC	
		6	2130	48.82	19	23.62	155 16.85	2.94	1.8	1.5	25	4	46	.06	1	.3	.2 17	SSC	
		7	325	31.37	19	23.41	155 16.67	3.14	1.8	2.0	27	3	53	.09	1	.3	.2 21	SSC	
		7	657	35.14	19	18.38	155 23.19	3.78	2.2	2.2	30	2	93	.11	3	.3	.9 20	SWR	
		7	8	5	55.77	19	23.18	155 16.81	3.44	2.7	2.9	26	1	46	.09	2	.3	.5 22	SSC
		7	1016	33.95	19	23.75	155 16.83	2.98	1.9	2.2	25	3	62	.09	1	.3	.2 18	SSC	
		7	1349	50.68	19	11.61	155 32.29	6.05	1.9	1.4	29	2	94	.19	8	.6	1.2 18	LSW	
		7	1426	6.99	19	20.08	155 11.71	7.27	1.8	1.2	28	3	82	.07	5	.4	.8 20	SF3	
		7	1457	11.27	19	32.30	155 42.68	7.74	2.6	1.2	27	2	82	.11	7	.5	1.7 19	MLO	
		7	1611	58.02	19	19.77	155 7.52	6.18	2.9	2.7	44	3	102	.10	5	.4	.5 33	SF4	
		7	1617	54.16	19	20.57	155 8.34	7.35	2.2	2.2	41	2	76	.12	4	.5	.7 28	SF4	
		7	1823	19.23	19	23.72	155 16.89	2.95	1.4	1.5	23	3	61	.09	1	.3	.2 16	SSC	
		7	1841	13.57	19	23.90	155 16.62	3.02	1.8	2.3	26	4	81	.10	0	.3	.3 20	SSC	
		7	2030	45.05	19	25.76	154 59.08	4.81	1.5	1.1	27	2	86	.15	1	.7	1.0 12	SLE	
		7	2327	15.37	19	19.18	155 15.68	8.46	2.1	2.3	45	3	94	.11	3	.4	.5 26	SF1	
		8	0	1	47.44	19	15.01	155 32.00	36.74	2.2		22	0	176	.14	3	1.3	3.4 10	DLS
		8	1017	10.69	19	23.34	155 16.87	2.78	.9	1.0	14	2	54	.10	0	.4	.3 9	SSC	
		8	1321	46.89	19	23.03	155 17.18	2.33	1.0	1.0	14	1	68	.06	1	.3	.4 12	SSC	
		8	1846	24.21	19	23.37	155 16.87	3.07	2.1	2.1	28	4	36	.08	0	.3	.3 21	SSC	
		9	135	49.15	19	19.87	155 8.25	7.75	2.1	2.4	34	1	84	.07	5	.4	.7 22	SF4	
		9	358	13.95	19	23.75	155 16.83	2.87	1.6	1.7	23	3	61	.08	1	.3	.2 17	SSC	
		9	5	0	19.31	19	23.18	155 17.14	2.65	1.2	1.0	19	3	62	.07	1	.3	.3 12	SSC
		9	5	4	39.21	19	23.65	155 16.87	2.48	1.3	1.4	22	4	50	.12	1	.3	.2 13	SSC
		9	745	26.27	19	23.44	155 16.85	2.94	1.2	1.3	21	2	50	.06	0	.3	.2 15	SSC	
		9	11	2	39.09	19	25.72	155 37.50	2.37	2.4	2.1	16	0	92	.13	4	.5	1.0 12	MLO
		9	1236	45.92	19	22.92	155 16.91	2.93	2.1	2.1	24	5	47	.08	1	.2	.3 20	SSC	
		9	1333	24.08	19	23.68	155 16.93	3.10	2.2	2.2	24	4	56	.09	1	.3	.2 17	SSC	
		9	1512	21.18	19	25.97	155 37.52	3.61	3.0	2.9	32	2	83	.12	3	.4	1.0 30	MLO	
		9	1829	12.61	19	23.90	155 16.99	2.96	1.6	1.4	15	3	74	.05	1	.3	.2 10	SSC	
		10	034	42.00	19	16.73	155 23.39	7.41	1.3	1.1	14	1	106	.10	5	.6	1.6 12	SWR	
		10	721	2.37	19	11.84	155 39.67	7.33	2.6	2.3	34	1	108	.20	7	.6	1.5 25	LSW	
		10	1132	2.72	19	18.01	155 16.55	6.99	2.1	1.8	27	2	161	.11	4	.5	.9 18	SF1	
		10	1557	45.89	19	20.95	155 6.11	8.27	1.9	1.7	21	2	97	.06	4	.6	1.2 18	SF4	
		10	2056	25.45	19	20.09	155 13.05	9.73	2.1	1.8	24	2	69	.08	5	.5	.8 21	SF2	
		10	2231	55.51	19	32.55	155 43.37	6.84	2.2	1.4	22	3	82	.10	6	.5	1.3 15	KON	
		11	20	0	49.29	19	23.31	155 16.81	3.02	2.2	2.5	31	5	37	.08	0	.2	.2 25	SSC
		11	2148	44.97	19	20.04	155 11.85	9.48	2.7	3.0	47	4	81	.08	5	.4	.5 29	SF3	
		11	2312	58.76	19	25.20	155 25.19	8.86	2.1	1.5	33	1	50	.11	0	.4	.9 26	KAO	
		12	018	37.97	19	11.30	155 40.89	1.79	2.4	1.4	19	2	172	.12	9	.6	1.2 14	LSW	
		12	3	2	32.67	19	12.01	155 41.08	3.52	2.4	1.3	25	2	172	.21	9	.9	3.4 20	LSW
		12	513	42.90	19	20.71	155 11.39	8.89	1.7	1.4	26	2	73	.07	4	.5	.7 21	SF3	
		12	648	38.48	19	23.77	155 16.85	3.09	2.1	2.3	24	4	68	.06	1	.3	.2 16	SSC	
		12	7	1	18.68	19	24.18	155 16.22	1.58	1.6	1.7	15	6	119	.07	1	.2	.3 10	SEC
		12	10	1	51.24	19	18.38	155 15.71	7.08	1.8	1.2	20	0	139	.10	4	.5	.8 19	SF1
		12	1043	43.47	19	21.13	155 5.87	8.13	1.8	1.3	20	0	128	.07	4	.6	.9 18	SF4	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR	GAP NS	RMS DEG	MIN SEC	ERH DIS	ERZ KM	NO FM	REMK
1981	JUL	12	17	3	1.97	19 23.77	155 16.78	3.11	1.6 1.3 20	3	63 .08	0	.3	.2 10	SSC	
		12	17	22	46.82	19 24.36	155 16.24	1.52	1.8 2.1 21	4	113 .08	1	.2	.2 10	SEC	
		12	18	13	4.44	19 22.86	155 17.24	2.06	1.7 1.6 22	3	43 .10	1	.3	.3 12	SSC	
		13	04	8	9.92	19 19.87	155 17.70	7.78	2.3 2.0 40	4	97 .11	5	.5	.8 26	SF4	
		13	24	2	11.18	19 23.12	155 16.78	3.19	1.4 1.0 16	2	46 .09	1	.4	.4 12	SSC	
		13	81	5	3.63	19 18.18	155 13.36	6.13	1.7 1.0 29	1	86 .09	2	.4	.9 15	SF2	
		13	11	18	20.99	19 17.98	155 13.31	6.71	1.4 1.6 32	0	92 .11	2	.5	.9 17	SF2	
		13	13	16	41.45	19 20.02	155 11.92	9.27	2.9 2.8 44	3	81 .09	5	.3	.4 33	SF3	
		13	17	56	50.64	19 19.42	155 15.41	7.94	2.2 2.3 41	2	88 .11	4	.4	.6 22	SF1	
		13	18	1	23.20	19 18.89	155 29.73	10.40	2.4 2.1 37	2	55 .10	7	.4	.6 25	LSW	
		13	22	45	14.71	19 22.76	155 25.71	9.99	1.8 1.7 35	4	38 .11	3	.4	.6 22	KA0	
		14	51	1	58.25	19 22.66	155 16.79	2.98	2.0 2.5 29	3	45 .10	1	.3	.3 10	SSC	
		14	55	1	23.69	19 22.99	155 17.02	2.27	1.8 2.4 14	1	89 .08	1	.3	.3 12	SSC	
		14	9	53	20.67	19 23.08	155 17.06	2.59	1.3 1.0 13	3	97 .08	1	.3	.4 9	SSC	
		14	14	17	50.16	19 23.30	155 16.91	3.08	2.0 1.7 24	4	56 .10	0	.3	.2 13	SSC	
		14	14	28	2.03	19 20.04	155 6.86	8.72	1.9 1.2 28	1	111 .07	5	.5	.8 22	SF4	
		15	9	11	9.41	19 27.96	155 25.67	4.31	2.2 1.8 37	5	71 .13	5	.3	1.5 22	KA0	
		15	10	39	8.51	19 20.07	155 9.10	8.14	1.9 2.1 39	3	76 .12	4	.4	.7 23	SF4	
		15	13	24	51.80	19 18.87	155 14.00	7.05	1.4 1.2 23	2	95 .11	4	.6	1.2 12	SF2	
		15	22	46	5.51	19 23.29	155 16.87	2.98	1.3 1.2 17	3	56 .08	0	.3	.3 9	SSC	
		16	9	50	5.41	19 22.84	155 16.91	2.53	1.6 1.6 19	3	76 .09	1	.3	.3 13	SSC	
		16	17	5	36.27	19 23.64	155 16.88	3.08	1.3 1.0 18	3	49 .10	1	.3	.3 10	SSC	
		16	17	48	20.77	19 24.35	155 17.56	2.85	1.4 1.4 20	3	44 .11	1	.4	.3 14	SSC	
		17	1	59	19.06	19 23.62	155 1.82	9.65	1.7 1.3 36	1	128 .11	5	.7	.5 20	SF5	
		17	3	3	15.83	19 23.51	155 16.78	3.05	3.1 3.2 43	6	36 .11	0	.2	.2 29	SSC	
		17	3	12	38.58	19 23.64	155 16.77	2.82	2.9 2.9 39	1	37 .11	1	.2	.2 24	SSC	
		17	3	14	37.42	19 23.66	155 16.84	2.79	1.2 1.0 16	3	57 .05	1	.3	.3 11	SSC	
		17	10	56	31.31	19 20.15	155 12.81	7.91	1.6 1.1 27	2	71 .10	5	.5	.9 20	SF2	
		17	12	13	22.14	19 23.35	155 16.88	3.16	1.7 1.4 22	2	37 .09	0	.3	.3 13	SSC	
		17	12	34	44.17	19 23.37	155 16.81	3.05	2.4 2.2 28	2	40 .11	0	.3	.2 19	SSC	
		17	15	25	1.56	19 23.19	155 16.90	2.95	1.4 1.0 20	3	40 .07	0	.3	.3 12	SSC	
		17	15	36	7.69	19 23.44	155 16.94	3.25	1.7 1.2 18	3	45 .08	0	.3	.3 12	SSC	
		17	15	41	5.63	19 23.41	155 16.70	3.17	2.8 2.5 40	4	38 .10	0	.2	.2 24	SSC	
		17	17	32	21.14	19 19.79	155 7.53	8.94	2.4 2.3 40	3	102 .08	5	.4	.5 23	SF4	
		17	18	32	15.71	19 23.15	155 16.74	3.04	2.1 1.7 26	3	47 .09	1	.3	.3 15	SSC	
		17	21	35	48.31	19 20.35	155 6.87	8.93	2.4 2.3 45	3	104 .08	5	.4	.4 28	SF4	
		17	22	8	6.94	19 25.63	155 16.68	2.17	1.7 1.3 17	2	151 .08	1	.5	.2 12	SNC	
		17	22	29	10.93	19 22.90	155 2.94	6.73	2.0 1.2 28	1	114 .14	4	.6	1.0 16	SF5	
		17	22	52	18.79	19 25.25	155 16.99	1.66	2.1 2.1 20	1	154 .10	1	.5	.2 13	SNC	
		17	23	30	42.60	19 20.36	155 11.28	8.84	2.1 2.0 38	2	79 .12	4	.4	.6 30	SF3	
		18	0	8	55.52	19 19.94	155 12.57	7.18	1.6 1.2 28	1	77 .12	5	.5	.9 18	SF2	
		18	1	14	52.14	19 23.81	155 16.87	2.92	1.6 1.1 15	2	76 .04	1	.5	.3 11	SSC	
		18	2	2	32.59	19 12.25	155 27.27	7.62	2.5 2.2 37	2	118 .16	5	.5	.8 21	LSW	
		18	22	8	7.12	19 23.92	155 16.06	3.03	1.9 1.6 23	3	107 .08	1	.3	.2 14	SF4	
		18	33	8	34.78	19 19.92	155 11.91	7.49	1.7 1.1 31	2	83 .11	5	.5	.9 18	SF3	
		18	9	31	26.07	19 23.76	155 16.72	3.27	2.1 1.7 18	1	79 .06	2	.3	.5 16	SSC	
		18	14	35	28.55	19 23.81	155 16.83	3.05	1.9 1.6 25	5	76 .08	0	.3	.2 14	SSC	
		18	14	41	13.27	19 23.23	155 16.79	2.88	2.2 2.2 18	1	45 .09	0	.3	.2 9	SSC	

HVO EARTHQUAKE SUMMARY LIST

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		ORIGIN TIME			LAT N		LON W		DEPTH AMP DIR			GAP RMS MIN ERH			ERZ NO					
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK
1981	JUL	18	16	3	46.38	19 19.47	155 10.21		8.75	1.8	1.1	28	2	98	.06	5	.3	.8	20	SF3
		18	18	7	45.11	19 22.72	155 16.93		2.58	2.0	1.7	26	2	42	.09	1	.3	.3	17	SSC
		18	20	16	4.65	19 19.68	155 13.81		6.70	1.6	1.1	34	2	69	.12	5	.4	.9	21	SF2
		18	20	31	56.62	19 23.37	155 16.99		2.97	1.2	.9	20	4	47	.08	0	.3	.3	14	SSC
		19	4	38	48.57	19 20.38	155 12.05		7.42	1.8	1.3	31	3	74	.11	5	.5	.7	20	SF3
		19	17	43	36.08	19 23.84	155 16.93		2.97	1.3	1.2	19	4	74	.06	1	.3	.3	12	SSC
		19	17	56	39.77	19 23.74	155 17.08		2.18	1.3	1.0	19	4	67	.13	1	.3	.3	10	SSC
		19	20	25	3.50	19 23.31	155 14.73		1.24	1.3	1.4	12	2	102	.07	3	.3	.5	6	SEC
		20	2	13	19.21	19 24.01	155 26.90		7.25	2.6	2.1	43	3	32	.12	3	.3	.7	35	KA0
		20	24	1	30.73	19 18.04	155 15.03		3.57	1.6	1.1	25	1	112	.10	3	.4	.9	16	SF3
		20	5	14	55.50	19 20.68	155 11.54		8.12	2.3	1.7	38	5	73	.11	4	.4	.6	27	SF3
		20	6	12	46.42	19 19.80	155 12.98		9.65	3.9	3.9	44	1	73	.11	5	.4	.4	38	SF2
		20	7	2	52.28	19 20.65	155 13.47		8.77	2.2	1.6	36	3	59	.10	4	.4	.6	25	SF2
		20	7	8	58.46	19 20.71	155 13.35		8.60	2.8	2.6	48	5	59	.11	4	.4	.5	30	SF2
		20	8	14	33.47	19 21.91	155 12.53		9.31	2.0	1.6	21	1	100	.15	2	.6	.7	16	SF2
		20	8	43	59.34	19 23.36	155 16.76		3.04	2.4	2.8	34	4	45	.10	0	.2	.2	23	SSC
		20	8	48	6.81	19 23.67	155 16.80		2.89	2.1	2.5	28	4	48	.10	1	.3	.2	20	SSC
		20	9	22	33.55	19 21.02	155 13.24		7.92	2.4	2.6	43	4	156	.13	3	.4	.5	30	SF2
		20	13	5	58.96	19 22.97	155 16.92		2.88	1.4	1.6	19	3	48	.06	1	.3	.3	15	SSC
		20	15	54	33.82	19 20.09	155 12.58		7.89	2.0	1.9	40	4	74	.13	5	.4	.6	25	SF2
		20	19	56	10.98	19 23.77	155 16.75		2.89	2.1	2.3	30	3	54	.12	0	.3	.2	22	SSC
		20	20	50	28.44	19 22.62	155 17.04		2.97	1.3	1.1	20	2	47	.07	1	.3	.4	13	SSC
		20	22	58	4.95	19 23.09	155 16.75		2.90	1.8	2.2	25	4	46	.10	1	.3	.3	18	SSC
		20	23	18	43.90	19 23.23	155 16.85		3.25	1.3	1.3	18	3	46	.08	0	.4	.4	14	SSC
		21	1	39	35.18	19 23.45	155 16.97		2.67	2.5	2.8	36	3	30	.11	0	.2	.2	25	SSC
		21	3	18	20.82	19 23.60	155 17.27		2.55	2.0	2.1	23	2	52	.08	1	.3	.3	19	SSC
		21	5	39	32.64	19 23.89	155 17.22		2.63	1.3	1.4	21	5	62	.06	1	.3	.2	13	SSC
		21	6	51	38.08	19 23.37	155 16.68		3.08	2.3	2.4	35	3	38	.10	0	.2	.2	24	SSC
		21	7	43	55.48	19 23.33	155 16.78		2.47	1.4	1.2	21	4	46	.10	0	.3	.3	11	SSC
		21	7	52	49.78	19 23.30	155 16.85		2.70	2.8	2.8	35	2	38	.10	0	.2	.2	22	SSC
		21	7	59	16.47	19 15.85	155 27.14		10.40	3.9	4.0	47	3	70	.13	5	.5	.4	42	LSW
		21	13	13	3.23	19 23.60	155 16.81		2.83	1.6	1.0	17	5	53	.07	0	.3	.2	13	SSC
		22	6	10	8.97	19 20.16	155 7.98		8.73	2.9	3.0	39	3	87	.06	5	.3	.5	29	SF4
		22	8	33	37.65	19 24.01	155 16.96		3.00	1.8	1.8	21	4	77	.08	1	.3	.2	13	SSC
		22	16	17	9.05	19 19.32	155 12.53		5.53	1.6	1.6	31	1	88	.11	5	.4	1.1	21	SF2
		22	19	6	13.59	19 20.63	155 16.87		2.63	1.7	1.9	16	2	58	.08	0	.3	.3	10	SSC
		22	22	42	5.42	19 23.24	155 11.00		8.71	1.6	1.3	27	3	75	.06	3	.5	.7	18	SF3
		22	22	56	52.48	19 23.58	155 16.87		2.86	2.0	2.1	26	4	43	.09	0	.3	.2	16	SSC
		23	1	38	17.55	18 57.24	155 11.14		45.84	3.0	3.2	47	3	243	.08	37	1.4	1.8	36	LO1
		23	2	26	17.36	19 23.06	155 16.77		3.09	2.2	2.3	33	3	40	.11	1	.3	.3	21	SSC
		23	3	44	15.25	19 19.57	155 16.26		7.84	2.1	1.9	42	2	95	.13	2	.4	.7	23	SF1
		23	5	47	26.33	19 20.34	155 6.34		5.64	2.1	1.4	34	2	111	.11	6	.5	1.7	22	SF4
		23	6	50	10.20	19 19.03	155 13.37		7.04	1.8	1.4	32	1	75	.12	4	.5	.9	22	SF2
		23	13	22	17.79	19 20.69	155 12.43		7.55	2.5	2.4	43	3	139	.14	4	.5	.6	34	SF2
		23	18	27	15.06	19 24.99	155 17.42		1.52	1.6	1.4	15	1	116	.09	1	.4	.2	12	SNC
		23	20	22	47.24	19 23.80	155 25.37		9.27	2.6	2.3	45	2	37	.12	3	.4	.6	32	KA0
		23	23	44	24.05	19 19.83	155 8.33		8.53	2.1	1.8	32	2	84	.08	5	.4	.9	21	SF4
		24	8	24	26.19	19 24.66	155 17.46		.71	2.6	3.3	32	2	36	.12	1	.2	.2	22	SNC

HVO EARTHQUAKE SUMMARY LIST

YEAR	MON	DAY	HR	SEC	DEC	MIN	LONG	DEPTH	KPH	MAG	HAIR	NAR	NS	DESP	RCS	MTH	DIR	EX	ERZ	NO	PRM	
1981	JUL	24	11	37	42	18	19	23	22	155	28	57	10	24	3	0	2	47	10	3	3	4
		24	11	37	42	18	19	23	22	155	28	57	10	24	3	0	2	47	10	3	3	4
		24	11	37	42	18	19	23	22	155	28	57	10	24	3	0	2	47	10	3	3	4
		24	16	2	11	42	19	24	13	155	1	18	1	1	1	1	1	1	1	1	1	
		24	20	5	23	19	21	6	15	155	1	17	1	1	1	1	1	1	1	1	1	
		24	20	4	53	19	25	6	15	155	1	19	1	1	1	1	1	1	1	1	1	
		24	23	3	21	19	24	27	155	1	98	1	9	3	3	2	4	60	9	1	2	
		25	0	4	51	19	25	10	155	1	92	1	5	3	3	2	4	60	9	1	2	
		25	05	11	53	19	24	30	155	1	17	1	1	1	1	1	1	1	1	1	1	
		25	05	11	53	19	24	30	155	1	17	1	1	1	1	1	1	1	1	1	1	
		25	32	3	5	19	23	39	155	1	64	3	10	9	1	1	1	1	1	1	1	
		25	43	1	57	19	20	46	155	1	20	2	7	1	1	1	1	1	1	1	1	
		25	48	7	18	19	20	46	155	1	31	8	0	1	1	1	1	1	1	1	1	
		25	14	9	8	19	20	23	155	1	95	3	4	1	1	1	1	1	1	1	1	
		25	14	4	10	19	23	14	155	1	92	1	2	4	1	1	1	1	1	1	1	
		25	14	3	13	19	20	64	155	1	19	8	4	1	1	1	1	1	1	1	1	
		25	15	5	21	19	23	14	155	1	98	2	0	1	1	1	1	1	1	1	1	
		25	15	5	21	19	23	14	155	1	98	2	0	1	1	1	1	1	1	1	1	
		25	19	40	5	19	20	45	155	1	81	7	7	2	4	4	1	1	1	1	1	
		26	04	9	2	19	24	92	155	1	98	1	8	2	5	3	1	2	1	1	1	
		26	31	7	5	19	24	92	155	1	25	2	8	3	3	0	2	1	1	1	1	
		26	740	3	17	19	23	16	155	1	04	2	9	2	5	3	3	4	36	12	0	
		26	743	7	3	19	21	58	155	9	79	4	5	1	1	1	1	20	05	5	4	
		26	813	3	8	19	21	06	155	1	83	1	0	1	1	1	1	0	10	2	4	
		26	1152	8	12	19	23	14	155	1	82	1	4	1	1	1	1	4	4	1	1	
		26	18	4	6	19	23	14	155	1	96	2	0	1	1	1	1	1	1	1	1	
		27	144	3	47	19	23	01	155	1	01	2	7	1	1	1						
		27	343	8	8	19	21	06	155	1	81	1	1	1	1	1	1	1	1	1	1	
		27	847	2	6	19	19	06	155	1	76	1	1	1	1	1	1	1	1	1	1	
		27	115	9	3	19	15	30	155	1	85	1	1	1	1	1	1	1	1	1	1	
		27	1243	2	6	19	19	77	155	1	80	1	1	1	1	1	1	1	1	1	1	
		27	1637	5	7	19	30	02	155	28	95	3	4	2	0	1	8	2	5	10	4	
		27	1713	1	5	19	19	44	155	1	36	1	1	1	1	1	1	1	1	1	1	
		27	1854	1	0	19	25	45	155	1	93	2	5	1	1	1	1	1	1	1	1	
		27	2151	5	1	19	20	45	155	8	62	6	17	1	1	1	1	1	1	1	1	
		27	2330	1	0	19	25	03	155	1	90	2	3	1	1	1	1	1	1	1	1	
		28	136	37	7	19	27	06	154	53	80	7	3	4	1	1	6	21	0	10	13	
		28	356	2	3	19	19	45	155	13	09	1	1	1	1	1	1	1	1	1	1	
		28	533	1	7	19	18	25	155	16	76	2	1	1	1	1	1	1	1	1	1	
		28	533	5	1	19	25	56	155	16	96	3	5	1	1	1	1	1	1	1	1	
		28	755	40	09	19	25	12	155	16	81	2	2	1	1	1	1	1	1	1	1	
		28	822	28	00	19	22	40	155	17	37	2	7	1	1	1	1	1	1	1	1	
		28	10	4	56	19	21	53	155	1	61	1	4	1	1	1	1	1	1	1	1	
		28	1018	3	92	19	21	81	155	1	98	7	9	3	3	4	2	15	10	4	5	
		28	1430	2	79	19	22	47	155	1	95	2	1	1	1	1	1	1	1	1	1	
		28	17	3	44	19	23	29	155	16	79	2	1	1	1	1	1	1	1	1	1	
		28	1929	5	37	19	23	14	155	1	53	6	4	1	1	1	1	1	1	1	1	
		28	2114	9	36	19	23	74	155	10	92	2	4	1	1	1	1	1	1	1	1	
		28	2117	6	46	19	23	72	155	16	93	2	4	1	1	1	1	1	1	1	1	

HVO EARTHQUAKE SUMMARY LIST

YEAR	MON	ORIGIN	TIME	SEC	DEG MIN	LOC N	DEG MIN	DEPT	WAVE	WAVE	WAVE	NR	NS	DEG	RMS	MIN	ERR	ERR	NO	REMARK	
		DATA	TIME	SEC	DEG MIN	LOC N	DEG MIN	WAVE	WAVE	WAVE	WAVE	NR	NS	DEG	RMS	MIN	ERR	ERR	NO	REMARK	
1961	JUL	29	14	11.21	19 23.34	155	17.11	2.77	1.2	1.1	1.1	15	2	6.3	.05	0	.3	10	SSC		
		29	144	5.11	19 23.72	155	15.08	2.94	2.6	1.2	2.1	15	2	11.0	.15	0	.7	13	SSC		
		29	416	7.04	19 23.72	155	15.08	2.61	1.7	1.6	2.3	4	55	.49	0	0	.3	27	SSC		
		29	116	4.55	19 23.32	155	16.79	2.64	1.2	1.2	3.5	4	4	12.2	.12	0	.3	17	SSC		
		29	1121	4.26	20 2.25	155	16.01	2.74	2.1	2.2	2.7	3	162	.10	9	1.6	24	19	KOM		
		29	1431	.16	19 23.54	155	16.93	2.92	1.4	2.1	2.0	1	45	.19	0	.3	17	SSC			
		29	1577	5.00	19 23.55	155	15.28	2.92	1.4	2.4	2.0	1	45	.19	0	.3	17	SSC			
		29	1643	1.27	19 23.45	155	16.71	2.70	2.3	2.4	2.7	3	59	.11	1	.3	10	SSC			
		29	1928	5.00	19 23.42	155	16.71	2.70	2.3	2.4	2.7	3	44	.09	0	.3	10	SSC			
		29	2127	4.79	19 23.74	155	15.02	9.11	2.0	2.2	2.9	4	42	.11	4	.4	23	SSC			
		30	141	5.42	19 23.65	155	16.93	3.49	1.4	1.7	2.0	2	58	.11	1	.4	15	SSC			
		30	131	2.43	19 23.65	155	16.71	2.70	1.1	1.1	1.5	1	44	.08	2	.3	16	SSC			
		30	233	2.43	19 23.60	155	17.29	2.67	1.5	1.7	2.0	3	44	.07	1	.5	15	SSC			
		30	351	12.01	19 23.60	155	17.05	2.67	1.5	1.7	2.0	3	44	.07	1	.5	15	SSC			
		30	921	4.30	19 23.64	155	14.774	11.53	2.4	1.7	2.6	2	101	.10	12	.5	21	KOM			
		30	1148	3.44	19 23.76	155	13.72	9.20	2.3	2.1	4.0	2	44	.12	3	.4	31	SSC			
		30	1415	3.44	19 23.76	155	13.72	7.40	2.2	2.1	4.1	4	76	.12	5	.4	27	SSC			
		30	1924	5.21	19 23.40	155	17.21	7.40	1.4	1.1	2.2	3	166	.06	5	.5	12	17	SSC		
		31	124	5.21	19 23.40	155	17.21	2.45	1.7	1.4	2.0	3	48	.07	3	.3	11	SSC			
		31	734	5.21	19 23.40	155	16.67	2.45	1.4	1.5	1.7	3	48	.08	0	.3	11	SSC			
		31	89	1.10	19 23.68	155	13.34	7.49	1.7	1.4	2.5	0	79	.15	3	.4	20	SSC			
		31	141	2.55	19 23.68	155	16.61	2.77	1.4	1.4	2.0	3	64	.09	3	.5	21	SSC			
		31	141	2.55	19 23.68	155	12.97	6.23	1.4	1.4	2.0	3	64	.09	3	.5	21	SSC			
		31	1645	2.40	19 23.41	155	16.72	6.77	1.4	1.4	2.0	2	66	.10	5	.4	20	SSC			
		31	1645	2.40	19 23.41	155	16.77	1.45	2.0	1.9	2.3	2	55	.21	0	.4	3	15	SSC		
		31	1918	11.55	19 23.46	155	16.95	2.45	1.4	1.3	2.4	4	40	.09	1	.3	3	14	SSC		
		AUG	1	131	21.48	19 23.44	155	15.66	2.49	1.7	1.4	2.4	4	50	.08	1	.3	2	14	SSC	
			1	147	4.46	19 23.03	155	15.66	2.49	1.7	1.4	2.4	4	50	.08	1	.3	2	14	SSC	
			1	221	35.51	19 23.07	155	17.06	2.41	1.4	1.1	2.5	3	65	.11	1	.3	3	12	SSC	
			1	531	12.51	19 23.56	155	14.64	2.27	1.4	1.2	5	56	.09	1	.3	2	17	SSC		
			1	747	17.39	19 23.03	155	14.65	3.21	1.4	2.1	2.9	4	55	.09	0	.3	14	SSC		
			1	850	4.28	19 23.44	155	16.76	6.46	1.4	1.3	3	105	.12	5	.5	1	16	SSC		
			1	102	2.33	19 20.44	155	17.75	7.11	1.3	2.1	4.2	3	73	.15	4	.4	7	29	SSC	
			1	132	1.32	19 20.44	155	17.65	7.11	1.2	2.1	4.2	3	73	.15	4	.4	7	29	SSC	
			1	153	3.41	19 23.46	155	16.86	2.48	1.4	2.3	4	65	.09	1	.3	3	14	SSC		
			1	163	3.67	19 23.46	155	16.86	2.48	1.4	2.3	4	65	.09	1	.3	3	14	SSC		
			1	174	2.61	19 23.47	155	16.40	3.04	1.9	2.6	4	59	.09	0	.3	2	20	SSC		
			1	174	5.18	19 23.17	155	15.76	3.04	1.9	2.6	4	59	.09	0	.3	2	20	SSC		
			1	174	5.18	19 23.17	155	15.76	3.04	1.9	2.6	4	59	.09	0	.3	2	20	SSC		
			1	183	12.92	19 23.17	155	15.95	2.40	1.4	1.7	2.3	4	61	.08	1	.3	16	SSC		
			1	1814	34.40	19 23.48	155	16.91	3.04	1.3	1.1	1.6	3	75	.07	1	.4	5	16	SSC	
			1	2330	4.32	19 23.43	155	15.47	3.01	1.3	1.2	1.7	3	49	.07	1	.3	3	12	SSC	
			2	111	51.00	19 23.43	155	15.47	3.01	1.3	1.2	1.7	3	49	.07	1	.3	3	12	SSC	
			2	235	2.27	19 21.03	155	17.30	9.40	2.4	1.2	4.5	4	65	.15	3	.4	6	24	SSC	
			2	250	31.49	19 21.03	155	17.54	3.42	1.4	1.1	1.7	2	59	.06	3	.3	5	10	SSC	
			2	41	37.49	19 21.48	153	14.62	3.45	1.4	1.1	1.7	1	95	.07	3	.3	6	12	SSC	
			3	849	14.30	20 4.53	153	47.06	2.52	3.0	2.9	4.6	4	187	.11	2	1.2	1	35	KOM	
			3	914	16.19	24.42	153	47.52	5.47	1.9	1.3	1.2	2	51	.09	1	.6	5	20	KOM	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	ORIGIN TIME			LAT N		LON W		DEPTH				AMP		DIR		GAP		RMS	MIN	ERH	ERZ NO		
		DA	HR	MIN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK			
1981	AUG	2	1045	28.56	19	23.60	155	19.84	12.96	2.1	1.6	38	5	45	.11	0	.4	.4	28	KAO				
		2	1740	43.54	19	21.83	155	18.36	2.59	1.6	1.4	20	3	67	.11	4	.3	.7	13	SWR				
		2	1750	4.79	19	21.96	155	18.19	2.72	1.6	1.3	25	4	55	.11	3	.3	.7	16	SWR				
		2	1819	24.52	19	22.78	155	17.22	2.58	1.7	1.4	25	5	42	.10	1	.3	.4	20	SSC				
		2	1843	26.72	19	21.74	155	1.52	7.73	2.1	1.3	35	2	158	.13	4	.6	.6	16	SFS				
		2	21	6	12.01	19	21.73	155	18.07	2.63	1.4	1.1	24	6	75	.11	3	.3	.6	16	SWR			
		2	23	7	44.76	19	21.71	155	17.48	3.23	1.5	1.2	22	3	57	.10	3	.3	.5	15	SWR			
		3	0	3	21.13	19	23.75	154	58.03	7.84	2.4	2.0	41	3	171	.14	3	.6	.4	25	LER			
		3	539	.30	19	21.73	155	18.17	2.83	1.2	1.0	18	2	76	.09	3	.3	.7	12	SWR				
		3	556	5.79	19	21.91	155	17.87	2.73	1.9	1.6	27	4	55	.11	3	.3	.6	18	SWR				
		3	758	8.12	19	21.65	155	18.29	2.63	1.4	.9	17	2	69	.08	3	.3	.7	12	SWR				
		3	11	5	16.96	20	2.81	155	46.95	23.53	2.0	2.0	37	3	169	.09	9	1.5	2.3	26	KOH			
		3	1143	58.70	19	23.85	155	.48	7.74	2.4	2.0	35	4	144	.13	4	.5	.7	29	SFS				
		3	1341	47.89	19	21.67	155	18.07	3.17	1.9	1.8	25	4	53	.09	3	.3	.6	17	SWR				
		3	1626	34.30	19	22.14	155	17.36	2.72	1.8	1.9	24	2	54	.10	2	.3	.4	15	SSC				
		3	1815	26.24	19	25.31	155	24.24	9.44	2.0	1.6	34	3	45	.09	2	.4	.7	25	KAO				
		3	2013	42.72	19	21.59	155	18.30	3.10	1.6	1.2	20	3	56	.07	3	.3	.6	12	SWR				
		3	2124	22.28	19	21.69	155	17.76	2.47	1.8	2.0	26	2	51	.11	3	.3	.5	18	SWR				
		3	2125	41.87	19	21.67	155	18.29	2.82	1.6	1.5	22	4	56	.10	3	.3	.6	17	SWR				
		3	2136	32.04	19	21.87	155	18.06	2.69	1.8	1.8	27	5	58	.13	3	.3	.6	21	SWR				
		3	2151	36.81	19	26.71	155	24.45	8.32	2.0	1.6	33	3	47	.12	3	.3	.7	22	KAO				
		3	2246	24.45	19	21.53	155	18.04	3.28	1.8	1.4	20	3	60	.10	3	.3	.7	13	SWR				
		4	125	3.24	19	18.83	155	29.88	7.16	2.0	1.8	24	1	76	.17	3	.5	1.5	17	LSW				
		4	318	3.04	19	25.52	155	18.65	1.84	2.3	2.4	23	2	123	.07	1	.4	.2	18	SNC				
		4	456	9.98	19	21.71	155	18.42	2.63	1.4	1.0	20	5	69	.09	3	.2	.6	12	SWR				
		4	526	7.85	19	21.50	155	17.83	3.44	2.0	1.7	25	4	55	.10	3	.3	.5	13	SWR				
		4	747	50.64	19	27.80	155	26.67	9.44	2.0	2.6	46	5	59	.12	6	.3	.6	28	KAO				
		4	18	0	40.40	19	19.50	155	11.73	6.69	1.7	1.3	31	3	94	.09	5	.5	.9	19	SF3			
		4	1939	54.13	19	22.26	155	17.41	3.07	1.3	1.0	19	3	60	.09	2	.3	.5	12	SSC				
		4	2136	52.57	19	21.69	155	18.21	3.13	1.8	1.9	24	3	53	.11	3	.3	.6	17	SWR				
		4	2310	56.56	19	21.82	155	18.29	2.88	1.4	1.2	19	2	73	.11	4	.4	.7	13	SWR				
		5	011	44.11	19	20.56	155	10.81	7.87	1.7	1.8	40	1	77	.12	3	.4	.6	32	SF3				
		5	054	26.32	20	.03	155	33.52	8.93	2.3	1.8	25	2	176	.10	26	.7	.5	13	KEA				
		5	426	54.78	19	21.75	155	18.16	2.94	1.4	1.1	19	2	57	.07	3	.3	.6	13	SWR				
		5	440	24.21	19	20.14	155	10.42	8.14	2.2	1.1	30	1	87	.10	4	.5	.8	21	SF3				
		5	1151	39.02	19	15.12	155	34.99	7.13	1.5	1.3	31	3	68	.19	4	.5	1.0	20	LSW				
		5	1648	.43	19	22.31	155	17.19	3.15	1.5	1.7	21	4	61	.07	2	.3	.4	14	SSC				
		5	1745	35.28	19	15.69	155	3.14	45.85	2.4	2.0	44	0	206	.10	8	1.2	1.9	39	DEP				
		5	1815	15.67	19	21.85	155	17.70	3.72	2.1	2.3	31	3	52	.10	3	.3	.6	18	SWR				
		5	19	5	23.29	19	22.52	155	17.23	2.67	1.5	1.6	23	4	51	.11	2	.3	.4	16	SSC			
		5	2026	56.94	19	21.72	155	18.28	2.80	1.2	1.1	18	2	68	.10	3	.3	.7	12	SWR				
		5	2120	59.94	19	21.69	155	17.75	3.61	1.6	1.4	23	5	60	.17	3	.4	.8	15	SWR				
		5	2132	1.17	19	22.27	155	17.30	2.82	1.3	1.3	22	3	59	.10	2	.3	.5	14	SSC				
		5	2224	28.62	19	23.09	154	59.01	7.51	2.0	1.6	28	1	181	.12	4	.7	.6	22	LER				
		6	0	0	30.06	19	26.66	155	29.39	10.70	1.9	1.3	25	1	68	.07	8	.4	1.2	21	KAO			
		6	1	7	56.23	19	21.74	155	18.26	2.72	1.4	1.3	16	2	74	.08	3	.3	.7	10	SWR			
		6	113	46.29	19	21.68	155	18.07	3.16	1.1	.8	18	1	66	.07	3	.3	.6	13	SWR				
		6	114	5.22	19	21.63	155	18.14	2.98	1.7	1.7	17	2	58	.09	3	.3	.7	14	SWR				

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HVO EARTHQUAKE SUMMARY LIST

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			ORIGIN TIME			LAT N		LON W		DEPTH		AMP		DIR		GAP		RMS		MIN		ERH		ERZ NO	
YEAR	MON	DA	HR	MIN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	SEC	DIS	KM	KM	PM	REMK		
1981	AUG	6	10	9	24.77	19	23.52	155	16.89		3.12	1.8	1.1	18	3	49	.06	0	.4	.3	12	SSC			
		6	1032	50.19	19	22.03	155	18.04		3.17	1.5	1.1	18	4	80	.09	3	.3	.6	9	SSC				
		6	11	0	20.49	19	21.77	155	18.49		2.54	2.1	2.0	28	4	65	.11	4	.3	.6	19	SWR			
		6	13	0	18.05	19	46.27	155	2.24		39.56	3.2	2.5	47	2	212	.11	8	.9	1.7	43	HIL			
		6	1755	50.81	19	22.98	155	17.03		3.00	2.1	2.1	30	3	37	.10	1	.2	.3	20	SSC				
		6	1815	26.52	19	20.01	155	8.00		8.45	2.1	2.1	42	4	88	.10	5	.4	.6	28	SF4				
		6	2317	25.03	19	23.38	155	17.05		2.58	2.5	2.9	42	4	35	.12	0	.2	.2	28	SSC				
		7	029	56.82	19	22.42	155	18.46		3.01	1.5	1.7	25	4	55	.10	2	.3	.4	16	SSC				
		7	3	1	57.93	19	23.00	155	17.05		3.01	1.2	1.0	17	3	48	.11	1	.3	.4	10	SSC			
		7	347	58.65	19	21.94	155	1.65		6.89	2.1	1.6	26	3	159	.11	4	.5	1.0	17	SF5				
		7	947	7.27	19	21.64	155	17.68		3.08	1.4	1.1	18	3	62	.10	3	.3	.6	12	SWR				
		7	1210	38.55	19	22.41	155	17.42		3.14	1.6	1.6	20	2	89	.11	2	.3	.5	14	SSC				
		7	1319	59.87	19	19.92	155	6.75		7.94	2.1	1.7	37	2	116	.09	5	.4	.7	21	SF4				
		7	1640	24.07	19	22.27	155	17.37		2.59	1.4	1.2	18	2	59	.09	2	.3	.5	15	SSC				
		7	1657	2.10	19	23.72	155	16.91		3.02	1.6	1.1	16	3	61	.06	1	.3	.3	11	SSC				
		7	1658	23.64	19	23.47	155	16.88		2.72	2.4	2.6	36	4	36	.10	0	.2	.2	28	SSC				
		7	1737	15.59	19	21.86	155	17.98		2.73	1.2	.9	16	2	82	.07	3	.3	.7	13	SWR				
		7	1911	34.41	19	23.13	155	17.00		2.48	2.6	2.9	41	3	37	.11	0	.2	.2	27	SSC				
		7	1938	20.18	19	22.78	155	16.74		3.10	2.0	2.2	27	4	55	.09	0	.3	.2	18	SSC				
		7	2324	13.57	19	22.86	155	17.03		2.24	1.5	1.3	19	4	58	.07	1	.2	.3	11	SSC				
		8	547	26.38	19	21.35	155	18.11		2.44	1.5	1.1	16	3	68	.06	3	.3	.6	9	SWR				
		8	714	47.53	19	22.46	155	17.16		3.26	1.4	1.0	17	2	55	.09	2	.3	.5	13	SSC				
		8	728	5.94	19	19.92	155	11.86		7.22	2.4	2.2	42	5	84	.13	5	.4	.6	26	SF3				
		8	758	7.26	19	25.91	155	24.64		9.14	1.8	1.3	27	3	47	.09	2	.4	1.0	22	KAO				
		8	848	15.84	19	23.66	155	16.72		3.25	1.6	1.1	22	3	42	.08	1	.3	.3	15	SSC				
		8	10	0	39.72	19	21.61	155	18.05		2.82	2.7	2.9	43	3	32	.12	3	.3	.5	26	SWR			
		8	1259	19.33	19	21.74	155	17.98		2.54	1.9	1.7	30	3	50	.11	3	.3	.5	17	SWR				
		8	15	2	37.10	19	19.37	155	11.58		8.34	1.7	1.2	26	2	98	.08	5	.5	1.0	21	SF3			
		8	15	4	5.46	19	21.92	155	18.07		3.12	1.4	1.4	22	4	76	.13	3	.3	.7	15	SWR			
		9	539	37.17	19	18.10	155	15.11		7.43	1.8	1.3	21	0	111	.10	4	.6	1.0	20	SF1				
		9	825	2.46	19	21.65	155	18.26		2.85	1.4	1.4	19	2	68	.09	3	.3	.6	15	SWR				
		9	9	2	21.79	19	21.57	155	7.19		8.66	2.0	1.7	29	2	78	.08	3	.4	.8	21	SF4			
		9	929	28.92	19	22.89	155	17.22		2.24	1.3	1.2	18	5	73	.06	1	.2	.3	14	SSC				
		9	1720	55.20	19	23.69	155	16.85		3.04	1.6	1.3	22	5	54	.07	1	.3	.2	18	SSC				
		9	1723	40.59	19	19.59	155	10.73		8.31	2.1	1.9	35	3	96	.07	5	.3	.6	24	SF3				
		9	1732	13.65	19	21.54	155	18.15		2.17	1.4	.9	18	6	111	.07	4	.3	.7	14	SWR				
		9	1750	40.40	19	17.75	155	12.98		6.63	1.6	1.3	30	3	119	.10	2	.4	.9	20	SF2				
		9	1751	26.52	19	23.26	155	16.81		3.00	2.3	2.5	34	7	41	.10	0	.2	.2	26	SSC				
		9	1820	29.93	19	19.96	155	13.14		8.53	2.3	2.2	41	3	68	.10	5	.4	.6	30	SF2				
		9	19	0	35.63	19	21.98	155	18.10		2.85	1.2	.9	17	5	91	.09	3	.3	.7	13	SWR			
		9	1932	38.72	19	22.84	155	17.01		2.80	1.4	1.4	19	4	76	.06	1	.3	.3	15	SSC				
		9	1941	37.31	19	23.83	155	16.93		2.83	1.7	2.0	23	6	74	.07	1	.3	.2	16	SSC				
		9	2027	7.58	19	22.84	155	17.18		2.54	1.5	1.3	15	5	86	.09	1	.3	.4	10	SSC				
		9	2133	4.33	19	21.72	155	18.06		3.01	2.1	2.4	26	5	88	.08	3	.3	.5	20	SWR				
		9	2253	56.59	19	21.81	155	18.27		2.94	1.6	1.1	20	4	67	.07	4	.3	.6	15	SWR				
		9	2254	24.33	19	21.56	155	18.18		2.99	1.7	1.1	17	4	76	.07	3	.3	.7	14	SWR				
		10	220	21.36	19	22.95	155	17.20		2.21	1.4	1.3	18	6	70	.06	1	.2	.3	14	SSC				
		10	331	49.49	19	22.41	155	17.34		2.53	1.6	1.0	21	6	92	.10	2	.3	.4	16	SSC				

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	AUG	10	332	20.52	19 22.63	155 17.12	2.85 1.4	.7 16	4	85 .07	1	.3	.4 12 SSC				
		10	334	56.24	19 22.54	155 17.19	3.11 1.4	.9 18	5	89 .08	2	.3	.4 14 SSC				
		10	335	18.38	19 22.53	155 17.25	2.88 1.3	.8 15	4	88 .04	2	.3	.4 13 SSC				
		10	339	43.35	19 22.46	155 17.44	2.38 1.1	1.1 16	3	87 .16	2	.4	.6 14 SSC				
		10	342	17.31	19 23.41	155 16.90	2.99 2.0	1.6 21	5	40 .08	0	.3	.2 17 SSC				
		10	343	49.64	19 22.27	155 17.47	2.78 1.4	1.0 17	4	93 .07	2	.3	.5 14 SSC				
		10	344	52.63	19 22.45	155 17.31	2.78 2.0	1.7 22	4	53 .09	2	.3	.4 20 SSC				
		10	347	53.41	19 23.15	155 17.09	2.86	1.3 14	3	63 .08	1	.3	.3 12 SSC				
		10	348	12.19	19 22.37	155 17.42	2.69 1.4	1.5 17	3	56 .07	2	.3	.4 14 SSC				
		10	349	40.15	19 22.35	155 17.23	2.92	1.7 20	4	54 .07	2	.3	.4 18 SSC				
		10	350	38.69	19 22.50	155 17.20	2.84	1.4 20	5	53 .07	2	.3	.4 17 SSC				
		10	351	19.14	19 22.93	155 17.08	2.29	1.5 17	3	49 .08	1	.3	.3 15 SSC				
		10	352	9.59	19 22.87	155 17.16	2.35	1.8 15	4	74 .09	1	.3	.3 13 SSC				
		10	353	46.57	19 22.92	155 16.91	2.92 2.3	2.4 36	4	39 .09	1	.2	.2 23 SSC				
		10	357	35.87	19 22.95	155 17.02	2.65	1.1 15	3	73 .04	1	.3	.3 13 SSC				
		10	357	58.14	19 23.01	155 17.17	2.09	1.1 15	4	77 .08	1	.3	.3 13 SSC				
		10	358	57.92	19 22.10	155 17.40	3.09 2.0	2.1 32	3	53 .09	3	.2	.4 21 SSC				
		10	359	54.76	19 22.28	155 17.46	2.56 2.4	2.8 27	3	53 .10	2	.2	.3 18 SSC				
		10	4 0	55.35	19 22.27	155 17.29	3.08 2.2	2.1 33	4	54 .07	2	.2	.3 22 SSC				
		10	4 2	11.97	19 22.91	155 17.03	2.69	1.3 14	3	73 .09	1	.4	.4 12 SSC				
		10	4 3	28.08	19 22.27	155 17.48	2.98 1.4	.8 19	3	55 .08	2	.3	.5 17 SSC				
		10	4 4	59.70	19 22.99	155 17.02	2.60	.8 15	4	69 .07	1	.3	.3 13 SSC				
		10	4 5	12.13	19 23.10	155 17.12	2.66 1.4	1.7 18	4	64 .10	1	.3	.3 15 SSC				
		10	4 8	46.78	19 22.84	155 16.97	3.57	1.0 10	2	100 .10	1	.5	.6 9 SSC				
		10	4 9	56.92	19 22.96	155 16.98	2.84	1.4 17	4	73 .09	1	.3	.3 15 SSC				
		10	410	59.23	19 23.29	155 16.38	1.97	.7 12	4	72 .08	1	.3	.2 10 SEC				
		10	411	57.25	19 23.44	155 16.97	3.02 1.3	1.7 19	3	46 .09	0	.4	.3 16 SSC				
		10	412	24.94	19 23.18	155 17.05	2.49 1.4	1.9 19	3	62 .04	0	.3	.2 15 SSC				
		10	414	36.72	19 22.93	155 17.09	2.89 1.4	1.6 17	4	71 .08	1	.3	.3 15 SSC				
		10	417	6.55	19 23.61	155 17.00	3.00 2.6	4.3 29	4	38 .10	0	.3	.2 23 SSC				
		10	419	4.09	19 23.28	155 16.98	2.83 2.1	2.0 26	4	58 .08	0	.2	.2 18 SSC				
		10	420	19.79	19 23.02	155 16.91	2.64 2.2	2.4 26	4	39 .09	1	.2	.2 20 SSC				
		10	421	56.51	19 23.84	155 16.74	2.53 2.2	2.9 26	5	68 .10	0	.2	.2 20 SSC				
		10	451	42.30	19 23.53	155 16.85	3.35 2.8	1.9 28	5	36 .10	0	.3	.2 24 SSC				
		10	453	25.20	19 24.48	155 12.79	9.80		6	1 271 .14	3	3.4	3.1 5 SF2				
		10	456	52.86	19 22.80	155 16.24	1.65 2.0	1.9 17	4	58 .07	1	.2	.2 13 SEC				
		10	458	3.06	19 22.86	155 16.83	2.82 2.0	1.2 27	4	41 .08	1	.2	.2 22 SSC				
		10	459	4.89	19 23.38	155 16.80	3.56	1.1 18	2	45 .11	0	.3	.4 15 SSC				
		10	5 0	.29	19 22.87	155 17.58	1.09 1.8	1.6 11	1	101 .14	1	.4	.5 10 SSC				
		10	5 4	22.26	19 23.35	155 16.74	2.90 2.0	1.3 20	5	53 .06	0	.2	.2 14 SSC				
		10	5 6	35.32	19 23.07	155 16.30	1.96	1.0 19	4	67 .07	1	.2	.2 14 SEC				
		10	516	26.79	19 22.92	155 16.36	1.84 2.3	1.5 14	3	84 .08	1	.3	.2 12 SEC				
		10	526	28.24	19 20.11	155 19.46	2.32 1.5	1.4 11	1	113 .09	4	.4	.8 9 SWR				
		10	530	26.49	19 21.15	155 19.19	3.14 2.1	1.1 23	4	49 .08	4	.3	.7 17 SWR				
		10	532	19.58	19 23.00	155 15.86	1.28 3.1	1.9 17	2	69 .11	1	.2	.2 11 SEC				
		10	533	35.43	19 21.31	155 19.37	2.50 2.1	1.7 21	2	51 .10	4	.3	.7 13 SWR				
		10	542	9.38	19 23.09	155 16.51	2.08 4.2	3.8 44	1	42 .16	1	.3	.4 33 SSC				
		10	548	53.59	19 20.70	155 17.66	3.09	1.2 10	2	133 .17	4	.8	1.3 4 SWR				

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		ORIGIN TIME			LAT N		LON W		DEPTH		AMP		DUR		GAP		RMS		MIN		ERH		ERZ NO		
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK					
1981	AUG	10	552	40.22	19	23.17	155	15.93	1.91	2.5	2.2	17	1	71	.13	1	.4	.3	14	SEC					
		10	6 0	55.92	19	23.01	155	16.04	1.90	2.4	1.7	26	1	37	.10	1	.3	.2	20	SEC					
		10	6 5	58.22	19	23.30	155	16.21	2.43	3.1	2.2	39	1	42	.12	1	.3	.2	27	SEC					
		10	614	25.21	19	23.20	155	16.12	1.89	2.4	1.7	23	2	42	.11	2	.2	.2	14	SEC					
		10	617	35.48	19	22.93	155	16.60	2.62		1.2	16	2	86	.08	1	.4	.2	12	SSC					
		10	623	39.28	19	18.47	155	16.94	5.17	3.6	3.9	32	0	115	.14	3	.5	1.4	27	SF1					
		10	630	56.88	19	22.78	155	17.29	2.42		1.3	9	2	146	.13	3	.5	.7	4	SSC					
		10	637	30.45	19	20.66	155	19.87	.69	2.3	2.2	10	1	109	.13	4	.6	1.6	5	SWR					
		10	646	7.20	19	21.54	155	19.50	2.25		1.4	12	1	192	.11	4	1.3	1.5	4	SWR					
		10	7 1	58.70	19	21.49	155	18.98	2.09	2.8	2.4	29	1	44	.12	4	.3	.7	15	SWR					
		10	7 4	34.05	19	21.51	155	18.99	1.43	2.5	1.2	6	2	311	.05	6	1.0	.6	3	SWR					
		10	716	45.98	19	21.04	155	19.12	3.18	2.8	2.4	26	1	45	.12	3	.4	.8	13	SWR					
		10	720	45.25	19	21.39	155	19.00	1.71	2.3	1.7	18	2	88	.09	4	.4	.8	6	SWR					
		10	722	50.11	19	21.13	155	18.76	2.78	2.5	1.7	24	1	48	.14	3	.3	.7	10	SWR					
		10	723	12.88	19	19.04	155	20.42	7.85	3.4	4.0	27	0	111	.16	12	.5	1.9	14	SWR					
		10	732	34.45	19	20.90	155	19.88	5.62	2.6	2.3	28	2	89	.11	7	.4	1.8	13	SWR					
		10	734	50.78	19	20.60	155	20.04	3.82		.8	16	1	88	.09	5	.5	1.3	11	SWR					
		10	737	38.98	19	20.76	155	19.70	7.86	2.6	1.8	17	1	91	.11	7	.5	1.8	10	SWR					
		10	743	28.55	19	20.49	155	20.43	3.11		1.3	11	1	95	.07	5	.5	.9	4	SWR					
		10	747	51.74	19	18.53	155	20.78	1.09	3.4	3.0	40	1	115	.15	5	.4	1.1	20	SWR					
		10	750	43.90	19	21.28	155	19.06	.37	2.4	1.7	18	3	87	.09	5	.3	.5	8	SWR					
		10	8 2	17.33	19	20.53	155	20.33	3.46		1.0	24	1	63	.10	5	.3	1.1	20	SWR					
		10	8 3	58.33	19	20.66	155	20.31	3.04	2.2	1.1	24	1	90	.09	5	.4	1.2	14	SWR					
		10	820	8.74	19	19.07	155	21.11	4.67	4.2	3.9	40	0	106	.14	4	.4	2.0	27	SWR					
		10	841	39.99	19	19.90	155	20.29	2.97	3.1	3.0	49	8	73	.07	5	.2	.5	37	SWR					
		10	847	42.35	19	20.08	155	19.12	4.46		1.3	14	2	106	.12	3	.6	1.5	14	SWR					
		10	851	12.40	19	25.08	155	18.14	5.58	2.4	2.0	19	4	175	.12	2	.6	.7	13	INT					
		10	858	27.76	19	19.90	155	20.35	1.14	2.4	2.4	35	4	73	.10	5	.2	.5	21	SWR					
		10	940	34.97	19	18.39	155	21.56	4.05	4.5	3.8	39	0	123	.20	5	.6	1.3	33	SWR					
		10	959	13.09	19	19.92	155	21.32	2.92	2.1	1.3	24	2	78	.11	3	.3	.7	17	SWR					
		10	1014	21.17	19	17.70	155	21.16	6.85	2.7	2.2	42	1	123	.16	5	.5	1.0	28	SWR					
		10	1024	6.78	19	18.88	155	17.57	5.42	2.2	1.5	32	3	128	.17	2	.5	1.3	25	SWR					
		10	1038	22.38	19	19.83	155	20.84	1.80	2.7	2.5	38	3	78	.12	4	.3	.6	24	SWR					
		10	1043	58.96	19	19.81	155	18.57	6.05	3.1	2.5	46	4	63	.13	2	.4	.7	34	SWR					
		10	12 1	44.76	19	18.51	155	21.11	3.13	1.8	1.6	27	2	112	.11	4	.4	.9	20	SWR					
		10	1216	34.19	19	17.90	155	21.55	6.74	2.2	1.7	27	1	118	.13	5	.5	1.2	22	SWR					
		10	13 2	57.77	19	20.67	155	20.44	.01	3.2	2.9	36	2	74	.16	5	.4	.7	20	SWR					
		10	13 5	52.05	19	19.41	155	21.92	5.02		1.1	28	3	88	.12	6	.4	2.4	18	SWR					
		10	1314	.95	19	24.55	155	16.19	2.76		1.0	15	2	129	.06	1	.4	.3	12	SNC					
		10	1329	11.28	19	17.74	155	21.65	7.10	3.6	3.4	47	3	119	.18	5	.5	.9	42	SWR					
		10	1432	53.26	19	19.24	155	22.59	5.38	2.3	2.2	32	2	88	.14	7	.4	1.6	24	SWR					
		10	1458	3.03	19	19.24	155	22.74	1.87	2.2	2.3	30	1	87	.11	8	.4	1.6	22	SWR					
		10	15 5	16.92	19	19.27	155	22.78	6.65	2.6	1.9	45	1	86	.14	8	.4	.9	36	SWR					
		10	1510	52.11	19	18.88	155	22.95	1.05	2.2	1.9	32	1	91	.13	8	.4	2.2	22	SWR					
		10	1529	48.24	19	18.81	155	22.83	5.00	2.4	2.0	35	1	94	.12	8	.4	2.9	23	SWR					
		10	1542	45.41	19	18.82	155	23.03	3.39	2.8	2.1	44	6	91	.10	3	.3	.5	38	SWR					
		10	1559	8.15	19	18.73	155	23.04	8.42	2.9	2.7	47	8	92	.11	3	.3	.5	39	SWR					
		10	1641	22.67	19	18.58	155	23.02	8.47	2.6	2.5	48	9	94	.14	3	.3	.6	35	SWR					

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR SEC	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERM KM	ERZ NO KM FM	REMK
1981	AUG	10	1722	20.12	19 18.12	155 23.21	2.83	2.4	2.6	39	5	96	.09	4	.3	.5 27	SWR
		10	1729	26.09	19 18.37	155 23.61	4.65	2.4	2.6	40	6	89	.10	3	.3	1.0 31	SWR
		10	1731	24.71	19 18.42	155 23.58	4.51	2.5	2.2	38	7	88	.13	3	.3	1.0 30	SWR
		10	1736	20.68	19 16.00	155 22.52	3.80	2.4	2.3	36	1	134	.11	4	.3	.9 27	SWR
		10	1747	11.90	19 17.65	155 23.28	2.96	2.7	3.3	42	6	99	.10	5	.2	.6 28	SWR
		10	1754	30.23	19 18.02	155 23.56	3.09	2.1	1.9	28	6	92	.11	4	.3	.7 26	SWR
		10	1811	54.22	19 17.91	155 23.06	2.91	2.4	2.3	34	6	100	.11	4	.3	.7 26	SWR
		10	1815	56.65	19 17.53	155 23.46	3.32	2.4	2.2	36	4	98	.09	5	.3	.8 29	SWR
		10	1825	44.77	19 18.37	155 23.73	4.36	2.1	1.9	29	4	87	.08	4	.3	.9 24	SWR
		10	1853	46.63	19 18.01	155 23.52	5.19	3.6	3.1	47	8	93	.12	4	.3	.8 34	SWR
		10	19 7	44.71	19 17.95	155 23.42	3.35	2.4	1.9	31	4	94	.11	4	.3	.7 24	SWR
		10	1917	17.19	19 19.49	155 18.95	4.44	3.3	3.1	25	3	53	.14	3	.4	1.0 19	SWR
		10	1923	43.37	19 14.45	155 22.17	3.25	3.3	2.2	37	1	156	.10	3	.3	.7 26	SWR
		10	1938	28.26	19 17.87	155 23.25	2.50	2.4	2.0	33	6	97	.10	4	.3	.6 27	SWR
		10	1953	48.33	19 18.11	155 23.69	5.36	2.4	2.2	32	1	89	.12	4	.4	1.3 21	SWR
		10	2015	50.91	19 19.40	155 21.16	1.18	2.4	2.5	33	1	89	.13	4	.4	.8 15	SWR
		10	2023	8.62	19 18.00	155 23.72	4.96	2.4	2.7	41	3	90	.13	4	.4	1.3 24	SWR
		10	2032	36.03	19 15.81	155 23.92	3.04	2.0	1.7	5	0	122	.09	3	.8	1.9 5	SWR
		10	2035	59.87	19 18.07	155 23.69	4.91	2.6	2.5	42	4	89	.14	4	.4	1.5 26	SWR
		10	2046	29.02	19 18.66	155 23.14	2.76	3.0	1.9	17	2	91	.15	3	.5	.7 10	SWR
		10	2058	30.18	19 16.93	155 25.57	7.64	3.3	3.0	32	3	61	.17	6	.5	1.2 28	LSW
		10	2114	34.86	19 24.29	155 15.91	2.50	2.7	2.3	31	4	44	.13	1	.3	.3 24	SEC
		10	2127	50.17	19 24.73	155 16.78	2.67	1.8	1.0	13	3	139	.08	1	.5	.3 9	SNC
		10	2143	9.36	19 18.30	155 24.02	1.60	2.1	1.9	21	1	88	.12	7	.4	1.8 13	SWR
		10	2153	52.69	19 18.30	155 23.60	.57	2.3	2.3	38	4	86	.14	4	.3	.6 24	SWR
		10	22 8	55.92	19 18.94	155 20.25	.96	2.4	1.9	12	1	152	.19	5	.9	1.4 4	SWR
		10	2223	21.88	19 15.21	155 22.38	2.88	2.7	2.7	37	2	146	.12	3	.4	.8 27	SWR
		10	2256	12.15	19 17.27	155 23.26	3.51	2.1	2.8	18	3	103	.11	5	.4	1.2 10	SWR
		10	2256	36.83	19 20.05	155 20.93	1.10	2.5	2.6	25	0	75	.11	4	.4	1.0 13	SWR
		10	23 7	12.84	19 17.65	155 23.64	3.50	2.2	1.9	21	3	94	.11	5	.3	1.0 14	SWR
		10	2317	31.51	19 17.29	155 22.31	.47	1.9	1.9	19	1	118	.11	6	.4	1.0 12	SWR
		10	2318	20.87	19 15.86	155 22.95	7.08	1.7	1.3	26	5	132	.11	3	.5	1.1 22	SWR
		10	2326	45.41	19 17.61	155 23.52	3.37	2.4	2.5	37	4	96	.11	5	.3	1.0 29	SWR
		10	2328	18.42	19 18.60	155 23.27	3.08	2.0	1.2	22	2	91	.11	3	.3	.7 15	SWR
		10	2328	53.77	19 19.73	155 21.76	3.22	1.8	1.4	24	5	82	.10	3	.4	.6 19	SWR
		10	2335	11.95	19 18.09	155 23.65	4.04	2.8	3.1	32	3	90	.13	4	.4	1.4 23	SWR
		10	2343	40.84	19 16.05	155 22.04	3.73	1.8	1.5	25	4	138	.12	5	.5	1.7 20	SWR
		10	2349	51.50	19 17.29	155 23.57	3.31	1.9	2.1	23	2	98	.08	5	.4	1.1 17	SWR
		11	0 6	32.66	19 17.68	155 23.38	3.36	2.4	2.5	42	4	98	.12	5	.3	.9 26	SWR
		11	011	35.71	19 20.34	155 20.71	1.29	2.2	1.9	24	2	68	.10	5	.3	.9 18	SWR
		11	020	15.42	19 13.50	155 21.48	2.20	2.4	2.0	40	3	167	.12	5	.5	.8 21	SWR
		11	047	7.18	19 19.73	155 12.30	7.68	2.4	1.8	40	3	83	.12	5	.4	.6 30	SF2
		11	1 8	50.79	19 13.00	155 21.88	3.41	1.9	1.3	21	0	168	.09	5	.7	1.2 11	SWR
		11	123	5.52	19 22.29	155 17.17	4.00	2.1	1.4	10	1	115	.12	2	.7	.9 5	SNC
		11	130	12.82	19 18.16	155 23.32	3.94	2.3	2.3	38	4	94	.14	4	.4	1.2 27	SWR
		11	152	54.73	19 16.87	155 23.64	3.09	1.4	1.3	21	1	99	.13	5	.4	1.3 13	SWR
		11	159	58.88	19 15.55	155 21.77	8.05	2.2	1.8	40	3	145	.14	5	.6	.7 30	SWR
		11	214	32.61	19 18.17	155 23.55	3.86	2.7	2.6	44	4	91	.14	4	.3	1.1 23	SWR

HVO EARTHQUAKE SUMMARY LIST

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		ORIGIN TIME			LAT N		LON W		DEPTH			AMP		DUR		GAP		RMS	MIN	ERM	ERZ NO	
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	FM	KM	FM	REMK	
1981	AUG	11	222	14.98	19	16.30	155	14.92	5.77	2.1	1.4	31	1	178	.12	3	.7	1.2	21	SF1		
		11	226	42.61	19	19.23	155	22.17	5.53	1.6	1.4	25	4	90	.10	3	.4	2.0	21	SWR		
		11	229	53.82	19	13.75	155	22.07	3.65	2.0		30	1	162	.12	4	.5	1.0	14	SWR		
		11	245	1.85	19	16.69	155	21.34	7.00	2.2	2.3	45	7	134	.13	5	.4	.7	32	SWR		
		11	3 2	45.74	19	17.39	155	23.13	3.10	1.9	1.1	20	4	104	.07	5	.4	1.0	18	SWR		
		11	3 4	13.56	19	16.59	155	22.24	6.51	2.2	1.8	38	2	131	.14	5	.4	1.1	27	SWR		
		11	314	54.65	19	20.37	155	20.34	5.17	1.7	1.4	25	3	65	.12	5	.4	1.0	18	SWR		
		11	329	31.54	19	16.98	155	24.09	2.64	2.9	2.9	42	2	89	.14	5	.3	1.1	23	SWR		
		11	340	59.90	19	16.70	155	24.01	5.21	1.8	1.3	23	3	106	.11	4	.4	1.2	17	SWR		
		11	345	49.28	19	17.84	155	23.68	2.71	2.6	2.1	29	1	92	.13	4	.4	1.0	18	SWR		
		11	353	36.33	19	17.45	155	23.33	5.78	3.3	2.8	45	2	100	.12	5	.4	1.0	36	SWR		
		11	4 6	23.56	19	24.08	155	15.66	3.11	1.8	1.0	14	4	117	.03	2	.4	.4	7	SEC		
		11	421	50.25	19	18.19	155	23.53	1.38	2.8	2.9	44	3	91	.12	4	.3	.7	34	SWR		
		11	446	40.75	19	19.69	155	21.50	3.40	1.8	1.3	21	3	82	.08	3	.4	.8	14	SWR		
		11	456	50.38	19	20.71	155	20.40	2.81	1.8	1.4	21	2	61	.10	5	.4	.9	14	SWR		
		11	5 8	5.93	19	18.06	155	23.34	2.46	2.1	1.5	25	2	94	.09	4	.3	.7	12	SWR		
		11	539	57.06	19	18.12	155	23.57	3.79	2.5	2.5	44	5	91	.13	4	.4	1.1	33	SWR		
		11	559	21.52	19	13.19	155	20.47	.01	1.9	1.1	25	1	174	.09	7	.5	.6	14	SWR		
		11	6 1	9.10	19	24.94	155	18.76	1.54	1.8	1.4	10	1	150	.08	0	.5	.3	3	SNC		
		11	611	26.32	19	20.40	155	20.56	2.46	1.9	1.1	25	4	124	.11	5	.4	.9	21	SWR		
		11	627	39.64	19	20.05	155	20.65	.62	2.0	1.1	20	1	73	.18	5	.4	1.0	14	SWR		
		11	655	32.05	19	19.85	155	20.87	1.02	2.8	2.8	38	1	78	.11	4	.3	.7	19	SWR		
		11	751	54.21	19	20.35	155	20.57	1.19	2.6	2.1	27	2	67	.09	5	.3	.6	20	SWR		
		11	758	26.66	19	17.80	155	23.39	4.54	2.0	1.1	26	1	96	.09	5	.4	1.8	20	SWR		
		11	830	36.01	19	14.72	155	20.63	1.23	2.4	1.4	33	3	159	.09	6	.5	.7	24	SWR		
		11	847	29.83	19	13.66	155	23.30	8.88	3.1	2.4	40	1	157	.12	11	.5	.7	32	SWR		
		11	849	27.24	19	19.73	155	21.40	3.47	2.0	1.1	24	2	82	.09	3	.4	.8	13	SWR		
		11	856	49.73	19	18.80	155	20.40	.03	2.1	1.2	14	0	184	.19	3	1.3	3.2	8	SWR		
		11	9 3	51.01	19	18.17	155	15.91	9.27	2.7	1.5	38	1	137	.11	4	.5	.6	30	SF1		
		11	911	22.44	19	16.69	155	23.69	5.49	2.4	1.8	27	1	122	.11	7	.5	2.3	19	SWR		
		11	959	35.67	19	19.78	155	21.56	3.35	1.9	1.4	24	3	82	.07	3	.3	.7	19	SWR		
		11	1024	58.81	19	20.45	155	20.34	1.48	2.5	2.6	19	1	64	.09	5	.3	.9	18	SWR		
		11	1027	35.68	19	19.74	155	6.89	7.18	2.3	2.5	28	3	116	.10	5	.4	1.0	21	SF4		
		11	1030	10.92	19	24.30	155	17.22	2.54	1.8	2.0	12	4	92	.10	1	.4	.4	10	SSC		
		11	1040	18.59	19	20.66	155	19.98	2.58	2.1		22	3	58	.10	5	.3	.8	17	SWR		
		11	11 1	27.83	19	19.75	155	21.31	2.84	1.8	1.1	18	2	82	.11	4	.4	.8	13	SWR		
		11	1140	56.45	19	20.38	155	20.62	2.09	1.8	1.0	20	2	99	.10	5	.4	.9	17	SWR		
		11	1143	58.65	19	19.89	155	21.56	3.65	2.0	1.1	27	3	79	.11	3	.4	.9	20	SWR		
		11	12 0	49.52	19	20.87	155	19.51	3.56	1.6	1.3	22	4	51	.09	4	.3	.9	16	SWR		
		11	1241	58.56	19	19.98	155	21.33	3.17	1.8	1.3	22	3	77	.07	3	.3	.6	17	SWR		
		11	13 9	23.19	19	17.66	155	23.46	3.00	2.3	2.4	26	3	97	.10	5	.4	.9	16	SWR		
		11	1320	36.23	19	16.60	155	15.24	10.47	2.2	1.7	29	5	207	.06	3	.8	.4	21	SF1		
		11	1331	17.69	19	20.74	155	19.22	6.01	2.4	2.6	14	1	59	.19	3	.7	2.7	6	SWR		
		11	1332	41.80	19	18.02	155	15.64	7.75	2.0	1.7	35	1	121	.11	5	.5	.7	24	SF1		
		11	1334	27.72	19	20.49	155	20.19	2.46	1.8	1.6	20	4	62	.10	5	.4	.9	15	SWR		
		11	1345	58.51	19	24.57	155	16.61	.87	2.5	2.6	10	1	134	.12	1	.3	.4	7	SNC		
		11	1388	28.17	19	19.61	155	21.87	3.18	1.8	1.4	23	3	85	.10	3	.4	.6	17	SWR		
		11	1352	45.32	19	17.44	155	23.80	3.52	2.2	2.0	29	3	92	.13	5	.4	1.3	21	SWR		

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	DEG	MIN	LAT N	LON W	DEPTH	AMP	DIR	GAP	RMS	MIN	ERH	ERZ	NO	REMK
									KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	
1981	AUG	11	1355	19.83	19	20.80	155 19.75	3.29 1.6 1.1	21	4	53	.08	4	.3	.8	17	SWR	
		11	14 7	10.68	19	17.96	155 15.93	7.39 1.7 1.5	32	2	123	.10	5	.5	.9	21	SF1	
		11	1436	8.18	19	20.24	155 21.26	2.92 1.8 1.7	23	5	72	.10	4	.3	.7	16	SWR	
		11	1440	37.59	19	22.88	155 15.02	1.68 1.8 2.0	21	4	66	.09	2	.3	.3	12	SEC	
		11	1455	31.36	19	13.48	155 20.94	.15 2.0 1.9	28	0	159	.13	6	.6	2.0	25	SWR	*
		11	15 4	17.95	19	13.19	155 20.56	.86 2.9 2.8	43	2	171	.11	6	.5	.9	27	SWR	
		11	15 6	54.07	19	13.06	155 20.54	.02 1.8 1.4	24	1	184	.12	7	.6	.8	17	SWR	*
		11	1540	41.96	19	17.58	155 23.84	3.06 2.1 1.8	30	3	91	.12	5	.4	1.2	25	SWR	
		11	1548	30.46	19	18.88	155 23.10	4.19 2.0	27	3	89	.10	3	.4	1.0	21	SWR	
		11	1553	52.51	19	20.18	155 21.04	1.35 1.4 1.9	16	0	73	.12	4	.4	1.0	13	SWR	
		11	1652	24.01	19	20.40	155 20.49	1.68 1.8 1.9	19	3	66	.09	5	.3	.8	15	SWR	
		11	1653	9.95	19	20.42	155 20.56	3.12 1.7 1.9	20	4	66	.08	5	.3	.9	17	SWR	
		11	17 2	33.48	19	18.13	155 23.54	4.18 2.2 2.5	36	6	91	.10	4	.3	.9	25	SWR	
		11	17 5	46.20	19	20.41	155 20.34	3.35 1.4 1.4	19	2	64	.08	5	.4	1.0	17	SWR	
		11	1733	46.07	19	17.76	155 23.29	3.41 1.7 1.5	28	5	98	.10	5	.3	.9	25	SWR	
		11	1756	29.91	19	15.98	155 23.28	2.13 2.4 2.1	31	4	121	.10	3	.4	.8	21	SWR	
		11	18 0	4.04	19	17.95	155 23.16	3.39 2.3 2.5	32	6	98	.08	4	.3	.7	24	SWR	
		11	18 5	2.77	19	18.61	155 22.03	6.45 1.3	22	4	103	.19	4	.6	1.4	19	SWR	
		11	1814	27.21	19	20.09	155 21.41	3.78 2.0	35	7	76	.09	3	.3	.7	26	SWR	
		11	1820	42.39	19	12.05	155 20.70	7.28 3.3 3.5	44	3	193	.11	7	.6	1.2	32	SWR	
		11	1851	35.97	19	20.71	155 19.77	3.57 1.3 1.1	17	1	55	.06	4	.4	1.0	11	SWR	
		11	1855	55.67	19	17.56	155 23.19	2.98 1.7 1.8	24	3	101	.08	5	.4	.9	18	SWR	
		11	1919	56.53	19	20.45	155 20.44	3.34 2.0 1.9	26	5	121	.08	5	.3	.9	21	SWR	
		11	1956	27.61	19	20.28	155 20.96	1.80 1.8 2.8	28	4	70	.09	4	.3	.6	18	SWR	
		11	1959	50.89	19	17.48	155 23.26	2.91 1.7 1.8	25	3	101	.09	5	.3	.9	20	SWR	
		11	20 5	17.39	19	18.04	155 23.24	3.92 1.8 1.9	26	5	96	.09	4	.4	.9	17	SWR	
		11	20 6	43.18	19	20.96	155 19.52	3.70 1.6 1.3	22	3	49	.07	4	.3	.9	18	SWR	
		11	2025	50.93	19	16.05	155 23.45	1.53 2.2 1.8	27	5	114	.09	3	.3	.7	23	SWR	
		11	2038	1.04	19	17.58	155 23.01	3.24 1.8 1.8	27	3	104	.09	5	.3	.9	18	SWR	
		11	2050	54.53	19	20.26	155 20.41	2.49 1.7 1.7	15	0	67	.08	5	.4	.9	14	SWR	
		11	2059	21.66	19	19.81	155 21.23	2.92 1.3 1.8	18	3	80	.06	4	.4	.7	17	SWR	
		11	2133	20.05	19	16.35	155 22.07	3.13 1.8 1.8	24	4	134	.11	5	.4	1.3	20	SWR	
		11	2134	34.40	19	17.68	155 23.33	2.85 2.0 2.5	26	3	99	.07	5	.3	.8	22	SWR	
		11	2144	13.53	19	17.41	155 23.06	2.83 2.0 2.2	25	4	105	.09	5	.4	1.1	23	SWR	
		11	2240	29.16	19	20.23	155 20.75	1.79 1.4 1.6	18	3	70	.08	4	.3	.8	16	SWR	
		11	2256	40.12	19	13.89	155 22.80	2.25 2.0 2.4	24	2	158	.10	2	.5	.4	15	SWR	
		11	23 6	34.76	19	20.87	155 19.56	3.55 1.7 1.4	22	2	51	.07	4	.3	.8	19	SWR	
		11	23 8	11.01	19	19.67	155 21.48	3.24 1.8 1.6	26	4	83	.10	3	.4	.7	23	SWR	
		11	2312	36.40	19	17.89	155 23.22	3.31 1.7 1.3	26	2	98	.08	4	.4	1.0	22	SWR	
		11	2340	20.50	19	20.13	155 20.61	3.31 1.5 1.7	10	0	135	.06	5	.5	1.3	9	SWR	
		12	016	51.41	19	17.95	155 23.26	3.49 2.0 1.6	28	2	97	.12	4	.4	1.1	21	SWR	
		12	133	25.38	19	20.30	155 20.47	3.78 1.3 1.6	21	3	98	.07	5	.4	1.0	17	SWR	
		12	138	31.66	19	20.03	155 21.20	3.19 1.8 1.6	24	4	76	.07	4	.3	.7	19	SWR	
		12	140	.38	19	20.46	155 20.43	1.34 2.4 2.7	18	0	64	.07	5	.3	.9	12	SWR	
		12	144	38.04	19	20.57	155 20.23	3.03 1.1 1.1	21	3	61	.07	5	.3	.9	19	SWR	
		12	242	19.72	19	19.91	155 21.47	3.38 1.6 1.4	21	2	79	.11	3	.4	.7	18	SWR	
		12	246	46.13	19	19.77	155 21.45	3.00 1.5 1.1	22	4	82	.06	3	.3	.6	15	SWR	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N	LON W	DEPTH	AMP	DIR	GAP	RMS	MIN	ERH	ERZ	NO	REMK			
					DEG	MIN	DEG	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK
1981	AUG	12	250	43.64	19	19.08	155 22.48	3.16	2.1	1.9	21	4	91	.08	3	.3	.6	15	SWR
		12	310	44.29	19	15.08	155 21.09	10.70	2.6	2.6	12	1	184	.07	7	1.0	1.5	6	SWR
		12	4 7	40.38	19	17.68	155 23.55	3.61	1.7	1.5	27	2	95	.13	5	.4	1.4	23	SWR
		12	416	29.37	19	17.43	155 23.48	3.08	1.8	1.6	27	2	98	.13	5	.4	1.1	19	SWR
		12	423	46.96	19	21.30	155 18.80	3.32	1.2	1.9	20	4	64	.09	3	.3	.8	15	SWR
		12	451	9.68	19	20.32	155 20.42	3.38	1.7	1.6	21	2	66	.06	5	.4	1.0	18	SWR
		12	453	32.85	19	18.97	155 22.97	4.05	1.4	1.1	25	3	90	.11	2	.4	.9	16	SWR
		12	5 7	25.56	19	21.36	155 18.72	3.35	1.2	1.4	19	3	62	.09	3	.3	.7	17	SWR
		12	540	52.86	19	19.71	155 21.59	3.27	1.4	1.1	23	4	83	.10	3	.4	.8	19	SWR
		12	6 3	36.75	19	21.08	155 17.94	2.66	1.2	1.4	9	1	136	.07	2	.4	.6	5	SWR
		12	6 4	1.99	19	19.60	155 21.65	3.35	1.3	1.1	20	3	88	.06	3	.4	.7	17	SWR
		12	620	22.90	19	24.44	155 16.35	.16	2.3	2.9	18	5	132	.13	1	.2	.3	11	SEC L
		12	651	25.15	19	21.34	155 18.33	30.56	2.1	1.8	41	1	41	.10	3	.7	1.0	39	DEP
		12	7 1	17.93	19	20.45	155 20.49	.03	2.1	2.2	17	1	65	.09	5	.3	1.1	9	SWR
		12	717	14.62	19	19.73	155 21.51	4.24	2.1	1.8	29	6	82	.09	3	.4	1.0	23	SWR
		12	732	32.79	19	16.22	155 22.66	3.34	2.1	2.1	31	4	131	.13	4	.4	1.2	24	SWR
		12	734	57.49	19	21.32	155 18.82	3.48	1.5	1.6	24	4	54	.10	3	.3	.7	17	SWR
		12	846	15.19	19	24.54	155 16.44	.48	1.5	1.0	10	2	142	.09	1	.2	.3	8	SNC
		12	848	.84	19	19.68	155 21.51	3.20	1.0	1.1	15	3	167	.05	3	.6	.7	12	SWR
		12	848	53.46	19	19.80	155 21.56	3.26	1.8	1.3	16	3	81	.08	3	.4	.7	15	SWR
		12	855	26.83	19	20.25	155 6.34	8.56	1.8	1.5	23	1	113	.06	5	.5	.8	18	SF4
		12	857	28.30	19	20.66	155 20.56	3.07	1.5	1.7	22	5	63	.09	5	.3	.9	20	SWR
		12	9 5	46.41	19	17.99	155 23.19	3.50	1.4	1.5	19	3	103	.09	4	.4	.9	17	SWR
		12	9 8	17.96	19	17.85	155 23.03	3.41	1.2	1.2	17	3	107	.05	4	.4	.8	12	SWR
		12	916	13.04	19	19.58	155 21.48	3.34	1.9	1.3	14	3	171	.08	3	.6	.7	13	SWR
		12	920	59.65	19	17.52	155 23.48	2.52	1.0	1.0	14	3	106	.04	5	.4	.8	11	SWR
		12	924	37.30	19	20.25	155 20.53	3.53	1.1	1.2	19	5	129	.07	5	.4	1.0	18	SWR
		12	938	5.62	19	17.07	155 21.71	3.58	1.1	1.2	18	2	128	.12	6	.5	1.6	14	SWR
		12	945	38.64	19	20.36	155 20.91	1.20	1.7	1.9	11	0	130	.08	4	.4	1.3	10	SWR
		12	952	35.19	19	18.61	155 23.21	3.95	1.1	1.2	18	1	92	.09	3	.4	1.0	12	SWR
		12	10 1	13.58	19	20.37	155 21.18	3.07	1.8	1.3	11	3	172	.04	4	.6	.7	7	SWR
		12	1016	21.67	19	20.40	155 20.37	3.27	1.4	1.4	21	3	65	.06	5	.4	.9	17	SWR
		12	1058	4.65	19	19.89	155 21.03	2.47	1.5	1.7	16	1	77	.08	4	.4	.9	13	SWR
		12	11 3	30.75	19	20.85	155 19.65	3.56	1.0	1.1	14	1	99	.06	4	.4	1.1	13	SWR
		12	11 8	51.25	19	19.61	155 21.51	3.56	1.1	1.9	15	2	85	.09	3	.5	.8	14	SWR
		12	1111	23.61	19	19.71	155 21.41	3.40	1.2	1.0	15	3	82	.06	3	.4	.6	13	SWR
		12	1146	1.82	19	20.10	155 21.24	3.40	1.9	1.9	25	4	75	.12	4	.4	.9	17	SWR
		12	1211	28.81	19	19.66	155 21.67	3.55	1.6	1.4	24	3	83	.10	3	.4	.7	16	SWR
		12	1214	14.88	19	18.16	155 23.20	3.98	1.7	1.8	16	1	100	.06	4	.4	1.2	15	SWR
		12	1218	3.18	19	21.28	155 18.88	3.42	1.2	1.4	17	3	81	.07	3	.3	.7	15	SWR
		12	1218	43.06	19	21.25	155 18.91	3.61	1.2	1.1	17	2	82	.04	3	.3	.8	15	SWR
		12	1227	46.68	19	19.91	155 20.85	1.12	2.4	2.1	28	2	77	.11	4	.3	.8	19	SWR
		12	1228	27.64	19	20.44	155 20.52	1.18	2.2	2.3	17	2	66	.07	5	.3	.8	11	SWR
		12	1244	.14	19	19.79	155 21.54	3.26	1.9	2.0	31	4	81	.11	3	.3	.7	21	SWR
		12	1257	44.93	19	20.98	155 19.51	3.31	1.6	1.2	21	4	76	.08	4	.3	.9	20	SWR
		12	13 2	47.68	19	20.38	155 20.59	.97	1.4	1.1	14	0	67	.10	5	.4	1.1	9	SWR
		12	13 8	29.71	19	20.13	155 20.94	2.49	1.0	1.6	23	4	73	.08	4	.4	.8	12	SWR
		12	1331	40.58	19	18.76	155 22.89	3.46	1.8	1.5	23	1	94	.08	3	.4	.8	17	SWR

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	AUG	12	1334	23.09	19 19.60	155 21.69	3.26	1.6	1.4	17	1	84	.08	3	.5	.8 15	SWR
		12	1339	2.60	19 20.27	155 20.47	3.39	1.2	1.0	16	3	127	.07	5	.4	1.2 14	SWR
		12	1355	13.31	19 19.48	155 21.44	3.18	.8	1.1	18	2	175	.14	4	1.0	1.0 9	SWR
		12	1356	17.39	19 20.09	155 21.43	3.71	.8	1.4	17	3	76	.12	3	.5	.9 11	SWR
		12	1357	13.44	19 18.92	155 22.82	3.61	1.0	1.2	17	1	91	.09	3	.5	.8 14	SWR
		12	14	6 48.56	19 16.44	155 23.72	4.93	1.3	1.4	18	3	102	.10	4	.4	1.6 11	SWR
		12	1416	24.52	19 16.86	155 22.17	6.82	1.3	1.3	21	2	127	.10	6	.4	1.2 14	SWR
		12	1418	17.97	19 17.14	155 23.35	3.46	1.1	1.1	18	1	114	.09	5	.4	1.3 11	SWR
		12	1420	49.94	19 17.31	155 23.53	2.44	1.3	.8	16	2	98	.10	5	.4	.9 12	SWR
		12	1425	26.15	19 18.83	155 23.23	3.88	1.0	1.3	15	1	114	.10	3	.5	.8 11	SWR
		12	1431	57.90	19 21.10	155 18.80	3.99	1.7	.8	18	3	83	.08	3	.4	1.0 14	SWR
		12	1444	49.47	19 19.73	155 21.49	3.31	.9	1.0	13	3	83	.05	3	.5	.7 11	SWR
		12	15	1 8.79	19 18.89	155 23.05	4.01	1.3	1.5	22	3	90	.10	3	.4	.8 13	SWR
		12	15	7 30.90	19 21.34	155 18.83	4.18	1.5	1.6	22	5	64	.10	3	.4	1.1 21	SWR
		12	1512	19.80	19 17.51	155 23.17	2.67	1.2	1.2	18	3	103	.07	5	.4	.9 17	SWR
		12	1514	22.33	19 24.99	155 16.37	5.64	1.3	.8	12	3	156	.13	1	.9	1.2 9	INT
		12	1514	39.27	19 17.42	155 23.27	2.85	1.3	1.7	14	2	111	.06	5	.4	.9 11	SWR
		12	1522	.90	19 20.46	155 20.52	2.96	1.3	1.3	18	4	65	.08	5	.3	.9 16	SWR
		12	1553	9.28	19 17.85	155 23.18	3.08	1.1	1.0	13	2	105	.07	4	.4	.8 10	SWR
		12	1553	32.44	19 17.56	155 20.90	6.59	2.0	1.8	29	2	126	.10	4	.4	1.1 18	SWR
		12	16	1 17.72	19 19.23	155 21.71	4.43	1.6	1.3	24	4	92	.06	3	.3	.9 21	SWR
		12	16	5 18.64	19 19.78	155 21.23	2.95	1.1	1.3	18	2	80	.09	4	.4	.7 14	SWR
		12	16	8 12.63	19 20.38	155 20.33	3.11	1.3	1.1	16	3	121	.08	5	.4	1.1 15	SWR
		12	1618	22.89	19 17.45	155 23.66	3.22	1.9	2.4	28	2	95	.12	5	.4	1.2 19	SWR
		12	1632	33.93	19 20.63	155 20.61	2.83	1.0	1.2	20	3	60	.09	5	.3	.8 16	SWR
		12	17	1 35.52	19 16.21	155 22.75	7.10	1.3	1.3	22	3	148	.10	4	.5	1.2 20	SWR
		12	17	3 7.49	19 23.67	155 16.35	.92	2.0	2.2	13	2	88	.15	1	.3	.3 4	SEC
		12	1710	11.05	19 17.60	155 23.67	3.21	1.0	1.1	19	3	120	.10	5	.4	1.1 14	SWR
		12	1710	41.57	19 18.23	155 23.30	3.43	1.7	1.6	19	2	93	.09	4	.4	.9 16	SWR
		12	1716	32.26	19 17.96	155 23.29	3.46	1.2	1.3	17	3	96	.10	4	.4	1.0 13	SWR
		12	1719	24.77	19 16.38	155 22.37	5.53	1.2	1.1	13	3	133	.10	5	.5	1.8 8	SWR
		12	1733	58.53	19 24.29	155 16.07	.03	2.1	2.2	10	2	126	.24	2	.3	.9 3	SEC
		12	1736	20.61	19 20.96	155 19.54	3.06	1.3	.8	20	3	77	.08	4	.3	.9 18	SWR
		12	1744	4.29	19 20.01	155 21.13	2.33	1.0	1.0	19	5	76	.09	4	.3	.6 15	SWR
		12	1753	15.55	19 21.22	155 18.86	3.39	1.1	1.2	20	4	82	.07	3	.3	.7 19	SWR
		12	18	2 30.23	19 20.45	155 20.52	3.00	1.3	1.0	21	5	66	.08	5	.3	.9 19	SWR
		12	1813	51.71	19 17.36	155 23.69	2.50	1.1	1.4	25	3	95	.09	5	.3	1.0 21	SWR
		12	1831	11.61	19 20.27	155 20.38	3.18	1.4	.8	23	4	67	.06	5	.3	.8 19	SWR
		12	1832	56.92	19 20.96	155 19.28	3.75	.8	.6	20	4	91	.08	4	.4	1.0 16	SWR
		12	1834	33.03	19 20.30	155 20.47	3.23	.9	1.1	20	4	126	.07	5	.3	.9 18	SWR
		12	1840	20.14	19 17.88	155 23.12	3.33	1.0	.6	19	2	99	.08	4	.4	1.0 15	SWR
		12	1915	23.61	19 22.25	155 17.44	3.02	.8	1.0	10	2	166	.07	2	.6	.5 8	SSC
		12	1917	25.14	19 18.08	155 20.41	8.90	.9	.9	12	2	166	.12	6	.7	1.6 8	SWR
		12	1921	42.12	19 17.83	155 23.38	2.59	1.2	.8	17	3	96	.10	4	.4	.9 13	SWR
		12	1924	14.36	19 17.22	155 22.21	5.43	1.0	.9	18	2	120	.09	6	.5	2.1 15	SWR
		12	1942	56.83	19 19.61	155 21.51	2.93	1.2	1.3	21	2	85	.06	3	.4	.7 16	SWR
		12	1949	4.36	19 20.99	155 19.52	3.23	1.0	.8	17	2	76	.10	4	.4	1.0 17	SWR
		12	1951	7.05	19 18.05	155 23.44	3.67	1.7	1.8	21	1	99	.12	4	.4	1.2 15	SWR

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	AUG	12	2017	55.81	19 20.53	155 20.28	2.66	1.1	1.1	19	3	62	.08	5	.3	.9 14	SWR
		12	2018	48.70	19 19.89	155 10.24	8.21	1.7	1.1	21	3	89	.06	4	.6	1.0 15	SWR
		12	2020	40.34	19 19.74	155 21.35	3.00	1.3	1.1	18	3	82	.07	4	.4	.7 15	SWR
		12	2022	.72	19 17.35	155 23.97	2.54	1.3	1.0	17	3	90	.09	5	.4	1.1 13	SWR
		12	2030	38.55	19 21.69	155 18.34	7.98	2.0	1.4	10	1	103	.13	3	.9	2.2 7	SWR
		12	2033	53.95	19 19.59	155 22.02	4.19	2.1	1.9	27	3	84	.13	3	.4	1.0 24	SWR
		12	2035	1.63	19 20.37	155 20.45	3.18	1.2	1.0	21	4	66	.07	5	.3	.9 17	SWR
		12	2039	53.80	19 19.65	155 21.53	3.35	1.1	1.0	18	2	86	.05	3	.4	.6 16	SWR
		12	2049	28.44	19 20.26	155 20.84	.26	1.5	1.6	17	3	70	.20	4	.5	.9 14	SWR
		12	2057	35.75	19 19.89	155 21.40	3.27	1.6	2.1	26	5	79	.07	3	.3	.6 19	SWR
		12	2059	10.16	19 19.95	155 21.22	3.33	2.1	2.1	30	4	78	.11	4	.3	.7 22	SWR
		12	21	5 23.26	19 19.66	155 21.34	3.61	1.1	1.1	21	3	83	.06	4	.4	.7 15	SWR
		12	2110	40.59	19 18.88	155 20.63	7.23	1.3	.9	19	3	101	.11	4	.5	1.3 15	SWR
		12	2140	4.32	19 17.59	155 23.54	2.73	.8	1.9	24	3	95	.09	5	.3	.9 19	SWR
		12	2152	2.89	19 28.48	155 37.30	.97	2.5	2.5	23	0	106	.15	3	.4	.6 15	MLO
		12	22	8 33.51	19 16.43	155 21.82	3.59	1.4	.6	23	3	135	.09	5	.4	1.5 20	SWR
		12	22	8 50.45	19 13.20	155 22.23	4.64	2.2	2.3	28	2	171	.10	4	.6	1.9 21	SWR
		12	2218	24.67	19 19.23	155 21.67	4.38	.8	1.2	13	2	188	.08	3	.8	1.0 11	SWR
		12	2218	54.62	19 17.07	155 21.00	7.06	1.4	1.3	22	4	131	.09	5	.5	1.1 19	SWR
		12	2224	29.66	19 20.29	155 20.51	3.46	1.2	1.4	23	3	68	.08	5	.3	.9 17	SWR
		12	2232	48.56	19 20.33	155 20.44	3.28	1.3	1.0	21	3	67	.07	5	.3	.8 16	SWR
		12	2234	53.67	19 19.04	155 23.08	4.17	1.3	1.3	22	2	87	.11	2	.4	.7 11	SWR
		12	2236	53.14	19 18.29	155 23.63	3.42	2.0	2.3	34	4	89	.12	4	.4	1.0 25	SWR
		12	2254	15.17	19 20.01	155 20.65	4.63	.9	1.0	18	2	139	.05	5	.4	1.6 12	SWR
		12	23	0 52.25	19 20.80	155 19.54	3.39	1.0	1.0	20	3	79	.08	4	.3	.9 19	SWR
		12	23	4 48.24	19 19.40	155 20.63	4.75	1.0	1.2	13	0	87	.14	4	.7	2.4 8	SWR
		12	2322	35.41	19 17.63	155 23.72	3.85	1.0	1.9	27	3	92	.11	5	.3	1.3 19	SWR
		12	2325	46.53	19 16.99	155 24.52	1.61	.8	1.0	18	2	82	.09	5	.3	1.0 10	SWR
		12	2326	25.99	19 21.37	155 18.79	3.57	1.2	1.3	16	3	63	.11	3	.4	.9 14	SWR
		12	2331	10.24	19 19.26	155 22.14	3.43	.8	.9	17	3	89	.07	3	.4	.6 9	SWR
		13	019	55.05	19 20.63	155 19.89	3.16	.9	1.1	20	4	57	.07	4	.3	.8 14	SWR
		13	044	49.57	19 20.83	155 19.44	4.58	1.2	1.2	18	2	50	.08	4	.4	1.2 14	SWR
		13	111	27.01	19 17.87	155 23.35	3.57	1.7	1.9	29	5	96	.09	4	.3	.8 17	SWR
		13	135	12.00	19 20.35	155 20.51	3.95	1.0	1.1	20	3	86	.10	5	.4	1.2 17	SWR
		13	140	22.12	19 21.28	155 18.79	3.50	1.1	1.2	23	4	63	.08	3	.3	.6 17	SWR
		13	154	31.56	19 21.10	155 18.85	3.58	1.0	.9	18	2	83	.07	3	.3	.8 15	SWR
		13	2	7 39.02	19 20.48	155 20.43	3.22	1.3	1.3	24	3	64	.09	5	.3	.9 18	SWR
		13	231	51.45	19 20.33	155 20.35	3.40	1.1	.9	19	3	65	.08	5	.4	.9 14	SWR
		13	236	4.81	19 18.17	155 23.86	3.85	1.0	1.0	20	1	87	.09	4	.4	1.0 11	SWR
		13	253	12.78	19 16.66	155 21.85	6.70	1.1	1.1	19	2	132	.09	6	.5	1.4 15	SWR
		13	254	35.70	19 16.33	155 21.97	3.05	1.0	1.3	23	3	136	.08	5	.4	1.3 18	SWR
		13	256	48.16	19 20.94	155 19.47	3.52	1.3	1.4	22	4	76	.07	4	.3	.8 18	SWR
		13	3	8 45.56	19 16.28	155 23.89	5.97	1.3	1.5	26	2	99	.14	4	.5	1.6 17	SWR
		13	3	9 45.76	19 20.70	155 19.70	3.42	.8	.9	19	3	54	.09	4	.4	1.1 14	SWR
		13	319	47.28	19 24.41	155 17.16	8.50	1.0	1.0	18	2	63	.11	1	.6	.9 10	INT
		13	333	7.34	19 17.20	155 22.43	4.31	1.1	1.1	23	1	117	.13	6	.5	1.6 14	SWR
		13	342	54.54	19 20.41	155 20.34	3.26	.9	.9	17	2	121	.09	5	.4	1.2 13	SWR
		13	351	52.41	19 19.59	155 21.49	3.10	1.3	1.0	23	4	85	.09	3	.4	.7 16	SWR

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HR	MIN	SEC	ORIGIN TIME	LAT N	DEG	LON W	MIN	DEPTH	AMP	MAG	NR	NS	GAP	RMS	MIN	ERH	ERZ	NO	REMK
											KM					DEG	SEC	DIS	KM	KM	FM	
1981	AUG	13	359	48.03	19	21.33	155	18.83	3.64	1.0	1.9	19	2	64	.08	3	.4	.8	15	SWR		
		13	413	50.77	19	14.90	155	15.43	5.6A	1.4	1.6	31	2	176	.13	5	.7	1.4	21	SF1		
		13	420	18.69	19	21.34	155	18.71	3.52	1.3	1.3	25	5	45	.10	3	.3	.6	19	SWR		
		13	423	49.79	19	20.77	155	19.55	3.45	1.3	1.2	19	2	52	.07	4	.3	.9	15	SWR		
		13	455	38.09	19	12.79	155	20.97	.01	1.5	1.7	20	0	174	.13	6	.8	2.6	16	SWR	*	
		13	513	23.75	19	20.65	155	20.42	2.91	1.2	1.2	22	5	62	.10	5	.3	.9	19	SWR		
		13	525	57.49	19	17.70	155	23.48	3.20	1.3	1.2	24	4	96	.10	5	.3	.9	16	SWR		
		13	538	28.13	19	17.68	155	23.70	4.48	2.2	2.5	32	2	93	.12	5	.3	1.9	20	SWR		
		13	546	36.87	19	17.87	155	23.38	2.9A	2.0	2.2	34	3	95	.09	4	.3	.8	20	SWR		
		13	6	0	1.46	19	17.10	155	22.21	7.27	2.0	2.4	44	1	122	.14	6	.4	.8	31	SWR	
		13	6	8	23.69	19	19.76	155	21.39	4.42	1.5	1.2	23	2	81	.09	3	.4	1.2	12	SWR	
		13	623	36.40	19	18.90	155	22.71	3.61	1.0	1.3	18	2	91	.08	3	.4	.6	11	SWR		
		13	659	50.32	19	17.05	155	20.86	7.20	1.2	.9	21	2	132	.08	4	.5	1.4	13	SWR		
		13	755	45.94	19	17.35	155	23.49	3.32	1.1	1.0	22	2	99	.11	5	.4	1.1	11	SWR		
		13	832	26.55	19	18.56	155	15.43	8.21	1.9	1.8	27	0	114	.09	4	.6	.9	25	SF1		
		13	1019	40.11	19	21.40	155	18.82	3.55	1.2	1.2	21	3	56	.11	3	.3	.8	19	SWR		
		13	1034	19.43	19	17.92	155	23.58	3.46	2.4	2.9	43	6	92	.12	4	.3	.9	28	SWR		
		13	1051	54.01	19	20.54	155	20.31	3.42	1.2	1.1	19	3	62	.07	5	.4	.9	13	SWR		
		13	1134	32.78	19	17.83	155	23.30	4.67	1.7	1.1	23	2	98	.12	4	.4	1.5	14	SWR		
		13	1136	31.01	19	17.35	155	22.86	6.84	1.4	1.4	27	1	110	.12	5	.5	1.0	18	SWR		
		13	1151	33.09	19	22.98	155	26.66	10.46	2.9	2.8	48	6	33	.12	2	.3	.4	35	KA0		
		13	1222	42.96	19	21.47	155	11.15	7.93	2.1	1.7	40	4	67	.12	3	.4	.6	27	SF3		
		13	1228	40.40	19	20.43	155	20.41	3.52	1.4	1.3	22	2	65	.08	5	.4	1.0	18	SWR		
		13	1253	36.50	19	20.80	155	19.50	4.07	1.2	1.1	16	0	51	.07	4	.4	1.2	12	SWR		
		13	1323	7.04	19	22.35	155	16.79	8.53	2.3	1.9	9	1	109	.13	2	.9	2.0	6	INT		
		13	15	1	42.33	19	16.24	155	46.11	10.53	2.9	2.5	29	2	107	.16	11	.5	.8	13	K0N	
		13	17	0	17.82	19	20.53	155	20.31	2.93	1.1	1.1	22	4	63	.09	5	.3	.9	18	SWR	
		13	18	9	27.43	19	21.14	155	18.93	4.02	1.9	1.6	18	0	51	.10	3	.4	1.1	14	SWR	
		13	2041	59.36	19	25.38	155	16.60	2.93	.6	.7	8	0	195	.03	1	.7	.5	4	SNC		
		13	2211	7.06	19	19.50	155	12.14	7.99	2.0	1.5	41	3	89	.11	5	.4	.7	28	SF3		
		13	2223	31.99	19	15.49	155	24.11	7.07	1.4	1.3	22	1	94	.11	2	.8	1.3	14	SWR		
		13	2252	49.83	19	19.52	155	21.92	3.66	1.6	1.5	26	1	85	.09	3	.4	.8	19	SWR		
		13	2330	4.60	19	23.12	155	17.20	4.73	1.3	.8	11	0	66	.15	1	.8	1.3	3	SSC	L	
		14	022	15.13	19	17.40	155	22.20	8.59	1.5	1.1	26	1	118	.14	6	.5	1.3	15	SWR		
		14	028	12.66	19	24.25	155	16.31	4.19	1.4	1.0	17	0	106	.07	1	.4	.4	8	SEC	L	
		14	038	2.68	19	24.34	155	15.80	1.07	1.1	1.2	13	1	133	.14	2	.4	.4	6	SEC	L	
		14	050	2.60	19	21.67	155	16.14	7.33	1.5	.9	10	0	187	.13	1	1.5	1.9	6	SF1	L	
		14	056	37.26	19	20.99	155	19.43	3.37	1.3	1.1	20	2	49	.09	4	.3	.9	18	SWR		
		14	150	15.13	19	24.27	155	16.68	2.78	1.0	1.2	18	0	88	.24	1	.7	.4	6	SSC	L	
		14	155	22.50	19	24.13	155	16.49	3.66	1.1	1.0	19	0	94	.19	0	.7	.5	5	SEC	L	
		14	257	13.78	19	20.64	155	13.34	7.87	2.0	1.7	36	4	60	.15	4	.4	.6	27	SF2		
		14	321	58.51	19	17.61	155	23.34	3.22	1.8	1.2	17	2	99	.06	5	.4	1.0	13	SWR		
		14	353	7.06	19	25.22	155	16.44	6.00	1.3	1.3	18	0	121	.11	1	.5	.8	5	INT	L	
		14	520	38.57	19	23.99	155	16.47	2.24	1.1	1.2	10	0	99	.13	0	.6	.4	0	SEC	L	
		14	521	34.27	19	20.88	155	19.57	3.38	1.0	1.1	18	1	78	.07	4	.4	.9	16	SWR		
		14	628	42.26	19	24.44	155	16.86	3.80	1.1	1.4	12	0	100	.11	1	.7	.4	6	SSC	L	
		14	746	27.84	19	23.69	155	16.29	1.96	.8	.7	16	0	88	.26	1	.5	.4	3	SEC	L	
		14	8	2	18.14	19	58.92	155	28.06	23.52	3.0	2.8	37	2	254	.10	17	1.1	1.8	27	KEA	

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YEAR	MON	DA	ORIGIN TIME			LAT N		LON W		DEPTH KM	AMP		RUP		GAP	RMS	MIN	ERH	ERZ	NO		
			HR	MIN	SEC	DEG	MIN	DEG	MIN		MAG	MAG	NR	NS								DEG
1981	AUG	14	832	44.08	19	20.67		155	19.81	3.43	1.3	1.5	21	4	56	.08	4	.3	.8	15	SWR	
		14	843	6.03	19	21.44		155	18.78	3.40	1.0	1.3	19	3	54	.08	3	.3	.7	14	SWR	
		14	855	45.70	19	21.19		155	18.81	3.55	1.6	1.6	19	2	82	.09	3	.4	.7	15	SWR	
		14	857	26.32	19	20.59		155	20.39	2.89	1.1	1.5	24	5	62	.09	5	.3	.7	12	SWR	
		14	955	12.72	19	23.81		155	17.30	.01	1.6	1.9	8	2	100	.17	1	.5	.6	4	SSC *	
		14	1045	24.94	19	17.64		155	23.24	3.17	1.3	1.5	16	2	100	.08	5	.4	.9	12	SWR	
		14	1058	27.58	19	17.66		155	23.36	3.55	1.4	1.6	22	2	106	.08	5	.4	.9	13	SWR	
		14	11	9	28.10	19	17.78		155	23.12	4.08	.9	1.3	18	2	107	.07	5	.4	1.2	12	SWR
		14	1143	18.51	19	21.29		155	18.81	3.81	.9	1.4	16	2	80	.08	3	.3	.9	12	SWR	
		14	1148	22.56	19	23.90		155	16.29	3.59	.8	1.3	12	0	100	.11	1	.5	.5	2	SEC L	
		14	1259	47.97	19	20.11		155	8.62	6.92	1.4	1.3	27	3	75	.09	4	.4	.9	10	SF4	
		14	1348	15.28	19	24.45		155	17.07	1.81	1.1	1.6	13	2	81	.10	1	.4	.2	10	SSC L	
		14	14	9	39.99	19	20.83		155	19.53	3.41	1.3	1.6	22	4	51	.08	4	.3	.9	20	SWR
		14	1624	39.55	19	24.48		155	16.45	4.49	.8	1.3	10	1	133	.06	1	.8	.8	7	SEC L	
		14	1649	56.55	19	34.84		155	39.93	1.57	1.6	2.4	18	3	137	.09	12	.5	1.1	15	MLO	
		14	18	5	48.39	19	18.85		155	22.69	4.68	1.9	2.6	33	5	94	.10	3	.3	.7	27	SWR
		14	1817	.64	19	17.39		155	23.11	2.80	1.3	1.9	22	3	104	.07	5	.3	.8	15	SWR	
		14	1932	28.62	19	16.59		155	23.62	3.59	2.5	2.9	43	4	98	.11	4	.3	.9	30	SWR	
		14	20	9	31.04	19	21.08		155	19.01	4.17	1.1	1.6	21	2	46	.07	3	.4	1.0	16	SWR
		14	2019	45.68	19	18.58		155	13.19	7.46	1.6	1.8	31	0	87	.08	3	.4	.8	26	SF2	
		14	2047	37.24	19	17.08		155	20.77	5.93	1.2	1.4	19	4	132	.07	4	.5	1.2	15	SWR	
		14	2051	58.16	19	21.01		155	19.63	3.62	1.0	1.4	19	3	50	.07	4	.3	.9	17	SWR	
		14	2058	58.86	19	24.25		155	17.16	1.57	1.4	1.8	14	1	70	.11	1	.3	.2	10	SSC L	
		14	2139	11.00	19	19.01		155	12.37	6.79	2.2	1.9	44	3	97	.10	4	.3	.6	33	SF2	
		14	2139	54.07	19	21.33		155	18.78	3.88	1.4	1.7	20	3	63	.09	3	.4	.9	18	SWR	
		14	22	7	41.84	19	22.95		155	26.55	11.07	1.4	1.4	26	4	50	.07	2	.4	.8	22	KA0
		14	2216	34.70	19	20.80		155	19.77	3.41	.9	1.4	21	4	54	.07	4	.3	.9	18	SWR	
		14	2227	18.71	19	5.90		155	19.39	10.28	1.8	2.1	25	0	249	.11	16	1.9	1.0	16	LOI	
		14	2233	22.00	19	17.33		155	23.64	3.26	1.3	1.8	29	4	96	.11	5	.3	1.1	20	SWR	
		14	2314	47.01	19	20.44		155	20.41	3.09	.9	1.4	21	4	65	.08	5	.3	.9	16	SWR	
		14	2351	36.77	19	59.39		155	57.00	14.60	3.2	3.2	33	1	233	.14	24	3.8	3.0	16	KOH	
		15	232	39.97	19	12.02		155	36.75	8.20	2.4	2.6	40	3	93	.23	5	.6	1.0	28	LSW	
		15	317	50.49	19	21.11		155	19.48	3.32	1.0	1.2	22	3	48	.11	4	.4	.9	17	SWR	
		15	344	56.42	19	21.34		155	18.71	3.48	1.0	1.2	20	4	62	.11	3	.4	.8	14	SWR	
		15	345	26.25	19	21.26		155	18.74	3.69	1.5	1.8	24	3	63	.08	3	.3	.7	23	SWR	
		15	442	30.72	19	20.88		155	12.30	7.85	1.9	1.9	43	4	66	.14	4	.4	.6	29	SF3	
		15	453	25.12	19	20.27		155	20.41	4.01	1.0	1.6	18	0	67	.09	5	.4	1.5	14	SWR	
		15	519	13.92	19	15.95		155	24.06	5.49	1.0	1.3	21	1	95	.12	3	.5	1.8	15	SWR	
		15	525	29.74	19	17.96		155	21.21	6.87	1.7	2.3	37	3	120	.12	5	.4	.7	19	SWR	
		15	9	5	51.59	19	18.39		155	21.69	7.99	.9	1.3	23	3	110	.11	4	.4	.9	13	SWR
		15	1324	43.74	19	21.22		155	18.77	3.45	1.1	1.4	19	3	80	.08	3	.3	.7	16	SWR	
		15	1328	58.96	19	16.57		155	23.08	3.29		1.6	13	3	115	.05	4	.4	1.1	10	SWR	
		15	1347	21.04	19	19.68		155	13.43	9.25	2.4	2.7	43	3	70	.10	5	.3	.4	29	SF2	
		15	1414	40.14	19	21.30		155	18.81	3.59	1.2	1.6	21	4	53	.07	3	.3	.6	15	SWR	
		15	17	7	17.61	19	21.26		155	18.81	3.72	1.1	1.5	22	4	64	.10	3	.5	.8	16	SWR
		15	1721	24.30	19	17.50		155	21.57	6.76	1.3	1.6	23	2	124	.11	5	.4	1.3	14	SWR	
		15	1743	20.66	19	17.18		155	23.35	3.88	.9	1.4	18	2	103	.08	5	.4	1.2	8	SWR	
		15	1745	54.98	19	16.45		155	22.67	5.80	1.8	2.3	37	2	126	.12	5	.4	1.1	25	SWR	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	AUG	15	19	2	44.81	19 21.31	155 18.83	3.41	1.3	1.6	26	4	46 .09	3	.3	.7 19 SWR
		15	19	5	46.10	19 25.27	155 15.92	14.98	1.6	1.6	37	2	92 .09	2	.5	.3 25 DEP
		15	19	18	22.85	19 20.60	155 10.90	8.89	1.7	1.4	33	4	76 .10	3	.4	.6 23 SF3
		15	20	32	.21	19 4.87	154 52.64	40.34	2.6	2.6	40	0	278 .10	33	3.5	1.9 36 DIS
		15	21	39	23.68	19 16.05	155 21.42	7.17	1.6	2.1	35	1	141 .12	6	.5	.8 19 SWK
		15	23	9	25.74	19 24.72	155 16.90	1.34	1.3	1.8	15	1	116 .12	0	.4	.2 9 SNC
		15	23	20	44.65	19 21.20	155 18.83	3.59	.9	1.4	20	2	47 .07	3	.3	.7 15 SWR
		15	23	56	50.20	19 13.47	155 20.68	7.01	1.7	2.6	26	1	172 .12	9	.7	1.2 19 SWR
		16	24	1	39.13	19 17.57	155 22.96	2.77	1.2	1.6	26	5	105 .07	5	.3	.8 23 SWR
		16	51	1	8.60	19 21.30	155 18.75	3.59	1.2	1.4	26	5	46 .09	3	.3	.7 19 SWR
		16	65	36	34	19 16.62	155 21.32	7.61	2.0	2.5	45	5	135 .10	5	.4	.7 31 SWR
		16	15	14	32.66	19 23.95	155 16.82	15.27	3.4	3.7	52	6	35 .12	0	.4	.3 44 DEP
		16	15	35	43.92	19 16.28	155 23.00	6.69	1.9	1.9	37	4	122 .12	4	.4	.9 27 SWR
		16	15	46	9.03	19 17.07	155 21.79	6.44	1.3	1.1	19	3	128 .07	6	.4	1.1 17 SWR
		16	20	32	.66	19 20.00	155 12.27	8.73	1.5	1.1	26	2	79 .07	5	.4	.8 19 SF3
		16	23	33	22.90	19 17.09	155 21.35	7.47	1.3	1.1	23	4	133 .08	5	.5	1.0 18 SWR
		17	01	9	44.85	19 18.45	155 15.50	7.85	2.2	2.1	41	3	107 .09	4	.3	.6 25 SF1
		17	2	9	56.74	19 27.64	155 14.74	31.79	1.9	1.4	42	3	41 .10	6	.5	1.1 29 DEP
		17	22	0	35.70	19 19.66	155 11.68	8.88	2.4	2.4	39	4	90 .06	5	.3	.5 23 SF3
		17	4	9	28.22	19 19.76	155 12.38	8.40	1.7	1.3	31	2	82 .09	5	.4	.7 23 SF2
		17	5	30	37.45	19 16.38	155 22.15	3.83	2.1	2.3	42	3	134 .12	5	.3	1.3 30 SWR
		17	6	18	32.50	19 16.44	155 21.78	5.84	1.3	1.1	21	5	141 .09	6	.5	1.4 19 SWR
		17	6	48	21.86	19 16.24	155 22.66	3.27	1.3	1.2	14	1	130 .12	4	.6	1.3 9 SWR
		17	6	50	.10	19 17.98	155 20.87	6.10	1.5	1.7	21	3	121 .07	4	.4	1.1 12 SWR
		17	7	49	26.84	19 16.81	155 22.00	3.45	1.3	1.2	24	3	130 .12	6	.4	1.4 18 SWR
		17	9	10	15.88	19 23.72	155 28.83	10.15	1.7	1.2	26	1	69 .07	3	.4	1.1 24 KAO
		17	9	18	10.76	19 16.28	155 23.67	2.97	1.7	1.4	21	3	105 .10	4	.4	1.0 15 SWR
		17	14	8	24.42	19 20.12	155 11.88	8.85	1.9	1.1	29	1	80 .08	5	.5	.8 18 SF3
		17	16	29	50.80	19 19.37	155 11.45	6.88	1.7	1.3	37	1	99 .11	6	.4	.8 28 SF3
		17	20	9	13.14	19 19.70	155 11.71	7.47	1.4	1.0	31	3	89 .13	5	.5	1.0 20 SF3
		18	0	36	29.62	19 24.61	155 17.28	1.29	.8	1.4	15	3	67 .11	1	.3	.2 8 SNC
		18	1	3	56.48	19 17.68	155 21.81	4.24	.1	1.3	16	2	129 .09	5	.4	1.6 8 SWR
		18	5	16	52.95	19 17.86	155 20.58	4.42	1.6	2.2	33	2	124 .12	3	.4	1.3 28 SWR
		18	7	32	9.87	19 16.47	155 22.80	7.50	1.7	2.5	34	3	123 .10	5	.4	.7 20 SWR
		18	7	54	41.17	19 17.63	155 23.31	8.37	1.4	2.1	27	2	99 .11	5	.4	.7 16 SWR
		18	12	53	1.72	19 20.61	155 10.99	7.32	.1	1.4	15	3	76 .11	3	.5	.6 24 SF3
		18	14	16	44.90	19 17.87	155 15.23	6.01	1.2	1.1	25	1	119 .10	3	.5	1.2 18 SF1
		18	17	41	29.73	19 17.64	155 15.57	6.02	1.4	1.1	21	0	130 .11	4	.6	1.5 20 SF1
		18	21	10	24.01	19 18.20	155 22.46	9.38	1.1	1.3	21	2	108 .09	4	.5	1.0 15 SWR
		18	22	47	13.12	19 18.86	155 13.42	5.86	1.5	1.0	32	2	76 .13	3	.5	1.2 21 SF2
		19	2	38	47.29	19 20.08	155 8.18	9.09	3.5	3.9	44	2	84 .09	5	.5	.3 33 SF4
		19	2	46	12.45	19 20.30	155 8.48	7.10	1.9	1.6	41	4	76 .11	4	.5	.8 31 SF4
		19	3	30	39.66	19 18.74	155 15.00	8.24	1.4	1.1	22	0	104 .09	4	.6	1.0 20 SF1
		19	4	5	56.72	19 16.94	155 21.99	4.58	.9	1.1	21	1	128 .11	6	.5	3.1 16 SWR
		19	6	45	25.87	19 16.96	155 23.06	8.04	1.1	1.6	20	1	110 .11	5	.5	1.4 14 SWR
		19	7	16	33.09	19 17.95	155 23.16	3.35	.8	1.0	16	2	98 .07	4	.4	.8 12 SWR
		19	8	56	36.21	19 26.11	155 37.40	3.17	2.5	2.9	31	3	91 .12	3	.3	.6 25 MLO
		19	9	0	13.27	19 17.16	155 20.92	5.95	1.2	1.1	21	3	131 .09	4	.5	1.4 18 SWR

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	AUG	19	1056	27.98	19 19.25	155 8.99	7.41	2.0	1.8	33	1	90 .08	4		.4	.8 19 SF4
		19	1217	30.12	19 19.55	155 11.06	8.50	1.9	1.8	30	2	97 .07	5		.4	.7 19 SF3
		19	1240	44.55	19 17.94	155 23.08	3.91	1.5	1.5	22	4	105 .07	4		.3	.9 19 SWR
		19	1632	45.59	19 16.79	155 23.16	5.45	1.9	2.2	31	2	111 .12	5		.4	1.1 20 SWR
		19	2031	30.20	19 16.73	155 22.15	3.23	1.1	1.0	15	2	130 .11	6		.5	1.5 14 SWR
		20	012	25.70	19 17.53	155 22.86	3.25	.9	1.0	15	4	117 .07	5		.4	.9 14 SWR
		20	147	12.81	19 17.60	155 17.32	32.58	1.7	1.4	22	2	133 .06	2	1.1	.9	2.1 14 DEP
		20	148	44.38	19 16.56	155 21.63	5.80	.9	1.0	20	3	140 .08	6		.4	1.4 14 SWR
		20	2 4	58.64	19 17.12	155 20.75	6.57	1.5	1.7	26	2	139 .09	4		.5	1.0 18 SWR
		20	331	31.67	19 25.72	155 23.84	10.15	1.7	1.3	27	3	43 .04	2		.4	.9 22 KAO
		20	722	22.17	19 44.54	154 59.07	36.96	2.9	2.5	48	3	212 .12	6		.8	1.4 41 HIL
		20	8 9	47.54	19 16.82	155 13.03	8.53	2.7	2.6	44	4	87 .11	3		.4	.6 33 SF2
		20	832	39.48	19 16.78	155 22.08	7.66	.1	1.3	16	0	129 .11	6		.7	1.7 15 SWR
		20	913	46.75	19 17.44	155 21.55	6.40	1.7	2.1	41	3	125 .12	5		.4	.9 26 SWR
		20	1015	56.09	19 57.96	155 21.01	13.23	2.8	1.8	38	6	202 .11	9		.8	.4 26 KEA
		20	1052	43.34	19 19.86	155 7.44	8.02	1.9	1.3	34	3	134 .12	5		.6	.7 23 SF4
		20	1357	23.10	19 58.69	155 20.44	12.44	2.9	2.4	36	1	203 .11	10		.4	.6 27 KEA
		20	2349	14.43	19 20.23	155 11.67	7.16	1.8	1.3	36	1	79 .13	5		.5	.8 27 SF3
		21	035	49.46	19 18.43	155 13.41	6.97	1.7	1.7	32	2	82 .11	3		.5	.9 23 SF2
		21	729	30.72	19 20.60	155 3.67	7.05	1.4	1.1	29	2	98 .12	2		.5	.8 18 SF5
		21	851	9.60	19 19.49	155 13.11	9.37	1.4	1.4	27	2	75 .09	5		.5	.8 17 SF2
		21	12 2	.76	19 16.81	155 22.94	7.20	1.8	2.1	34	3	115 .13	5		.4	1.0 25 SWR
		21	14 4	57.77	19 19.50	155 12.66	4.95	1.5	1.4	33	2	83 .13	5		.5	1.6 21 SF3
		21	2328	48.10	19 59.11	155 19.70	12.04	2.9	2.9	43	4	206 .12	11	1.0	.6	.6 33 KEA
		22	123	56.95	19 21.63	155 3.32	8.67	1.9	1.2	28	0	105 .10	3		.6	.7 21 SF5
		22	434	6.60	19 19.12	155 13.22	6.04	1.5	1.4	29	3	78 .10	4		.4	1.0 15 SF2
		22	441	44.96	19 19.83	155 7.97	8.66	1.5	1.1	31	3	91 .10	5		.5	.7 23 SF4
		22	1153	25.98	19 20.57	155 12.90	9.05	1.6	1.3	27	1	66 .08	4		.5	.8 22 SF2
		22	12 5	20.33	20 11.17	156 25.66	10.32	4.4	4.7	46	5	226 .12	67		.8	1.5 43 DIS F
		22	1346	11.73	19 21.59	155 6.59	8.85	1.6	1.3	30	1	82 .08	3		.4	.8 20 SF4
		22	1356	32.08	19 17.25	155 20.51	6.24	1.1	1.1	21	4	131 .07	4		.4	1.0 19 SWR
		22	1357	45.08	19 17.16	155 20.18	6.82	1.6	1.6	25	5	133 .08	3		.5	.8 19 SWR
		22	1644	32.15	19 23.68	155 2.45	8.60	2.2	2.3	37	6	121 .12	4		.4	.4 24 SF5
		22	1733	32.58	19 10.90	155 32.70	6.53	2.3	1.5	31	2	104 .17	9		.5	1.2 14 LSW
		23	246	2.92	19 19.70	155 12.59	8.92	2.1	2.2	42	4	80 .12	5		.4	.5 32 SF2
		23	7 1	34.14	19 7.52	155 23.95	44.31	.1	1.8	25	0	188 .07	8	1.4	.9	2.9 14 LO1 T
		23	1019	27.55	19 17.21	155 20.58	7.34	1.3	1.1	33	3	134 .11	4		.5	.9 21 SWR
		23	1030	1.85	19 17.73	155 23.58	4.39	1.8	1.6	31	3	94 .11	5		.4	1.7 21 SWR
		23	11 3	37.58	19 17.47	155 20.83	6.44	1.6	1.6	39	5	131 .13	4		.4	.9 28 SWR
		23	1738	24.59	19 17.59	155 21.09	8.59	2.2	2.2	40	3	127 .14	4		.4	.6 28 SWR
		23	2226	53.21	19 20.63	155 12.89	8.03	2.0	1.8	46	4	64 .11	4		.4	.6 31 SF2
		24	0 2	18.49	19 22.55	155 1.97	8.54	1.7	1.4	28	2	136 .11	5		.6	.5 19 SF5
		24	17 8	53.33	19 17.70	155 23.35	3.86	.7	1.0	18	2	105 .05	5		.4	1.2 14 SWR
		24	2228	.11	19 18.10	155 13.14	6.03	1.4	1.1	29	2	99 .11	2		.4	.9 18 SF2
		25	226	51.92	19 20.02	155 8.56	7.14	1.6	1.5	42	5	76 .12	4		.4	.8 26 SF4
		25	232	41.56	19 18.99	155 19.93	8.08	1.2	1.1	26	1	91 .10	3		.5	.9 23 SWR
		25	257	39.72	19 24.53	155 29.75	7.60	1.9	1.3	36	2	51 .12	5		.4	1.0 22 KAO
		25	329	31.00	19 19.50	155 14.42	7.34	1.9	1.8	41	4	93 .13	5		.4	.7 25 SF2

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YEAR	MON	ORIGIN TIME			LAT N		LON W		DEPTH KM	AMP		DIR NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO			
		DA	HRMN	SEC	DEG	MIN	DEG	MIN		MAG	MAG							FM	REMK		
1981	AUG	25	355	2.15	19	30.56	155	46.50	8.39	2.1	1.9	22	2	126	.10	1	.6	.7	15	KON	
		25	456	56.22	19	15.94	155	23.25	7.49	.8	1.1	19	3	140	.08	3	.5	.9	12	SWR	
		25	615	26.97	19	16.33	155	23.10	5.67	1.7	2.0	38	4	119	.12	4	.4	1.0	24	SWR	
		25	1019	4.83	19	17.86	155	21.51	6.64	2.2	2.3	44	4	118	.14	5	.4	.8	35	SWR	
		25	1456	31.92	19	16.90	155	21.33	6.76	1.8	1.2	29	6	132	.11	5	.4	1.2	23	SWR	
		25	1511	56.52	19	22.43	155	5.94	7.29	2.0	1.4	36	3	70	.11	1	.5	.7	16	SF4	
		26	217	52.27	19	19.97	155	12.49	6.45	1.5	1.3	38	3	77	.13	5	.5	1.0	27	SF2	
		26	346	25.55	19	19.24	155	15.38	8.42	2.5	2.1	45	3	91	.12	4	.4	.6	36	SF1	
		26	444	7.96	19	15.77	155	22.36	7.21	1.9	1.5	29	4	164	.11	4	.3	1.0	23	SWR	
		26	828	12.40	19	21.56	155	1.35	7.30	1.3	1.4	19	0	178	.12	4	1.0	.6	15	SF5	
		26	1042	42.14	19	15.61	155	23.41	7.25	1.9	2.0	38	4	124	.12	3	.5	.7	28	SWR	
		26	1043	40.29	19	15.42	155	23.10	7.85	1.2	1.1	22	1	156	.09	3	.5	1.2	15	SWR	
		26	13	2	7.83	19	19.18	155	13.55	6.93	1.5	1.8	37	4	68	.11	4	.4	.7	25	SF2
		26	1629	45.39	19	19.46	155	.57	36.12	2.2	1.5	36	0	206	.10	4	1.5	2.0	34	DEP	
		26	1757	31.14	19	17.38	155	23.37	3.13	.9	1.1	20	3	100	.07	5	.4	.9	14	SWR	
		27	039	28.15	19	17.57	155	20.89	8.13	1.7	1.7	27	4	129	.09	4	.4	.8	16	SWR	
		27	1	2	37.30	19	18.04	155	23.24	5.58	2.4	2.6	39	4	96	.13	4	.4	1.2	28	SWR
		27	656	40.13	19	17.48	155	21.29	7.96	2.0	2.1	34	4	127	.13	5	.4	.8	21	SWR	
		27	8	5	29.06	19	17.43	155	21.48	6.72	1.7	1.9	42	2	126	.14	5	.5	.8	30	SWR
		27	15	5	47.19	19	24.58	155	17.32	1.51	.9	1.3	10	0	101	.10	1	.5	.2	8	SNC
		27	20	5	48.86	19	25.10	155	15.41	.83	1.5	1.8	15	2	160	.12	2	.3	.4	7	SNC
		28	113	36.37	19	22.16	155	4.90	8.48	2.2	1.9	32	1	77	.10	3	.5	.5	24	SF5	
		28	2129	31.54	19	19.41	155	12.03	8.52	2.0	1.7	46	5	92	.12	5	.4	.5	26	SF3	
		29	038	4.35	19	19.90	155	9.77	7.49	1.7	1.0	23	2	85	.08	4	.5	1.0	16	SF3	
29	221	32.66	19	16.57	155	23.89	3.36	1.8	1.5	23	2	97	.12	4	.4	1.4	18	SWR			
29	314	18.11	19	18.18	155	12.87	9.87	2.5	2.2	45	5	150	.12	8	.5	.6	31	SF2			
29	510	56.50	19	17.71	155	22.11	7.42	1.2	1.3	23	0	115	.11	6	.5	1.9	17	SWR			
29	646	30.47	19	23.42	155	1.35	7.77	1.7	1.3	32	2	137	.14	6	.6	.7	22	SF5			
29	959	26.76	19	52.83	155	25.08	29.18	2.8	1.8	29	2	135	.10	8	.7	1.4	24	KEA			
29	1320	39.85	19	18.41	155	12.95	9.14	2.2	2.3	44	5	136	.12	8	.5	.7	32	SF2			
29	1535	35.89	19	18.38	155	15.15	6.97	1.7	1.6	34	0	105	.13	4	.5	.9	26	SF1			
29	1536	21.84	19	16.90	155	21.95	6.91	1.8	1.5	31	3	129	.11	6	.4	1.1	17	SWR			
29	1549	55.00	19	15.37	155	23.17	7.93	1.1	1.1	24	2	160	.09	2	.5	1.1	14	SWR			
29	1713	45.63	19	15.92	155	23.15	8.06	1.4	1.3	27	2	125	.09	3	.5	.9	18	SWR			
29	23	7	3.73	19	23.07	155	2.96	8.25	1.9	1.3	32	3	117	.12	4	.6	.6	19	SF5		
30	924	23.98	19	17.41	155	16.43	9.41	2.4	2.3	42	5	137	.11	4	.4	.5	31	SF1			
30	1133	1.32	19	20.17	155	10.57	7.97	1.8	1.7	41	3	84	.13	4	.5	.7	30	SF3			
30	15	1	56.85	19	19.74	155	11.11	7.14	1.8	1.7	38	3	92	.13	5	.4	.7	28	SF3		
30	2115	32.30	19	18.38	155	14.64	7.42	1.8	1.3	29	3	106	.09	3	.5	.8	21	SF1			
30	2152	54.22	19	20.40	155	11.84	8.25	1.6	1.4	32	3	76	.10	5	.5	.7	24	SF3			
31	117	38.06	19	20.42	155	12.44	6.93	1.8	1.6	34	3	71	.10	4	.4	.7	19	SF2			
31	140	24.84	19	24.29	155	16.73	15.46	1.7	1.3	40	3	60	.09	1	.5	.3	32	DEP			
31	632	28.04	19	20.43	155	2.93	8.04	2.3	1.8	33	1	136	.11	1	.7	.5	25	SF5			
31	812	21.21	19	28.18	156	.82	12.02	2.8	1.5	20	1	251	.12	10	2.2	.6	12	KON			
31	1246	50.38	19	19.96	155	11.67	7.70	1.9	1.8	34	4	85	.11	5	.5	.7	24	SF3			
31	1653	.31	19	16.32	155	23.39	2.18	1.0	1.0	14	1	112	.08	4	.4	1.1	10	SWR			
31	23	4	10.14	19	21.62	155	28.45	9.77	1.2	1.2	24	2	44	.09	2	.4	.8	15	KAO		
SEP	1	017	41.31	19	22.36	155	2.31	6.49	2.1	1.2	32	2	130	.20	5	.7	1.0	24	SF5		

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YEAR	MON	ORIGIN TIME			LAT N		LON W		DEPTH KM	AMP				GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK	
		DA	HRMN	SEC	DEG	MIN	DEG	MIN		MAG	MAG	NR	NS								
1981	SEP	1	510	36.96	19	22.52	155	12.38	3.82	1.5	1.3	29	2	163	.19	6	.8	2.1	16	SSF	
		1	9	3	52.33	19	20.11	155	12.65	9.14	1.5	1.0	28	1	73	.08	5	.8	20	SF2	
		1	1042	17.62	19	45.91	154	51.69	41.98	3.1	2.6	49	3	243	.11	19	1.1	1.4	43	HIL	
		1	1547	56.61	19	19.70	155	10.74	7.99	2.2	2.3	39	3	94	.10	5	.4	.6	27	SF3	
		1	1913	47.36	19	20.65	155	12.98	7.53	1.5	1.4	34	3	64	.13	4	.5	.8	19	SF2	
		1	1921	52.72	19	20.66	155	8.06	8.14	2.1	2.1	40	3	80	.08	4	.4	.6	23	SF4	
		2	1023	56.46	19	21.19	155	8.17	7.46	1.1	1.3	18	0	92	.10	3	.6	1.3	14	SF4	
		2	1024	46.30	19	20.95	155	6.25	8.42	1.1	1.1	18	0	97	.07	4	.7	1.2	12	SF4	
		2	1444	52.34	19	15.87	155	28.15	12.11	1.6	1.6	22	1	71	.12	4	.5	1.3	13	LSW	
		2	2036	30.00	19	19.66	155	12.45	5.28	1.4	1.2	30	2	82	.11	5	.4	1.3	20	SF2	
		2	2127	46.13	19	15.73	155	34.84	7.88	1.7	1.2	29	3	63	.19	4	.6	1.0	18	LSW	
		3	959	38.60	19	22.94	155	26.85	8.39	1.8	1.2	26	4	44	.10	2	.4	.7	18	KAO	
		3	1912	29.98	19	49.99	155	33.50	22.65	2.3	1.6	31	4	106	.08	12	.6	1.3	28	KEA	
		3	2045	19.82	19	22.15	155	26.54	7.54	1.8	1.3	26	4	42	.11	2	.4	.8	20	KAO	
		4	613	.34	19	22.64	155	1.92	7.86	2.2	2.0	35	3	136	.11	5	.5	.8	25	SF5	
		4	1334	41.39	19	19.64	155	7.65	8.44	2.1	2.3	36	2	102	.08	4	.5	.6	27	SF4	
		4	1450	36.92	19	21.06	155	5.97	9.19	2.6	2.1	41	3	96	.08	4	.4	.5	30	SF4	
		4	2251	54.76	19	21.17	155	10.87	9.35	2.2	2.6	41	3	67	.08	2	.3	.5	27	SF3	
		5	343	52.11	19	20.91	155	12.99	9.35	2.1	2.8	45	3	61	.12	3	.3	.5	28	SF2	
		5	1115	9.98	19	19.72	155	11.65	7.36	1.8	1.6	35	2	89	.11	5	.5	.8	24	SF3	
		5	1543	16.53	19	19.45	155	11.48	9.19	2.0	2.1	35	2	96	.10	6	.4	.6	23	SF3	
		5	1848	26.59	19	1.40	155	30.11	40.79	2.7	2.4	43	3	201	.07	16	.8	1.4	32	DLS	
		5	1932	31.85	19	19.48	155	11.98	7.45	1.6	1.4	28	4	91	.09	5	.4	.8	16	SF3	
		5	2249	7.18	19	19.02	155	15.47	8.08	2.0	1.8	31	1	104	.09	4	.4	.8	20	SF1	
		5	2338	40.07	19	18.96	155	13.82	7.67	1.7	1.6	34	3	76	.10	4	.5	.8	19	SF2	
		6	357	8.09	19	20.33	155	12.48	8.54	1.9	2.1	39	3	72	.12	4	.4	.6	23	SF2	
		6	422	31.80	19	20.56	155	10.73	9.70	2.6	2.0	42	3	77	.12	5	.4	.6	30	SF3	
		6	655	39.84	19	22.64	155	3.55	8.39	1.8	2.1	28	0	106	.12	4	.5	.5	21	SF5	
		6	1936	52.07	19	11.65	155	20.70	51.23	1.9	1.8	28	0	185	.09	8	1.6	3.5	22	DEP	
		6	2046	45.13	19	19.15	155	15.55	7.28	1.4	1.9	33	3	95	.09	4	.4	.7	20	SF1	
		6	2221	46.23	19	38.02	156	1.80	41.56	3.3	3.8	45	2	225	.09	19	.8	1.6	34	KON F	
		6	2234	47.61	19	24.67	155	29.26	9.43	3.3	4.3	52	6	32	.09	5	.3	.4	41	KAO F	
		6	23	0	47.30	19	24.70	155	29.19	9.49	1.8	1.6	34	2	58	.09	5	.4	.8	22	KAO
		7	349	1.02	19	20.48	155	10.68	8.13	1.9	2.4	37	2	78	.11	3	.4	.6	29	SF3	
		7	526	7.29	19	21.35	155	2.47	6.26	2.1	2.3	32	0	138	.13	3	.5	.7	23	SF5	
		7	12	7	30.17	19	18.87	155	15.57	8.03	1.4	1.3	30	3	109	.11	4	.5	.8	16	SF1
		7	2152	39.52	19	23.92	154	59.01	5.94	1.6	1.2	29	1	159	.15	2	.7	1.1	20	LER	
		8	2	5	19.03	19	24.05	155	29.61	10.01	2.1	1.8	38	3	50	.11	5	.3	.7	24	KAO
		8	329	49.03	19	21.93	155	18.21	2.57	1.2	1.0	18	2	76	.12	4	.3	.8	13	SWR	
		8	431	22.86	19	20.76	155	25.49	9.46	1.8	1.2	30	4	55	.11	4	.4	.7	23	KAO	
		8	917	2.57	19	19.81	155	12.20	8.01	1.7	1.6	24	0	83	.09	5	.5	.8	19	SF3	
		8	1215	17.13	18	59.84	155	19.22	45.08	2.5	2.2	40	0	225	.08	23	1.4	2.4	31	LOI	
		8	1243	45.12	19	41.44	155	1.50	10.12	2.3	1.7	17	0	220	.23	9	2.6	2.0	5	HIL	
		8	14	5	18.45	19	25.68	155	24.01	7.27	1.8	1.4	27	4	77	.12	2	.4	1.0	17	KAO
		8	1438	32.63	19	47.06	156	2.56	38.23	2.7	1.8	44	5	233	.11	24	.9	1.2	33	HUA	
		8	1954	12.85	19	20.40	155	11.76	8.71	2.0	1.9	42	4	76	.12	5	.4	.6	26	SF3	
		8	22	9	49.44	19	18.70	155	13.54	6.99	1.9	1.8	36	4	85	.11	3	.4	.8	22	SF2
		9	1123	34.40	19	25.38	155	16.11	15.03	1.8	1.1	33	2	75	.09	2	.5	.3	27	DEP	

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	MAG	MUR MAG NR NS	GAP	RMS	MIN SEC DIS	ERH DIS	ERZ	NO	REMK	
1981	SEP	9	1338	1.55	19 19.83	155 8.61	7.80	1.7	1.4 25	0	105	.09	5	.6	.8	20 SF4	
		9	1436	13.63	19 18.25	155 23.27	8.97	1.8 14	17	0	123	.12	4	.7	1.2	12 SWR	
		9	1528	59.74	19 23.72	155 1.48	7.07	1.7 1.3	24	1	139	.12	5	.6	.6	17 SF5	
		9	1614	8.16	19 21.80	155 4.76	6.92	1.3 1.0	25	1	78	.12	3	.5	.7	13 SF5	
		9	1958	56.04	19 18.97	155 15.39	7.74	1.3 1.1	29	2	96	.09	4	.5	.8	15 SF1	
		9	2056	46.90	19 19.64	155 12.21	7.39	1.5 1.3	26	2	86	.11	5	.5	1.0	17 SF3	
		10	557	47.30	19 22.21	155 2.77	8.53	2.0 1.8	36	1	121	.09	4	.4	.5	16 SF5	
		10	2150	17.69	19 13.81	155 25.53	38.38	2.0 1.5	34	0	134	.10	3	.8	2.0	30 DLS	
		11	420	39.29	19 13.91	155 32.44	7.17	1.8 1.4	31	2	71	.15	5	.5	.9	16 LSW	
		11	711	32.14	19 18.71	155 13.36	7.83	1.5 1.1	28	3	80	.08	3	.5	.8	19 SF2	
		11	940	6.69	19 16.46	155 22.93	8.23	2.4 2.8	48	4	120	.15	4	.4	.6	30 SWR	
		11	952	53.46	19 16.25	155 22.76	6.13	1.7 1.4	28	3	127	.10	4	.4	1.0	21 SWR	
		11	1422	40.79	19 39.45	155 2.36	.02	1.8 2.4	19	0	121	.18	5	.9	3.7	12 HIL	
		11	1514	6.66	19 26.75	155 2.19	44.08	2.1 1.6	43	1	70	.10	5	.8	1.8	28 DFP	
		12	127	54.33	19 17.28	155 20.80	6.28	1.5 1.5	30	4	134	.08	4	.4	.9	20 SWR	
		12	1542	43.69	19 19.50	155 12.59	9.16	2.7 2.8	45	3	83	.12	5	.4	.5	31 SF2	
		12	1808	46.63	20 .76	155 20.85	10.91	2.6 2.6	34	4	210	.11	14	.9	.5	14 KEA	
		13	042	42.67	19 24.18	155 28.68	9.62	2.0 1.8	32	0	52	.10	4	.4	.9	27 KAO	
		13	123	3.70	19 22.71	155 1.75	8.21	2.3 1.8	34	1	150	.12	6	.6	.8	24 SF5	
		13	2216	11.81	19 16.44	155 22.47	7.03	1.9 2.6	41	3	129	.14	5	.4	.9	27 SWR	
		14	147	23.02	19 19.82	155 11.96	6.61	1.6 1.6	39	4	84	.13	6	.4	.7	31 SF3	
		14	627	39.20	19 18.76	155 13.76	8.02	2.4 2.5	44	5	91	.11	3	.4	.5	26 SF2	
		14	746	12.03	19 29.33	155 15.94	10.26	2.2 1.8	42	4	59	.09	8	.3	.6	31 GLN	
		14	8	18.06	19 18.85	155 13.67	7.76	1.7 1.6	35	1	84	.10	3	.5	.7	26 SF2	
		14	954	20.84	19 17.69	155 14.04	6.03	1.3 1.1	23	1	98	.09	2	.6	1.0	15 SF2	
		14	1021	53.29	19 19.55	155 11.48	9.37	2.1 2.6	31	2	94	.12	5	.4	.5	24 SF3	
		14	15	0	4.00	19 16.10	155 22.69	2.78	1.2 1.1	24	2	133	.10	4	.4	1.0	18 SWR
		14	1539	44.64	19 19.56	155 12.13	7.14	2.0 1.8	41	4	88	.13	5	.4	.7	28 SF3	
		14	16	1	29.79	19 19.95	155 10.85	6.92	2.3 2.3	45	5	88	.13	4	.4	.7	30 SF3
		14	1641	19.56	19 18.43	155 13.03	7.94	1.8 1.8	39	4	95	.10	3	.4	.5	25 SF2	
		15	310	34.11	19 11.92	155 38.96	8.29	2.2 1.9	31	3	105	.15	6	.5	.9	21 LSW	
		15	657	19.23	19 45.83	156 7.15	33.54	2.9 2.5	45	4	247	.10	31	1.1	1.9	37 HUA	
		15	948	44.92	19 15.51	155 23.18	8.99	2.3 1.5	14	1	155	.07	3	.7	1.5	10 SWR	
		15	1114	58.47	19 20.99	155 26.21	9.09	1.4 1.2	27	1	76	.13	4	.4	.8	16 KAO	
		15	2333	10.23	19 19.60	155 11.62	5.47	1.4 1.3	28	2	93	.11	6	.5	1.1	19 SF3	
		16	12	4	47.50	19 12.05	155 56.14	42.35	2.6 2.3	36	3	233	.07	10	1.1	1.3	32 KON
		16	14	0	19.10	19 27.27	155 29.61	9.03	1.6 1.2	25	3	73	.08	9	.4	1.2	14 KAO
		16	1445	20.99	19 25.66	155 28.54	6.91	1.6 1.4	32	3	60	.09	6	.3	.9	21 KAO	
		16	1832	28.79	19 21.06	155 6.28	6.55	1.6 1.3	31	1	95	.12	4	.5	.9	12 SF4	
		16	2113	16.59	19 21.77	155 2.47	6.58	2.0 1.8	37	4	141	.15	4	.5	.6	21 SF5	
		16	2310	20.71	19 1.57	155 30.31	40.53	2.6 2.3	29	2	201	.08	15	.9	1.6	18 DLS	
		17	221	55.84	19 28.11	155 35.45	.38	2.1 2.2	9	0	103	.09	1	.2	.2	5 MLO	
		17	1049	46.55	19 18.16	155 23.59	4.67	2.1 2.1	22	0	114	.11	4	.5	1.6	16 SWR	
		17	1114	27.69	19 17.28	155 21.98	4.63	1.4 1.1	34	7	123	.12	6	.4	1.9	23 SWR	
		17	1246	7.84	19 18.38	155 15.22	7.55	1.6 1.3	31	5	106	.11	4	.5	.8	22 SF1	
		17	16	7	16.72	19 18.76	155 15.11	6.83	1.6 1.1	32	2	96	.10	4	.4	.8	19 SF1
		18	1	2	43.92	19 15.99	155 26.81	8.26	1.5 1.4	37	2	67	.14	6	.4	.8	18 LSW
		18	1839	55.33	19 20.12	155 12.88	9.01	2.6 2.7	43	3	71	.09	5	.4	.5	29 SF2	

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			ORIGIN TIME		LAT N		LON W		DEPTH AMP DUR				GAP RMS MIN		ERH	ERZ NO					
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK	
1981	SEP	18	1844	17.62	19	20.26	155	12.89	8.14	1.8	1.5	34	3	69	.11	4	.5	.7	22	SF2	
		18	1954	3.42	19	15.90	155	21.95	8.35	1.4	1.2	22	2	176	.11	5	.6	1.3	16	SWR	
		19	2	4	35.44	19	20.26	155	8.11	7.43	1.7	1.3	37	3	84	.13	5	.4	.6	25	SF4
		19	3	1	10.03	19	19.72	155	11.92	5.67	1.8	1.4	32	5	87	.10	6	.4	1.0	21	SF3
		19	635	31.82	19	20.38	155	7.61	8.66	2.3	2.1	40	3	92	.11	5	.5	.6	23	SF4	
		19	931	13.70	19	19.46	155	10.15	8.94	2.0	1.5	39	4	98	.10	5	.4	.5	22	SF3	
		19	1350	2.98	19	19.15	155	47.38	8.44	1.7	1.2	22	2	89	.13	10	.6	1.4	14	KON	
		19	1736	54.43	19	17.07	155	21.87	5.41	2.0	2.1	31	2	127	.11	6	.4	1.5	26	SWR	
		19	1812	31.85	19	20.58	155	13.55	8.05	2.5	2.5	42	3	57	.13	4	.4	.6	32	SF2	
		19	2214	36.76	19	20.96	155	4.50	8.18	2.1	2.0	38	0	98	.10	3	.5	.4	26	SF5	
		20	630	7.47	19	17.53	155	20.84	5.03	1.8	1.3	26	4	130	.09	4	.4	1.4	19	SWR	
		20	643	24.25	19	21.68	155	6.37	7.04	1.9	1.8	31	2	80	.09	3	.4	.8	17	SF4	
	20	1534	16.06	19	20.72	155	10.35	7.81	2.1	2.1	40	3	74	.12	3	.4	.7	26	SF3		
	20	1641	8.55	19	17.61	155	23.32	2.71	1.7	1.3	17	1	99	.07	5	.4	.9	8	SWR		
	20	1727	49.66	19	20.13	155	11.65	8.27	1.5	1.1	32	2	81	.11	5	.5	.9	18	SF3		
	21	235	37.64	19	19.54	155	12.57	9.07	2.7	2.0	46	4	83	.12	5	.4	.4	29	SF2		
	21	249	50.70	19	20.29	155	12.68	8.55	1.6	1.6	31	1	70	.10	4	.5	.8	21	SF2		
	21	722	52.66	19	24.03	155	17.11	15.33	2.2	2.0	46	5	57	.11	1	.5	.3	35	DFP		
	21	1035	33.43	19	19.77	155	10.68	8.49	1.4	1.3	27	2	91	.08	5	.5	.6	22	SF3		
	21	1632	45.34	18	58.25	155	6.87	48.45	2.4	2.3	46	1	246	.09	35	1.5	2.2	41	L01		
	21	2014	54.56	19	16.27	155	23.25	7.05	1.7	1.9	35	4	116	.14	4	.5	1.2	28	SWR		
	22	238	44.00	19	23.30	155	3.64	8.42	2.0	1.9	35	1	100	.11	3	.5	.5	17	SF5		
	22	355	1.75	19	19.67	155	7.49	8.76	3.1	1.4	43	2	105	.09	4	.5	.4	29	SF4		
	22	449	24.02	19	19.68	155	7.77	9.26	3.3	1.5	48	3	99	.10	4	.5	.4	39	SF4		
22	533	25.26	19	19.66	155	25.24	8.03	1.4	1.2	20	3	62	.08	4	.4	.8	14	KA0			
22	650	23.72	19	19.40	155	7.25	10.18	1.9	1.4	44	1	117	.11	4	.6	.4	40	SF4			
22	743	2.34	19	17.33	155	12.94	8.87	1.4	1.3	29	3	151	.11	1	.5	1.0	20	SF2			
23	5	1	54.04	19	19.57	155	12.21	7.58	1.9	1.3	34	2	88	.11	5	.4	.8	26	SF3		
23	820	21.91	19	20.50	155	4.21	6.86	1.6	1.3	8	0	306	.07	6	7.8	3.4	7	SF5			
23	1046	23.57	19	20.34	155	9.55	7.86	1.8	1.6	33	2	76	.08	3	.5	.7	17	SF3			
23	1140	48.93	19	17.42	155	12.93	7.29	1.1	1.1	25	2	143	.09	1	.6	.9	15	SF2			
23	12	6	48.97	19	17.60	155	20.82	5.98	1.7	1.2	19	1	126	.09	4	.6	1.4	15	SWR		
23	1541	4.43	19	23.65	155	2.83	6.82	1.3	1.3	20	0	111	.14	3	.6	1.1	11	SF3			
23	2011	44.07	20	16.74	155	4.93	6.94	1.6	2.4	5	0	307	.09	51	18.4	5.8	2	KEA			
23	2055	18.78	19	16.69	155	22.12	7.68	1.3	1.2	20	3	131	.09	5	.5	1.1	11	SWR			
24	016	31.35	19	17.97	155	20.79	6.89	1.1	1.2	15	2	155	.07	4	.8	1.4	13	SWR			
24	439	42.76	19	18.49	155	20.07	14.16	1.8	1.4	29	4	112	.10	3	.5	.5	23	DFP			
24	1454	58.88	19	17.98	155	12.90	6.95	1.6	1.3	35	5	113	.11	2	.4	.8	17	SF2			
25	418	21.36	19	24.25	155	30.01	8.41	2.2	1.7	41	2	33	.09	5	.3	.7	29	KA0			
25	657	29.73	19	19.22	155	8.41	7.85	1.7	1.5	31	4	85	.07	4	.5	.8	22	SF4			
25	1238	32.98	19	19.79	155	11.22	8.09	1.9	1.6	27	2	90	.08	5	.5	1.0	17	SF3			
25	1422	15.48	19	20.16	155	11.63	7.80	2.0	1.9	37	5	81	.10	6	.4	.6	21	SF3			
25	1426	56.73	19	24.44	155	30.20	9.55	2.1	2.0	34	2	40	.08	6	.3	.7	20	KA0			
25	1441	7.26	19	19.45	155	8.00	8.23	1.4	1.6	28	3	80	.07	4	.5	.8	16	SF4			
25	1556	39.68	19	19.79	155	7.00	6.45	1.5	1.8	28	1	113	.11	5	.5	1.0	15	SF4			
25	21	6	56.19	19	19.02	155	13.33	6.67	1.8	1.3	25	4	128	.10	7	.6	1.1	15	SF2		
25	2146	46.75	19	20.23	155	12.55	8.24	1.6	1.1	26	2	73	.09	5	.5	.9	14	SF2			
25	2228	28.23	19	17.87	155	21.21	7.84	1.6	1.6	27	3	121	.10	5	.5	1.0	21	SWR			

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YEAR	MON	DA	HR	MIN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	SEP	25	2257	34.86	19	20.08	155 12.66	8.38	1.6	1.3	25	1	73	.08	5	.5	.9 15 SF2	
		26	047	53.54	19	21.82	155 18.42	12.63	1.6	1.6	36	6	33	.09	4	.4	.5 22 SWR	
		26	049	42.22	19	20.77	155 4.36	8.43	1.6	1.9	27	0	103	.10	3	.6	.7 14 SF5	
		26	514	16.10	19	13.76	155 25.10	38.50	2.0	2.4	33	0	135	.11	2	.8	1.7 20 DLS	
		26	529	51.11	19	15.78	155 22.97	6.91	1.5	1.6	29	2	133	.09	3	.5	1.0 16 SWR	
		26	638	8.85	19	11.16	155 33.25	7.25	2.0	1.8	28	1	101	.15	9	.6	1.1 14 LSW	
		26	641	43.19	19	19.88	155 5.89	8.98	1.4	1.4	27	2	129	.09	5	.6	.8 13 SF4	
		26	945	21.42	19	21.04	155 6.35	6.44	1.8	1.8	30	1	94	.13	4	.5	.9 22 SF4	
		26	1237	45.45	19	17.36	155 20.65	6.93	1.6	1.6	25	3	149	.11	4	.5	1.0 17 SWR	
		26	1238	28.53	19	16.92	155 20.97	7.41	1.8	2.1	29	3	133	.10	5	.5	1.1 18 SWR	
		26	2213	38.21	19	20.57	155 13.26	8.47	2.1	2.4	39	2	62	.11	4	.4	.6 28 SF2	
		27	150	.62	19	22.32	155 25.11	10.57	3.4	3.7	46	3	32	.11	4	.3	.4 41 KAO F	
		27	434	1.28	19	20.47	155 12.30	9.13	2.1	2.5	41	2	71	.11	4	.4	.5 28 SF3	
		27	10	59.55	19	19.06	155 13.45	5.87	1.6	1.4	27	2	77	.13	4	.5	1.2 16 SF2	
		27	2053	31.06	19	18.15	155 16.50	8.32	2.0	2.4	39	2	121	.10	4	.5	.6 27 SF1	
		28	432	39.96	19	17.74	155 23.48	4.63	1.8	1.3	22	1	95	.11	5	.4	2.1 18 SWR	
		28	555	46.75	19	19.36	155 15.44	7.73	1.8	1.9	34	1	90	.10	4	.5	.7 22 SF1	
		28	614	1.80	19	20.07	155 8.16	8.21	2.1	2.2	36	2	85	.11	5	.4	.6 26 SF4	
		28	7	9.47.61	19	20.17	155 11.97	9.84	2.9	3.2	41	2	79	.09	5	.3	.4 32 SF3	
		28	835	23.21	19	19.98	155 12.17	8.48	1.7	1.8	29	1	113	.09	5	.6	.9 20 SF3	
		28	10	4	3.13	19	20.20	7.72	1.6	1.3	30	4	80	.11	5	.5	.8 17 SF3	
		28	11	9	55.56	19	18.49	7.43	1.6	1.7	31	3	97	.11	4	.5	1.0 19 SF1	
		28	1157	47.20	19	20.22	155 12.90	8.93	1.6	1.7	30	2	69	.08	4	.4	.6 22 SF2	
		28	12	7	31.37	19	25.69	2.06	3.8	3.4	33	1	178	.10	4	.5	.9 29 MLO	
		28	1214	13.68	19	20.34	155 11.41	7.85	1.7	1.3	28	3	79	.08	4	.4	.6 17 SF3	
		28	1225	7.36	19	29.35	155 48.47	8.12	3.1	2.7	30	0	92	.13	12	.7	.9 20 KON	
		28	1514	46.93	19	20.24	155 11.45	8.52	1.7	1.7	31	4	80	.09	4	.5	.6 19 SF3	
		28	1859	27.74	19	20.31	155 11.26	8.13	1.7	1.8	36	3	80	.12	4	.5	.8 26 SF3	
		29	257	28.72	19	17.56	155 21.05	8.82	1.7	1.8	33	4	128	.12	4	.5	.6 20 SWR	
		29	357	49.58	19	21.56	155 6.88	8.23	2.4	2.6	39	3	81	.11	3	.4	.6 29 SF4	
		29	416	52.71	19	19.88	155 9.10	6.50	1.8	1.3	31	3	80	.10	4	.5	1.1 25 SF4	
		29	640	22.54	19	16.84	155 20.27	6.86	1.3	1.1	24	3	147	.09	4	.5	1.2 20 SWR	
		29	752	36.10	19	16.60	155 23.79	2.71	1.1	1.1	21	1	99	.11	4	.4	1.1 15 SWR	
		29	1225	9.81	19	19.88	155 11.87	7.69	1.7	1.5	32	2	84	.09	5	.4	.7 17 SF3	
		29	1240	37.69	19	25.10	155 16.01	15.87	2.1	1.3	38	2	73	.09	2	.5	.4 27 DEP	
		29	1943	53.36	19	20.74	155 13.34	9.05	1.6	1.4	27	1	59	.08	4	.5	.8 15 SF2	
		29	22	6	52.59	19	20.51	7.41	2.1	1.8	43	4	78	.14	3	.4	.7 34 SF3	
		30	7	4	29.70	19	18.79	8.73	1.5	1.5	32	2	71	.10	3	.5	.6 15 SF2	
		30	7	4	45.75	19	18.58	10.25	3.9	4.0	44	2	72	.10	3	.5	.5 38 SF2 F	
		30	959	.36	19	18.92	155 13.75	8.55	2.8	3.0	47	6	66	.11	4	.4	.5 33 SF2	
		30	1417	49.09	19	19.41	155 16.32	8.02	2.3	2.4	38	3	105	.10	2	.4	.6 27 SF1	
		30	1939	27.27	19	19.08	155 9.93	7.76	1.3	1.3	24	2	107	.06	5	.5	1.1 12 SF3	
		30	21	3	45.54	19	50.16	30.07	2.4	2.6	38	4	172	.10	8	.8	1.6 31 KEA	
		30	2234	42.57	19	22.98	154 58.30	7.99	1.7	1.6	29	0	180	.12	4	.7	.8 19 LER	
OCT		1	1440	57.20	19	20.09	155 6.94	7.79	2.4	2.0	37	1	108	.10	5	.4	.6 25 SF4	
		1	1722	29.72	19	19.20	155 10.88	6.53	1.9	1.5	31	3	106	.10	6	.5	1.0 20 SF3	
		1	2139	18.91	19	20.66	155 2.13	7.49	3.1	3.1	42	3	171	.10	2	.6	.4 34 SF5	
		2	042	47.79	19	16.66	155 22.10	7.72	1.3	1.3	22	2	131	.10	5	.5	1.2 16 SWR	

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YEAR	MON	DA	HR	MIN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	OCT	2	544	34.28	19	20.46	155 6.77	9.35	3.1	3.0 50	4	102	.10	5	.5	.4 37 SF4 F	
		2	921	12.40	19	18.58	155 11.48	8.12	2.2	2.2 35	4	121	.09	5	.4	.7 21 SF3	
		2	1143	40.50	19	20.40	155 7.23	8.47	3.1	3.1 43	2	97	.12	5	.4	.6 30 SF4	
		2	1227	13.50	19	21.72	155 25.93	10.54	2.1	1.8 39	3	46	.11	3	.4	.6 24 KAO	
		3	6	3	45.17	19	25.38	155 25.45	4.70	1.7 1.2 28	2	51	.11	1	.4	.9 20 KAO	
		3	948	35.35	19	26.63	155 38.50	2.56	2.5	2.1 14	1	206	.11	4	.9	.8 8 MLO	
		3	13	7	27.46	19	.54	155 18.75	37.76	2.6 2.1 39	2	222	.08	23	1.2	2.0 32 LOI	
		3	1748	35.15	19	18.21	155 15.50	8.07	1.7	1.7 29	1	124	.08	4	.5	.6 22 SF1	
		3	2216	7.23	19	16.32	155 22.71	2.49	1.8	1.3 29	2	128	.13	4	.4	1.1 18 SWR	
		3	2228	3.01	19	20.18	155 12.41	8.91	1.5	1.6 36	2	69	.10	5	.5	.6 21 SF2	
		3	2251	6.88	19	19.80	155 13.03	10.17	1.6	1.3 30	2	72	.07	5	.5	.7 19 SF2	
		4	2	5	4.20	18	51.66	155 19.17	16.98	2.1 1.5 18	1	279	.09	36	3.0	52.9 10 LOI	*
		4	1149	1.23	19	15.08	155 23.00	7.49	1.9	1.4 29	3	140	.12	2	.5	1.0 19 SWR	
		4	14	9	13.07	19	20.48	155 9.55	8.43	1.6 1.2 33	3	73	.11	3	.6	.9 25 SF3	
		4	1542	28.00	19	17.30	155 30.69	28.41	3.7	3.8 54	6	46	.09	4	.5	.9 47 DLS F	
		4	1656	45.59	19	20.51	155 13.09	9.89	2.9	3.0 43	3	63	.11	4	.3	.4 29 SF2	
		5	337	19.85	19	16.98	155 23.23	7.74	1.8	1.6 32	3	107	.11	5	.4	.7 18 SWR	
		5	447	12.06	19	55.98	155 30.40	25.51	2.4	1.8 36	1	157	.09	18	.6	1.8 28 KEA	
		5	10	7	47.13	19	20.52	155 11.35	8.48	1.5 1.5 30	4	76	.10	4	.5	.8 22 SF3	
		5	1115	47.69	19	22.00	155 25.45	9.88	1.7	1.7 34	4	43	.10	4	.4	.6 26 KAO	
		5	2154	54.01	19	21.30	155 17.58	27.96	1.7	1.2 40	3	34	.08	2	.6	.9 29 DEP	
		5	2211	42.21	19	58.51	155 33.55	18.55	2.1	2.0 35	5	165	.09	24	.6	2.4 26 KEA	
		6	229	46.64	19	20.36	155 12.99	8.70	1.7	1.8 36	3	66	.10	4	.4	.6 23 SF2	
		6	919	54.72	19	18.82	155 13.39	8.48	1.8	1.1 20	1	78	.06	3	.6	1.0 13 SF2	
		6	930	4.76	19	20.36	155 12.28	6.92	2.1	1.8 38	4	73	.11	4	.4	.7 23 SF3	
		6	1215	45.39	19	25.95	155 38.71	4.03	2.8	2.8 31	1	195	.10	5	.7	1.4 20 MLO	
		6	1430	46.87	19	24.38	155 12.88	6.10	2.8	2.6 44	5	44	.09	3	.3	.6 32 SF2	
		6	1849	51.80	19	18.01	155 20.80	7.03	1.5	1.2 26	3	121	.09	4	.4	1.1 22 SWR	
		6	1918	13.53	19	26.80	154 56.05	5.35	1.5	1.2 29	3	142	.12	2	.5	.9 18 LER	
		6	2335	43.42	19	18.57	155 14.25	9.84	3.0	3.0 45	3	130	.11	6	.4	.5 36 SF2	
		7	030	38.17	19	19.02	155 16.37	6.98	1.8	1.3 27	3	113	.11	3	.5	.9 21 SF1	
		7	628	46.56	19	25.72	155 28.06	9.64	2.3	2.3 45	5	88	.10	5	.3	.7 29 KAO	
		7	820	4.33	19	20.90	155 6.28	7.40	1.9	1.4 20	1	98	.10	4	.5	1.1 16 SF4	
		7	13	1	36.24	19	26.83	155 36.15	40.80	2.8 2.5 26	1	58	.12	1	.9	2.0 3 DML	
		7	1555	15.24	19	17.00	155 22.20	6.54	1.2	1.2 22	1	124	.10	6	.4	1.4 14 SWR	
		7	1824	59.09	19	23.01	155 27.06	7.14	1.9	1.8 33	3	45	.10	1	.4	.8 24 KAO	
		7	2259	52.40	19	14.13	155 32.91	7.48	1.8	1.5 22	1	194	.15	5	1.0	.9 11 LSW	
		8	041	1.58	19	15.40	155 22.83	6.77	1.4	1.7 23	3	171	.09	3	.5	1.2 15 SWR	
		8	149	28.68	19	21.18	155 18.47	12.93	1.5	1.8 43	7	47	.11	3	.4	.4 30 SWR	
		8	211	26.65	19	23.84	155 16.75	3.06	1.4	1.6 19	2	74	.08	0	.3	.3 10 SSC	
		8	10	2	35.01	19	20.78	155 13.51	8.55	1.6 1.5 37	4	58	.10	4	.4	.6 23 SF2	
		8	1133	27.61	19	20.21	155 4.38	6.44	2.0	2.0 30	2	128	.07	3	.4	.6 17 SF5	
		8	1327	58.43	19	22.94	155 2.38	8.17	2.2	2.0 38	2	123	.13	4	.5	.5 21 SF5	
		8	1929	3.32	19	15.28	155 49.81	4.37	2.3	1.8 46	1	138	.13	5	.8	2.6 16 KON	
		9	242	39.11	19	20.20	155 11.51	7.78	2.3	2.3 43	4	81	.14	5	.5	.6 34 SF3	
		9	852	5.58	19	20.44	155 11.87	8.60	1.9	1.1 30	2	75	.09	5	.5	.7 18 SF3	
		9	1110	5.47	19	22.60	155 29.89	8.61	1.9	1.3 37	3	43	.09	4	.3	.9 26 KAO	
		9	1543	4.92	19	40.90	156 31.50	39.19	2.9	2.8 26	0	243	.15	67	2.6	3.1 16 DIS	

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR	GAP NS	RMS DEG	MIN SEC	ERH DIS	ERZ NO KM FM	REMK
1981	OCT	9	2021	17.00	19 19.64	155 9.82	7.72	1.9	1.8 38	3 91	.12	4	.4	.8 26	SF3
		10	334	29.32	19 20.21	155 11.39	7.69	1.9	1.7 43	4 81	.13	4	.4	.7 25	SF3
		10	344	11.65	19 20.29	155 7.03	7.35	2.1	1.8 35	2 102	.10	5	.4	.7 18	SF4
		10	753	34.06	19 25.06	155 27.95	10.01	2.4	2.5 29	2 47	.12	5	.4	.8 21	KA0
		10	1113	38.48	19 58.85	155 45.97	10.10		1.5 11	1 162	.13	16	1.0	1.2 10	KOH
		10	1146	52.68	19 20.03	155 12.57	7.59	1.6	1.6 21	1 75	.09	5	.5	.9 17	SF2
		10	1643	7.94	19 18.88	155 12.14	6.52	1.9	1.5 36	5 104	.11	4	.5	.9 20	SF3
		10	1823	23.29	19 19.83	155 11.70	9.45	2.9	3.1 45	3 86	.10	5	.4	.4 31	SF3
		11	3 1	18.58	19 19.91	155 8.00	7.44	1.6	1.3 30	2 90	.07	5	.4	.8 20	SF4
		11	328	14.35	19 24.24	155 16.48	16.20	1.8	1.6 43	2 44	.12	1	.4	.4 27	DEP
		11	5 8	49.16	19 12.65	155 35.75	8.14	2.2	2.1 37	1 87	.21	5	.6	.9 18	LSW
		11	721	19.03	19 37.35	156 4.48	37.88	3.0	3.0 48	4 237	.10	22	1.1	.8 38	KON
		11	835	58.23	19 20.43	155 6.76	7.79	1.8	1.3 33	4 103	.10	5	.4	.6 24	SF4
		11	1537	18.48	19 21.02	155 2.49	7.16	2.1	1.8 40	2 143	.11	2	.4	.5 25	SF5
		12	516	33.60	19 19.40	155 15.23	7.57	1.4	1.3 29	1 95	.09	4	.5	.8 20	SF1
		12	725	23.34	19 19.69	155 6.82	7.79	2.1	1.7 39	6 119	.10	5	.4	.7 24	SF4
		12	930	15.71	19 20.46	155 7.51	7.50	2.2	2.1 39	4 91	.10	5	.4	.6 23	SF4
		12	935	17.41	19 21.03	155 13.23	8.03	2.4	2.5 43	3 58	.13	3	.4	.6 32	SF2
		12	947	50.40	19 20.79	155 11.06	8.16	2.0	2.0 40	4 73	.10	3	.4	.5 26	SF3
		12	1028	38.30	19 20.17	155 26.79	10.11	2.3	2.2 42	2 50	.13	5	.4	.7 28	KA0
		12	1053	8.30	19 17.47	155 13.09	7.20	1.7	1.3 29	2 129	.10	1	.5	.9 17	SF2
		12	1443	59.09	19 20.80	155 6.08	7.97	2.1	2.1 36	0 102	.11	4	.5	.7 29	SF4
		12	2226	40.61	19 19.33	155 15.51	9.18	2.4	2.5 44	3 100	.11	4	.4	.5 31	SF1
		13	013	31.38	19 18.04	155 13.33	8.46	2.4	2.5 44	5 90	.11	2	.4	.5 28	SF2
		13	415	53.64	19 20.55	155 11.55	8.78	1.9	1.6 35	3 75	.09	4	.4	.6 29	SF3
		13	5 3	26.37	19 19.46	155 6.85	7.98	1.8	1.3 35	5 125	.08	4	.4	.5 22	SF4
		13	14 1	45.25	19 19.27	155 25.97	29.91	1.8	1.3 38	2 59	.11	5	.7	1.1 32	DML
		13	1540	31.18	19 20.67	155 13.73	9.04	2.6	2.8 44	3 55	.13	4	.4	.5 35	SF2
		13	1824	35.55	19 23.04	155 24.23	9.38	1.6	1.5 40	3 32	.12	4	.3	.5 29	KA0
		13	1911	22.84	19 17.05	155 21.61	8.69	3.1	3.4 47	2 129	.14	6	.4	.5 42	SWR
		13	1914	16.35	19 17.11	155 21.80	8.50	2.8	3.0 48	4 128	.14	6	.4	.6 40	SWR
		14	036	21.10	19 24.09	154 56.72	6.49	1.7	1.1 31	2 160	.14	2	.8	.7 15	LER
		14	451	3.44	19 20.89	154 4.65	47.87	2.5	2.9 21	1 335	.14	82	4.9	3.6 5	OIS
		14	520	59.10	19 20.34	155 11.96	7.39	2.4	2.5 46	3 76	.13	5	.4	.6 34	SF3
		14	1350	59.01	19 18.11	155 23.77	9.63	2.4	2.8 45	3 88	.14	4	.4	.6 33	SWR
		14	1438	20.54	19 59.90	155 39.69	13.98	3.1	3.4 50	5 149	.10	19	.8	1.0 39	KOH F
		14	1844	9.87	19 15.25	155 27.67	7.43	1.6	1.3 32	4 78	.16	4	.4	.8 22	LSW
		14	2058	42.75	19 19.87	155 7.22	8.60	1.4	1.3 27	1 107	.06	5	.5	.7 19	SF4
		14	23 5	53.15	19 16.93	155 21.56	6.43	1.8	1.8 34	4 133	.11	6	.4	.9 21	SWR
		15	1 0	.19	18 59.21	155 3.35	35.37	3.3	3.4 49	3 248	.10	35	1.4	2.0 43	LOI
		15	6 4	2.83	19 25.45	155 37.74	2.04	2.3	2.2 25	1 95	.11	4	.5	1.1 19	MLO
		15	610	41.88	19 22.41	155 3.36	8.36	1.9	1.8 33	2 104	.09	4	.5	.5 19	SF5
		15	656	5.13	19 20.77	155 3.03	7.31	1.6	1.3 26	2 115	.10	2	.5	.7 14	SF5
		15	1251	21.61	19 21.47	155 6.13	8.46	2.3	2.3 35	1 86	.07	3	.4	.6 24	SF4
		15	1413	39.97	19 19.24	155 10.15	8.01	1.8	1.8 35	3 103	.09	5	.4	.6 25	SF3
		15	2115	53.15	19 23.88	155 15.34	36.08	1.5	1.3 22	0 96	.09	2	1.2	3.0 7	DEP L
		16	134	46.73	19 20.28	155 6.57	7.65	1.7	1.1 30	2 110	.11	5	.5	.8 15	SF4
		16	1124	43.67	19 18.98	155 12.45	6.15	1.9	1.8 36	2 97	.13	4	.5	1.0 26	SF2

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR NR NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	OCT	16	1216	24.95	19 20.65	155 6.99	8.53	1.4	1.6 26	2 96	.08	5	.5	.7 18	SF4
		16	1437	12.36	19 12.88	155 31.73	5.00	1.8	1.6 30	2 132	.16	5	.6	1.8 17	LSW
		16	1619	35.11	19 13.18	155 37.33	8.14	1.9	1.9 35	3 92	.20	3	.6	.8 23	LSW
		16	17 5	39.51	19 20.41	155 7.01	7.87	1.8	1.8 31	1 100	.11	5	.4	.8 19	SF4
		16	1737	16.80	19 20.86	155 17.40	32.58	1.6	1.4 31	2 44	.08	1	.9	1.5 22	DEP
		16	1857	50.31	19 19.50	155 10.98	7.22	1.8	2.1 37	3 98	.11	5	.4	.7 22	SF3
		16	22 3	4.57	19 21.22	155 8.27	8.51	1.8	2.1 39	2 71	.09	3	.5	.5 22	SF4
		16	2331	52.98	19 19.74	155 11.57	7.67	2.0	1.9 32	2 90	.10	5	.5	.8 21	SF3
		17	6 6	59.89	19 20.13	155 12.15	7.47	1.7	1.8 36	3 77	.10	5	.5	.6 24	SF3
		17	724	15.55	19 19.73	155 6.85	8.06	2.0	1.8 36	1 117	.09	5	.5	.6 20	SF4
		17	853	27.66	19 20.66	155 10.85	8.55	1.6	1.3 32	3 75	.09	3	.4	.6 16	SF3
		17	916	41.93	19 20.18	155 12.73	7.30	1.7	1.3 30	3 71	.11	5	.5	.8 21	SF2
		17	16 0	31.65	19 20.30	155 12.84	6.81	1.9	1.8 32	2 69	.13	4	.5	.8 21	SF2
		18	057	20.31	19 19.55	155 8.16	8.22	1.9	1.9 30	1 89	.08	4	.4	.7 20	SF4
		18	814	1.67	19 22.78	155 27.32	10.22	2.5	2.6 45	3 36	.11	1	.3	.5 31	KA0
		18	1130	8.35	19 18.31	155 13.26	6.87	1.7	1.1 34	4 89	.10	2	.5	.8 19	SF2
		18	1138	50.52	19 19.81	155 10.47	8.34	1.9	1.6 35	3 91	.08	4	.4	.7 25	SF3
		18	1142	28.81	19 23.80	155 16.90	2.79	1.2	1.1 18	2 74	.09	1	.4	.2 10	SSC
		18	1941	4.64	19 19.88	155 13.68	8.48	2.2	2.3 48	4 60	.12	5	.4	.5 28	SF2
		19	253	22.35	19 26.25	155 37.91	1.19	1.3	1.1 14	2 97	.14	3	.7	.9 6	MLO
		19	416	28.49	19 18.88	155 25.89	9.93	1.8	1.5 26	3 60	.10	5	.5	.9 23	LSW
		19	10 8	35.60	19 20.09	155 11.29	9.24	3.0	2.9 46	4 83	.11	4	.3	.4 32	SF3
		19	1149	4.01	19 .37	155 18.50	40.14	2.0	1.3 30	0 237	.08	24	1.8	2.7 24	LOI
		19	1230	18.87	19 18.77	155 14.93	6.98	2.0	1.4 33	1 92	.10	4	.5	.9 19	SF1
		19	1342	54.31	19 26.52	154 56.58	5.48	1.7	1.4 30	3 143	.10	3	.5	.9 18	LER
		19	14 9	39.68	19 18.65	155 14.77	7.35	1.4	1.3 27	2 102	.07	4	.4	.9 15	SF1
		19	1449	31.57	19 25.61	155 28.91	8.85	2.0	1.6 30	2 51	.11	6	.4	.8 22	KA0
		19	1713	45.43	19 24.15	155 15.97	3.11	.9	1.3 13	2 121	.04	1	.3	.4 9	SEC
		19	1743	16.73	19 30.62	155 52.04	8.74	1.6	1.7 17	2 190	.12	6	1.6	.6 13	KON
		19	1930	30.55	19 23.85	155 15.84	3.32	1.5	1.8 25	3 82	.09	1	.5	.3 14	SEC
		19	1934	25.31	19 19.63	155 9.14	6.54	1.6	1.3 33	3 85	.12	5	.5	1.0 22	SF3
		19	2216	36.56	19 19.94	155 13.62	7.40	1.6	1.3 38	4 62	.11	5	.4	.7 22	SF2
		20	1642	22.46	19 18.85	155 13.08	7.03	1.7	1.4 34	1 85	.11	3	.5	.8 19	SF2
		21	437	19.01	19 18.80	155 14.98	6.48	1.7	1.3 30	1 93	.10	4	.5	.9 20	SF1
		21	845	53.48	19 21.16	155 6.05	6.70	1.1	1.2 26	2 94	.12	3	.6	1.0 9	SF4
		21	1651	21.35	19 19.99	155 6.28	8.17	1.6	1.3 25	2 121	.11	6	.5	.9 16	SF4
		21	1738	47.16	19 25.56	155 37.46	2.48	2.2	1.8 12	1 92	.12	4	.6	1.2 5	MLO
		22	223	15.59	19 25.80	155 37.63	2.67	2.2	1.8 11	2 94	.12	4	.6	1.0 12	MLO
		22	325	7.90	19 24.83	155 36.95	.67	2.2	1.7 18	1 124	.12	5	.6	1.3 6	MLO
		22	411	40.44	19 19.70	155 11.35	7.13	2.1	2.1 43	4 91	.13	5	.4	.6 30	SF3
		22	514	4.36	19 20.74	155 13.03	8.68	2.4	2.7 48	5 62	.11	4	.4	.5 31	SF2
		22	1322	15.10	19 19.50	155 8.09	9.00	2.4	2.0 43	3 91	.08	4	.3	.5 28	SF4
		22	1323	31.14	19 20.03	155 8.43	8.17	2.3	2.0 44	5 79	.09	5	.4	.6 30	SF4
		22	1619	20.23	19 18.85	155 13.50	6.45	1.6	1.1 20	2 73	.08	3	.5	1.2 15	SF2
		22	2156	8.92	19 19.47	155 8.73	9.52	3.3	3.8 44	0 82	.11	4	.5	.4 38	SF4
		22	22 0	59.15	19 19.83	155 22.39	5.61	1.8	2.3 35	1 124	.12	5	.4	1.3 24	SWR
		22	2215	7.39	19 17.84	155 20.86	6.62	1.7	1.1 26	2 123	.08	4	.4	1.2 17	SWR
		23	226	21.04	19 30.26	155 27.60	5.02	1.8	1.0 16	3 96	.10	3	.5	1.2 8	MLO

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	OCT	23	435	34.92	19 26.68	154 56.04	5.48	1.5	1.1	24	3	143	.10	2	.5	.6 12 LER
		23	438	59.46	19 20.71	155 12.72	8.39	1.5	1.3	30	2	65	.09	4	.5	.7 16 SF2
		23	712	22.93	19 18.50	155 15.16	7.10	1.7	1.4	26	3	102	.10	4	.5	1.0 18 SF1
		23	1045	34.77	19 25.44	154 55.83	6.14	1.7	1.3	24	1	166	.10	4	.7	1.1 14 LER
		23	1311	41.99	19 19.92	155 10.60	8.64	2.4	2.4	42	6	89	.12	4	.4	.6 30 SF3
		23	1652	46.28	19 20.31	155 7.63	8.08	1.5	1.3	30	2	91	.09	5	.5	.9 20 SF4
		23	1745	11.47	19 23.89	155 26.73	10.05	1.8	1.3	25	2	48	.09	3	.4	.9 20 KAO
		23	2013	47.13	19 21.41	155 14.78	9.44	1.5	1.4	28	3	82	.10	3	.5	.8 16 SF1
		23	2049	35.78	19 50.41	155 10.39	43.49	2.3	1.3	30	1	200	.09	19	1.1	2.5 20 KEA
		24	120	46.12	19 27.91	155 41.92	9.23	1.4	1.3	25	2	89	.11	9	.4	1.1 17 MLO
		24	936	26.43	19 19.17	155 11.28	7.17	1.8	2.1	33	4	105	.09	6	.4	.7 21 SF3
		24	1153	55.75	19 15.44	154 52.49	40.34	2.3	1.6	40	0	253	.08	20	2.6	2.5 36 DIS
		24	1415	4.01	19 17.59	155 13.03	7.79	2.1	2.0	39	3	125	.14	1	.5	.8 26 SF2
		24	230	33.56	19 19.48	155 11.78	7.75	1.6	1.1	35	4	93	.12	5	.4	.8 21 SF3
		25	421	44.94	19 20.00	155 12.30	7.30	1.5	1.1	32	3	79	.11	5	.5	.9 20 SF3
		25	1119	10.40	19 20.52	155 12.75	8.43	1.5	1.3	29	2	67	.09	4	.5	.8 17 SF2
		25	1918	58.43	19 22.41	155 16.46	33.52	1.9	1.6	35	0	50	.08	1	.7	1.4 28 DEP
		26	543	19.35	19 18.91	155 13.20	6.69	1.7	1.6	40	2	81	.12	4	.4	.8 22 SF2
		26	919	51.56	19 24.36	155 16.94	2.00	1.2	1.4	14	3	87	.08	1	.4	.2 7 SSC
		26	1159	9.57	19 16.59	155 22.19	7.30	1.8	1.9	31	2	132	.12	5	.4	.9 23 SWR
		26	2159	40.36	19 22.71	155 2.12	7.90	2.1	2.2	35	1	131	.10	5	.4	.6 23 SF5
		27	3	33.51	19 19.43	155 11.67	7.87	1.5	1.3	34	4	96	.09	5	.5	.8 21 SF3
		27	425	19.95	19 20.59	155 4.25	8.62	2.2	2.3	38	1	110	.08	3	.5	.4 24 SF5
		27	632	43.01	19 11.79	155 28.95	5.75	2.2	1.6	27	0	85	.12	5	.5	1.2 15 LSW
		27	913	27.99	19 19.44	155 12.45	7.58	1.8	1.6	36	6	86	.10	5	.4	.7 15 SF2
		27	1228	54.66	19 22.06	155 6.48	8.13	2.4	2.1	42	5	75	.12	2	.4	.6 25 SF4
		27	1753	58.28	19 21.36	155 7.10	8.45	2.5	2.7	44	4	82	.08	3	.4	.4 23 SF4
		27	2333	32.26	19 22.60	155 17.21	32.88	4.0	4.2	49	2	38	.12	2	.6	1.1 47 DEP F
		28	143	20.66	19 22.42	155 17.23	32.67	2.7	3.0	51	3	38	.11	2	.5	.9 46 DEP
		28	414	32.81	19 16.79	155 23.17	8.54	1.8	1.6	30	2	111	.13	5	.5	.7 12 SWR
		28	636	23.18	19 22.46	155 17.10	32.76	2.5	2.2	49	2	40	.11	2	.5	.9 38 DEP
		28	750	13.14	19 16.66	155 22.18	8.28	2.3	1.8	47	5	130	.15	5	.4	.7 31 SWR
		28	750	39.62	19 16.59	155 21.85	7.45	2.7	2.8	49	3	133	.16	6	.4	.8 36 SWR
		28	752	29.96	19 16.77	155 21.63	6.92	1.8	1.4	33	4	133	.10	6	.4	.8 24 SWR
		28	837	42.25	19 24.07	155 16.93	14.30	1.6	.7	24	2	80	.08	1	.6	.8 15 DEP
		28	1332	26.74	19 20.71	155 6.95	8.96	2.9	2.8	42	2	95	.09	4	.4	.5 32 SF4
		28	1742	23.42	19 21.41	155 28.37	9.28	1.6	1.4	33	1	42	.11	2	.4	.7 27 KAO
		28	1856	33.08	19 19.51	155 7.16	8.45	1.6	1.3	32	3	116	.08	4	.5	.7 21 SF4
		28	2253	4.10	19 22.63	155 16.73	30.13	1.4	1.0	26	1	82	.07	1	1.0	1.7 19 DEP
		28	2336	43.39	19 22.42	155 16.43	30.84	1.6	1.2	24	0	50	.07	1	1.1	2.2 18 DEP
		28	2355	53.43	20 14.33	155 54.22	36.46	2.5	2.4	24	3	314	.09	18	1.7	.8 15 KOH
		29	117	16.39	19 22.30	155 6.15	7.79	2.0	1.5	35	1	72	.09	1	.4	.7 17 SF4
		29	118	33.76	19 22.20	155 6.36	8.45	2.0	1.8	34	4	73	.11	2	.4	.6 20 SF4
		29	557	12.89	19 20.01	155 10.16	8.05	1.8	1.7	31	2	86	.08	4	.5	.7 22 SF3
		29	634	.27	19 20.43	155 11.79	8.44	1.9	1.9	40	2	75	.11	5	.4	.6 24 SF3
		29	918	6.36	19 19.82	155 12.33	7.11	1.6	1.1	29	3	81	.09	5	.5	.9 18 SF2
		29	1447	17.41	19 20.29	155 12.11	8.81	2.3	2.4	44	4	76	.10	5	.4	.5 32 SF3
		29	20	6	19 22.96	155 1.68	7.49	1.9	1.3	31	2	146	.14	5	.6	.7 20 SF5

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YEAR	MON	DA	HR	MIN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR DEG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM REMK
1981	OCT	29	2014	6.19		19 24.00	155 16.40	10.01	1.8	1.1 20	2	102	.08	0	.6	.8 11 INT LT
		29	2112	2.96		19 19.44	155 11.99	4.18	1.5	1.4 37	4	92	.15	5	.4	1.8 23 SSF
		30	423	25.62		19 27.63	155 37.55	1.66	2.2	1.5 10	0	111	.13	2	.5	.8 5 MLO
		30	627	4.08		19 22.16	155 2.32	7.84	1.6	1.3 25	1	141	.14	4	.8	.8 20 SF5
		30	753	42.62		19 20.47	155 12.90	8.66	1.6	1.5 27	3	66	.09	4	.5	.7 20 SF2
		30	754	54.32		19 19.88	155 18.68	5.00	2.4	2.0 42	3	58	.11	2	.3	.9 27 SWR
		30	852	54.20		19 23.76	155 26.06	9.42	2.2	1.7 39	3	47	.12	3	.4	.7 28 KAO
		30	1233	39.38		19 18.42	155 13.81	8.57	1.7	1.5 34	1	95	.11	3	.5	.8 22 SF2
		30	1253	.33		19 41.42	155 3.48	6.76	2.5	2.6 30	0	186	.19	21	1.4	3.0 11 HIL R
		30	1648	55.41		19 16.92	155 22.82	6.58	1.8	1.5 34	4	115	.13	5	.4	.9 22 SWR
		30	1740	48.53		19 20.63	155 13.86	8.89	1.4	1.1 28	2	67	.07	4	.5	.7 17 SF2
		31	140	27.94		19 15.48	155 12.42	48.13	2.4	1.9 45	1	170	.09	3	.4	1.4 36 DEP
		31	237	9.85		19 16.50	155 22.45	5.53	1.9	2.1 39	2	129	.12	5	.4	1.0 25 SWR
		31	9	25.31		19 21.82	155 4.90	8.67	2.3	2.2 40	2	78	.09	3	.5	.5 24 SF5
		31	945	13.03		19 22.01	155 5.11	8.63	2.0	1.8 33	1	76	.08	3	.4	.6 21 SF5
	NOV	1	2157	35.75		19 19.90	155 10.88	7.40	2.5	2.6 37	1	89	.11	4	.4	.6 29 SF3
		1	252	9.12		19 19.36	155 13.37	6.47	1.5	1.3 32	3	72	.12	4	.4	.9 19 SF2
		1	550	14.80		19 23.46	155 16.62	2.86	1.8	1.1 21	3	50	.09	0	.3	.2 12 SSC
		1	727	32.97		19 30.50	155 20.76	13.89	2.1	1.6 37	5	69	.10	5	.4	.5 26 DML
		1	918	51.46		19 17.62	155 20.87	9.45	2.4	2.9 48	4	126	.12	4	.4	.5 31 SWR
		1	16	5		19 29.09	155 52.58	10.47	3.1	3.0 41	5	97	.15	4	.5	.4 25 KON
		1	1923	42.48		19 21.30	155 7.50	7.34	1.7	1.5 38	1	80	.12	4	.5	.8 20 SF4
		1	2033	3.37		19 7.26	155 28.11	29.41	2.3	1.5 38	2	180	.07	4	.7	1.4 31 DLS
		2	2	3		19 24.49	155 24.87	10.75	2.4	2.7 49	5	30	.12	2	.3	.4 37 KAO
		2	226	1.15		19 19.08	155 13.40	7.64	2.2	2.4 47	6	74	.12	4	.4	.6 23 SF2
		2	336	7.26		19 19.72	155 11.03	8.56	1.9	1.9 43	2	92	.12	5	.4	.6 32 SF3
		2	5	8		19 24.55	155 13.49	35.04	2.2	1.6 42	1	49	.11	2	.7	1.2 36 DEP
		2	643	51.80		19 20.93	155 12.60	8.01	1.8	1.8 31	1	122	.12	3	.6	.5 21 SF2
		2	1114	16.31		19 20.20	155 7.60	5.56	1.6	1.4 31	3	94	.11	5	.5	1.3 18 SF4
		2	1231	42.92		19 18.31	155 13.27	7.26	1.7	1.8 36	3	68	.10	2	.5	.8 20 SF2
		2	1726	17.11		19 30.91	155 57.44	10.44	2.7	2.5 29	2	232	.14	5	1.3	.6 18 KON
		3	118	56.10		19 17.50	155 21.02	5.50	1.7	1.5 24	2	126	.09	4	.5	1.4 19 SWR
		3	2	1		19 18.22	155 16.72	33.03	1.9	1.6 37	3	119	.09	3	.8	1.1 29 DEP
		3	215	58.83		19 13.46	156 1.53	14.49	2.1	2.3 22	1	255	.17	17	2.6	.8 9 KON
		3	320	22.66		19 20.40	155 12.36	7.98	1.5	1.5 34	2	72	.13	4	.5	.7 21 SF2
		3	326	44.49	20	.72	155 35.64	11.19	2.6	2.2 33	4	173	.09	23	.7	.5 17 KOH
		3	328	1.67	19	20.77	155 10.75	7.99	2.2	2.0 41	4	73	.11	3	.4	.6 21 SF3
		3	437	17.04	19	25.94	155 24.08	10.11	2.5	2.4 47	3	34	.12	2	.3	.4 32 KAO
		3	10	5	19	19.84	155 12.27	8.14	1.5	1.3 28	3	81	.06	5	.5	.8 19 SF3
		3	1956	23.84	19	23.82	155 16.76	2.92	1.6	2.0 23	3	74	.08	0	.3	.2 16 SSC
		3	2037	43.66	19	23.68	155 16.78	2.57	1.1	1.0 15	2	85	.08	0	.4	.3 13 SSC
		4	10	3	19	23.94	155 16.84	2.68	1.1	1.3 15	2	47	.10	1	.4	.2 9 SSC
		4	1045	10.73	19	18.79	155 47.56	7.99	2.5	2.1 31	3	116	.15	10	.6	1.0 13 KON
		4	1135	38.43	19	20.10	155 12.45	7.44	1.6	1.5 30	2	76	.11	5	.5	.9 17 SF2
		4	16	8	19	25.09	155 16.02	9.17	1.6	.9 24	3	147	.10	2	.6	.7 12 INT L
		4	18	8	19	20.60	155 13.05	8.32	1.6	2.0 37	3	63	.12	4	.5	.7 24 SF2
		4	1917	27.49	19	17.47	155 21.30	7.46	1.7	1.9 36	4	125	.12	5	.5	.7 23 SWR
		5	5	6	19	24.25	155 17.31	14.44	1.8	1.1 36	5	40	.08	1	.5	.4 24 DEP

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		ORIGIN TIME			LAT N		LON W		DEPTH			AMP		DUR		GAP		RMS		MIN		ERH		ERZ NO	
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	KM	FM	REMK					
1981	NOV	5	5	6	46.79	19	18.95	155	47.99	11.06	2.7	2.3	33	3	94	.11	9	.5	.5	16	KON				
		5	824	22.34	19	22.41	155	1.09	7.23	2.8	3.0	33	2	168	.09	6	.6	.4	26	SF5	F				
		5	1355	30.43	19	19.86	155	12.15	8.70	1.6	1.1	25	2	82	.07	5	.5	.9	14	SF3					
		5	1518	34.15	19	13.10	155	15.81	32.42	2.2	1.8	46	2	179	.09	8	.7	1.0	41	DEP					
		5	21	7	16.63	19	21.60	155	2.15	8.19	2.5	2.7	41	3	145	.10	3	.5	.4	25	SF5				
		6	031	9.59	19	19.92	155	12.09	7.44	1.6	1.4	21	0	82	.07	5	.5	1.0	18	SF3					
		6	1429	7.37	19	20.30	155	13.05	7.54	1.8	1.8	43	3	66	.14	4	.5	.6	28	SF2					
		7	014	6.35	19	25.92	155	26.48	4.95	2.0	1.4	32	2	56	.12	3	.3	1.1	17	KAO					
		7	016	23.87	19	21.02	155	4.76	8.00	1.5	1.4	27	0	98	.11	4	.6	.7	16	SF5					
		7	723	46.83	19	20.14	155	13.09	9.83	3.1	3.4	47	2	68	.10	5	.4	.3	40	SF2	F				
		7	833	40.34	19	23.87	155	16.88	2.92	1.2	1.3	21	3	77	.06	1	.3	.2	11	SSC					
		7	10	5	23.95	19	20.71	155	27.37	29.12	2.2	1.3	33	1	50	.10	3	.6	1.1	27	DML				
		7	1311	3.38	19	19.98	155	12.14	8.09	1.8	1.7	37	3	80	.10	5	.4	.6	25	SF3					
		7	1447	53.66	19	17.59	155	14.97	6.16	1.9	1.5	34	2	126	.11	3	.4	.8	23	SF1					
		7	1538	48.94	19	10.12	155	36.62	8.94	2.0	1.8	31	2	102	.12	9	.5	.9	17	LSW					
		7	1720	47.42	19	23.58	155	16.80	3.10	.9	.9	17	2	41	.09	0	.4	.3	7	SSC					
		7	1737	37.48	19	18.51	155	13.86	8.01	1.5	1.3	25	0	93	.10	3	.5	.9	15	SF2					
		7	18	1	12.02	19	29.41	155	37.35	3.61	1.5	1.8	14	1	253	.11	2	2.1	.6	9	MLO				
		7	2336	3.56	19	23.65	155	16.84	2.67	1.1	1.3	19	3	48	.07	1	.3	.2	11	SSC					
		8	330	45.42	19	16.93	155	21.95	6.17	1.9	2.3	39	0	128	.14	6	.4	.9	25	SWR					
		8	555	33.30	19	19.01	155	12.26	5.55	1.6	1.0	32	3	98	.12	4	.5	1.3	20	SF3					
		8	6	5	44.63	19	20.09	155	13.11	7.09	1.6	1.2	29	2	68	.10	5	.5	.9	17	SF2				
		8	7	5	30.81	19	19.94	155	9.38	6.71	1.6	1.4	32	3	82	.11	4	.5	.9	14	SF3				
		8	1314	5.40	19	19.07	155	15.69	7.09	1.1	1.1	18	0	116	.08	4	.6	1.1	13	SF1					
		8	1721	9.40	19	28.90	155	36.03	2.73	2.5	2.4	19	1	88	.14	1	.5	.3	13	MLO					
		8	1843	8.89	19	16.74	155	23.17	6.36	1.8	1.8	21	1	124	.11	6	.5	1.6	15	SWR					
		8	2246	43.41	19	20.21	155	12.62	8.72	1.1	1.27	0	72	.09	5	.4	.7	14	SF2						
		9	145	36.78	19	19.61	155	7.78	9.22	2.9	3.2	38	1	99	.10	4	.5	.4	29	SF4					
		9	1327	50.82	19	20.45	155	12.94	7.77	1.6	1.3	28	2	66	.10	4	.5	.8	20	SF2					
		9	1417	12.60	19	17.78	155	23.52	3.01	2.1	2.3	32	1	94	.10	5	.3	.9	17	SWR					
		9	1639	20.31	19	20.18	155	6.92	7.54	1.9	1.3	31	2	106	.10	5	.5	.8	20	SF4					
		9	2137	8.78	19	18.10	155	16.38	8.12	2.0	1.8	41	3	132	.10	4	.4	.6	23	SF1					
		10	118	32.55	19	20.10	155	13.24	7.63	2.0	2.2	43	3	66	.13	5	.4	.7	29	SF2					
		10	3	2	56.58	19	20.58	155	12.67	10.31	4.4	4.9	47	1	67	.11	4	.4	.3	43	SF2	F			
		10	312	41.44	19	20.80	155	11.57	7.96	1.7	1.5	34	4	71	.10	4	.4	.7	22	SF3					
		10	319	53.45	19	19.61	155	10.95	8.37	1.8	1.5	38	3	95	.14	5	.5	.7	20	SF3					
		10	331	2.64	19	20.34	155	12.44	8.96	3.4	3.5	49	3	72	.12	4	.4	.5	42	SF2	F				
		10	348	13.71	19	20.21	155	11.30	8.05	2.3	2.4	45	3	81	.13	4	.4	.6	32	SF3					
		10	4	1	50.11	19	19.85	155	12.22	7.72	1.9	1.8	44	2	82	.12	5	.4	.6	29	SF3				
		10	411	25.89	19	20.68	155	10.70	8.38	1.7	1.4	33	2	74	.07	3	.4	.7	18	SF3					
		10	416	24.62	19	24.30	155	33.73	34.90	2.5	2.9	22	0	86	.13	7	.9	2.1	0	DML	L				
		10	5	5	41.33	19	20.21	155	11.49	6.95	1.7	1.6	31	2	81	.11	4	.5	.9	22	SF3				
		10	616	22.78	19	17.27	155	12.77	6.62	1.6	1.4	33	2	163	.13	1	.6	.9	18	SF2					
		10	1021	38.26	19	20.95	155	13.09	8.16	1.5	1.4	33	3	60	.09	3	.4	.6	22	SF2					
		10	1355	26.32	19	20.96	155	11.85	9.01	1.9	1.7	36	3	68	.11	4	.4	.6	23	SF3					
		10	1525	50.55	19	23.70	155	16.74	2.87	1.6	1.9	23	4	44	.12	0	.3	.3	16	SSC					
		10	2031	6.90	19	18.03	155	20.75	7.23	1.9	2.2	45	6	121	.09	4	.3	.6	31	SWR					
		11	048	52.28	19	18.86	155	15.30	6.70	1.3	1.1	27	3	106	.09	4	.5	.9	18	SF1					

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		ORIGIN TIME			LAT N		LON W		DEPTH				AMP		DUR		GAP		RMS	MIN	ERH	ERZ NO		
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	NR	NS	DEG	SEC	DIS	KM			KM	KM	FM	REMK	
1981	NOV	11	129	19.97	19	19.29	155	13.68	5.87	1.8	2.1	43	3	65	.13	4	.4							
		11	131	29.09	19	17.01	155	23.24	5.05	2.0	2.6	44	1	106	.14	5	.4					1.2	31 SWR	
		11	6	1	6.48	19	19.25	155	11.49	7.44	1.6	1.2	32	3	102	.09	5	.5					.7	20 SF3
		11	1019	32.72	19	18.96	155	15.55	6.94	1.9	1.9	34	2	95	.12	4	.4					.8	27 SF1	
		11	1215	.40	19	20.23	155	25.27	10.41	1.6	1.4	16	1	104	.08	4	.6					1.1	13 KAO	
		11	16	8	1.18	19	15.95	155	23.25	8.10	1.4	1.1	20	3	140	.08	3	.5					1.0	16 SWR
		11	1936	34.31	19	20.68	155	9.85	8.64	1.8	1.3	27	2	73	.06	3	.5					.9	22 SF3	
		11	2123	31.70	19	22.16	155	17.10	31.28	2.0	1.3	33	1	60	.08	2	.8					1.2	25 DEP	
		11	22	3	52.26	19	21.93	155	2.91	9.05	1.8	1.5	28	3	126	.10	4	.5					.7	21 SF5
		11	2236	11.42	19	19.81	155	11.41	9.74	2.9	3.2	46	2	88	.10	5	.4					.3	37 SF3 F	
		12	253	4.52	19	21.39	155	4.66	6.88	1.9	1.8	31	1	86	.13	4	.4					.7	20 SF5	
		12	629	12.09	19	19.66	155	11.04	7.40	1.6	1.0	27	2	94	.11	5	.6					1.1	21 SF3	
		12	1213	6.39	19	36.85	155	49.78	13.73	2.6	2.1	31	3	140	.13	8	.6					.4	24 KON	
		12	1525	30.19	19	32.71	155	56.95	5.69	2.1	1.7	29	4	210	.18	7	.8					.9	18 KON	
		13	2	0	13.64	19	21.64	155	4.44	7.62	1.7	1.3	32	0	83	.13	4	.5					.8	21 SF5
		13	513	38.38	19	17.16	155	21.87	5.24	1.4	1.3	28	1	126	.13	6	.5					1.8	23 SWR	
		13	1451	42.25	19	23.64	155	16.71	2.73	1.4	1.5	21	3	43	.11	1	.4					.3	14 SSC	
		13	1738	16.26	19	19.33	155	15.79	7.87	1.5	1.0	32	3	102	.12	3	.5					.8	20 SF1	
		13	2011	13.29	19	15.96	155	22.80	6.66	1.6	1.5	30	1	133	.11	4	.4					1.0	22 SWR	
		14	013	12.74	19	19.30	155	13.11	8.30	2.6	2.7	46	3	78	.12	4	.4					.5	39 SF2	
		14	644	17.41	19	26.52	155	27.22	8.53	2.2	1.3	41	4	48	.11	4	.3					.7	28 KAO	
		14	956	27.82	19	25.22	155	16.14	14.38	1.9	1.2	36	3	74	.10	2	.5					.3	26 DEP	
		15	16	4	59.60	19	58.37	155	20.42	9.38	2.3	2.1	31	4	201	.12	9	.7					.6	18 KEA
		15	1725	53.48	19	17.36	155	13.72	7.50	1.5	1.1	25	2	137	.08	1	.7					.9	16 SF2	
		15	1939	3.00	19	57.84	155	21.06	11.95	2.2	1.9	24	4	197	.11	8	.9					.4	14 KEA	
		15	2023	59.37	19	57.76	155	21.13	10.11	3.0	2.9	37	4	197	.10	8	.6					.5	22 KEA F	
		15	21	3	28.25	19	58.02	155	20.69	9.92	2.9	2.9	44	4	199	.11	9	.8					.6	32 KEA F
		15	2122	25.42	19	57.98	155	20.73	11.49	2.5	2.8	28	3	199	.12	9	.9					.4	20 KEA F	
		15	2123	8.86	19	57.97	155	21.08	11.75	2.7	2.4	41	5	199	.12	9	.8					.4	29 KEA F	
		15	2137	25.03	19	58.05	155	21.28	11.55	2.0	1.6	26	4	198	.11	9	.8					.4	18 KEA	
		15	2159	45.44	19	57.53	155	20.88	11.54	2.0	1.6	21	3	201	.12	8	1.0					.5	12 KEA	
		15	22	4	10.50	19	58.10	155	21.49	11.64	1.8	1.5	21	3	198	.12	9	1.1					.5	13 KEA
		15	2340	54.76	19	58.26	155	20.89	11.75	1.9	1.5	21	3	199	.12	9	1.0					.5	12 KEA	
		16	152	31.93	19	20.52	155	9.83	7.49	1.8	1.3	28	2	75	.09	3	.5					.7	19 SF3	
		16	2	8	40.36	19	58.34	155	20.48	12.34	2.5	2.4	37	4	201	.13	9	1.0					.6	25 KEA F
		16	226	40.23	19	57.43	155	21.65	12.15	3.4	3.4	49	3	174	.11	8	.8					.6	44 KEA F	
		16	344	30.31	19	57.49	155	21.30	11.87	2.3	1.9	35	5	195	.11	8	.8					.3	19 KEA	
		16	436	58.96	19	57.30	155	21.38	11.42	2.8	2.6	43	2	195	.12	7	.8					.6	35 KEA F	
		16	515	44.81	19	58.22	155	20.97	11.75	2.0	1.5	20	4	199	.12	9	1.3					.4	13 KEA	
		16	718	28.10	19	58.43	155	20.45	11.83	2.3	2.2	21	4	201	.10	9	1.0					.4	12 KEA	
		16	720	10.49	19	58.64	155	20.15	11.72	2.5	2.6	29	4	203	.15	10	1.1					.5	17 KEA F	
		16	1124	10.84	19	57.58	155	21.25	11.79	1.9	1.8	19	3	197	.10	8	1.0					.5	14 KEA	
		16	12	4	4.90	19	19.92	155	8.37	8.11	2.1	2.5	40	3	82	.10	5	.4					.8	27 SF4
		16	12	6	12.10	19	19.98	155	8.44	7.25	2.4	2.8	40	2	80	.12	5	.4					.7	23 SF4
		16	1441	31.56	19	11.15	155	28.93	33.93	2.2	1.7	31	1	60	.06	4	.8					1.6	26 OLS	
		16	1722	52.67	19	57.85	155	20.75	11.83	2.4	2.5	36	4	199	.11	8	.9					.5	25 KEA	
		16	1735	3.12	19	54.17	155	19.92	10.43	1.9	1.7	21	1	239	.09	2	1.2					.4	13 KEA	
		16	1739	2.52	19	21.80	155	2.10	8.18	1.7	1.8	30	0	150	.12	4	.8					.5	21 SF5	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	NOV	16	1747	12.81	19 58.02	155 20.76	12.10	2.3	2.3	27	4	199	.12	9	1.2	.5 16	KEA
		16	1750	37.03	19 57.69	155 20.81	12.15	1.9	1.9	24	3	197	.12	8	.9	.5 13	KEA
		16	1910	9.55	19 16.84	155 21.95	8.46	3.0	3.4	45	2	130	.15	6	.4	.6 39	SWR
		16	21	3 45.12	19 57.15	155 21.98	12.53	1.8	1.6	13	2	225	.03	7	.9	.4 7	KEA
		16	21	8 42.84	19 57.78	155 21.83	11.43	1.9	1.5	18	3	196	.13	8	1.1	.5 14	KEA
		17	020	22.00	19 57.61	155 21.29	11.95	2.5	2.4	25	4	197	.07	8	.8	.4 15	KEA
		17	418	45.10	19 18.01	155 23.62	3.29	1.7	1.9	33	3	91	.13	4	.4	1.0 19	SWR
		17	650	1.37	19 53.90	155 19.86	10.81	2.1	2.1	27	3	237	.11	2	1.0	.4 24	KEA
		17	933	28.67	19 12.57	155 28.62	.03	2.5	2.3	42	4	90	.17	6	.4	.6 25	LSW
		17	1040	30.06	19 57.59	155 21.64	12.22	2.4	2.0	25	5	195	.08	8	.8	.4 14	KEA
		17	1810	41.66	19 23.44	155 24.64	11.36	1.4	1.2	40	3	35	.10	4	.4	.5 31	KAD
		17	1942	4.14	19 57.75	155 21.28	11.80	2.2	1.8	20	6	197	.11	8	.9	.4 7	KEA
		17	23	8 46.13	19 19.35	155 11.85	8.36	2.4	2.4	43	3	96	.11	5	.4	.5 28	SF3
		18	118	33.03	19 23.58	155 16.62	2.38	2.2	2.9	36	4	37	.13	1	.3	.2 21	SSC
		18	420	50.98	19 57.52	155 20.95	9.80	2.7	2.8	42	4	197	.11	23	.6	.6 29	KEA
		18	7	9 26.68	19 17.75	155 23.61	4.42	2.1	2.6	35	4	93	.11	5	.3	1.7 18	SWR
		18	753	2.84	19 58.08	155 19.97	9.65	1.4	1.3	2	2	201	.11	9	.9	.6 4	KEA
		18	1029	38.67	19 18.87	155 13.37	9.58	2.7	3.0	47	5	130	.11	7	.4	.4 35	SF2
		18	11	5 43.16	19 18.42	155 13.41	6.64	1.7	1.5	33	2	82	.11	3	.5	.9 23	SF2
		18	1124	10.71	19 57.49	155 20.94	12.11	2.3	2.4	21	4	197	.10	8	1.1	.5 12	KEA
		18	1239	8.35	19 24.02	155 16.83	2.81	1.1	1.1	16	4	84	.08	0	.4	.3 10	SSC
		18	2229	54.85	19 22.17	155 28.88	10.89	3.6	3.7	50	3	36	.11	2	.3	.4 45	KAD F
		19	310	41.72	19 19.34	155 11.53	7.82	1.7	1.4	32	3	99	.10	5	.5	.8 20	SF3
		19	10	2 34.04	19 58.26	155 20.63	11.81	2.8	2.6	30	3	201	.12	9	.9	.5 14	KEA F
		19	1058	41.91	19 59.09	155 20.02	11.19	2.5	2.4	18	1	205	.13	11	1.4	.5 10	KEA
		19	1348	39.87	19 20.12	155 11.35	7.12	1.9	2.1	34	4	83	.11	4	.4	.6 27	SF3
		19	1443	20.89	19 58.49	155 20.72	11.78	2.4	2.6	32	3	201	.10	10	1.0	.5 18	KFA
		19	16	4 33.15	19 19.18	155 15.44	8.85	2.5	2.9	46	5	125	.12	4	.4	.5 31	SF1
		19	1932	58.14	19 57.41	155 21.27	11.84	3.8	4.2	53	5	195	.12	8	.7	.6 47	KEA F
		20	031	44.98	19 58.98	155 19.81	12.57	2.3	2.6	28	3	205	.14	10	1.3	.5 17	KEA
		20	521	5.27	19 29.61	155 44.34	7.22	2.1	1.6	29	4	67	.10	3	.5	1.0 21	KON
		20	742	52.41	19 21.73	155 5.01	8.77	3.4	4.0	49	4	81	.10	3	.5	.4 42	SF5 F
		20	947	7.88	19 21.63	155 1.44	7.31	1.7	1.6	30	1	170	.13	4	.6	.6 15	SF5
		20	10	4 30.31	19 22.33	155 28.95	9.35	1.6	1.4	26	1	65	.11	2	.4	.9 20	KAD
		20	1054	54.58	19 57.54	155 21.29	12.05	2.1	2.1	20	4	196	.08	8	.9	.4 14	KEA
		20	1437	52.03	19 57.65	155 20.82	11.84	2.2	2.1	26	4	197	.10	8	.9	.4 18	KEA
		20	16	0 2.96	19 58.16	155 20.46	12.11	2.7	2.8	38	4	200	.12	9	.9	.6 24	KEA
		20	1841	15.12	19 19.69	155 6.78	6.74	2.0	1.9	38	4	120	.11	5	.5	.9 24	SF4
		20	2038	54.14	19 20.88	155 11.78	8.27	1.9	2.3	44	3	69	.12	4	.4	.5 33	SF3
		20	2342	26.31	19 54.23	155 19.93	10.54	1.9	2.2	20	2	239	.08	2	1.2	.4 12	KEA
		21	1	6 54.93	19 23.76	155 16.75	2.90	1.8	2.1	25	3	55	.09	0	.3	.2 15	SSC
		21	453	40.47	19 23.24	155 14.84	31.57	1.9	1.7	43	1	47	.10	2	.7	1.1 36	DEP
		21	548	57.80	19 20.43	155 17.64	32.99	2.2	1.6	37	1	58	.10	1	.8	1.3 31	DEP
		21	657	31.25	19 19.21	155 15.44	7.00	1.3	1.1	26	2	100	.10	4	.5	1.0 17	SF1
		21	21	2 42.04	19 18.38	155 27.17	36.10	2.4	2.1	46	3	48	.10	8	.7	1.1 40	DLS
		22	055	8.82	19 20.23	155 7.35	7.16	1.7	1.5	29	1	98	.10	5	.5	.8 19	SF4
		22	1	6 31.57	19 28.39	155 53.53	14.24	1.6	1.6	16	0	128	.15	3	1.2	.7 5	KON
		22	624	51.37	19 19.90	155 8.81	7.54	1.5	1.3	28	3	75	.10	4	.6	1.0 18	SF4

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	NOV	22	644	19.80	19 20.09	155 8.13	7.89 2.1 2.3 38	2 84 .11 5	.5	.8 22	SF4						
		22	7	7 33.45	20 2.17	155 49.49	7.83 1.8 1.5 0	201 .06 11	1.3	1.1 11	KOH						
		22	16	7 42.32	19 19.14	155 15.13	7.86 2.3 2.5 42	2 89 .12 4	.4	.6 27	SF1						
		22	1613	41.94	19 23.54	155 16.68	2.88 2.5 2.9 41	3 42 .10 1	.2	.2 30	SSC						
		22	1948	33.15	19 21.12	155 6.26	6.26 2.0 2.2 40	4 94 .13 4	.5	1.0 25	SF4						
		22	1958	58.52	19 18.54	155 13.90	6.48 1.4 1.5 33	3 72 .11 3	.5	1.0 21	SF2						
		22	2216	29.42	19 24.08	155 15.93	2.99 1.5 2.1 26	4 110 .10 1	.3	.3 21	SEC						
		23	755	21.61	19 20.26	155 11.61	9.03 1.9 2.0 37	3 79 .11 5	.4	.6 25	SF3						
		23	12	9 53.38	19 20.31	155 13.15	7.26 1.6 1.5 32	4 65 .11 4	.4	.8 18	SF2						
		23	1444	41.08	19 58.13	155 21.03	12.44 1.6 1.5 19	3 199 .08 9	.9	.5 8	KEA						
		23	1528	19.10	19 57.61	155 21.28	10.56 2.8 2.8 36	2 197 .12 8	.8	.5 18	KEA						
		23	1545	24.91	19 16.22	155 23.41	5.12 1.6 1.8 31	1 113 .13 4	.5	1.5 24	SWR						
		23	1621	36.97	19 44.04	156 4.64	10.29 2.9 2.4 19	2 238 .11 26	1.8	1.0 11	HUA						
		23	1822	21.86	19 20.99	155 3.78	7.56 2.2 2.3 38	0 85 .12 3	.5	.5 32	SF5						
		23	21	5 18.31	19 21.10	155 6.13	7.43 1.3 1.2 23	0 94 .09 4	.5	.9 14	SF4						
		23	2149	16.80	19 20.43	155 13.24	7.11 1.6 1.8 39	3 63 .11 4	.4	.7 25	SF2						
		24	1055	52.87	19 23.21	155 16.79	3.10 1.3 1.3 17	4 57 .09 1	.3	.4 11	SSC						
		24	17	3 23.70	19 18.14	155 13.37	7.95 1.7 2.2 39	5 87 .12 2	.5	.6 27	SF2						
		24	17	5 30.89	19 47.60	155 24.43	14.85 2.7 2.1 31	3 99 .07 6	.4	.4 23	KEA						
		24	1915	26.72	19 18.17	155 13.50	7.38 1.8 2.4 40	3 80 .13 2	.5	.7 24	SF2						
		25	339	43.09	19 21.30	155 5.86	7.66 2.3 2.4 38	3 91 .10 3	.4	.6 28	SF4						
		25	1315	40.24	19 21.12	155 5.76	7.79 1.9 1.8 27	1 95 .11 4	.5	.7 18	SF4						
		25	1611	31.71	19 23.95	155 16.00	3.06 1.7 2.1 24	5 105 .08 1	.3	.3 13	SEC						
		25	1720	32.80	19 20.58	155 12.20	7.79 1.6 1.4 34	4 71 .12 4	.5	.7 21	SF3						
		25	1818	32.96	19 23.81	155 16.83	2.40 1.4 1.8 26	4 70 .10 0	.3	.2 15	SSC						
		26	054	20.98	19 57.77	155 20.53	11.28 2.5 2.4 31	4 199 .12 6	.9	.5 20	KEA						
		26	116	31.56	19 21.58	155 6.19	7.67 2.1 1.9 37	0 84 .13 3	.5	.7 26	SF4						
		26	250	2.32	19 17.28	155 21.04	6.66 1.7 1.9 34	3 133 .11 4	.4	.8 25	SWR						
		26	318	51.95	20 5.23	155 50.35	27.95 2.9 2.0 41	3 226 .09 8	1.3	1.5 29	KOH						
		26	849	19.07	19 19.06	155 13.25	4.73 1.6 1.3 37	2 78 .13 4	.4	1.6 29	SSF						
		26	1718	3.65	19 23.31	155 16.82	2.87 1.3 1.3 21	4 54 .07 0	.3	.2 10	SSC						
		26	1935	2.05	19 58.46	155 20.25	11.73 2.2 1.6 20	3 202 .12 9	1.2	.4 10	KEA						
		26	2217	39.53	19 17.98	155 23.89	3.11 2.3 2.7 42	4 87 .11 4	.3	.9 29	SWR						
		27	1	3 3.93	19 20.44	155 12.98	7.35 1.5 1.6 34	5 95 .12 4	.5	.7 23	SF2						
		27	654	10.47	19 22.03	155 18.03	2.87 1.9 1.6 28	4 50 .11 3	.3	.5 18	SSC						
		27	1353	58.66	19 23.53	155 16.83	3.18 1.2 1.2 17	3 50 .06 0	.3	.3 9	SSC						
		27	20	4 20.24	19 58.30	155 20.77	10.02 2.7 2.8 39	4 200 .10 24	.6	.7 24	KEA F						
		28	354	30.29	19 58.24	155 20.75	9.76 2.8 2.8 39	4 200 .11 24	.7	.6 25	KEA						
		28	917	18.44	19 57.81	155 20.78	9.89 3.4 3.4 41	3 198 .10 23	.6	.5 26	KEA F						
		28	933	35.57	19 57.90	155 19.96	9.17 2.6 1.6 15	2 200 .07 24	.8	1.0 10	KEA						
		28	12	4 56.36	19 58.56	155 20.66	10.01 2.4 1.9 21	3 201 .11 25	1.0	.8 10	KEA						
		28	12	6 2.21	19 21.86	155 18.19	2.41 1.2 1.1 18	4 75 .10 4	.5	.7 14	SWR						
		28	1318	31.46	19 23.81	155 15.84	2.73 1.3 1.1 19	4 103 .11 1	.4	.3 12	SEC						
		28	1737	36.64	19 57.73	155 20.83	9.95 2.6 1.6 16	2 197 .08 23	.8	.8 8	KEA						
		28	1829	2.28	19 21.55	155 15.23	9.26 2.2 2.0 39	5 63 .10 2	.4	.4 29	SF1						
		28	1839	47.51	19 58.22	155 20.83	10.87 2.5 2.3 23	3 199 .08 24	.8	.6 8	KEA						
		28	2257	43.34	19 53.60	155 17.08	38.65 2.7 2.6 44	2 191 .12 22	1.0	2.0 42	KEA						
		28	2353	5.32	19 17.13	155 22.58	7.55 2.1 2.1 33	2 116 .14 6	.5	.8 22	SWR						

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	NOV	28	2354	13.77	19 17.44	155 22.63	7.04	1.8	1.4	30	2 111	.14	5	.4	.9 20 SWR	
		29	934	58.27	19 19.53	155 11.71	7.03	1.7	1.1	35	2 93	.11	6	.5	.9 26 SF3	
		29	1414	8.42	19 58.43	155 20.37	9.15	2.6	2.4	31	3 201	.11	25	.9	.7 22 KFA	
		29	1454	53.85	19 58.39	155 20.37	9.80	2.2	1.8	28	4 201	.10	25	.8	.7 20 KEA	
		29	2020	23.46	19 18.65	155 15.11	6.77	1.9	1.5	31	2 108	.11	4	.5	.9 22 SF1	
		29	2032	3.87	19 16.64	155 23.10	7.83	1.8	1.4	30	5 114	.10	5	.4	.7 19 SWR	
		30	935	10.97	19 17.86	155 20.86	7.65	2.3	2.4	34	5 123	.10	4	.4	.8 20 SWH	
		30	1613	21.14	19 20.20	155 13.00	7.49	1.6	1.7	30	2 68	.12	5	.5	.9 20 SF2	
		30	20 7	9.73	19 21.42	155 4.80	8.71	3.4	3.4	41	3 87	.11	4	.5	.4 34 SF5 F	
		30	2343	29.25	19 20.15	155 10.64	34.79	2.4	2.2	39	3 96	.11	4	.8	1.1 33 DEP	
	DEC	1	310	50.45	19 13.73	155 25.63	37.70	2.6	2.6	39	2 134	.10	3	.8	1.5 34 DLS	
		1	833	15.46	19 23.35	155 16.70	2.72	2.2	2.2	27	3 52	.10	0	.3	.3 19 SSC	
		1	2111	33.93	20 5.11	155 50.10	27.41	2.9	2.5	38	3 222	.11	8	1.3	1.5 28 KOH	
		2	534	43.87	19 17.43	155 21.83	8.11	1.9	1.8	30	3 122	.13	6	.4	.9 19 SWR	
		2	11 9	42.96	19 16.76	155 15.35	6.37	1.7	1.3	26	1 169	.10	3	.6	.8 10 SF1	
		2	1242	30.01	19 19.78	155 7.06	6.88	2.3	2.2	37	2 113	.11	5	.5	1.0 26 SF4	
		2	20 9	23.01	19 54.82	155 19.94	10.32	2.5	2.1	21	0 188	.06	20	.9	.6 11 KEA	
		3	144	52.02	19 21.67	155 15.40	8.06	1.5	1.4	29	3 62	.11	2	.5	.6 22 SF1	
		3	457	19.68	19 18.16	155 13.37	6.70	1.7	1.4	31	2 87	.10	2	.5	.9 19 SF2	
		3	520	35.27	19 58.62	155 20.54	9.54	2.6	1.6	23	2 201	.10	25	.8	.7 15 KEA	
		3	723	44.93	19 20.67	155 13.66	7.23	1.5	1.4	32	3 55	.14	4	.5	.9 24 SF2	
		3	1058	59.92	19 57.88	155 20.35	8.96	2.8	2.8	37	5 199	.12	24	.6	.6 21 KEA	
		3	1355	30.74	19 20.16	155 7.26	5.09	2.1	1.2	32	4 101	.12	5	.5	2.1 24 SF4	
		3	17 3	20.24	19 20.00	155 8.47	6.18	2.3	2.4	39	4 79	.13	5	.5	.9 28 SF4	
		4	735	29.87	19 19.05	155 26.12	7.86	2.2	2.1	39	4 58	.13	5	.3	.7 31 KAU	
		4	1222	56.74	19 24.01	155 15.97	2.78	1.5	1.3	16	2 108	.08	1	.3	.3 12 SEC	
		4	1641	27.79	19 13.57	155 23.42	37.95	2.9	3.1	49	2 151	.11	2	.7	1.2 43 DEP	
		5	0 7	33.58	19 23.52	155 16.79	2.86	1.3	1.3	16	1 47	.10	0	.3	.2 13 SSC	
		5	034	16.16	19 19.29	155 16.28	7.62	2.0	1.8	38	3 106	.12	3	.4	.7 20 SF1	
		5	625	.34	19 23.67	155 16.73	2.73	1.8	1.6	23	2 41	.08	1	.3	.2 18 SSC	
		5	625	22.82	19 23.96	155 16.73	3.27	1.4	2.1	16	2 77	.06	0	.3	.3 11 SSC	
		5	1226	30.91	19 19.88	155 7.72	7.90	3.3	3.6	45	4 97	.09	5	.4	.5 32 SF4	
		5	1334	21.09	19 19.99	155 8.07	5.56	1.8	1.3	29	1 87	.10	5	.5	1.5 25 SF4	
		6	954	24.54	19 23.22	155 16.83	2.78	1.3	1.1	17	3 58	.08	0	.3	.3 7 SSC	
		6	11 2	55.08	19 23.79	155 16.83	2.68	1.7	1.8	21	1 70	.11	0	.3	.2 16 SSC	
		6	2147	16.49	19 22.97	155 24.31	9.45	2.2	2.1	41	5 34	.11	5	.4	.5 31 KAU	
		7	259	50.67	19 48.68	155 35.43	15.38	2.7	2.6	34	3 100	.11	14	.9	.8 21 KEA	
		7	4 4	13.55	19 19.73	155 10.11	8.18	1.9	1.5	28	2 91	.07	4	.4	.6 19 SF3	
		7	9 7	29.14	19 18.75	155 13.21	8.76	3.2	3.4	43	2 132	.11	7	.5	.6 38 SF2 F	
		7	15 9	7.24	19 14.59	155 34.83	8.36	2.3	2.1	30	3 77	.18	4	.5	.9 16 LSW	
		7	1739	27.19	19 48.79	156 3.87	41.12	4.0	4.0	47	4 239	.10	28	1.0	1.1 41 HUA F	
		7	1955	49.20	19 20.59	155 13.15	7.63	1.6	1.8	39	4 62	.10	4	.4	.6 23 SF2	
		7	2312	29.13	19 21.08	155 17.10	2.35	1.6	1.8	8	1 212	.07	3	.7	.9 0 SWR L	
		8	112	51.34	19 10.04	155 41.33	7.54	2.5	1.5	30	1 128	.26	12	.9	1.8 19 LSW	
		8	8 6	35.88	19 16.79	155 15.14	7.27	2.3	1.9	35	2 154	.11	3	.5	.9 24 SF1	
		8	23 6	5.99	19 22.42	155 1.54	6.01	2.1	1.4	35	4 146	.14	5	.5	.8 13 SF5	
		9	0 3	46.73	19 20.56	155 12.13	9.25	1.7	1.4	31	1 71	.09	4	.4	.6 22 SF3	
		9	5 3	33.96	19 17.39	155 16.32	7.99	1.7	1.3	27	1 151	.09	4	.5	.5 17 SF1	

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	DEC	9	1237	48.02	19 20.49	155 11.98	8.73	1.7	1.4	25	0 73	.08	4	.5	.9 18 SF3	
		9	1926	47.10	19 58.31	155 20.77	11.66	1.9	1.6	22	3 201	.09	9	.9	.5 11 KEA	
		10	158	10.51	19 20.22	155 13.38	7.29	1.8	1.2	30	3 63	.10	5	.4	.8 16 SF2	
		10	1332	11.96	19 3.18	156 10.48	43.42	2.4	2.2	30	1 291	.10	40	2.9	1.7 21 KON	
		11	146	54.14	19 23.68	155 17.15	2.82	1.3	1.1	12	2 94	.08	1	.4	.4 9 SSC	
		11	1117	50.57	19 23.50	155 16.84	2.79	1.2	1.4	18	3 48	.10	0	.3	.3 11 SSC	
		12	3 3	4.40	19 19.21	155 15.98	7.86	1.6	1.1	22	0 106	.07	3	.5	.9 17 SF1	
		12	1325	27.93	19 20.64	155 12.40	8.53	1.8	1.1	35	3 64	.10	4	.4	.6 26 SF2	
		12	1823	13.31	19 19.75	155 7.52	9.86	3.7	3.8	47	4 103	.10	5	.5	.4 42 SF4	F
		13	140	48.53	19 25.20	155 29.01	8.27	2.6	2.0	46	3 37	.11	6	.3	.7 31 KAO	
		13	322	28.85	19 20.74	155 4.33	8.43	3.0	2.9	44	3 105	.10	3	.5	.4 31 SF5	
		13	432	35.91	19 20.06	155 8.45	7.71	2.5	2.4	45	5 79	.11	4	.4	.6 29 SF4	
		13	1420	21.31	19 19.64	155 8.41	9.15	3.3	3.7	47	3 83	.10	4	.4	.4 36 SF4	F
		14	345	29.18	19 22.44	155 16.27	30.84	1.9	1.6	42	2 29	.10	3	.6	1.0 36 DEP	
		14	1038	.05	19 21.64	155 6.11	8.28	2.2	2.0	37	2 84	.10	6	.4	.7 20 SF4	
		14	1718	24.26	19 17.67	155 21.25	7.17	1.7	1.2	25	3 125	.11	5	.5	1.1 15 SWR	
		14	2246	30.25	19 19.51	155 8.23	7.65	1.7	1.3	28	1 88	.09	4	.5	.8 15 SF4	
		15	441	22.96	19 20.45	155 6.62	8.34	2.5	2.4	40	3 105	.11	6	.4	.6 28 SF4	
		15	1411	25.70	19 17.08	155 15.50	10.40	2.9	3.0	46	3 151	.10	6	.4	.4 36 SF1	
		15	1740	29.63	19 20.52	155 10.40	7.86	1.7	1.3	27	2 77	.10	3	.5	.8 15 SF3	
		15	2128	19.60	19 23.60	155 16.67	2.75	2.1	2.6	31	3 49	.10	1	.3	.2 20 SSC	
		15	2130	54.30	19 23.54	155 16.87	2.82	2.8	2.4	41	3 36	.10	0	.2	.2 29 SSC	
		16	344	56.28	19 17.66	155 13.00	7.18	2.0	2.1	37	2 123	.11	1	.5	.8 21 SF2	
		16	448	18.41	19 19.42	155 13.24	7.43	2.0	2.3	42	4 73	.13	4	.4	.7 28 SF2	
		16	453	26.52	19 20.66	155 9.62	7.45	1.7	1.8	35	1 71	.10	3	.4	.7 25 SF3	
		16	923	24.83	20 1.53	155 22.26	11.17	2.7	2.7	37	4 210	.13	15	.9	.6 17 KEA	
		16	1030	38.83	19 20.54	155 9.46	7.81	1.7	1.8	26	1 106	.09	3	.5	.9 14 SF3	
		16	2021	51.51	19 20.17	155 6.89	9.40	3.4	3.8	43	1 143	.10	6	.6	.5 37 SF4	F
		17	2043	19.92	19 20.59	155 13.11	8.59	2.4	2.6	42	3 63	.11	4	.4	.5 32 SF2	
		18	3 8	30.42	19 20.38	155 13.35	7.14	1.6	1.5	33	3 63	.13	4	.5	.8 21 SF2	
		18	645	42.28	19 22.64	155 2.06	7.07	1.9	1.5	31	1 132	.16	5	.7	.8 19 SF5	
		18	919	30.20	19 20.28	155 12.79	7.95	1.7	1.3	25	2 100	.09	4	.6	.8 19 SF2	
		19	542	35.63	19 21.94	155 5.11	7.81	2.0	1.7	37	4 77	.11	5	.4	.6 24 SF5	
		19	840	8.09	19 20.31	155 12.86	6.91	1.6	1.0	29	3 68	.10	4	.5	.8 20 SF2	
		19	1037	55.38	19 19.42	155 8.53	5.90	2.0	1.3	28	2 81	.08	4	.4	1.2 13 SF4	
		19	1230	7.22	19 22.72	155 1.38	8.22	2.1	1.8	38	3 145	.14	6	.6	.6 23 SF5	
		19	1231	49.07	19 19.82	155 8.44	8.24	2.6	2.7	43	6 81	.10	5	.4	.6 25 SF4	
		19	1736	23.32	19 23.37	155 16.79	2.80	1.5	1.6	24	4 53	.09	0	.3	.2 15 SSC	
		19	1910	42.86	19 23.62	155 16.71	2.56	1.6	2.0	26	4 41	.11	1	.3	.2 17 SSC	
		19	23 6	40.53	19 21.89	155 25.09	10.11	1.7	1.3	35	3 40	.11	4	.4	.7 22 KAO	
		20	5 7	45.04	19 19.68	155 10.03	6.61	1.5		22	1 92	.11	4	.5	1.0 13 SF3	
		20	5 8	2.65	19 19.63	155 10.22	9.19	3.1		42	2 94	.11	5	.4	.4 33 SF3	
		20	5 9	28.33	19 20.09	155 10.04	8.08	2.7	2.9	45	3 83	.12	4	.4	.6 31 SF3	
		20	637	11.57	19 19.60	155 10.53	5.99	1.6	1.1	18	2 162	.06	5	.6	1.2 9 SF3	
		20	744	23.61	19 19.01	155 13.31	7.95	1.7	1.4	35	2 77	.10	4	.4	.6 22 SF2	
		20	826	20.67	19 20.94	155 12.87	9.09	2.3	2.3	43	4 62	.12	3	.4	.5 33 SF2	
		20	10 8	3.06	19 18.06	155 13.09	6.88	1.5	1.3	29	2 101	.08	2	.5	.9 18 SF2	
		20	13 3	57.73	19 19.19	155 13.02	7.81	1.9	1.3	31	2 107	.10	4	.5	.8 19 SF2	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	DEC	21	613	55.06	19 23.94	155 16.83	2.95 1.2 1.2 16	3 81 .07 0	.4	.3 9 SSC								
		21	1440	17.59	19 18.96	155 15.41	7.33 1.6 1.3 26	2 105 .09 4	.5	.9 16 SF1								
		21	1724	11.51	19 23.24	155 16.77	3.06 1.9 2.4 24	3 45 .09 0	.3	.3 18 SSC								
		21	1915	15.59	19 20.02	155 6.71	8.51 3.2 3.0 41	2 113 .10 5	.4	.5 29 SF4								
		21	2037	53.94	19 17.88	155 13.04	6.08 1.6 1.8 30	2 110 .11 2	.5	1.0 18 SF2								
		21	21 7	34.12	19 20.85	155 6.67	6.95 1.9 1.9 32	0 96 .13 6	.5	1.3 22 SF4								
		21	2158	23.92	19 17.47	155 13.09	6.63 1.6 1.0 24	3 128 .09 1	.5	.9 15 SF2								
		22	056	22.28	19 22.00	155 25.49	9.79 1.6 1.4 35	4 44 .09 4	.4	.6 26 KAO								
		23	654	58.14	19 19.85	155 10.75	8.36 1.9 1.6 33	1 90 .08 4	.4	.6 24 SF3								
		23	711	14.60	20 5.68	155 50.40	28.48 3.0 5.2 43	6 148 .11 7	.6	1.0 32 KOF F								
		23	725	58.16	19 19.83	155 10.67	7.99 1.9 1.2 30	3 90 .07 4	.5	.7 17 SF3								
		23	8 0	22.61	19 14.41	155 35.40	8.02 2.8 2.7 43	4 80 .20 3	.5	.9 29 LSW								
		23	1127	56.96	19 23.73	155 16.89	2.66 1.7 .9 20	4 62 .07 1	.3	.2 13 SSC								
		23	1518	46.87	19 14.76	155 34.85	7.62 2.5 2.4 40	3 105 .17 4	.5	1.0 29 LSW								
		23	1548	23.35	19 19.15	155 15.42	8.24 1.9 2.1 44	3 91 .11 4	.4	.6 28 SF1								
		23	1615	6.83	19 23.45	155 16.98	2.63 1.6 1.5 20	1 41 .08 0	.3	.2 11 SSC								
		23	22 0	24.66	19 23.74	155 16.78	2.71 1.5 1.4 21	3 57 .08 0	.3	.2 13 SSC								
		23	22 0	59.36	19 23.71	155 16.79	2.90 1.9 2.4 26	4 52 .08 1	.3	.2 15 SSC								
		24	1 1	33.96	19 19.35	155 11.55	7.45 1.4 1.1 27	1 99 .10 5	.5	1.0 18 SF3								
		24	121	55.02	19 21.22	155 10.93	8.16 1.6 1.6 32	3 67 .12 3	.5	.7 22 SF1								
		24	132	5.05	19 20.61	155 12.68	8.30 1.9 1.8 38	4 66 .11 4	.4	.6 28 SF2								
		24	2 9	16.15	19 23.56	155 16.79	3.17 1.3 1.7 18	2 47 .08 0	.3	.3 12 SSC								
		24	552	20.98	19 19.58	155 13.28	7.22 1.5 1.4 26	2 71 .10 5	.5	1.0 19 SF2								
		24	6 5	1.98	19 24.37	155 17.25	2.06 1.1 1.0 14	2 60 .05 1	.3	.2 5 SSC								
		24	1437	1.85	19 15.62	155 23.11	7.75 1.9 1.7 27	0 133 .13 3	.6	1.1 23 SWR								
		24	1819	56.38	19 19.84	155 10.26	7.88 1.8 1.1 31	3 90 .09 4	.5	.8 19 SF3								
		24	2230	2.79	20 .57	155 30.93	39.79 2.5 1.8 36	2 189 .07 22	.8	1.5 27 KEA								
		25	741	46.57	19 20.83	155 11.34	8.81 2.3 2.0 35	4 71 .10 3	.4	.5 20 SF3								
		25	958	36.49	19 20.41	155 7.39	8.01 2.3 2.1 33	1 94 .10 5	.5	.9 23 SF4								
		25	1210	19.30	19 20.57	155 7.82	6.66 2.2 1.9 37	3 85 .13 5	.5	.8 29 SF4								
		26	234	1.54	19 20.12	155 7.28	5.62 1.8 1.1 25	3 101 .12 5	.6	1.7 17 SF4								
		26	313	34.88	20 11.30	155 37.20	37.53 2.9 2.5 40	3 242 .08 18	1.3	1.3 34 KOH								
		26	5 4	13.61	19 20.75	155 10.51	7.44 1.7 1.3 28	2 73 .11 3	.5	.8 18 SF3								
		26	720	44.53	19 25.80	155 24.92	7.01 2.1 1.7 37	4 37 .12 1	.4	.8 27 KAO								
		26	1047	.62	19 23.83	155 26.91	9.72 2.3 2.0 40	2 42 .13 3	.4	.7 28 KAO								
		26	12 1	38.19	19 18.58	155 15.60	7.80 1.6 1.6 34	3 115 .12 4	.5	.7 23 SF1								
		26	1221	1.69	19 20.33	155 12.52	7.19 1.6 1.2 30	2 72 .11 4	.5	.7 19 SF2								
		27	244	26.37	19 18.13	155 .21	40.56 2.5 1.8 31	0 226 .08 6	2.1	2.5 29 DEP								
		27	711	56.61	19 20.58	155 12.59	7.35 2.2 2.5 31	2 67 .13 4	.5	.7 24 SF2								
		27	832	56.89	19 25.53	155 16.71	1.68 2.0 2.9 10	1 173 .03 1	.7	.2 9 SNC								
		27	1125	56.25	19 22.44	155 5.20	7.76 2.0 1.6 35	2 70 .09 4	.4	.8 23 SF5								
		27	1145	54.30	19 19.26	155 15.60	8.58 1.9 2.0 40	2 102 .10 4	.4	.4 27 SF1								
		27	1334	36.17	19 25.34	155 16.76	2.04 1.7 1.8 17	3 122 .09 1	.4	.2 11 SNC								
		27	16 9	30.37	19 16.52	155 22.42	7.84 3.2 3.7 48	2 129 .15 5	.4	.6 45 SWR								
		27	1617	2.03	19 16.83	155 22.22	6.16 2.4 2.8 44	2 127 .14 6	.4	.9 34 SWR								
		27	1625	13.32	19 16.81	155 22.13	4.16 1.8 1.7 33	2 128 .14 6	.5	1.7 25 SWR								
		27	1927	45.85	19 20.43	155 11.27	8.70 1.7 1.4 29	1 78 .07 4	.4	.6 19 SF3								
		27	23 0	46.00	19 19.45	155 8.13	6.05 1.8 1.3 31	2 91 .12 4	.6	1.2 22 SF4								

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	ORIGIN TIME			LAT N		LON W		DEPTH				AMP		DIR		GAP		RMS	MIN	ERH	ERZ NO	
		DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	MAG	MAG	MAG	NR	NS	DEG	SEC	DIS	KM	DIS	KM	KM	FM	REMK
1981	DEC	27	23 2	23.99	19	26.34	155	16.05	1.98	1.3	1.4	13	2	208	.05	3		.5		.6	10	SNC	
		28	418	52.74	19	17.84	155	21.06	5.46	1.7	1.3	20	4	123	.07	4		.4		1.3	14	SWR	
		28	434	18.19	19	19.18	155	12.86	8.53	2.0	1.9	39	2	84	.12	4		.4		.8	29	SF2	
		28	1042	53.01	19	15.97	155	22.20	7.00	1.0	1.3	19	1	168	.07	4		.6		1.6	14	SWR	
		28	1130	41.39	19	23.34	155	16.99	3.04	1.4	1.4	21	4	55	.08	0		.3		.3	12	SSC	
		28	1147	51.05	19	15.83	155	21.88	7.70	1.1	1.1	21	2	179	.08	5		.6		1.4	12	SWR	
		28	1315	6.36	19	21.30	155	.44	5.62	2.1	1.8	31	3	186	.13	5		.7		1.8	20	SF5	
		28	1617	21.61	19	18.01	155	23.42	3.44	1.7	1.8	30	5	94	.10	4		.5		.8	18	SWR	
		28	1831	6.59	19	19.37	155	16.81	6.62	1.2	1.2	25	6	58	.12	3		.4		.8	17	SWR	
		29	024	2.61	19	23.74	155	23.22	9.41	1.5	1.4	34	4	39	.11	4		.4		.5	22	KAO	
		29	335	48.24	19	19.58	155	13.20	6.60	1.4	1.8	41	3	72	.13	5		.4		.8	28	SF2	
		29	555	20.95	19	13.36	155	15.47	31.47	2.7	2.4	46	2	177	.09	8		.7		1.0	42	DEP	
		29	651	8.89	19	19.99	155	7.63	8.11	1.7	1.1	30	1	97	.10	5		.5		.9	25	SF4	
		29	656	59.89	19	20.12	155	7.83	7.70	1.3	1.3	20	3	91	.08	5		.5		.9	12	SF4	
		29	733	22.33	19	22.41	155	2.12	7.22	1.6	1.3	20	2	143	.12	5		.6		1.0	10	SF5	
		29	940	44.45	19	23.80	155	16.72	2.63	1.1	1.3	20	3	63	.09	0		.4		.3	9	SSC	
		29	1310	10.53	19	18.87	155	15.12	8.95	2.1	2.1	40	3	103	.10	4		.4		.5	23	KF1	
		29	15 7	38.20	19	32.50	155	55.91	15.38	2.6	2.8	33	2	205	.11	6	1.0			.5	21	KON F	
		29	20 3	33.37	19	11.85	155	16.89	47.45	2.1	1.9	35	1	182	.08	11	1.0			1.6	28	DEP L	
		29	20 6	15.20	19	10.74	155	16.28	51.67	1.8	1.5	32	0	211	.09	13	1.6			2.9	18	DEP L	
		30	331	29.27	19	20.04	155	9.64	7.03	1.5	1.5	25	3	82	.10	4		.5		1.0	15	SF3	
		30	444	13.21	19	33.89	155	37.62	2.51	1.9	1.6	17	1	144	.14	9		.7		2.4	5	MLO	
		30	7 5	3.61	19	17.01	155	21.38	6.41	1.5	1.8	29	3	131	.10	5		.4		1.0	21	SWR	
		30	748	50.01	19	20.81	155	10.96	8.35	2.1	1.8	38	4	109	.10	3		.3		.4	22	SF3	
		30	822	23.13	19	20.70	155	10.77	8.14	1.5	1.1	26	3	74	.12	3		.6		.9	20	SF3	
		30	823	53.66	19	19.92	155	10.19	6.61	1.5	1.1	25	2	88	.09	4		.6		1.1	17	SF3	
		30	1140	11.70	19	17.31	155	30.42	7.15	2.0	2.3	37	3	46	.17	4		.4		1.3	23	LSW	
		30	12 3	48.56	19	18.22	155	15.94	7.51	1.1	1.1	24	3	117	.10	4		.6		.8	14	SF1	
		30	1547	22.86	19	23.73	155	23.54	10.19	1.6	1.6	37	5	36	.10	4		.3		.5	25	KAO	
		30	1817	51.68	19	20.34	155	13.24	7.17	1.8	1.3	24	2	121	.10	4		.6		.9	14	SF2	
		30	2111	35.10	19	23.57	155	1.36	6.10	1.9	1.6	25	1	145	.11	5		.6		1.3	12	SF5	
		31	147	43.40	19	20.65	155	12.99	9.02	1.6	1.8	32	3	64	.08	4		.4		.5	21	SF2	
		31	723	14.46	19	19.72	155	10.55	7.74	1.9	1.4	28	1	92	.08	5		.5		.8	21	SF3	
		31	8 0	4.20	19	23.42	155	16.88	2.94	1.3	1.2	17	3	52	.07	0		.3		.3	9	SSC	
		31	953	41.20	19	18.85	155	13.61	9.48	2.8	2.9	44	4	108	.11	3		.6		.5	34	SF2	
		31	1414	12.07	19	33.63	155	57.61	11.45	2.6	2.4	26	2	256	.12	9	1.8			.5	19	KON	
		31	1735	25.06	19	22.75	155	16.76	28.29	3.0	3.0	45	1	42	.11	1	.6			.9	44	DEP	
		31	2113	33.64	19	47.77	155	3.63	40.21	2.5	2.0	34	1	208	.08	11	1.0			2.3	28	KEA	
		31	2216	20.33	19	14.22	155	36.65	7.64	2.4	1.8	30	1	188	.20	2	.9			1.1	20	LSW	

Table 6. HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HR	MIN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK		
1981	JAN	1	2231	49.52	19	20.94	155 29.95	29.85	3.4	3.4	47	2	65	.08	5	.5	1.0	45	DML	
		2	742	8.00	19	18.27	155 14.15	10.19	3.6	3.7	42	1	138	.11	7	.5	.4	41	SF2 F	
		3	3	4	40.11	20	15.69	155 52.39	27.57	3.9	4.3	47	3	160	.12	18	.9	1.1	43	KOH F
		5	6	4	37.12	19	27.28	155 23.62	8.41	3.1	2.8	40	2	73	.11	5	.3	.7	32	KAO F
		6	1814	5.43	18	54.01	155 6.75	51.98	4.1	4.4	46	2	256	.09	43	1.8	2.4	44	LOI F	
		7	1016	46.40	19	25.21	155 15.84	15.83	3.4	3.2	47	2	36	.11	2	.4	.3	43	DEP F	
		12	418	10.63	19	21.35	155 18.28	31.06	4.5	4.6	43	0	40	.10	3	.6	1.0	43	DEP F	
		12	423	19.23	19	22.11	155 16.81	32.70	2.9	3.9	45	2	48	.09	2	.6	.9	38	DEP F	
		12	430	17.11	19	17.60	155 18.31	33.28	4.0	4.3	43	0	132	.09	1	.7	1.0	43	DEP F	
		12	5	7	48.91	19	19.68	155 17.26	33.42	4.0	4.4	45	1	92	.10	1	.6	1.0	44	DEP F
		12	1121	41.15	19	31.27	155 18.18	32.92	4.3	4.5	44	0	50	.10	8	.6	1.2	44	DEP F	
		13	1813	31.52	19	20.80	155 15.48	15.37	3.1	3.4	41	0	74	.11	3	.6	.4	41	DEP	
		13	1820	16.51	19	22.08	155 19.42	28.88	4.3	4.8	44	0	44	.10	3	.6	.9	44	DML F	
		14	418	57.40	20	5.92	155 40.03	21.98	2.9	3.1	43	2	197	.10	12	1.4	2.3	38	KOH	
		14	1436	53.03	19	25.78	155 37.51	.00	3.1	3.4	33	1	93	.10	7	.4	1.4	29	MLO	
		14	2316	34.35	19	17.68	158 19.54	15.02	3.3	3.5	22	0	315	.12264	7.9	99.0	5	DIS		
		15	1437	11.96	19	19.50	155 17.39	34.35	3.8	3.7	44	1	95	.10	1	.6	1.0	43	DEP F	
		17	1021	55.33	19	21.16	155 1.65	8.76	2.9	3.2	40	1	168	.10	3	.6	.4	34	SF5	
		18	125	53.54	19	25.00	155 16.95	1.67	3.4	3.8	32	1	39	.10	0	.3	.2	23	SNC F	
		19	1821	40.44	19	18.39	155 12.95	9.32	3.0	3.6	43	3	136	.11	8	.5	.6	34	SF2 F	
		20	028	8.48	19	20.27	155 7.13	8.46	2.8	3.2	37	3	101	.10	5	.4	.6	28	SF4	
		20	618	53.36	19	23.31	155 16.83	2.45	2.4	3.2	27	3	46	.08	0	.3	.2	21	SSC F	
		20	12	2	29.41	19	23.35	155 16.77	3.22	2.9	3.4	26	1	39	.10	0	.3	.3	21	SSC
		20	1542	15.78	19	22.99	155 16.79	2.77	2.4	3.1	29	3	40	.11	1	.2	.2	22	SSC	
		20	2129	11.18	19	23.23	155 16.91	2.88	2.7	3.0	36	3	37	.09	0	.2	.2	26	SSC	
		21	1635	7.12	19	22.82	155 16.71	3.29	2.6	3.3	31	2	42	.09	1	.2	.3	25	SSC	
		22	339	2.48	19	46.66	156 1.85	40.63	3.8	4.1	47	5	166	.09	23	.8	1.6	41	HUA F	
		24	1530	34.47	19	21.57	155 15.19	9.23	3.4	3.6	40	2	63	.10	2	.4	.5	38	SF1	
		28	925	48.48	19	23.59	155 16.91	3.19	2.8	3.3	37	1	40	.11	0	.2	.2	27	SSC F	
FEB		5	839	15.33	19	23.54	155 16.82	2.92	2.3	3.0	32	0	37	.09	0	.3	.2	23	SSC F	
		7	1223	20.77	19	18.04	155 23.23	5.45	2.4	3.0	33	0	112	.12	4	.4	.9	22	SWR	
		7	2230	2.57	19	18.00	155 23.28	6.04	2.5	3.3	38	2	112	.13	4	.4	.9	25	SWR	
		8	20	3	59.94	19	21.01	155 51.12	11.22	3.0	2.9	24	0	143	.10	10	.8	.7	21	KON
		9	6	2	44.04	19	32.48	155 36.95	11.12	3.8	3.2	42	1	45	.14	6	.4	.5	41	MLO F
		9	918	46.74	19	18.35	155 23.26	5.45	2.4	3.1	34	1	109	.12	3	.4	1.0	27	SWR	
		9	1334	11.13	19	33.14	155 37.68	10.00	3.0	2.7	37	2	95	.14	8	.5	.6	33	MLO	
		10	1934	2.06	19	20.02	155 8.33	8.68	3.0	3.0	41	2	81	.10	5	.4	.6	32	SF4	
		11	444	31.19	19	18.30	155 23.25	2.89	3.0	3.3	42	2	110	.13	4	.3	.8	28	SWR	
		11	2149	16.30	19	18.47	155 23.47	4.25	2.5	3.1	28	1	107	.12	3	.4	1.2	25	SWR	
		12	1428	54.33	19	18.43	155 23.28	5.66	2.8	3.0	40	0	108	.13	3	.4	.9	33	SWR	
		13	17	8	53.20	19	17.70	155 23.70	5.88	2.8	3.8	42	0	113	.11	5	.4	.9	26	SWR F
		13	1952	44.20	19	18.07	155 23.46	6.48	3.3	3.9	45	1	110	.15	4	.4	.9	42	SWR F	
		14	552	57.98	19	18.82	155 15.36	8.70	2.8	3.2	46	2	96	.11	4	.4	.4	35	SF1	
		15	1241	33.83	19	18.48	155 23.25	5.45	2.3	3.2	40	3	108	.13	3	.4	.9	27	SWR	
		15	1332	22.42	19	18.35	155 23.25	5.45	2.4	3.6	33	1	109	.11	3	.4	1.1	28	SWR F	
		16	220	15.48	19	18.63	155 23.30	6.82	2.4	3.4	45	2	107	.14	3	.4	.8	33	SWR	
		16	6	2	28.00	19	19.53	155 17.58	33.90	2.9	3.5	45	0	94	.09	1	.6	1.0	44	DEP F
		16	1344	35.88	19	18.19	155 23.42	5.82	2.4	3.0	34	2	110	.12	4	.4	1.1	27	SWR	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HR	MIN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DUR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK		
1981	FEB	16	1412	56.71	19	18.03	155 23.71	5.27	2.6	3.2	44	3	110	.12	4	.4	1.0	30	SWR	
		16	2037	37.70	19	18.35	155 23.21	5.51	2.7	3.5	46	3	109	.14	3	.3	.9	34	SWR	
		18	20	7	49.69	19	18.51	5.92	3.5	3.8	47	6	107	.13	3	.3	.7	42	SWR	
		21	1036	44.99	19	26.21	155 37.15	2.91	2.9	3.1	34	1	82	.15	2	.5	.7	22	MLO	
		21	1137	12.06	19	20.30	155 6.58	8.94	3.1	3.2	44	2	108	.08	5	.4	.5	35	SF4	
		23	1222	8.00	19	17.51	155 23.79	6.24	2.4	3.2	39	3	114	.13	5	.5	1.1	26	SWR	
		24	1345	57.53	19	20.25	155 11.35	7.86	3.0	3.0	40	4	80	.09	4	.4	.6	30	SF3	
		24	1611	42.28	20	7.70	155 58.84	52.69	3.1	3.2	17	1	277	.14	21	1.6	2.3	6	KOH	
		25	020	27.39	19	19.62	155 12.61	9.06	3.0	2.8	40	2	81	.10	5	.4	.5	27	SF2	
	MAR	1	7	1	21.26	19	21.52	155 2.05	9.07	4.3	4.3	48	1	148	.10	3	.6	.4	44	SF5 F
		1	2219	45.18	19	19.63	155 7.86	9.13	3.0	3.1	43	2	97	.09	4	.4	.4	27	SF4	
		4	1556	45.69	19	24.90	155 28.42	11.09	4.1	4.1	49	2	30	.12	5	.3	.4	45	KAO F	
		4	16	0	27.23	19	24.97	155 28.38	11.07	3.4	3.4	49	3	30	.11	5	.3	.4	43	KAO
		5	4	9	40.85	21	25.94	156 47.79	.00	5.1	5.3	45	7	226	.50	93	6.8	.8	42	DIS F
		5	416	15.66	21	15.97	156 52.16	1.26	3.4	2.1	26	2	211	.12	85	2.9	.7	21	DIS	
		5	1643	36.41	21	9.52	156 54.58	.31	4.5	4.8	44	2	197	.12	81	1.6	.3	35	DIS	
		6	519	8.10	21	41.04	156 39.48	15.05	3.6	3.9	11	2	243	.14110	12.2	13.9	3	DIS	*	
		6	957	46.90	19	20.68	155 29.76	10.54	3.1	2.8	42	0	66	.11	5	.4	.6	32	KAO	
		6	1756	.74	19	44.34	156 26.57	15.01	4.0	4.1	51	5	234	.13	62	1.1	3.1	45	DIS F	
		9	327	45.20	19	21.23	155 3.07	8.52	3.3	3.4	45	1	113	.11	2	.6	.4	40	SF5 F	
		11	458	29.62	19	17.80	155 23.63	4.39	2.4	3.1	33	2	92	.12	5	.4	1.6	28	SWR	
		11	1323	8.96	19	21.71	155 1.93	6.50	3.1	3.1	44	2	148	.12	4	.4	.6	32	SF5 F	
		11	2237	44.93	19	15.10	155 1.99	44.22	3.7	3.4	49	2	207	.10	9	.9	1.4	47	DEP F	
		12	9	6	50.96	19	18.65	5.53	2.5	3.1	39	2	90	.13	3	.4	1.0	30	SWR	
		15	2017	19.59	19	22.49	155 14.03	31.32	4.0	4.1	49	1	50	.12	2	.6	1.0	47	DEP F	
		15	2026	14.52	19	17.70	155 23.44	6.82	3.1	3.6	44	0	96	.14	5	.4	.8	39	SWR F	
		15	2223	21.32	19	22.00	155 14.04	31.01	3.2	3.3	49	1	54	.11	2	.6	.9	47	DEP F	
		16	034	55.24	19	21.89	155 14.08	30.79	2.9	3.0	49	2	54	.10	2	.6	.9	45	DEP	
		16	541	45.35	19	17.30	155 20.77	5.87	2.5	3.2	39	4	135	.09	4	.4	.9	30	SWR	
		16	17	3	15.69	19	20.77	8.86	2.9	3.2	42	0	119	.10	2	.7	.5	37	SF5	
		17	1943	17.82	19	41.39	156 2.25	9.45	2.9	3.0	25	1	229	.14	21	1.3	.7	18	HUA	
		20	1332	39.98	19	24.45	155 16.11	15.74	2.9	3.1	49	3	36	.11	1	.4	.3	43	DEP	
		23	042	49.50	19	17.54	155 23.57	5.61	2.4	3.0	34	2	96	.11	5	.4	1.4	23	SWR	
		23	1853	22.15	19	18.17	155 23.41	6.72	2.8	3.3	49	1	93	.13	4	.4	.7	40	SWR	
		24	5	1	10.38	19	17.79	5.86	2.3	3.0	47	7	95	.12	5	.3	1.0	36	SWR	
		25	625	5.10	19	45.26	155 27.66	24.51	3.3	3.6	50	3	62	.10	3	.5	1.2	34	KEA F	
		26	155	40.21	19	21.24	155 4.54	9.00	3.2	3.2	46	2	89	.10	4	.5	.4	34	SF5 F	
		30	9	6	14.00	19	19.94	9.11	3.6	3.9	46	3	83	.10	5	.3	.4	38	SF3 F	
	APR	1	0	0	39.43	21	13.53	156 52.02	.00	3.7	4.2	31	1	207	.29	82	4.4	.7	9	DIS
		2	249	11.20	19	20.05	155 11.96	9.46	3.0	3.0	44	2	81	.10	5	.4	.4	37	SF3	
		7	1647	48.94	19	21.46	155 1.58	8.54	2.9	3.1	42	0	162	.08	4	.6	.4	30	SF5 F	
		8	1853	24.22	19	19.61	155 10.51	9.13	2.9	3.0	46	4	95	.11	5	.3	.4	33	SF3	
		17	2026	19.36	19	20.63	155 16.89	1.68	3.7	4.0	35	2	75	.09	1	.3	.3	18	KOA F	
		23	344	34.17	19	22.95	155 4.25	8.71	3.4	3.2	47	4	87	.11	3	.4	.4	37	SF5 F	
		23	2248	41.03	19	20.14	155 6.76	8.48	3.1	3.4	40	3	110	.11	5	.4	.6	35	SF4	
		27	457	53.63	19	19.34	155 6.86	8.67	3.0	3.4	34	3	127	.09	4	.5	.4	21	SF4	
		27	1129	21.53	19	16.40	155 11.55	5.37	3.4	3.6	43	4	172	.15	4	.6	1.0	39	SSF F	
		27	18	8	47.32	19	23.50	2.40	2.8	3.0	39	1	39	.11	0	.2	.2	25	SSC	

HVO EARTHQUAKE SUMMARY LIST

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YEAR	MON	DA	HRMN	SEC	ORIGIN TIME	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG NR	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ NO KM FM	REMK
1981	APR	28	846	29.26	19 19.50	155 11.17	9.75 3.0 3.4 44	4 97 .10	5 .4	.4 35 SF3 F						
		28	1451	50.30	19 19.58	155 7.30	8.58 2.6 3.0 42	1 111 .10	4 .5	.5 29 SF4						
		30	115	33.41	19 23.39	155 16.93	2.62 3.1 3.5 45	3 36 .11	0 .2	.2 31 SSC F						
	MAY	2	236	7.46	19 18.11	155 13.24	10.77 3.8 3.8 45	1 93 .12	2 .6	.5 41 SF2 F						
		2	710	46.28	19 20.05	155 8.02	8.81 3.2 3.4 44	2 87 .10	5 .5	.4 35 SF4 F						
		7	247	59.70	19 19.73	155 12.69	9.01 3.2 3.5 43	1 79 .11	5 .4	.4 26 SF2						
		7	650	27.44	19 20.17	155 8.40	8.73 2.9 3.1 46	3 79 .09	4 .4	.5 31 SF4						
		12	1140	3.08	19 19.64	155 11.36	8.75 3.0 3.0 45	1 93 .12	5 .4	.5 37 SF3						
		13	21	30.25	19 19.87	155 13.44	10.02 3.4 3.7 46	2 66 .11	5 .4	.4 41 SF2						
		14	614	39.12	19 18.50	155 22.92	6.79 2.5 3.0 41	2 95 .13	3 .4	1.0 32 SWR						
		14	1116	6.78	19 21.00	155 13.32	8.97 3.0 3.0 45	3 57 .12	3 .4	.5 33 SF2 F						
		17	921	45.59	19 20.10	155 13.83	9.79 3.2 3.3 46	2 57 .10	5 .3	.3 35 SF2 F						
		18	347	58.58	19 18.38	155 23.47	7.14 2.8 3.3 46	2 90 .14	3 .4	.8 37 SWR						
		19	2252	14.55	19 23.43	155 16.86	2.67 2.7 3.0 41	2 36 .12	0 .2	.2 28 SSC						
		19	23	8 32.26	19 23.05	155 17.04	2.59 2.9 3.3 45	2 37 .13	1 .2	.3 30 SSC						
		21	057	39.76	19 12.29	155 41.78	6.82 3.5 3.1 42	2 190 .21	10 .8	1.0 31 LSW						
		22	1344	44.81	18 44.92	155 31.65	26.29 3.8 3.9 50	4 287 .08	30 1.6	2.5 46 DLS						
		25	211	19.06	19 20.28	155 12.96	9.40 3.1 3.1 49	4 68 .11	4 .3	.4 35 SF2 F						
		26	010	4.64	19 19.71	155 8.15	7.86 3.0 3.2 47	4 88 .09	4 .4	.5 28 SWR						
		28	711	30.28	19 19.11	155 11.48	8.21 2.8 3.1 47	4 105 .11	5 .4	.5 33 SF3						
		31	1725	25.81	19 29.33	155 46.39	10.00 3.2 2.8 39	4 73 .11	2 .4	.5 22 KON						
		31	2232	.15	19 26.65	156 53.65	31.33 3.0 3.2 30	3 222 .11102	2.8	3.6 18 DIS						
		2	1024	21.86	19 22.10	155 28.96	10.55 3.2 3.2 44	2 36 .11	2 .4	.6 34 KAO						
		3	155	20.08	19 21.00	155 6.04	8.83 3.1 3.2 46	3 97 .12	4 .4	.5 36 SF4						
		4	714	37.03	19 18.18	155 23.58	4.38 2.6 3.0 43	3 91 .13	4 .4	1.4 33 SWR						
		4	730	12.83	19 17.88	155 23.34	5.94 2.7 3.0 42	2 96 .12	4 .4	.9 30 SWR						
		6	1032	25.25	19 23.43	155 16.86	2.98 3.1 3.3 45	2 36 .12	0 .2	.3 33 SSC F						
		8	2112	7.82	19 21.49	155 7.45	8.75 3.4 3.2 50	3 77 .12	4 .4	.5 39 SF4 F						
		15	1543	22.73	19 20.71	155 13.01	9.63 3.5 3.6 48	3 62 .11	4 .4	.4 43 SF2 F						
		17	912	41.11	19 21.63	155 15.21	9.50 3.0 3.0 46	3 62 .10	2 .4	.4 32 SF1						
		20	1627	16.22	19 17.83	155 15.62	9.30 3.0 2.8 43	1 142 .11	5 .5	.6 34 SF1						
		21	114	37.31	19 19.69	155 7.70	8.77 3.0 3.2 40	2 100 .10	4 .4	.7 24 SF4						
		26	1848	31.53	19 25.90	155 16.53	.39 2.3 3.6 14	3 164 .08	2 .3	.4 7 SNC F						
		30	1146	25.71	19 18.86	155 13.26	11.02 3.5 3.5 48	3 126 .11	7 .5	.4 40 SF2 F						
		30	1146	25.71	19 18.86	155 13.26	11.02 3.5 3.5 48	3 126 .11	7 .5	.4 40 SF2 F						
	JUL	2	231	54.70	19 19.43	155 11.37	10.33 3.6 3.6 43	1 98 .08	6 .5	.4 41 SF3 F						
		3	1328	42.62	19 23.41	155 16.85	2.99 3.1 3.4 41	1 36 .11	0 .2	.2 26 SSC F						
		5	1450	55.23	19 20.01	155 6.62	9.03 2.9 3.0 43	2 115 .10	5 .5	.5 31 SF4						
		6	1030	38.60	19 20.65	155 11.75	9.71 3.0 3.2 47	2 73 .12	4 .3	.4 37 SF3						
		9	1512	21.18	19 25.97	155 37.52	3.61 3.0 2.9 32	2 83 .12	3 .4	1.0 30 MLO						
		11	2148	44.97	19 20.04	155 11.85	9.48 2.7 3.0 47	4 81 .08	5 .4	.5 29 SF3						
		17	3	15.83	19 23.51	155 16.78	3.05 3.1 3.2 43	6 36 .11	0 .2	.2 29 SSC						
		20	612	46.42	19 19.80	155 12.98	9.65 3.9 3.9 44	1 73 .11	5 .4	.4 38 SF2 F						
		21	759	16.47	19 15.85	155 27.14	10.40 3.9 4.0 47	3 70 .13	5 .5	.4 42 LSW F						
		22	610	8.97	19 20.16	155 7.98	8.73 2.9 3.0 39	3 87 .06	5 .3	.5 29 SF4						
		23	138	17.55	18 57.24	155 11.14	45.64 3.0 3.2 47	3 243 .08	37 1.4	1.8 36 LOI						
		24	824	26.19	19 24.66	155 17.46	.71 2.6 3.3 32	2 36 .12	1 .2	.2 22 SNC F						
		24	1137	42.18	19 23.82	155 28.57	10.26 3.0 3.2 42	1 47 .10	3 .3	.5 35 KAO						
		24	1624	11.62	19 24.13	155 16.18	1.11 2.4 3.0 32	3 45 .14	1 .2	.2 20 SEC						

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YEAR	MON	ORIGIN TIME			LAT N		LON W		DEPTH	AMP		DIR	NR	NS	GAP	RMS	MIN	ERH	ERZ NO	REMK
		DA	HRMN	SEC	DEG	MIN	DEG	MIN		KM	MAG									
1981	JUL	26	047	29.25	19	24.20	155	15.98	1.18	2.5	3.1	26	4	42	.12	1	.2	.3	19	SEC
		26	311	7.57	19	24.92	155	17.25	1.45	2.3	3.0	22	1	73	.10	0	.3	.2	15	SNC
		27	1715	15.59	19	19.44	155	11.36	9.51	3.3	3.7	42	2	98	.11	6	.4	.4	36	SF3 F
		28	10	44.86	19	21.53	155	1.61	8.59	4.1	4.1	43	1	160	.10	4	.6	.4	40	SF5 F
	28	1018	33.92	19	21.81	155	1.98	7.89	3.3	3.3	43	2	145	.10	4	.5	.5	37	SF5 F	
	AUG	29	1557	50.04	19	21.55	155	15.28	9.79	3.4	3.4	44	2	63	.10	2	.4	.4	32	SF1 F
		1	1034	2.33	19	20.05	155	7.73	9.81	3.0	2.9	45	2	94	.10	5	.4	.3	29	SF4
		2	848	16.20	20	6.53	155	47.08	23.22	3.0	2.9	46	4	187	.11	2	1.2	1.3	35	KOH F
		4	747	50.64	19	27.80	155	26.87	9.44	3.0	2.6	46	5	59	.12	6	.3	.6	28	KAO F
		6	13	0	18.05	19	46.27	155	2.24	39.56	3.2	2.5	47	2	212	.11	8	.9	1.7	43
10		417	6.55	19	23.61	155	17.00	3.00	2.6	3.3	29	4	38	.10	0	.3	.2	23	SSC	
10	532	19.58	19	23.00	155	15.86	1.28	3.1	1.9	17	2	69	.11	1	.2	.2	11	SEC		
	542	9.38	19	23.09	155	16.51	2.08	4.2	3.8	44	1	42	.16	1	.3	.4	33	SSC		
	6	58.22	19	23.30	155	16.21	2.43	3.1	2.2	39	1	42	.12	1	.3	.2	27	SEC		
	623	39.28	19	18.47	155	16.94	5.17	3.6	3.9	32	0	115	.14	3	.5	1.4	27	SF1		
	723	12.88	19	19.04	155	20.42	7.85	3.4	3.0	27	0	111	.16	12	.5	1.9	14	SWR		
	747	51.74	19	18.53	155	20.78	1.09	3.4	3.0	40	1	115	.15	5	.4	1.1	20	SWR		
	820	8.74	19	19.07	155	21.11	4.67	4.2	3.9	40	0	106	.14	4	.4	2.0	27	SWR		
	841	39.99	19	19.90	155	20.29	2.97	3.1	3.0	49	8	73	.07	5	.2	.5	37	SWR		
	940	34.97	19	18.39	155	21.56	4.05	4.5	3.8	39	0	123	.20	5	.6	1.3	33	SWR		
	1043	58.96	19	19.81	155	18.57	6.06	3.1	2.5	46	4	63	.13	2	.4	.7	34	SWR		
10	13	2	57.77	19	20.67	155	20.44	.01	3.2	2.9	36	2	74	.16	5	.4	.7	20	SWR *	
	1329	11.28	19	17.74	155	21.65	7.10	3.6	3.4	47	3	119	.18	5	.5	.9	42	SWR		
	1747	11.90	19	17.65	155	23.28	2.96	2.7	3.3	42	6	99	.10	5	.2	.6	28	SWR		
	1853	46.63	19	18.01	155	23.52	5.19	3.6	3.1	47	8	93	.12	4	.3	.8	34	SWR		
	1917	17.19	19	19.49	155	18.95	4.44	3.3	3.1	25	3	53	.14	3	.4	1.0	19	SWR		
	1923	43.37	19	14.45	155	22.17	3.25	3.3	2.2	37	1	156	.10	3	.5	.7	26	SWR		
	2046	29.02	19	18.66	155	23.14	2.76	3.0	1.9	17	2	91	.15	3	.5	.7	10	SWR		
	2058	30.18	19	16.93	155	25.57	7.64	3.3	3.0	32	3	61	.17	6	.5	1.2	28	LSW		
	2335	11.95	19	18.09	155	23.65	4.04	2.8	3.1	32	3	90	.13	4	.4	1.4	23	SWR		
	353	36.33	19	17.45	155	23.33	5.78	3.3	2.8	45	2	100	.12	5	.4	1.0	36	SWR		
11	847	29.83	19	13.66	155	23.30	8.88	3.1	2.4	40	1	157	.12	11	.5	.7	32	SWR		
	1820	42.39	19	12.05	155	20.70	7.28	3.3	3.5	44	3	193	.11	7	.6	1.2	32	SWR		
	8	2	18.14	19	58.92	155	28.06	23.52	3.0	2.8	37	2	254	.10	17	1.1	1.8	27	KEA	
	2351	36.77	19	59.39	155	57.00	14.60	3.2	3.2	33	1	233	.14	24	3.8	3.0	16	KOH		
	1514	32.66	19	23.95	155	16.82	15.27	3.4	3.7	52	6	35	.12	0	.4	.3	44	DEF F		
	19	238	47.29	19	20.08	155	8.18	4.09	3.5	3.9	44	2	84	.09	5	.5	.3	33	SF4	
	22	15	20.33	20	11.17	156	25.66	10.32	4.4	4.7	46	5	226	.12	67	.8	1.5	43	HIL F	
	1	1042	17.62	19	45.91	154	51.69	41.98	3.1	2.6	49	3	243	.11	19	1.1	1.4	43	DIS	
	4	1450	36.92	19	21.06	155	5.97	9.19	2.6	3.1	41	3	96	.08	4	.4	.5	30	SF4	
	6	422	31.80	19	20.56	155	10.73	9.70	2.6	3.0	42	3	77	.12	3	.4	.6	30	SF3	
6	2221	46.23	19	38.02	156	.80	41.56	3.3	3.8	45	2	225	.09	19	.8	1.6	34	KON F		
	6	2234	47.61	19	24.67	155	29.26	9.93	3.3	3.3	52	6	32	.09	5	.3	.4	41	KAO F	
	21	235	37.64	19	19.54	155	12.57	9.07	2.7	3.0	46	4	83	.12	5	.4	.4	29	SF2	
	22	355	1.75	19	19.67	155	7.49	8.76	3.1	3.4	43	2	105	.09	4	.5	.4	29	SF4	
	22	449	24.02	19	19.68	155	7.77	9.26	3.3	3.5	48	3	99	.10	4	.5	.4	39	SF4 F	
	22	650	23.72	19	19.40	155	7.25	10.18	3.9	4.1	44	1	117	.11	4	.6	.4	40	SF4 F	
	27	150	.62	19	22.32	155	25.11	10.57	3.4	3.7	46	3	132	.11	4	.3	.4	41	KAO F	

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1981	SEP	28	7 9	47.61	19 20.17	155 11.97	9.84	2.9	3.2	41	2	79	.09	5	.3	.4	32	SF3
		28	12 7	31.37	19 25.69	155 37.88	2.06	3.8	3.4	33	1	178	.10	4	.5	.9	29	ML0
		28	1225	7.36	19 29.35	155 48.47	8.12	3.1	2.7	30	0	92	.13	12	.7	.9	20	KON
		30	7 4	45.75	19 18.58	155 13.62	10.25	3.9	4.0	44	2	72	.10	3	.5	.5	38	SF2 F
		30	959	.36	19 18.92	155 13.75	8.55	2.8	3.0	47	6	66	.11	4	.4	.5	33	SF2
	OCT	1	2139	18.91	19 20.66	155 2.13	7.49	3.1	3.1	42	3	171	.10	2	.6	.4	34	SF5
		2	544	34.28	19 20.46	155 6.77	9.35	3.1	3.0	50	4	102	.10	5	.5	.4	37	SF4 F
		2	1143	40.50	19 20.40	155 7.23	8.97	3.1	3.1	43	2	97	.12	5	.4	.6	30	SF4
		4	1542	28.00	19 17.30	155 30.69	26.41	3.7	3.8	54	6	46	.09	4	.5	.9	47	DLS F
		4	1656	45.59	19 20.51	155 13.09	9.89	2.9	3.0	43	3	63	.11	4	.3	.4	29	SF2
		6	2335	43.42	19 18.57	155 14.25	9.84	3.0	3.0	45	3	130	.11	6	.4	.5	36	SF2
		10	1823	23.29	19 19.83	155 11.70	9.45	2.9	3.1	45	3	86	.10	5	.4	.4	31	SF3
		11	721	19.03	19 37.35	156 4.48	37.88	3.0	3.0	48	4	237	.10	22	1.1	.8	38	KON
		13	1911	22.84	19 17.05	155 21.61	8.69	3.1	3.4	47	2	129	.14	6	.4	.5	42	SWR
		13	1914	16.35	19 17.11	155 21.80	8.50	2.8	3.0	48	4	128	.14	6	.4	.6	40	SWR
		14	1438	20.54	19 59.90	155 39.69	13.98	3.1	3.4	50	5	149	.10	19	.8	1.0	39	KOH F
		15	1 0	.19	18 59.21	155 3.35	35.37	3.3	3.4	49	3	248	.10	35	1.4	2.0	43	LO1
		19	10 8	35.60	19 20.09	155 11.29	9.24	3.0	2.9	46	4	83	.11	4	.3	.4	32	SF3
		22	2156	8.92	19 19.47	155 8.73	9.52	3.3	3.8	44	0	82	.11	4	.5	.4	38	SF4
		27	2333	32.26	19 22.60	155 17.21	32.88	4.0	4.2	49	2	38	.12	2	.6	1.1	47	DEP F
	NOV	28	143	20.66	19 22.42	155 17.23	32.67	2.7	3.0	51	3	38	.11	2	.5	.9	46	DEP
		1	16 5	50.64	19 29.09	155 52.58	10.97	3.1	3.0	41	5	97	.15	4	.6	.4	25	KON
		5	824	22.34	19 22.41	155 1.09	7.23	2.8	3.0	33	2	168	.09	6	.6	.4	26	SF5 F
		7	723	46.83	19 20.14	155 13.09	9.83	3.1	3.4	47	2	68	.10	5	.4	.3	40	SF2 F
		9	145	36.78	19 19.61	155 7.78	9.22	2.9	3.2	38	1	99	.10	4	.5	.4	29	SF4
		10	3 2	56.58	19 20.58	155 12.67	10.31	4.4	4.9	47	1	67	.11	4	.4	.3	43	SF2 F
		10	331	2.64	19 20.34	155 12.44	8.96	3.4	3.5	49	3	72	.12	4	.4	.5	42	SF2 F
		11	2236	11.42	19 19.81	155 11.41	9.74	2.9	3.2	46	2	88	.10	5	.4	.3	37	SF3 F
		15	2023	59.37	19 57.76	155 21.13	10.11	3.0	2.9	37	4	197	.10	8	.6	.5	22	KEA F
		16	226	40.23	19 57.43	155 21.65	12.15	3.4	3.4	49	3	174	.11	8	.8	.6	44	KEA F
		16	1910	9.55	19 16.84	155 21.95	8.46	3.0	3.4	45	2	130	.15	6	.4	.6	39	SWR
		18	1029	38.67	19 18.87	155 13.37	9.58	2.7	3.0	47	5	130	.11	7	.4	.4	35	SF2
		18	2229	54.85	19 22.17	155 28.88	10.89	3.6	3.7	50	3	36	.11	2	.3	.4	45	KA0 F
		19	1932	58.14	19 57.41	155 21.27	11.84	3.8	4.2	53	5	195	.12	8	.7	.6	47	KEA F
		20	742	52.41	19 21.73	155 5.01	8.77	3.4	4.0	49	4	81	.10	3	.5	.4	42	SF5 F
		28	917	18.44	19 57.81	155 20.78	9.89	3.4	3.4	41	3	198	.10	23	.6	.5	26	KEA F
		30	20 7	9.73	19 21.42	155 4.80	8.71	3.4	3.4	41	3	87	.11	4	.5	.4	36	SF5 F
	DEC	4	1641	27.79	19 13.57	155 23.42	37.95	2.9	3.1	49	2	151	.11	2	.7	1.2	43	DEP
		5	1226	30.91	19 19.88	155 7.72	7.90	3.3	3.6	45	4	97	.09	5	.4	.5	32	SF4
		7	9 7	29.14	19 18.75	155 13.21	8.76	3.2	3.4	43	2	132	.11	7	.5	.6	38	SF2 F
		7	1739	27.19	19 48.79	156 3.87	41.12	4.0	4.0	47	4	239	.10	28	1.0	1.1	41	HUA F
		12	1823	13.31	19 19.75	155 7.52	9.86	3.7	3.8	47	4	103	.10	5	.5	.4	42	SF4 F
		13	322	28.85	19 20.74	155 4.33	8.43	3.0	2.9	44	3	105	.10	3	.5	.4	31	SF5
		13	1420	21.31	19 19.64	155 8.41	9.15	3.3	3.7	47	3	83	.10	4	.4	.4	36	SF4 F
		15	1411	25.70	19 17.08	155 15.50	10.40	2.9	3.0	46	3	151	.10	6	.4	.4	36	SF1
		15	2130	54.30	19 23.54	155 16.87	2.82	2.8	3.4	41	3	36	.10	0	.2	.2	29	SSC
		16	2021	51.51	19 20.17	155 6.89	9.40	3.4	3.8	43	1	143	.10	6	.6	.5	37	SF4 F
		20	5 8	2.65	19 19.63	155 10.22	9.19	3.1		42	2	94	.11	5	.4	.4	33	SF3

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YEAR	MON	DA	HRMN	SEC	LAT N DEG MIN	LON W DEG MIN	DEPTH KM	AMP MAG	DIR MAG	NR	NS	GAP DEG	RMS SEC	MIN DIS	ERH KM	ERZ KM	NO FM	REMK
1981	DEC	21	1915	15.59	19 20.02	155 6.71	8.51	3.2	3.0	41	2	113	.10	5	.4	.5	29	SF4
		23	711	14.60	20 5.68	155 50.40	28.48	3.0	3.2	43	6	148	.11	7	.6	1.0	32	KOH F
		27	16 9	30.37	19 16.52	155 22.42	7.84	3.2	3.7	48	2	129	.15	5	.4	.6	45	SWR
		31	1735	25.06	19 22.75	155 16.76	28.29	3.0	3.0	45	1	42	.11	1	.6	.9	44	DEP