Hawaiian Volcano Observatory
1960 Quarterly Administrative reports

Introductory Note By Thomas L. Wright and Jennifer S. Nakata

Compiled By Jennifer S. Nakata

Draft of
Summary 17
January, February, and March 1960
by Michael P. Lane

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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.
Heiheiahulu (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.

Thomas L. Wright and Jennifer S. Nakata

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HAWAIIAN VOLCANO ~~SUMMARY~~ OBSERVATORY

SUMMARY 17

January, Febuary, March, 1960

by
Michael P. Lane

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CHRONOLOGICAL SUMMARY--FLANK ERUPTION

During the last quarter of 1959, Kilauea Volcano ~~began the most complete sequence of eruptive activity in its history~~ entered the final dramatic stages of an unusually complete sequence of eruptive activity. Eruption events in that quarter consisted of inflation of the volcano, and a major outpouring of lava at the summit from November 14 to December 21, 1959.

Three major eruptions took place in the first quarter of 1960, the flank eruption along the East rift zone of Kilauea, the rapid deflation of the summit, and finally the collapse of the summit caldera. Two notable phases of seismic activity which began in the fourth quarter of 1959 continued into the first month of 1960; weak harmonic tremor continued on the North-Pit seismometer, and the swarm of small earthquakes which began the last week of December was recorded in ever-increasing number on the Pahoa seismographs.

On January 2, the Pahoa station was improved by the addition of a short-period, high-gain, optically-recording unit to the set of horizontal mechanical instsuments already in the vault. This change resulted in more accurate daily earthquakes counts from the Pahoa station.

It is interesting to note on graph the comparison in activity along the east rift zone and SW rift zone during the last week in December.

Both zones were quite active with the SW zone generally having more events per day than the East rift zone. This led Observatory personnel to speculate that a flank eruption might occure along the SW rift. This feeling was tempered during the first week of January when activity along the SW rift decreased from 208 events per week to 93 events per week. At the same time, activity along the east rift zone also decreased as compared to the last week in December.

During the second week in January earthquakes activity sharply increased along the east rift zone. The number of earthquakes recorded on the Pahoa seismometer rose from 100 on January 8 to more than a 1000 on January 12. The sources of the east rift zone events were located by the use of a sensitive portable seismograph. At the beginning of the second week in January, the epicenter migrated down the rift zone toward the sea. On January 12, the source was traced to a small graben situated abrest the east rift zone just north of the village of Kapohoa and ten km east of Pahoa.

On January 13, at approximately 05h45m earthquakes from the vicinity of Kapoho sharply increased in both size and frequence while the hypocenter of these events moved upward to a very shallow depth.① During the afternoon, however, seismic activity along the east rift zone gradually diminished. The Kapoho graben began subsiding the morning of January 13 and continued to drop until mid-afternoon. Along the south side of the graben movement occured along

① Eight earthquakes with magnitude of 3.0 or above took place along the east rift zone east of Pahoa. This series began at 12:18 with a 3.0 magnitude event and continued until 20:12. The largest ~~event registered on the Pahoa seismometer~~ quake had a magnitude of 3.5.

1.7 miles of the Kopoho fault, while on the north side of the graben (Koae fault) movement occured along a pre-existing fault scarp. Maximum vertical displacement was respectively : Kapoho fault 3½ feet, Koae fault 4 feet. Movement along both faults was confined to vertical displacement and no lateral slippage was either measured or observed. The cessation of subsidence was accompanied by a marked decrease in seismic activity, and after 15h00m only an occasional earthquake was recorded along the rift.

At 19h30m on January 13, harmonic tremor began recording on the Pahoa seismometer and the flank eruption broke out along a fissure one km in length which split the center of the graben. This eruptive fissure continued to expand toward the east with the nearly continous line of fountains attaining a maximum length of 3500 feet. Initial fountains were between 50 and100 feet high while fountain heights reached a maximum of 300 feet from the newer eruptive vents to the east.. In ½ hour after the eruption began, fountaining abated noticeable. On the west end of the initial outbreak fountaining became feeble and at 22h00m fountaining from the eastern vents of the fissure ceased abruptly. Although many fountains had nearly ceased, the rate of lava extrusion continued to rise. Lava from the western most vents flowed southward while lava from the eastern vents flowed in a northerly direction. When the lava from the eastern vents reached the north edge of the graben and its high fault scarp (20 to30 feet) it turned and

flowed in a north eastward direction along the fault scarp. Thus, on the north side of the graben, the lava was confined in a narrow trough between the Koae fault scarp and the northward tilted graben floor. In this trough, the lava formed a narrow flow and advanced rapidly toward the sea.

At 23h15m large quantites of brackish ground water gained access the the eruptive conduits with resulting loud roaring explosions and spewing of dark clouds from the vents.

Activity along the eruptive fissures continued into January 14. Fountains gradually dimished and brackish water continued to enter the lava conduits. This ground water provided the fuel for the erratic series of steam explosions which took place on January 14. The following briefly summarizes the steam and ash eruptions from different vents along the fissure for one period of observation.

01:00 -- Steam and ash emission lasting 50 minutes

02:00 -- Minor steam emission

04:15 -- Dense black clouds of steam and ash lasting for 2 minutes

05:50 -- Steam blast lasting for 2 minutes

06:00 -- Violet steam emission lasting more than an hour

07:40 -- Steam and ash emission lasting for 35 minutes

08:50 -- Steam and ash emission lasting for 2 hours

09:45 -- Steam emission lasting approximately 1 minute

09:50 -- Steam blast lasting approximately 1 minute

By 10:30 steam and ash emission had essentially stopped.

By 10h30m on January 14, fountaining was restricted to a 700 foot segment of the original fissure. Lava had advanced to within 0.3 miles of the sea by mid-afternoon. At 20h00m fountain heights had increased to 250-300 feet.

((During the second week of January, seismic activity at the summit was relatively quiet with the exception of January 13. Twice as many events were recorded on this ~~date~~ day compared to either the previous day or the following day.))

During the early hours of January 15, there was very little change in the fountaining. Lava continued to advance toward the sea and at 08h08m the main lava front reached the sea a few hundered feet south of Kaoko Point. Fountain activity slowly increased during the day. By 20h00m fountaining was restricted to a vent at the east end of the eruptive fissure. This fountain reached a maximum height of 400 feet. Because of the increased fountain height, pumice and cinder accumulations which began in the afternoon were accelerated and by 23h45m the pumice and cinder cone was estimated to be 80 feet heigh near the fountain base.

Fountain height continued to increase at the eastern vent through January 17. The following list indicates fountain heights and the time of their observation:

02:15 - 550-600 feet

03:45 - 600-700 feet with an occasional burst to 900 feet

21:30 - 800 feet

22:50 - Occasional burst to 1050 feet

During the day pahoehoe flows spread southward across the graben while an aa flow moved southward along the coast from the main front. Lava began filling Higashi pond at about 19h45m. Higashi pond is a long shallow inlet marking the seaward side of the Kapoho graben. It appeared during the 1924 collapse of this graben and was filled during the present eruption. Thus it appears neither on the old (1921) maps of Puna, nor in modern post-eruption mapping. The U.S.G.S. Professional Paper on the 1959-60 Eruption of Kilauea now in print does include accurate maps of this short-lived feature.

[On January 17 the summit of Kilauea began to subside. This subsidence was not however accompanied by an unusual number of earthquakes. Daily counts from the summit area indicated little change from the previous day, Although tilt readings clearly tracked the collapse.]

(9)

Although fountain heights had decreased during the night, lava and pumice output remained large. The cinder cone had attained a height of 100 feet by early morning, and by 17h15m the cone was 170 feet high. An increase in activity began at 06h35m and fountain heights of 1200 feet were measured with average heights remaining high (700-1000) throughout the day.

Although sometimes erratic, fountain heights continued to reach high levels between January 18 and January 21, with a spetacular burst on January 18 when the main fountain reached 1700 feet. During the morning of January 18, lava broke out of the graben on the north side and moved northward. By January 21, lava had nearly reached the village of Koae.

Cinder cone growth continued through the period and by 20h40m on January 20 the cone was 235 feet high.

(1) [((Earthquake activity at Kilauea caldera decreased steadly from 50 events on January 18 to 19 events on January 21. Kilauea caldera activity remained nearly the same during the next day, but on January 23 a notable increase in seismic activity from this region occured. This day marked the beginning of the shallow Kilauea caldera swarm which accompanied the collapse of the summit. (2) [The number of events recorded from the caldera increased by a factor of over 10 between January 23 (90 events) and January 28 (1080 events).)))]

Put in section on Halemaumau collapse.

From January 22 to Febuary 1, lava continued to pour out in great quantities. The following are estimates on the volume of lava extruded and the area of coverage.

January 24	60,000,000 cubic yards	1080 acres
January 28	85,000,000 cubic yards	1280 acres

Two eruption features were noted during the above period. A lava lake which was larger and higher than the earlier lake was still distinguishable in the middle of the lava field. This lake provided lava for a flow which curved eastward past Koae. The lake also fed lava tubes which radiated from the center of the lake. These tubes fed several small aa tongues and pahoehoe oozes and a lava stream which flowed around the west side of Kuhii. This flow breached the east end of the first Kuhii-Kapahoa barrier.

The steep sided parasitic cone which began January 21 continued to grow and by Janaary 22 was as high as the main cone. On January 24, the parasitic cone rose 65 feet above the main cone. Although the main cone did not grow in height between January 20 and January 24, its mass was greatly increased by compactiona and lateral spreading of pumice.

On January 27, the heaviest pumice fall of the entire eruption occured in a 7 hour period. A broad pumice loaf, nearly as high as the main cone, accumulated 3000 feet northeast of the fountain. This loaf was later dissected by a lava river.

At 21h45m on January 27, the eruption abruptly ceased and this cessation of activity lasted until 21h50m when the spatter vent roared back to like. This phenomenon was recorded on the seismic net. At Pahoa, harmonic tremor completed stopped for the 5 minute period and at the summit stations absolute quite prevailed during the period.

Activity along the eruption fissure remained unchanged until Febuary 6. On Febuary 6, lava extrusion essentialy ceased. After this date, and until activity ceased entirely on Febuary 19, there were only minor changes in activity. A lava flow which poured out of the splatter cone on Febuary 18 marked the end of the flank eruption. Minor intermittet gas and cinder emissios continued on Febuary 19, but by 14h00m this had ceased.

By the end of the eruption, approximately 160,000,000 cubic yards of lava covered an area of 2510 acres, 500 acres of which were added beyond the old coastline. Lava covered the Village of Kapoho, the Village of Koae, a U.S.Coast Guard station and several homes along the beach. Pumic covered 2750 acres to a depth of 0.1 feet or more. 820 acres had 1 foot of pumice overlay and 55 acres had 5 or more feet of pumice.

HALEMAUMAU COLLAPSE

During the last few days in January, subsidence of Kilauea caldera which began January 17 continued as lava from the summit moved out into the rift zone. Tilt measuments made between January 19 and January22 showed rapid settling of the summit. ① after Jan 23, Seismic activity increased daily as brittle surface rocks of the caldera fialed under the raped deformation caused by the subsidence. ② Weak harmonic tremor associated with the eruption of Kilauea Iki increased as the movement of lava from the summit intensified. Between January 28 and Febuary 1 over 10,000 shallow Kilauea caldera earthquakes were recorded at the summit stations. and hundreds of these earthquakes were felt.

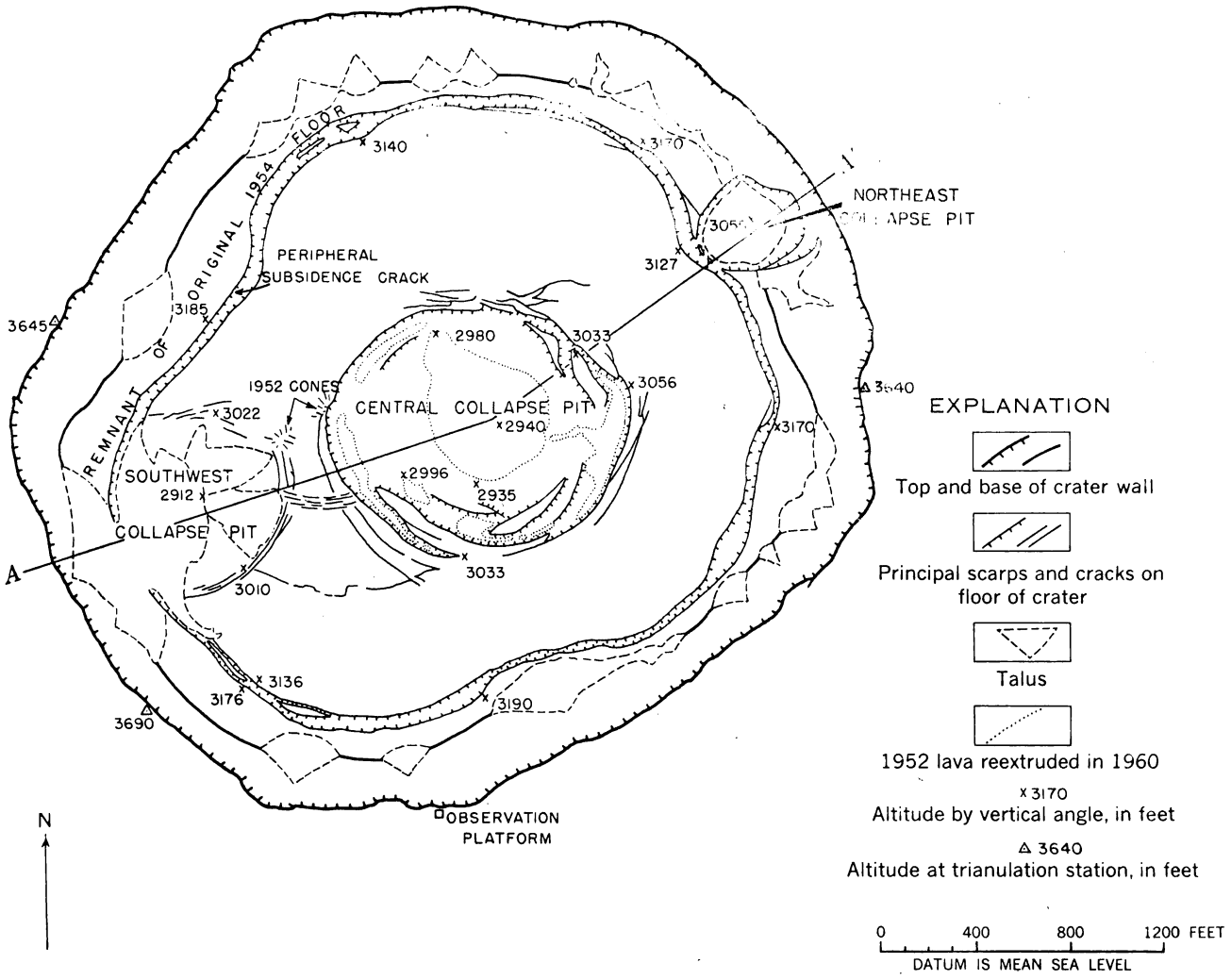
In the first few days of Febuary seismic activity at Kilauea caldera continued to increase and on Febuary 6 nearly 5000 Kilauea caldera events were recorded at the summit stations. New peripheral cracks developed around Halemaumau and Kilauea, and old cracks widened. Many landslides were recorded from Halemaumau.

The collapse began on Febuary 7 when a fissure broke through and drained the lava from beneath the floor of Halemaumau causing the floor to drop 150 feet. This feature is referred to as the Central Collapse Pit in Figure 1. after (Richter and others, The 1961 Eruption of Kilauea Volcano, Hawaii). Just before noon, an area 1000 feet in diameter in the center of the floor dropped an additional 200 feet. This cavity

partially refilled with highly viscous lava. During the afternoon the subsidence gradually ceased, but on Febuary 9 another small collapse (Southwest Collapse Pit) occured in the floor. This collapse was not accompied by refilling of lava.

Daily Kilauea caldera counts from the summit station remained high (generally over 1000 a day) for the entire month of Febuary. A sharp drop in Kilauea caldera earthquakes was recorded on March 1 and this decrease in activity lasted until March when daily counts suddenly quadrupuled. The increased seismic activity lasted until March 11. On March 11, the third and final collapse of Halemaumau took place. A pit, 100 feet deep and 300 by 400 feet in diameter formed at the northeast corner of the remaining 1954 lava ledge (Northeast Collapse Pit).Total volume of the Halemaumau collapse was approxiamtely 29,000,000 cubic yards.

Seismic activity gradually decreased during the rest of March. Kilauea caldera earthquakes associated with the collapse continued into April while a moderate subsidence of the summit continued into the summer of 1960.



~~FIGURE 2.—Map and section of Halemaumau crater, in the floor of Kilauea caldera, before the 1961 summit eruptions. All collapse features in the bottom of Halemaumau occurred during the summit subsidence of February–March 1960. (See fig. 20 for section A–A'.)~~

Figure x.-- After Richter and others (1961). Map and section showing 1960 Halemaumau collapse features.

Tilting of the ground around Kilauea caldera.-- Tilting of the ground around the summit of Kilauea is monitored daily by a short-base water-tube tiltmeter in Uwekahuna Vault, and at irregular intervals it is measured on a regional scale by means of a network of field tilt-bases and a portable water tube tiltmeter. The attitude of the ground surface at each tilt base is reported in terms of north-south and east-west tilt coordinates. Both coordinates at each station were arbitrarily set equal to 500 when measurements at that station were begun. Increasing tilt coordiantes correspond to northward and eastward tilting of the earth's surface; i.e., to a relative subsidence toward the north and east. A one-unit change in coordinates corresponds to a tilting of 1 microradian (1mm per km) in the direction indicated.

T[illegible] a[illegible]

a. Til[illegible] [illegible] fo[illegible]

[illegible]	N-S	E-W	[illegible]	N-[illegible]	[illegible]
[illegible] 3	545	433	Fe[illegible]	[illegible]	[illegible]
[illegible]	544	43[illegible]		[illegible]	[illegible]
10	544	43[illegible]	2	4[illegible]	
13	543	43[illegible]	Jan. 2[illegible]	[illegible]	
17	543	43[illegible]		4[illegible]	5[illegible]
20	[illegible]	45[illegible]		[illegible]	
24	[illegible]	[illegible]		395	
27	517	504		[illegible]	
31	[illegible]91	5[illegible]		390	
Feb 3	[illegible]	5[illegible]		3[illegible]	
7	497	6[illegible]	[illegible]	380	[illegible]
10	4[illegible]4	63[illegible]		[illegible]	
14	433	649		[illegible]	
17	428	655			

b. Tilt coordinates and [illegible] caldera

Til[illegible] (location)	Date	Tilt Coordinates N-S	Tilt Coordinates E-W	[illegible] of Tilting [illegible] radians (microradians per month)		[illegible] last reading
[illegible] (19°2[illegible]5'N, 155°17.4'W)	Jan. 20, 1960	557.8	459.6	[illegible]6	S [illegible] E	De[illegible] 1959
[illegible] (19°[illegible]6.3'N, [illegible]°17.3'W)	Jan. 20, 1960	506.2	493.0	1[illegible]	S 28° E	De[illegible], 1959
[illegible] (19°24.1'N, 155°16.8'W)	Jan. 22, 1960	604.9	488.1	27.8	S 88° E	De[illegible]
Kalihipaa (19°21.4'N, 155°15.3'W)	Jan. 19, 1960	477.2	511.0	[illegible]	N 19° E	Dec. 29, 19[illegible]
[illegible] (19°[illegible], 155°19.0'W)	Jan. 21, 1960	530.4	484.1	21.4	S 73° E	Dec. 31, 1959
Kam[illegible] (19°22.7'N, 155°[illegible]'W)	Jan. 22, 1960	444.9	543.8	41.6	N 15° E	De[illegible] 1959
Kilauea Nui (19°24'N, 155°16.7'W)	Jan. 26, 19[illegible]	500.0	500.0			
[illegible] P[illegible] (19°[illegible].2'N, 155°18.6'W)	Jan. 19, 19[illegible]	500.0	[illegible]00.0			
[illegible] (19°[illegible]'N, 155°15.7'W)	Jan. 21, 1960	561	492			
[illegible] (19°23.4'N, 155°16.9'W)	Jan 21, 1960	388	570			

Uwekahuna	Feb. [illegible]	412.6	53			[illegible]
Tree Molds	Feb. 5, [illegible]	408.8	28			[illegible]
Sand Spit	Feb. 5, 1960	597.1	581.1	[illegible]	S 86° E	[illegible]
Kahikipua	Feb. 4, 1960	508.1	504.3	59.1	N 12° W	[illegible]
Keamoku	Feb. 4, [illegible]	483.3	508.1	284.1	S 69° E	[illegible]
Kamokukolau	Feb. 5, 1960	634.1	494.[illegible]	119.0	N 15° W	[illegible]
Kipuka Nene	Feb. 6, 1960	504.9	497.5	14.9	N 27° [illegible]	[illegible]
Hilina Pali	Feb. 6, 1960	504.6	497.1	9.0	N 32° W	Jan. 19, [illegible]
[illegible]	Feb. 5, 1960	437	449	263	S 19° W	Jan. [illegible] 1960
[illegible]	Feb. 5, 1960	547	559	418	N 3° W	Jan. [illegible]

Uwekahuna	Mar. 28, 1960	272.0	646.5	95.5	S 33° E	Feb. [illegible], 1960
Tree Molds	Mar. 29, 1960	334.0	550.2	44.0	S 16° E	Feb. 5, 1960
Sand Spit	Apr. 4, 1960	757.6	704.8	102.2	N 38° E	Feb. 5, 1960
Kahikipua	Mar. 29, 1960	563.4	447.7	43.9	N 46° W	Feb. 4, 1960
Keamoku	Mar. 30, 1960	425.0	739.1	78.2	S 66° E	Feb. 4, 1960
Kamokukolau	Apr. 5, 1960	817.2	456.9	93.4	N 12° W	Feb. 5, 1960
Kipuka Nene	Mar. 31, 1960	517.5	492.8	7.5	N 21° W	Feb. 6, 1960
Hilina Pali	Apr. 4, 1960	516.0	490.4	6.8	N 30° W	Feb. 6, 1960
Whitney	Apr. 3, 1960	320	380	73.8	S 30° W	Feb. [illegible], 1960
Outlet	Apr. 1, 1960	842	568	131.0	N 2° E	Feb. [illegible] 1960

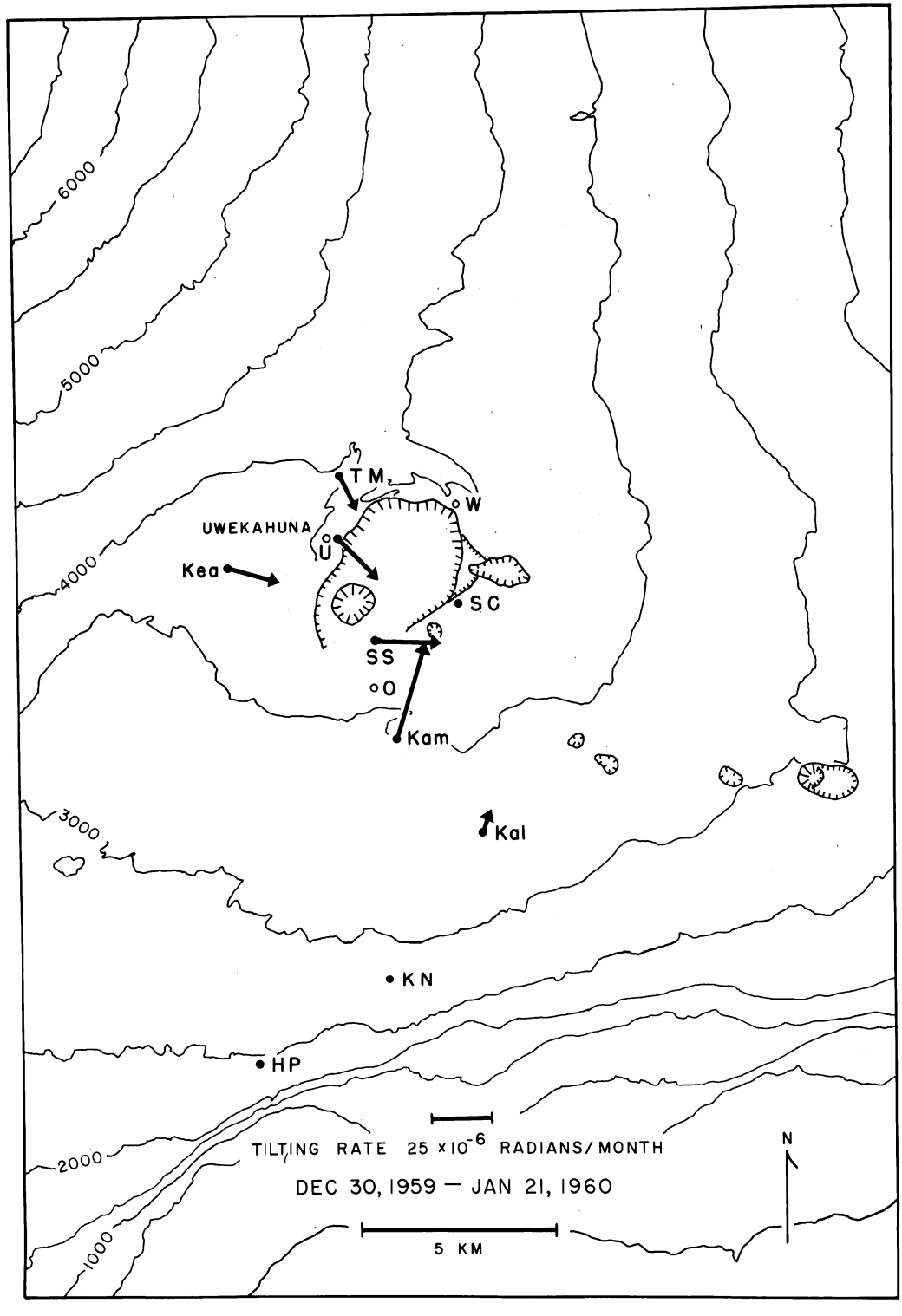


Figure 1.-- Tilting of the ground around Kilauea caldera, December 30, 1959 to January 21, 1960. The vector depciting tilting at a given tilt base points in the direction of maximum relative subsidence and has a length. proportional to the rate of tilting during the measurement interval. Closed circles represent field tilt bases; open circles, short-base water-tube tiltmeters.

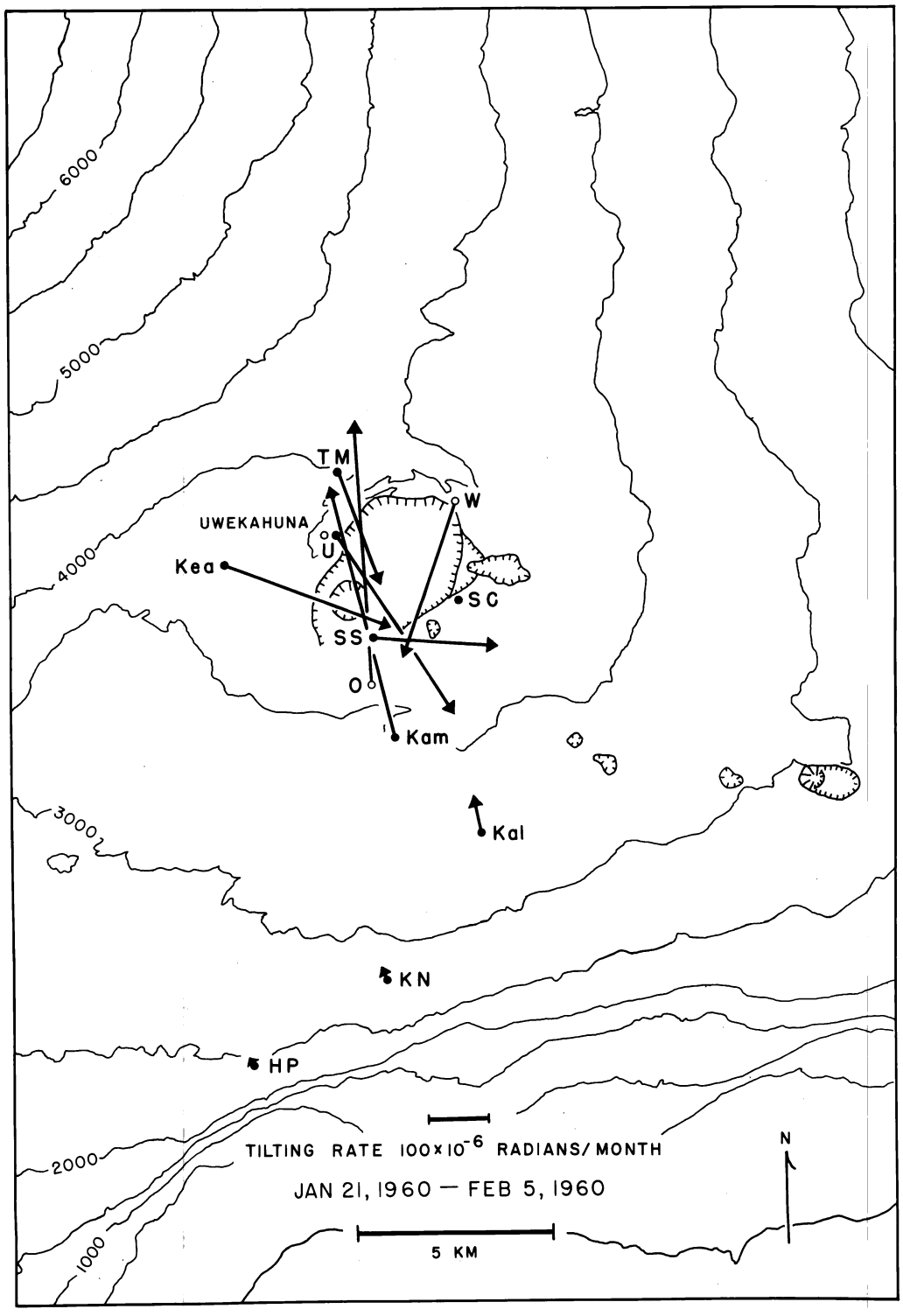


Figure 2.=-Tilting of the ground around Kilauea caldera, January 21, 1960 to Febuary 5, 1960. The vector depciting tilting at a given tilt base points in the direction of maximum relative subsidence and has a length proportional to the rate of tilting during the measurement interval. Closed circles represent field tilt bases; open circles, short-base water-tube tiltmeters.

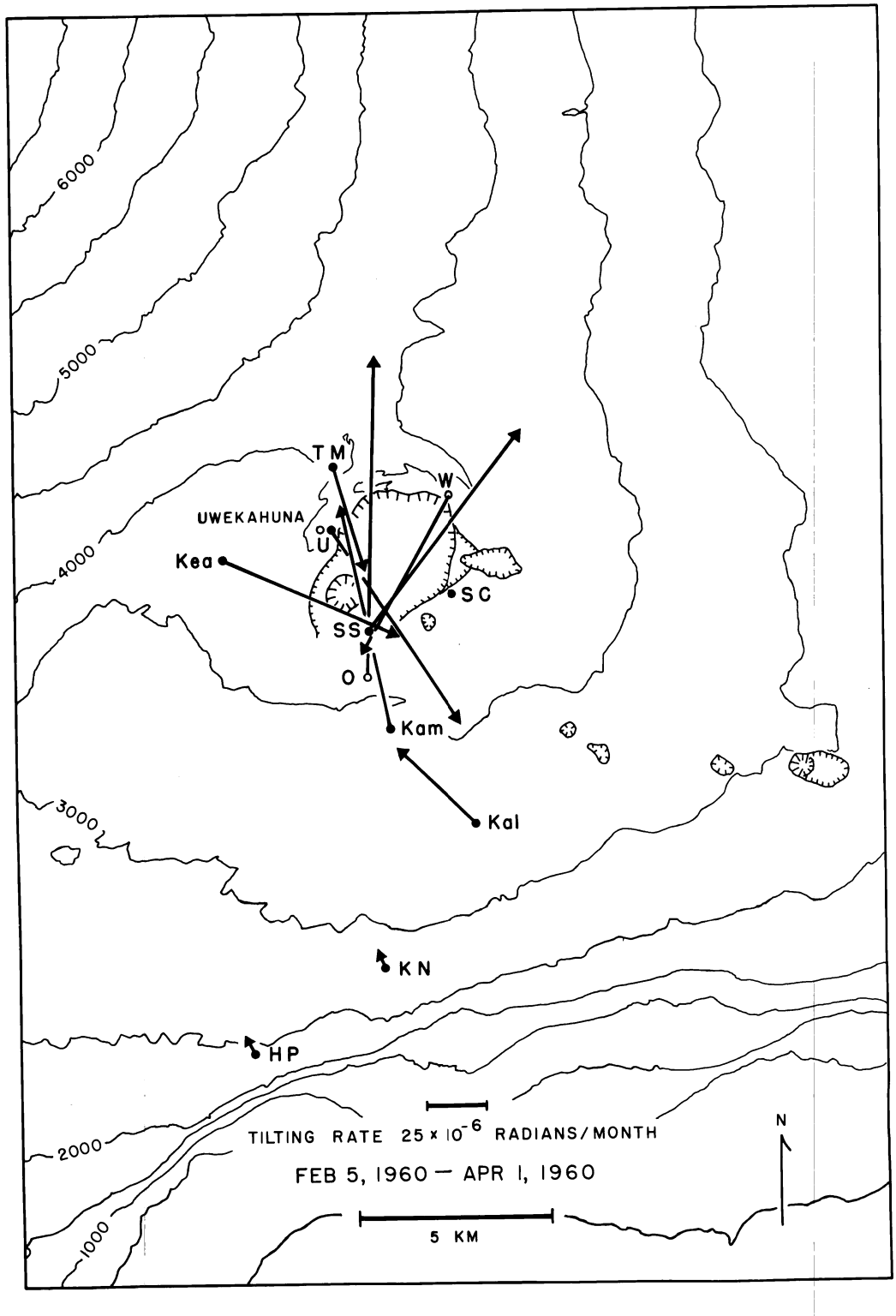


Figure 3.-- Tilting of the ground around Kilauea caldera, Febuary 5, 1960 to April 1, 1960. The vector depciting tilting at a given tilt base points in the direction of maximum relative subsidence and has a length proportional to the rate of tilting during the measurement interval. Closed circles represent field tilt bases; open circles, short-base water-tube tiltmeters.

Seismic summary.--Events recorded by the U.S. Geological Survey seismograph network in Hawaii fall into two categories: local earthquakes and tremor originating in the region of the Hawaiian Islands, usually within 100 km of at least one seismograph, and distant earthquakes originating more than 3,000 km from Hawaii. As an index of seismic activity at Hawaiian volcanoes, daily counts of earthquakes and minutes of tremor recorded by seismographs in Hawaii are listed in table 3. The earthquakes are separated into groups on the basis of region of origin as determined by analysis of records obtained daily at the Observatory (U, M, A, D, N, ~~W~~). Earthquakes of magnitude 2.5 or greater are generally sufficiently well recorded to be located with greater precision; they are listed individually in table 4. Data on identifiable phases from distant earthquakes are listed in table 5.

Locations of the seismograph stations are shown on figure 1, and essential data on the stations were given in ~~Summary 29~~. table 6.

October 13, 1965

Dear Jerry:

Here is the data. I hope it is in a form which will be usefull. I have been trying to gather my thoughts for the chronological summary. It looks like soom of the data would lend itself nicely to graphing. I have in mind the Pahoa quake count and Pahoa tremor. Table 3 points out the dramatic change in counts and I thought it might be worthwhile to graph it. I could also do this with the Kilauea summit count. Let me know how you feel about these brain storms.

Things are progressing at a rapid pace on the Alaskan adventure. It looks like we will leave Denver sometime around the 25th, and I probably will not have the chronological summary completed by then.

Sincerely

Mike

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

U, M, A, D, and N around Kilauea caldera

Tremor is separated into three categories: deep, intermediate, and shallow, on the basis of relative amplitudes on seismographs in the summit region. Unless otherwise stated, tremor is presumed to be associated with movement of magma within the central complex of Kilauea.

Earthquake categories are: Halemaumau rock slides, which are detected by the characteristic record they produce on the North Pit seismograph; shallow earthquakes in the Kilauea caldera region; shallow earthquakes along the SW. rift zone of Kilauea and the adjacent portion of the Kaoiki fault system; earthquakes along the eastern half of Kilauea's east rift zone (from the Pahoa seismograph); ~~earthquakes from a source about 30 km beneath Halemaumau;~~ earthquakes from the upper east rift zone and the adjacent fault systems of Kilauea's south flank, and earthquakes from other regions: Kona, Mauna Kea, etc. ~~? Obscured by the swarm of earthquakes near Puu Koae~~.

→ earthquakes from intermediate depths (15–30 km) beneath the summit of Kilauea

Table 3.-- Numbers of earthquakes and minutes of tremor on seismographs U, M, A, D, and N [redacted] around Kilauea caldera

Date (1960)	Tremor (in minutes)			Earthquakes							
	Deep	Inter-mediate	Shallow	Hale-maumau slides	Kilauea caldera	S.W. rift and Kaoiki	Eastern east rift	Kilauea summit ~~30~~ 15-30 km	Upper east rift	Others
JAN 1	Continuous		shallow		75	20	15	1	—	—
2	"		"		100	23	59	3	1	—
3	"		"		80	22	44	—	—	1 Kamuela
										1 Naalehu
4	"		"		70	13	52	—	—	—
5	"		"		65	11	33	—	—	—
6	"		"		45	4	51	3	—	
7	"		"		45	13	39	2	-	2 off E coast
										of Hawaii
8	"		"		50	20	30	—	—	—
9	"		"		75	7	131	—	—	—
10	"		"		55	9	77	—	—	—
11	"		"		35-1/2 Day	8	420	—	—	
12	"		"		80	6	495	1	1	1 off W coast
										of Hawaii
13	"		"		167	5	1000+	—	—	1 of E coast of
										Hawaii
14	"		"		86	1	45	—	—	—
15	"		"		90	1	2	—	—	—
16	"		"		16	2	—	—	—	—
17	"		"		50	8	1	—	—	—
18	"		"		50	2	1	1	—	—
19	"		"		30	3	—	—	—	—
20	"		"		18	4	—	—	—	—

Table 3.-- Numbers of earthquakes and minutes of tremor on seismographs U,M, A, D, N, WP, and MP around Kilauea caldera

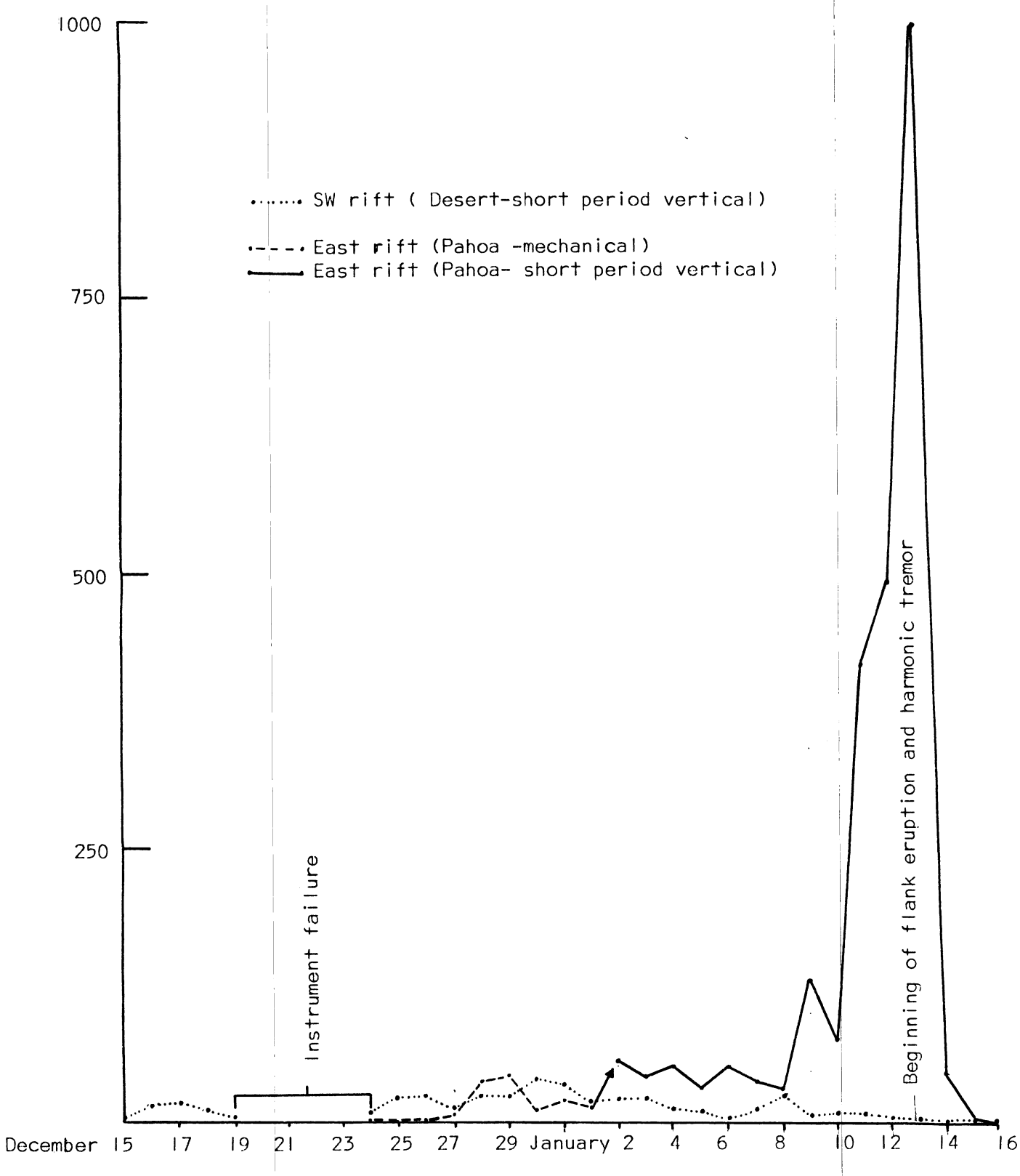
Date (1960)	Tremor (in minutes)			Earthquakes						
	Deep	Intermediate	Shallow	Halemaumau slides	Kilauea caldera	S.W. rift and Kaoiki	Eastern east rift	Kilauea summit 15-30 km	Upper east rift	Others
Jan 21	Continuous		shallow	—	19	8	2	2	—	—
22	〃		〃	—	26	13	1	2	—	—
23	〃		〃	—	90	12	—	3	—	—
24	〃		〃	—	165	13	1	2	—	—
25	〃		〃	—	195	12	—	—	—	—
26	〃		〃	—	340	11	1	—	—	—
27	〃		〃	—	535	5	—	—	—	1 Kailue
28	〃		〃	—	1090	—	1	—	—	—
29	〃		〃	—	1280	—	—	—	1	—
30	〃		〃	—	3845	—	—	—	4	
31	〃		〃	—	3000	—	—	2	—	—
Feb 1	〃		〃	—	1290 +	9	—	—	1	—
2	〃		〃	—	2450	11	1	21	1	—
3	〃		〃	—	3260	—	7	19	—	—
4	〃		〃	—	2025+	2	12	—	—	—
5	〃		〃	—	2200	—	14	—	—	—
6	〃		〃	—	4850++	—	26	—	—	—
7	Spasmodic		Shallow	—	2100 +	5	3	30	—	—
8	—	—	115	—	3100	—	2	2	1	—
9	—	—	91	—	1600 +	—	7	1	—	—
10	—	—	—	—	2025	2	4	3	1	—
11	—	—	—	—	1550	2	3	5	—	—
12	—	—	—	—	1200	2	1	1	—	—
13	—	—	—	—	575	4	1	1	—	1 OFF S coast of Hawaii

Table 3.-- Numbers of earthquakes and minutes of tremor on seismographs U,M, A, D, N, WP, and MP around Kilauea caldera

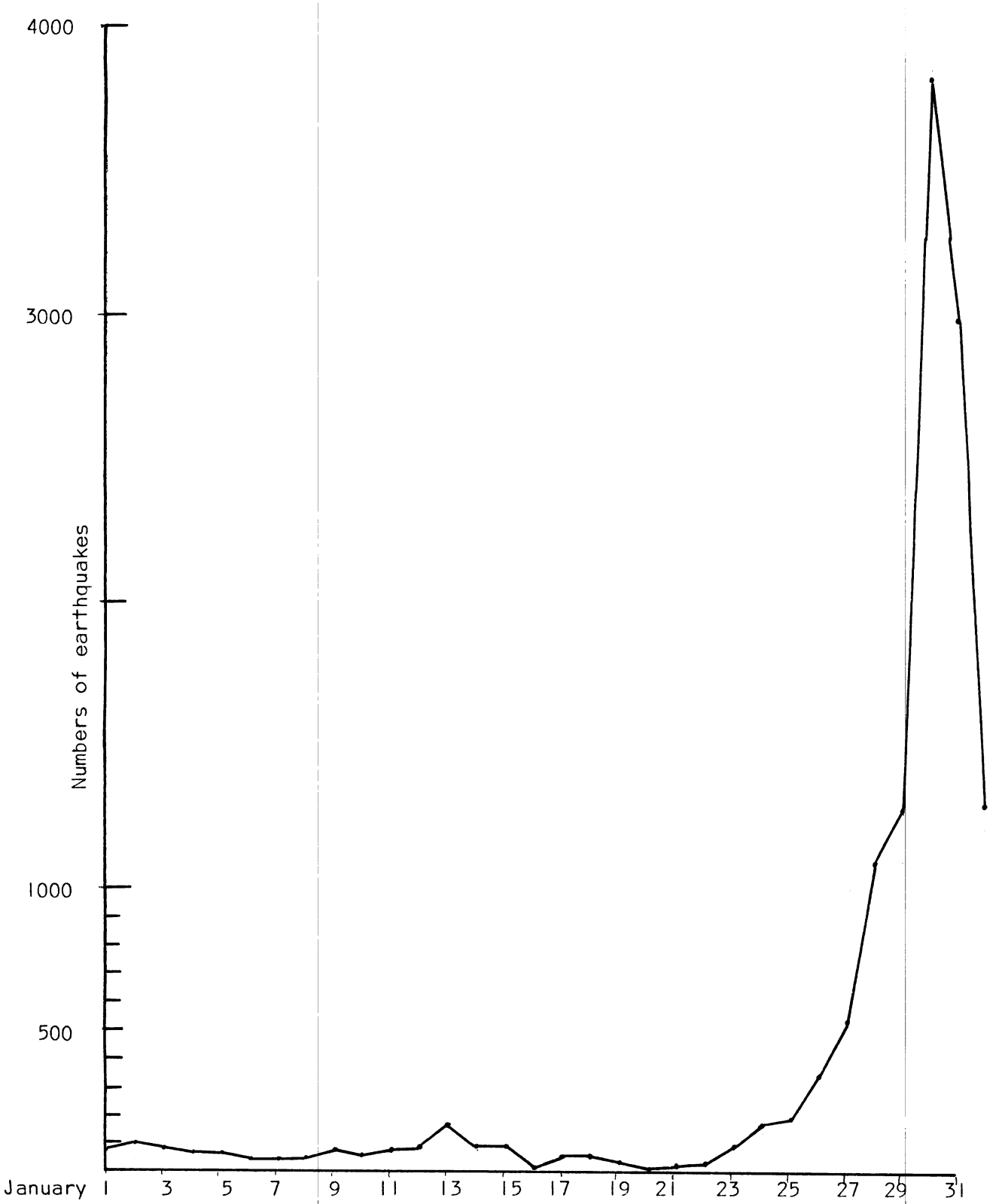
Date (1960)	Tremor (in minutes)			Earthquakes						
	Deep	Inter-mediate	Shallow	Hale-maumau slides	Kilauea caldera	S.W. rift and Kaoiki	Eastern east rift	Kilauea summit ~~30~~ 15-30 km	Upper east rift	Others
Feb 14	–	–	245	–	755	1	1	–	–	–
15	–	–	75	–	1100	4	4	–		
16	–	–	–	–	405	2	1	2	–	1 off S coast of Hawaii
17	–	–	–	–	1200	3	2	3	–	2 of S coast of Hawaii
18	–	–	1348	–	1600	5	–	2	–	–
19				–	1185	2	3	–	–	–
20	–	–	–	–	1425	1	1	3	–	–
21	–	–	–	–	1145	2	2	2	1	1 off S coast of Hawaii
22	–	–	–	–	2100	4	17	1	1	–
23	–	–	–	–	1165	3	6	1	–	–
24	–	–	–	–	1550	3	5	2	–	–
25	–	–	–	–	1335	4	6	8	–	–
26	–	–	–	–	1500	3	4	6	–	–
27	–	–	–	–	1260	12	2	3	–	–
28				–	1100	9	2	2	–	–
29	–	–	–	–	1100	4	4	–	–	–
March 1	–	–	–	–	510	15	2	3	1	–
2	–	–	–	–	640	9	3	–	2	1 Mauna Kea
3	–	–	–	–	650	–	2	–	1	–
4	–	–	–	–	480	–	2	# 1	1	1 at Kealakekua Bay
5	–	–	–	–	370	5	4	2		1 off S coast of Hawaii
6	–	–	–	–	309	5	1	2	1	–

Table 3.-- Numbers of earthquakes and minutes of tremor on seismographs U,M, A, D, N, WP, and MP around Kilauea caldera

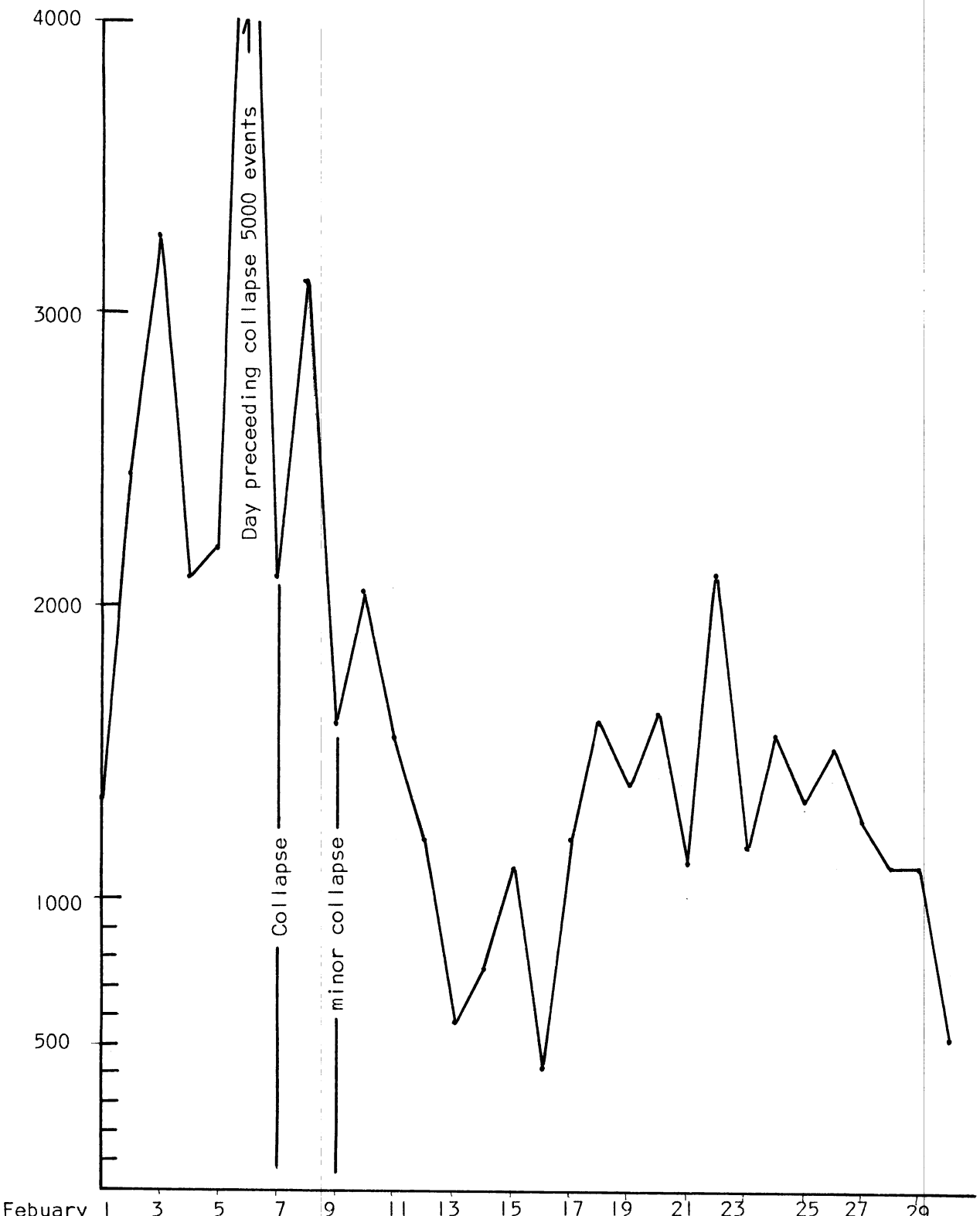
Date (1960)	Tremor (in minutes)			Earthquakes						
	Deep	Inter-mediate	Shallow	Hale-maumau slides	Kilauea caldera	S.W. rift and Kaoiki	Eastern east rift	Kilauea summit ~~30~~ 15-30 km	Upper east rift	Others
March 7	—	—	—	—	1250	8	6	1	—	—
8	—	—	—	—	1320	3	2	2	1	—
9	—	—	—	—	1180	2	5	3	—	—
10	—	—	—	—	2000++	1	—	4	—	—
11	—	—	—	—	750	1	4	2	—	—
12	—	—	—	—	260	4	2	2	—	—
13	—	—	—	—	130	3	—	1	—	1 off NE coast of Hawaii
14	—	—	—	—	170	—	—	3	—	—
15	—	—	—	15	215	4	—	1	—	—
16	—	—	—	—	170	2	1	2	—	1 Kona
17	—	—	—	—	150	2	—	—	—	—
18	—	—	—	—	120	2	1	1	—	—
19	—	—	—	—	110	2	1	2	1	2 Kona
20	—	—	—	—	140	—	2	2	1	—
21	—	—	—	—	160	4	—	—	—	—
22	—	—	—	—	150	3	1	4	—	—
23	—	—	—	—	160	19	—	1	—	—
24	—	—	—	—	130	2	1	1	—	—
25	—	—	—	—	135	4	1	—	—	—
26	—	—	—	—	205	7	1	1	—	—
27	—	—	—	—	142	2	2	2	—	—
28	—	—	—	—	140	4	—	1	—	—
29	—	—	—	—	140	5	—	1	—	—
30	—	—	—	—	120	3	1	—	—	—



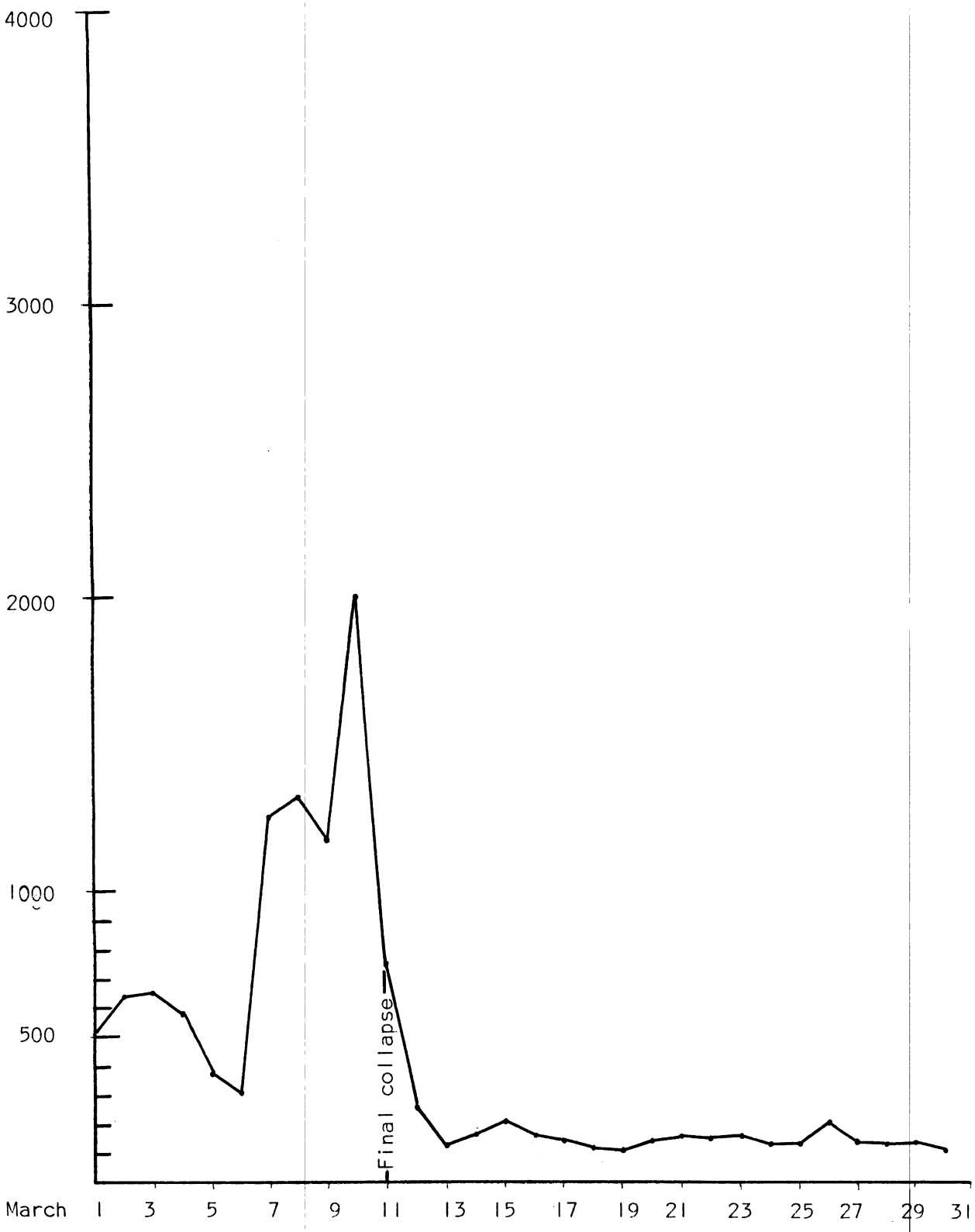
Graph .--Graph showing numbers of earthquakes along the SW rift zone and East rift zone during the period preceeding the flank eruption.



Graph 1.-- Numbers of Kilauea caldera earthquakes in month preceeding collapse.



Graph 2.--Numbers of Kilauea caldera earthquakes during month of collapse.



Graph 3.--Numbers of Kilauea caldera earthquakes during the month after the collapse of Halemaumau.

Table 4.--Local earthquakes recorded by seismographs of the U.S. Geological Survey,

April, May, and June 1963

[Entries for a given quake are: date, origin time (Hawaiian Standard Time), magnitude, depth, epicenter and felt reports. All earthquakes of magnitude 2.5 and larger, as well as many favorably located smaller ones, occurring on or near the island of Hawaii are included in the list.

In the following list, some origin times are followed only by "KM 30" and a statement of magnitude. These are all members of a continuing family of quakes noted also in other Summaries. The best mean focus for this group is beneath Halemaumau at a depth of 30 kilometers (19°24.1' N., 155°17.1' W.).

In Summary 29, a persistent earthquake sequence was codified by the initials KT which referred to a "poor" location along the Kalapana Trail. This designation is retained for the purposes of this Summary but will be discontinued in the future unless Kalapana Trail quakes resume. The approximate epicenter for these quakes is 19°20' N., and 155°05' W., and shallow depth is assumed.

In Summary 24, "Kaoiki" was introduced as a symbol for listing any of a family of quakes with mean focus 19°24' N., 155°25' W., h=3 to 8 km. This symbol is used in the following list]

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

on all Lat & Long. correct " to '

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
JAN 1	20	14	12.6	3.2	<3	19°30'	154°51.7'	9km E of Pahoa seismometer	Felt in Puna
2	12	47	41.4	1.3	13	19°21.6'	155°13.1'	5km ESE of Ahua seismometer	
2	21	56	40.5	2.5	2	19°28.2'	154°53.1'	6 km ESE of Pahoa seismometer	
2	22	46	27.0	2.5	2	19°28.2'	154°53.1'	6 km ESE of Pahoa seismometer	
3	04	54	58.4	3.7	13	19°27.4'	155°20'	7 km SE of Mauna Loa seismometer	Felt in Hilo
3	15	53	06.9	1.1	3	19°24.2'	155°21.7'	10 km S of Mauna Loa seismometer	
3	16	03	46.0	2.9	13	20°03.8'	155°49.5'	15km W of Kamuela	
3	21	27	35.0	2.5	13	19°00.2'	155°37.9'	7 km SSW Naalehu	
4	17	21	28.0	1.4	3	19°23.4'	155°28.5'	10 km NE of Desert seismometer	
4	23	09	37.0	2.0	5	19°25.8'	155°28.2'	12 km NE of Desert seismometer	
5	05	56	35.4	2.0	<3	19°24.3'	155°01'	12.5 km SW of Pahoa seismometer	
5	11	32	00.3	2.2	8	19°25'	155°00.8'	3.5 km S of Hilo	
5	18	35	05.6	1.8	5	19°14.5'	155°31.8'	20km NNE of Naalehu	
5	22	35	08.0	2.3	8	19°22.5'	155°31'	18km SSW of Mauna Loa seismometer	
7	06	24	38.0	2.5	3	19°24'	154°49'	16 km SE of Pahoa seismometer - offshore	Felt in Puna
7	15	02	16.3	1.7	8	19°25.5'	155°11.7'	10km E of Uwekahuna seismometer	
7	16	56	33.4	2.2	3	19°25.6'	155°00.8'	10 km SW of Pahoa seismometer	
7	23	36	33.5	3.3	13	18°37.8'	154°38.7'	131 km SE of Hilo offshore	
9	12	59	47.0	2.7	3	19°20.2'	155°00.2'	~~4a E of Desert seismometer~~ 3 km W of Pahoa	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
JAN 9	14	34	31.3	2.0	<3	19° 17.7"	155° 16.1"	13km SE of Desert seismometer	
11	01	58	54.3	2.6	<3	19° 23.2"	154° 53.5"	13.5 km SSE of Pahoa seismometer	
11	05	19	31.2	2.4	8	19° 26.2"	154° 51.9"	9.5km SE of Pahoa seismometer	
11	05	36	49.5	2.6	3	19° 28.4"	154° 49.0"	13 km ESE of Pahoa seismometer	
11	05	47	33.4	2.4	3	19° 29.3"	154° 46.7"	18 km E of Pahoa seismometer	
11	17	15	51.0	2.5	<3	19° 24.4"	154° 50.0"	15 km ESE of Pahoa seismometer	
11	17	41	31.5	3.5	8	19° 29.8"	154° 47.5"	16.5 km E of Pahoa seismometer - offshore	
12	00	37	09.0	2.3	<3	19° 19.5"	155° 03.2"	26 km SE of Ahua seismometer	
12	00	59	42.0	2.3	<3	19° 28.8"	154° 52.6"	8 km E of Pahoa seismometer	
12	04	09	57.3	2.5	<3	19° 29.2"	154° 52.5"	8 km E of Pahoa seismometer	
12	18	20	44.2	3.2	<3	19° 43.5"	156° 17.0	57km SW of Kawaihae offshore	
13	10	17	02.4	2.8	3	19° 27.4"	154° 55.9"	4km S of Pahoa seismometer	
13	11	02	08.4	2.6	3	19° 19.4"	155° 08.7"	26 km E of Desert seismometer	
13	11	42	23.0	2.4	<3	19° 27.9"	154° 51.1"	11 km SE of Pahoa seismometer	
13	12	18	25.0	3.0	<3	19° 29.6"	154° 52.4"	7.5 km E of Pahoa seismometer	
13	12	37	24.4	3.1	3	19° 20.4"	154° 53.6"	6km E of Pahoa seismometer	
13	13	03	24.1	3.3	<8	19° 31.2"	154° 51.8"	9 km E of Pahoa, seismometer	
13	13	42	16.3	3.1	<3	19° 29.3"	154° 53.4"	6 km E of Pahoa, seismometer	
13	16	00	25.1	3.2	13	19° 35.1"	154° 55.4"	15 km NE of Pahoa seismometer, offshore	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
JAN 13	16	12	50.2	2.9	<3	19° 28.3"	154° 51.8"	9.5km ESE of Pahoa seismometer	
13	16	29	38.6	3.5	8	19° 31.3"	154°46.3"	18 km ENE of Pahoa seismometer (offshore)	
13	18	02	01.3	3.4	<3	19°23.5"	154°53.5"	18 5 km SSE of Pahoa seismometer	
13	20	12	39.5	3.0	<3	19° 30.2"	154°52.9"	7km E of Pahoa seismometer	
14	16	03	25.2	1.7	<3	19° 21.0"	155° 09.0"	25km E of Desert seismometer	
16	11	42	36.7	2.0	<3	19° 25.9"	154 °53.8"	9km SE of Pahoa seismometer	
17	19	24	37.3	2.0	13	19° 23.3"	155 °18.4"	10 km NE of Desert seismometer	
18	13	31	14.6	0.8	3	19°24.9"	155°23.2"	7 km N of Desert seismometer	
18	18	26	52.6	2.4	3	19°23.3"	155 °26.1"	8 km NE of Desert seismometer	
21	17	05	03.9	1.9	3	19° 16.3"	155° 29.9"	14km SW of Desert seismometer	
22	20	21	55.4	2.2	3	19° 25.3"	155° 23.8"	9km NNW of Desert seismometer	
23	14	43	57.5	2.6	8	19° 20.1"	155° 24.5"	2.5 km NE of Desert seismometer	
23	19	55	59.0	1.9	3	19° 21.7"	155° 23.8"	2.5 km NW of Desert seismometer	
24	00	43	41.2	1.2	8	19° 24.5"	155° 14.2"	5km NE of Ahua seismometer	
24	12	18	57.8	2.2	25	19° 22.3"	155° 17.1"	2 km E of Ahua seismometer	
25	07	54	32.8	0.8	3	19°23.6"	155° 16.2"	2.5 km SW of Ahua seismometer	
25	12	41	15.7	1.2	8	19°24.3"	155°20.0"	6 km W of North Pit seismometer	
25	22	01	50.3	1.5	3	19° 20.8"	155° 23.3"	1 km NW of Desert seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Jan 26	02	11	23.4	3.0	3	19°22.0''	155°31.3''	14 Km NW of Desert seismometer	
26	04	43	05.8	2.9	20	19°20.3''	155°17.9''	9 km E of Desert seismometer	
26	10	07	21.2	1.6	<3	19°24.3''	155°17.8''	2 km S. of Uwekahuna seismometer	
26	12	34	35.0	2.2	<3	19°24.3''	155°18.3''	3km SE of North P.T seismometer	Felt in H.V.O
26	16	17	36.8	2.6	<3	19°24.5''	155°18.4''	3 km E of North P.T seismometer	
26	23	36	56.1	1.9	<3	19°23.7''	155°18.1''	3 km SW of North P.T seismometer	
27	03	15	02.2	1.6	<3	19°24.0''	155°18.2''	3 km SW of North P.T seismometer	
27	05	11	25.3	1.9	3	19°23.5''	155°16.4''	2km NNW of Ahua seismometer	
27	12	53	22.0	1.4	<3	19°24.5''	155°16.2''	1km E of North P.T seismometer	
27	13	36	24.4	3.0	20	19°36.6''	155°39.2''	3 km SE of Kilue	
27	15	54	08.3	1.6	3	19°26.4''	155°15.0''	5 km NE of Uwekahuna seismometer	
27	16	14	18.1	1.7	<3	19°26.3''	155°14.3''	5 km NE of North P.T seismometer	
27	17	12	39.0	1.3	<3	19°27.8''	155°17.4''	4 km N of Uwekahuna seismometer	
27	17	28	07.3	1.7	<3	19°23.4''	155°15.4''	2km NE of Ahua seismometer	
27	17	30	31.7	1.7	<3	19°23.5''	155°17.1''	2.8 km S of North P.T seismometer	
27	20	48	06.0	1.8	<3	19°28.3''	155°13.2''	9km NE of North P.T seismometer	
27	22	13	29.2	1.4	<3	19°24.8''	155°18.0''	2km N of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Jan 27	22	36	39.2	1.6	<3	19°23.4''	155°13.8''	6km SE of North Pit seismometer	
27	23	04	15.0	1.4	<3	19°30.0''	155°14.9''	10 km NE of North Pit seismometer	
28	03	26	24.3	2.2	<3	19°23.2''	155°18.8''	5 km SW of North Pit seismometer	Felt H.V.O.
28	08	43	37.5	1.4	3	19°24.3''	155° 22.4'	7.5 km NE of Desert seismometer	
28	11	16	43.3	1.6	<3	19°24.3''	155°18.8''	3.5 W of North Pit seismometer	
28	18	07	59.3	1.2	<3	19°24.1''	155° 17.2'	2 km SW of North Pit seismometer	
28	18	39	25.0	1.3	<3	19°24.2''	155°18.2''	2.5 km WSW of North Pit seismometer	
29	00	56	14.6	1.8	<3	19°27.9''	155° 13.1''	8.5 km NE of North Pit seismometer	
29	09	10	18.5	3.1	13	19°19.2''	155° 08.0''	19km SE of North Pit seismometer	Felt in Hilo, Pahoa, Kuloa
29	13	05	15.9	1.3	8	19°24.4''	155°16.7''	1km S of North Pit seismometer	
29	14	48	12.5	1.7	8	19°24.4''	155°16.6''	1km S of North Pit seismometer	
29	20	44	58.6	1.7	8	19°26.4''	155°16.7''	2km NE of Uwekahuna seismometer	
29	22	21	03.7	1.3	<3	19°24.0''	155°18.2''	3km SSW of Uwekahuna seismometer	
30	00	33	37.0	1.3	3	19°25.9''	155° 15.3''	4km ENE of Uwekahuna seismometer	
30	04	49	43.8	2.1	3	19°27.9''	155° 12.8''	8km NE of Uwekahuna seismometer	
30	08	13	13.3	2.1	20	19° 23.9''	155° 10.7''	10km E of Ahua seismometer	
30	10	05	44.5	1.6	8	19°26.8''	155°13.1''	8km NE of Uwekahuna seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
JAN 30	11	06	19.2	1.7	13	19° 22.7'	155° 10.3'	10 Km E of Ahua seismometer	
30	11	43	13.4	1.0	8	19° 25.5'	155° 20.0'	4 Km W of Uwekahuna seismometer	
30	11	46	57.9	1.3	13	19° 25.2'	155° 14.9	3 Km E of North P.I seismometer	
30	17	57	11.8	1.4	<3	19° 24.1'	155° 18.0'	2.5 Km SE of North P.I seismometer	
30	19	10	15.1	1.4	<3	19° 25.5'	155° 49.0'	3.5 E of North P.I seismometer	
30	19	34	44.3	2.8	8	19° 23.7'	155° 01.3'	26 Km E of Ahua seismometer	
30	20	09	24.4	2.6	13	19° 23.3'	154° 59.6'	28 Km E of Ahua seismometer	
30	20	12	37.7	1.1	<3	19° 24.3'	155° 17.8'	2 Km SW of North P.I seismometer	
30	22	29	41.2	2.5	<3	19° 24.4'	155° 18.1'	2.5 Km SW of North P.I seismometer	
30	23	15	23.5	1.2	<3	19° 27.1'	155° 14.2'	7 Km NE of North P.I seismometer	
30	23	42	00.6	1.7	<3	19° 24.1'	155° 18.5'	3 Km SW of North P.I seismometer	
31	00	33	17.0	1.3	<3	19° 22.7'	155° 10.9'	11.5 Km NE of North P.I seismometer	
31	03	42	48.4	1.2	<3	19° 27.9'	155° 12.4'	10 Km NE of North P.I seismometer	
31	03	49	49.0	1.3	<3	19° 27.2'	155° 14.3'	6 Km NE of North P.I seismometer	
31	03	53	37.0	1.4	<3	19° 27.4'	155° 13.2'	8 Km NE of North P.I seismometer	
31	04	17	10.1	2.5	<3	19° 27.3'	155° 13.0'	7.5 Km NE of North P.I Seismometer	Felt in H.N.P.
31	04	28	30.8	1.8	<3	19° 25.9'	155° 16.0'	2.5 Km NE of North P.I seismometer	Felt in H.N.P.

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
JAN 31	11	10	02.4	2.1	3	19° 26.2''	155 °15.2''	3.5 km NE of North P.T seismometer	Felt in H.V.N.P
31	11	37	48.1	1.6	3	19°28.6''	155° 11.4''	12 km NE of North P.T seismometer	
31	12	31	06.1	1.6	<3	19°24.3''	155°18.6''	3 km W of North P.T seismometer	
31	15	29	12.6	2.2	3	19°24.5''	155°16.6''	1 km SE of North P.T	Felt in H.V.N.P.
31	19	53	45.3	1.0	<3	19° 24.2''	155 °17.8''	2 km SW of North P.T seismometer	
31	20	01	56.5	2.4	<3	19° 24.1''	155° 16.0''	2 km SW of North P.T seismometer	
31	21	14	30.1	1.3	3	19°24.1''	155°17.3''	1.5 km SW of North P.T seismometer	
31	23	01	03.4	1.2	3	19°25.7''	155 °18.3''	1.5 km W of Uwekahuna seismometer	
31	23	36	16.1	2.0	<3	19°27.5 ''	155 °10.8''	12.5 km NE of North P.T seismometer	
31	23	52	10.2	1.4	<3	19°24.6''	155°17.8''	2 km W of North P.T seismometer	
Feb 1	01	17	44.6	1.8	3	19°26.2''	155°14.5''	5 km NE of North P.T seismometer	
1	01	40	16.5	2.8	13	19°19.2''	155°11.7''	9.5 km SE of Ahua seismometer	
1	01	59	52.7	1.4	<3	19° 23.9''	155° 14.1''	5 km ESE of N. P.T seismometer	
1	02	54	16.0	1.7	<3	19°23.8''	155°18.6''	4 km SW of North P.T seismometer	
1	02	59	45.0	1.9	<3	19°22.8''	155°10.1''	12 km ESE of North P.T seismometer	
1	05	24	11.4	1.7	<3	19°26.3''	155°14.7''	5 km NE of North P.T seismometer	
1	06	05	05.2	1.8	<3	19°24.3''	155°15.8''	2 km SE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 1	06	55	18.0	1.7	<3	19°27.0''	155°13.5''	7km NE of North P.T seismometer	
1	06	59	28.0	1.7	<3	19°26.9''	155°13.5''	7km NE of North P.T seismometer	
1	07	16	39.2	1.6	<3	19°24.4''	155°15.1''	3km ESE of North P.T seismometer	
1	08	55	34.0	1.2	<3	19°26.2''	155°15.1''	4km NE of North P.T seismometer	
1	08	59	58.3	2.2	<3	19°24.7''	155°16.8''	0.5km E of North P.T seismometer	
1	09	04	27.9	1.3	<3	19°23.8''	155°18.5''	3.5km SSW of Uwekahua seismometer	
1	09	21	12.4	0.5	<3	19°24.6''	155°18.4''	3km W of North P.T seismometer	
1	10	52	32.5	1.7	<3	19°24.1''	155°18.9''	4km SSW of North P.T seismometer	
1	11	03	25.2	0.6	<3	19°24.4''	155°18.5''	3km W. of North P.T seismometer	
1	11	32	34.8	1.2	<3	19°24.3''	155°18.9''	4km WSW of North P.T seismometer	
1	12	11	18.6	1.7	<3	19°25.6''	155°15.3''	3km NE of North P.T seismometer	
1	13	56	17.3	2.0	<3	19°27.4''	155°12.9''	8.5km NE of North P.T seismometer	
1	13	58	26.0	1.4	<3	19°20.9''	155°14.8''	4km NE of North P.T seismometer	
1	15	43	34.7	1.3	<3	19°26.2''	155°14.7''	4.5km NE of North P.T seismometer	
1	16	06	12.4	1.4	<3	19°26.9''	155°14.6''	5km NE of North P.T seismometer	
1	16	10	35.7	1.6	<3	19°26.5''	155°14.6''	4km NE of North P.T seismometer	
1	16	30	19.2	1.1	<3	19°25.5''	155°14.7''	4km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 1	17	42	47.4	2.1	<3	19° 23.9"	155°17.9"	2.9 km S of Uwekahuna seismometer	
1	19	05	30.5	2.0	<3	19°27.8"	155°12.5"	9km NE of North Pit seismometer	Felt in H.V.O
1	21	24	12.1	1.2	<3	19°24.2"	155°18.5"	3 km SW of Uweka huna seismometer	
1	21	52	20.6	1.2	<3	19°22.9"	155°17.4"	4.5 km S of Uwekahuna seismometer	
1	22	03	10.4	1.8	<3	19°22.2"	155°14.2"	6 km NE of North Pit seismometer	
1	22	27	36.5	1.4	<3	19°24.7"	155°16.2"	1.5 km NE of North Pit seismometer	
1	23	27	45.5	1.9	<3	19°22.9"	155° 15.1"	2 km NE of Ahua seismometers	
2	00	04	32.0	1.3	<3	19°24.7"	155°16.7"	0.5 km SE of North Pit seismometer	
2	00	30	49.3	0.9	<3	19°23.5"	155°18.0"	3km SW of North Pit seismometer	
2	00	51	18.0	2.8	<3	19°22.4"	155°06.5"	17 km E of Ahua seismometer	
2	07	15	27.4	1.8	<3	19°24.0"	155° 13.9"	6.5 km E of North Pit seismometer	
2	07	16	29.1	1.5	<3	19°19.7"	155°16.2"	1.5 km ESE of North Pit seismometer	
2	07	24	25.8	1.7	<3	19°25.2"	155°15.5"	2.5 km E of North Pit seismometer	
2	08	12	10.7	1.4	<3	19°25.6"	155°15.5"	3 km E of North Pit seismometer	
2	08	52	50.2	1.0	<3	19°25.5"	155°16.1"	2 km NE of North Pit seismometer	
2	09	00	01.1	1.7	<3	19°25.2"	155°15.2"	3 km NE of North Pit seismometer	
2	10	15	24.0	2.4	<3	19°27.1"	155°14.4"	6 km NE of North Pit seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 2	10	41	26.1	1.5	<3	19° 24.0''	155° 18.9''	3.5 km SW of Uwekahuna seismometer	
2	13	16	47.5	1.6	<3	19° 25.4''	155° 15.2''	3.5 km NE of North P.T seismometer	
2	13	49	18.0	0.8	<3	19° 24.5''	155° 16.8''	0.75 km SE of North P.T seismometer	
2	14	47	34.1	1.7	<3	19° 25.5''	155° 15.2''	3 km NE of North P.T seismometer	
2	14	56	26.6	0.9	3	19° 25.2''	155° 16.8''	1 km N of North P.T seismometer	
2	18	55	13.0	1.9	<3	19° 25.8''	155° 16.3''	1.5 km NE of North P.T seismometer	Felt in H.V.P.
2	19	07	19.8	2.0	<3	19° 25.8''	155° 15.3''	3 km NE of North P.T seismometer	Felt in H.V.P.
2	20	13	01.0	1.2	<3	19° 24.9''	155° 16.1''	1.25 km E of North P.T seismometer	
2	20	18	47.4	1.6	<3	19° 25.7''	155° 15.9''	2.5 km E of North P.T seismometer	
2	21	15	43.5	1.4	<3	19° 24.6''	155° 16.1''	1.75 ESE of North P.T seismometer	
2	21	43	21.4	1.8	<3	19° 25.2''	155° 15.4''	3 km E of North P.T seismometer	
2	22	19	09.0	2.1	<3	19° 24.9''	155° 15.2''	4 km E of Uwekahuna seismometer	Felt in H.V.P.
2	22	45	47.0	1.0	<3	19° 25.5''	155° 16.6''	3 km E of Uwekahuna seismometer	
2	23	49	27.8	2.0	<3	19° 24.9''	155° 16.9''	1 km E of North P.T seismometer	Felt H.V.P.
3	00	06	16.4	1.0	<3	19° 25.4''	155° 16.1''	2.5 km E of Uwekahuna seismometer	
3	00	50	09.9	1.5	<3	19° 25.7''	155° 16.0''	3 km E of Uwekahuna seismometer	
3	01	38	39.2	2.0	<3	19° 28.0''	155° 12.2''	10 km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 3	04	16	20.2	1.9	<3	19° 24.0''	155° 17.6''	1Km S of Uwekahuna seismometer	Felt in HVP
3	04	45	20.0	2.2	<3	19° 25.8''	155° 16.1''	2Km NE of North P.T seismometer	Felt in HVP
3	06	26	51.5	1.4	<3	19° 25.5''	155° 15.5''	3.0 Km E of Uwekahuna seismometer	
3	07	19	38.8	1.4	<3	19° 25.0''	155° 15.5''	2.5 Km E of North P.T seismometer	
3	07	50	29.1	1.0	<3	19° 24.8''	155° 16.6''	0.5 Km E of North P.T seismometer	
3	10	25	11.2	1.5	<3	19° 25.0''	155° 16.0''	1.75 Km E of North P.T seismometer	
3	11	27	31.1	1.4	<3	19° 25.1''	155° 16.1''	2.75 Km E of Uwekahuna seismometer	
3	12	35	28.8	1.3	<3	19° 25.2''	155° 16.1''	2.5 Km E of Uwekahuna seismometer	
3	12	39	09.8	1.4	<3	19° 26.3''	155° 16.1''	2.75 Km NE of Uwekahuna seismometer	
3	12	53	04.6	1.3	<3	19° 24.1''	155° 16.6''	1.5 Km SE of North P.T seismometer	
3	12	55	31.0	1.5	<3	19° 24.4''	155° 15.0''	4.5Km E of Uwekahuna seismometer	
3	13	19	56.7	1.1	<3	19° 25.9''	155° 16.7''	1.75 Km NE of Uwekahuna seismometer	
3	13	28	14.1	1.3	<3	19° 24.5''	155° 16.5''	1.0Km SE of North P.T seismometer	
3	13	39	08.9	1.4	<3	19° 24.6''	155° 16.4''	1.0Km SE of North P.T seismometer	
3	15	29	39.7	1.6	<3	19° 25.1''	155° 15.5''	2.5 Km E of North P.T seismometer	
3	17	37	20.5	1.3	<3	19° 24.7''	155° 16.0''	1.7 Km E of North P.T seismometer	
3	18	12	28.8	1.2	<3	19° 25.1''	155° 16.5''	1.0 Km ENE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 3	18	30	24.1	1.2	8	19°24.6''	155°16.8''	1.0Km W of North P.T seismometer	
3	19	10	52.5	1.1	<3	19°23.9''	155°16.9''	1.75Km S of North P.T seismometer	
3	19	36	35.2	1.0	<3	19°23.9''	155°16.8''	2Km S of North P.T seismometer	
3	20	49	16.7	1.4	<3	19°24.9'	155°16.6''	2.25Km E of North P.T seismometer	
3	21	15	35.5	1.7	<3	19°25.4''	155°15.3''	4 Km E of Uwekahuna seismometer	
3	21	51	12.0	1.3	<3	19°25.0''	155°16.1''	1.25Km E of North P.T seismometer	
3	21	54	40.4	1.2	<3	19°23.9''	155°17.6''	2.25 Km SW of North P.T seismometer	
3	22	01	07.1	2.4	<3	19°26.3''	155°14.8''	4 Km NE of North P.T seismometer	Felt H.V.P.
3	22	51	12.2	0.6	<3	19°24.8''	155°16.5''	1Km SE of North P.T seismometer	
4	00	47	44.8	1.4	<3	19°25.3''	155°16.0''	2Km NE of North P.T seismometer	
4	07	29	33.4	2.4	<3	19°22.5''	155°15.4''	4Km E of Uwekahuna seismometer	Felt in H.V.P.
4	11	24	03.3	1.8	<3	19°24.8''	155°16.3	1.25 Km E of North P.T seismometer	
4	12	13	21.6	1.1	<3	19°24.6''	155°16.6''	0.8Km SE of North P.T seismometer	
4	12	18	00.0	1.4	<3	19°24.9''	155°16.0''	1.75 E of North P.T seismometer	
4	13	14	36.6	1.0	<3	19°24.5''	155°16.6''	0.8 Km SE of North P.T seismometer	
4	14	11	21.4	1.0	<3	19°25.2''	155°16.4''	1.25 Km E of North P.T seismometer	
4	14	46	31.9	2.0	<3	19°24.6''	155°16.5''	0.8 Km SE of North P.T seismometer.	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 4	15	46	21.3	1.2	<3	19° 24.6"	155° 15.0"	1 km SE of North P.T seismometer	
4	16	43	40.6	2.0	<3	19° 26.5"	155° 15.0"	6 km NE of North P.T seismometer	
4	16	46	12.6	2.1	<3	19° 26.9"	155° 15.2"	5 km NE of North P.T seismometer	
4	17	06	47.1	1.0	<3	19° 25.1"	155° 16.4"	1.25 km E of North P.T seismometer	
4	17	52	49.2	1.6	<3	19° 25.4"	155° 15.4"	4 km E of Uwekahuna seismometer	
4	18	34	25.3	1.4	<3	19° 24.9"	155° 16.4"	1.25 E of North P.T seismometer	
4	20	10	07.7	1.2	<3	19° 24.4"	155° 16.4"	1.0 km ESE of North P.T seismometer	
4	20	19	41.1	1.1	<3	19° 24.4"	155° 17.9"	2 km SSW of Uwekahuna seismometer	
4	23	37	07.0	1.2	<3	19° 25.5"	155° 16.5"	2 km E of Uwekahuna seismometer	
5	00	25	20.2	1.5	<3	19° 25.1"	155° 16.4"	1.25 km E of North P.T seismometer	
5	01	08	04.7	1.0	<3	19° 24.9"	155° 16.7"	0.5 km SE of North P.T seismometer	
5	01	28	49.3	1.2	<3	19° 24.6"	155° 16.4"	1.0 km SE of North P.T seismometer	
5	01	33	04.0	1.3	<3	19° 25.1"	155° 16.6"	2 km E of North P.T seismometer	
5	01	39	50.2	1.0	<3	19° 25.4"	155° 15.9"	3 km E of Uwekahuna seismometer	
5	05	27	48.2	1.2	<3	19° 25.2"	155° 16.4"	2 km E of Uwekahuna seismometer	
5	06	42	20.3	1.0	<3	19° 25.0"	155° 16.2	1.25 km E of North P.T seismometer	
5	07	16	12.2	1.5	<3	19° 25.0"	155° 16.4"	1.0 km E of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 5	08	16	07.5	1.4	<3	19° 25.3''	155°16.5''	2.8 Km E of Uwekahuna seismometer	
5	08	30	37.8	1.2	<3	19° 25.1''	155°16.5''	2 Km E of Uwekahuna seismometer	
5	10	14	32.8	1.7	<3	19°25.6''	155°15.6''	3.25 Km ENE of Uwekahuna seismometer	
5	12	53	15.9	1.6	<3	19°25.3''	155°15.6''	3.5 Km E of Uwekahuna seismometer	
5	13	02	36.9	1.4	<3	19°25.7''	155°16.6''	1.8 Km ENE of Uwekahuna	
5	13	11	21.0	1.1	<3	19°25.1''	155°16.6''	0.5 Km ENE of North P.T seismometer	
5	13	16	18.4	1.0	<3	19°24.9''	155°16.5''	1.0 Km E of North P.T seismometer	
5	14	15	28.8	1.2	<3	19°23.8''	155°18.2''	3 Km SW of Uwekahuna seismometer	
5	14	17	59.0	1.3	<3	19°23.8''	155°18.2''	3 Km SW of Uwekahuna seismometer	
5	15	16	07.3	1.2	<3	19°24.9''	155°15.4''	2.5 Km E of North P.T seismometer	
5	18	21	37.9	0.9	<3	19°24.9''	155°16.6''	0.5 Km E of North P.T seismometer	
5	18	52	54.8	0.8	<3	19°25.1''	155°16.7''	0.5 Km ENE of North P.T seismometer	
5	20	22	43.6	1.0	<3	19° 24.7''	155°16.7''	0 Km From North P.T seismometer	
5	20	31	36.4	1.0	<3	19°24.4''	155°16.6''	1.0 Km SE of North P.T seismometer	
6	00	56	49.4	1.0	<3	19°25.1''	155° 16.6''	0.75 Km ENE of North P.T seismometer	
6	12	34	55.0	1.5	3	19°23.4''	155°15.0''	2 Km NE of Ahua seismometer	
7	20	13	39.3	1.0	<3	19°25.2''	155°16.2''	1.25 Km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 7	21	34	25.2	3.1	3	19°20.9"	155°16.6"	0.75 SSW of Ahua seismometer	
7	22	17	18.5	0.9	<3	19°25.0"	155°16.5"	1.5 Km E of North P.T seismometer	
8	01	42	13.1	1.0	<3	19°24.8"	155°16.4"	1.0 Km ESE of North P.T seismometer	
8	04	56	21.1	0.9	<3	19° 25.0"	155°16.5"	1.0 Km E of North P.T seismometer	
8	05	34	05.0	1.2	<3	19°25.3"	155°16.2"	1.5 Km ENE of North P.T seismometer	
8	09	13	02.3	1.3	<3	19°25.1"	155°16.1"	1.5 Km E of North P.T seismometer	
8	18	05	38.0	1.7	3	19°21.9"	155°17.0"	2.5 Km WSW of Ahua seismometer	
8	20	52	26.2	3.3	<3	19°29.5"	154°57.0"	1.0 Km S of Pohoa seismometer	
9	03	26	14.3	1.3	<3	19°24.6"	155°15.9"	2 Km E of North P.T seismometer	
9	04	49	27.1	1.2	<3	19°23.9"	155°17.4"	2 Km SSW of North P.T seismometer	
9	09	13	24.8	1.0	<3	19°25.2"	155°15.3"	3 Km E of North P.T seismometer	
9	10	01	03.0	1.6	3	19°23.7"	155°20.5"	8 Km NE of Desert seismometer	
9	10	18	05.5	1.0	<3	19°25.3"	155°16.6"	0.75 Km NE of North P.T seismometer	
9	14	32	15.5	1.2	<3	19°24.9"	155°16.6"	0.25 Km E of North P.T seismometer	
9	15	36	15.6	1.1	<3	19°24.5"	155°17.5"	1.0 Km SW of North P.T seismometer	
9	21	20	29.4	1.5	<3	19°24.0"	155°18.0"	3 Km SW of Uwekahuna seismometer	
9	21	47	53.5	1.2	<3	19°24.8"	155°18.5"	2 Km WSW of Uwekahuna seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 9	22	35	21.4	1.7	<3	19°24.4''	155°19.9''	9km NE of Desert seismometer	
10	03	28	51.0	1.2	<3	19°25.4''	155°15.9''	2km NE of North P.T seismometer	
10	04	19	08.1	2.2	3	19°20.6''	155°16.9''	3 km SW of Ahua seismometer	
10	06	21	48.5	1.4	<3	19°25.2''	155°15.7''	2.25 NE of North P.T seismometer	
10	08	15	18.0	1.8	<3	19°26.4''	155°15.3''	4 Km E of North P.T seismometer	
10	10	57	19.2	2.2	3	19°25.0''	155°10.0''	12 km E of North P.T seismometer	
10	12	04	13.6	1.4	<3	19°25.3''	155°15.4''	3.7 km E of Uwekahuna seismometer	
10	12	39	14.7	1.7	<3	19°25.4''	155°15.1''	4.25 km E of Uwekahuna seismometer	
10	18	30	46.4	2.0	<3	19°25.1''	155°15.3''	4 km E of Uwekahuna seismometer	
10	20	42	13.2	1.3	<3	19°25.4''	155°15.4''	3.75 km E of North P.T seismometer	
10	20	58	10.6	1.0	<3	19°25.0''	155°16.1''	1.5 km E of North P.T seismometer	
10	21	25	09.2	1.6	<3	19°25.1''	155°15.9''	2 km E of North P.T seismometer	
10	21	53	52.7	2.1	3	19°22.6''	155°15.1''	1.4 km E of Ahua seismometer	
11	01	09	08.0	0.9	<3	19°24.6''	155°17.4''	1.0 km SW of North P.T seismometer	
11	09	11	11.5	1.0	<3	19°24.0''	155°18.0''	1.75 km SW of North P.T seismometer	
11	11	39	35.4	2.8	<3	19°24.5''	155°13.5''	6 km E of North P.T seismometer	
11	20	05	12.3	1.0	<3	19°25.1''	155°16.0''	1.75 km ENE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 11	22	54	01.2	2.1	<3	19°24.1''	155°14.9''	4 km SE of North P.T seismometer	
12	04	17	01.0	2.2	3	19°22.1''	155°16.2''	1 km W of Ahua seismometer	
12	04	55	08.3	2.2	<3	19°23.0''	155°16.8''	2 km NW of Ahua seismometer	
12	06	13	35.0	1.0	<3	19°25.2''	155°16.4''	1.0 km NE of North P.T seismometer	
12	08	43	14.6	1.6	<3	19°25.3''	155°15.6''	3 km E of Uwekahuna seismometer	
12	16	34	39.0	2.7	<3	19°23.3''	155°15.3''	1.75 km NE of Ahua seismometer	
12	16	40	14.7	1.5	3	19°22.0''	155°16.9''	1.0 km SW of Ahua seismometer	
12	16	50	45.6	2.8	<3	19°25.6''	155°15.5''	3.5 km E of Uwekahuna seismometer	
13	03	27	57.3	1.1	<3	19°25.5''	155°15.8''	3 km E of Uwekahuna seismometer	
13	14	15	48.8	2.5	3	19°11.3''	155°02.8''	17 km SW of Apua Point offshore	
14	00	24	49.1	2.0	<3	19°25.4''	155°15.4''	4 km E of Uwekahuna seismometer	
15	19	29	38.8	1.1	<3	19°25.4''	155°15.6''	3 km E of Uwekahuna seismometer	
15	20	52	40.0	1.0	<3	19°24.6''	155°16.4''	1.25 km SE of North P.T seismometer	
16	18	55	26.4	2.5	8	19°00.9''	155°14.0''	27.5 km S-SW of Apua Point offshore)	
17	11	38	50.0	4.5	3	19°09.6''	154°38.8''	41 km SE of Kalapana offshore	
17	17	20	03.4	2.5	3	19°17.0''	155°06.8''	9 km ENE of Apua Point offshore	
17	20	41	25.6	1.3	25	19°22.5''	155°18.1''	5 km SW of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 17	22	56	39.7	1.2	<3	19°25.4"	155°16.6"	3.25 km E of Uwekahuna seismometer	
18	00	07	06.2	1.1	<3	19°24.9"	155°16.1"	1.75 km E of North P.T seismometer	
18	04	50	54.0	1.6	<3	19°24.8"	155°15.5"	2.75 E of North P.T seismometer	
18	06	57	59.0	1.2	<3	19°25.1"	155°16.1"	1.5 km ENE of North P.T seismometer	
18	09	25	26.3	1.3	<3	19°25.1"	155° 16.0"	3 km E of Uwekahuna seismometer	
18	13	56	01.6	1.7	<3	19°24.0"	155°16.0"	2.5 km SE of North P.T seismometer	
18	20	05	46.4	1.2	<3	19°25.5"	155°15.4"	3.5 km E of Uwekahuna seismometer	
18	20	34	49.7	1.4	<3	19°22.8"	155°17.8"	5 km S of Uwekahuna seismometer	
20	01	53	57.4	1.0	<3	19°24.6"	155°15.5"	3 km E of North P.T seismometer	
20	13	40	35.3	1.0	<3	19°25.2"	155°15.1"	1.6 km NE of North P.T seismometer	
20	13	49	38.0	1.2	<3	19° 25.2"	155°16.7"	0.5 km NE of North P.T seismometer	
20	14	48	16.3	1.6	<3	19°25.5"	155°15.6"	3.25 km E of Uwekahuna seismometer	
20	14	56	00.4	1.2	3	19°24.5"	155°18.0"	2 km W of North P.T seismometer	
20	16	17	03.4	1.0	<3	19°25.0"	155°16.5"	1.0 km E of North P.T seismometer	
20	21	40	35.4	2.0	<3	19°25.8"	155°15.2"	4 km E of Uwekahuna seismometer	
21	01	11	59.0	1.1	<3	19°24.4"	155° 15.9"	3 km E of Uwekahuna seismometer	
21	04	32	18.1	1.4	<3	19°25.1"	155°16.7"	0.5 km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 21	07	24	49.8	2.4	<3	19°20.9''	155°15.5''	3km S-SE of Ahua seismometers	
21	07	46	06.2	1.2	<3	19°24.7''	155°16.8''	0.5 km SE of North Pit seismometer	
21	10	55	40.0	1.3	<3	19°24.5''	155°16.9''	0.75 km SSE of North Pit seismometer	
21	10	56	48.5	1.2	<3	19°25.3''	155°15.5''	2.75 km E of Uwekahuna seismometer	
21	13	14	46.6	1.0	3	19°15.6''	155°16.3''	12km S of Ahua seismometer (Offshore)	
21	13	20	27.7	1.0	<3	19°25.5''	155°16.1''	2.5km E of Uwekahuna seismometer	Felt at North Rim Kilauea caldera
21	13	25	06.2	1.3	<3	19°25.1''	155°15.9''	2km ENE of North Pit seismometer	Felt at North Rim Kilauea Caldera
21	15	40	14.7	1.3	<3	19°26.8''	155°15.0''	5km NE of North Pit seismometer	Felt at North Rim Kilauea Caldera.
21	16	53	48.8	1.8	<3	19°26.2''	155°15.7''	3km NE of North Pit seismometer	Felt at North Rim Kilauea Caldera
21	17	03	38.0	1.0	<3	19°26.2''	155°15.9''	3 km NE of Uwekahuna seismometer	
21	18	17	09.4	1.6	<3	19°26.4''	155°15.0''	4km NE of North Pit seismometer	
21	21	37	08.3	1.4	<3	19°25.7''	155°15.0''	5km E of Uwekahuna seismometer	
21	22	39	03.6	1.4	<3	19°26.1''	155°15.8''	3 km NE of North Pit seismometer	
21	22	50	34.7	1.0	<3	19°26.0''	155°15.9''	3km NE of North Pit seismometer	
22	03	19	37.5	1.2	<3	19°26.3''	155°15.9''	3 km NE of Uwekahuna seismometer	
22	05	33	00.5	1.0	<3	19°25.3''	155°15.9''	3km E of Uwekahuna seismometer	
22	05	53	22.8	1.5	<3	19°26.1''	155°15.9''	3 km NE of North Pit seismometer	Felt at North Rim Kilauea Caldera

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 22	15	29	02.5	1.9	<3	19° 25.6''	155°14.9''	4.5 km E of Uwekahuna seismometer	
22	16	31	31.3	2.0	<3	19° 26.9''	155°14.6''	6 km NE of North P.T seismometer	
22	18	08	17.8	3.2	<3	19° 20.5''	155°15.2''	19 km ESE of Ahua seismometer	
23	09	15	15.4	2.2	<3	19° 26.8''	155°14.2''	6 km NE of Uwekahuna seismometer	
23	09	24	46.0	1.0	<3	19° 24.5''	155°16.9''	0.75 km S of North P.T seismometer	
23	11	53	27.8	2.2	<3	19° 26.1''	155°15.6''	5 km NE of Uwekahuna seismometer	
23	15	43	34.9	1.8	3	19° 26.2''	155° 15.2''	4 km NE of Uwekahuna seismometer	
23	17	17	38.0	1.4	<3	19° 25.6''	155°16.3''	3 km NE of Uwekahuna seismometer	
24	02	27	26.2	2.2	<3	19° 25.2''	155°14.3''	4 km ENE of North P.T seismometer	
24	03	23	55.1	1.1	<3	19° 25.0''	155°16.7''	0.5 km NE of North P.T seismometer	
24	04	36	34.7	1.9	<3	19° 26.4''	155°15.4''	3 km NE of North P.T seismometer	
24	09	45	23.0	1.3	<3	19° 26.2''	155°16.5''	2.75 km ENE of North P.T seismometer	
24	20	15	22.9	1.9	<3	19° 25.9''	155°15.0''	3 km NE of North P.T seismometer	
24	20	21	31.2	1.7	<3	19° 25.9''	155°15.4''	3 km NE of North P.T seismometer	
25	05	28	00.3	1.4	<3	19° 24.0''	155°18.2''	3 km SW of Uwekahuna seismometer	Felt at North Rim Kilauea Caldera
25	11	01	30.7	1.4	<3	19° 23.6''	155° 18.8''	4 km SW of Uwekahuna seismometer	
25	13	05	36.4	1.3	<3	19° 23.9''	155° 17.5''	3 km S of Uwekahuna seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 25	14	25	36.5	1.9	<3	19° 26.2'	155° 15.2	4Km NE of North P.T seismometer	
25	14	31	57.0	1.3	<3	19° 25.3"	155° 16.0"	2km ENE of North P.T seismometer	
25	14	33	08.0	1.3	<3	19° 25.3'	155° 15.8"	2km ENE of North P.T seismometer	
25	15	15	27.9	1.4	<3	19° 24.7"	155° 16.5"	1.0km E of North P.T seismometer	
25	18	35	14.3	1.7	25	19° 22.1"	155° 18.5"	4.5 km W of Ahua seismometer	
25	23	11	43.6	2.0	<3	19° 25.9"	155° 15.0"	4km NE of North P.T seismometer	
26	01	00	02.0	2.2	<3	19° 26.7"	155° 14.8"	5km NE of North P.T seismometer	
26	04	14	55.7	1.3	<3	19° 25.2"	155° 15.8"	2km ENE of North P.T seismometer	
26	04	40	50.1	1.3	<3	19° 24.7"	155° 16.5"	1.0 km E of North P.T seismometer	
26	10	35	45.9	3.0	<3	19° 25.7"	155° 16.1"	3 km E of Uwekahuna seismometer	
26	15	58	51.1	3.0	<3	19° 26.1"	155° 15.2'	3 km NE of North P.T seismometer	
26	20	01	35.5	1.9	<3	19° 27.2"	155° 15.2"	5km NE of North P.T seismometer	
26	20	32	31.9	1.7	<3	19° 22.9"	155° 18.9"	5 km SW of Uwekahuna seismometer	
27	10	54	13.3	1.5	8	19° 27.2"	155° 14.0"	6 km NE of North P.T seismometer	
27	11	34	19.8	2.3	<3	19° 25.6"	155° 16.1"	2km NE of North P.T seismometer	
27	13	11	38.0	2.9	<3	19° 27.0"	155° 14.7"	5.5km NE of North P.T seismometer	
27	13	50	59.1	2.6	<3	19° 25.9"	155° 16.0"	2.5 km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb 27	14	21	15.4	1.4	<3	19° 25.6''	155°16.0''	2 Km NE of North P.T seismometer	
27	14	42	32.6	1.6	<3	19°25.4''	155°15.7''	2 Km NE of North P.T seismometer	
27	22	57	33.0	1.8	<3	19°25.1''	155°16.5''	1.0 Km E NE of North P.T seismometer	Felt at North Rim Kilauea Caldera
27	23	23	01.8	2.0	<3	19°26.2''	155°15.9''	3 Km NE of North P.T seismometer	
27	23	41	20.7	1.2	<3	19°24.9''	155° 16.1''	1.5 Km E of North P.T seismometer	
28	00	45	58.9	1.0	<3	19° 25.2''	155°16.4''	1.0 Km NE of North P.T seismometer	
28	01	11	56.3	1.2	<3	19° 24.9''	155°16.4''	1.0 E of North P.T seismometer	
28	05	09	16.5	1.3	<3	19° 24.9''	155°16.1''	1.5 Km E of North P.T seismometer	
28	07	14	28.9	1.3	<3	19°25.0''	155°15.9''	2 Km E of North P.T seismometer	
28	12	24	43.0	1.7	<3	19°25.6''	155°15.3''	3 Km ENE of North P.T seismometer	
28	13	03	18.7	1.2	<3	19°25.2''	155°16.3''	1.0 Km NE of North P.T seismometer	
28	18	20	23.9	1.3	<3	19°25.8''	155°15.2''	3.75 Km NE of North P.T seismometer	
28	21	59	08.0	1.2	<3	19°24.9''	155°16.6''	0.5 Km E of North P.T seismometer	
28	22	15	28.8	1.4	<3	19° 24.7''	155°16.2''	1.5 Km E of North P.T seismometer	Felt at North Rim Kilauea Caldera
28	23	12	35.2	2.3	<3	19°25.9''	155°15.5''	3 Km NE of North P.T seismometer	Felt at North Rim Kilauea Caldera.
29	09	35	29.9	1.5	<3	19° 25.5''	155°15.0''	3.5 Km NE of North P.T seismometer	
29	10	14	24.6	2.4	<3	19°26.7''	155°14.9''	5 Km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
Feb. 29	11	38	11.6	2.1	<3	19° 25.9''	155° 15.0''	4 km NE of North P.T seismometers	
29	13	47	28.8	2.3	<3	19°26.7''	155°15.0''	4km NE of North P.T seismometer	
29	16	59	39.9	2.0	<3	19°26.7''	155°16.2''	3 km NE of North P.T seismometer	
29	18	12	11.0	2.1	<3	19°26.2''	155°15.5''	4km NE of North P.T seismometer	Felt at North Rim Kilauea Caldera
29	19	17	36.8	2.1	<3	19°21.0''	155°17.0''	3.25 SW of Ahua seismometer	
29	19	26	47.3	3.1	3	19°21.1''	155°16.1''	2 km SW of Ahua seismometer	
29	21	15	57.8	2.7	3	19°20.8''	155°16.4''	3 km S of Ahua seismometer	
29	21	39	13.6	1.6	<3	19° 21.8''	155°16.8''	2 km SW of Ahua seismometer	
29	23	43	36.4	2.5	<3	19°20.7''	155°15.8''	3km S of Ahua seismometer	
March 1	01	07	59.8	1.0	<3	19°24.7''	155°16.7''	0.5 km ESE of North P.T seismometer	
1	03	48	28.2	2.1	<3	19° 19.2''	155° 07.8''	10km NE of Apua Point	
1	05	39	08.9	2.3	<3	19°21.6''	155°18.9''	5km WSW of Ahua seismometer	
1	10	37	46.5	1.7	<3	19° 23.2''	155°12.8''	6 km E of Ahua seismometer	
1	11	26	04.0	1.4	3	19°25.0''	155°14.5''	4 km E of North P.T seismometer	
1	12	07	41.2	2.0	<3	19°23.1''	155°12.6''	6 km E of Ahua seismometer	
1	12	14	36.4	2.0	<3	19°27.0''	155°14.0''	6km NE of North P.T seismometer	
1	14	48	36.4	0.8	<3	19°25.2''	155°16.1''	1.75 km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
March 1	15	29	55.8	1.6	<3	19°25.5''	155°15.5''	3 Km ENE of North Pit seismometer	
1	18	03	11.4	1.4	<3	19°25.5''	155°15.1''	3.5 Km ENE of North Pit seismometer	
1	19	23	39.5	1.7	<3	19°26.2''	155°15.1''	4 Km NE of North Pit seismometer	
1	21	05	47.6	1.3	<3	19°25.8''	155°14.8	4 Km NE of North Pit seismometer	
1	23	04	23.9	1.1	<3	19°25.6''	155°15.0''	3.5 Km NE of North Pit seismometer	
1	23	48	06.5	2.1	15	19°23.5''	155°18.4''	4 Km SW of North Pit seismometer	
2	00	11	15.0	1.3	3	19°25.9''	155°14.8°	4 Km NE of North Pit seismometer	
2	01	58	20.9	0.9	<3	19°25.3''	155°15.9''	2 Km NE of North Pit seismometer	
2	02	59	26.2	0.8	<3	19°24.8''	155°16.2''	1.0 Km E of North Pit seismometer	
2	04	28	15.7	1.4	<3	19°26.5''	155°14.2''	5 Km NE of North Pit seismometer	
2	04	41	04.6	1.2	<3	19°24.3''	155°11.9''	9 Km E of North Pit seismometer	
2	04	46	45.2	1.9	<3	19°26.8''	155°14.1''	7 Km NE of North Pit seismometer	
2	05	11	08.2	0.7	<3	19°24.9''	155°16.7''	0.5 Km E of North Pit seismometer	
2	06	15	04.0	1.2	<3	19°25.3''	155°15.7''	2 Km NE of North Pit seismometers	
2	06	26	27.4	3.2	25	19°19.8''	155°22.8''	18 Km NE of Pohakuloa	
2	06	29	45.7	1.5	<3	19°25.2''	155°15.0''	3.5 Km E of North Pit seismometer	
2	06	43	45.5	1.3	<3	19°25.3''	155°15.8''	2 Km ENE of North Pit seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
March 2	07	29	06.4	1.2	<3	19°25.6"	155°15.5"	3 km NE of North P.T seismometer	
2	13	10	59.3	1.8	<3	19°27.5"	155°13.4"	8 km NE of North P.T seismometer	
2	13	14	59.8	1.7	<3	19°25.2"	155°14.3"	4 km NE of North P.T seismometer	
2	13	49	52.2	1.8	<3	19°24.8"	155°16.2"	1.5 km E of North P.T seismometer	
2	14	52	24.8	1.5	<3	19°24.7"	155°15.4"	2.5 km E of North P.T seismometer	
2	15	08	02.6	2.0	<3	19°26.9"	155°16.2"	3 km NE of Uwekahuna seismometer	
2	15	13	01.0	1.6	<3	19°25.9"	155°16.2"	2.75 km NE of Uwekahuna seismometer	Felt at Kilauea summit
2	15	29	07.2	1.0	<3	19°25.4"	155°15.0"	3.5 km NE of North P.T seismometer	
2	15	32	20.8	1.5	<3	19°25.2"	155°15.2"	3 km NE of North P.T seismometer	
2	16	39	25.2	1.4	<3	19°25.6"	155°15.1"	3.5 km NE of North P.T seismometer	
2	16	52	06.2	2.3	<3	19°22.5"	155°13.5"	4 km E of Ahua seismometer	
2	18	40	23.4	1.2	3	19°25.8"	155°15.5"	2 km NE of North P.T seismometer	
2	19	38	36.2	2.9	3	19°21.8"	155°03.7"	22 km E of Ahua seismometer on E RIFT zone	
2	22	02	03.0	3.5	8	19°23.5"	155°58.3"	12 km SSW of Pahoa seismometer	Felt at Namawata
2	22	33	33.8	1.9	<3	19°22.2"	155°13.0"	10 km NE of North P.T seismometer	
2	23	22	13.4	1.0	<3	19°24.7"	155°17.0"	0.25 km S of North P.T seismometer	
2	23	24	15.3	1.8	<3	19°26.2"	155°13.9"	6 km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
March 3	02	40	00.2	1.3	<3	19°25.5''	155°16.4''	3 km NE of North P.T seismometer	
3	12	07	07.4	2.5	<3	19°26.2''	155°14.7''	5 km NE of North P.T seismometer	
3	12	48	32.6	1.5	<3	19°25.4''	155°15.7''	2.5 km NE of North P.T seismometer	
3	14	26	56.6	1.0	<3	19°25.5''	155°16.2''	2 km E of Uwekahuna seismometer	
3	14	30	42.7	1.4	<3	19°26.0''	155°17.0''	2 km NNE of North P.T seismometer	
3	19	22	12.4	2.8	<3	19°20.7''	155°20.0''	11 km ESE of Ahua seismometer	
3	23	59	14.9	2.0	<3	19°27.6''	155°15.0''	4.5 km NE of North P.T seismometer	
4	03	15	12.0	2.4	3	19°20.9''	155°23.7''	5 km SE of Ahua seismometer	
4	04	35	08.4	1.3	<3	19°25.4''	155°16.2''	3 km NE of North P.T seismometer	
4	05	04	35.0	2.3	<3	19°18.8''	155°07.2''	15 km ENE of Ahua seismometer	
4	06	04	25.5	3.6	13	19°26.5''	155°59.5''	10 km SW of Kealakekua Bay	Felt in Kona region
4	11	48	30.2	1.9	<3	19°25.4''	155°17.4''	0.5 km E of Uwekahuna seismometer	
4	18	35	38.6	1.6	25	19°20.9''	155°18.1''	4.5 km SW of Ahua seismometer	
4	20	28	05.1	0.8	<3	19°25.2''	155°16.1''	1.5 km NE of North P.T seismometer	
5	00	55	44.4	1.3	<3	19°25.5''	155°16.0''	2 km NE of North P.T seismometer	
5	01	21	38.1	1.3	<3	19°24.7''	155°16.6''	1.0 km SW of North P.T seismometer	
5	06	41	07.7	2.1	<3	19°26.3''	155°16.0''	3 km NE of North P.T seismometer	Felt Kilauea summit.

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
March 5	06	49	53.2	2.0	<3	19°26.0"	155°15.5"	3 km NE of North P.T seismometer	Felt Kilauea summit
5	11	52	38.7	1.6	<3	19°25.9"	155°14.9"	4 km NE of North P.T seismometer	
5	15	03	41.0	2.3	35	19°19.2"	155°15.6"	6 km S of Ahua seismometer	
5	18	01	33.1	2.5	8	19°21.8"	155°07.7"	16 km E of Ahua seismometer (upper R.FT)	
5	21	38	21.5	2.9	3	19°16.2"	155°00.5"	10 km SSW of Kalapana (offshore)	
5	21	51	18.5	1.3	25	19°21.0"	155°17.8"	3.5 km SW of Ahua seismometer	
5	23	57	19.0	1.4	<3	19°22.8"	155°16.0"	0.5 km N of Ahua seismometer	
6	09	52	16.5	1.1	<3	19°25.5"	155°15.5"	3 km NE of North P.T seismometer	
6	11	27	17.8	0.7	<3	19°25.0"	155°16.6"	0.5 km E of North P.T seismometer	
6	11	48	31.8	1.5	<3	19°24.0"	155°12.3"	6 km ENE of Ahua seismometer	
6	12	15	16.1	2.7	3	19°23.5"	155°29.5"	16 km SW of Mauna Loa seismometer	
6	13	51	07.7	1.0	<3	19°25.1"	155°14.9"	4.0 km ENE of North P.T seismometer	
6	14	38	17.1	1.8	<3	19°28.0"	155°12.0"	10 km NE of Uwekahuna seismometer	
6	16	27	15.7	0.9	<3	19°25.1"	155°16.3"	1.0 km NE of North P.T seismometer	
6	17	32	28.1	1.8	<3	19°22.4"	155°15.7"	2.25 km NE of Ahua seismometer	
6	20	13	04.7	0.6	<3	19°25.2"	155°16.2"	1.25 km NE of North P.T seismometer	
6	21	04	27.3	1.3	<3	19°25.3"	155°15.8"	2 km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
March 6	21	15	50.0	1.1	<3	19°25.6"	155°15.2"	3.5 Km NE of North P.T seismometer	
6	23	34	54.9	2.9	<3	19°23.4"	155°08.2"	16 Km NE of North P.T seismometer	Felt Kilauea summit
7	03	24	18.0	2.9	<3	19°25.9"	155°22.9"	7.5 Km NE of North P.T seismometer	Felt Kilauea summit
7	05	19	09.3	1.3	8	19°27.1"	155°13.0"	8 Km NE of North P.T seismometer	
7	05	22	06.1	1.2	<3	19°26.2"	155°15.0"	4 Km NE of North P.T seismometer	
7	09	24	13.9	0.8	<3	19°24.8"	155°14.7"	0.5 Km SE of North P.T seismometer	
7	11	57	00.9	0.6	<3	19°24.7"	155°16.5"	1.0 Km SE of North P.T seismometer	
7	14	08	28.0	1.1	<3	19°25.6"	155°15.6"	2.5 Km NE of North P.T seismometer	
7	16	32	31.6	3.6	<3	19°26.4"	155°13.8"	6 Km NE of North P.T seismometer	Felt Kilauea summit
8	01	41	35.6	2.0	3	19°21.8"	155°12.0"	7 Km E of Ahua seismometer	
8	02	02	34.6	1.1	<3	19°25.8"	155°15.7"	3 Km NE of North P.T seismometer	
8	02	24	12.8	1.0	<3	19°25.3"	155°16.3"	1.5 Km NE of North P.T seismometer	
8	05	42	44.0	1.7	<3	19°27.1"	155°16.0"	4 Km NE of Uwekahuna seismometer	
8	09	50	37.8	1.1	<3	19°25.3"	155°15.7"	2 Km NE of North P.T seismometer	
8	09	51	22.3	1.0	<3	19°26.0"	155°15.8"	3 Km E of North P.T seismometer	
9	00	25	57.8	1.0	<3	19°25.2"	155°16.2"	1.25 Km NE of North P.T seismometer	
9	03	46	17.0	1.4	<3	19° 25.4"	155°15.4"	3 Km NE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
March 9	10	15	45.1	0.8	<3	19° 24.8"	155° 16.3"	1.0 Km E of North P.T seismometer	
9	10	58	25.7	0.7	<3	19°25.1"	155°16.8"	0.5 km NE of North P.T seismometer.	
9	16	06	17.1	2.1	8	19°27.5"	154°59.9"	6 Km SW of Pahoa seismometer	
9	18	17	36.9	1.2	<3	19° 25.6"	155°15.2"	3 km NE of North P.T seismometer	
9	21	13	54.9	1.0	<3	19°26.1"	155°15.0"	4.5 km ENE of Uwekahuna seismometer	
9	21	14	52.1	1.1	<3	19°24.7"	155°16.5"	0.5 km SE of North P.T seismometer	
10	01	24	50.8	0.7	<3	19°25.0"	155°16.7"	0.5 km E of North P.T seismometer	
10	07	29	51.5	0.7	<3	19°24.9"	155°16.7"	0.5 km E of North P.T seismometer.	
10	11	46	17.2	2.2	<3	19° 27.7"	155°11.8"	10 km NE of North P.T seismometer	
10	12	20	06.6	1.8	<3	19°26.6"	155° 12.8"	8 Km NE of North P.T seismometer	
10	12	57	52.8	0.6	<3	19°25.1"	155°16.3"	1.0 km ENE of North P.T seismometer	
10	13	59	18.3	0.7	<3	19°25.6"	155°15.7"	2.5 km NE of North P.T seismometer	
10	15	35	44.7	0.6	<3	19°25.0"	155°16.6"	0.5 km ENE of North P.T seismometer	
10	16	54	45.8	1.0	<3	19°25.1"	155°15.8"	2.5 km ENE of North P.T seismometer	
10	19	11	00.4	0.9	<3	19°25.3"	155°15.7"	2.5 km NE of North P.T seismometer	
10	19	39	34.7	1.2	<3	19° 25.6"	155°15.3"	3 km ESE of North P.T seismometer.	
10	22	17	58.8	0.5	<3	19°25.1"	155°16.4"	1 km ENE of North P.T seismometer	

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
March 10	22	05	31.5	0.7	<3	19°25.4"	155°16.3"	1.5 km NE of North Pit seismometer	
10	22	43	51.9	1.0	<3	19°24.9"	155°16.5"	1.0 km E of North Pit seismometer	
11	00	44	49.6	0.6	<3	19°24.9"	155°16.5"	1.0 km E of North Pit seismometer	
11	01	32	36.8	1.0	<3	19°24.5"	155°15.9"	2.5 ESE of North Pit seismometer	
11	04	26	34.6	0.7	<3	19°25.4"	155°16.3"	1.5 km NE of North Pit seismometer	
11	15	43	31.9	1.6	3	19°24.5"	155°04.9"	17 km SW of Pahoa seismometer	
11	20	47	42.4	2.2	<3	19°24.0"	155°13.8"	5 km NE of Ahua seismometer	
12	22	05	35.4	1.0	<3	19°21.8"	155°15.0"	2 km SE of Ahua seismometer	
13	06	50	27.0	2.3	55	19°51.2"	155°05.5"	14 km N of Hilo	
13	07	27	19.2	1.0	<3	19°29.8"	155°23.4"	8 km S-SW of Mauna Loa seismometer	
13	10	45	21.4	0.7	<3	19°25.8"	155°14.9"	4 km NE of North Pit seismometer	
15	07	38	55.6	1.1	<3	19°23.5"	155°18.3"	3.5 km SW of North Pit seismometer	
16	07	17	33.4	2.7	15	19°19.8"	155°53.7"	6 km SSE of Hookena	
17	04	09	57.5	1.6	<3	19°26.4"	155°14.9"	4.5 km NE of North Pit seismometer	
17	04	13	47.8	0.9	<3	19°26.3"	155°17.2"	1.75 km NE of Uwekahuna seismometer	
19	00	08	22.2	2.5	8	19°28.5"	155°56.5"	Kealakekua Bay	
19	22	08	24.8	2.1	3	19°23.5"	155°11.5"	7.5 km E of Ahua seismometer	
19	22	28	13.7	3.1	20	19°25.7"	155°03.4"	17.5 km WNW of Hookena	Felt in Kona Region

Table 4.--Local earthquakes recorded by seismographs of the U.S.Geological Survey January, February, and March 1960.

Date (1960)	Time			Magnitude	Depth (km)	Epicenter			Felt report
	h	m	s			Lat. N.	Long. W.	Description	
March 20	14	41	47.7	3.3	8	19°24.8"	155°16.1"	16 Km ENE of Ahua seismometer	
21	20	41	25.8	1.4	8	19°26.0"	155°29.3"	12 Km SW of Mauna Loa seismometer	
23	11	58	31.5	2.2	15	19°24.3"	155°16.5"	1.0Km SE of North Pit seismometer	
23	17	48	25.4	3.7	8	19°25.1"	155°15.0"	3Km ESE of North Pit seismometer	Felt in Captain Cook, Kilauea summit
23	17	53	00.3	3.5	13	19°25.1"	155°17.9"	1.0 Km SW of Uwekahuna seismometer	Felt at Kilauea summit
23	17	55	19.4	2.5	13	19°25.2"	155°18.2"	1.5 Km SW of Uwekahuna seismometer	
23	18	42	03.6	1.9	13	19°24.9"	155°18.2"	2Km SE of Uwekahuna seismometer	
24	13	16	21.9	2.0	13	19°24.8"	155°22.2"	8 Km WSW of Uwekahuna seismometer	
24	23	34	50.7	2.1	8	19°23.9"	155°25.8"	11Km SSW of Mauna Loa seismometer	
26	20	20	15.6	2.4	15	19°25.9"	155°15.8"	3Km NE of North Pit seismometer	
31	10	10	48.0	2.4	13	19°24.2"	155°19.5"	4.Km SW of Uwekahuna seismometers	
31	12	25	29.9	1.6	8	19°25.8"	155°17.1"	10Km NE of Uwekahuna seismometer	

Table 5.--Distant earthquakes

[Times are reported in Greenwich Civil Time which is 10 hours faster than Hawaiian Standard Time. A "c" following the time of P indicates compressional first motion; a "d" indicates dilatational first motion. Station symbols, locations, and instrumentation ~~were~~ are presented in ~~summary 25~~ table 6. Magnitudes calculated from the Hawaii seismograms are followed by (HVO). Location of epicenters, origin times, focal depths, and magnitudes reported by other institutions are taken from "Preliminary Determination of Epicenters" published by the U.S. Coast and Geodetic Survey]

Harold,

Will you see that this table is put in standard format? Check summary 34 (?) for style. It seems that Mike did not get the picture on teleseism surface wave identification and nomenclature. No point in reporting Lg arrivals to 1/10 second. Also, the old Gutenberg Lg and Lr notation is passé for Pacific paths. Will you spot-check the records to make sure that you know what he was reading?

The c + d after S and surface waves should be struck out —

I'm afraid that you might have to reread a fair amount of the teleseismic material. I can find no signs that Mike computed HVO magnitudes, etc.

Table 5--Distant earthquakes

Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
1-1-60	M	ef	23-21-12.7c					C&GS [illegible]
	0	ef	13.2c					[illegible]
	D	ef	13.2c					[illegible]
								[illegible]
								[illegible]
1-[illegible]-60	M	ip	[illegible]-23 5c					C&GS [illegible] 1-60
	0	ef	[illegible]					06-57-26*
	HE	ip	24.2c					56½ N, 153½ E
								[illegible]
1-3-60	M	ip	21-29-20,3c					C&GS card 1-60
	D	ip	20.8c					21-20-13
								45°N, 148°E
								Kuril Islands
								in about 150 KM

Table 5.-- Distant earthquakes

Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
1-9-60	"	iP	07-59-22.2d					C&GS card 4-60
	0	eP	22.0d					07-41-57
								1S-124E.
								Celebes
1-12-60	PΣ-Z	iP	[illegible].1d		1/10 sec time [illegible]			
	"	i?	56-53.1c		[illegible] PE were not			
	"	i?	16-03-42.1c		read to 1/10 sec			
	PΣ-N	iS	03-[illegible].1d					
	"	i?	09-41.1d					
	"	i?	16-30.1c					
	C&GS card 3-60							
			15-40-34					
			16S, 72W					
			southern Peru, h about 200 Km.					
			Mag 7 1/2 (Pas), 7 1/2-7 3/4 (Berk).					Many casualties and extensive property damage Arequipa
1-15-60	PΣ-Z	iP	09-43-03.1dn					C&GS card 5-60
		iS	09-53-28.1dn					09-30-24
								15S., 75.
								Near coast of Southern Peru.
	PΣ-N	iLq	10-07-12.1dn					Minor damage in
								Ica Province.
								Felt in Lima area.
	PΣ-E	iLr	10-09-44.1dn					h about 150 KM.
								Mag. 7 (Pas), 6 1/2 (Berk).

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Table 5.-- Distant earthquakes

Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
[illegible]	M	iP	[illegible] 27.?d					[illegible]
	A	iP	27.6c					[illegible]
	D	iP	27.6c					63°N, [illegible]
		iS	[illegible]					Alaska, [illegible]
	[illegible]	[illegible]	[illegible]					[illegible]
		P	[illegible]d					
	SpE	eS	28.?c					
	SpZ	iP	27.6d					
1-22	M	iP	13-48-12.3c		Is (no card)			
	A	eP	12.?c					
	D	eP	11.7c					
	N							
	UZ	iP	12.8d					
1-22	M	iP	04-53-08.0d					C&GS card 7-60
	A	iP	08.2d					04-40-56
	D	iP	07.3d					4°S. 127½°E
	N	iP	07.8d					Ceram Island region
	UZ	iP	08.5d					Mag 6½ (Pas)
	SpE	eS?	08.7d					
	SpZ	iP	08.5d					
	PΣ-Z	iP	08.0d					
	PΣ-Z	iP	05-18-13.0d					
		iS?	20-27.0					
	PΣ-N	iS?	17-31.0					
	PΣ-E	iS?						

Table 5.-- Distant earthquakes

Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
1-23-	[illegible]	[illegible]	[illegible]					[illegible]
	[illegible]	[illegible]	24.7d					07-31-14
	[illegible]	[illegible]	26.1d					45°, 127½ E
	[illegible]	[illegible]						[illegible]
	[illegible]	iP	27.1d					6½ (Pas)
	[illegible]	[illegible]	[illegible]					
	Pz[illegible]	[illegible]	[illegible]					
		[illegible]	[illegible]					
	[illegible]	[illegible]	[illegible]					
1-23-60	M	iP	18-08-43.7d					C & GS card 7-60
	A	iP	44.1d					17-56-30
	D	iP	44.3d					45°, 127½ E
								Ceram Rel. region
	UZ	iP	44.2d					6½ - 6¾ (Pas)
	SpE	iS?	48.1d					
	SpZ	iP	44.2d					
	PZZ	iP	18-33-26.7d					
1-24-60	M	iP	04-29-42.4c					C & GS card 7-60
	A	iP	42.2c					04-21-42
	D	iP	41.5c					15½ S, 179 W
								Fiji Islands
	UZ	iP	41.5c					Mag. 6¼ - 6½ Pas
	PZZ	iP	04-29-42.7d					6 - 6¼ Rayleigh
	"	iS	04-36-11.7d					
	"	iP	40-55.7c					

Table 5.-- Distant earthquakes

Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
[illegible]								
2-3-60	PSZ	iP	03-46-[illegible]					
		eS	04-04-[illegible]c					
		eG?	04-10-20.8c					
		eLT?	04-11-[illegible]					
	PSN	eS	04-04-([illegible])c					
		eG	04-10-([illegible])					
		eLT	04-11-13.2c					
	PS-L	eS	04-0?-[illegible] c					
		eG	04-10-[illegible] c					
		eLT	04-[illegible]-[illegible] c					
	C&GS	card	9-60	Pre-	Determination			
			03-46-30		4½S, 153½E	New Ireland Region.		
2-24-60	M	iP	21-46-54.8?					
	A	iP?	54.4d					
	D	iP?	54.5c					
	UZ	eP	54.3?					
	SpZ	iP	54.2d					
			C&GS card	18-60				
			21-37-04		½S, 146E			
					[illegible] Islands			
			Felt, Rabaul,	[illegible]	[illegible], Manus			
			Mag 6½-6¾					

Table 5.-- Distant earthquakes

Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
3-5-[illegible]	M	eP	14-01 [illegible] c					
	A	iP	28.[illegible] c					
	D	iP	[illegible]					
	[illegible]	iP	[illegible]					
	[illegible]	iP	[illegible]					
		[illegible]	[illegible]-52.0 c					
		[illegible]	24-36.0 c					
		eP	31-[illegible]					
	PZ-N	iS	11-15 c					
		eSS	15-42 c					
		iSSS	18-32 d					
		iG	21-12 [illegible]					
	[illegible]	[illegible]	[illegible]					
	SpZ	iP	[illegible]					
					C-GS Card 20-60			
	Origin		Time 12-49-16		1°N; 129°E			
					Halmahera [illegible]	[illegible]		
					Mag [illegible] (Pas)			
		C-GS	Card 20-60					
3-6-60	PZ-Z	iP	02-57-20 c.					
			C-GS card 20-60					
			02-22-06					
			1°N; 129°E					
			Halmahera af Te[illegible]					
3-8-60	M	iP	16-42-32.5 d		Ca GS Card 19-60			
	A	iP	32.5 d		16-33-38			
	D	iP	31.4 d		16 1/2°S; 168 1/2°E			
	N	iP	33.2 d		New Hebrides Islands			
	UZ	iP	32.7 d		h about 300km			
	SpE	iS	34.0 c		Mag 7-7 1/4 (CGS)			
	SpZ	iP	32.7 d		Felt at Port Vila			
	PZ-Z	iP	42-25 d					
	PZ-E	P	d					
	PZ-N	P	d					
		iS	49-31 d					
		iaS	51-04 c					
		iG	53-59 d					
		iSSS	55-14 c					

Table 5.-- Distant earthquakes

Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
[illegible]	[illegible]	[illegible]	[illegible]					
			05.2c.					
			[illegible]					
			[illegible]					
			05.2c.					
			05.2c.					
			c.65 cord 21-40					
			51°N, 174½°W					
			Andreanof Islands, Aleutian Islands					
	M	op	17-17-24.2					
	A	cP						
	D	cP	24.9c.					
	N	iP	25.5P					
	Spec	ep	25.6c.					
	PS-7	iP	17-24d					
		iS	25-14d					
		iSS	29-8d					
		eR	33-8d					
			c.65 cord 22-60					
			40°N, 143½°E					
			off North coast of Honshu, Japan					
			FCIT: Northern Honshu and southern Hokkaido					
			5 foot seismic news of Miyako					
			h about 60 km					
			Mag 7 (Pas)					
			7-7 1/4 (Berk)					

Table 5.-- Distant earthquakes

	Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
	[illegible]	M	[illegible]	[illegible]					
				21.1					
				22.1					
		A		17.3					
				23.2					
				[illegible]					
		D		17.3					
				22.2					
				[illegible]					
		N		22.3					
		spZ		32.5					
		PZ-2		[illegible]					
				41 - 12					
				[illegible]					
				01 - 01 - 22					
		PZ-1		47 - 44					
				C-65 cord 23-40					
				00 - 23 - 22					
				39½°N, 143°E					
				Near east coast of Honshu, Japan					
				h about 100 Km					
				Mag 6¾-7 (Berk);		Mag 5½-6¾ (Pas)			
	3-27-60	M	eP	03 - 57 - 22.9					
		A	iP	9.8					
		D	iP	38.7					
		N	iP	41.8					
		UZ	eP	41.5					
		PZ-2	iS	04 - 05 - 10					
			iLe	12 - 08					
				C-65 cord 24-60					
				03 - 48 - 27					
				47N ; 152½ E					
				New Hebrides Islands					
				M 6.4 (Berk)					
				h about 25					

Table 5.-- Distant earthquakes

	Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
	3-27-60	M	P	23 - 27 - [illegible]					
		[illegible]	P	14 - 3[illegible]					
		[illegible]	[illegible]	21 - [illegible]					
		[illegible]	[illegible]	31 - [illegible]					
		[illegible] N	ILR	1[illegible] - [illegible]					
				C-65 - [illegible]					
				09;5[illegible]					
				18 1/2 S [illegible]					
				New Hebrides	Is.				
				h about 25 Km					
				Mag 6 1/2 (Prel.)					
	3-27-60	M	P	23 - 38 - 52.8d					
		A	P	52.4d					
		D	P	51.7d					
		UZ	P	1Pd					
		SpZ	P	1Pd					
				C-65 card 26-60					
				23 - 28 - 04					
				38 1/2 S, 175 E					
				Near coast of	North Island, N.Z.				
				h about 250 Km					

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Table 5.-- Distant earthquakes

	Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
	3-24-60	M	eP	06-40-17.5d					
			iP	20.8c					
			iP	25.8d					
		A	eP	17.0d					
			iP	20.5c					
			iP	25.3d					
		D	eP	17.5d					
			iP	19.4c					
			iP	24.3d					
		N	eP	17.2?					
			iP	20.4c					
			iP	25.4d					
		UZ	iP	18.0d					
			iP	20.4c					
			iP	24.2d					
		SpE	iP	?					
			iP	20.0?					
			iP	25.0?					
		SpZ	iP	18.0d					
			iP	20.7?c					
			iP	24.9c					
		PΣ-Z	iP	22d					
			iS	45-45d					
			iSS?	51-15d					
		PΣ-E	iG?	52-54c					
			iLR	55-03d					
				C-65 card 25-60					
				06:30:54					
				17°S, 167°E					
				New Hebrides Islands					
				h about 250 km					
				Mag. 6 3/4 (Pas.)					
				6 1/4-6 1/2 (Bark)					
	3-30-60	M	iP	15-28-55.2d					
		A	iP	54.6d					
		D	iP	53.8d					
		N	eP	54.9d					
				C-65 card 28-60					
				15:19:30					
				22½ S., 105°E					
				Loyalty Island Region					

Table 5.-- Distant earthquakes

	Date	Inst	Phase	Time	Δt	Corr. Time	S-P	Amp	Remarks
	[illegible]-30-6[illegible]	M	eP	10-59-49.1c					
		A	iP	[illegible]					
				C-65 card 27-[illegible]					
				13½ S, 166E					
				New H[illegible]	[illegible]				
				Mag 6 (Berk)					

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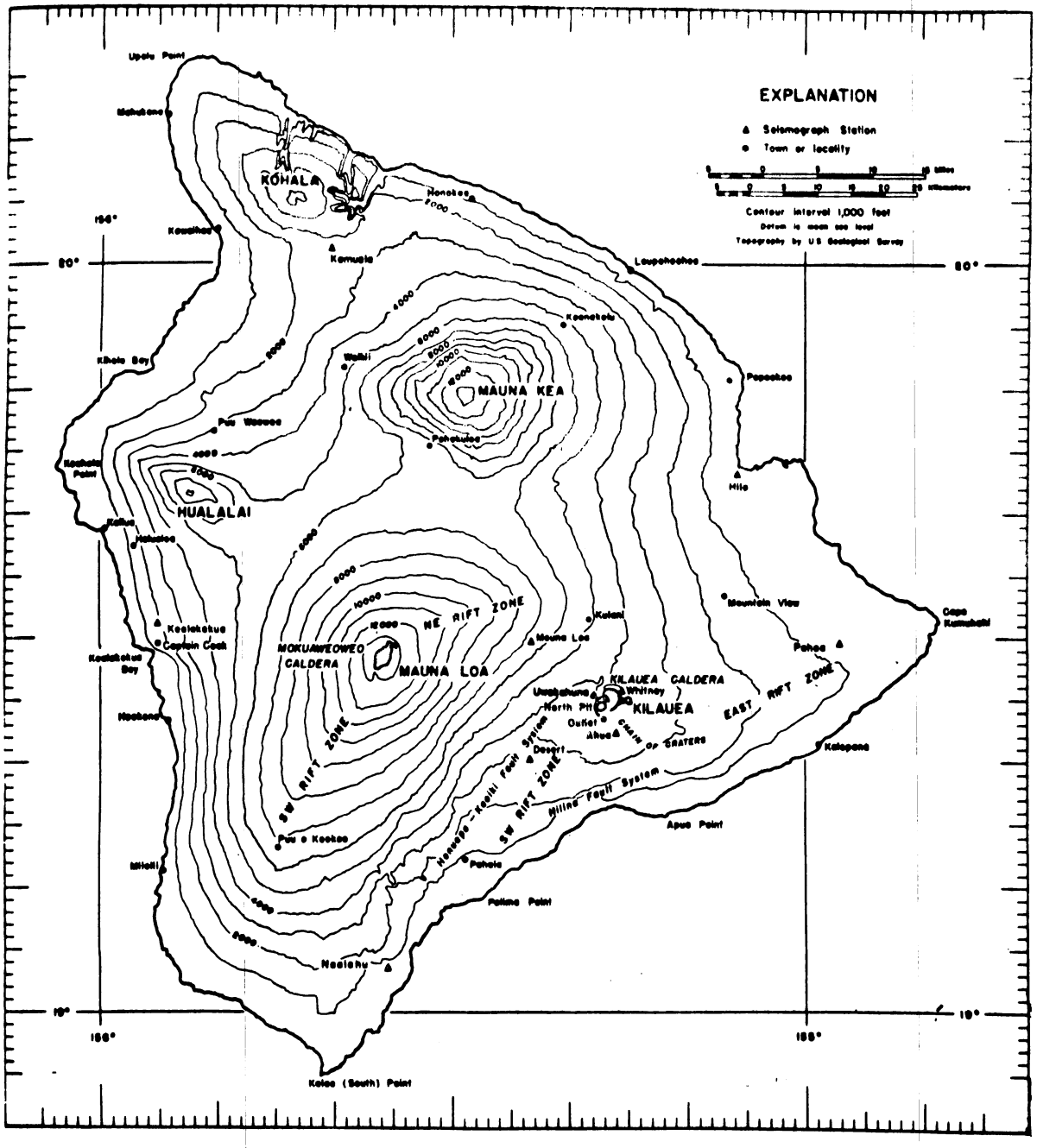

Figure 1.--Map of the island of Hawaii showing seismograph stations operated by the Geological Survey and localities mentioned in the text. Epicenters of earthquakes are given in terms of geographic coordinates, which are indicated at the edges of the map.

Table 6.--U.S. Geological Survey seismograph stations in Hawaii

Station	Symbol	Location		Altitude (m) above sea level	Equipment (Z, vertical; N, north-south; E, east-west)
		Latitude N.	Longitude W.		
Uwekahuna (Hawaiian Volcano Observatory).	U	19°25.4'	155°17.6'	1,240	Long-period Press-Ewing: N, E, Z; (seismometer and galvanometer periods are 15 and 90 seconds, respectively). Short-period Sprengnether: E, Z. HVO-1: Z1/. Short-base liquid-level tiltmeter.
Mauna Loa----------	M	19°29.8'	155°23.3'	2,010	Remote recording HVO-2: Z2/.
Outlet----------	O	19°23.4'	155°16.9'	1,080	Remote recording HVO-2: Z. (Discontinued Jan 9, 1960)
Ahua ---	A	19°22.4"	155°15.9"	1,070	Short-base liquid-level tiltmeter. JAN 9, 1960 OUTLET INSTRUMENT moved TO AHUA
Desert----------	D	19°20.2'	155°23.3'	815	Remote recording HVO-2: Z.
North Pit----------	N	19°24.9'	155°17.0'	1,115	Remote recording HVO-2: Z.
Whitney----------	W	19°25.9'	155°15.7'	1,210	Bosch-Omori: N, E; (seismometer period 9 seconds). Short-base liquid-level tiltmeter.
Hilo----------	Hi	19°43.2'	155°05.3'	20	HVO-1: Z. Wood-Anderson: N, E. Operated by Sister Thecla at St. Joseph's School.

Table 6.--U.S. Geological Survey seismograph stations in Hawaii--Continued

Station	Symbol	Location		Altitude (m) above sea level	Equipment (Z, vertical; N, north-south; E, east-west)
		Latitude N.	Longitude W.		
Naalehu----------	Na	19°03.8'	155°35.2'	205	Loucks-Omori: N, E; (seismometer period 3 seconds). Operated by Mr. Alfred Kahakua at Naalehu School.
Pahoa----------	Pa	19°29.7'	154°56.8'	205	Loucks-Omori: N, E; (seismometer period 3 seconds). Operated by Mr. Kongo Kimura at Pahoa School. (Discontinued Jan 2, 1960)
Kamuela----------	Ka	20°01.3'	155°40.3'	815	Jan 2, 1965 A HVO-1/Z installed in place of L-Omori. Loucks-Omori: N, E; (seismometer period 3 seconds). Operated by Mr. T. C. Mills at Waimea School.
Konawaena----------	Ko	19°30.8'	155°55.1'	495	Hawaiian-type seismograph: N, E; (seismometer period 9 seconds). Operated by Mr. Howard Tatsuno at Konawaena School.
Haleakala, Maui----	Ha	20°46.0'	156°15.0'	2,090	HVO-1: Z. Wood-Anderson: N, E. Operated by the staff of Hawaii National Park at Haleakala, Maui.

1/ HVO-1 is a moving-coil, hinged, vertical-component seismograph with seismometer and galvanometer periods of 0.5 second. Overdamping of both seismometer and galvanometer is used to control the strong galvanometer reaction. This seismograph has a peak magnification of about 20,000 at a period of 0.25 second. Recording is optical, on photographic paper.

Table 6.--U.S. Geological Survey seismograph stations in Hawaii--Continued

2/ HVO-2 is a moving-coil, vertical-component seismograph with a seismometer period of 0.8 second. Its signal is transmitted over telephone wires to the Hawaiian Volcano Observatory, where it is recorded on smoked paper. The response of this seismograph is similar to that of HVO-1. Records from these seismographs at the M, O, and D stations are recorded on a 3-component drum to permit an accurate comparison of arrival times at these stations.

(For Coast and Geodetic Survey
United States Earthquake, 1960)

H A W A I I A N I S L A N D S

(150th Meridian or Hawaiian Standard Time)

Note: Data on the following local disturbance were determined from seismograph stations on the islands of Hawaii and Maui by the Hawaiian Volcano Observatory of the U.S. Geological Survey. For additional information, see the Hawaiian Volcano Observatory Summary 17 through 20.

January 9: 05:26:41.8*. Epicenter 20°27' north, 155°24' west 8 km northwest of Honokaa at a depth of 12.5 km. Felt near Waipio Valley on Hamakua coast of Hawaii. Magnitude 2.9.

January 13: During the 14 hours preceding the outbreak of a flank eruption on the east rift zone of Kilauea at about 1900 hours about 1000 earthquakes were felt in the vicinity of the village of Kapoho. Contemporaneous with this seismic activity the Kapoho graben subsided about 4 feet. These quakes were of magnitude 2.0 or less and were felt at a maximum rate of two per minute during the early part of the 14 hour period. Because of their small size and great number no attempt was made to itemize them.

January 18: 18:26:46.0*. Epicenter 19°24' north, 155°45' west, 15 km east northeast of Hookena at a depth of 3 km. Felt Kilauea caldera area, Pohakuloa and Kona. Magnitude 4.5.

Accompanying the summit subsidence of Kilauea Volcano, during the early part of 1960, many earthquakes were felt in the vicinity of Kilauea Caldera. Dates, origin times (to the nearest minute) and approximate magnitudes for these earthquakes are listed below:

Date	Time	Magnitude	Date	Time	Magnitude
Jan. 26	16:17	2.3	Jan. 30	08:59	2.3
"	16:20	0.6	"	09:00	2.5
Jan. 28	03:26	1.8	"	09:02	2.2
Jan. 29	09:10 a/	4.4	"	09:02	1.8
Jan. 30	07:16	2.2	"	09:04	2.2
"	07:26	2.2	"	09:05	1.8
"	07:30	1.6	"	09:07	2.3
"	07:35	2.2	"	09:07	2.3
"	07:51	2.3	"	09:08	2.2
"	08:07	2.1	"	11:32	1.8
"	08:13	2.6	"	23:42	2.3
"	08:15	1.9	Jan. 31	04:17	2.5
"	08:27	2.8	"	04:28	2.3
"	08:28	2.8	"	11:10	2.5
"	08:29	2.6	"	11:37	2.2
"	08:41	2.0	"	15:29	2.6
"	08:43	2.2	"	20:00	2.3
"	08:53	2.4	Feb. 1	07:48	1.8
"	08:57	2.3	"	08:30	2.2
"	08:57	2.4	"	08:58	2.5
"	08:58	2.2	"	09:04	2.1
"	08:58	2.3	"	16:06	1.8
	08:59	2.3	"	16:51	2.6

a/ felt island-wide.
~~b/ felt in Hilo also.~~
~~c/ note on broken road etc.~~

Date	Time	Magnitude	Date	Time	Magnitude
Feb. 1	19:05	2.1	Feb. 3	12:39	2.3
"	22:27	2.2	"	12:55	1.8
"	23:41	2.2	"	13:18	2.3
Feb. 2	06:38	2.5	"	14:18	2.4
"	07:24	2.0	"	14:25	3.0
"	14:56	2.8	"	17:31	2.6
"	18:55	2.4	"	18:30	2.3
"	19:07	2.3	"	19:18	2.2
"	20:18	2.4	"	21:51	2.3
"	21:24	2.2	"	22:01	2.9
"	22:19	3.3	"	22:44	2.0
Feb. 3	01:10	2.0	Feb. 4	03:11	2.2
"	02:30	2.4	"	04:53	1.8
"	03:26	2.2	"	06:42	2.5
"	04:16	2.5	"	07:29	2.5
"	04:25	2.3	"	10:41	2.6
"	04:28	1.8	"	14:46	2.3
"	04:29	2.0	"	16:43	3.0
"	04:29	2.2	"	16:46	3.0
"	04:45	2.8	"	17:06	1.8
"	10:50	2.6	"	20:10	1.6
"	11:41	2.0	"	20:52	2.5
"	11:44	2.2	"	21:20	2.2

Date	Time	Magnitude
Feb. 4	21:29	2.5
"	21:33	2.7
"	21:48	2.6
"	22:00	1.8
"	22:01	2.0
"	22:03	2.2
"	22:04	2.2
"	22:07	2.3
"	22:09	2.5
"	23:01	2.2
"	23:02	2.8
"	23:09	2.3
"	23:12	2.2
Feb. 5	00:25	2.3
"	04:15	2.3
"	04:38	2.5
"	04:42	2.3
"	04:46	2.3
"	04:52	2.8
"	05:00	2.2
"	05:02	2.3
"	05:02	2.4
"	05:04	2.5
"	05:06	2.5
"	05:07	2.2

Date	Time	Magnitude
Feb. 5	05:08	2.3
"	05:12	2.8
"	05:51 ~~05:21~~	2.2
"	06:03	1.8
"	06:04	1.8
"	21:41	2.2
"	22:01	2.3
"	22:02	2.8
Feb. 6	02:02	2.6
"	03:10	2.3 ~~3.2~~
"	03:17	2.3
"	03:49	2.5
"	03:58	2.0
"	04:00	2.3
"	04:06	2.3
"	04:20	2.6
"	04:27	2.5
"	04:46	2.4
"	05:10	2.2
"	05:25	2.2
"	05:35	2.3
"	06:03	2.2
"	06:07	3.2
"	06:12	2.2
"	06:15	2.6

Date	Time	Magnitude
Feb. 6	10:44	2.8
"	11:14	2.5
"	16:44	2.3
"	17:13	2.3
"	18:44	1.4
"	19:54	2.8
"	22:08	2.2
"	23:29	2.6
"	23:55	2.2
Feb. 7	00:41	2.3
"	01:38	2.2
"	02:04	2.3
"	02:18	2.3
"	02:20	2.5
"	05:27	4.1
"	06:04	2.5
"	06:05	2.6
"	06:07	2.7
"	06:09	3.6
"	21:34	3.6
"	22:36*	3.8

Date	Time	Magnitude
Feb. 8	04:11	1.9
"	08:45	1.9
Feb. 9	03:25	2.5
"	06:19	2.3
"	15:29	3.7
"	17:27	2.0
"	17:27	2.2
"	17:28	3.1
"	17:29	2.9
"	17:29	2.8
"	17:30	2.3
"	17:31	2.5
"	17:32	2.9
"	21:20	2.2
"	21:47	2.5
"	22:35	2.2
Feb. 10	00:48	2.2
"	18:14	1.8
"	18:29	2.5
"	21:25	1.8
Feb. 11	00:41	2.3
"	01:09	2.0
"	01:53	1.8

Date	Time	Magnitude	Date	Time	Magnitude
Feb. 11	01:56	1.8	Feb. 20	12:40	2.4
"	02:09	2.3	"	14:48	2.2
"	02:11	1.8	"	14:56	2.3
"	03:26	3.3	"	21:40	2.3
"	03:33	1.9	"	22:51	2.2
"	04:43	1.8	Feb. 21	12:37	1.9
"	05:53	2.7	"	13:20	2.3
"	07:24	1.6	"	13:25	2.0
"	11:39	3.3	"	13:35	0.6
Feb. 12	04:17	2.8	"	15:40	1.9
"	04:55	3.5	"	16:54	2.3
"	08:43	2.3	"	17:03	2.3
"	09:27	2.2	"	17:20	3.0
"	10:17	3.2	"	17:37	3.3
"	16:34 b/	4.1	"	18:15	1.6
"	16:51	2.8	"	18:17	1.9
Feb. 15	20:19	1.3	"	21:37	2.1
Feb. 16	15:35	2.3	"	22:29	2.3
Feb. 18	09:25	2.0	"	22:33	2.0
"	20:06	1.9	"	22:39	2.0
"	20:07	1.5	"	22:52	1.8

b/ ~~believed to be~~ responsible for fault motion across Hilina Pali road and destruction of about fifty feet of that road. 19°21' north, 155°17' west.

Date	Time	Magnitude	Date	Time	Magnitude
Feb. 22	04:29	2.1	Feb. 24	03:55	2.5
"	05:29	3.3	"	04:36	2.6
"	05:40	2.0	"	05:20	0.8
"	05:53	2.2	"	06:47	0.8
"	10:11	1.8	"	20:15	2.0
"	13:08	2.3	"	20:21	2.3
"	14:25	2.6	"	20:25	1.9
"	15:29	2.6	Feb. 25	03:25	0.8
"	16:31	2.2	"	03:29	1.7
"	21:44	3.5	"	03:31	1.3
"	22:35	1.8	"	04:17	3.0
"	22:42	3.8	"	05:27	2.6
"	23:31	3.7	"	09:21	2.8
Feb. 23	08:24	2.6	"	14:25	2.6
"	09:05	2.0	"	14:32	2.2
"	09:15	3.6	"	15:15	2.2
"	11:50	2.0	"	23:11	2.3
"	11:53	2.3	Feb. 26	01:00	2.9
"	14:11	3.1	"	12:41	3.1
"	14:31	1.8	"	15:58	3.0
"	15:43	2.4	"	16:06	2.2
"	16:06	2.0	"	16:12	2.6
"	16:45	2.2	Feb. 27	04:42	2.2
"	17:17	2.5	"	05:36	2.3
"	18:58	3.4	"	10:48	1.0
"	19:02	2.2	"	10:54	1.8

Date	Time	Magnitude
Feb. 27	11:31	0.8
"	11:34	2.3
"	12:03	2.1
"	13:11	2.8
"	13:37	1.9
"	13:50	2.0
"	22:57	2.3
"	23:23	2.0
Feb. 28	00:19	2.2
"	02:17	1.8
"	12:24	2.2
"	22:15	2.2
"	23:12	2.3
"	23:15	1.8
Feb. 29	10:14	2.6
"	11:38	2.3
"	13:47	2.5
"	15:42	1.9
"	16:59	2.0
"	18:12	2.2
"	19:17	3.4
Mar. 1	06:42:~~32~~	1.8
"	21:06	1.6
"	22:07	1.9

Date	Time	Magnitude
Mar. 2	15:07	1.8
"	15:08	2.7
"	15:13	2.0
"	15:53	2.6
"	18:40	1.9
"	22:02	1.8
"	23:11	2.2
"	23:24	2.0
Mar. 3	02:00	2.3
"	12:07	2.8
"	13:24	2.2
"	14:26	2.2
"	14:30	2.2
Mar. 5	05:28	1.8
"	06:41	2.0
"	06:44	2.5
"	06:50	2.3
"	11:42	3.3
Mar. 6	21:04	0.5
"	21:16	0.7
"	23:34	3.0
Mar. 7	08:47	2.2
"	16:32	3.8
Mar. 8	07:05	1.8
Mar. 11	05:49	2.0
"	07:09	2.2

March 4: 06:04:26.0*. Epicenter 19°26' north, 155°57' west, 5 km east of Honaunau at a depth of 8 km. Felt at north and south Kona. Magnitude 3.0.

March 7: 03:24:17.5*. Epicenter 19°26' north, 155°13' west, 8 km northeast of Halemaumau at a depth of 5 km. Felt at Kilauea caldera area. Dishes broken in 4 homes, small objects overturned. Magnitude 3.3.

March 19: 22:28:13.4*. Epicenter 19°18' north, 155°57' west, 12 km south southwest of Hookena at a depth of 3 km. Felt at Capt. Cook, Kona. Magnitude 3.2.

March 23: 17:48:26.0*. Epicenter 19°25' north, 155°15' west, 5 km beneath Kilauea Iki crater. Felt east rim of Kilauea caldera. Magnitude 3.8.

March 23: 17:53:00.2*. Epicenter 19°25' north, 155°15' west, 5 km beneath Kilauea Iki crater. Felt east rim of Kilauea caldera. Magnitude 3.5.

March 24: 13:16:21.5*. Epicenter 19°24' north, 155°22' west, 10 km east southeast of Halemaumau at a depth of 8 km. Felt northwest rim of Kilauea caldera. Magnitude 3.2.

April 3: 15:41:03.8*. Epicenter 19°21' north, 155°15' west, 7 km southeast of Halemaumau at a depth of 3 km. Felt north and northwest rim of Kilauea caldera. Magnitude 2.8.

April 4: 04:34:11.7*. Epicenter 19°21' north, 155°16' west, 7 km south southeast of Halemaumau at a shallow depth. Felt north and northeast rim of Kilauea caldera. Magnitude 3.3.

April 5: 03:18:53.5*. Epicenter 19°25' north, 155°17' west, 8 km beneath Halemaumau. Felt at east rim of Kilauea caldera. Magnitude 3.2.

April 22: 07:20:26.6*. Epicenter 19°25' north, 155°17' west, 60 km beneath Halemaumau. Felt at east rim of Kilauea caldera. Magnitude 2.6.

April 26: 07:04:23.8*. Epicenter 19°25' north, 155°16' west, southeast sector of Kilauea caldera at a depth of 8 km. Felt at east rim of Kilauea caldera. Magnitude 2.3.

April 29: 06:13:09.3*. Epicenter 19°25' north, 155°26' west, 17 km west northwest of Halemaumau at a depth of 8 km. Felt from Hilo to Kona. Magnitude 3.9.

May 5: 09:46:34.0*. Epicenter 19°25' north, 155°17' west, shallow depth below Halemaumau. Felt at north rim of Kilauea caldera. Magnitude 2.6.

May 8: 06:28:39.0*. Epicenter 19°21' north, 155°19' west, 8 km southwest of Halemaumau at a depth of 25 km. Felt island-wide. Magnitude 4.0

May 11: 23:08:45.9*. Epicenter 19°24' north, 155°18' west, 2 km southwest of Halemaumau at a shallow depth, Felt at north rim of Kilauea caldera. Magnitude 2.6.

May 12: 11:18:09.9*. Epicenter 19°23' north, 155°20' west, 7 km southwest of Halemaumau at a depth of 15 km. Felt island-wide. Magnitude 3.9.

May 25: 10:45:33.0*. Epicenter eastern ~~portion~~ section of Kilauea caldera at a shallow depth. Felt at northwest rim of Kilauea caldera. Magnitude 1.6.

May 27: 05:49:08.0*. Epicenter 19°25' north, 155°17' west, northeast rim of Halemaumau at a depth of 12.5 km. Felt from Kilauea caldera area to Hilo. Magnitude 3.9.

May 27: 05:58:10.0*. Epicenter 19°25' north, 155°17' west, northeast rim of Halemaumau at a depth of 12.5 km. Felt from Kilauea caldera area to Hilo. Magnitude 3.4.

May 31: 14:12:43.2*. Epicenter 19°24' north, 155°19' west, 4 km southwest of ~~Uwekahuna~~ Halemaumau at a depth of 15 km. Felt at northwest rim of Kilauea caldera. Magnitude 2.8.

June 2: 20:47:22.8*. Epicenter 19°26' north, 155°27' west, 20 km east of ~~Uwekahuna~~ Halemaumau at a depth of 5km. Felt from Kilauea caldera area to Kona. Magnitude 3.5.

June 5: 23:40:30.6*/ Epicenter 19°21' north, 155°16' west, 8 km south southeast of Halemaumau at a depth of 8 km. Felt at east rim of Kilauea caldera. Magnitude 2.6.

June 7: 12:19:24.1*. Epicenter 19°10' north, 155°34' west, 10 km north of Naalehu at a depth of 5 km. Felt at Pahala and north and east rims of Kilauea caldera. Magnitude 4.1.

June 13: 17:53:59.4*. Epicenter 19°08' north, 155°27' west, 8 km south southwest of Pahala at a depth of 25 km. Felt at Kealakekua. Magnitude 3.6.

June 14: 23:15:34.3*. Epicenter 19°25' north, 155°17' west, 8 km below Halemaumau. Felt at Kilauea caldera region. Magnitude 3.3.

June 14: 23:53:36.3*. Epicenter 19°25' north, 155°17' west, 8 km below Halemaumau. Felt at Kilauea caldera region. Magnitude 2.8.

June 15: 07:11:40.0*. Epicenter 19°27' north, 155°17' west, 6 km north northwest of Halemaumau at a shallow depth. Felt at Kilauea caldera region. Magnitude 3.0.

June 18: 01:56:07.4*. Epicenter 19°18' north, 155°25' west, 18 km southwest of Halemaumau at a depth of 8 km. Felt at Kilauea caldera region. Magnitude 3.9.

June 18: 09:50:07.5*. Epicenter 19°19' north, 155°13' west, 14 km southeast of Halemaumau at a depth of 3 km. Felt at east rim of Kilauea caldera. Magnitude 3.4.

June 20: 12:58:23.5*. Epicenter 19°24' north, 155°21' west, 6 km west southwest of Halemaumau at a depth of 12.5 km. Felt island-wide. Magnitude 4.1.

June 20: 13:14:48.2*. Epicenter 19°22' north, 155°22' west, 8 km southwest of Halemaumau at a depth of 12.5 km. Felt from Kilauea caldera area to Kona. Magnitude 3.9.

June 20: 18:58:58.3*. Epicenter 19°24' north, 155°19' west, 4 km southwest of Halemaumau at a depth of 12.5 km. Felt at east rim of Kilauea caldera. Magnitude 3.1.

June 21: 01:00:18.3*. Epicenter 19°24' north, 155°21' west, 6 km wbst southwest of Halemaumau at a depth of 15 km. Felt at north rim of Kilauea caldera. Magnitude 3.2.

June 21: 10:56:49.2*. Epicenter 19°23' north, 155°16' west, 4 km south southeast of Halemaumau at a shallow depth. Felt at Kilauea caldera area. Magnitude 3.5.

June 26: 14:33:08.6*. Epicenter 19°25' north, 155°15' west, 8 km beneath northwest rim of Kilauea Iki. Felt at Kilauea caldera area. Magnitude 3.1.

July 7: 09:40:27.7*. Epicenter 19°27' north, 155°15' west, 3 km north of Volcano House at a depth of 52 km. Felt at east rim of Kilauea caldera. Magnitude 3.1.

July 7: 14:33:35.0*. Epicenter 19°27' north, 155°15' west, 3 km north of Volcano House at a depth of 52 km. Felt at east rim of Kilauea caldera. Magnitude 2.9.

July 19: 18:38:43.2*. Epicenter 19°27' north, 155°16' west, north rim of Kilauea, near Keauhou Ranch at a shallow depth. Felt along north and east rims of Kilauea caldera. Magnitude 1.8.

July 19: 18:40:16.9*. Epicenter 19°27' north, 155°16' west, north rim of Kilauea near Keauhou Ranch at a shallow depth. Felt along north and east rim of Kilauea caldera. Magnitude 1.6.

July 23: 13:20:24.0*. Epicenter 19°26' north, 155°16' west, north rim of Kilauea caldera at a depth of 5 km. Felt at northeast rim of Kilauea caldera. Magnitude 2.7.

August 7: 17:33:22.0*. Epicenter 19°26' north, 155°18' west, north rim of Kilauea caldera at a depth of 10 km. Magnitude 3.0. Felt at north and east rims of Kilauea caldera.

August 10: 23:16:55.1*. Epicenter 19°54' north, 155°36' west, 7 km northeast of Waikii at a depth of 10 km. Felt near Waipio valley on Hamakua coast of Hawaii. Magnitude 3.9.

August 11: 01:47:17.7*. Epicenter 19°52' north, 155°36' west, 5 km east of Waikii at a depth of 10 km. Felt at Honokaa. Magnitude 3.8.

August 11: 10:03:14.0*. Epicenter 19°25' north, 155°18' west, 5 km beneath Halemaumau. Felt at northwest rim of Kilauea caldera. Magnitude 1.9.

August 14: 04:20:23.9*. Epicenter 19°33' north, 155°41' west, northwest flank of Mauna Loa 25 km east of Capt. Cook at a depth of 5 km. Felt at Capt. Cook, Kona. Magnitude 2.5.

September 14: 04:19:39.0*. Epicenter 19°13' north, 155°52' west, 30 km south of Capt. Cook, at a depth of 15 km near Papa. Felt at Capt. Cook, Kona. Magnitude 3.6.

September 17: 12:33:25.0*. Epicenter 19°25' north, 155°17' west, Halemaumau at a depth of 5 km. Felt on north rim of Kilauea caldera. Magnitude 1.8.

September 18: 22:53:34.0*. Epicenter 19°24' north, 155°18' west, southeast Kilauea caldera, very shallow. Felt on north rim of Kilauea caldera. Magnitude 1.7.

September 19: 15:27:21.5*. Epicenter 19°25' north, 155°20' west, 5 km west of Halemaumau at a depth of 10 km. Felt on east rim of Kilauea caldera. Magnitude 1.8.

September 20: 07:29:43.2*. Epicenter 19°58' north, 155°34' west northwest flank of Mauna Kea 17 km south of Kukuihaele at a depth of 12.5 km. Widely felt; north rim of Kilauea, Kealakekua and Kukuihaele. Magnitude 3.7.

September 21: 20:08:41.0*. Epicenter 19°45' north, 156°15' west, 20 km west of Keahole Pt. at a depth of about 15 km. Widely felt in north Kona, reports from Kealakekua, Honokahau and Kainaliu. Magnitude 3.3.

September 29: 08:23:19.6*. Epicenter 19°24' north, 155°18' west, Halemaumau at a depth of 27 km. Felt at east rim of Kilauea caldera. Magnitude 2.7.

October 8: 17:27:15.1*. Epicenter 19°27' north, 155°24' west, about 20 km east of Mokuaweoweo at a depth of 8 km. Felt in Hilo, Pahoa and east rim of Kilauea caldera. Magnitude 3.7.

October 17: 13:43:25.5*. Epicenter 19°25' north, 155°17' west, Kilauea caldera at a depth of 5 km. Felt at east rim of Kilauea caldera. Magnitude 1.5.

October 18: 09:29:53.2*. Epicenter 19°25' north, 155°22' west, about 9 km west of Halemaumau at a depth of 48 km. Felt at east rim of Kilauea caldera. Magnitude 2.8.

October 25: 05:18:28.8*. Epicenter 19°27' north, 155°16' west, north rim of Kilauea caldera at a depth of 10 km. Felt east rim of Kilauea caldera. Magnitude 2.4.

October 25: 21:31:56.0*. Epicenter 19°26' north, 155°17' west, north rim of Kilauea caldera at a shallow depth. Felt all over Kilauea summit area. Cracked paths, roads and tennis courts at military rest camp on north rim of Kilauea caldera. Magnitude 3.2.

November 1: 06:32:50.5*. Epicenter 19°26' north, 155°17' west, Halemaumau at a depth of about 5 km. Felt on north and east rims of Kilauea caldera. Magnitude 2.7.

November 5: 10:35:35.5*. Epicenter 19°21' north, 155°05' west, at Puu Mana on the southeast Kilauea Pali system, 40 km south of Hilo at shallow depth. Felt in Hilo. Magnitude 3.0.

November 7: 09:36:29.0*. Epicenter 19°25' north, 155°18' west, east rim of Kilauea caldera at a depth of 7 km. Felt on northwest rim of Kilauea caldera. Magnitude 2.0.

November 7: 12:27:05.7*. Epicenter 19°25' north, 155°18' west, east rim of Kilauea caldera at a depth of 7 km. Felt on northwest rim of Kilauea caldera. Magnitude 2.3.

November 7: 20:21:32.1*. Epicenter 19°25' north, 155°18' west, east rim of Kilauea caldera at a depth of 7 km. Felt on north rim of Kilauea caldera. Magnitude 2.7.

November 10: 14:58:49.8*. Epicenter 19°25' north, 155°18' west, east rim of Kilauea caldera at a depth of 7 km. Felt on northwest rim of Kilauea caldera. Magnitude 2.1.

November 10: 15:45:10.5*. Epicenter 19°25' north, 155°18' west, east rim of Kilauea caldera at a depth of 7 km. Felt on northwest rim of Kilauea caldera. Magnitude 2.4.

November 15: 11:55:17.8*. Epicenter 19°24' north, 155°18' west, Kilauea southwest rift at a depth of 5 km. Felt at northwest rim of Kilauea caldera. Magnitude 2.1.

November 30: 13:30:58.0*. Epicenter 19°23' north, 155°19' west, Kilauea southwest rift at a depth of 30 km. Felt at Kilauea summit area. Magnitude 3.5.

November 30: 19:47:41.6*. Epicenter 19°23' north, 155°18' west, Cone Peak region at a depth of 30 km. Felt at Kilauea summit area. Magnitude 3.3.

December 5: 17:54:32.7*. Epicenter 19°26' north, 155°20' west, northern Kaoiki system at a depth of 15 km. Felt at east rim of Kilauea caldera. Magnitude 1.9.

December 13: 12:06:51.0*. Epicenter Halemaumau at a depth of 30 km. Felt in Pohakuloa, along Kona coast and in Kilauea caldera region. Magnitude 4.0.

December 13: 12:08:16.4*. Epicenter Halemaumau at a depth of 30 km. Felt in Pohakuloa, Kilauea caldera region, and along Kona coast. Magnitude 4.0.

December 17: 20:57:16.1*. Epicenter 19°42' north, 155°45' west, 16 km northeast of Kealakekua at a depth of 3 km. Felt at Kealakekua. Magnitude 3.3.

December 21: 22:15:45.0*. Epicenter 19°21' north, 155° 17 west, 5 km south of Halemaumau at a depth of 10 km. Felt in Kilauea caldera region. Magnitude 2.5.

December 25: 02:56:28.0*. Epicenter 19°13' north, 155°38' west, south flank of Mauna Loa 15 km west of Pahala at a shallow depth. Felt in southern half of the island; Kilauea region to South Point to north Kona. Magnitude 4.5.

December 28: 23:27:41.5*. Epicenter 19°26' north, 155°21' west, 7 km west of Halemaumau at a depth of 5 km. Felt at north rim of Kilauea caldera. Magnitude 2.7.

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	1
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	JAN	1	0738	43.79	19	24.75	155	27.29	10.20	6	.08	1.3	3.8	KAO			256	11	
1960	JAN	1	2014	11.98	19	26.10	154	46.73	1.70	6	.17	10.8	7.3	SLE	F#	3.4X	306	45	
1960	JAN	2	1247	40.53	19	20.38	155	9.96	29.79	7	.05	3.6	3.1	DEP		2.3X	260	13	
1960	JAN	2	2156	38.12	19	24.07	154	31.79	6.87	7	.21	12.6	16.3	DIS	-	2.9X	324	68	
1960	JAN	2	2246	26.00	19	26.97	154	40.91	6.66	5	.00	6.5	5.6	LER		2.9X	315	52	
1960	JAN	3	0453	58.76	19	27.49	155	19.03	14.52	6	.07	1.3	.8	DML		3.7X	143		
1960	JAN	3	1553	6.94	19	23.78	155	25.90	7.61	6	.10	2.2	4.5	KAO		2.3X	237		
1960	JAN	3	1603	45.82	20	2.65	155	52.31	12.78	8	.10	8.4	11.9	KOH	-	2.8X	326	79	
1960	JAN	3	2127	35.56	18	57.95	155	28.03	16.89	7	.13	2.7	16.6	DLS	-		326	42	
1960	JAN	4	1721	27.55	19	21.78	155	31.02	10.40	5	.07	1.6	5.3	KAO		2.4X	300	14	
1960	JAN	4	2309	36.93	19	26.73	155	27.72	0.28	7	.06	2.3	.8	KAO		2.3X	265	10	
1960	JAN	5	0556	34.86	19	22.85	154	49.95	12.53	5	.06	7.1	9.9	LER	-	2.3X	301	46	
1960	JAN	5	1131	53.47	19	19.86	155	5.01	5.61	7	.12	2.2	11.6	SF5	-	2.6X	272	22	
1960	JAN	5	1835	6.33	19	11.49	155	27.43	12.21	8	.14	3.4	1.3	LSW		2.5X	333	18	
1960	JAN	5	2235	8.65	19	19.82	155	25.44	11.50	7	.05	1.6	.8	KAO		2.8X	292		
1960	JAN	7	0524	38.44	19	25.79	154	44.99	5.24	6	.05	3.0	1.6	LER		3.0X	309	48	
1960	JAN	7	0815	29.16	19	24.97	154	46.35	14.78	6	.06	6.8	10.0	LER	-	2.7X	307	47	
1960	JAN	7	1453	36.84	19	22.48	155	6.01	5.62	6	.21	2.2	15.2	SF4	-	3.3X	235	21	
1960	JAN	7	1502	16.03	19	21.61	155	10.83	14.36	8	.16	2.6	1.2	DEP		2.6X	206	11	
1960	JAN	7	1656	32.44	19	22.65	154	51.26	10.74	6	.13	4.2	2.0	LER		2.6X	302	16	
1960	JAN	7	2336	33.08	18	41.22	154	26.29	13.04	8	.13	9.4	13.6	DIS	-	3.3X	336	104	
1960	JAN	9	1259	50.79	19	24.16	155	7.81	8.24	7	.10	1.5	4.9	SF4		2.7X	193	16	
1960	JAN	9	1434	30.17	19	18.30	155	5.54	1.01	7	.14	3.3	15.9	SSF	-	2.8X	241	22	
1960	JAN	11	0157	54.27	19	28.06	154	43.56	8.91	8	.14	7.9	7.1	LER		3.1X	312	47	
1960	JAN	11	0519	29.26	19	24.53	154	40.70	5.82	7	.05	3.3	2.0	LER		3.1X	316	55	
1960	JAN	11	0536	51.00	19	30.81	154	54.09	0.16	5	.18	6.1	6.8	SLE	#	2.7X	338		
1960	JAN	11	0547	34.12	19	27.93	154	46.42	6.96	8	.15	2.4	1.8	LER		2.7X	307	43	
1960	JAN	11	1715	50.76	19	22.83	154	39.01	9.01	7	.09	8.3	11.3	DIS	-	3.1X	317	59	
1960	JAN	11	1741	30.98	19	20.45	154	45.05	0.76	7	.08	8.1	3.7	SLE		3.5X	310	54	
1960	JAN	12	0037	9.39	19	16.34	154	57.28	6.78	4	.01	3.3	9.6	LER	-	2.5X	340	34	
1960	JAN	12	0059	44.27	19	27.45	154	56.59	0.02	7	.09	4.3	.7	SLE	#	2.8X	260		
1960	JAN	12	0409	58.80	19	28.60	154	53.65	0.03	7	.16	1.7	2.0	SLE	#	3.0X	291		
1960	JAN	12	1819	42.50	19	57.91	156	28.82	6.97	4	.13	11.4	13.0	DIS	-	3.5X	353	126	
1960	JAN	13	1017	8.20	19	28.08	155	16.93	10.14	5	.02	1.1	1.8	GLN		2.7X	159		
1960	JAN	13	1100	23.78	19	29.48	154	53.21	6.90	6	.14	3.1	13.9	LER	-	2.8X	291	33	
1960	JAN	13	1102	11.76	19	22.67	155	16.90	6.32	4	.00	4.0	5.7	INT		3.0X	142		
1960	JAN	13	1106	7.41	19	35.68	154	58.81	6.90	4	.06	5.0	12.6	HIL	-	2.8X	270	18	
1960	JAN	13	1142	19.83	19	30.77	154	34.54	2.67	5	.06	10.3	6.4	DIS	-	3.2X	324	58	
1960	JAN	13	1218	24.70	19	28.37	154	40.59	10.74	5	.10	8.7	12.1	LER	-	3.3X	316	51	
1960	JAN	13	1237	20.74	19	32.11	154	33.20	2.91	5	.05	9.6	6.2	DIS	-	3.7X	326	60	
1960	JAN	13	1303	22.76	19	28.70	154	40.34	0.06	6	.09	3.7	.9	SLE	#	3.6X	317	51	
1960	JAN	13	1342	17.74	19	30.90	154	54.20	0.30	7	.14	82.9	31.6	SLE	X	2.9X	288	30	
1960	JAN	13	1441	32.45	19	26.88	154	39.81	3.03	5	.17	7.0	5.8	DIS		3.3X	316	54	
1960	JAN	13	1445	40.27	19	27.41	154	47.05	3.23	5	.20	8.9	11.9	SLE	-	3.1X	306	43	
1960	JAN	13	1506	42.72	19	30.91	154	39.85	0.67	4	.29	24.8	10.1	DIS	-	3.5X	323	50	

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	2
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	JAN	13	1600	24.78	19	26.39	154	46.07	7.83	7	.17	2.3	2.4	LER		3.5X	308	20	
1960	JAN	13	1611	48.74	19	25.60	154	41.87	0.02	8	.14	3.3	1.1	SLE	#	3.3X	314	52	
1960	JAN	13	1629	36.11	19	26.82	154	31.59	7.58	4	.11	14.2	15.0	DIS	-	4.1X	325	66	
1960	JAN	13	1720	11.46	19	26.00	154	42.82	6.08	6	.13	2.4	3.1	LER		3.2X	320	51	
1960	JAN	13	1802	1.21	19	35.72	154	42.05	4.74	8	.19	2.8	4.1	HIL		3.6X	319	43	
1960	JAN	13	2012	38.97	19	28.23	154	42.10	3.73	6	.12	2.5	3.4	SLE		3.3X	314	49	
1960	JAN	14	0206	29.23	18	59.37	154	23.27	6.84	4	.35	19.0	24.9	DIS	-	3.1X	333	81	
1960	JAN	14	1503	25.09	19	14.85	155	6.42	0.90	5	.10	13.7	6.0	SSF	-		333	22	
1960	JAN	16	1142	37.27	19	25.87	154	51.38	0.02	6	.19	10.0	2.7	SLE	#	2.5X	297	40	
1960	JAN	17	1924	36.86	19	24.62	155	13.92	19.80	7	.09	2.2	1.4	DEP		3.3X	198		
1960	JAN	18	1331	13.72	19	24.75	155	25.24	15.67	6	.01	1.3	2.5	DML			222		
1960	JAN	18	1826	47.32	19	20.94	155	47.27	7.04	6	.04	3.3	11.5	KON	-	4.7X	337	42	
1960	JAN	21	1705	3.57	19	14.57	155	33.51	2.46	5	.06	9.6	8.6	LSW	-		328	33	
1960	JAN	22	2021	54.57	19	25.57	155	24.87	0.05	6	.14	2.0	1.3	KAO	#	3.3X	215		
1960	JAN	23	1442	57.39	19	18.85	155	26.35	9.73	5	.11	2.0	2.7	LSW		2.6X	304		
1960	JAN	23	1954	58.65	19	20.59	155	24.92	12.19	5	.07	1.4	2.8	SWR		2.7X	265		
1960	JAN	24	0043	40.72	19	14.39	155	9.77	5.19	5	.13	3.8	13.3	SF3	-		329	18	
1960	JAN	24	1217	57.51	19	23.67	155	12.26	29.36	7	.14	3.3	1.9	DEP		2.8X	232		
1960	JAN	25	0754	33.16	19	24.24	155	17.30	1.96	5	.01	1.7	1.1	SSC		2.6X	157		
1960	JAN	25	1241	15.56	19	23.69	155	17.74	13.95	5	.02	1.6	1.4	DEP		2.2X	122		
1960	JAN	25	1907	8.25	19	26.38	155	24.14	6.45	4	.01	4.2	10.8	KAO	-	2.5X	234	11	
1960	JAN	25	2201	50.24	19	20.16	155	20.97	0.01	5	.03	2.3	1.0	SWR			207		
1960	JAN	26	0211	22.42	19	21.02	155	34.27	0.66	7	.08	10.1	4.3	MLO	-	2.6X	315	19	
1960	JAN	26	0443	5.62	19	22.85	155	15.67	26.66	8	.11	1.5	1.3	DEP		2.8X	137		
1960	JAN	26	1007	21.33	19	24.55	155	16.92	2.42	5	.03	1.7	.4	SNC		2.2X	191		
1960	JAN	26	1234	34.87	19	24.24	155	17.08	2.06	6	.06	1.9	.9	SSC		2.7X	142		
1960	JAN	26	1617	36.91	19	24.18	155	17.55	1.95	5	.03	1.6	1.4	SSC		3.0X	140		
1960	JAN	26	1916	12.26	19	23.71	155	17.86	0.93	5	.05	.7	1.5	SSC		2.2X	117		
1960	JAN	26	2146	14.40	19	24.39	155	16.51	3.22	5	.08	2.0	.7	SSC		2.8X	208		
1960	JAN	26	2336	56.00	19	23.63	155	17.70	1.13	6	.06	1.0	1.5	SSC		2.4X	113		
1960	JAN	27	0315	2.22	19	23.98	155	17.65	1.33	6	.03	1.3	1.5	SSC		3.0X	102		
1960	JAN	27	0511	25.72	19	25.19	155	15.59	3.33	5	.08	1.8	1.1	SNC		3.5X	244		
1960	JAN	27	1058	30.59	19	29.99	155	16.36	4.47	5	.18	2.6	17.4	GLN	-	3.3X	267		
1960	JAN	27	1253	20.57	19	27.13	155	15.09	0.86	4	.25	9.7	18.9	SNC	-	3.1X	261		
1960	JAN	27	1336	32.73	19	25.84	155	25.36	6.98	4	.23	5.9	18.6	KAO	-	3.0X	226		
1960	JAN	27	1554	8.43	19	24.50	155	16.14	0.04	6	.05	1.0	.4	SEC	#	3.0X	225		
1960	JAN	27	1614	18.54	19	26.60	155	16.25	0.03	5	.21	1.0	1.7	SNC	#	3.0X	239		
1960	JAN	27	1623	24.56	19	26.48	155	18.53	0.11	4	.13	15.7	1.5	SNC	-	2.5X	193		
1960	JAN	27	1712	38.84	19	29.51	155	15.17	4.67	6	.27	2.8	21.4	GLN	-	3.0X	273		
1960	JAN	27	1728	7.38	19	24.55	155	15.81	0.03	6	.27	1.6	1.0	SNC	#	3.2X	236		
1960	JAN	27	1730	31.28	19	23.79	155	16.91	0.03	5	.21	2.1	1.9	SSC	#	3.1X	167		
1960	JAN	27	2048	6.25	19	26.25	155	16.45	0.06	4	.13	5.4	8.2	SNC	#	2.8X	233		
1960	JAN	27	2213	28.90	19	23.86	155	17.70	0.01	4	.03	.5	31.6	SSC	-	2.8X	127		
1960	JAN	27	2236	39.35	19	25.60	155	15.13	0.03	6	.22	.8	1.5	SNC	#	3.0X	254		
1960	JAN	27	2304	16.12	19	26.29	155	19.00	9.15	5	.18	11.7	3.3	INT		3.2X	172		

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	3
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	JAN	28	0144	6.31	19	22.45	155	29.81	5.56	4	.22	2.0	20.7	KAO	-	2.5X	290	12	
1960	JAN	28	0326	25.33	19	24.26	155	17.72	1.47	4	.01	1.7	1.5	SSC		3.0X	187		
1960	JAN	28	0843	37.41	19	24.83	155	23.33	3.00	4	.06	1.1	31.6	KAO	-	2.9X	181		
1960	JAN	28	1013	47.22	19	24.87	155	16.46	1.00	5	.22	5.2	31.6	SNC	-	2.5X	230		
1960	JAN	28	1716	42.90	19	23.86	155	17.61	0.03	5	.26	1.2	2.4	SSC	#	2.7X	124		
1960	JAN	28	1738	48.36	19	24.26	155	17.06	1.23	5	.07	8.4	5.5	SSC	-	2.8X	231		
1960	JAN	28	1806	59.25	19	23.74	155	18.16	0.03	6	.07	.4	.9	SSC	#	2.6X	112		
1960	JAN	28	1839	24.18	19	25.67	155	14.55	0.50	5	.02	.6	.7	SNC		3.0X	265		
1960	JAN	29	0054	21.70	19	25.20	155	16.49	0.01	4	.29	3.3	31.6	SNC	-	2.4X	247		
1960	JAN	29	0056	15.93	19	24.38	155	16.23	0.01	5	.31	6.6	31.6	SEC	-	2.5X	222		
1960	JAN	29	0057	38.87	19	32.89	155	11.59	0.30	4	.84	69.0	31.6	GLN	-	3.2X	340	17	
1960	JAN	29	0319	21.23	19	24.62	155	15.56	0.02	4	.24	3.9	1.3	SNC	#	2.5X	307		
1960	JAN	29	0910	20.40	19	21.46	155	12.31	7.77	6	.05	2.3	2.0	SF2		4.2X	248		
1960	JAN	29	1305	16.52	19	24.43	155	16.73	2.92	6	.08	1.9	.6	SSC		2.9X	186		
1960	JAN	29	1448	12.53	19	24.55	155	15.16	1.45	5	.05	1.5	.9	SNC		3.1X	296		
1960	JAN	29	1825	27.23	19	24.51	155	17.57	0.03	5	.17	1.6	2.2	SSC	#	2.0X	89		
1960	JAN	29	1828	18.54	19	23.65	155	17.40	0.01	5	.26	1.0	31.6	SSC	-	3.0X	137		
1960	JAN	29	2043	58.39	19	27.62	155	13.17	8.00	4	.08	4.5	31.6	GLN	-	3.6X	284		
1960	JAN	29	2221	3.18	19	23.80	155	16.04	0.93	5	.02	1.9	.8	SEC		2.9X	282		
1960	JAN	30	0033	37.50	19	24.00	155	18.19	0.04	5	.07	.4	1.2	SSC	#	2.5X	106		
1960	JAN	30	0237	57.16	19	23.80	155	17.58	0.20	4	.01	.5	31.6	SSC	-	3.1X	131		
1960	JAN	30	0449	45.08	19	24.92	155	14.21	2.22	5	.02	1.1	1.3	SNC		3.4X	273		
1960	JAN	30	0619	48.20	19	25.37	155	15.92	0.20	4	.10	.7	31.6	SNC	-	2.3X	236		
1960	JAN	30	0813	13.28	19	24.10	155	7.62	16.06	5	.04	3.4	1.5	DEP		3.3X	324	15	
1960	JAN	30	1005	45.31	19	24.15	155	16.78	9.43	5	.02	1.7	1.0	INT		3.0X	185		
1960	JAN	30	1048	32.43	19	24.86	155	16.38	2.48	5	.09	1.9	.6	SNC			221		
1960	JAN	30	1106	21.44	19	24.22	155	17.01	2.72	4	.01	1.3	.7	SSC			174		
1960	JAN	30	1143	13.16	19	25.92	155	15.43	5.20	5	.04	2.0	1.2	INT		3.0X	250		
1960	JAN	30	1144	19.13	19	24.18	155	16.93	1.28	5	.01	1.7	.8	SSC			178		
1960	JAN	30	1145	59.20	19	25.07	155	17.03	2.12	4	.01	1.7	.3	SNC			209		
1960	JAN	30	1150	38.95	19	23.79	155	16.19	6.78	4	.01	3.1	3.4	INT			207		
1960	JAN	30	1757	11.65	19	24.04	155	16.90	2.53	6	.08	2.1	1.0	SSC		2.2X	156		
1960	JAN	30	1910	14.57	19	24.74	155	14.85	0.01	6	.13	.7	1.0	SNC	#	3.0X	261		
1960	JAN	30	1934	48.26	19	23.79	155	18.09	0.01	5	.10	1.4	3.4	SSC	#		112		
1960	JAN	30	2009	28.76	19	24.51	155	16.88	2.17	6	.04	1.8	.5	SSC		2.8X	172		
1960	JAN	30	2012	37.41	19	24.75	155	15.27	1.89	6	.10	1.3	.8	SNC		2.7X	251		
1960	JAN	30	2229	39.23	19	23.92	155	17.78	0.77	6	.12	1.1	1.8	SSC		2.4X	105		
1960	JAN	30	2315	23.28	19	24.50	155	17.29	0.73	4	.00	2.3	1.4	SSC		2.2X	166		
1960	JAN	30	2342	0.57	19	24.02	155	17.41	2.00	5	.07	1.9	1.5	SSC		2.8X	114		
1960	JAN	31	0033	18.41	19	24.17	155	17.95	0.01	4	.05	.5	31.6	SSC	-	2.3X	101		
1960	JAN	31	0342	49.52	19	25.36	155	13.92	6.11	4	.03	5.0	5.1	SF2		3.0X	276		
1960	JAN	31	0349	48.81	19	25.88	155	15.52	0.03	6	.13	.6	.8	SNC	#	2.8X	248		
1960	JAN	31	0353	37.50	19	25.54	155	14.86	0.88	6	.10	.7	1.0	SNC		2.9X	259		
1960	JAN	31	0417	10.97	19	23.57	155	18.36	0.01	7	.27	.8	31.6	SSC	-	2.4X	119		
1960	JAN	31	0428	29.88	19	25.67	155	15.12	0.01	5	.21	1.1	31.6	SNC	-	2.3X	254		

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	4
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	JAN	31	1110	2.83	19	25.35	155	16.05	3.45	6	.00	1.7	.4	SNC		2.9X	234		
1960	JAN	31	1137	49.05	19	24.02	155	18.26	0.03	7	.27	.7	.8	SSC	#	2.8X	196		
1960	JAN	31	1231	5.20	19	25.68	155	15.71	0.02	5	.04	.4	.6	SNC	#	2.8X	244		
1960	JAN	31	1249	28.23	19	23.75	155	18.37	0.55	5	.03	.6	1.6	SSC		2.7X	114		
1960	JAN	31	1529	12.64	19	23.89	155	17.70	1.11	7	.11	.6	.6	SSC		2.7X	105		
1960	JAN	31	1953	45.04	19	24.13	155	17.28	0.54	6	.02	1.1	1.1	SSC		2.5X	124		
1960	JAN	31	2000	56.78	19	24.19	155	17.78	0.16	7	.09	.4	.5	SSC		2.7X	98		
1960	JAN	31	2114	29.85	19	25.26	155	15.53	1.62	6	.08	1.0	.9	SNC		2.6X	245		
1960	JAN	31	2158	46.43	19	23.65	155	16.59	0.01	4	.36	3.0	31.6	SSC	-	2.7X	180		
1960	JAN	31	2301	1.80	19	28.27	155	14.03	0.11	5	.13	3.0	8.8	GLN	#	3.1X	277		
1960	JAN	31	2336	15.65	19	26.83	155	9.52	0.05	6	.29	4.8	31.6	GLN	-	3.0X	311	14	
1960	JAN	31	2352	10.11	19	24.74	155	15.29	2.90	5	.10	3.2	.9	SNC		2.9X	250		
1960	FEB	1	0117	44.76	19	25.79	155	14.31	3.28	4	.00	3.2	2.6	SNC		3.1X	269		
1960	FEB	1	0140	18.10	19	23.89	155	17.93	0.02	5	.05	.6	1.4	SSC	#	3.0X	108		
1960	FEB	1	0159	52.68	19	25.92	155	15.85	0.02	6	.24	.8	1.3	SNC	#	2.5X	242		
1960	FEB	1	0249	41.38	19	26.30	155	15.12	0.01	5	.29	1.2	1.6	SNC	#	2.7X	256		
1960	FEB	1	0254	13.88	19	28.01	155	13.53	0.13	5	.20	3.8	11.6	GLN	#	3.2X	281		
1960	FEB	1	0459	46.93	19	25.57	155	15.26	0.03	5	.04	.4	.6	SNC	#	2.7X	251		
1960	FEB	1	0524	11.78	19	24.70	155	15.56	2.31	6	.08	1.5	.7	SNC		2.8X	244		
1960	FEB	1	0605	5.24	19	23.63	155	16.08	0.54	6	.10	2.3	.6	SEC	#	3.0X	205		
1960	FEB	1	0655	18.31	19	25.93	155	14.96	0.01	6	.12	.7	.9	SNC	#	2.5X	258		
1960	FEB	1	0659	28.64	19	25.07	155	14.85	1.41	6	.10	.8	1.1	SNC		2.5X	260		
1960	FEB	1	0716	38.60	19	24.56	155	14.66	0.01	4	.10	.9	31.6	SNC	-	3.1X	266		
1960	FEB	1	0855	34.12	19	23.98	155	18.21	0.41	5	.19	.7	1.7	SSC		2.5X	107		
1960	FEB	1	0858	58.19	19	23.95	155	18.24	0.14	6	.04	.5	.3	SSC		2.8X	108		
1960	FEB	1	0904	27.69	19	23.72	155	18.00	0.96	5	.03	.6	1.4	SSC		2.7X	113		
1960	FEB	1	0921	12.41	19	24.17	155	16.09	4.88	5	.01	1.8	.9	SEC		2.6X	223		
1960	FEB	1	1052	31.91	19	24.49	155	15.02	7.40	6	.28	4.0	2.1	INT		3.3X	257		
1960	FEB	1	1103	25.02	19	24.97	155	15.82	2.82	6	.03	1.5	.5	SNC		2.5X	237		
1960	FEB	1	1132	34.65	19	24.85	155	16.38	2.88	6	.13	2.1	.6	SNC		2.9X	221		
1960	FEB	1	1204	40.07	19	25.63	155	14.38	0.02	6	.18	1.0	1.2	SNC	#	2.7X	268		
1960	FEB	1	1211	18.06	19	25.08	155	14.88	0.02	6	.17	.9	1.2	SNC	#	3.2X	259		
1960	FEB	1	1356	17.54	19	25.73	155	14.33	0.02	6	.18	1.1	1.1	SNC	#	3.0X	269		
1960	FEB	1	1358	26.37	19	23.44	155	14.94	5.96	5	.16	3.0	1.8	INT		2.8X	273		
1960	FEB	1	1543	34.84	19	23.69	155	17.82	0.01	6	.02	.4	.8	SSC	#	2.4X	112		
1960	FEB	1	1606	13.22	19	24.47	155	17.13	1.77	5	.04	1.8	.8	SSC		2.6X	134		
1960	FEB	1	1610	35.99	19	24.69	155	14.47	4.39	5	.19	2.1	3.9	SNC		2.9X	269		
1960	FEB	1	1630	18.94	19	25.48	155	14.75	0.01	5	.06	.7	31.6	SNC	-	2.2X	261		
1960	FEB	1	1701	37.59	19	24.45	155	16.98	1.41	5	.06	1.9	.7	SSC		2.8X	155		
1960	FEB	1	1742	47.56	19	23.82	155	17.75	1.98	6	.07	1.4	1.8	SSC		3.3X	108		
1960	FEB	1	1744	15.06	19	24.64	155	16.58	0.05	4	.09	2.0	31.6	SNC	-	3.1X	213		
1960	FEB	1	1905	31.47	19	25.82	155	12.70	4.56	6	.26	2.7	17.5	SER	-	3.0X	290		
1960	FEB	1	2124	11.71	19	23.73	155	18.20	0.41	6	.10	.5	1.2	SSC		2.6X	113		
1960	FEB	1	2152	20.01	19	22.68	155	13.27	6.22	5	.13	2.8	2.1	SF2		2.7X	309		
1960	FEB	1	2201	44.75	19	25.57	155	16.37	0.33	4	.08	8.3	9.0	SNC	-	2.8X	228		

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	5
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	FEB	1	2203	11.03	19	24.98	155	15.72	2.37	6	.12	1.7	.7	SNC		2.8X	240		
1960	FEB	1	2227	36.46	19	23.86	155	17.49	0.50	6	.08	.5	.3	SSC		3.1X	104		
1960	FEB	1	2309	55.49	19	24.06	155	16.75	1.04	4	.07	11.6	7.6	SSC	-	3.0X	169		
1960	FEB	1	2327	45.72	19	21.90	155	16.69	0.01	4	.06	1.3	31.6	KOA	-	2.5X	229		
1960	FEB	2	0004	31.30	19	25.56	155	15.32	0.03	4	.08	.7	31.6	SNC	-	3.0X	250		
1960	FEB	2	0030	49.05	19	23.52	155	17.84	0.09	4	.11	3.5	9.2	SSC		2.2X	129		
1960	FEB	2	0051	20.95	19	24.05	155	16.99	0.00	4	.24	3.4	2.7	SSC	#	3.0X	170		
1960	FEB	2	0715	27.99	19	23.78	155	16.27	1.17	5	.02	2.1	.7	SEC		2.9X	202		
1960	FEB	2	0716	29.08	19	24.43	155	19.04	0.03	5	.23	.9	1.7	KAO	#	3.0X	100		
1960	FEB	2	0724	25.52	19	23.09	155	18.77	0.03	5	.21	.7	1.7	SSC	#	3.1X	133		
1960	FEB	2	0812	10.33	19	27.40	155	15.70	1.28	6	.13	1.0	1.6	SNC		2.8X	254		
1960	FEB	2	0849	47.25	19	25.87	155	15.82	0.03	6	.20	.7	1.1	SNC	#	2.7X	243		
1960	FEB	2	0852	49.97	19	24.90	155	15.98	0.03	6	.24	1.3	.8	SNC	#	2.6X	232		
1960	FEB	2	0900	1.38	19	24.88	155	15.70	1.68	6	.14	1.5	.8	SNC		3.0X	240		
1960	FEB	2	1015	23.46	19	25.18	155	18.19	0.58	5	.04	.7	.7	SNC		2.4X	169		
1960	FEB	2	1041	26.36	19	24.71	155	18.00	5.38	6	.09	1.5	1.3	INT		3.0X	90		
1960	FEB	2	1316	47.71	19	26.56	155	15.08	2.06	6	.13	.9	1.8	SNC		3.1X	258		
1960	FEB	2	1349	17.53	19	24.10	155	16.86	0.00	5	.29	3.9	3.3	SSC	#	2.6X	160		
1960	FEB	2	1447	34.88	19	24.17	155	16.81	3.38	5	.02	1.5	.7	SSC		3.0X	168		
1960	FEB	2	1456	26.56	19	24.16	155	18.43	1.34	8	.16	.6	.5	SSC		2.8X	104		
1960	FEB	2	1832	18.49	19	23.92	155	17.18	1.57	5	.00	1.9	1.5	SSC		2.6X	132		
1960	FEB	2	1855	12.50	19	23.74	155	17.72	0.12	7	.05	.4	.2	SSC		2.7X	110		
1960	FEB	2	1907	20.04	19	23.86	155	17.20	1.65	8	.13	.7	.4	SSC		3.2X	109		
1960	FEB	2	1928	52.70	19	24.37	155	17.47	0.00	5	.26	2.2	3.2	SSC	#	2.7X	103		
1960	FEB	2	2013	1.22	19	24.26	155	16.52	3.19	6	.17	2.7	.8	SSC		3.0X	197		
1960	FEB	2	2018	47.34	19	23.69	155	19.01	1.27	8	.15	.6	.6	SSC		2.7X	117		
1960	FEB	2	2115	43.91	19	23.76	155	17.36	2.22	5	.39	4.8	4.6	SSC	#	3.0X	141		
1960	FEB	2	2143	21.38	19	24.99	155	15.15	1.55	6	.14	1.2	1.1	SNC		2.8X	254		
1960	FEB	2	2219	9.20	19	24.18	155	17.42	1.30	7	.11	.5	.3	SSC		3.3X	109		
1960	FEB	2	2245	47.00	19	25.46	155	15.63	0.37	5	.07	.5	.8	SNC		2.6X	244		
1960	FEB	2	2349	27.28	19	24.03	155	16.89	0.00	4	.29	5.3	3.3	SSC	#	2.4X	164		
1960	FEB	3	0006	16.46	19	24.12	155	17.73	0.04	5	.08	1.4	2.5	SSC	#	2.5X	100		
1960	FEB	3	0050	9.68	19	23.74	155	18.10	1.11	8	.15	.6	.4	SSC		2.4X	113		
1960	FEB	3	0138	40.42	19	24.72	155	15.07	7.06	5	.16	2.9	1.5	INT		3.1X	255		
1960	FEB	3	0416	21.06	19	23.72	155	18.50	0.03	6	.39	.9	1.0	SSC	#	2.7X	115		
1960	FEB	3	0445	19.73	19	23.46	155	18.28	0.75	8	.19	.6	.5	SSC		3.1X	121		
1960	FEB	3	0547	14.63	19	19.24	155	16.82	1.40	7	.27	3.2	1.1	SSF		2.8X	306		
1960	FEB	3	0626	50.99	19	25.65	155	14.52	0.02	5	.21	1.0	1.4	SNC	#	3.1X	265		
1960	FEB	3	0719	38.73	19	23.74	155	17.93	0.13	6	.06	.4	.9	SSC		2.5X	112		
1960	FEB	3	0750	28.80	19	25.36	155	15.78	1.12	6	.14	1.0	1.0	SNC		2.7X	241		
1960	FEB	3	1025	11.10	19	23.60	155	18.26	0.79	6	.10	.5	1.3	SSC		2.9X	117		
1960	FEB	3	1127	30.95	19	23.83	155	18.16	0.12	6	.12	.4	1.1	SSC	#	2.8X	111		
1960	FEB	3	1144	9.36	19	24.25	155	17.28	0.02	5	.19	2.0	2.3	SSC	#	2.7X	122		
1960	FEB	3	1235	28.07	19	25.71	155	14.91	0.02	5	.09	.7	.9	SNC	#	3.0X	258		
1960	FEB	3	1239	9.84	19	22.34	155	19.14	0.01	4	.03	.6	31.6	KAO	-	3.2X	154		

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	6
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	FEB	3	1253	4.60	19	23.69	155	17.38	1.23	6	.01	1.3	1.4	SSC		2.8X	116		
1960	FEB	3	1255	31.46	19	23.66	155	17.68	0.85	8	.13	.6	.4	SSC		2.7X	112		
1960	FEB	3	1318	56.13	19	25.91	155	15.91	0.05	6	.34	1.0	1.6	SNC	#	3.2X	239		
1960	FEB	3	1328	13.64	19	25.03	155	15.54	0.67	6	.15	.9	.8	SNC		2.8X	245		
1960	FEB	3	1339	8.92	19	23.86	155	17.81	0.85	6	.02	.8	1.2	SSC		2.9X	107		
1960	FEB	3	1529	39.73	19	25.09	155	15.57	1.03	5	.02	1.0	1.0	SNC		2.5X	244		
1960	FEB	3	1731	41.85	19	24.93	155	16.64	0.23	4	.03	9.6	5.1	SNC	-	2.7X	216		
1960	FEB	3	1737	20.63	19	24.50	155	15.99	2.52	6	.02	1.6	.6	SEC		2.9X	229		
1960	FEB	3	1739	32.23	19	24.10	155	17.29	0.02	5	.19	1.9	2.2	SSC	#	2.7X	124		
1960	FEB	3	1812	28.46	19	25.54	155	15.54	1.01	6	.13	.8	1.0	SNC		2.9X	246		
1960	FEB	3	1830	24.73	19	23.85	155	17.65	1.64	7	.11	.7	.4	SSC		2.8X	125		
1960	FEB	3	1910	51.79	19	24.54	155	15.66	0.01	6	.10	.9	.6	SNC	#	2.6X	241		
1960	FEB	3	1936	35.01	19	24.26	155	15.63	0.96	5	.06	1.5	.8	SEC		2.7X	293		
1960	FEB	3	2049	16.81	19	23.68	155	17.74	0.46	5	.01	.5	1.1	SSC		2.7X	122		
1960	FEB	3	2115	35.76	19	25.12	155	16.15	1.62	6	.05	1.3	.5	SNC		2.9X	229		
1960	FEB	3	2151	12.18	19	24.60	155	16.52	2.94	6	.10	2.0	.5	SNC		2.7X	216		
1960	FEB	3	2154	40.45	19	24.70	155	15.65	3.47	5	.01	1.7	.8	SNC		2.8X	240		
1960	FEB	3	2201	7.72	19	23.91	155	17.33	1.65	7	.10	.6	.4	SSC		2.8X	108		
1960	FEB	3	2242	18.25	19	24.28	155	16.92	0.00	4	.30	11.6	10.7	SSC	#	2.7X	158		
1960	FEB	3	2251	12.14	19	24.73	155	16.12	0.65	6	.10	1.3	.5	SNC		2.3X	227		
1960	FEB	4	0047	45.01	19	25.30	155	16.09	2.80	6	.06	1.5	.5	SNC		2.9X	232		
1960	FEB	4	0729	33.33	19	25.78	155	14.70	1.55	6	.12	.9	1.4	SNC		3.0X	262		
1960	FEB	4	1124	2.97	19	24.98	155	15.63	0.57	6	.10	.8	.7	SNC		3.0X	242		
1960	FEB	4	1213	21.37	19	23.83	155	17.63	0.03	6	.10	.7	1.3	SSC	#	3.0X	106		
1960	FEB	4	1217	59.87	19	24.90	155	15.54	1.56	6	.13	1.4	.9	SNC		2.9X	244		
1960	FEB	4	1314	35.90	19	25.10	155	15.15	0.02	6	.17	.7	.8	SNC	#	2.9X	253		
1960	FEB	4	1411	21.50	19	25.02	155	15.92	1.60	6	.14	1.5	.7	SNC		3.0X	234		
1960	FEB	4	1446	32.07	19	24.08	155	17.30	1.36	8	.14	.7	.4	SSC		2.9X	111		
1960	FEB	4	1546	21.22	19	24.04	155	17.67	0.08	6	.06	.6	1.0	SSC		2.6X	101		
1960	FEB	4	1643	41.32	19	24.90	155	16.68	3.06	7	.13	.8	.4	SNC		3.0X	133		
1960	FEB	4	1646	13.35	19	25.07	155	17.00	2.34	7	.14	.7	.3	SNC		2.9X	127		
1960	FEB	4	1706	46.24	19	26.68	155	14.72	1.95	7	.36	1.8	3.1	SNC		3.0X	167		
1960	FEB	4	1752	49.22	19	25.22	155	15.64	0.12	6	.02	.6	.8	SNC		2.9X	243		
1960	FEB	4	1834	24.96	19	25.05	155	15.76	0.04	6	.03	.5	.5	SNC	#	2.8X	239		
1960	FEB	4	2010	7.51	19	24.94	155	15.65	1.89	6	.12	1.5	.7	SNC		1.9X	242		
1960	FEB	4	2019	41.10	19	25.51	155	15.16	3.92	6	.08	1.6	1.3	SNC		3.1X	253		
1960	FEB	4	2337	6.62	19	25.79	155	15.83	0.02	5	.06	.5	.8	SNC	#	2.3X	242		
1960	FEB	5	0009	31.09	19	23.88	155	17.99	0.02	5	.05	.4	1.0	SSC	#	2.4X	113		
1960	FEB	5	0025	20.36	19	24.23	155	17.91	1.13	6	.10	1.2	1.6	SSC		2.5X	99		
1960	FEB	5	0108	4.01	19	25.35	155	15.33	0.02	6	.08	.5	.6	SNC	#	2.3X	250		
1960	FEB	5	0128	48.96	19	24.01	155	16.97	0.00	5	.28	3.4	3.1	SSC	#	2.7X	148		
1960	FEB	5	0133	4.20	19	24.02	155	17.44	1.73	7	.07	.6	.3	SSC		2.4X	107		
1960	FEB	5	0139	50.21	19	23.89	155	18.25	0.04	5	.08	.5	1.1	SSC	#	2.5X	110		
1960	FEB	5	0527	47.59	19	25.58	155	15.56	0.03	6	.18	.6	.9	SNC	#	2.7X	246		
1960	FEB	5	0642	20.06	19	25.00	155	15.89	0.18	5	.01	.6	.5	SNC		2.7X	236		

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN	7
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS	MAG	GAP	DS	
1960	FEB	5	0716	12.07	19	25.04	155	16.21	0.39	4	.06	8.9	7.6	SNC	- 2.4X	227		
1960	FEB	5	0806	7.20	19	25.33	155	15.73	0.02	6	.04	.4	.5	SNC	# 2.8X	242		
1960	FEB	5	0830	37.43	19	25.44	155	15.78	0.00	5	.09	.5	.7	SNC	# 2.8X	241		
1960	FEB	5	1014	32.50	19	25.55	155	15.65	0.01	5	.15	.7	31.6	SNC	- 2.9X	244		
1960	FEB	5	1253	17.35	19	24.27	155	16.71	3.25	5	.01	.8	.4	SSC	3.1X	128		
1960	FEB	5	1302	36.99	19	25.37	155	16.11	1.01	6	.18	1.3	1.0	SNC	3.0X	232		
1960	FEB	5	1311	20.55	19	25.52	155	15.82	0.03	5	.06	.4	.6	SNC	# 2.9X	240		
1960	FEB	5	1316	17.89	19	25.30	155	15.68	0.03	5	.08	.4	.6	SNC	# 2.6X	243		
1960	FEB	5	1415	28.17	19	25.25	155	15.84	0.04	6	.12	.6	.6	SNC	# 2.7X	239		
1960	FEB	5	1416	58.53	19	24.44	155	17.80	0.03	5	.13	.7	1.3	SSC	# 2.1X	127		
1960	FEB	5	1516	7.66	19	24.35	155	16.29	1.97	5	.05	1.8	.7	SEC	2.6X	218		
1960	FEB	5	1821	37.37	19	25.30	155	15.76	0.03	5	.09	.6	.7	SNC	# 2.7X	240		
1960	FEB	5	1852	54.29	19	25.42	155	15.86	0.02	5	.06	.5	.7	SNC	# 2.7X	239		
1960	FEB	5	2022	43.13	19	25.28	155	15.94	0.03	5	.02	.5	.6	SNC	# 2.8X	236		
1960	FEB	5	2031	36.35	19	24.95	155	16.07	0.79	5	.03	1.0	.6	SNC	2.5X	230		
1960	FEB	6	0056	48.91	19	25.27	155	15.52	0.01	6	.26	1.0	1.1	SNC	# 2.7X	246		
1960	FEB	6	1234	55.24	19	23.87	155	17.75	0.05	6	.11	.7	1.4	SSC	# 2.9X	107		
1960	FEB	7	2013	37.83	19	25.59	155	15.71	0.04	5	.05	.4	.6	SNC	# 2.7X	243		
1960	FEB	7	2134	25.21	19	21.59	155	15.66	3.31	8	.21	1.3	.7	KOA	3.8X	236		
1960	FEB	7	2217	18.39	19	23.88	155	17.96	0.12	6	.06	.4	.9	SSC	2.4X	107		
1960	FEB	8	0142	12.96	19	24.75	155	15.96	1.43	6	.12	1.6	.6	SNC	2.7X	232		
1960	FEB	8	0456	20.68	19	25.39	155	15.76	0.02	5	.05	.4	.6	SNC	# 2.7X	241		
1960	FEB	8	0534	4.53	19	25.24	155	15.73	0.03	6	.10	.5	.6	SNC	# 2.7X	241		
1960	FEB	8	0912	14.23	19	24.51	155	17.41	0.01	4	.11	1.0	31.6	SSC	- 2.5X	156		
1960	FEB	8	0913	1.88	19	25.29	155	15.62	0.21	6	.11	.6	.7	SNC	2.9X	244		
1960	FEB	8	1639	42.51	19	24.25	155	16.19	0.01	6	.10	1.6	.6	SEC	2.7X	220		
1960	FEB	8	1805	36.25	19	20.14	155	12.30	0.02	8	.16	1.8	.8	SSF	# 3.1X	215		
1960	FEB	8	2052	25.31	19	26.44	154	44.42	11.08	7	.12	8.8	11.5	LER	- 3.2X	310	48	
1960	FEB	9	0326	14.38	19	24.69	155	15.46	4.09	8	.09	.6	1.1	SNC	2.7X	117		
1960	FEB	9	0449	27.01	19	23.62	155	18.12	2.77	6	.02	1.5	2.1	SSC	3.0X	116		
1960	FEB	9	0540	9.26	19	25.11	155	15.61	0.79	6	.11	.9	.8	SNC	2.8X	243		
1960	FEB	9	0735	30.72	19	24.97	155	15.84	0.01	5	.09	.8	1.0	SNC	# 2.8X	237		
1960	FEB	9	0913	24.63	19	24.45	155	16.70	3.58	6	.05	1.8	.6	SSC	2.7X	191		
1960	FEB	9	1001	2.27	19	24.28	155	19.89	0.05	4	.14	.9	6.4	KAO	# 2.7X	111		
1960	FEB	9	1018	5.05	19	25.69	155	15.92	0.01	5	.05	.3	.6	SNC	# 2.8X	238		
1960	FEB	9	1218	41.75	19	24.96	155	17.01	0.23	4	.05	9.4	1.7	SNC	- 2.1X	207		
1960	FEB	9	1432	16.23	19	25.28	155	15.92	0.60	6	.13	.9	.8	SNC	3.0X	236		
1960	FEB	9	1536	15.42	19	25.02	155	15.93	1.03	6	.07	1.0	.6	SNC	2.8X	234		
1960	FEB	9	2120	29.57	19	24.43	155	16.35	3.04	6	.07	1.9	.6	SEC	3.0X	218		
1960	FEB	9	2147	53.19	19	25.34	155	16.19	1.87	6	.14	1.6	.8	SNC	3.0X	230		
1960	FEB	9	2235	21.98	19	26.13	155	16.53	6.01	7	.16	1.2	1.1	INT	3.2X	139		
1960	FEB	10	0328	51.11	19	24.15	155	18.10	0.52	6	.02	.5	1.0	SSC	2.7X	103		
1960	FEB	10	0419	8.29	19	15.45	155	10.76	3.01	5	.07	2.8	13.5	SSF	- 2.7X	250	21	
1960	FEB	10	0621	48.78	19	24.96	155	15.99	2.68	6	.08	1.7	.6	SNC	3.0X	233		
1960	FEB	10	0815	18.49	19	24.73	155	16.24	3.18	5	.08	1.9	.7	SNC	3.1X	224		

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN	8
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS	MAG	GAP	DS	
1960	FEB	10	1057	20.37	19	22.89	155	16.43	0.31	5	.08	.7	.6	SEC	2.6X	114		
1960	FEB	10	1204	13.71	19	25.19	155	15.32	2.08	6	.10	1.2	1.0	SNC	2.9X	250		
1960	FEB	10	1239	14.14	19	25.96	155	14.36	0.09	5	.06	.8	1.1	SNC	# 3.2X	268		
1960	FEB	10	1611	53.76	19	27.24	155	15.49	0.94	5	.04	.6	1.0	SNC	2.9X	255		
1960	FEB	10	1830	46.80	19	23.83	155	17.37	2.57	7	.11	.6	.4	SSC	2.9X	105		
1960	FEB	10	2042	13.33	19	25.31	155	15.38	1.73	6	.07	1.0	.9	SNC	2.8X	249		
1960	FEB	10	2058	20.60	19	23.82	155	17.65	0.02	6	.10	.6	1.0	SSC	# 2.7X	106		
1960	FEB	10	2125	8.93	19	25.14	155	15.59	0.45	6	.12	.8	.8	SNC	3.2X	244		
1960	FEB	10	2153	52.42	19	23.12	155	15.14	0.13	8	.13	.6	.6	SEC	2.8X	202		
1960	FEB	11	0109	7.18	19	25.74	155	15.10	0.01	6	.08	.6	31.6	SNC	- 2.9X	255		
1960	FEB	11	0911	11.81	19	24.22	155	17.55	2.49	5	.05	1.7	1.3	SSC	2.7X	141		
1960	FEB	11	1139	35.50	19	21.77	155	16.10	1.62	7	.05	.4	.7	KOA	3.5X	192		
1960	FEB	11	2005	12.05	19	23.86	155	18.19	0.03	6	.06	.4	.9	SSC	2.8X	109		
1960	FEB	11	2254	2.15	19	24.03	155	17.33	1.48	8	.13	.6	.4	SSC	2.5X	96		
1960	FEB	12	0417	0.58	19	21.69	155	14.86	1.37	7	.04	1.1	.8	KOA	3.1X	238		
1960	FEB	12	0455	5.98	19	21.41	155	8.92	0.01	5	.15	3.0	31.6	SER	- 3.7X	211	16	
1960	FEB	12	0613	34.76	19	24.59	155	16.18	0.43	6	.08	1.3	.5	SNC	2.9X	224		
1960	FEB	12	0843	14.75	19	25.21	155	15.94	3.33	6	.03	1.5	.5	SNC	3.0X	235		
1960	FEB	12	1634	38.35	19	20.28	155	14.57	4.48	8	.26	2.0	3.8	SSF	4.1X	250		
1960	FEB	12	1640	14.87	19	21.47	155	16.74	2.18	6	.20	13.5	10.0	KOA	- 2.9X	219		
1960	FEB	12	1650	45.59	19	25.86	155	15.24	1.69	6	.07	.7	1.1	SNC	3.4X	253		
1960	FEB	13	0326	57.66	19	23.91	155	18.32	0.03	5	.07	.5	1.0	SSC	# 2.7X	109		
1960	FEB	13	1415	54.15	19	21.22	155	14.13	4.99	4	.14	16.7	2.7	KOA	- 2.4X	300		
1960	FEB	14	0024	49.30	19	25.41	155	14.79	3.43	6	.05	1.2	1.3	SNC	3.3X	261		
1960	FEB	14	1103	30.96	19	17.53	155	11.76	3.86	5	.35	14.4	27.9	SSF	- 3.4X	318	12	
1960	FEB	15	1024	49.98	19	23.71	155	18.36	0.54	5	.27	.8	3.2	SSC	# 2.5X	115		
1960	FEB	15	1929	38.89	19	25.30	155	15.67	1.58	5	.03	.9	1.1	SNC	2.7X	243		
1960	FEB	15	2052	39.40	19	25.40	155	15.20	0.02	5	.15	.8	1.3	SNC	# 2.7X	253		
1960	FEB	16	1855	26.10	19	0.20	155	5.95	7.48	5	.07	4.6	2.4	LOI		343	48	
1960	FEB	17	1138	0.28	19	24.29	155	17.90	0.03	4	.03	2.4	7.6	SSC	# 3.0X	120		
1960	FEB	17	1720	3.80	19	18.97	155	2.44	6.91	5	.12	3.8	12.3	SF5	- 3.5X	335	28	
1960	FEB	17	2041	25.14	19	24.84	155	14.70	30.21	5	.07	3.5	2.0	DEP	3.1X	264		
1960	FEB	17	2256	39.57	19	25.18	155	15.78	0.91	6	.09	.9	.7	SNC	2.8X	240		
1960	FEB	18	0007	6.38	19	24.20	155	17.12	1.32	4	.00	1.8	1.1	SSC	2.4X	167		
1960	FEB	18	0450	54.20	19	24.15	155	15.44	3.28	6	.13	2.3	1.0	SEC	3.1X	246		
1960	FEB	18	0656	58.43	19	25.58	155	15.15	0.03	6	.20	.9	1.3	SNC	# 2.9X	254		
1960	FEB	18	0925	25.98	19	25.35	155	15.55	0.28	5	.02	.5	.7	SNC	3.1X	245		
1960	FEB	18	1356	1.07	19	24.00	155	16.05	0.02	6	.10	1.5	.8	SEC	# 3.2X	219		
1960	FEB	18	2005	46.79	19	23.97	155	16.41	3.11	6	.09	1.1	.7	SEC	2.8X	213		
1960	FEB	18	2034	46.69	19	23.70	155	2.11	5.59	6	.12	3.5	12.6	SF5	- 3.4X	334	24	
1960	FEB	20	0152	57.45	19	25.54	155	15.64	0.01	6	.09	.5	.7	SNC	# 2.4X	244		
1960	FEB	20	1340	34.96	19	25.34	155	15.73	0.32	5	.07	.7	1.0	SNC	2.7X	242		
1960	FEB	20	1349	37.58	19	25.55	155	15.67	0.03	6	.20	.7	1.0	SNC	# 2.9X	243		
1960	FEB	20	1448	16.90	19	24.32	155	17.44	2.26	6	.06	.6	.3	SSC	3.1X	111		
1960	FEB	20	1456	0.28	19	24.77	155	16.59	3.77	5	.01	1.6	.6	SNC	3.2X	215		

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	9
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS
1960	FEB	20	1617	3.64	19	24.76	155	16.80	1.08	4	.01	1.8	.6	SNC		2.7X	209	
1960	FEB	20	2140	35.66	19	24.10	155	17.17	0.95	8	.12	.6	.4	SSC		2.4X	114	
1960	FEB	21	0110	58.95	19	23.82	155	18.33	0.04	5	.11	.6	1.5	SSC	#	2.7X	112	
1960	FEB	21	0432	18.16	19	24.52	155	17.50	1.55	6	.01	1.6	1.0	SSC		2.8X	93	
1960	FEB	21	0724	50.06	19	21.91	155	15.51	1.10	8	.11	.8	.3	KOA		2.9X	191	
1960	FEB	21	0746	6.37	19	24.48	155	16.89	1.83	6	.08	1.9	.6	SSC		2.9X	169	
1960	FEB	21	1055	40.04	19	24.42	155	16.73	2.32	6	.07	1.9	.5	SSC		2.9X	186	
1960	FEB	21	1056	48.66	19	25.16	155	15.43	3.58	5	.02	1.6	1.0	SNC		2.9X	248	
1960	FEB	21	1314	46.30	19	15.98	155	8.78	9.00	4	.13	3.9	31.6	SF4	-		329	17
1960	FEB	21	1320	26.44	19	23.95	155	10.72	16.19	4	.00	3.1	1.2	DEP		3.5X	316	10
1960	FEB	21	1325	6.38	19	24.06	155	17.74	1.78	7	.13	.7	.5	SSC		3.0X	101	
1960	FEB	21	1540	15.46	19	25.36	155	15.79	1.82	6	.09	.7	.7	SNC		2.8X	154	
1960	FEB	21	1653	49.27	19	23.82	155	17.67	2.51	7	.15	.8	.6	SSC		2.8X	106	
1960	FEB	21	1703	37.95	19	25.33	155	15.95	1.11	5	.03	.7	.7	SNC			236	
1960	FEB	21	1817	10.00	19	24.23	155	17.37	1.61	8	.09	.6	.3	SSC		2.9X	111	
1960	FEB	21	2137	8.21	19	25.55	155	15.03	0.52	6	.10	.6	.9	SNC		2.8X	256	
1960	FEB	21	2239	3.81	19	24.13	155	17.42	1.72	8	.10	.6	.3	SSC		3.0X	109	
1960	FEB	21	2250	34.98	19	24.15	155	18.67	1.69	6	.08	.9	1.9	SSC		2.5X	106	
1960	FEB	22	0319	37.55	19	24.29	155	18.88	0.39	6	.05	.5	1.0	SSC		2.6X	103	
1960	FEB	22	0533	0.56	19	25.33	155	15.64	2.01	6	.08	1.2	.9	SNC		2.7X	243	
1960	FEB	22	0553	23.27	19	24.27	155	18.58	1.57	7	.17	.7	.5	SSC			102	
1960	FEB	22	1529	3.00	19	23.75	155	17.99	2.09	7	.14	.9	.5	SSC		3.3X	197	
1960	FEB	22	1631	32.05	19	23.98	155	17.67	1.46	7	.14	.7	.5	SSC		3.1X	102	
1960	FEB	22	1808	21.62	19	21.65	155	15.64	1.67	6	.23	5.9	.6	KOA		3.3X	276	
1960	FEB	23	0915	16.05	19	24.49	155	16.85	1.74	8	.13	.6	.2	SSC		3.4X	82	
1960	FEB	23	0924	45.65	19	24.90	155	15.89	0.62	6	.10	1.0	.6	SNC		3.0X	236	
1960	FEB	23	1153	28.09	19	24.10	155	18.16	0.42	8	.11	.4	.3	SSC		3.1X	104	
1960	FEB	23	1543	35.13	19	25.32	155	16.85	2.33	8	.11	.6	.4	SNC		2.6X	86	
1960	FEB	23	1717	37.43	19	23.34	155	16.69	0.32	7	.19	1.0	.6	SSC		3.2X	173	
1960	FEB	24	0227	26.45	19	24.67	155	15.84	0.01	6	.15	1.0	.6	SNC	#	2.3X	210	
1960	FEB	24	0323	54.87	19	24.08	155	18.14	0.07	6	.01	.4	.9	SSC		3.0X	104	
1960	FEB	24	0436	34.95	19	24.33	155	17.55	1.31	7	.10	.7	.3	SSC		2.8X	176	
1960	FEB	24	0945	23.03	19	24.97	155	15.35	1.61	6	.12	1.2	.9	SNC		2.6X	249	
1960	FEB	24	2015	21.78	19	25.15	155	9.51	4.86	4	.07	1.9	12.2	SER	-	3.5X	177	12
1960	FEB	24	2021	30.61	19	25.02	155	15.18	0.01	5	.06	.7	31.6	SNC	-	2.5X	253	
1960	FEB	25	0417	34.75	19	25.32	155	17.31	0.02	6	.15	.9	.3	SNC	#	2.7X	113	
1960	FEB	25	0527	59.85	19	24.06	155	17.74	0.34	7	.08	.5	.4	SSC		2.7X	101	
1960	FEB	25	1101	31.04	19	24.31	155	18.20	4.43	5	.01	1.2	1.5	SSC		2.1X	99	
1960	FEB	25	1305	34.75	19	22.82	155	9.01	14.75	4	.09	12.5	5.3	DEP	-	3.5X	322	12
1960	FEB	25	1425	36.51	19	24.29	155	17.55	0.78	7	.11	.7	.4	SSC		2.7X	109	
1960	FEB	25	1431	57.06	19	25.30	155	15.69	2.18	6	.11	1.4	.9	SNC		2.7X	242	
1960	FEB	25	1433	8.12	19	25.33	155	15.74	2.29	5	.09	1.5	1.2	SNC		2.9X	241	
1960	FEB	25	1515	27.52	19	23.47	155	18.48	0.03	7	.11	.5	.3	SSC	#	3.0X	122	
1960	FEB	25	1832	3.93	19	25.20	155	15.96	0.10	6	.11	.8	.7	SNC		2.9X	234	
1960	FEB	25	1835	12.91	19	23.76	155	16.05	40.26	6	.07	4.3	1.8	DEP		2.8X	211	

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	10
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS
1960	FEB	25	2311	44.00	19	23.38	155	17.38	1.81	8	.09	.5	.4	SSC		2.7X	117	
1960	FEB	26	0100	1.68	19	23.91	155	14.57	0.02	5	.12	1.1	.8	SEC	#	3.1X	222	
1960	FEB	26	0414	55.57	19	23.89	155	18.24	0.03	7	.11	.4	.9	SSC	#	2.8X	110	
1960	FEB	26	0440	50.06	19	24.33	155	17.37	0.79	5	.02	1.3	1.2	SSC		3.0X	155	
1960	FEB	26	1035	45.94	19	23.86	155	17.38	1.34	6	.10	1.0	.9	SSC		3.2X	164	
1960	FEB	26	1258	1.88	19	19.65	155	13.61	2.67	6	.31	5.1	2.1	SSF		3.1X	305	
1960	FEB	26	1558	50.89	19	24.56	155	16.86	0.01	8	.08	.6	.4	SNC	#	3.0X	83	
1960	FEB	26	2001	35.67	19	25.26	155	15.96	0.70	7	.14	.7	.9	SNC		2.9X	132	
1960	FEB	26	2035	30.97	19	20.73	155	15.96	1.04	7	.06	.7	.4	KOA		3.3X	203	
1960	FEB	26	2103	51.38	19	25.50	155	16.86	0.01	4	.10	.5	31.6	SNC	-	3.0X	175	
1960	FEB	27	1054	14.48	19	24.76	155	17.09	2.59	7	.09	.6	.3	SNC		2.6X	123	
1960	FEB	27	1134	19.66	19	24.09	155	17.88	0.44	8	.06	.4	.4	SSC		2.7X	102	
1960	FEB	27	1311	38.55	19	24.13	155	17.72	0.76	8	.06	.5	.3	SSC		3.3X	99	
1960	FEB	27	1349	58.99	19	24.00	155	17.22	0.50	8	.18	.7	.4	SSC		2.8X	112	
1960	FEB	27	1421	15.85	19	24.38	155	18.75	0.03	5	.50	1.7	3.3	SSC	#	2.8X	100	
1960	FEB	27	1442	32.64	19	25.47	155	15.58	1.70	6	.01	.9	.8	SNC		3.0X	245	
1960	FEB	27	2257	33.02	19	24.25	155	17.87	0.84	7	.06	.5	.4	SSC		2.9X	102	
1960	FEB	27	2323	2.24	19	24.06	155	16.37	4.49	6	.12	.9	1.2	SEC		3.2X	136	
1960	FEB	27	2341	20.96	19	24.75	155	16.24	2.70	6	.04	1.6	.5	SNC		2.6X	224	
1960	FEB	28	0045	59.02	19	24.06	155	17.39	0.02	6	.09	1.0	1.3	SSC	#	2.7X	116	
1960	FEB	28	0111	56.13	19	24.02	155	18.00	0.04	6	.00	.4	.9	SSC		3.0X	104	
1960	FEB	28	0519	16.28	19	23.45	155	18.43	0.04	7	.11	.4	.9	SSC	#	3.1X	122	
1960	FEB	28	0714	29.24	19	24.43	155	16.50	3.16	6	.04	1.5	.4	SEC		2.9X	209	
1960	FEB	28	1155	38.55	19	22.03	155	16.41	0.02	5	.16	2.0	1.6	SEC	#	1.9X	203	
1960	FEB	28	1224	43.10	19	24.00	155	18.26	0.19	7	.21	.7	.5	SSC		2.8X	107	
1960	FEB	28	1303	18.90	19	24.86	155	16.37	1.27	6	.07	1.4	.4	SNC		2.9X	222	
1960	FEB	28	1820	24.08	19	25.81	155	15.32	1.87	6	.11	.9	1.3	SNC		2.6X	252	
1960	FEB	28	2159	7.92	19	24.14	155	18.04	0.98	6	.03	.8	1.3	SSC		3.0X	102	
1960	FEB	28	2215	28.59	19	23.76	155	17.89	0.02	6	.04	.4	.8	SSC	#	2.9X	111	
1960	FEB	28	2312	35.43	19	24.10	155	17.28	1.41	8	.12	.6	.4	SSC		2.8X	112	
1960	FEB	29	0834	41.82	19	25.16	155	15.20	1.41	6	.11	.9	1.0	SNC		3.1X	252	
1960	FEB	29	0935	30.16	19	25.89	155	15.37	1.64	6	.09	.8	1.2	SNC		2.8X	251	
1960	FEB	29	1014	24.70	19	25.38	155	15.85	0.58	6	.07	.7	.7	SNC		2.8X	238	
1960	FEB	29	1138	12.03	19	24.00	155	17.24	1.33	9	.14	.6	.4	SSC		3.1X	96	
1960	FEB	29	1347	29.14	19	24.71	155	17.98	1.53	8	.17	.8	.3	SNC		2.8X	90	
1960	FEB	29	1355	3.09	19	18.75	155	11.64	4.75	5	.11	2.7	14.1	SSF	-	2.7X	317	15
1960	FEB	29	1659	38.04	19	24.25	155	18.16	1.44	8	.16	.7	.4	SSC		2.9X	101	
1960	FEB	29	1812	11.16	19	24.29	155	17.32	0.93	8	.14	.6	.3	SSC		3.2X	113	
1960	FEB	29	1917	36.98	19	21.01	155	16.52	1.58	5	.07	12.1	6.6	KOA	-	3.2X	240	
1960	FEB	29	1926	46.23	19	19.98	155	16.06	0.01	8	.15	1.0	.5	SSF	#	3.0X	211	
1960	FEB	29	2114	57.36	19	20.43	155	16.41	0.36	9	.23	1.0	.5	SSF		3.0X	206	
1960	FEB	29	2139	13.58	19	20.05	155	13.93	5.06	5	.11	2.7	11.8	SF2	-	2.6X	302	10
1960	FEB	29	2343	36.62	19	20.48	155	13.91	4.85	5	.04	2.2	10.8	SSF	-	3.6X	302	10
1960	MAR	1	0127	0.09	19	24.40	155	15.38	4.19	4	.00	2.0	1.1	SEC		3.0X	248	
1960	MAR	1	0348	28.55	19	17.50	155	3.08	6.89	4	.12	4.0	13.5	SF5	-	2.7X	336	29

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN	11
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS	MAG	GAP	DS	
1960	MAR	1	0418	32.81	19	24.63	155	17.28	0.00	5	.20	1.7	1.7	SNC #	2.7X	106		
1960	MAR	1	0539	8.26	19	20.96	155	17.93	0.00	5	.14	3.3	7.8	SWR #	3.6X	209		
1960	MAR	1	1037	47.71	19	24.19	155	16.75	0.01	4	.01	10.0	6.3	SSC -	2.4X	271		
1960	MAR	1	1126	4.45	19	24.27	155	15.27	3.91	5	.02	1.9	1.1	SEC	2.5X	252		
1960	MAR	1	1207	42.23	19	24.19	155	15.94	0.01	5	.05	1.5	31.6	SEC -	2.5X	292		
1960	MAR	1	1214	36.63	19	25.36	155	14.60	1.69	5	.07	.9	1.8	SNC	3.1X	264		
1960	MAR	1	1226	45.40	19	19.93	155	16.29	0.01	4	.24	18.4	31.6	SSF -	2.5X	265		
1960	MAR	1	1300	12.42	19	23.97	155	17.10	0.01	5	.04	.9	31.6	SSC -	2.3X	233		
1960	MAR	1	1426	36.00	19	25.07	155	15.97	0.03	5	.05	2.0	2.1	SNC #	2.4X	233		
1960	MAR	1	1428	19.15	19	26.33	155	16.05	0.54	4	.23	9.6	14.1	SNC -	2.4X	240		
1960	MAR	1	1448	34.07	19	25.43	155	15.32	0.03	6	.16	.6	.9	SNC #	2.6X	251		
1960	MAR	1	1529	55.97	19	25.44	155	15.36	2.23	6	.05	1.0	.9	SNC	3.0X	249		
1960	MAR	1	1627	27.44	19	25.12	155	16.27	0.10	4	.02	6.5	6.7	SNC -	2.1X	226		
1960	MAR	1	1803	11.82	19	25.12	155	15.60	3.03	6	.06	1.5	.6	SNC	2.6X	244		
1960	MAR	1	1923	40.07	19	24.34	155	18.34	1.20	7	.20	.9	1.5	SSC	2.8X	100		
1960	MAR	1	2105	48.07	19	25.31	155	15.45	2.39	6	.06	1.2	.9	SNC	2.7X	247		
1960	MAR	1	2304	23.95	19	24.54	155	16.09	0.30	6	.09	1.2	.6	SEC	2.2X	227		
1960	MAR	1	2348	6.64	19	25.14	155	15.31	16.07	7	.13	1.8	1.0	DEP	3.5X	133		
1960	MAR	2	0011	15.49	19	24.63	155	16.75	2.83	6	.05	1.7	.4	SNC	2.3X	201		
1960	MAR	2	0158	20.85	19	24.16	155	17.43	0.23	6	.19	1.3	1.6	SSC #	2.3X	112		
1960	MAR	2	0254	55.35	19	25.72	155	12.86	16.61	5	.12	3.4	1.6	DEP	2.3X	288		
1960	MAR	2	0256	32.04	19	24.12	155	16.74	0.01	4	.07	2.0	31.6	SSC -	2.5X	255		
1960	MAR	2	0259	25.42	19	24.73	155	17.05	0.76	5	.05	1.6	.6	SNC	2.2X	138		
1960	MAR	2	0412	22.23	19	24.71	155	15.84	0.01	4	.36	21.5	21.6	SNC -	2.5X	249		
1960	MAR	2	0428	17.60	19	25.49	155	14.64	0.00	6	.30	1.4	1.5	SNC #	2.5X	264		
1960	MAR	2	0441	5.06	19	23.89	155	11.23	4.79	5	.33	4.6	24.0	SER -	3.3X	315	10	
1960	MAR	2	0446	45.12	19	26.01	155	11.23	4.57	5	.30	3.3	26.1	GLN -	2.9X	302	11	
1960	MAR	2	0511	7.85	19	24.22	155	17.88	0.14	6	.08	.6	1.0	SSC	2.8X	98		
1960	MAR	2	0615	3.97	19	25.47	155	15.77	1.15	5	.01	.7	.9	SNC	2.7X	241		
1960	MAR	2	0626	26.91	19	46.00	155	7.31	43.26	8	.11	3.1	1.3	HIL	3.3X	294		
1960	MAR	2	0629	46.15	19	24.35	155	14.75	4.20	4	.01	3.8	1.5	SEC	3.1X	266		
1960	MAR	2	0643	45.92	19	24.28	155	16.54	0.07	5	.21	13.7	4.8	SSC #		197		
1960	MAR	2	0729	6.61	19	25.54	155	15.92	1.64	5	.02	1.0	1.1	SNC		237		
1960	MAR	2	0743	59.63	19	24.71	155	14.09	7.31	4	.00	2.3	1.1	INT		276		
1960	MAR	2	1310	0.47	19	24.70	155	16.23	3.93	6	.06	1.8	.7	SNC		224		
1960	MAR	2	1314	0.56	19	25.87	155	16.66	0.02	6	.22	.7	1.2	SNC #		225		
1960	MAR	2	1349	52.35	19	24.34	155	17.41	0.84	6	.08	1.5	1.3	SSC		108		
1960	MAR	2	1452	25.26	19	24.13	155	16.59	1.33	5	.03	2.1	.6	SSC		186		
1960	MAR	2	1507	34.10	19	24.65	155	16.75	0.37	5	.10	1.9	.4	SNC		277		
1960	MAR	2	1508	2.46	19	24.08	155	19.06	0.85	7	.17	.6	.4	KAO		108		
1960	MAR	2	1513	0.91	19	23.83	155	18.20	0.57	8	.08	.4	.4	SSC		111		
1960	MAR	2	1529	7.73	19	24.74	155	15.96	2.66	5	.05	2.4	.6	SNC		231		
1960	MAR	2	1532	20.92	19	24.55	155	16.55	0.03	6	.12	1.6	.4	SNC #	2.7X	213		
1960	MAR	2	1639	25.85	19	24.04	155	17.55	2.92	6	.12	2.1	1.8	SSC	2.7X	105		
1960	MAR	2	1652	6.42	19	22.15	155	14.80	0.55	6	.20	1.4	.8	SEC	3.3X	191		

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN	12
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS	MAG	GAP	DS	
1960	MAR	2	1840	23.75	19	24.28	155	17.34	5.15	5	.21	2.8	3.3	INT	2.9X	116		
1960	MAR	2	1938	39.93	19	22.70	155	16.60	2.55	6	.20	1.0	.7	SSC	2.9X	135		
1960	MAR	2	2202	7.59	19	24.68	155	19.93	0.76	5	.09	.9	3.5	KAO	2.6X	113		
1960	MAR	2	2233	35.29	19	24.49	155	17.01	1.30	6	.01	1.8	.7	SSC	2.4X	153		
1960	MAR	2	2241	47.73	19	24.89	155	18.55	1.34	6	.16	1.4	2.0	SNC	2.2X	102		
1960	MAR	2	2322	13.20	19	25.01	155	16.43	0.80	6	.07	1.2	.4	SNC	2.2X	222		
1960	MAR	2	2324	16.14	19	24.77	155	16.14	2.88	6	.19	2.7	.7	SNC	2.8X	227		
1960	MAR	3	0240	0.49	19	23.89	155	18.08	1.68	6	.11	1.4	2.0	SSC	2.4X	109		
1960	MAR	3	0400	38.61	19	17.06	155	19.52	4.31	4	.06	4.9	13.2	SWR -	2.5X	280		
1960	MAR	3	0449	29.90	19	25.86	155	16.64	0.02	5	.14	.8	1.1	SNC #	2.3X	258		
1960	MAR	3	0541	30.85	19	26.46	155	16.35	0.39	5	.05	.5	.9	SNC	2.2X	237		
1960	MAR	3	1207	7.92	19	24.04	155	17.12	1.21	7	.06	.5	.3	SSC	3.3X	93		
1960	MAR	3	1248	32.38	19	25.67	155	15.80	0.47	5	.02	2.1	2.5	SNC	3.0X	241		
1960	MAR	3	1425	56.25	19	24.22	155	17.49	0.00	8	.22	.6	.6	SSC #	2.8X	106		
1960	MAR	3	1430	42.18	19	24.28	155	18.10	0.10	6	.13	.7	1.5	SSC	3.1X	99		
1960	MAR	3	1802	10.13	19	25.39	155	14.68	5.87	5	.09	2.4	1.7	INT	3.7X	263		
1960	MAR	3	1922	14.28	19	21.79	155	17.21	0.03	6	.23	1.0	2.0	SWR #	3.0X	188		
1960	MAR	3	2359	15.36	19	24.96	155	16.81	1.53	6	.07	.7	.4	SNC	3.2X	126		
1960	MAR	4	0315	12.94	19	22.47	155	16.40	1.00	6	.07	.7	.4	SEC	3.0X	154		
1960	MAR	4	0435	8.79	19	24.98	155	16.37	1.37	6	.12	1.5	.5	SNC	2.6X	223		
1960	MAR	4	0504	38.80	19	24.84	155	16.66	2.16	7	.11	.9	.4	SNC	2.3X	126		
1960	MAR	4	0604	33.39	19	25.25	155	24.42	4.77	5	.25	1.6	23.5	KAO F-	2.8X	205		
1960	MAR	4	0648	6.27	19	24.25	155	17.22	0.40	6	.22	2.1	1.9	SSC	3.1X	128		
1960	MAR	4	1148	28.96	19	24.75	155	19.30	0.00	4	.18	2.2	3.4	KAO #	3.4X	208		
1960	MAR	4	1835	38.19	19	21.93	155	14.84	30.81	4	.00	3.2	1.2	DEP		295		
1960	MAR	4	1915	24.01	19	23.80	155	14.37	0.12	4	.33	9.4	11.9	SEC #	2.5X	281		
1960	MAR	4	2028	4.60	19	25.73	155	14.82	0.03	5	.22	4.1	7.8	SNC #	2.5X	261		
1960	MAR	5	0055	44.72	19	25.07	155	17.04	2.81	5	.02	1.5	.3	SNC	2.8X	208		
1960	MAR	5	0121	38.28	19	24.89	155	15.54	0.03	6	.23	1.1	.8	SNC #	2.9X	244		
1960	MAR	5	0641	1.78	19	24.36	155	17.96	1.24	8	.19	.7	.4	SSC F	2.8X	96		
1960	MAR	5	0644	8.08	19	23.88	155	17.80	0.68	5	.16	.8	1.4	SSC	2.4X	106		
1960	MAR	5	0649	53.51	19	24.10	155	17.41	1.51	7	.15	.7	.3	SSC	2.4X	109		
1960	MAR	5	1152	38.30	19	26.34	155	13.30	1.57	5	.09	1.2	2.2	GLN	3.0X	282		
1960	MAR	5	1503	42.97	19	22.92	155	18.63	23.50	5	.10	3.6	12.4	DEP -	2.5X	138		
1960	MAR	5	1748	12.44	19	25.16	155	15.40	0.02	6	.19	.8	.8	SNC #	2.7X	248		
1960	MAR	5	1801	35.95	19	25.65	155	15.56	0.09	6	.11	.5	.8	SNC	2.6X	246		
1960	MAR	5	2138	27.02	19	21.43	155	16.34	1.38	5	.03	11.2	5.7	KOA -		237		
1960	MAR	5	2151	18.70	19	21.58	155	15.11	25.86	7	.08	2.3	1.3	DEP	2.5X	196		
1960	MAR	5	2357	18.02	19	20.70	155	15.05	0.06	6	.21	1.8	4.2	KOA #	2.8X	205		
1960	MAR	6	0952	16.71	19	25.10	155	15.35	2.56	6	.10	1.5	.9	SNC	2.3X	249		
1960	MAR	6	1127	17.57	19	25.12	155	16.11	0.12	5	.02	1.9	1.8	SNC	2.1X	230		
1960	MAR	6	1148	32.70	19	23.39	155	16.87	0.11	4	.30	9.9	8.5	SSC #	2.3X	181		
1960	MAR	6	1215	17.20	19	26.60	155	28.01	4.56	7	.18	1.9	14.4	KAO -	3.0X	269	10	
1960	MAR	6	1321	30.39	19	23.63	155	18.22	0.84	5	.01	.4	1.3	SSC	2.5X	116		
1960	MAR	6	1351	8.06	19	25.09	155	15.34	2.14	5	.14	1.5	1.6	SNC	2.3X	250		

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	13
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	MAR	6	1438	17.24	19	26.90	155	9.83	5.07	5	.21	2.7	16.9	GLN	-	2.8X	310	13	
1960	MAR	6	1627	15.77	19	23.94	155	17.83	0.02	5	.17	1.8	3.6	SSC	#	2.4X	106		
1960	MAR	6	1732	27.40	19	24.30	155	16.95	0.00	4	.37	4.7	3.3	SSC	#	2.7X	161		
1960	MAR	6	1926	46.72	19	24.39	155	17.11	0.72	5	.03	1.7	1.1	SSC		2.1X	138		
1960	MAR	6	2013	4.30	19	25.32	155	15.53	0.01	6	.26	.9	1.1	SNC	#	2.4X	245		
1960	MAR	6	2104	27.67	19	24.44	155	17.17	1.62	6	.08	2.0	.9	SSC		2.8X	130		
1960	MAR	6	2115	50.19	19	25.43	155	15.46	1.35	6	.04	.8	.9	SNC		2.7X	247		
1960	MAR	6	2218	33.83	19	24.88	155	17.17	0.01	5	.27	.7	31.6	SNC	-	2.3X	120		
1960	MAR	6	2333	57.25	19	24.24	155	13.08	6.95	7	.14	1.4	2.8	SF2	F	2.9X	166		
1960	MAR	7	0324	18.66	19	24.92	155	13.78	5.48	7	.13	1.2	2.9	SF2	F	3.9X	146		
1960	MAR	7	0519	10.52	19	25.44	155	15.80	3.55	5	.16	2.4	1.3	SNC		2.1X	240		
1960	MAR	7	0522	6.85	19	24.80	155	17.15	2.82	6	.12	2.0	.6	SNC		2.3X	99		
1960	MAR	7	0924	13.23	19	24.58	155	15.35	0.02	5	.21	1.2	1.6	SNC	#	2.7X	249		
1960	MAR	7	1053	17.15	19	25.25	155	16.35	0.01	4	.23	1.1	31.6	SNC	-	2.5X	226		
1960	MAR	7	1157	0.84	19	24.84	155	15.72	2.22	5	.07	1.5	.9	SNC		2.4X	240		
1960	MAR	7	1408	28.02	19	25.69	155	15.65	1.40	5	.11	.8	1.5	SNC		2.7X	245		
1960	MAR	7	1632	31.48	19	27.10	155	13.00	0.04	6	.05	1.1	31.6	GLN	F-	3.7X	285		
1960	MAR	8	0141	35.32	19	21.21	155	12.32	0.99	6	.13	1.8	1.0	SER		3.1X	315		
1960	MAR	8	0202	34.45	19	25.77	155	16.07	0.38	6	.05	.5	.8	SNC		2.4X	236		
1960	MAR	8	0224	12.98	19	25.20	155	17.07	2.24	5	.06	1.7	.3	SNC		3.0X	210		
1960	MAR	8	0434	53.81	19	25.13	155	15.78	1.53	5	.10	1.2	1.2	SNC		2.7X	239		
1960	MAR	8	0542	43.64	19	26.55	155	14.98	0.91	6	.12	.8	1.3	SNC		3.1X	259		
1960	MAR	8	0950	37.21	19	25.63	155	14.50	0.12	6	.23	1.1	1.6	SNC	#	2.8X	266		
1960	MAR	8	0951	22.23	19	23.74	155	17.96	0.06	5	.09	.5	1.3	SSC	#	2.6X	113		
1960	MAR	8	1155	42.00	19	25.03	155	15.37	1.04	5	.07	.7	1.2	SNC		2.8X	248		
1960	MAR	8	1452	38.69	19	24.76	155	16.86	0.85	5	.01	1.8	.3	SNC		2.6X	201		
1960	MAR	8	1901	40.92	19	24.68	155	15.29	0.03	5	.39	1.9	3.4	SNC	#	2.9X	251		
1960	MAR	9	0024	58.35	19	23.62	155	16.92	3.92	4	.00	1.9	1.6	SSC		2.9X	160		
1960	MAR	9	0346	16.76	19	25.58	155	15.24	0.67	5	.13	.9	1.5	SNC		3.0X	253		
1960	MAR	9	0528	56.17	19	24.76	155	16.19	0.29	4	.18	14.8	10.5	SNC	-	2.2X	226		
1960	MAR	9	1015	44.18	19	25.36	155	14.17	0.03	6	.33	1.6	1.8	SNC	#	2.7X	272		
1960	MAR	9	1058	25.46	19	24.63	155	17.06	0.00	5	.23	2.0	1.5	SNC	#	2.4X	142		
1960	MAR	9	1606	20.60	19	23.19	155	15.10	0.00	4	.24	8.8	6.8	SEC	#	2.3X	271		
1960	MAR	9	1817	36.06	19	26.06	155	9.76	4.82	6	.29	3.0	22.4	GLN	-	3.0X	311	13	
1960	MAR	9	2113	54.58	19	26.07	155	14.62	0.35	5	.10	.9	1.3	SNC		2.4X	264		
1960	MAR	9	2114	52.15	19	24.23	155	17.10	0.63	5	.04	1.5	1.0	SSC		2.2X	141		
1960	MAR	10	0124	50.16	19	25.87	155	12.78	7.00	5	.64	23.3	11.4	SF2	#	2.7X	289		
1960	MAR	10	0728	57.93	19	25.36	155	15.16	0.10	5	.07	.7	1.0	SNC		2.6X	254		
1960	MAR	10	1129	32.10	19	24.77	155	16.45	2.57	4	.01	1.8	.6	SNC		2.8X	219		
1960	MAR	10	1146	17.51	19	25.57	155	13.29	0.00	4	.17	2.3	2.1	SER	#	3.1X	284		
1960	MAR	10	1220	7.23	19	25.17	155	14.63	0.01	5	.22	1.2	1.8	SNC	#	2.8X	264		
1960	MAR	10	1225	16.68	19	31.45	155	10.69	5.97	4	.05	1.7	10.1	GLN	-	3.1X	306	16	
1960	MAR	10	1257	52.81	19	24.24	155	17.69	0.48	4	.00	1.6	1.9	SSC		2.0X	133		
1960	MAR	10	1359	17.66	19	25.80	155	15.24	0.08	5	.12	.8	1.2	SNC		2.4X	253		
1960	MAR	10	1446	36.32	19	25.45	155	16.05	0.02	6	.10	.5	.7	SNC	#	2.2X	234		

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	14
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	MAR	10	1535	44.28	19	25.35	155	15.59	0.03	6	.15	.8	1.1	SNC	#	2.5X	244		
1960	MAR	10	1654	45.95	19	25.03	155	15.05	2.10	5	.01	1.3	1.0	SNC		2.6X	256		
1960	MAR	10	1911	0.95	19	23.87	155	16.55	4.81	4	.01	1.8	1.2	SSC		2.7X	190		
1960	MAR	10	1939	35.06	19	23.11	155	17.35	2.65	5	.01	2.2	2.6	SSC		2.7X	126		
1960	MAR	10	1941	23.44	19	24.78	155	17.67	4.30	4	.00	1.4	.8	SNC		2.4X	139		
1960	MAR	10	2205	31.73	19	25.05	155	16.79	1.19	4	.00	1.8	.5	SNC		2.4X	214		
1960	MAR	10	2216	58.20	19	25.33	155	14.89	0.02	5	.28	1.4	2.1	SNC	#	2.4X	259		
1960	MAR	10	2243	51.91	19	24.24	155	17.68	0.48	4	.00	1.6	1.9	SSC		2.8X	134		
1960	MAR	11	0044	49.15	19	25.41	155	15.70	0.03	5	.22	1.0	1.5	SNC	#	2.5X	242		
1960	MAR	11	0131	56.85	19	24.42	155	15.71	1.37	4	.01	2.5	.8	SEC		2.5X	238		
1960	MAR	11	0329	5.76	19	28.02	155	13.51	8.96	4	.01	2.7	2.3	GLN		3.1X	281		
1960	MAR	11	0426	24.24	19	25.63	155	15.79	0.14	5	.06	.6	1.0	SNC		2.8X	241		
1960	MAR	11	1543	32.59	19	24.88	155	4.62	5.41	6	.19	3.6	17.4	SF5	-	2.4X	200	16	
1960	MAR	11	2016	30.53	19	23.41	155	17.22	0.00	4	.09	1.9	3.0	SSC	#	2.5X	138		
1960	MAR	11	2047	41.94	19	23.50	155	10.41	4.74	6	.39	5.1	27.9	SER	-	3.4X	317	10	
1960	MAR	12	2205	33.88	19	22.77	155	13.50	0.09	5	.22	1.7	1.0	SER	#	2.4X	310		
1960	MAR	13	0650	27.07	19	50.81	155	3.91	44.60	7	.15	6.3	2.9	KEA		2.6X	328	14	
1960	MAR	13	0727	19.04	19	26.16	155	26.14	7.19	4	.08	4.7	13.1	KAO	-	2.5X	241		
1960	MAR	13	1045	21.56	19	23.71	155	14.72	11.24	5	.15	2.9	1.1	INT		2.5X	274		
1960	MAR	15	0737	56.86	19	23.92	155	17.18	3.81	5	.01	1.7	1.3	SSC		2.8X	156		
1960	MAR	16	0717	32.65	19	19.78	155	53.34	2.37	5	.07	9.3	8.1	KON	-	2.8X	341	53	
1960	MAR	17	0408	57.41	19	25.69	155	15.52	0.32	6	.24	.9	1.3	SNC		2.8X	247		
1960	MAR	17	0413	47.30	19	26.53	155	14.59	0.02	5	.24	1.1	1.6	SNC	#	3.0X	265		
1960	MAR	19	0008	20.64	19	25.09	156	7.29	7.13	6	.15	10.9	14.2	KON	-		347	77	
1960	MAR	19	2208	24.28	19	20.03	155	12.18	0.55	7	.15	2.0	1.4	SSF		2.9X	256		
1960	MAR	19	2228	11.84	19	46.25	156	6.56	5.14	6	.19	12.7	15.6	HUA	-	3.3X	336	81	
1960	MAR	20	1441	50.55	19	26.19	155	15.81	0.03	6	.05	.4	.7	SNC		3.0X	245		
1960	MAR	21	2041	25.42	19	25.62	155	33.66	9.85	6	.06	1.8	6.2	MLO			308	20	
1960	MAR	23	1158	32.01	19	24.51	155	15.53	14.81	8	.03	1.4	.7	DEP		2.6X	163		
1960	MAR	23	1748	26.04	19	25.39	155	15.66	14.59	9	.18	1.4	1.1	DEP	F	3.8X	109		
1960	MAR	23	1752	59.95	19	23.75	155	15.58	21.68	8	.09	1.5	2.5	DEP		3.8X	122		
1960	MAR	23	1755	19.63	19	25.25	155	16.67	15.77	9	.08	1.1	.8	DEP		2.7X	89		
1960	MAR	23	1842	3.95	19	25.77	155	16.23	14.72	9	.13	1.3	1.0	DEP		2.4X	97		
1960	MAR	24	1316	21.68	19	24.91	155	22.72	11.03	9	.12	1.0	1.1	KAO	F	3.2X	167		
1960	MAR	24	2334	49.88	19	21.96	155	31.34	10.66	7	.10	1.8	1.1	KAO		3.0X	302	14	
1960	MAR	26	2020	16.03	19	24.01	155	15.23	16.07	8	.15	2.2	1.2	DEP		2.5X	176		
1960	MAR	31	0152	25.59	19	20.06	155	20.25	30.29	4	.00	2.5	1.8	DEP			213		
1960	MAR	31	1010	48.29	19	24.15	155	17.47	14.23	8	.11	1.3	1.0	DEP		2.4X	96		
1960	MAR	31	1225	29.30	19	27.00	155	12.44	11.90	6	.01	2.3	1.3	GLN		2.8X	290		
1960	APR	1	1906	11.28	19	24.99	155	17.74	16.69	9	.10	1.2	1.0	DEP		3.0X	94		
1960	APR	1	1908	53.65	19	32.69	155	9.97	4.91	4	.01	2.2	12.5	GLN	-	2.3X	199	19	
1960	APR	2	1816	45.20	19	12.32	155	37.59	0.75	5	.18	5.2	18.6	LSW	-	2.4X	232	16	
1960	APR	3	1541	4.11	19	22.25	155	17.09	0.02	8	.15	.5	.3	SSC	#	2.8X	142		
1960	APR	4	0434	11.72	19	21.57	155	16.55	0.00	8	.12	.8	1.1	KOA	#	3.3X	189		
1960	APR	4	0936	42.84	19	21.67	155	17.04	0.03	8	.23	.9	.7	SWR	#	2.9X	169		

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF		AZ	MIN 15
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	APR	5	0318	53.86	19	25.83	155	16.56	2.53	6	.02	.7	.4	SNC		3.2X	138		
1960	APR	5	0443	23.83	19	25.58	155	13.68	23.43	8	.02	2.2	1.4	DEP		2.2X	190		
1960	APR	17	1735	44.72	19	28.70	155	13.37	20.13	8	.14	1.5	3.4	DEP		2.9X	115		
1960	APR	18	1641	0.22	19	13.67	155	10.08	6.95	4	.12	1.916.1		SF3	-	1.7X	210	38	
1960	APR	20	1655	34.85	19	26.59	155	16.21	47.96	5	.01	3.0	5.3	DEP		2.3X	96		
1960	APR	20	1808	18.98	19	35.26	155	24.03	65.20	9	.14	3.0	1.9	KEA		2.4X	248	10	
1960	APR	20	1943	5.96	19	35.19	155	22.67	62.70	8	.15	4.3	2.0	KEA		2.4X	237	10	
1960	APR	21	0438	4.03	19	36.54	155	26.57	59.46	7	.20	6.4	2.3	KEA			262	14	
1960	APR	21	0521	18.94	19	33.52	155	22.53	58.10	9	.11	2.9	1.1	DML			216		
1960	APR	21	0554	14.87	19	32.40	155	24.07	61.70	8	.11	4.0	1.4	DML			254		
1960	APR	21	0630	15.12	19	31.77	155	24.87	58.69	9	.09	3.4	1.6	DML			254		
1960	APR	21	0631	21.65	19	24.31	155	18.24	6.51	5	.17	2.815.3		INT	-		155	12	
1960	APR	21	0651	5.09	19	34.64	155	24.80	59.24	8	.08	2.3	1.6	DML		2.4X	251		
1960	APR	21	0815	29.87	19	31.90	155	21.54	0.03	4	.1513.9		2.4	MLO	-		236		
1960	APR	21	0815	52.81	19	25.13	155	12.23	6.99	4	.10	1.614.4		SF3	-	2.3X	154	28	
1960	APR	21	0817	11.31	19	22.62	155	8.12	0.01	4	.10	2.8	.4	SER	#	2.1X	227	30	
1960	APR	21	0854	29.98	19	48.32	155	34.98	37.82	5	.01	5.3	5.4	KEA		2.5X	279	40	
1960	APR	21	0942	32.81	19	32.19	155	26.90	57.56	6	.06	3.1	1.7	DML			257		
1960	APR	21	1015	52.32	19	36.34	155	28.17	54.46	6	.08	3.1	1.9	KEA		2.4X	268	15	
1960	APR	21	1025	45.36	19	25.87	155	13.97	6.93	4	.08	1.113.3		SF2	-	2.0X	162	18	
1960	APR	21	1027	50.18	19	25.12	155	12.83	6.92	4	.25	1.822.7		SF2	-	2.0X	171	20	
1960	APR	21	1028	47.79	19	34.67	155	16.01	45.00	4	.02	2.331.6		DEP	-		174	16	
1960	APR	21	1031	2.92	19	27.12	155	16.61	25.70	6	.25	2.5	4.4	DEP		2.3X	100		
1960	APR	21	1126	30.38	19	25.24	155	13.37	6.93	4	.10	1.114.4		SF2	-	2.0X	168	19	
1960	APR	21	1140	44.55	19	26.36	155	17.59	31.10	4	.09	4.4	9.9	DEP	-	2.3X	142	12	
1960	APR	21	1758	52.08	19	25.44	155	13.37	6.94	4	.09	1.113.6		SF2	-	2.0X	167	19	
1960	APR	21	1759	52.73	19	27.63	155	14.08	6.94	4	.23	1.722.5		INT	-	2.0X	202	17	
1960	APR	21	1802	53.60	19	27.72	155	18.28	30.29	4	.06	4.7	9.4	DEP	-	2.1X	129	10	
1960	APR	21	1826	35.07	19	35.69	155	21.90	55.06	7	.10	3.0	1.9	KEA		2.3X	231	11	
1960	APR	21	1848	50.02	19	26.50	155	15.86	30.02	4	.08	3.910.5		DEP	-	2.5X	150	14	
1960	APR	21	1852	51.04	19	26.61	155	13.97	6.95	4	.00	.911.4		GLN	-	2.0X	156	17	
1960	APR	21	1854	22.16	19	37.11	155	19.93	44.15	7	.13	2.3	2.0	KEA		2.4X	222	15	
1960	APR	21	1900	33.35	19	27.55	155	17.68	29.43	4	.06	4.6	9.9	DEP	-	2.2X	133	11	
1960	APR	21	1903	45.01	19	34.69	155	22.35	54.74	8	.12	3.4	1.9	DML		2.8X	231		
1960	APR	21	1935	38.19	19	35.14	155	24.98	56.15	7	.15	5.0	1.9	KEA	#	2.4X	253	10	
1960	APR	21	1959	42.25	19	23.65	155	4.37	7.00	5	.27	3.125.4		SF5	-	2.0X	262	34	
1960	APR	21	2020	2.20	19	33.66	155	21.88	54.06	4	.01	3.7	1.4	DML		2.3X	218		
1960	APR	21	2023	5.58	19	38.44	155	26.72	54.41	6	.10	4.3	1.8	KEA		2.3X	277	17	
1960	APR	21	2114	40.17	19	25.16	155	13.52	6.91	4	.16	1.417.2		SF2	-	2.1X	169	19	
1960	APR	21	2118	53.41	19	31.71	155	21.30	64.34	5	.00	3.4	2.2	DML		2.4X	187		
1960	APR	21	2126	47.71	19	27.01	155	16.56	19.34	5	.05	1.5	3.4	DEP		2.4X	137	13	
1960	APR	21	2227	41.50	19	27.11	155	17.14	28.73	4	.09	4.610.8		DEP	-	2.5X	139	12	
1960	APR	21	2311	33.84	19	25.94	155	13.88	6.93	4	.16	1.417.0		SF2	-	2.0X	162	18	
1960	APR	21	2353	19.97	19	27.25	155	17.44	28.68	4	.12	5.211.8		DEP	-	2.2X	137	11	
1960	APR	22	0027	16.95	19	26.22	155	13.97	6.93	4	.04	1.011.9		GLN	-	2.0X	159	18	

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF		AZ	MIN 16
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	APR	22	0116	7.13	19	26.79	155	14.74	6.91	4	.21	1.921.0		INT	-	2.0X	211	16	
1960	APR	22	0129	40.57	19	26.39	155	14.26	6.94	4	.15	1.316.1		INT	-	2.0X	157	17	
1960	APR	22	0142	48.91	19	26.82	155	14.82	13.28	5	.01	.9	1.3	DEP		2.5X	141	16	
1960	APR	22	0151	17.38	19	29.69	155	17.88	25.97	5	.23	2.4	4.5	DEP		2.6X	129		
1960	APR	22	0205	17.32	19	27.78	155	17.50	30.04	4	.02	4.3	9.1	DEP	-	2.3X	132	11	
1960	APR	22	0240	35.49	19	28.88	155	18.95	28.87	4	.06	5.5	9.6	DEP	-	2.5X	119		
1960	APR	22	0254	23.15	19	27.18	155	16.51	20.58	4	.00	2.4	3.9	DEP		2.3X	149	13	
1960	APR	22	0302	43.04	19	36.54	155	20.30	30.77	6	.03	1.6	2.7	KEA		2.1X	220	14	
1960	APR	22	0312	22.07	19	28.76	155	17.93	28.91	4	.08	5.410.6		DEP	-	2.4X	124	10	
1960	APR	22	0318	50.89	19	28.56	155	17.06	25.59	5	.10	1.6	2.9	DEP		2.1X	115	11	
1960	APR	22	0330	11.29	19	34.31	155	19.62	48.97	7	.04	1.5	1.7	DML		2.7X	198	11	
1960	APR	22	0353	18.22	19	34.01	155	19.53	53.82	8	.12	1.6	2.0	DML		2.5X	194	10	
1960	APR	22	0358	56.24	19	34.64	155	22.99	52.65	6	.13	3.1	2.2	DML		2.3X	238		
1960	APR	22	0416	37.69	19	26.15	155	14.58	6.93	4	.04	1.012.0		INT	-	2.2X	157	17	
1960	APR	22	0441	36.93	19	32.72	155	25.94	45.20	5	.23	9.6	5.6	DML		2.6X	224		
1960	APR	22	0458	15.64	19	36.70	155	27.77	53.12	5	.06	4.3	2.7	KEA		2.3X	267	15	
1960	APR	22	0503	24.14	19	23.92	155	13.23	6.85	4	.18	4.719.0		SF2	-	2.3X	206	21	
1960	APR	22	0519	31.19	19	25.76	155	15.73	15.66	4	.00	1.4	1.7	DEP		2.8X	144	15	
1960	APR	22	0554	21.41	19	38.20	155	23.62	58.32	5	.4913.7		6.6	KEA		3.0X	235	33	
1960	APR	22	0600	42.03	19	36.13	155	22.42	5.74	5	.01	2.3	3.0	KEA		2.3X	225	33	
1960	APR	22	0602	20.73	19	47.47	155	23.55	58.81	4	.01	4.9	2.5	KEA		2.9X	268	33	
1960	APR	22	0831	53.53	19	31.23	155	22.40	50.99	5	.01	3.0	2.0	DML			242		
1960	APR	22	0903	23.05	19	25.29	155	15.53	6.81	4	.08	2.813.8		INT	-		146	16	
1960	APR	22	0920	7.36	19	29.69	155	19.08	52.58	6	.03	2.8	1.7	DML			177		
1960	APR	22	1024	11.79	19	37.39	155	21.33	28.85	6	.06	1.5	1.5	KEA			266	14	
1960	APR	22	1035	45.79	19	27.10	155	15.41	12.80	4	.01	1.6	1.3	INT			151	15	
1960	APR	22	1045	54.87	19	23.20	155	12.52	0.03	6	.37	1.8	1.0	SER	#		163	20	
1960	APR	22	1221	15.03	19	39.56	155	21.86	33.76	4	.00	3.7	2.4	KEA			272	18	
1960	APR	22	1253	44.93	19	39.77	155	19.35	26.28	4	.00	2.7	3.2	KEA			272	20	
1960	APR	22	2039	1.09	19	27.67	155	16.29	22.47	7	.27	2.5	3.6	DEP		2.4X	105		
1960	APR	22	2050	36.05	19	33.23	155	22.32	52.04	6	.09	2.8	2.3	DML		2.3X	222		
1960	APR	22	2310	41.26	19	31.95	155	19.65	52.38	8	.09	2.8	1.5	DML		2.7X	171		
1960	APR	23	0033	17.82	19	34.74	155	17.38	52.23	7	.08	2.6	1.5	DEP		2.4X	184	14	
1960	APR	23	0044	25.96	19	34.87	155	26.90	48.92	9	.07	3.1	1.5	DML		2.6X	261	11	
1960	APR	23	1332	10.45	19	33.65	155	22.37	52.62	5	.03	3.2	2.1	DML			266		
1960	APR	23	1342	56.28	19	23.59	155	19.04	1.90	5	.04	1.8	3.0	KAO		3.6X	176		
1960	APR	23	2020	18.91	19	23.03	155	14.92	2.23	7	.08	.7	.7	SEC		3.8X	168		
1960	APR	24	2233	19.61	19	18.35	155	5.75	7.45	4	.06	4.110.4		SF4	-	2.8X	241	24	
1960	APR	25	1615	3.57	19	22.50	155	24.36	0.65	5	.04	2.0	1.2	KAO	#	3.3X	211		
1960	APR	25	1654	54.48	19	20.35	155	11.19	4.60	5	.19	3.418.6		SSF	-	2.9X	320	13	
1960	APR	25	1919	57.24	19	24.88	155	25.13	4.49	6	.15	1.313.9		KAO	-	2.7X	220		
1960	APR	26	0701	50.93	19	17.93	155	7.08	4.46	5	.06	2.712.8		SSF	-	3.2X	331	22	
1960	APR	26	0704	24.08	19	23.90	155	18.27	4.88	8	.13	.7	1.1	SSC		3.0X	110		
1960	APR	26	1325	41.12	19	20.97	155	16.24	5.80	4	.2315.9		15.2	SF1	-		252		
1960	APR	26	2254	32.36	20	0.94	155	19.72	0.37	5	.4728.3		15.3	KEA	-	3.9X	347	58	

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN 17
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS
1960	APR	27	0952	54.42	19	40.43	155	6.44	45.85	6	.05	5.8	4.2	HIL		3.7X	330	34
1960	APR	29	0613	5.43	19	38.09	155	38.67	9.09	6	.06	10.4	4.4	KEA	-	4.4X	321	31
1960	APR	29	1200	42.56	19	28.99	155	33.02	26.01	5	.04	8.1	5.5	DML	-		311	17
1960	APR	30	0103	28.65	19	22.96	155	26.16	6.30	4	.12	5.9	12.1	KAO	-		246	
1960	APR	30	1322	18.08	19	24.12	155	17.37	0.69	6	.11	1.4	1.4	SSC		2.5X	116	
1960	APR	30	1335	21.30	19	24.20	155	18.09	0.02	4	.13	2.0	4.3	SSC	#	2.2X	102	
1960	APR	30	1840	54.04	19	24.21	155	16.94	1.76	5	.01	1.9	.9	SSC		2.4X	178	
1960	APR	30	2130	42.58	19	17.42	155	9.37	4.46	4	.11	13.8	15.1	SSF	-	2.7X	326	15
1960	MAY	3	0706	54.87	19	23.87	155	14.83	4.91	6	.05	2.0	1.5	SEC		2.6X	268	
1960	MAY	3	2042	35.04	19	25.29	155	14.91	0.02	6	.27	1.1	1.3	SNC	#	3.0X	259	
1960	MAY	5	0946	32.70	19	16.96	155	17.33	4.93	6	.17	3.3	8.3	SWR	#	2.9X	277	10
1960	MAY	8	0526	52.13	19	18.20	155	17.38	29.19	7	.10	2.9	1.7	DEP		2.7X	231	
1960	MAY	8	0628	38.44	19	22.14	155	19.46	32.22	8	.18	2.3	2.4	DML		3.8X	135	
1960	MAY	8	0630	15.59	19	20.86	155	20.74	36.54	6	.12	3.2	1.4	DEP		3.8X	187	
1960	MAY	9	1255	30.91	19	18.09	155	29.93	4.81	6	.02	1.5	2.5	LSW		2.8X	188	12
1960	MAY	9	2000	18.72	19	21.43	155	17.62	0.02	7	.13	.9	.9	SWR	#	2.8X	165	
1960	MAY	11	2308	45.48	19	25.41	155	15.21	0.04	6	.16	3.7	5.8	SNC	#	2.9X	253	
1960	MAY	12	1118	8.55	19	16.53	155	24.54	24.81	7	.25	3.2	4.6	DEP		3.9X	156	
1960	MAY	16	0526	53.32	19	22.59	155	26.23	12.12	6	.10	1.4	3.0	KAO		2.7X	251	
1960	MAY	17	0305	15.92	20	41.43	155	37.13	7.01	7	.09	8.9	11.2	DIS	-	3.8X	342	121
1960	MAY	19	1420	0.95	19	22.22	155	2.66	37.45	8	.04	1.8	3.7	DEP		2.8X	229	17
1960	MAY	20	0224	7.74	19	23.56	155	28.42	9.33	8	.14	1.3	1.1	KAO		3.4X	198	11
1960	MAY	21	0841	36.66	19	37.20	155	37.48	6.85	6	.09	3.5	10.6	KEA	-	3.0X	337	28
1960	MAY	25	0235	50.67	20	8.45	155	36.02	6.81	8	.08	8.6	10.7	KOH	-	2.7X	325	71
1960	MAY	25	1045	34.63	19	24.21	155	17.45	1.71	5	.03	1.6	1.3	SSC		2.8X	109	
1960	MAY	27	0549	8.93	19	27.08	155	14.24	6.44	8	.20	1.7	2.9	INT		3.5X	172	
1960	MAY	27	0558	10.95	19	27.36	155	15.03	8.43	7	.12	1.7	1.0	INT		3.3X	188	
1960	MAY	29	0442	25.98	19	25.04	155	15.81	1.04	4	.01	1.4	2.4	SNC		2.4X	238	
1960	MAY	31	0131	3.10	19	10.09	155	12.81	10.36	7	.12	4.2	1.6	SF2		3.6X	304	23
1960	MAY	31	1616	30.84	19	24.24	155	16.94	0.02	5	.04	1.7	1.0	SSC	#	2.0X	162	
1960	MAY	31	1728	19.21	19	24.50	155	17.46	1.15	5	.08	11.6	7.1	SSC	-	2.0X	170	
1960	MAY	31	1930	20.27	19	24.35	155	18.29	1.56	5	.01	1.1	1.5	SSC		2.5X	99	
1960	JUN	2	0202	56.55	19	18.29	155	59.46	6.95	5	.14	10.5	13.7	KON	-	2.9X	337	63
1960	JUN	2	0322	59.09	19	23.92	155	17.95	0.03	7	.11	.5	.4	SSC	#	2.3X	107	
1960	JUN	2	2047	23.49	19	23.77	155	26.37	4.15	9	.21	1.7	6.2	KAO		3.5X	202	
1960	JUN	4	1655	45.04	19	18.95	155	10.91	4.76	6	.32	4.5	26.0	SSF	-	2.9X	321	11
1960	JUN	5	1147	32.11	19	42.14	155	9.15	30.08	6	.10	6.0	4.7	KEA		2.8X	268	32
1960	JUN	5	1235	29.25	19	20.95	155	14.05	5.08	4	.03	2.5	9.4	SF2	-	2.8X	303	10
1960	JUN	5	2150	55.55	19	24.08	155	17.70	1.33	5	.01	1.2	1.5	SSC		2.7X	131	
1960	JUN	5	2340	31.05	19	21.21	155	15.98	1.02	6	.05	1.0	.3	KOA		3.1X	238	
1960	JUN	7	1219	24.81	19	14.38	155	35.62	6.99	5	.02	2.8	9.2	LSW	-	4.0X	220	20
1960	JUN	7	2041	40.16	19	24.59	155	16.96	8.24	6	.04	1.6	1.0	INT		2.8X	161	
1960	JUN	8	0613	55.97	19	24.33	155	14.42	6.95	4	.00	2.3	1.2	INT		3.3X	272	
1960	JUN	9	2002	55.06	19	21.77	155	17.57	7.20	5	.01	1.2	2.2	SWR		2.7X	186	
1960	JUN	10	1902	12.81	19	24.30	155	16.90	1.36	5	.02	.4	.2	SSC		2.7X	123	

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN 18
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS
1960	JUN	11	0402	2.94	19	25.71	155	15.36	1.73	4	.00	1.4	3.3	SNC		2.4X	250	
1960	JUN	13	1753	57.84	18	59.05	155	20.75	12.05	7	.12	1.8	1.5	LOI		3.7X	254	27
1960	JUN	14	2315	34.71	19	25.32	155	16.24	1.73	7	.06	.8	.4	SNC		3.1X	144	
1960	JUN	14	2353	36.66	19	25.84	155	16.35	2.02	8	.02	.5	.6	SNC		2.5X	94	
1960	JUN	15	0711	40.81	19	24.46	155	17.99	1.85	8	.10	.6	.3	SSC		3.1X	94	
1960	JUN	15	1216	50.85	19	24.90	155	18.81	0.86	5	.13	.7	1.6	SNC		3.0X	106	
1960	JUN	16	0321	34.73	19	24.29	155	17.41	1.24	6	.02	1.5	1.2	SSC		2.9X	110	
1960	JUN	16	1443	42.80	19	24.02	155	18.17	0.20	6	.04	.4	.9	SSC		2.6X	106	
1960	JUN	16	1605	14.08	19	24.78	155	16.61	2.25	5	.00	1.9	.3	SNC		2.7X	215	
1960	JUN	16	1653	19.61	19	24.75	155	16.74	1.33	5	.01	1.6	.5	SNC		2.7X	211	
1960	JUN	16	2024	38.92	19	24.45	155	16.88	1.40	6	.12	2.2	.7	SSC		2.5X	169	
1960	JUN	17	0244	43.71	19	25.34	155	16.03	0.58	6	.08	.8	.7	SNC		2.6X	234	
1960	JUN	17	0256	51.85	19	26.60	155	14.43	0.65	6	.08	.8	1.1	SNC		3.3X	268	
1960	JUN	18	0155	12.67	19	24.13	155	17.78	1.04	6	.02	1.0	1.3	SSC		2.7X	100	
1960	JUN	18	0156	7.55	19	19.24	155	11.34	17.95	4	.00	2.8	2.1	DEP		3.6X	223	10
1960	JUN	18	0428	33.20	19	25.05	155	17.39	1.77	5	.01	1.5	.4	SNC		2.5X	142	
1960	JUN	18	0838	13.61	19	24.38	155	16.68	1.92	6	.11	2.2	.5	SSC		2.4X	189	
1960	JUN	18	0842	52.88	19	24.27	155	17.47	1.85	5	.02	1.6	1.2	SSC		3.1X	106	
1960	JUN	18	0950	8.81	19	22.03	155	17.27	0.02	8	.09	.5	.3	SSC		3.5X	150	
1960	JUN	18	0959	39.64	19	26.07	155	14.31	0.02	6	.23	1.3	1.4	SNC	#	2.7X	269	
1960	JUN	18	1252	10.88	19	24.75	155	16.65	2.21	4	.00	1.8	.5	SNC			214	
1960	JUN	19	0354	34.91	19	24.33	155	17.71	1.42	5	.05	1.5	1.5	SSC		2.9X	95	
1960	JUN	19	0810	15.36	19	23.71	155	18.05	0.02	5	.08	1.4	3.3	SSC	#	3.0X	113	
1960	JUN	19	0829	25.93	19	24.89	155	14.12	2.12	5	.10	.9	1.4	SNC		2.9X	275	
1960	JUN	19	0925	58.80	19	23.30	155	17.27	1.02	8	.13	.6	.5	SSC		2.3X	118	
1960	JUN	19	1816	40.65	19	19.94	155	11.43	4.58	6	.11	2.8	13.8	SSF	-	2.6X	318	
1960	JUN	20	1111	24.77	19	20.32	155	12.18	4.95	5	.14	3.8	13.6	SSF	-	3.8X	315	12
1960	JUN	20	1258	24.32	19	22.74	155	21.19	30.20	9	.14	2.0	1.7	DML		4.5X	126	
1960	JUN	20	1314	48.15	19	23.24	155	20.77	21.35	6	.03	2.4	3.3	DML		4.0X	240	
1960	JUN	20	1358	54.01	19	19.47	155	20.18	3.67	7	.15	7.3	11.9	SWR	-	3.8X	315	11
1960	JUN	20	1529	4.76	19	22.37	155	16.25	30.00	8	.10	1.8	1.3	DEP		3.1X	235	
1960	JUN	20	1858	58.31	19	24.19	155	16.04	15.75	9	.04	1.4	.6	DEP		3.3X	147	
1960	JUN	21	0100	17.28	19	21.88	155	17.50	28.48	10	.09	2.9	1.3	DEP		3.1X	152	
1960	JUN	21	0329	12.59	19	23.93	155	18.09	13.93	9	.11	1.1	.4	DEP		3.3X	93	
1960	JUN	21	1056	45.68	19	23.41	155	17.82	0.04	5	.12	1.6	3.7	SSC	#	3.8X	120	
1960	JUN	22	0509	56.69	19	20.02	155	12.70	4.90	5	.04	2.2	10.9	SSF	-	3.2X	311	12
1960	JUN	22	1130	16.88	19	19.10	155	14.98	6.49	8	.07	1.2	2.0	SF1		2.7X	212	
1960	JUN	24	0302	36.84	19	25.06	155	16.74	1.29	4	.01	1.9	.3	SNC		2.7X	215	
1960	JUN	24	0412	42.71	19	19.07	155	27.33	7.99	5	.08	9.3	5.0	KAO	-	2.8X	306	
1960	JUN	26	0147	25.39	19	25.76	155	16.47	0.01	5	.33	.9	31.6	SNC	-	1.7X	228	
1960	JUN	26	1433	9.06	19	25.33	155	14.13	2.78	7	.18	1.1	2.4	SNC		3.2X	137	
1960	JUN	28	0001	7.13	19	24.99	155	16.32	0.44	4	.12	12.0	8.7	SNC	-	2.2X	224	
1960	JUN	30	1849	2.62	19	25.61	155	14.72	1.84	6	.10	.8	1.3	SNC		2.4X	262	
1960	JUL	3	1652	13.53	19	29.04	155	24.49	10.40	5	.06	1.7	2.5	KAO		2.5X	244	
1960	JUL	6	1850	50.04	19	27.26	155	15.59	29.87	4	.01	2.6	9.6	DEP	-		153	

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	19
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	JUL	6	1902	40.87	19	25.52	155	19.45	7.00	4	.00	1.5	12.4	KAO	-		172		
1960	JUL	6	1911	23.96	19	27.37	155	16.54	28.53	4	.01	2.4	9.1	DEP	-		140		
1960	JUL	6	2003	3.09	19	10.81	155	11.94	7.03	4	.00	4.1	12.4	SF3	-		270	22	
1960	JUL	6	2147	15.81	19	31.63	155	13.63	60.49	10	.12	3.5	1.6	DEP		2.5X	135	13	
1960	JUL	6	2315	14.34	19	15.75	154	51.91	17.78	5	.11	4.1	15.5	DIS	-	2.0X	278	48	
1960	JUL	7	0022	26.50	19	25.78	155	18.24	14.49	4	.01	2.6	6.7	DEP			171		
1960	JUL	7	0057	1.56	19	25.56	155	18.80	6.99	4	.00	2.3	12.3	INT	-		183		
1960	JUL	7	0124	16.43	19	26.26	155	11.13	40.16	4	.04	5.1	11.8	DEP	-		212	11	
1960	JUL	7	0231	5.38	19	31.52	155	11.71	58.62	9	.12	3.3	1.5	DEP		2.3X	125	15	
1960	JUL	7	0336	12.10	19	19.45	154	46.63	5.71	4	.00	2.5	2.2	LER		2.0X	313	52	
1960	JUL	7	0352	32.13	19	29.90	155	9.51	39.56	4	.10	4.4	10.8	DEP	-		203	18	
1960	JUL	7	0432	23.27	19	31.35	155	13.25	59.75	7	.10	6.0	3.6	DEP		2.3X	164	13	
1960	JUL	7	0447	43.04	19	31.15	155	12.94	44.63	6	.07	2.5	9.3	DEP		2.0X	127	13	
1960	JUL	7	0453	51.84	19	29.41	155	11.46	50.02	5	.03	3.1	5.0	DEP		1.9X	124	15	
1960	JUL	7	0501	10.99	19	33.33	155	15.14	57.06	7	.08	3.8	2.3	DEP		2.4X	190	15	
1960	JUL	7	0517	1.16	19	15.23	154	50.24	17.13	5	.11	4.1	15.3	DIS	-	2.2X	283	51	
1960	JUL	7	0525	55.51	19	29.71	155	12.30	52.43	6	.04	3.2	4.6	DEP	#	1.8X	117	15	
1960	JUL	7	0607	54.61	19	31.04	155	10.11	48.68	5	.10	5.2	11.4	DEP	-	1.8X	193	17	
1960	JUL	7	0629	0.05	19	27.26	155	11.52	40.74	5	.03	2.2	5.8	DEP		1.8X	141	12	
1960	JUL	7	0634	27.50	19	33.69	155	6.26	7.05	4	.42	7.1	31.3	HIL	-		215	18	
1960	JUL	7	0650	17.06	19	24.08	155	18.54	13.01	7	.12	1.5	.7	DEP		2.6X	107		
1960	JUL	7	0825	31.94	19	32.91	155	15.68	48.39	6	.07	3.4	2.0	DEP		2.4X	193	14	
1960	JUL	7	0827	59.30	19	27.09	155	13.70	36.93	4	.00	3.2	7.7	DEP			153		
1960	JUL	7	0900	1.22	19	33.53	155	12.28	6.98	4	.14	2.3	15.6	GLN	-	2.5X	213	18	
1960	JUL	7	0903	23.78	19	27.53	155	15.18	42.94	4	.01	3.6	8.9	DEP	-		155	10	
1960	JUL	7	0940	27.77	19	32.58	155	17.42	48.91	8	.06	3.2	1.4	DEP		2.9X	196	13	
1960	JUL	7	1002	14.02	19	27.84	155	14.15	41.88	6	.06	2.6	5.6	DEP		2.0X	114		
1960	JUL	7	1003	9.25	19	32.10	155	15.19	48.21	6	.11	2.6	3.3	DEP		2.4X	146	13	
1960	JUL	7	1015	42.55	19	28.50	155	14.72	37.73	4	.01	3.2	11.7	DEP	-	2.1X	160		
1960	JUL	7	1026	38.09	19	29.62	155	14.72	61.67	6	.03	2.8	4.4	DEP		2.4X	121	13	
1960	JUL	7	1124	18.52	19	30.62	155	13.26	41.72	5	.04	2.3	9.3	DEP	-	2.0X	124	16	
1960	JUL	7	1127	10.21	19	29.30	155	11.01	49.29	4	.05	4.5	10.7	DEP	-	2.3X	193	15	
1960	JUL	7	1135	23.20	19	41.27	155	31.89	10.50	7	.06	1.1	2.3	KEA		2.6X	260	38	
1960	JUL	7	1143	8.78	19	28.49	155	13.02	37.47	5	.03	3.3	7.0	DEP		2.9X	167	10	
1960	JUL	7	1248	24.45	19	31.48	155	10.10	6.99	4	.42	5.0	27.6	GLN	-		195	20	
1960	JUL	7	1250	24.72	19	28.53	155	10.26	65.84	5	.04	5.9	5.1	DEP		2.5X	205	15	
1960	JUL	7	1257	40.27	19	29.79	155	13.74	39.75	5	.05	3.6	7.8	DEP		2.2X	179	11	
1960	JUL	7	1300	6.44	19	33.30	155	15.23	39.81	5	.26	4.3	17.5	DEP	-	2.3X	157	16	
1960	JUL	7	1302	2.96	19	29.99	155	12.14	49.72	8	.06	2.4	1.5	DEP		2.4X	116	13	
1960	JUL	7	1312	55.17	19	31.28	155	14.44	47.43	9	.16	3.2	1.8	DEP		2.6X	134	12	
1960	JUL	7	1324	31.46	19	29.56	155	12.48	49.67	9	.13	2.9	1.6	DEP		2.8X	116	12	
1960	JUL	7	1326	53.20	19	30.13	155	13.01	46.88	8	.08	2.4	1.5	DEP		2.8X	120	12	
1960	JUL	7	1329	3.88	19	23.80	155	21.38	4.23	5	.19	3.3	14.4	KAO	-	2.4X	239	10	
1960	JUL	7	1345	10.80	19	32.52	155	14.95	50.83	8	.19	3.8	2.1	DEP		2.8X	148	14	
1960	JUL	7	1409	37.29	19	31.96	155	16.69	50.84	8	.04	2.5	1.4	DEP		2.5X	152	12	

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	20
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	JUL	7	1415	34.41	19	31.58	155	12.10	19.69	5	.09	1.5	8.9	DEP		2.1X	127	15	
1960	JUL	7	1428	35.23	19	31.22	155	15.82	49.29	6	.10	3.2	2.8	DEP		2.4X	185	16	
1960	JUL	7	1431	27.44	19	22.98	155	11.10	45.79	7	.05	3.0	1.5	DEP		2.6X	168		
1960	JUL	7	1433	35.05	19	26.34	155	11.33	50.84	7	.04	3.3	1.4	DEP		2.6X	150	11	
1960	JUL	7	1510	8.82	19	26.18	155	15.79	24.89	4	.04	5.0	10.4	DEP	-		245		
1960	JUL	7	1513	8.35	19	19.52	155	13.38	49.49	5	.28	8.7	18.0	DEP	-	2.5X	218		
1960	JUL	7	1524	4.27	19	29.83	155	13.03	43.02	5	.10	2.7	10.9	DEP	-	2.2X	118	15	
1960	JUL	7	1544	36.80	19	27.26	155	16.40	23.36	4	.04	4.9	9.8	DEP	-		242		
1960	JUL	7	1600	55.85	19	29.88	155	14.93	35.08	5	.12	3.8	12.8	DEP	-	2.1X	153		
1960	JUL	7	1601	57.06	19	29.54	155	10.67	49.63	6	.07	4.8	3.3	DEP		2.4X	195	16	
1960	JUL	7	1605	37.59	19	41.69	155	31.00	2.98	7	.15	1.6	2.5	KEA		2.7X	259	38	
1960	JUL	7	1626	44.83	19	28.54	155	14.57	36.19	4	.07	3.5	12.7	DEP	-	2.3X	162	12	
1960	JUL	7	1637	56.99	19	27.52	155	11.31	32.18	4	.02	3.8	10.3	DEP	-	2.4X	202	12	
1960	JUL	7	1638	56.33	19	28.00	155	9.68	44.83	5	.06	4.0	4.2	DEP		2.3X	212	15	
1960	JUL	7	1639	41.72	19	27.78	155	9.21	45.66	7	.06	4.4	1.6	DEP		2.8X	217	15	
1960	JUL	7	1648	6.99	19	29.17	155	11.25	49.54	8	.12	4.9	2.5	DEP		3.0X	193	13	
1960	JUL	7	1700	26.63	19	28.07	155	13.36	30.47	4	.02	2.8	9.7	DEP	-	2.2X	178	11	
1960	JUL	7	1706	48.73	19	11.24	155	33.15	6.99	4	.15	3.9	17.9	LSW	-		331	37	
1960	JUL	7	1722	18.27	19	28.91	155	8.57	49.27	7	.09	4.4	2.6	DEP		3.0X	215	17	
1960	JUL	7	1724	4.78	19	27.96	155	13.48	32.50	6	.08	3.2	10.3	DEP	-	2.2X	177		
1960	JUL	7	1727	42.20	19	32.42	155	11.31	7.00	5	.13	2.1	13.0	GLN	-	2.1X	177	17	
1960	JUL	7	1735	6.33	19	29.22	155	9.80	50.47	7	.14	5.6	2.6	DEP		3.2X	205	15	
1960	JUL	7	1743	5.24	19	22.14	154	52.26	6.97	4	.21	4.7	21.5	LER	-	2.4X	301	41	
1960	JUL	7	1755	52.99	19	28.84	155	9.42	49.21	6	.05	4.6	1.8	DEP		2.5X	209	16	
1960	JUL	7	1759	59.37	19	30.69	155	12.69	49.69	7	.08	4.0	2.0	DEP		2.7X	172	13	
1960	JUL	7	1818	43.08	19	32.06	155	10.72	46.17	6	.10	4.9	1.9	DEP		2.2X	183	17	
1960	JUL	7	1827	23.81	19	27.84	155	12.03	32.89	4	.04	3.5	10.8	DEP	-	2.1X	193	12	
1960	JUL	7	1831	50.95	19	41.70	155	31.81	12.26	5	.01	1.6	1.7	KEA		2.4X	261	39	
1960	JUL	7	1835	24.25	19	28.06	155	9.11	48.31	6	.04	4.4	1.6	DEP		2.5X	216	16	
1960	JUL	7	1854	24.02	19	26.80	155	7.40	47.95	6	.09	5.0	1.8	DEP		2.7X	236	17	
1960	JUL	7	1916	23.62	19	27.58	155	7.02	63.61	6	.10	6.6	5.4	DEP		3.0X	224	18	
1960	JUL	7	1920	40.36	19	20.25	154	55.24	25.08	6	.14	4.8	12.5	LER	-	2.3X	292	36	
1960	JUL	7	1923	27.59	19	31.69	155	10.07	0.07	4	.11	2.1	13.4	GLN	-	2.2X	190	18	
1960	JUL	7	1926	20.96	19	30.32	155	11.81	52.36	5	.03	4.6	9.9	DEP	-	2.5X	182	14	
1960	JUL	7	2033	4.57	19	31.27	155	10.75	49.68	6	.03	4.4	3.0	DEP		2.1X	186	19	
1960	JUL	7	2039	38.82	19	31.38	155	10.52	6.98	4	.39	4.6	25.6	GLN	-	1.9X	188	19	
1960	JUL	7	2120	5.90	19	31.33	155	11.02	46.65	6	.04	4.2	1.9	DEP		2.7X	184	16	
1960	JUL	7	2136	34.43	19	39.97	155	30.91	12.68	6	.13	2.1	2.2	KEA		2.6X	255	36	
1960	JUL	7	2139	59.66	19	28.97	155	12.80	35.43	5	.04	3.3	10.4	DEP	-	1.9X	179	11	
1960	JUL	7	2146	3.97	19	41.13	155	30.95	17.37	6	.18	1.8	19.1	KEA	-	2.5X	258	37	
1960	JUL	7	2336	1.18	19	28.25	155	13.22	49.17	5	.07	5.4	3.1	DEP			284		
1960	JUL	8	0000	19.18	19	28.83	155	13.98	26.86	5	.01	2.4	6.4	DEP		2.0X	167		
1960	JUL	8	0017	9.01	19	28.32	155	13.28	28.80	4	.01	2.6	8.9	DEP	-	1.9X	177	12	
1960	JUL	8	0056	56.81	19	28.46	155	13.23	31.69	5	.06	3.0	9.3	DEP	-	1.9X	177		
1960	JUL	8	0108	1.20	19	29.64	155	10.94	49.65	6	.02	3.8	2.7	DEP		2.1X	193	14	

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	21
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	JUL	8	0110	25.91	19	18.03	154	54.47	20.74	6	.31	7.325.9		LER	-	2.4X	272	43	
1960	JUL	8	0113	13.03	19	30.39	155	9.96	53.01	7	.07	5.0	3.2	DEP		2.4X	198	16	
1960	JUL	8	0134	2.31	19	25.76	155	19.85	22.71	4	.09	2.611.8		DML	-		138		
1960	JUL	8	0314	46.12	19	42.54	155	31.66	9.35	7	.08	1.0	2.5	KEA		2.3X	263	40	
1960	JUL	8	0331	13.38	19	41.90	155	33.32	6.92	7	.30	2.626.1		KEA	-	2.1X	291	41	
1960	JUL	8	0343	30.20	19	29.17	155	14.48	29.35	4	.01	2.6	9.1	DEP	-	2.1X	161	13	
1960	JUL	8	0524	37.96	19	27.79	155	12.06	32.68	4	.13	4.112.6		DEP	-	1.9X	193	12	
1960	JUL	8	0813	46.59	19	28.33	155	14.42	29.25	4	.01	2.6	9.1	DEP	-	1.9X	164	11	
1960	JUL	8	1352	32.91	19	27.54	155	12.75	31.72	4	.03	2.910.3		DEP	-	1.9X	187	11	
1960	JUL	8	1540	46.44	19	31.65	155	11.01	6.99	4	.37	4.224.6		GLN	-	1.9X	182	19	
1960	JUL	8	1603	1.70	19	22.14	155	26.69	10.22	8	.08	1.3	.5	KAO		3.0X	178		
1960	JUL	8	1618	31.17	19	13.93	155	24.00	7.01	4	.07	2.213.6		SWR	-	2.7X	320	21	
1960	JUL	8	1716	44.19	19	29.91	155	10.52	48.31	5	.02	4.3	9.3	DEP	-	2.2X	195	15	
1960	JUL	8	1901	37.62	19	36.50	155	21.90	6.90	4	.03	2.510.7		KEA	-	1.8X	241	28	
1960	JUL	8	1911	15.45	19	29.03	155	10.97	39.61	6	.04	2.6	5.8	DEP		2.2X	129	15	
1960	JUL	8	2018	21.48	19	28.39	155	13.15	47.01	4	.05	4.210.2		DEP	-		166	12	
1960	JUL	8	2103	22.03	19	28.23	155	11.51	34.76	5	.11	3.9	8.1	DEP		2.3X	164	12	
1960	JUL	8	2111	2.78	19	31.72	155	12.53	51.43	8	.10	2.6	3.2	DEP		2.4X	130	15	
1960	JUL	8	2131	21.60	19	28.23	155	12.07	45.01	4	.04	4.0	9.8	DEP	-		165	13	
1960	JUL	8	2137	45.81	19	19.33	154	54.36	17.18	5	.23	5.022.2		LER	-	2.3X	272	42	
1960	JUL	8	2144	59.53	19	29.05	155	12.81	36.08	4	.00	3.2	7.9	DEP			172	13	
1960	JUL	8	2150	58.82	19	29.98	155	12.30	40.44	4	.03	3.6	9.0	DEP	-		181	15	
1960	JUL	8	2325	4.64	19	34.69	155	13.62	6.91	4	.26	3.919.1		GLN	-		224	19	
1960	JUL	8	2335	26.18	19	26.82	155	18.43	18.20	4	.01	3.4	8.3	DEP	-		207		
1960	JUL	9	0110	23.21	19	30.92	155	11.63	48.39	6	.04	2.0	3.1	DEP		2.0X	121	17	
1960	JUL	9	0150	5.29	19	30.79	155	13.26	44.70	7	.09	2.2	3.2	DEP		2.3X	126	16	
1960	JUL	9	0205	13.04	19	27.64	155	13.53	26.45	4	.01	2.410.1		DEP	-	1.9X	178		
1960	JUL	9	0231	6.55	19	30.41	155	12.85	44.99	8	.07	1.9	2.9	DEP		2.2X	122	12	
1960	JUL	9	0240	27.30	19	26.94	155	16.23	25.56	4	.14	6.213.6		DEP	-		242		
1960	JUL	9	0313	0.64	19	30.20	155	13.55	57.80	7	.09	3.0	4.7	DEP		2.6X	122	11	
1960	JUL	9	0537	3.06	19	27.24	155	12.11	36.54	6	.07	2.6	3.6	DEP		2.1X	156	10	
1960	JUL	9	0818	36.11	19	28.48	155	12.97	48.14	8	.07	2.6	1.5	DEP		2.4X	120	10	
1960	JUL	9	0828	50.44	19	38.47	155	32.76	17.08	6	.14	1.816.8		KEA	-	1.9X	255	36	
1960	JUL	9	1701	54.26	19	27.99	155	12.78	35.63	4	.00	3.1	7.7	DEP			162	12	
1960	JUL	9	1836	3.44	19	24.46	155	26.03	0.71	6	.03	1.9	.9	KAO		3.0X	237		
1960	JUL	9	1920	57.27	19	28.31	155	14.42	31.12	5	.03	1.4	4.4	DEP		2.2X	109	11	
1960	JUL	10	0808	43.28	19	25.69	155	23.64	1.50	6	.03	1.4	9.1	KAO	-	2.9X	188		
1960	JUL	11	1309	39.07	19	42.09	155	21.77	10.80	4	.06	5.911.3		KEA	-	2.3X	258	23	
1960	JUL	13	1731	6.53	19	27.33	155	28.21	2.26	8	.13	2.5	2.0	KAO		3.0X	267	10	
1960	JUL	13	2022	43.77	19	48.45	155	54.80	35.68	7	.09	5.2	8.1	HUA		2.6X	323	65	
1960	JUL	14	0322	12.09	19	24.88	155	21.79	10.40	6	.09	1.1	1.3	KAO		2.3X	146		
1960	JUL	14	1105	9.28	19	34.09	155	18.89	3.70	4	.08	7.113.9		GLN	-		301	11	
1960	JUL	15	0057	20.00	19	23.95	155	17.76	1.76	5	.04	1.4	1.7	SSC		3.0X	126		
1960	JUL	15	1741	24.93	18	44.57	155	6.43	7.02	6	.08	8.310.8		LOI	-	3.5X	325	72	
1960	JUL	19	1838	43.43	19	25.64	155	15.63	0.02	6	.23	.9	1.5	SNC	F#		245		

---ORIGIN TIME (HST)--					-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN	22
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS	
1960	JUL	19	1840	16.95	19	25.66	155	15.43	0.03	6	.17	.7	1.3	SNC	F#	2.9X	248		
1960	JUL	23	1320	25.09	19	25.61	155	16.58	2.96	7	.09	.7	.5	SNC		2.8X	91		
1960	JUL	25	1921	24.50	19	22.80	155	20.66	20.18	7	.09	1.5	.9	DML		2.5X	246		
1960	JUL	26	1226	48.12	19	21.75	155	17.62	0.03	4	.09	2.1	2.5	SWR	#	2.1X	186		
1960	JUL	28	0559	55.69	19	19.28	155	16.50	13.57	6	.13	2.1	1.4	DEP		2.3X	219		
1960	AUG	1	1431	40.91	19	26.86	154	55.91	5.76	4	.05	3.912.8		LER	-	2.8X	340	36	
1960	AUG	2	1418	4.04	19	23.18	155	18.04	14.98	4	.00	3.0	7.4	DEP		2.3X	129		
1960	AUG	4	0532	58.79	19	19.68	156	10.95	2.54	11	.08	2.9	2.1	KON		3.9X	244	69	
1960	AUG	5	1344	25.60	19	24.60	155	16.90	13.40	7	.09	1.4	.9	DEP		3.2X	91		
1960	AUG	7	0505	28.03	19	24.75	155	42.80	7.00	4	.111	3.311.0		MLO	-		331	35	
1960	AUG	7	1733	23.01	19	25.73	155	17.50	5.05	7	.06	.6	.7	INT		2.9X	122		
1960	AUG	9	1436	46.79	19	25.18	155	24.47	4.39	5	.12	2.814.2		KAO	-	2.5X	265		
1960	AUG	10	2316	55.64	19	55.48	155	35.42	8.72	11	.06	.9	1.5	KOH		3.7X	163	52	
1960	AUG	11	0147	18.18	19	54.64	155	36.39	11.48	10	.12	1.3	3.1	KEA		3.8X	165	51	
1960	AUG	11	1003	14.64	19	24.60	155	16.76	2.94	6	.12	2.1	.5	SNC		3.0X	195		
1960	AUG	11	1932	32.61	19	12.43	155	27.51	0.03	6	.10	2.7	.6	LSW	#	2.6X	174	16	
1960	AUG	13	2200	36.70	19	23.72	155	28.39	2.23	7	.12	4.0	3.0	KAO		2.8X	272	11	
1960	AUG	14	0420	26.52	19	30.05	155	36.47	11.77	7	.10	6.8	1.8	MLO		2.7X	297	23	
1960	AUG	17	0418	31.19	19	24.24	155	18.38	13.78	9	.11	1.3	.4	DEP		2.7X	145		
1960	AUG	17	0431	40.82	19	25.08	155	17.79	13.20	8	.04	1.0	.5	DEP		2.5X	85		
1960	AUG	17	1315	43.86	19	48.16	155	35.12	5.59	7	.07	2.4	2.4	KEA		2.7X	301	52	
1960	AUG	18	0306	21.66	19	24.25	155	17.41	2.93	5	.06	1.8	1.2	SSC		2.6X	150		
1960	AUG	21	0302	26.75	19	22.08	155	25.75	10.36	4	.00	2.7	.9	KAO			248		
1960	AUG	25	0348	31.04	18	52.05	153	41.74	45.00	7	.27	8.231.6		DIS	-	3.7X	343	149	
1960	AUG	28	1314	55.10	19	47.18	155	30.69	23.99	4	.03	9.6	8.0	KEA	-	2.6X	294	35	
1960	AUG	28	1800	15.24	20	10.72	156	39.75	6.69	7	.05	7.8	7.4	DIS	-	4.2X	269	78	
1960	AUG	30	0431	59.64	19	19.88	155	15.73	30.59	5	.03	3.4	1.5	DEP		2.8X	276		
1960	SEP	4	1442	31.53	19	23.09	155	18.26	17.59	6	.07	1.7	1.3	DEP		2.7X	113		
1960	SEP	5	1718	46.06	19	27.87	155	28.92	10.57	8	.10	1.3	1.0	KAO		2.8X	270	10	
1960	SEP	11	0847	34.05	19	25.02	155	17.67	30.03	8	.14	2.1	1.5	DEP		2.5X	84		
1960	SEP	12	2302	40.86	19	21.14	155	13.74	35.33	6	.12	3.5	4.4	DEP		3.1X	246		
1960	SEP	14	0419	40.30	19	10.86	155	44.48	4.65	8	.15	4.1	2.6	KON		3.5X	339	41	
1960	SEP	16	0951	4.66	19	26.18	155	17.30	15.72	9	.08	1.2	.9	DEP		2.4X	90		
1960	SEP	17	1233	25.28	19	24.29	155	19.14	0.58	6	.08	.5	.5	KAO		2.3X	103		
1960	SEP	18	2001	7.42	19	25.13	155	28.64	19.41	6	.05	1.9	3.3	DML		2.3X	273	13	
1960	SEP	18	2253	34.23	19	23.98	155	17.61	0.96	8	.10	.5	.4	SSC		2.1X	102		
1960	SEP	19	1527	21.77	19	24.96	155	17.80	13.61	6	.03	1.2	.6	DEP	F	2.5X	112		
1960	SEP	20	0729	43.47	19	58.75	155	34.11	12.63	7	.07	7.911.0		KOH	-	3.7X	332	57	
1960	SEP	21	1500	27.51	19	22.53	155	25.50	10.43	6	.09	1.2	2.8	KAO			238		
1960	SEP	21	2008	41.45	19	26.83	156	14.26	19.75	6	.11	3.114.9		KON	-	3.5X	341	89	
1960	SEP	21	2208	3.58	19	14.69	155	21.79	14.23	9	.11	1.8	.7	DEP		3.0X	173	11	
1960	SEP	28	0633	8.10	19	20.87	155	22.54	14.40	7	.14	1.6	1.4	DEP		2.7X	140		
1960	SEP	29	0823	19.94	19	23.26	155	16.38	26.62	6	.05	3.2	4.2	DEP			171		
1960	OCT	5	0231	57.07	19	36.44	155	11.90	53.51	6	.04	2.8	2.5	KEA		2.1X	163	17	
1960	OCT	5	0250	15.33	19	32.18	155	17.77	51.48	6	.21	5.2	4.5	DEP	#	2.5X	160	11	

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN 23
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS
1960	OCT	5	0255	58.93	19	25.87	155	17.20	27.76	6	.19	2.4	4.2	DEP		2.1X	140	
1960	OCT	5	0331	54.44	19	32.15	155	16.97	53.80	8	.21	3.4	1.9	DEP		2.5X	155	12
1960	OCT	5	0344	4.23	19	27.64	155	13.80	29.03	5	.21	2.4	5.0	DEP		2.2X	119	10
1960	OCT	5	0346	25.83	19	31.31	155	14.81	52.97	8	.14	3.4	1.8	DEP		2.6X	137	12
1960	OCT	5	0434	35.53	19	38.12	155	15.36	53.40	5	.09	3.4	2.5	KEA		2.5X	198	20
1960	OCT	5	0459	17.79	19	35.02	155	21.39	46.44	8	.05	3.3	1.3	KEA		2.3X	218	19
1960	OCT	5	0500	1.57	19	31.69	155	17.59	50.85	9	.12	3.1	1.6	DEP		2.3X	154	11
1960	OCT	5	0507	39.98	19	34.58	155	22.23	47.28	7	.18	5.4	3.5	DML	#	2.5X	219	19
1960	OCT	5	0511	48.67	19	26.89	155	14.91	15.29	4	.01	1.1	1.4	DEP		2.0X	140	16
1960	OCT	5	0516	27.71	19	34.53	155	11.86	6.99	4	.05	1.0	12.6	GLN	-	2.1X	148	20
1960	OCT	5	0529	59.67	19	45.22	155	32.96	6.60	5	.16	3.0	3.6	KEA		2.2X	271	45
1960	OCT	5	0536	37.93	19	36.77	155	22.51	51.03	6	.15	5.4	3.7	KEA		2.4X	227	23
1960	OCT	5	0541	0.28	19	40.94	155	32.34	11.42	7	.30	2.9	3.5	KEA	#	2.2X	259	39
1960	OCT	5	0550	57.51	19	32.66	155	14.37	48.97	5	.04	3.6	2.2	DEP		2.1X	150	15
1960	OCT	5	0551	43.26	19	32.50	155	13.23	55.75	5	.26	9.7	6.1	DEP		2.5X	160	18
1960	OCT	5	0655	55.83	19	39.19	155	19.77	57.12	6	.06	3.5	1.8	KEA		2.5X	233	18
1960	OCT	5	0704	44.50	19	28.68	155	15.30	35.72	5	.05	2.2	5.1	DEP		2.5X	114	
1960	OCT	5	0911	13.39	19	25.88	155	19.67	2.13	4	.00	1.3	2.1	KAO		1.4X	144	
1960	OCT	5	0921	50.65	19	34.00	155	25.57	43.69	8	.06	3.5	1.4	DML		2.5X	227	21
1960	OCT	5	1119	20.83	19	26.37	155	15.40	40.45	6	.01	2.6	3.5	DEP		2.2X	144	
1960	OCT	5	1120	29.68	19	27.41	155	17.08	43.17	6	.01	2.9	3.7	DEP		2.2X	150	
1960	OCT	5	1143	4.00	19	28.66	155	16.74	44.92	7	.12	3.7	1.6	DEP		2.5X	165	
1960	OCT	5	1311	39.53	19	9.99	155	7.00	7.08	5	.19	1.5	15.2	LOI	-	2.2X	232	28
1960	OCT	5	1331	36.77	19	31.41	155	16.87	47.49	6	.13	4.1	1.8	DEP		2.5X	199	11
1960	OCT	5	1332	41.77	19	38.99	155	14.68	29.78	5	.12	3.2	2.3	KEA		2.3X	256	23
1960	OCT	5	1348	41.33	19	33.08	155	18.53	50.28	5	.23	5.8	5.3	DEP		2.3X	176	10
1960	OCT	5	1352	0.54	19	34.65	155	21.13	49.56	6	.18	5.0	3.3	DML		2.8X	216	10
1960	OCT	5	1359	30.38	19	29.63	155	15.63	46.76	6	.12	3.9	1.7	DEP		2.6X	177	
1960	OCT	5	1401	53.42	19	28.35	155	17.47	50.08	5	.02	3.3	1.3	DEP		2.5X	160	
1960	OCT	5	1437	56.68	19	28.13	155	17.34	47.05	7	.14	4.1	1.8	DEP		2.5X	158	
1960	OCT	5	1458	20.60	19	27.81	155	15.74	30.29	6	.05	2.2	2.4	DEP		2.1X	157	
1960	OCT	5	1537	58.30	19	30.47	155	17.63	37.19	7	.08	1.8	2.8	DEP		2.5X	139	10
1960	OCT	5	1546	33.75	19	35.14	155	18.56	71.26	5	.10	8.0	6.9	KEA	-	2.7X	243	13
1960	OCT	5	1557	41.96	19	28.08	155	17.68	24.17	4	.00	4.2	4.9	DEP		2.2X	235	10
1960	OCT	5	1601	13.41	19	28.14	155	18.56	47.43	6	.09	3.1	1.3	DEP		2.5X	154	
1960	OCT	5	1607	25.89	19	22.88	155	24.28	12.84	7	.08	1.3	.8	KAO		2.6X	158	
1960	OCT	5	1702	36.44	19	33.86	155	20.24	39.57	5	.01	2.3	2.4	DML		2.4X	210	22
1960	OCT	5	1720	21.83	19	36.50	155	28.73	32.38	6	.04	6.1	6.9	KEA	-	2.3X	242	28
1960	OCT	5	1733	21.08	19	39.96	155	30.72	8.35	9	.22	1.4	4.1	KEA		2.3X	255	35
1960	OCT	5	1744	42.43	19	26.18	155	15.54	47.00	7	.09	3.5	1.5	DEP		2.5X	141	
1960	OCT	5	1746	9.11	19	27.55	155	20.58	71.54	5	.18	8.5	7.3	DML		2.8X	132	
1960	OCT	5	1750	44.50	19	34.94	155	20.28	42.94	9	.18	4.2	1.9	DML		2.3X	214	18
1960	OCT	5	1802	1.91	19	30.27	155	16.78	47.50	8	.10	2.9	1.1	DEP		2.5X	134	
1960	OCT	5	1832	1.96	19	28.59	155	14.84	45.60	8	.13	3.1	1.8	DEP		2.5X	112	
1960	OCT	5	1839	30.32	19	29.11	155	19.95	42.97	7	.23	5.2	2.3	DML		2.7X	165	

---ORIGIN TIME (HST)--				-LAT N--		--LON W--		DEPTH	N	RMS	ERH	ERZ	LOC		PREF	AZ	MIN 24
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKS		MAG	GAP	DS
1960	OCT	5	1908	43.22	19	24.65	155	13.54	30.00	5	.24	3.7	31.6	DEP	-	2.2X	153	
1960	OCT	5	1922	40.32	19	29.04	155	14.62	28.59	9	.36	3.0	7.8	DEP		2.3X	115	
1960	OCT	5	1947	37.93	19	30.76	155	12.16	13.29	4	.00	.9	6.1	DEP		1.7X	122	17
1960	OCT	5	2029	39.50	19	26.07	155	18.49	21.54	5	.01	1.8	3.0	DEP		1.7X	92	
1960	OCT	5	2030	19.50	19	22.76	155	15.60	55.88	6	.12	3.9	6.5	DEP		2.5X	151	
1960	OCT	5	2147	52.71	19	34.22	155	18.56	42.94	8	.05	2.7	1.3	DEP		2.4X	216	16
1960	OCT	5	2212	6.42	19	27.67	155	14.27	41.71	6	.19	4.4	5.9	DEP		2.8X	158	
1960	OCT	5	2254	8.44	19	25.95	155	13.19	47.66	5	.03	2.4	4.3	DEP		2.3X	144	
1960	OCT	5	2352	38.13	19	29.77	155	15.16	34.67	8	.06	1.6	2.9	DEP		2.0X	123	
1960	OCT	5	2354	10.43	19	29.23	155	17.21	46.76	7	.06	3.3	1.4	DEP		2.4X	172	
1960	OCT	6	0054	44.73	19	29.63	155	13.40	51.91	7	.05	3.4	1.5	DEP		2.2X	177	11
1960	OCT	6	0106	36.64	19	31.53	155	20.16	42.51	6	.13	4.0	2.7	DML		1.9X	215	12
1960	OCT	6	0120	12.17	19	29.91	155	13.04	50.15	7	.08	4.8	3.3	DEP		2.0X	172	12
1960	OCT	6	0135	50.66	19	34.35	155	22.67	39.38	7	.22	5.0	3.1	DML		2.1X	219	
1960	OCT	6	0222	25.67	19	32.75	155	17.50	39.54	7	.19	3.4	2.4	DEP		1.9X	165	12
1960	OCT	6	0351	49.68	19	28.45	155	14.27	27.31	5	.01	1.4	4.6	DEP		1.8X	110	
1960	OCT	6	0415	2.45	19	25.47	155	13.70	46.68	6	.06	2.9	4.7	DEP		1.8X	140	
1960	OCT	6	0430	0.71	19	27.88	155	14.05	52.06	5	.09	3.2	5.5	DEP		2.1X	160	11
1960	OCT	6	0502	35.53	19	31.12	155	17.14	44.52	7	.11	2.1	2.7	DEP		2.0X	144	11
1960	OCT	6	0521	45.23	19	32.42	155	18.72	49.63	7	.09	3.6	2.2	DEP		2.0X	200	19
1960	OCT	6	0525	13.01	19	27.01	155	14.75	53.10	5	.08	3.5	6.2	DEP			151	
1960	OCT	6	0543	46.54	19	5.11	155	3.44	8.37	5	.27	11.0	19.1	LOI	-	1.9X	254	39
1960	OCT	6	0554	33.70	19	27.50	155	16.15	49.96	7	.11	3.8	1.6	DEP		2.8X	154	
1960	OCT	6	0613	30.62	19	43.21	155	33.07	70.50	5	.04	8.5	5.4	KEA	-	2.3X	288	30
1960	OCT	6	0632	4.19	19	29.76	155	14.10	54.29	8	.21	4.5	2.5	DEP		2.5X	120	10
1960	OCT	6	0704	12.32	19	35.22	155	20.09	48.72	8	.10	3.7	1.5	KEA		2.1X	215	19
1960	OCT	6	0734	36.74	19	31.33	155	15.80	36.43	5	.10	2.4	9.3	DEP		2.0X	141	13
1960	OCT	6	0756	52.94	19	32.21	155	19.34	47.76	4	.01	3.1	3.0	DML	#	2.3X	202	32
1960	OCT	6	1002	20.36	19	30.33	155	15.05	42.49	8	.10	2.4	1.6	DEP		2.0X	128	10
1960	OCT	6	1133	16.04	19	29.05	155	15.40	53.56	8	.09	2.6	1.3	DEP		2.6X	118	
1960	OCT	6	1139	40.91	19	31.20	155	15.98	48.05	8	.27	5.2	6.3	DEP		2.3X	141	11
1960	OCT	6	1146	48.96	19	33.40	155	17.04	50.38	8	.11	3.5	2.2	DEP		2.3X	169	13
1960	OCT	6	1437	23.70	19	30.16	155	15.60	44.91	7	.09	2.7	2.7	DEP		2.3X	179	
1960	OCT	6	1616	14.71	19	29.92	155	15.01	25.47	6	.11	1.6	4.8	DEP		1.8X	124	
1960	OCT	6	1916	44.28	19	26.42	155	27.02	3.76	5	.08	2.2	3.7	KAO		2.2X	260	13
1960	OCT	6	1942	25.68	19	29.65	155	12.79	47.65	7	.09	2.1	3.4	DEP		2.0X	116	12
1960	OCT	6	2051	14.94	19	32.58	155	20.04	79.86	7	.14	6.3	4.8	DML		2.3X	183	
1960	OCT	6	2236	29.29	19	28.98	155	15.02	20.82	6	.13	1.6	4.1	DEP		2.0X	116	
1960	OCT	8	1727	15.13	19	28.37	155	24.37	12.16	10	.09	1.2	.9	KAO		4.3X	126	
1960	OCT	17	1343	25.40	19	23.66	155	13.81	8.05	7	.27	3.9	2.3	SF2	F	3.1X	293	
1960	OCT	17	1500	26.45	19	31.01	155	18.03	42.57	7	.06	2.4	1.6	DEP		2.6X	147	
1960	OCT	18	0929	54.51	19	27.39	155	18.03	37.00	6	.08	4.0	1.8	DEP	F	2.7X	121	
1960	OCT	18	1302	24.07	19	28.02	155	20.37	39.11	7	.17	2.7	4.2	DML		2.1X	103	
1960	OCT	19	0641	3.47	19	28.02	155	16.04	39.71	6	.06	2.8	2.3	DEP		2.1X	145	
1960	OCT	22	0226	12.73	19	23.80	155	16.30	13.60	6	.05	1.6	.9	DEP		2.4X	195	

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---ORIGIN TIME (HST)-- -LAT N-- --LON W-- DEPTH  N RMS ERH ERZ LOC    PREF AZ MIN 25
YEAR MON DA HRMN  SEC  DEG MIN  DEG  MIN    KM  RD SEC  KM  KM REMKS  MAG  GAP DS

1960 OCT 22 0417 31.10 19 23.98 155 17.11 11.94  6 .03 1.4 1.0 INT    2.4X 137
1960 OCT 22 1223 23.24 19 22.80 155 18.39 27.47  7 .13 2.8 1.6 DEP    2.5X 142
1960 OCT 25 0518 30.21 19 25.44 155 16.12  2.00  6 .07  .7  .8 SNC    2.9X 146
1960 OCT 25 2131 56.28 19 26.04 155 16.85  0.89  5 .02  .7  .8 SNC    3.7X 134
1960 NOV  1 0632 49.42 19 25.99 155 15.20  0.03  5 .24 4.1 7.5 SNC  #      254

1960 NOV  5 1035 35.81 19 18.10 155  0.05  7.01  7 .11 1.511.6 SF5 F- 3.1X 287 29
1960 NOV  7 0936 29.13 19 25.94 155 17.64  4.63  5 .04 1.6  .5 SNC F  2.9X 208
1960 NOV  7 1227  5.88 19 24.93 155 18.67  3.52  7 .14  .9  .5 SNC F  3.1X  95
1960 NOV  7 2021 31.62 19 25.90 155 17.90  0.64  5 .02  .7  .9 SNC F# 2.6X 117
1960 NOV 10 1458 50.01 19 25.12 155 18.36  4.35  5 .08 1.4 1.1 SNC F  3.0X 113

1960 NOV 10 1545 10.72 19 25.22 155 17.96  4.06  6 .09  .6  .7 SNC F  2.8X  87
1960 NOV 15 1155 17.96 19 24.08 155 17.75  0.87  6 .03  .9 1.2 SSC F  3.0X 101
1960 NOV 30 1330 57.80 19 21.82 155 12.63 30.21 10 .08 3.3 2.0 DEP    3.5X 214
1960 NOV 30 1947 41.56 19 24.12 155 15.57 30.41 10 .07 2.9 1.5 DEP    3.3X 164
1960 DEC  5 1754 33.07 19 26.08 155 17.09 14.96  6 .05 2.0  .9 DEP F  2.6X 219

1960 DEC  9 0700 51.60 20 24.98 156  9.98  9.31  7 .04 4.9 4.5 KOH    3.4X 203 40
1960 DEC  9 0829  3.52 19 27.20 155 56.32  5.61  6 .03 4.5 1.1 KON    3.5X 343 58
1960 DEC 13 1206 51.12 19 27.03 155 16.49 29.35  8 .22 2.5 2.1 DEP    4.1X  99
1960 DEC 13 1208 16.07 19 24.07 155 17.25 33.01  9 .23 2.6 3.1 DEP    4.0X  79
1960 DEC 13 1232 16.09 19 23.54 155 17.30 32.96  9 .15 2.5 1.5 DEP    2.2X  91

1960 DEC 13 1252 27.53 19 22.92 155 16.83 30.92  9 .11 3.3 1.4 DEP    3.0X 103
1960 DEC 17 2057 17.38 19 39.58 155 58.47  4.58 10 .13 1.2 1.9 HUA    3.4X 199 64
1960 DEC 21 2215 45.49 19 21.33 155 15.18  8.52  7 .04  .8 1.2 SF1    3.6X 198
1960 DEC 25 0256 28.01 19 12.40 155 42.57  0.01  8 .18 5.0 1.4 LSW  # 4.6X 268 20
1960 DEC 28 2327 41.47 19 26.16 155 23.05  0.47 10 .13  .9  .6 KAO    3.3X 174

1960 DEC 30 0035  7.77 19 28.52 155 17.66 18.77  5 .08 5.6 8.8 DEP  - 2.8X 240
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