



Hawaiian Volcano Observatory Summary 103; Part I, Seismic Data, January to December 2003

by Jennifer S. Nakata

Chronological Summary
by C. Heliker, T. Orr, and R. Hoblitt

Open-File Report 2004-1242

2004

Any use of trade names is for descriptive purposes only and does not imply endorsement by the Federal government.

**U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY**

Hawaiian Volcano Observatory
Hawai‘i Volcanoes National Park, Hawai‘i 96718

TABLE OF CONTENTS

	Page
Hawaiian Volcano Observatory Staff	1
Introduction	2
Chronological Summary	3
Table C-1 Eruption statistics 1983-2003	5
Table C-2 Ocean entries, from west to east, active during 2003	6
Figure C-1 Eruption flow map	7
Figure C-2 Expanded eruption flow map	8
Seismic Instrumentation	9
Figure 1 Map of Hawai'i Island showing geographic and geologic features	10
Figure 2 Seismic stations operated by the USGS and NOAA on Hawai'i Island	11
Figure 3 Seismic network telemetry scheme on Hawai'i Island	12
Figure 4a Seismic network telemetry scheme at Kilauea summit	13
Figure 4b Broad-band telemetry scheme at Kilauea summit	13
Figure 5 Seismic network telemetry scheme on Maui Island	14
Table 1 Seismic stations in Hawai'i operated by the USGS	15
Table 2 Seismic instrument types in use by HVO	17
Figure 6 HVO system response curve of the four basic seismograph types	17
Seismic Data Processing	18
Seismic Catalog	19
Table 3 Coordinates of named regions used for classifying earthquakes	19
Figure 7 Earthquake classification, shallow for Kilauea and Mauna Loa	21
Figure 8 Earthquake classification, intermediate for Kilauea and Mauna Loa	22
Figure 9 Earthquake classification, crustal, for Hawai'i Island	23
Figure 10 Earthquake classification, deep, for Hawai'i Island	24
Figure 11 Earthquake locations, Hawaiian Islands, all depths, $M \geq 3.5$	25
Figure 12 Earthquake locations, Hawai'i Island, all depths, $M \geq 3.0$	26
Figure 13 Earthquake locations, Hawai'i Island, shallow, $M \geq 2.0$	27
Figure 14 Earthquake locations, Hawai'i Island, intermediate, $M \geq 2.0$	28
Figure 15 Earthquake locations, Hawai'i Island, deep, $M \geq 2.0$	29
Figure 16 Earthquake locations, Kilauea summit, shallow, $M \geq 1.0$	30
Figure 17 Earthquake locations, Kilauea summit, intermediate, $M \geq 1.0$	31
Figure 18 Earthquake locations, Kilauea summit, deep, $M \geq 1.0$	32
Figure 19 Earthquake locations, Kilauea south flank, shallow, $M \geq 2.0$	33
Figure 20 Earthquake locations, Kilauea south flank, intermediate, $M \geq 2.0$	34
Figure 21 Earthquake locations, Kilauea south flank, deep, $M \geq 2.0$	35
Figure 22 Earthquake locations, Mauna Loa summit, shallow, $M \geq 2.0$	36
Figure 23 Earthquake locations, Mauna Loa summit, intermediate, $M \geq 2.0$	37
Figure 24 Earthquake locations, Mauna Loa summit, deep, $M \geq 2.0$	38
Table 4 List of all located earthquakes	39
Table 5 List of located earthquakes of magnitude 3.0 or greater	77

2003 HAWAIIAN VOLCANO OBSERVATORY STAFF

DONALD A. SWANSON (SCIENTIST-IN-CHARGE)

ARNOLD T. OKAMURA (DEPUTY SCIENTIST-IN-CHARGE)

GEOLOGY

C. CHRISTINA HELIKER
RICHARD P. HOBLITT
DAVID R. SHERROD
FRANK A. TRUSDELL

GEOPHYSICS

JAMES P. KAUAIKAUA

SEISMOLOGY

STUART K. KOYANAGI
JENNIFER S. NAKATA
PAUL G. OKUBO
JEFF O. URIBE

DEFORMATION

PETER F. CERVELI
ASTA MIKLUS
MAURICE K. SAKO

GEOCHEMISTRY

TAMAR ELIAS
A. JEFFERSON SUTTON

ELECTRONICS

STEVEN K. FUKE
BRUCE T. FURUKAWA
KENNETH T. HONMA

COMPUTER

WILFRED R. TANIGAWA

LIBRARY/PHOTO ARCHIVE

T. JANE TAKAHASHI

ADMINISTRATION

PAULINE N. FUKUNAGA
MARIAN M. KAGIMOTO

PROGRAM OUTREACH COORDINATOR

STEVE R. BRANTLEY

SCIENTIST EMERITUS

ROBERT Y. KOYANAGI

CONTRACTS

Seismic :

L. GLADYS FORBES - record changing
ADOLPH R. TEVES - record changing

CSAV Cooperative Employees

JEAN BATTAGLIA* - Seismic
FRANCINE S. COLOMA - Deformation
RALF KRUG - Deformation*
TIM ORR - Geology
CHAN SHIM- Deformation*
DAVID WHILLDIN – Seismic

+ Arrived in 2003

* Left in 2003

INTRODUCTION

The Hawaiian Volcano Observatory (HVO) summary presents seismic data gathered during the year and a chronological narrative describing the volcanic events. The seismic summary is offered without interpretation as a source of preliminary data. It is complete in the sense that most data for events of $M \geq 1.5$ routinely gathered by the Observatory are included. The emphasis in collection of tilt and deformation data has shifted from quarterly measurements at a few water-tube tilt stations ("wet" tilt) to a larger number of continuously recording borehole tiltmeters, repeated measurements at numerous spirit-level tilt stations ("dry" tilt), and surveying of level and trilateration networks. Because of the large quantity of deformation data now gathered and differing schedules of data reduction, the seismic and deformation summaries are published separately.

The HVO summaries have been published in various forms since 1956. Summaries prior to 1974 were issued quarterly, but cost, convenience of preparation and distribution, and the large quantities of data dictated an annual publication beginning with Summary 74 for the year 1974. Summary 86 (the introduction of CUSP at HVO) includes a description of the seismic instrumentation, calibration, and processing used in recent years. The present summary includes background information on the seismic network and processing to allow use of the data and to provide an understanding of how they were gathered.

A report by Klein and Koyanagi (1980)¹ tabulating instrumentation, calibration, and recording history of each seismic station in the network. It is designed as a reference for users of seismograms and phase data and includes and augments the information in the station table in this summary.

¹ Klein, F.W., and Koyanagi, R.Y., 1980, Hawaiian Volcano Observatory seismic network history, 1950-1979: U.S. Geological Survey Open-File Report 80-302, 84 p.

CHRONOLOGICAL SUMMARY 2003
by
T. Orr, R. Hoblitt and C. Heliker

Lava covered 17.2 km² from January 21, 2003, through the end of the year. Only 4.7 km² of this was virgin, vegetated land, most of which was located along the west margin of the existing flow field (0.4 km² consisted of kipuka within the existing flow field). The total area covered by lava since 1983 is 116.9 km², and the estimated volume of erupted lava is approximately 2.6 km³ (dense rock equivalent). For all the latest eruption statistics, refer to table C-1.

No pauses in magma supply to the Pu'u 'O'o flank vent(s) occurred in 2003. Two "surge-style" events occurred on January 21 and August 9. These events have a characteristic tilt signature—recorded at both the summit and Pu'u 'O'o cone—of an initial slow deflation, followed by rapid inflation, then a final deflation that is usually accompanied by a surge in effusion at the eruption site. Both of the events in 2003 resulted in large breakouts high on the Mother's Day tube. In both cases, sustained surface flows resulted in the development of new lava tubes, which gradually captured all of the flow to the old Mother's Day tube below the 2,390-ft elevation.

Flows and tubes

Kohola. The January 21 event triggered large breakouts that recoated much of the upper Mother's Day flow and spread down the west side of the existing flow field, forming the Kohola tube (fig. C-1). The Kohola flow reached the sea on February 14. The entry was short-lived, but the flow remained vigorous on the coastal plain through most of May. Activity then stagnated on the lower reaches of the Kohola until early July, when a new series of breakouts, originating near the top of Pulama pali, reached the coastal plain. By the end of August, this lobe had reached its maximum seaward extent, 550 m short of the ocean, but breakouts from the flow on the coastal plain continued until the last week of September. Meanwhile, in early August, a new breakout from the Kohola tube fed flows that cascaded down Holei Pali west of the main Kohola field. These flows reached the coastal plain on August 4 but stagnated after 5 days.

Substantial breakouts from the Kohola tube continued on the upper slopes of Pulama pali through October. On October 30, one flow made it to Paliuli before quickly stagnating. Flows remained active on the upper slopes of Pulama pali until early November.

Eastside. In mid-February, breakouts from the old Mother's Day tube at about the 2,350-ft elevation began advancing down the east side of the existing Mother's Day flow and eventually formed the Eastside tube. Breakouts from this tube reached the coastal plain on April 7, and a narrow lobe reached the ocean 10 days later at Lae'apuki. This flow stagnated after a few days. A new lobe reached the ocean at Highcastle and entered water from May 18 to July 9. The last observed breakout on the coastal plain from the 'Highcastle lobe' of the Eastside flow was observed on July 12. Breakouts from the Eastside tube continued on Pulama pali and above; one flow reached the coastal plain during the first week of August but quickly stagnated. Diminishing activity on this tube continued through early October.

August 9. The main thrust of the breakouts initiated by the August 9 surge-style event was to the southeast. By September 11, the August 9 flow was pouring over Pulama pali in a series of large fingers and, in the next two weeks, reached the 550-ft elevation. During the last week of September, the active terminus of the August 9 flow began to retreat upslope as the lower part of the flow stagnated. At the beginning of October, minor activity still continued on the August 9 and Eastside tubes on Pulama pali, but, by mid-month, breakouts from these tubes had retreated above the pali.

Old Mother's Day. The Kohola and Eastside branches didn't immediately capture the entire volume of the old Mother's Day tube, and lava continued to reach the ocean via that route at the West Highcastle entry through mid-May. Breakouts from the old tube continued on Pulama pali, and in mid-June flows approached within 700 m of Paliuli. Breakouts on the Old Mother's Day tube gradually diminished through July. Following the August 9 event, the Old Mother's Day tube seemed to lose most of its supply, although above Pulama pali it was difficult to match the voluminous breakouts with their respective tubes. By November, however, the Old Mother's Day tube appeared to be extinct below the 2,390-ft elevation.

Activity retreats upslope

Breakouts on the lower reaches of the Kohola, August 9, and Eastside branches of the Mother's Day tube steadily diminished during October, and no active lava reached the coastal plain for the first time since June 2002. The last surface flow active below the top of the pali (in the Kohola) was spotted on November 11, and the Kohola tube was no longer in service by the end of November. Thereafter, all surface flows from the Mother's Day tube were associated with rootless shield activity fed by the August 9 tube.

Ocean entries

Lava entered the ocean at five different locations during 2003 (table C-2), and none of the entries persisted for long. The longest-lived entry of 2003 was at West Highcastle, which was active at the beginning of the year and remained so until mid-May, when the old Mother's Day tube began to stagnate as newer tube branches captured its supply. These new tubes, however, didn't manage to produce a memorable entry, perhaps because they split the supply between them. The Kohola flow reached the ocean with a flourish on Valentine's Day, after devouring a fresh section of the Chain of Craters Road and forcing the Park Service to move their mobile visitor center. The new entry, however, was active for a scant two weeks.

The Eastside tube made a feint at Lae'apuki in mid-April, but the flow died after two days. Another flow fed by the same tube established a beachhead at Highcastle in mid-May. This entry lacked conviction, however, and was distinguished by its consistent lack of vigor, producing a weak plume that was scarcely visible at a distance. The Highcastle entry was last reported active on July 9, and that was it for ocean entries in 2003.

The Pu'u 'O'o crater

The crater was quiet during almost the entire first half of 2003. Most of the prominent cones and pits on the crater floor (fig. C-2), including the East Pond Vent, the January vent, the Drainhole, and the Beehive vent (all of which formed during the first half of 2002), were incandescent, and sometimes the glow was strong enough to be visible from Highway 11 on clear nights.

A small flow from the South Wall Complex and Humble vents was emplaced two days after the January 21 surge-style event. Thereafter, no flows were active in the crater until June, when two small pahoehoe flows extruded from the Drainhole and January vents.

Beginning in August, gas pistoning from the January and East Pond vents was occasionally accompanied by spattering and/or extrusion of small lava flows.

On October 2, coincident with the first lava flows from the West Gap Pit, Dave's Pit, on the southwest edge of the crater floor, produced a small flow for the first time in 2003. On October 27, Dave's Pit produced another flow, again in concert with the beginning of renewed activity in the West Gap. The January vent and Dave's Pit were again active at the end of October. Activity was intermittent through November, with flows from the Humble and January vents, frequent gas-jetting from several vents, and spattering from the Beehive vent. The frequency of lava flows in the crater picked up greatly in the last half of December, but the crater floor wasn't completely repaved with new lava until January (see December-January report above.)

Puka Nui and the West Gap

Puka Nui showed little change during the first three quarters of 2003. New rock fall was observed following the January 21 surge-style event, but otherwise this composite collapse feature was stable until renewed activity filled the pit with lava in the last three months of the year.

Likewise, the West Gap Pit and 55 cone/pit were quiet until October. A new incandescent area was first observed on the northwest wall of the West Gap pit on June 6, and, later in the same month, was the source of a pulsating gas jet. The incandescent area became the site of the eastern spatter cone in the West Gap at the end of the year. Later in the summer, incandescence was also spotted from a pit at the base of the large West Gap Pit hornito, and from the small collapse pit in the filled 55 cone/pit just southwest of West Gap Pit. Both of these areas also produced lava in the autumn.

As the distal end of the tube system atrophied, effusive activity began in early October at the West Gap pit and subsequently in Puka Nui and the 55 cone/pit. None of these areas had been active since early May 2002.

Table C-1. Eruption statistics, 1983–2003.

Areas

Total area covered by lava, 3/83–12/31/03: 116.9 km² (45.1 mi²)

Episode	Area originally covered	Area still exposed, 12/31/02
1–48b (mostly Pu'u 'O'o)	42.0 km ²	17.3 km ²
48 (Kupaianaha)	41.0	34.6
49 (between Pu'u 'O'o & Kupaianaha)	3.9	3.7
50 (Pu'u 'O'o flank vents)	1.0	0.12
51–52 (Pu'u 'O'o flank vents)	12.3	0.18
53 (Pu'u 'O'o flank vents)	19.4	3.4
54 (in & NE of Napau Crater)	0.24	0.24
55 (Pu'u 'O'o flank vents)	57.4	57.4
New (vegetated) territory covered in 2003:	4.7 km²	

Net total of new land created, Nov. 86–Dec. 2003: ~225 hectares (~560 acres)*

Net new land created during 2003: ~0.8 hectares (2 acres)

*These figures do not include new land that was claimed by wave erosion or collapse of the active lava bench. Due to these processes, the total area of new land has decreased in some years.

Volumes

Total, 1/83 through 12/03. Approximately: 2.6 km³ (dense rock equivalent)

Episodes 1–48b (1/83–6/86)	.391 km³
Episode 48 (7/86–2/92)	.500 km³
Episode 49 (11/91)	.011 km³
Episode 50 (2/92–3/92)	.005 km³
Episode 51–52 (3/92–2/93)	.078 km³
Episode 53 (2/93–1/97)	.535 km³
Episode 54 (1/97)	.0003 km³
Episode 55 (2/97– ongoing)	1.12 km³

Other fascinating facts

Height of the Pu'u 'O'o cone: **~181 m** (595 ft). Cone has lost **~74 m** (242 ft) to collapse since 1986

Dimensions of the Pu'u 'O'o crater: **~250 m x 400 m** (820 x 1312 ft)

Depth of the Pu'u 'O'o crater floor below east rim, Dec 2003: **~8 m**

Dimensions of episode 50–55 lava shield: **~1.9 x 1.0 km**

Height of episode 50–55 lava shield: **~90 m**

Height of Kupaianaha lava shield: **56 m** (Kupaianaha vent inactive since Feb. 92)

Thickness of lava at the coast:

~15–35 m (33–115 ft) over Chain of Craters Rd/Hwy 130

Highway covered by lava flows in 2003: **640 m** (2,100 ft)

Total highway covered in eruption: **14.3 km** (8.9 mi)

Structures destroyed

No structures destroyed in 2003

Total structures destroyed since 1983: **189**

Table C-2. Ocean entries, from west to east, active during 2003 (several began in 2002).

Ocean entry	Dates of activity <i>2002 dates in italics</i> 2003 dates in bold	Final bench dimension	Final bench area (hectares)	Maximum bench area (hectares)
Kohala	Feb. 14-17, 2003	165 x 20 m	0.24	—
Wilipe'a	<i>Jul. 21-Aug. 8, Aug. 11, 14, 16, Sep. 3-</i> Jan. 2, 2003	750 x 100 m	4.9	14.8
West Highcastle	<i>Jul. 19-Aug. 2, Aug. 7, Aug. 13, Sep. 16-18, Sep. 20-</i> May 13, 2003	800 x 150 m	5.7	10.7
Post-Jan. 21, 2003 Highcastle	May 18-July 9, 2003	320 x 120 m	2.8	2.8
Pre-Jan. 21, 2003 Highcastle	<i>Aug. 8-15, Aug 20-24, Sep. 20-21, Oct. 29, Nov. 11-21, Dec. 9-</i> Jan. 7, 2003	290 x 60 m	1.0	1.3
Lae'apuki	April 17-18, 2003	100 x 20 m	0.07	0.07

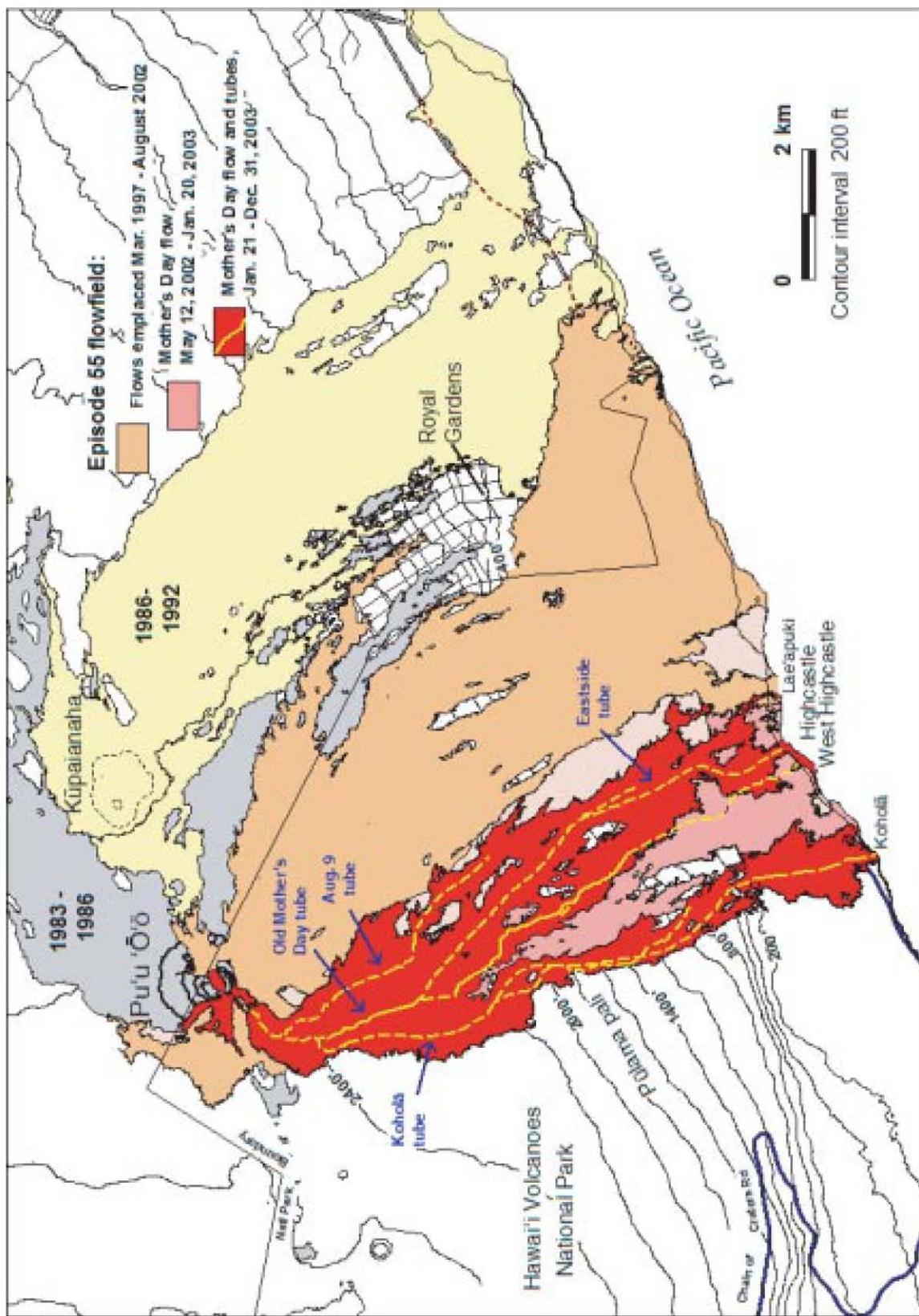


Figure C-1. Lava flows, tubes, and ocean entries active from January 21–December 31, 2003.

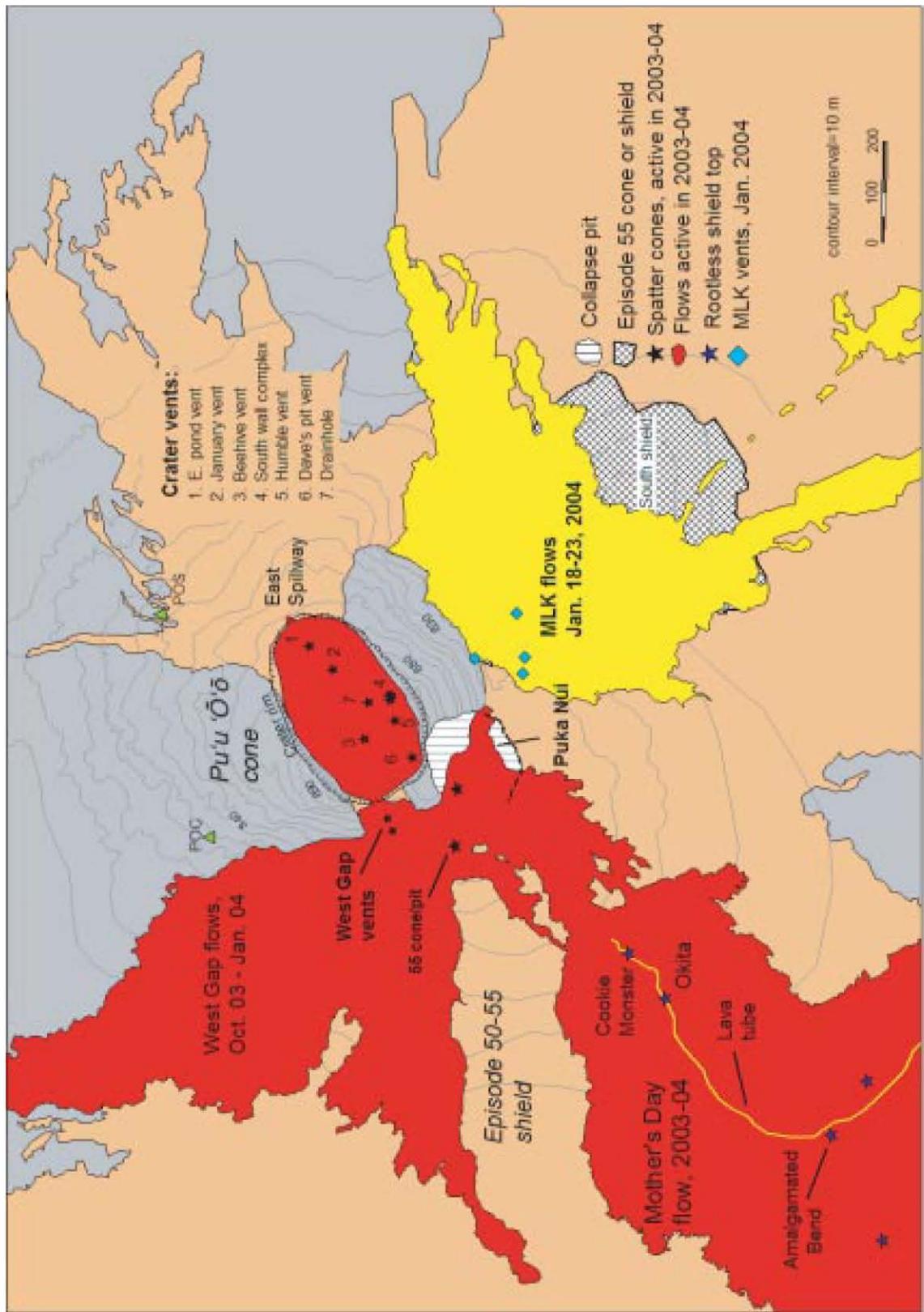


Figure C-2. Map of Pu'u 'O'o cone and the upper Mother's Day lava tube, showing new flows emplaced from West Gap, 55 cone/pit, Puka Nui, and the MLK Vent through January 2004.

SEISMIC INSTRUMENTATION

The network. The Hawaiian Volcano Observatory maintains an extensive telemetered seismic network on the Island of Hawai'i. The standard HVO field sensors, 1-Hz geophones, are deployed as single-component, vertical-only units or as three-component combinations of one vertical and two orthogonal horizontal units. The 2003 network consisted of 48 station sites: 8 three-component, 3 six-component (which included a three-component Kinematic Force-Balance accelerometer), 2 four-component (Uwekahuna included a low-gain vertical with a unity gain setting; Ainapo included a moderate-gain vertical with a 48db setting), 3 two-component (each site included a moderate-gain vertical with a 48db setting), and 33 vertical-component-only sites. The coverage is most dense on and around Kilauea Volcano. During 1999 HVO added to the network three vertical-component-only sites on the Island of Maui. All seismic signals from the network are telemetered in real time to the Observatory for recording.

The Pacific Tsunami Warning Center (NOAA) operates and maintains a network of stations on the islands of Hawai'i, Maui, and O'ahu. In 1999, radio links were established to share data, in real-time, between PTWC and HVO. PTWC signals from one O'ahu three-component station, and one Maui and four Hawai'i vertical-component-only stations, were telemetered to the Observatory for recording.

Figure 1 is a map of selected geographic and geologic features. Figure 2 shows the sites of seismic stations operated by HVO and PTWC on the Island of Hawai'i during 2003. Figure 3 indicates the telemetry scheme for the seismic stations on Hawai'i Island, and figures 4a and 4b are expanded views of the telemetry schemes at Kilauea summit: 4a, HVO seismic stations and 4b, broadband network installed by Menlo Park and maintained by HVO. Figure 5 indicates the telemetry scheme for the seismic stations on Maui Island.

Table 1 lists seismic stations by names, four-letter station codes, coordinates in degrees and minutes (old Hawaiian datum), elevation in meters, and other data, as described below, pertaining to each station. The list includes all the stations operated by HVO during 2003. Seismic stations operated by PTWC on the Islands of Hawai'i, O'ahu and Maui are also listed. Phase times from PTWC stations, not telemetered to HVO, are used to supplement local earthquakes and earthquakes that occur within the Hawaiian Archipelago but distant from the Hawai'i Island network.

Instrumentation and recording. Each telemetered station's data channel has a voltage-controlled oscillator (VCO) for FM multiplex transmission to HVO via radio. These telemetering stations are all of Type 1, Earthquake Hazards Team (EHT) standard system used in USGS seismic networks (see table 2 for details). After discrimination at the receiver, the analog signals are converted to digital form as part of the routine computer location processing and archiving. Through July 2001, continuous signals from the telemetered network were saved on 4-mm digital-audio tape (DAT) recording units. Three DAT recorders ran in automatic rotation, as each ~20-hr tape was filled. Optic recordings are coded in table 1 as follows: H - Helicorder paper, and I - ink paper. DAT and paper records are archived at HVO.

Seismograph response and calibration. Response curve for the short-period seismograph type in use is given in figure 6. The Type 1 curve gives the magnification of the standard EHT system from ground motion at the seismometer to the seismic trace, as would be seen on a 20x Develocorder film viewer. The curve plots the unit response, which is multiplied by a constant but known factor, CAL, to get the response for an individual station. Individual CAL factors for Type 1 seismographs are Develocorder equivalent peak-to-peak amplitudes, measured in millimeters, of a 100-microvolt 5 to 8-Hz signal introduced to the preamp/VCO in place of the geophone at the field station. The calibration process is normally performed each time a station is visited for other required maintenance. Though Develocorder operations have ceased, calculations continue to be based on Develocorder equivalents.

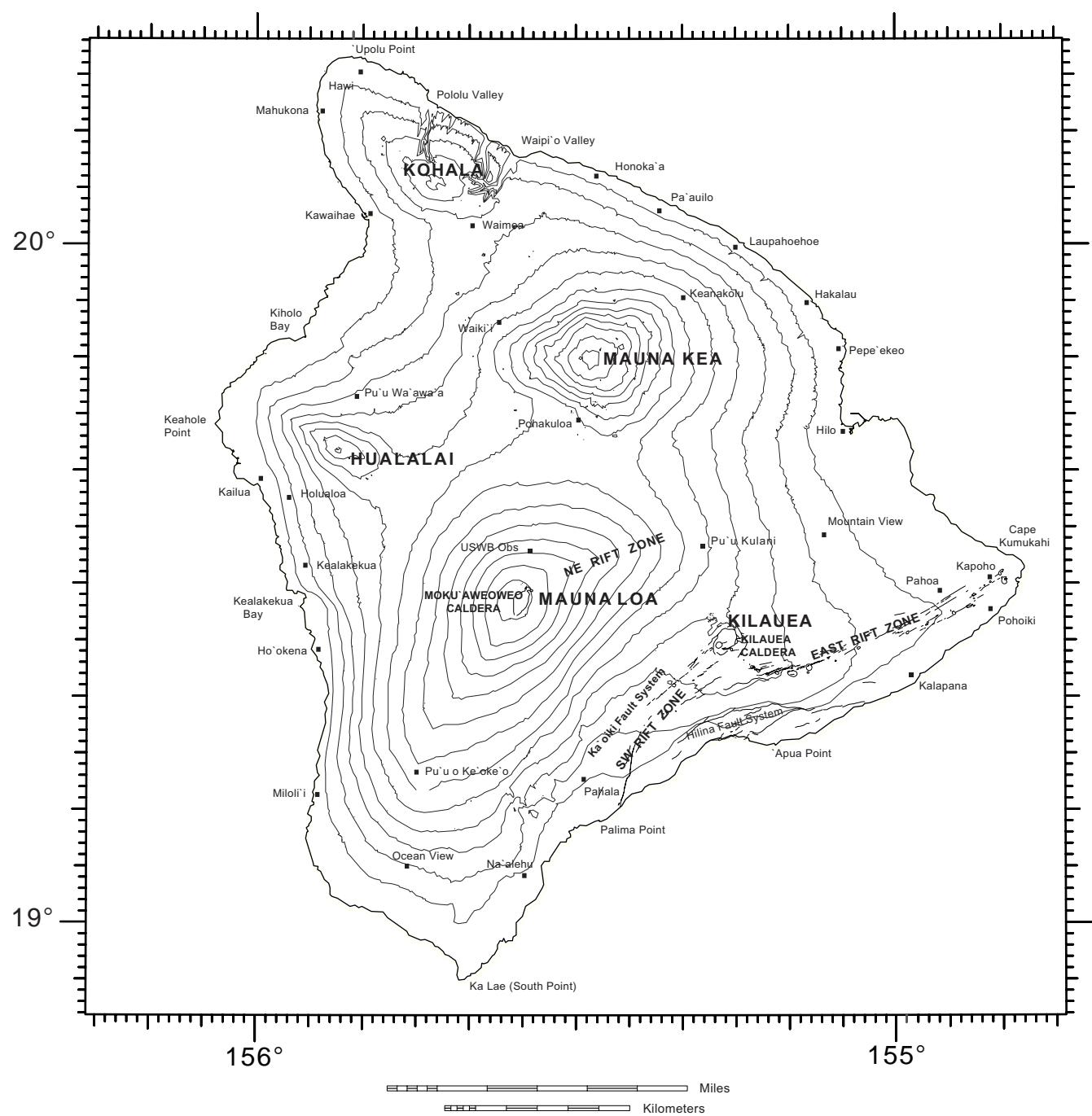


Figure 1. Map of the Island of Hawai'i, showing principal settlements and selected geographic and geologic features.

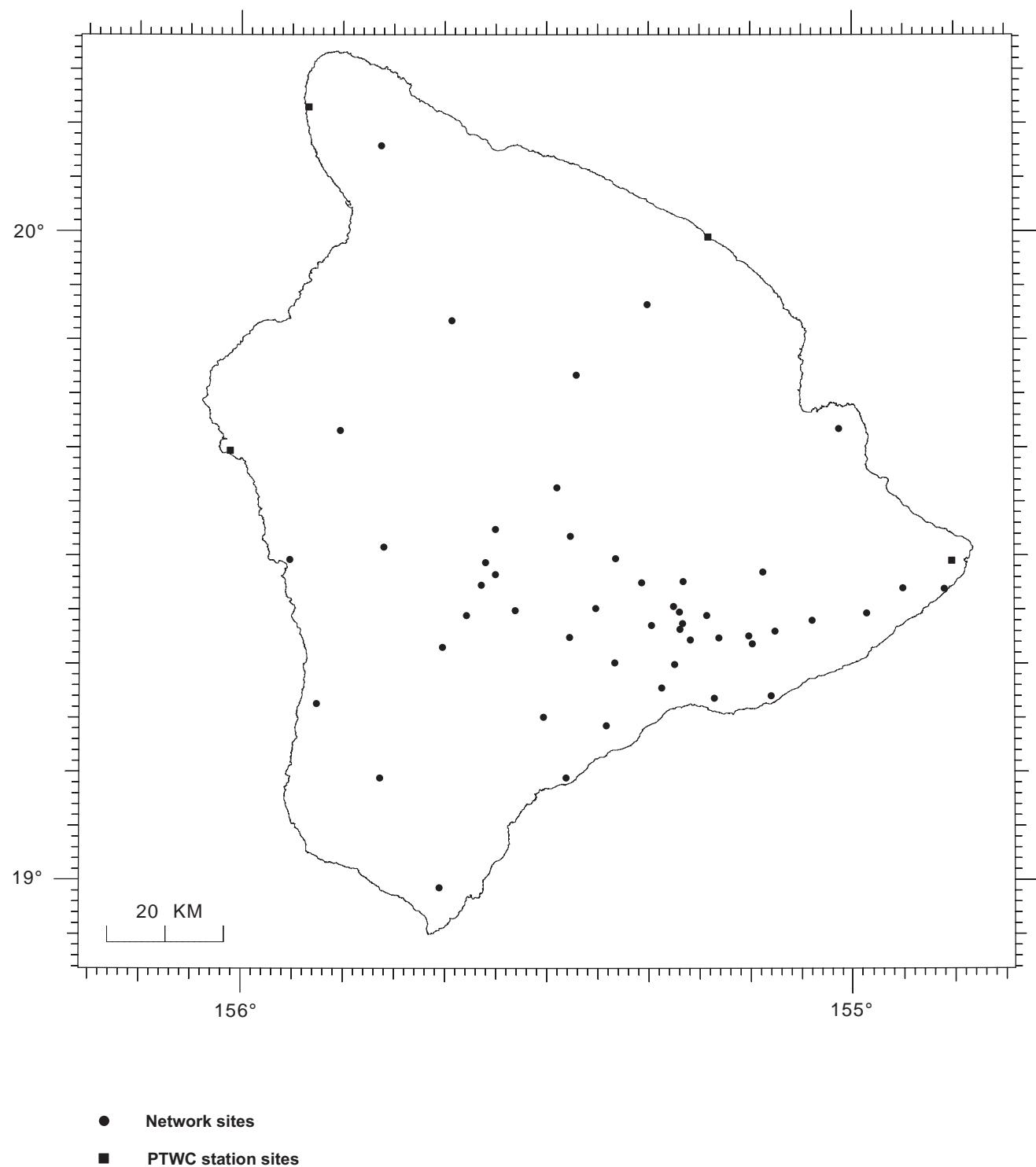
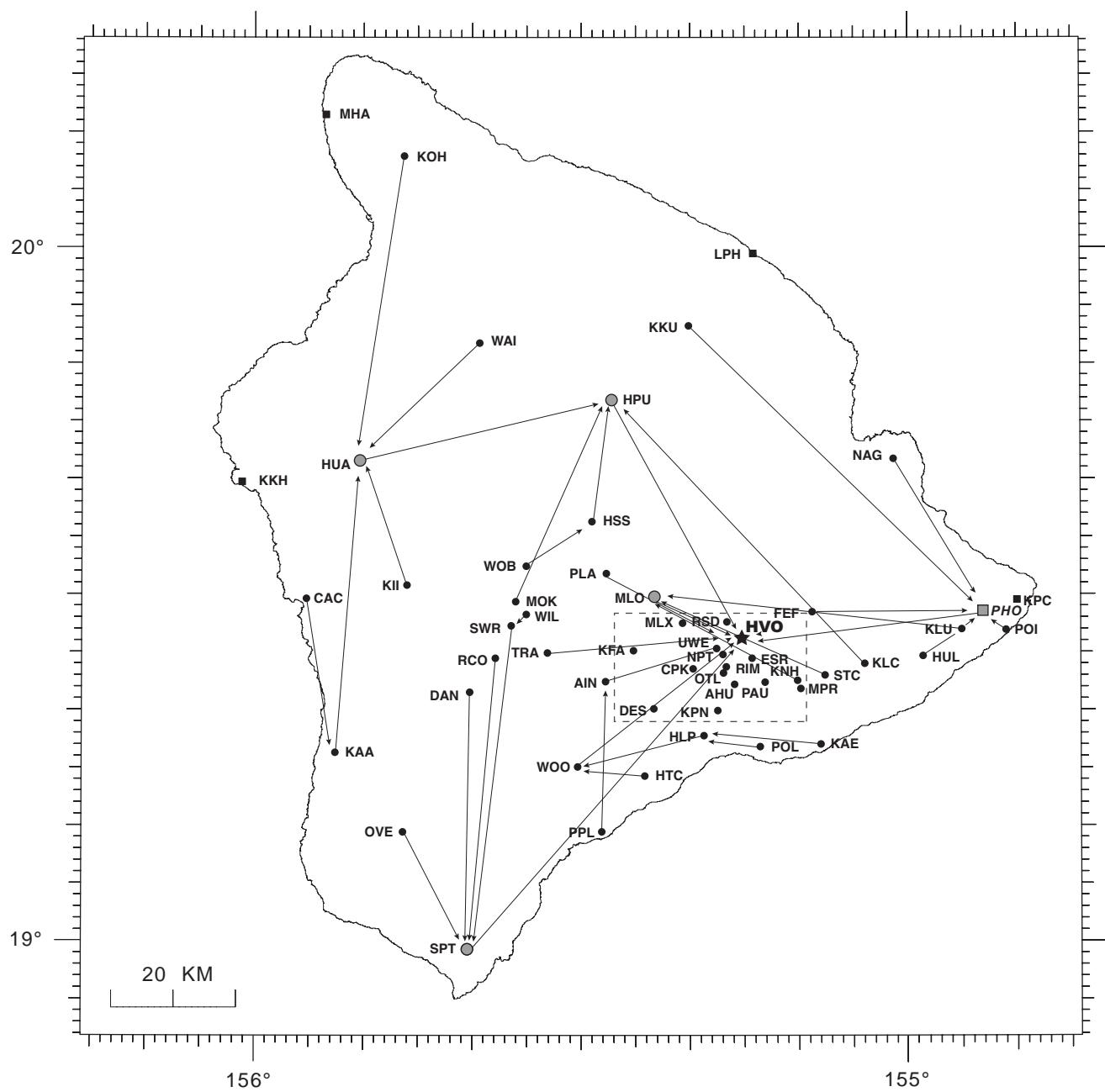
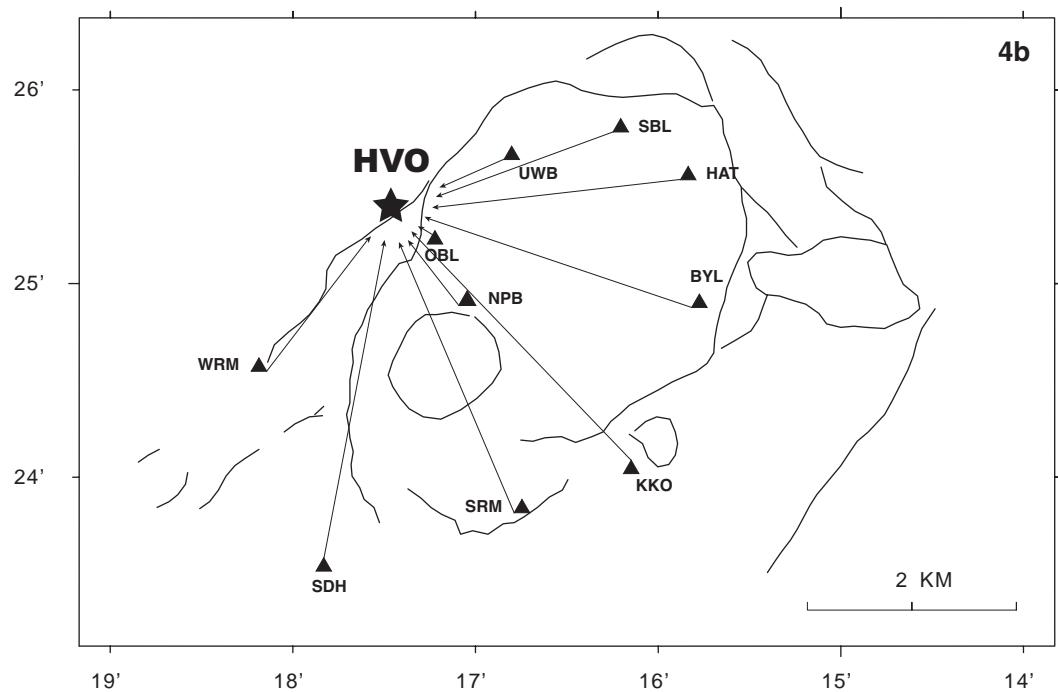
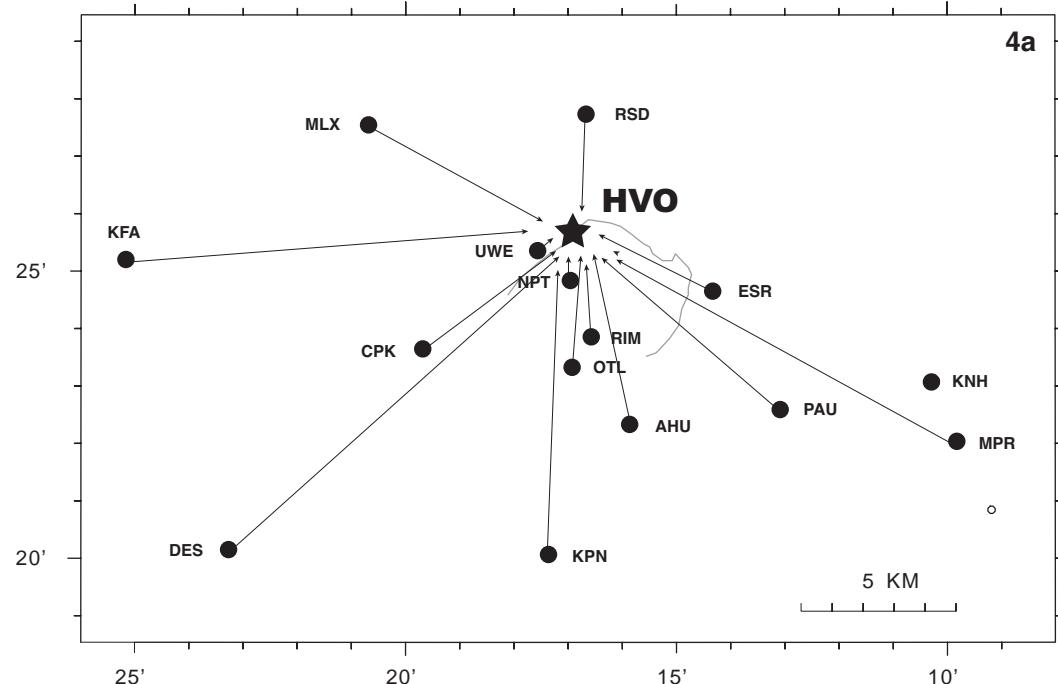


Figure 2. Seismic station sites operated by the USGS and NOAA on Hawai'i Island during 2003 on the Island of Hawai'i.



- ★ Hawaiian Volcano Observatory
- Network sites
- Direct-to-Line 32 Channel
- Direct-to-Line 32 Channel repeater sites
- [- -] Inset Kilauea Summit
- PTWC station sites

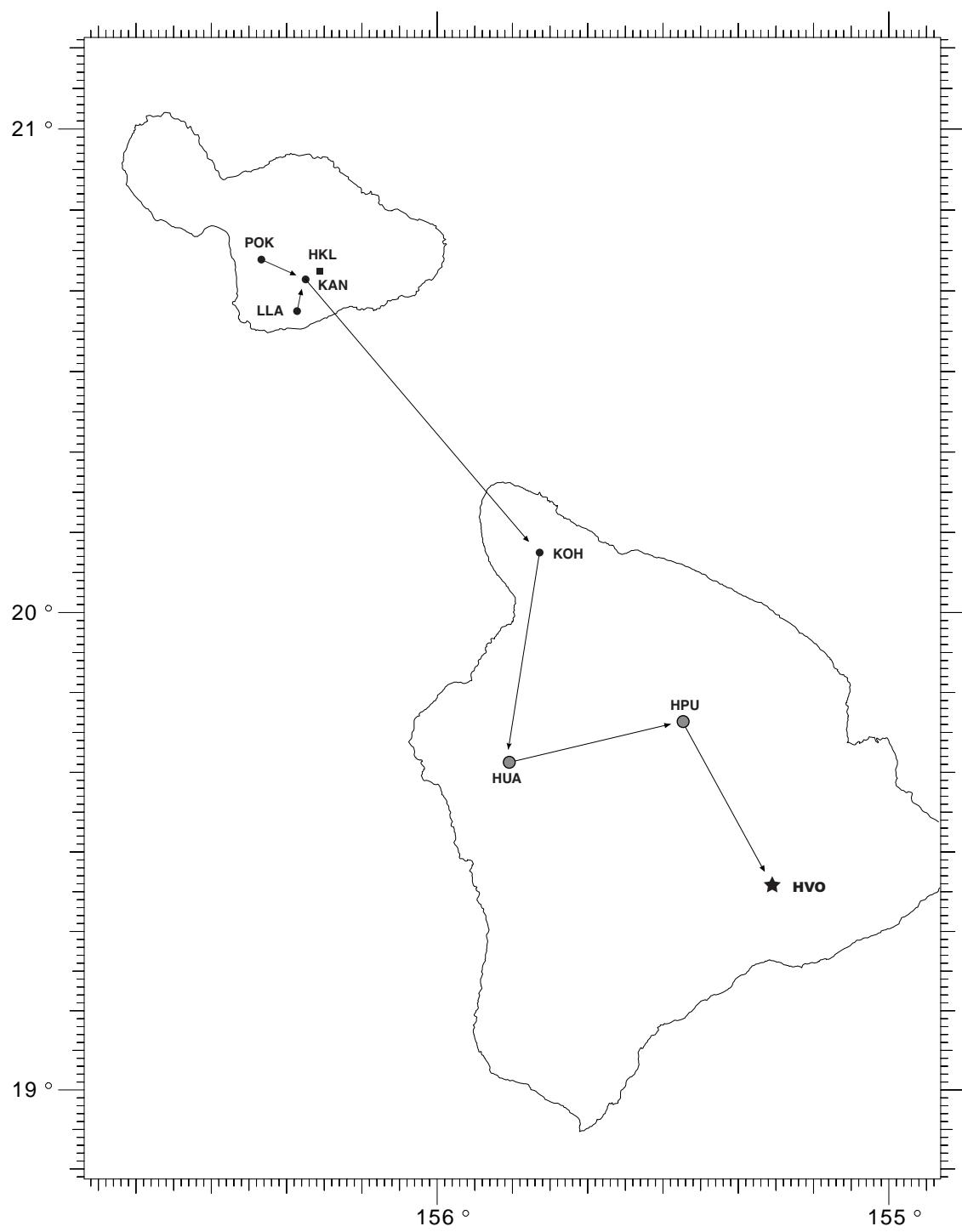
Figure 3. Telemetry scheme for seismic stations operational during 2003 on the Island of Hawai'i.



- ★ Hawaiian Volcano Observatory
- Network sites
- ▲ Broadband sites

Figure 4a. Expanded telemetry scheme for the 2003 Hawaiian Volcano Observatory seismic network at Kilauea summit.

Figure 4b. Expanded telemetry scheme for the 2003 Menlo Park broadband network at Kilauea summit.



- ★ Hawaiian Volcano Observatory
- Network station sites
- Direct-to-Line 32 Channel
- PTWC station sites

Figure 5. Telemetry scheme for seismic stations operational during 2003 on the Island of Maui.

Table 1. Seismic stations in Hawai'i operated by the USGS in 2003.

STATION NAME	CODE	-LAT-		-LON-		ELEV (M)	DELAY (M)	CAL	SEIS	OPTIC	TYPE	RECORD
		D	M	D	M							
AHUA	AHUV	19	22.40	155	15.90	1070	-0.10	-0.13	2.6	L5	I	
AHUA	AHUE	19	22.40	155	15.90	1070	-0.10	-0.13	3.0	E5	MW	
AHUA	AHUN	19	22.40	155	15.90	1070	-0.10	-0.13	3.0	E5	MW	
AINAPO	AINV	19	22.50	155	27.62	1524	0.13	0.17	6.8	L5		
AINAPO	AINE	19	22.50	155	27.62	1524	0.13	0.17	3.0	L5	MW	
AINAPO	AINN	19	22.50	155	27.62	1524	0.13	0.17	3.0	L5	MW	
AINAPO	AINZ	19	22.50	155	27.62	1524	0.13	0.17	0.0	L5		
CAPTAIN COOK	CACV	19	29.29	155	55.09	323	0.00	-0.16	1.1	L5		
CONE PEAK	CPKV	19	23.70	155	19.70	1038	-0.26	-0.07	6.0	L5		
DANDELION	DANV	19	21.42	155	40.04	3003	-0.27	0.03	4.3	E5		
DESERT	DESV	19	20.20	155	23.30	815	-0.29	-0.13	4.5	L5	I	
DIAMOND HEAD, OADHHZ	21	16.12		157	48.25	137	0.00	0.00	0.0	S1	H	
ESCAPE ROAD	ESRV	19	24.68	155	14.33	1177	-0.17	-0.19	1.2	L5		
FERN FOREST	FEFV	19	28.70	155	8.91	691	0.01	0.05	0.0	L5		
HEIHEIAHULU	HHAZ	19	25.13	154	58.72	369	-0.17	-0.16	0.0	F5		
HEIHEIAHULU	HHAE	19	25.13	154	58.72	369	-0.17	-0.16	0.0	F5		
HEIHEIAHULU	HHAN	19	25.13	154	58.72	369	-0.17	-0.16	0.0	F5		
HALEAKALA, MAUI	HKLZ	20	42.63	156	15.55	3051	0.00	0.00	0.0	S1	H	
HILINA PALI	HLPV	19	17.96	155	18.63	707	0.02	0.07	2.1	L5		
HONOLULU, OAHU	HONZ	21	19.30	158	0.50	2	0.00	0.00	0.0	S1	H	
HONOLULU, OAHU	HONE	21	19.30	158	0.50	2	0.00	0.00	0.0	S1	H	
HONOLULU, OAHU	HONN	21	19.30	158	0.50	2	0.00	0.00	0.0	S1	H	
HONUAPO	HPOZ	19	5.34	155	33.23	15	0.00	0.00	0.0	S1		
HALE POHAKU	HPUV	19	46.85	155	27.50	3396	0.31	0.17	3.3	L5		
HUMUULA SHEEP	STHSAZ	19	36.31	155	29.13	2445	0.20	0.35	0.0	F5		
HUMUULA SHEEP	STHSAN	19	36.31	155	29.13	2445	0.20	0.35	0.0	F5		
HUMUULA SHEEP	STHSAE	19	36.31	155	29.13	2445	0.20	0.35	0.0	F5		
HUMUULA SHEEP	STHSSV	19	36.31	155	29.13	2445	0.20	0.35	4.0	L5		
HUMUULA SHEEP	STSSE	19	36.31	155	29.13	2445	0.20	0.35	3.0	L5		
HUMUULA SHEEP	STHSSN	19	36.31	155	29.13	2445	0.20	0.35	3.0	L5		
HOT CAVES	HTCV	19	14.33	155	24.02	381	-0.16	-0.07	2.3	E4		
HUALALAI	HUAV	19	41.25	155	50.32	2189	0.67	0.38	2.8	L5	I	
HEIHEIAHULU	HULV	19	25.13	154	58.72	369	-0.17	-0.16	1.6	L5	H	
HEIHEIAHULU	HULE	19	25.13	154	58.72	369	-0.17	-0.16	3.0	E5	MW	
HEIHEIAHULU	HULN	19	25.13	154	58.72	369	-0.17	-0.16	3.0	L5	MW	
KAAPUNA	KAAV	19	15.98	155	52.28	524	-0.12	-0.01	3.3	E5		
KAENA POINT	KAEV	19	17.35	155	7.95	37	-0.01	0.06	1.4	L5		
KANAHAU, MAUI	KANV	20	41.60	156	17.84	2745	0.00	0.00	0.0	L5		
KAOIKI FAULTS	KFAV	19	25.25	155	25.18	1579	0.13	0.17	0.0	L5		
KANEKII	KIIV	19	30.56	155	45.90	1841	0.15	0.37	3.0	L5		
KANEKII	KIIE	19	30.56	155	45.90	1841	0.15	0.37	3.0	L5	MW	
KANEKII	KIIN	19	30.56	155	45.90	1841	0.15	0.37	3.0	L5	MW	
KIPAPA, OAHU	KIPZ	21	25.40	158	0.90	2	0.00	0.00	0.0	S1		
KAILUA, KONA	KKHZ	19	39.40	156	1.12	1	0.00	0.00	0.0	S1		
KEANAKOLU	KKUV	19	53.39	155	20.58	1863	0.68	0.24	3.3	L5		
KALALUA CONE	KLCV	19	24.35	155	4.08	659	-0.25	-0.30	3.4	L5		
PUU KALIU	KLUV	19	27.48	154	55.26	271	-0.17	-0.30	3.4	L5		
KANE NUI O HAMO	KNHV	19	22.95	155	10.32	954	-0.17	-0.20	0.0	L5	I	
KANE NUI O HAMO	KNHZ	19	22.95	155	10.32	954	-0.17	-0.20	0.0	L5		
KOHALA	KOHV	20	7.69	155	46.77	1166	-0.03	-0.17	6.3	L5		
KOHALA	KOHE	20	7.69	155	46.77	1166	-0.03	-0.17	3.0	L5	MW	
KOHALA	KOHN	20	7.69	155	46.77	1166	-0.03	-0.17	3.0	L5	MW	
KAPOHO CONE	KPCZ	19	30.02	154	50.51	134	0.00	0.00	0.0	S1		
KIPUKA NENE	KPNV	19	20.10	155	17.40	924	-0.11	-0.08	3.5	L5		

STATION NAME	CODE	-LAT-		-LON-		ELEV	DELAY	DELAY	CAL	SEIS	OPTIC	TYPE	RECORD
		D	M	D	M	(M)	1	2					
LUALAILUA, MAUI	LLAV	20	37.62	156	18.62	683	0.00	0.00	0.0	0.0	L5		
LAUPAHOEHOE	LPHZ	19	59.82	155	14.58	1	0.00	0.00	0.0	0.0	S1		
MAHUKONA	MHAZ	20	11.27	155	54.18	1	0.00	0.00	0.0	0.0	S1		
MAUNA LOA	MLOV	19	29.80	155	23.30	2010	0.03	0.08	5.6	L5	I		
MAUNA LOA	MLOE	19	29.80	155	23.30	2010	0.03	0.08	3.0	L5			
MAUNA LOA	MLON	19	29.80	155	23.30	2010	0.03	0.08	3.0	L5			
MAUNA LOA X	MLXV	19	27.60	155	20.70	1475	0.06	0.15	3.0	L5			
MOKUAWEOEWO	MOKV	19	29.28	155	35.98	4104	0.15	0.16	4.2	L5	IH		
NATIONAL GUARD	NAGV	19	42.12	155	1.72	18	0.54	0.30	4.0	R5			
NATIONAL GUARD	NAGE	19	42.12	155	1.72	18	0.54	0.30	3.0	R5	MW		
NATIONAL GUARD	NAGN	19	42.12	155	1.72	18	0.54	0.30	3.0	R5	MW		
NORTH PIT	NPTV	19	24.90	155	17.00	1115	-0.30	-0.18	3.0	L5	I		
NORTH PIT	NPTE	19	24.90	155	17.00	1115	-0.30	-0.18	3.0	L5	MW		
NORTH PIT	NPTN	19	24.90	155	17.00	1115	-0.30	-0.18	3.0	L5	MW		
OPANA, OAHU	OPAZ	21	41.45	158	0.70	100	0.00	0.00	0.0	S1	H		
OUTLET	OTLV	19	23.38	155	16.94	1038	-0.19	-0.18	2.6	L5			
OUTLET	OTLZ	19	23.38	155	16.94	1038	-0.19	-0.18	0.0	L5			
OCEANVIEW ESTATEOVEV		19	9.21	155	45.92	1378	0.00	0.00	0.0	L5			
PAUAHI	PAAZ	19	22.62	155	13.10	994	-0.21	-0.24	0.0	F5			
PAUAHI	PAAE	19	22.62	155	13.10	994	-0.21	-0.24	0.0	F5			
PAUAHI	PAAN	19	22.62	155	13.10	994	-0.21	-0.24	0.0	F5			
PAUAHI	PAUV	19	22.62	155	13.10	994	-0.21	-0.24	2.9	L5			
PAUAHI	PAUE	19	22.62	155	13.10	994	-0.21	-0.24	3.0	L5	MW		
PAUAHI	PAUN	19	22.62	155	13.10	994	-0.21	-0.24	3.0	L5	MW		
PUU ULAULA	PLAV	19	32.00	155	27.67	2992	-0.03	0.13	6.3	L5	I		
POHOIKI	POIV	19	27.42	154	51.22	16	-0.09	-0.24	0.0	L5			
PUUOKALI, MAUI	POKV	20	44.00	156	23.32	511	0.00	0.00	0.0	L5			
POLIOKEAWE PALI	POLV	19	17.02	155	13.47	169	-0.02	0.03	3.4	E5			
PUU PILI	PPLV	19	9.50	155	27.87	35	-0.15	-0.15	1.4	E5			
RED CONE	RCOV	19	24.36	155	37.79	3601	0.00	0.00	0.0	L5			
RIM	RIMV	19	23.90	155	16.60	1128	-0.21	-0.13	0.0	L5			
RAINSHED	RSDV	19	27.78	155	16.68	1270	0.06	0.15	0.0	L5			
SOUTH POINT	SPDV	18	58.94	155	40.24	250	-0.17	-0.22	0.0	L5			
SOUTH POINT	SPDE	18	58.94	155	40.24	250	-0.17	-0.22	0.0	L5	MW		
SOUTH POINT	SPDN	18	58.94	155	40.24	250	-0.17	-0.22	0.0	L5	MW		
STEAM CRACKS	STCV	19	23.30	155	7.67	765	-0.25	-0.30	3.4	L5	H		
SOUTHWEST RIFT	SWRV	19	27.26	155	36.30	4048	0.01	0.04	5.6	E5			
TRAIL	TRAV	19	24.91	155	32.96	3207	0.00	0.00	0.0	L5			
UWEKAHUNA	URAV	19	25.40	155	17.60	1240	-0.21	0.00	0.0	R5			
UWEKAHUNA	URAE	19	25.40	155	17.60	1240	-0.21	0.00	3.0	R5	MW		
UWEKAHUNA	URAN	19	25.40	155	17.60	1240	-0.21	0.00	3.0	R5	MW		
UWEKAHUNA	UUGZ	19	25.40	155	17.60	1240	0.00	0.00	0.0	L0			
WAIKII	WAIV	19	51.58	155	39.60	1433	0.20	0.35	0.0	L5			
WILKES CAMP	WILV	19	28.15	155	35.02	4037	0.22	0.17	2.6	E5			
WILKES CAMP	WILE	19	28.15	155	35.02	4037	0.22	0.17	3.0	L5	MW		
WILKES CAMP	WILN	19	28.15	155	35.02	4037	0.22	0.17	3.0	L5	MW		
WAIMANALO RIDGE, WMRZ		21	19.22	157	40.94	200	0.00	0.00	0.0	S1			
WEATHER OBSERVATWOBV		19	32.31	155	35.01	3396	0.00	0.00	0.0	E5			
WOOD VALLEY	WOOV	19	15.08	155	30.12	909	-0.15	-0.06	2.6	E5			

Table 2. Seismic instrument types

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

Type 1 (Codes E, L, R, and 4, 5) consists of:

- a) Geophone - Electrotech EV-17 (E), Mark Products L4C (L) or Kinematic Ranger SS1 (R). (L) and (R) are 1.0-sec. period moving-magnet vertical- or horizontal- (E-W and N-S) component seismometers adjusted for an output of 0.5 volts/cm/sec and 0.8, critically damped.
- b) Preamp/VCO - USGS/OEVE Model J502, J512 (5) voltage-controlled oscillator. Three db points for bandpass filter at 0.1 Hz and 30 Hz. Signals are transmitted on audio FM carrier over cable or FM radio link to HVO.

Code (W) - Wood-Anderson torsion seismograph.

Code (MW) - Horizontal-component seismograph based on a Type 1 system and modified to 3x a Wood-Anderson response.

Code (F) - Kinematic Force-Balance Accelerometer (FBA23).

Code (S13) – Geotech, 1Hz seismometer with A1 VCO operated by the Pacific Tsunami Warning Center.

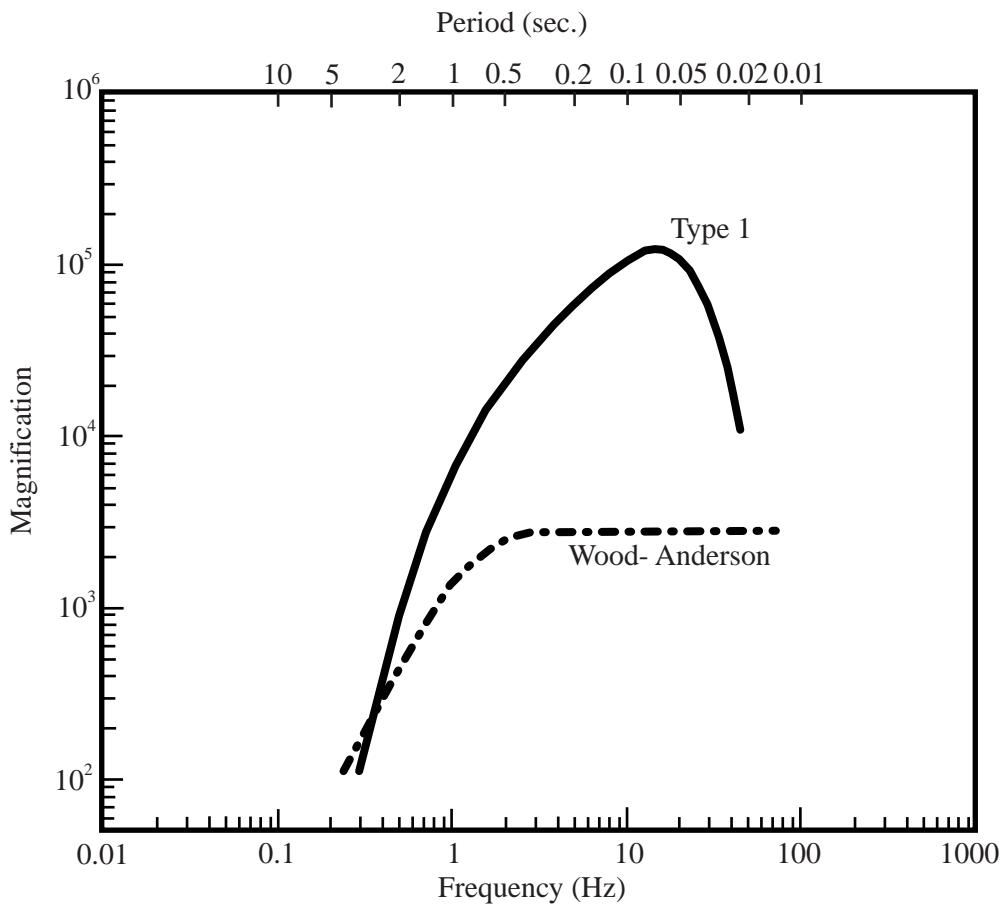


Figure 6. System-response curves for the Wood-Anderson torsion seismograph and for seismometers used by the Hawaiian Volcano Observatory. The Type 1 curve plots the unit response of the standard USGS microearthquake seismometer system as would be recorded on Develocorder film. This includes the geophone, all electronics including telemetry, Develocorder galvanometer, and projection of film by a 20x viewer. The unit response curve is multiplied by constant but known factors (CAL) to obtain the responses for individual stations.

SEISMIC DATA PROCESSING

Due to age and high cost of maintenance, Developcorder 'A' was discontinued on August 1, 1997. Daily count of classified microearthquakes from source regions around Kilauea and Mauna Loa, and duration of tremor, were also discontinued. Coda duration, however, is measured in seconds from drum (ink or helicorder) records to determine a coda magnitude that is entered as an external magnitude in the final solution.

In 1986, HVO acquired a VAX 11-750 computer and adopted the CUSP (California Institute of Technology USGS Seismic Processing) routine. Discriminated analog signals are converted to digital form, and detected events are saved in real time. Detected events are demultiplexed, and P-picks are made by the computer, producing a rough location. Events are examined by an analyst, on a graphics terminal, to refine computer P-picks and to time additional P- and S-phases for a preliminary location. Binary CUSP files are archived on magneto-optical media and translated into ASCII phase files. Locations and amplitude magnitudes are then determined, using the program HYPOINVERSE-2000 (Klein, 2002)². Events are reworked and rerun, as needed, to produce a final solution. Magneto-optical copies of arrival times and output summary data are kept at HVO.

In July 1992, HVO acquired VAX workstations for timing earthquakes using a "generic" version of CUSP. In addition to timing P and S arrival signals, the VAX workstations are capable of measuring peak-to-peak amplitudes along with the associated period. This capability allowed the renewal of amplitude magnitude determinations from the network seismic stations. Amplitude data gathered from July 1992 to July 1997 became part of a test set to determine magnitude corrections for network stations. Results of newly determined magnitude corrections are detailed by Nakata and Okubo (1997)³.

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

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

Two empirical sets of station delays or corrections were used in the HYPOINVERSE locations and are given in table 1. The delay models are separated by a circle of radius 34 km, centered at 19°22' N and 155°10' W. Delay model 1 is used for epicenters occurring within a circle of radius 31 km from the center. This region includes Kilauea and its south flank. A combination of the two delay models is used for epicenters that fall in a transition zone that is 6 km wide. Delay model 2 is applied to the rest of the island and offshore earthquakes. For a detailed description, refer to Klein².

Magnitudes for events are computed using recorded amplitudes on selected network vertical, Modified Wood-Anderson (MW) horizontal, and/or moderate and low gain stations. Amplitude readings are corrected to an equivalent Wood-Anderson amplitude using the curves of figure 6 and CAL factors listed in table 1.

Duration magnitude is determined by the length of signal, in seconds, read from drum recordings of Type 1 seismographs. This length of time is measured from the P arrival to the point where the earthquake signal has decayed to nearly the background noise level. Drum-recorded duration magnitude is calculated with a relationship equivalent to the developcorder viewer output.

² Klein, F.W., 2002, User's guide to HYPOINVERSE-2000, a Fortran Program to solve for earthquake locations and magnitudes: U.S. Geological Survey Open-File Report 02-171, 116 p.

³ Nakata, J., and Okubo, P., 1997, Determination of station amplitude magnitude corrections for the Hawaiian Volcano Observatory telemetered seismograph network: Data from 1992-1997: U.S. Geological Survey Open-File Report 97-863, 73 p.

SEISMIC CATALOG

The emphasis in both station coverage and detailed data analysis is on the highly active south half of the Island of Hawai‘i. The set of well-recorded earthquakes located in the Hawai‘i Island region is nearly complete above magnitude 2.0. Many smaller events are located in the densely instrumented Kilauea area. Substantial effort is made to locate earthquakes elsewhere within the Hawaiian Archipelago. Such coverage cannot be as complete as in south Hawai‘i, but nearly all events above magnitude 4.0 are located with limited precision.

Data presented in the seismic catalog are in three parts: (1) Maps showing computer-located hypocenters are given in figures 11-24. The location maps are of different scales and provide hypocenters with magnitude thresholds set at 1.0, 2.0, 3.0, and 3.5, varying according to region. (2) The list of computer locations constitutes the bulk of this summary and is given in table 4. Each earthquake in the list is assigned a three-letter code based on its general location and depth. Figures 7-10 are maps of the regions used to assign the location codes. The latitude and longitude limits of rectangular regions are listed in table 3. When the listed coordinates overlap, precedence is given according to figures 7-10. (3) Table 5 re-lists the events in table 4 for which the preferred magnitude is 3.0 or larger. This list includes many of the earthquakes felt in Hawai‘i.

Table 3. Names and coordinates of regions used for classifying earthquakes.

All earthquakes locate in one of the following groups, identified by a numerical class or three-letter code:

—Shallow:

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

—Intermediate depth:

- 9 SF1 - Kilauea south flank (5-13 km) (west end)
- 10 SF2 - Kilauea south flank (5-13 km)
- 11 SF3 - Kilauea south flank (5-13 km)
- 12 SF4 - Kilauea south flank (5-13 km)
- 13 SF5 - Kilauea south flank (5-13 km) (east end)
- 14 LER - Lower east rift (5-99 km)
- 15 MLO - Mauna Loa (0-13 km)
- 16 LSW - Lower southwest rift zones of Kilauea and Mauna Loa (0-13 km)
- 17 GLN - Glenwood (0-13 km)
- 18 SWR - Southwest rift zone of Kilauea (0-13 km)
- 19 INT - Intermediate caldera (5-13 km)
- 20 KAO - Ka‘oiki (0-13 km)

—Deep:

- 21 DEP - Deep Kilauea (>13 km) (below regions 1-13, 17-19)
- 22 DLS - Deep lower southwest rift zone of Kilauea and Mauna Loa (>13 km) (below region 16)
- 23 DML - Deep Mauna Loa (>13 km) (below regions 15, 20)

—Outer regions, all depths:

- 24 LOI - Lo‘ihī
- 25 KON - South Kona
- 26 HUA - Hualalai
- 27 KOH - Kohala
- 28 KEA - Mauna Kea
- 29 HIL - Hilo
- 30 DIS - Distant, everywhere else

Table 3 (continued). The latitude and longitude limits of the regions are given below. If the coordinates overlap, precedence is given according to maps in figures 7-10.

No.	Code	N. Lat.	S. Lat.	W. Lon.	E. Lon.
1	SNC	19 28.0	19 24.5	155 19.0	155 14.0
2	SSC	19 24.5	19 22.0	155 19.0	155 16.5
3	SEC	19 24.5	19 22.0	155 16.5	155 14.0
4	SER	19 26.0	19 20.5	155 14.0	155 07.2
5	SME	19 26.0	_____	155 07.2	155 00.0
6	KOA	19 22.0	19 20.5	155 17.0	155 14.0
7	SSF	_____	19 10.0	155 17.0	155 00.0
8	SLE	19 32.0	19 16.0	155 00.0	154 40.0
9	SF1	19 22.0	19 10.0	155 17.0	155 14.5
10	SF2	19 26.0	19 10.0	155 14.5	155 12.3
11	SF3	19 26.0	19 10.0	155 12.3	155 09.1
12	SF4	19 26.0	19 10.0	155 09.1	155 05.3
13	SF5	19 26.0	19 10.0	155 05.3	155 00.0
14	LER	19 32.0	19 16.0	155 00.0	154 40.0
15	MLO	19 35.0	19 19.0	155 35.0	155 19.0
16	LSW	19 19.0	18 40.0	155 43.0	155 25.0
17	GLN	19 35.0	19 26.0	155 19.0	155 00.0
18	SWR	19 22.0	19 10.0	155 25.0	155 17.0
19	INT	19 28.0	19 22.0	155 19.0	155 14.0
20	KAO	19 30.0	19 19.0	155 32.0	155 19.0
21	DEP	19 35.0	19 10.0	155 25.0	155 00.0
22	DLS	19 19.0	18 40.0	155 43.0	155 25.0
23	DML	19 35.0	19 19.0	155 35.0	155 19.0
24	LOI	19 10.0	18 40.0	155 25.0	155 00.0
25	KON	19 39.0	19 00.0	156 20.0	155 43.0
26	HUA	19 55.0	19 39.0	156 20.0	155 43.0
27	KOH	20 25.0	19 55.0	156 20.0	155 34.0
28	KEA	20 25.0	19 35.0	155 34.0	154 40.0
29	HIL	19 47.0	19 32.0	155 09.0	154 40.0

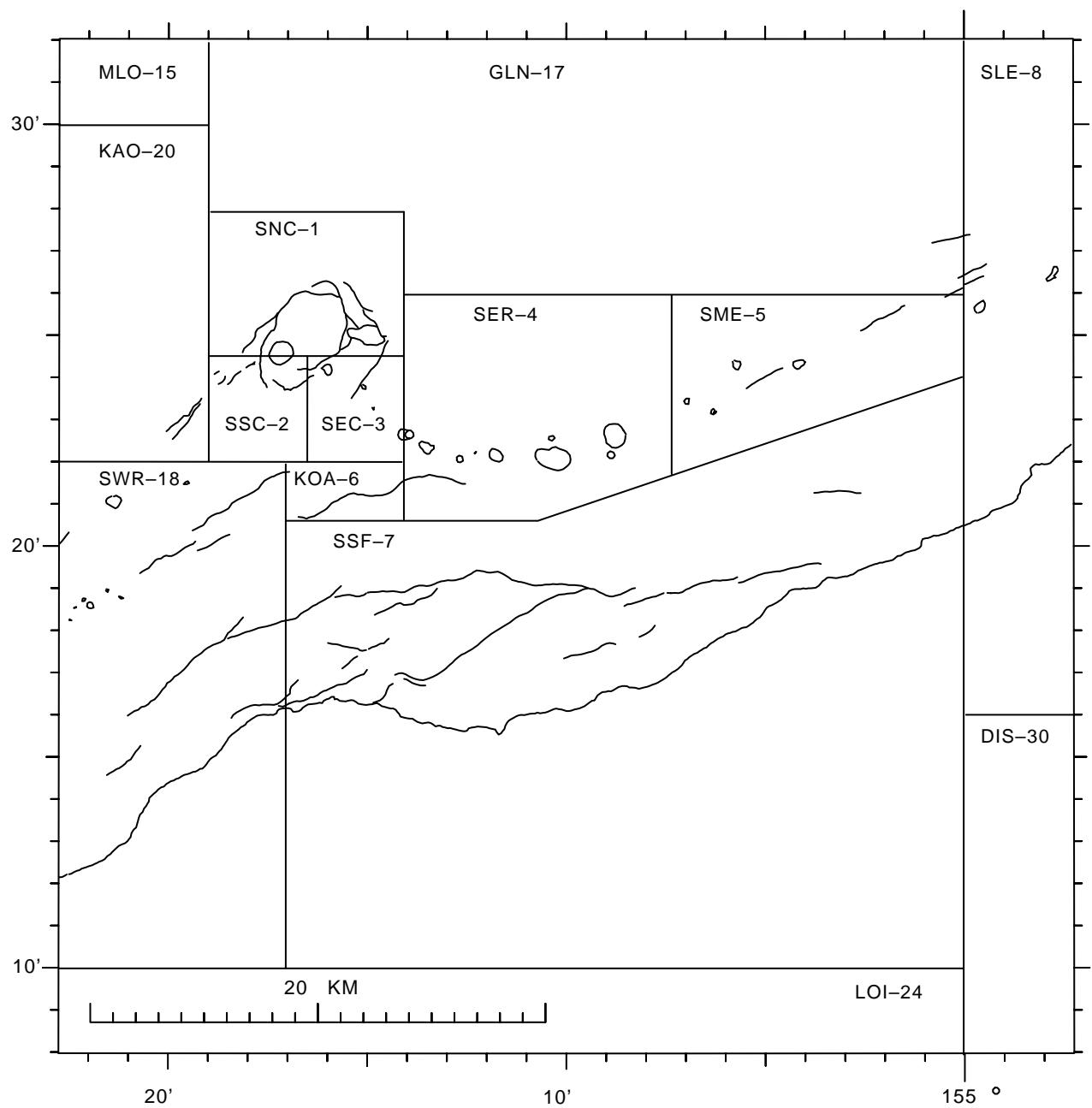


Figure 7. Earthquake classification, shallow (0-5 km deep), for Kilauea and the east flank of Mauna Loa.

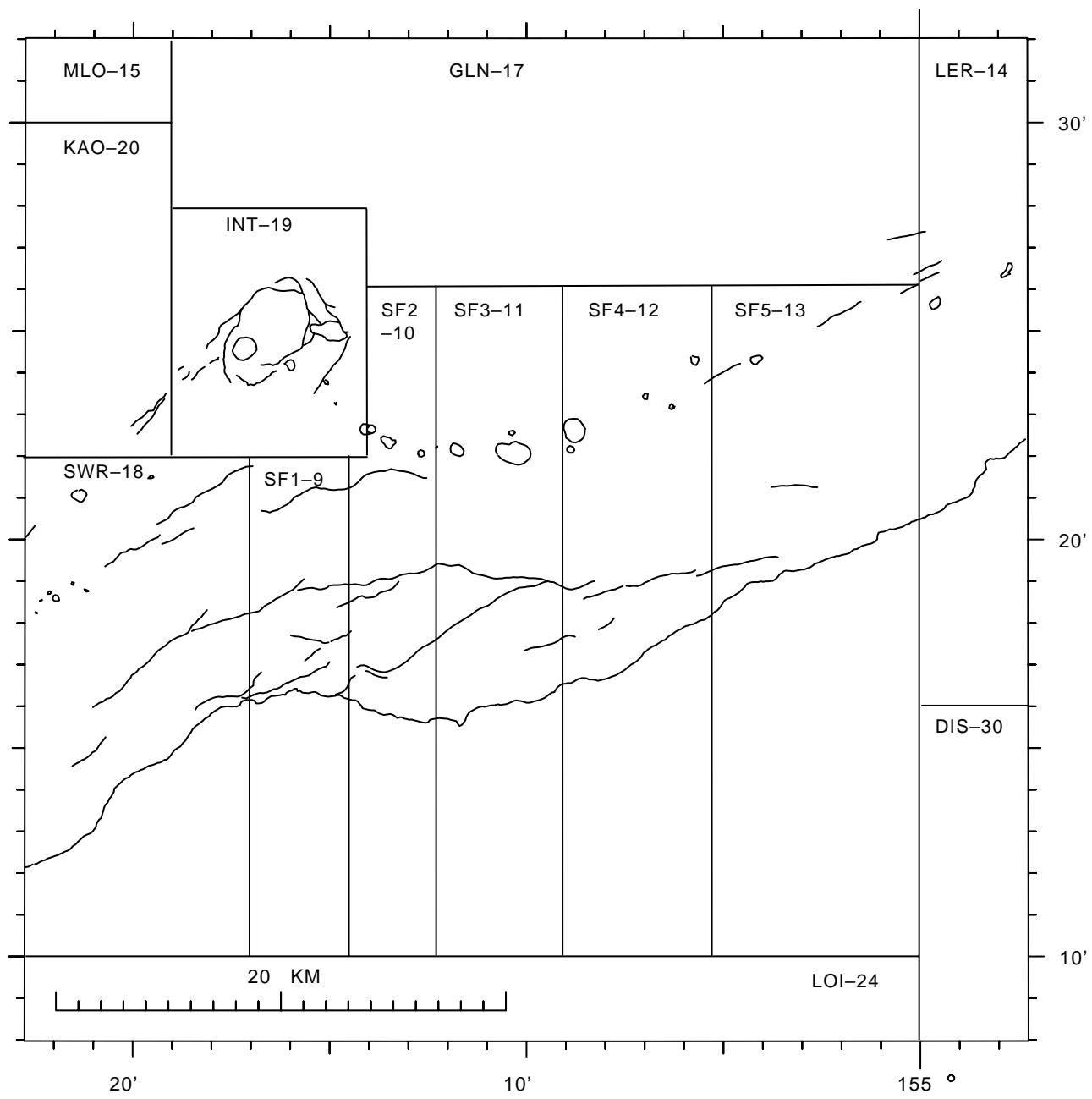


Figure 8. Earthquake classification, intermediate (5.1-13 km deep), for Kilauea and the east flank of Mauna Loa.

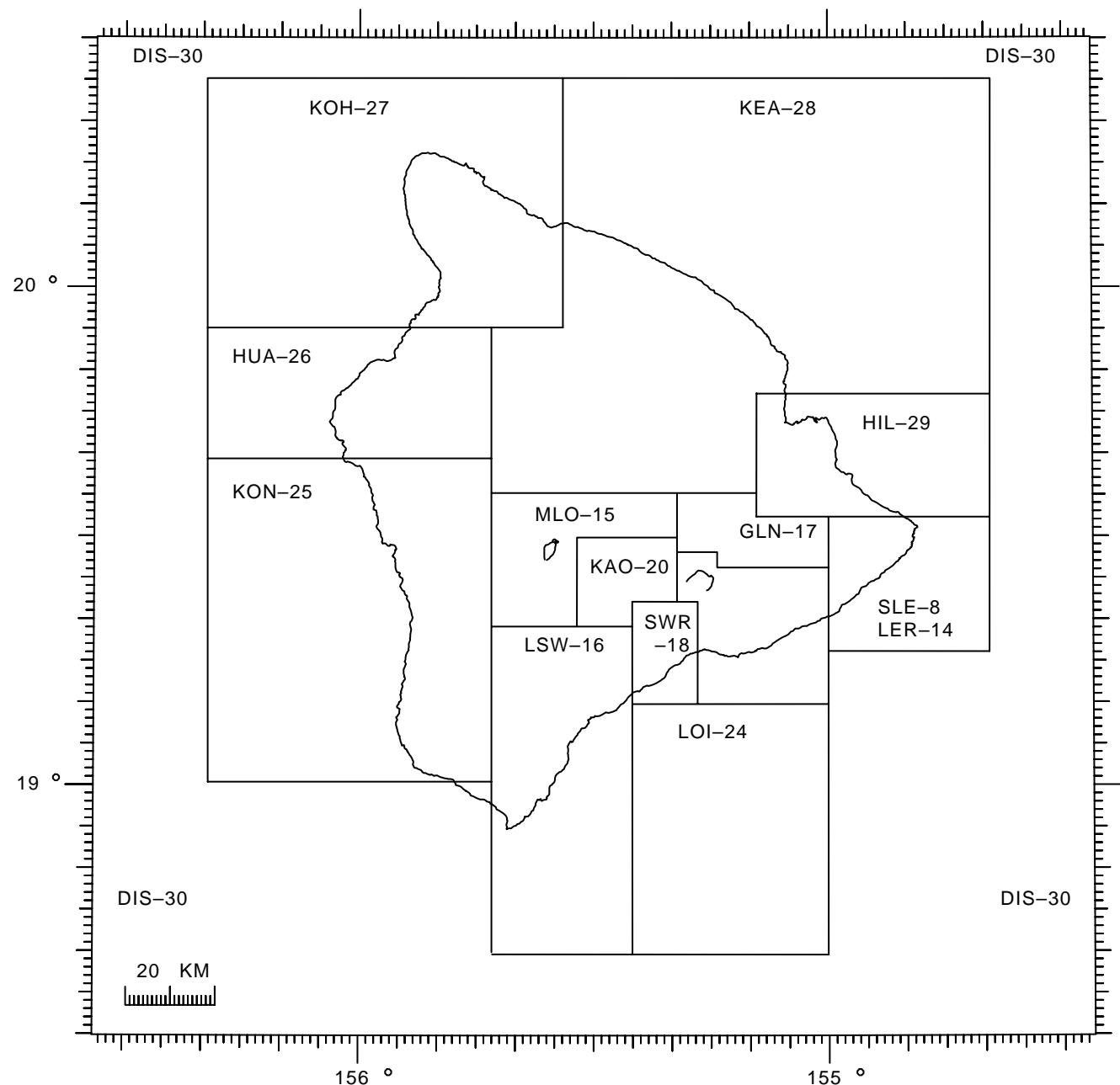


Figure 9. Earthquake classification, crustal (0-13 km deep), for the Island of Hawai'i.

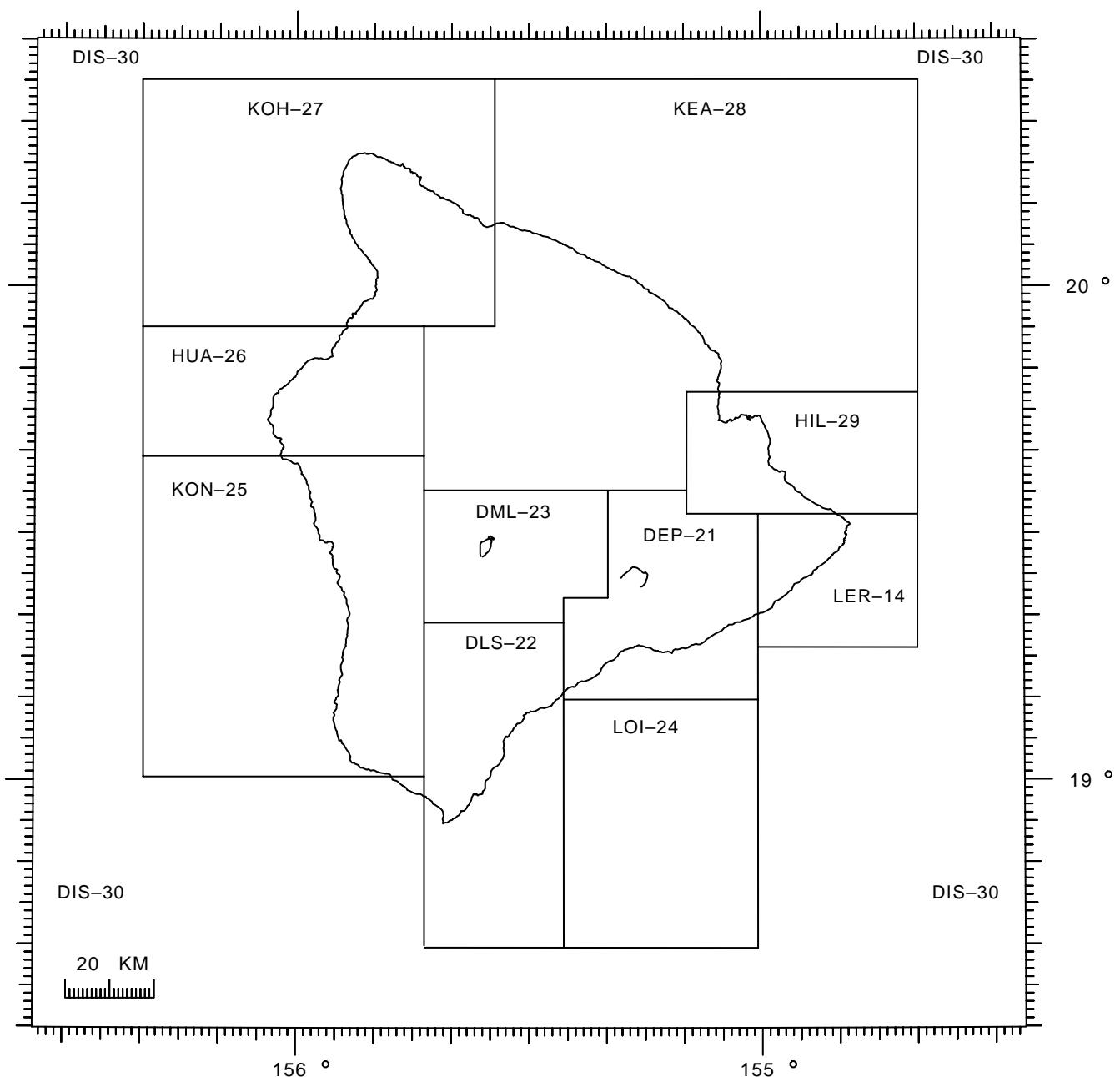


Figure 10. Earthquake classification, deep (greater than 13 km deep), for the Island of Hawai'i.

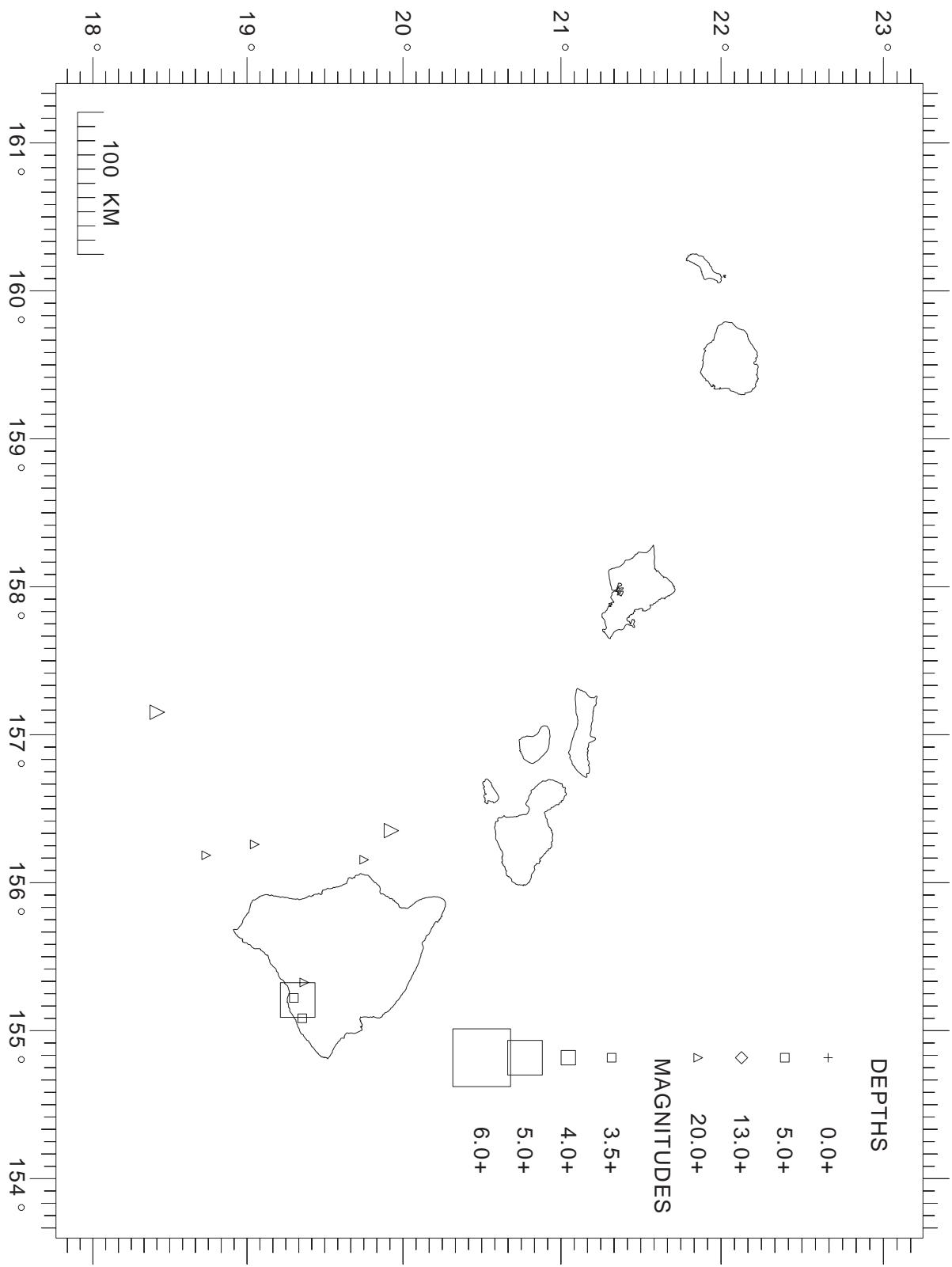
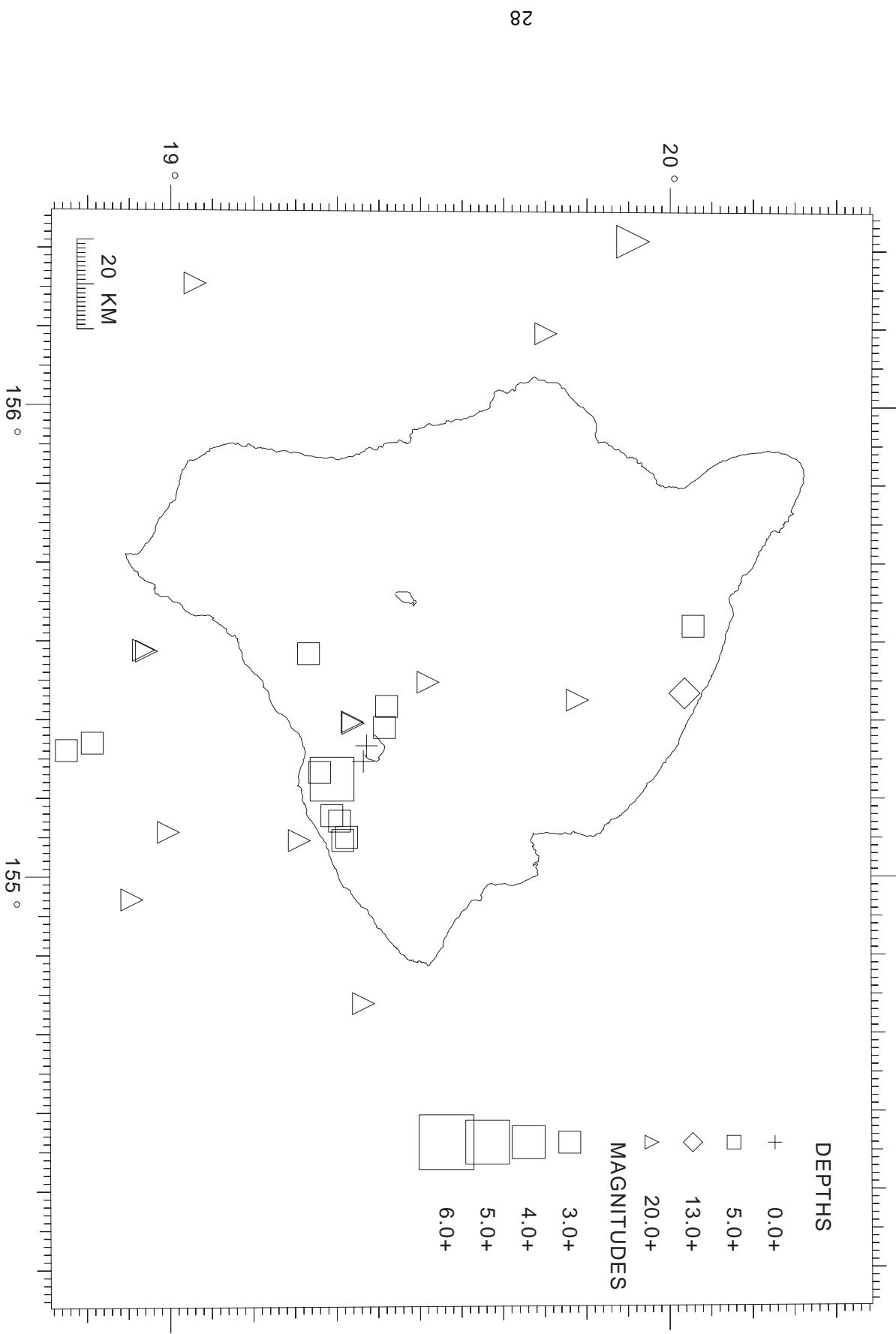


Figure 11. 2003 earthquake locations, Hawaiian Islands,
0–60 km depth, $M \geq 3.5$.

Figure 12. 2003 earthquake locations, Hawai'i Island,
0–60 km depth, M≥3.0.



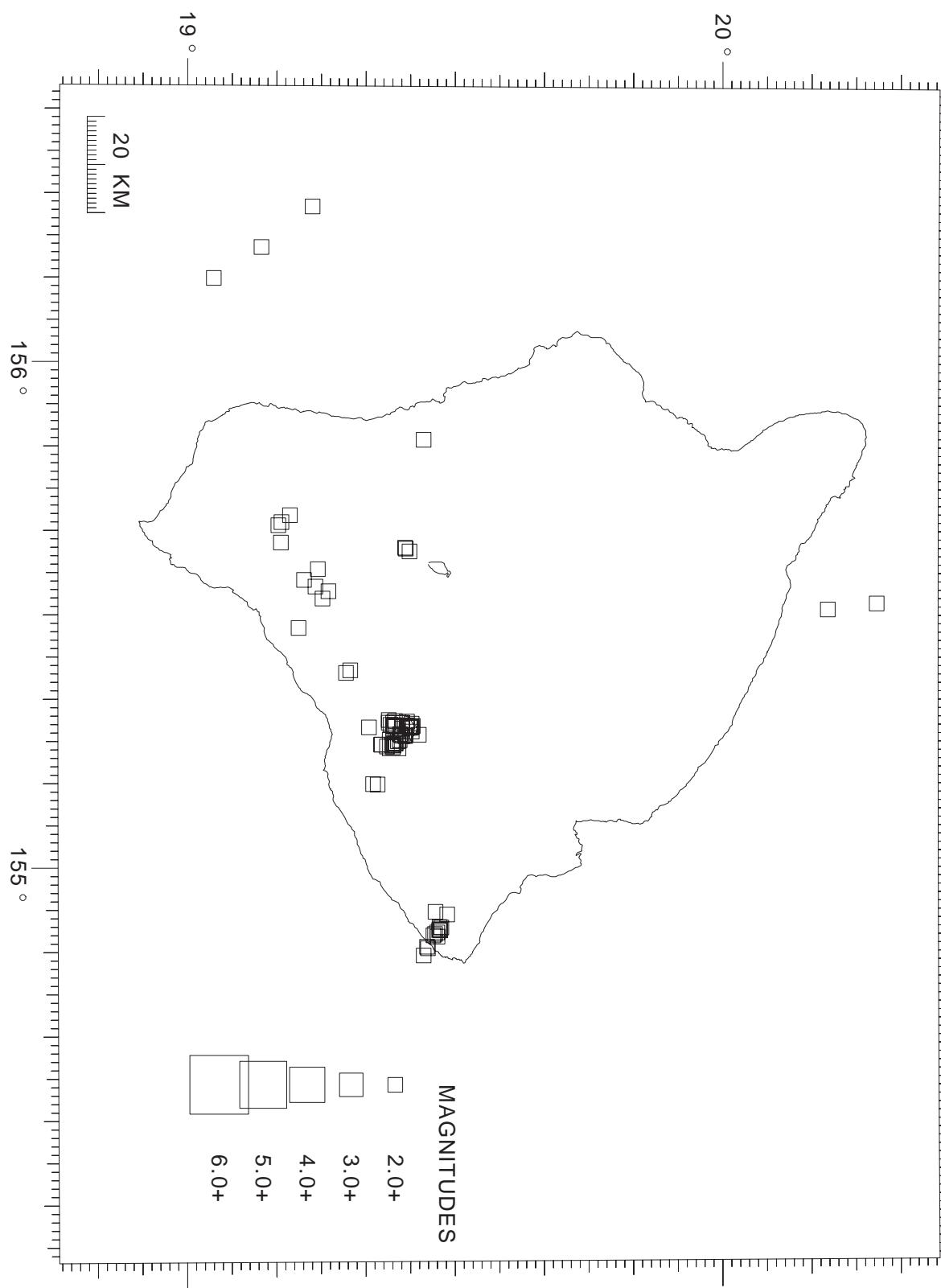


Figure 13. 2003 earthquake locations, Hawai'i Island, shallow (0–5.0 km depth), M>=2.0.

Figure 14. 2003 earthquake locations, Hawai'i Island, intermediate (5.1–13.0 km depth), $M \geq 2.0$.

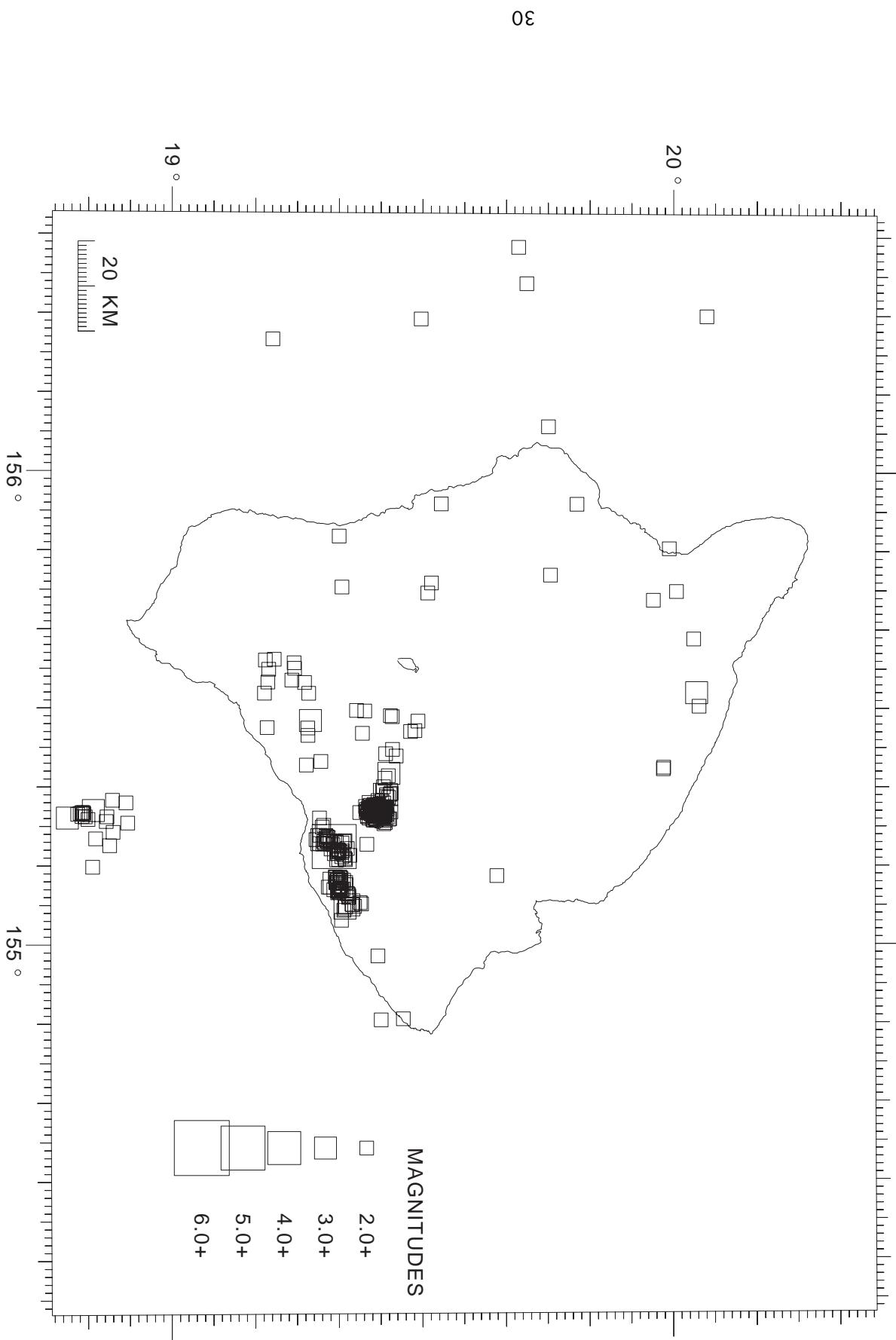


Figure 15. 2003 earthquake locations, Hawai'i Island, deep (13.1–60.0 km depth), $M \geq 2.0$.

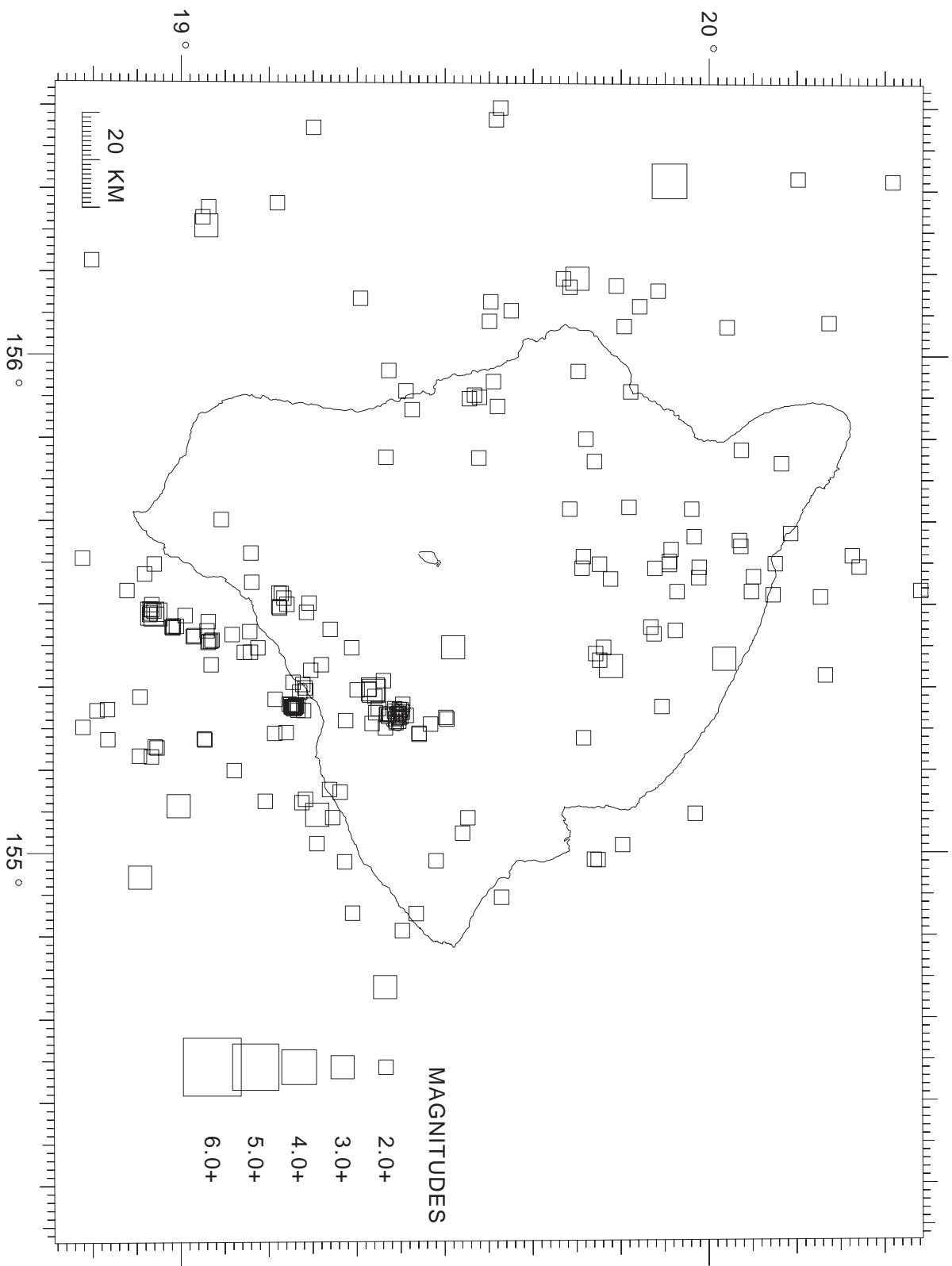


Figure 16. 2003 earthquake locations, Kilauea summit,
shallow (0–5.0 km depth), $M \geq 1.0$.

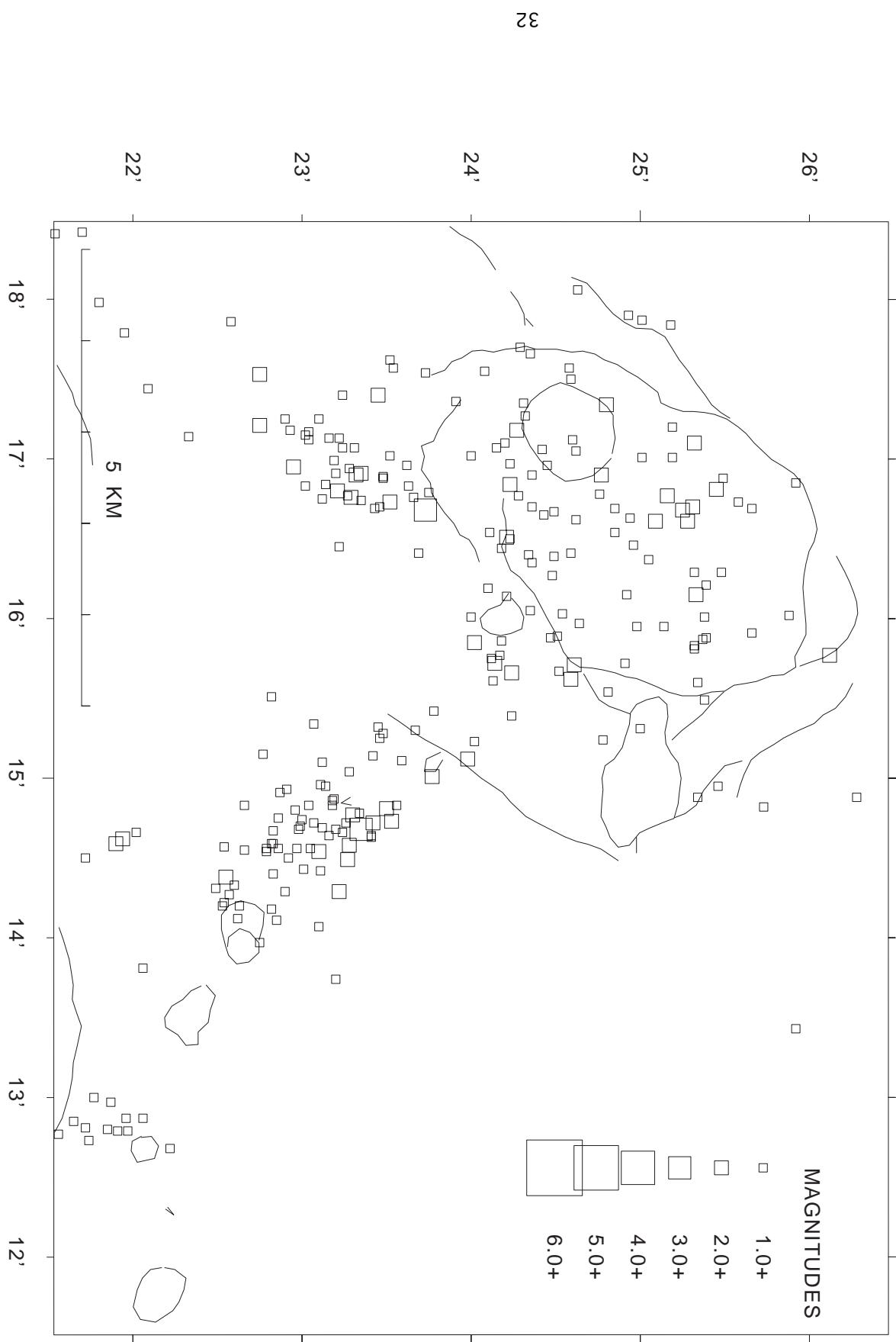


Figure 17. 2003 earthquake locations, Kilauea summit,
intermediate (5.1–13.0 km depth), $M \geq 1.0$.

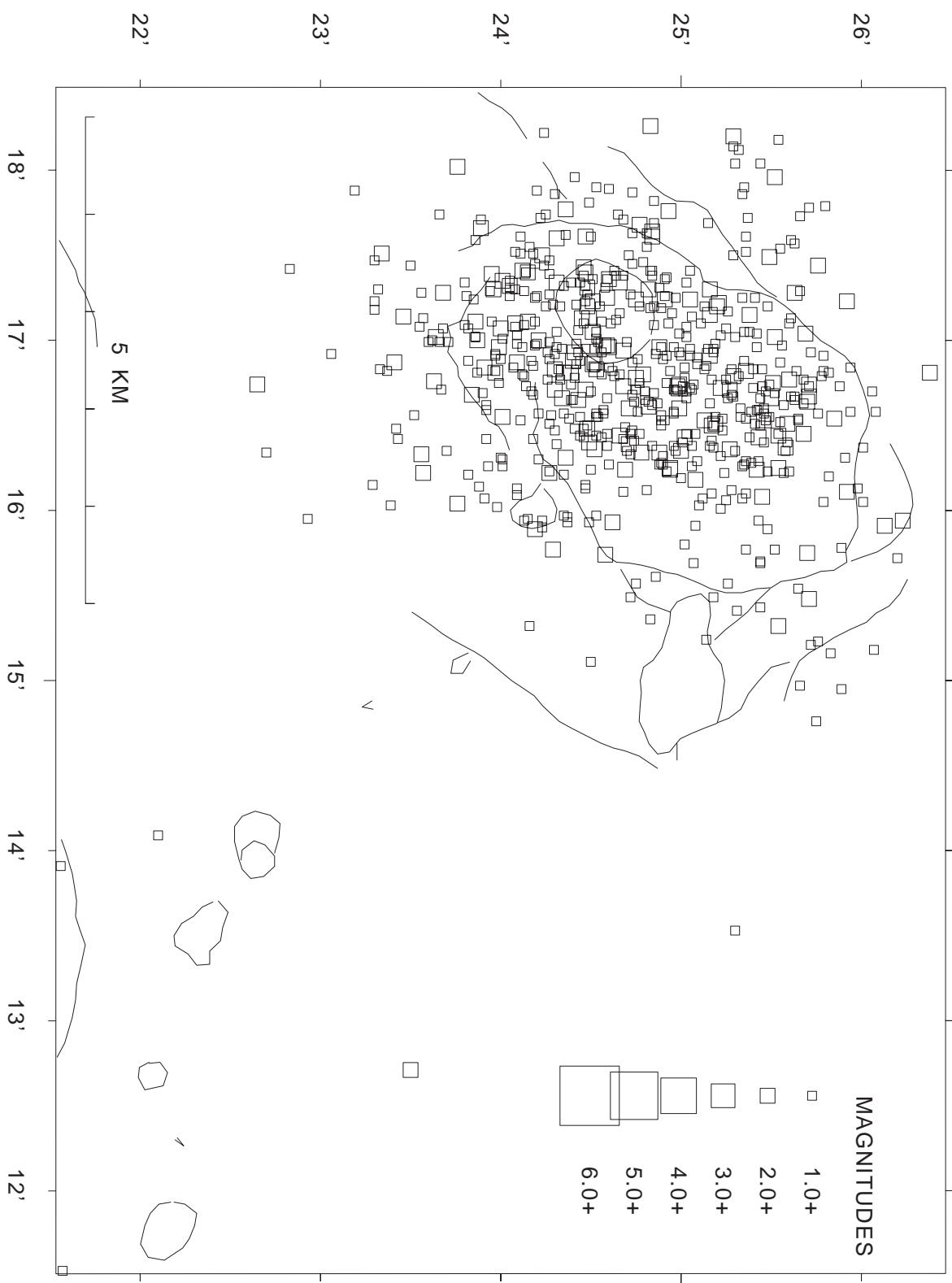


Figure 18. 2003 earthquake locations, Kilauea summit, deep (13.1–60.0 km depth), $M \geq 1.0$.

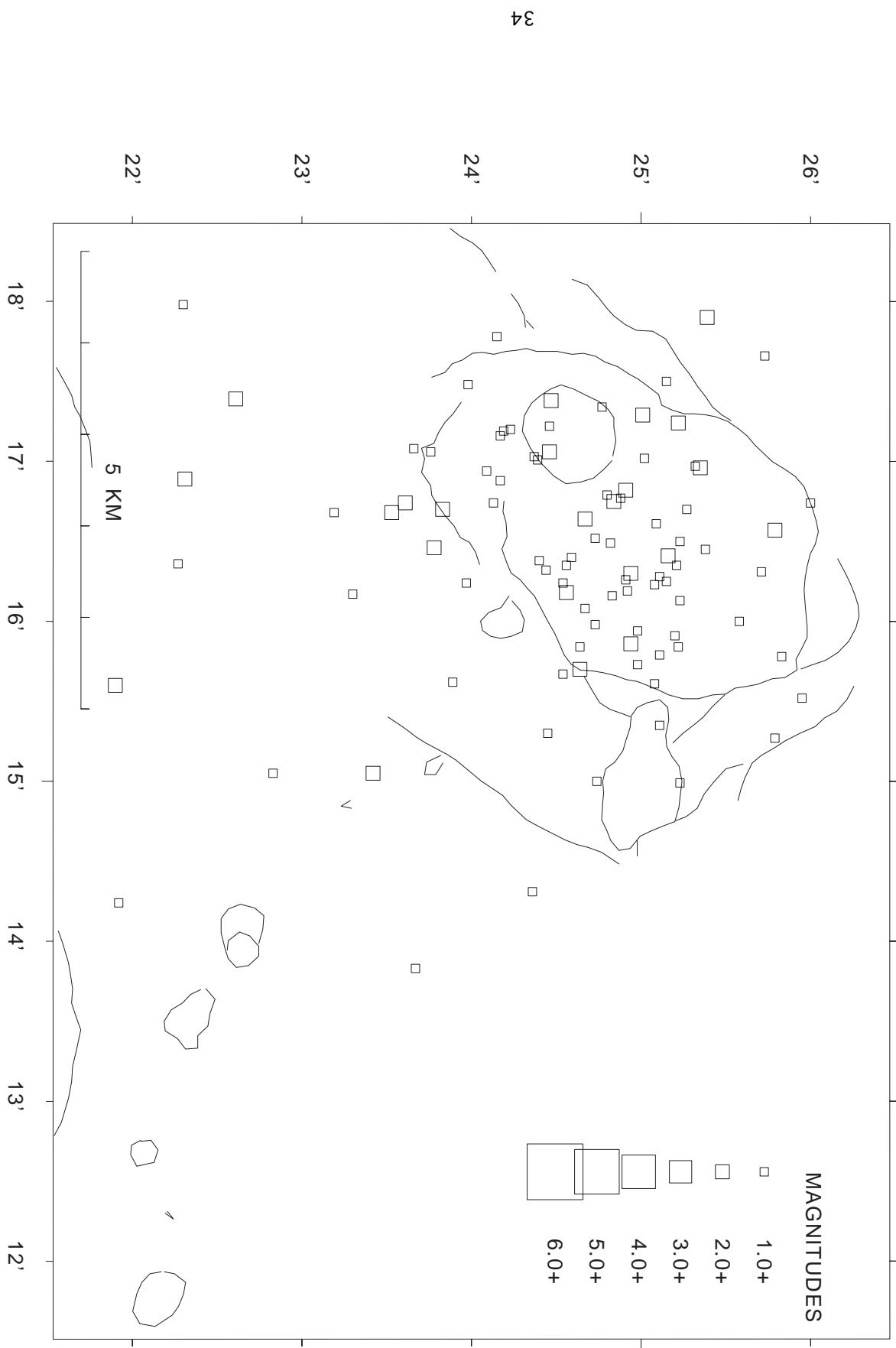


Figure 19. 2003 earthquake locations, Kilauea south flank,
shallow (0–5.0 km depth), $M \geq 2.0$.

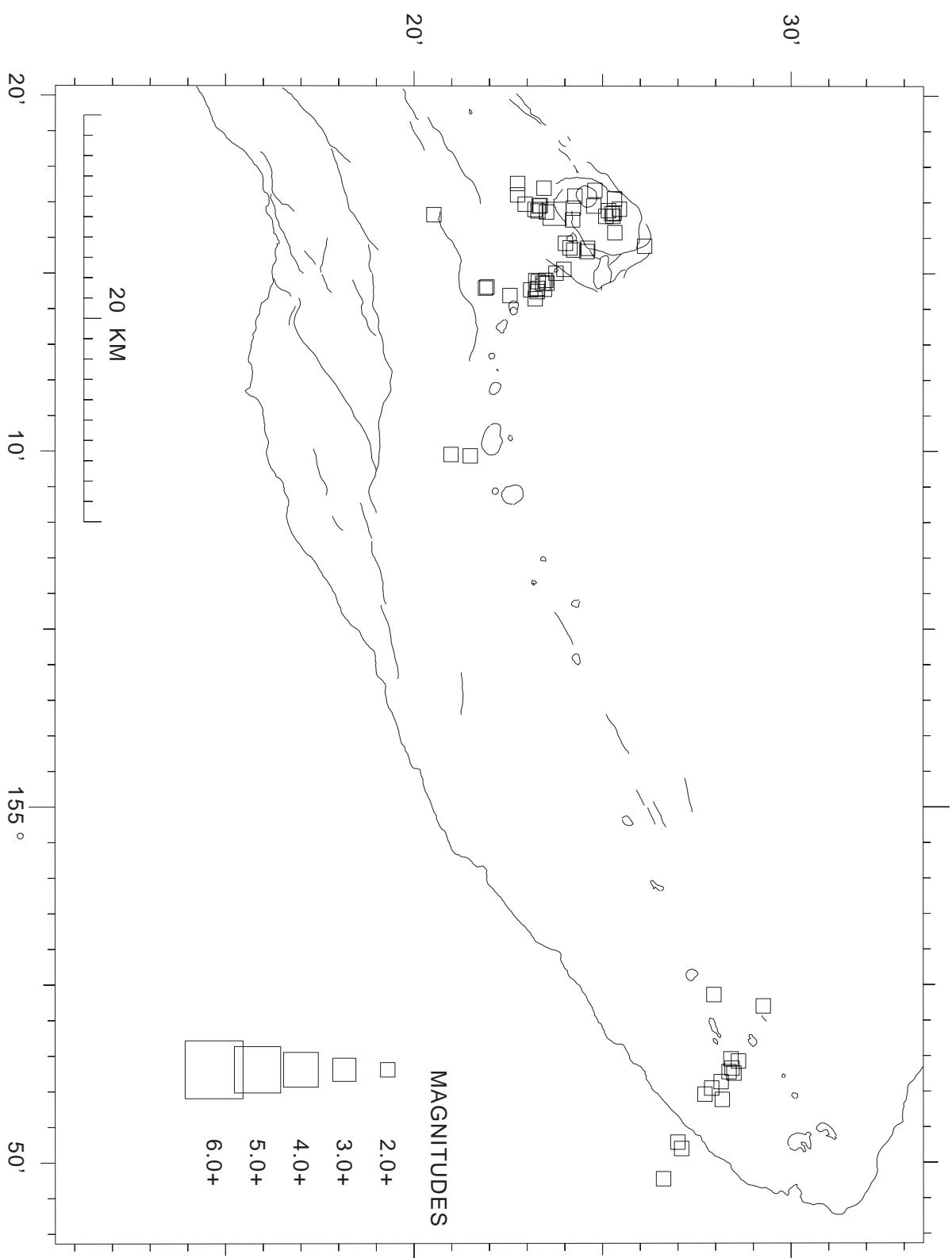


Figure 20. 2003 earthquake locations, Kilauea south flank, intermediate (5.1–13.0 km depth), $M \geq 2.0$.

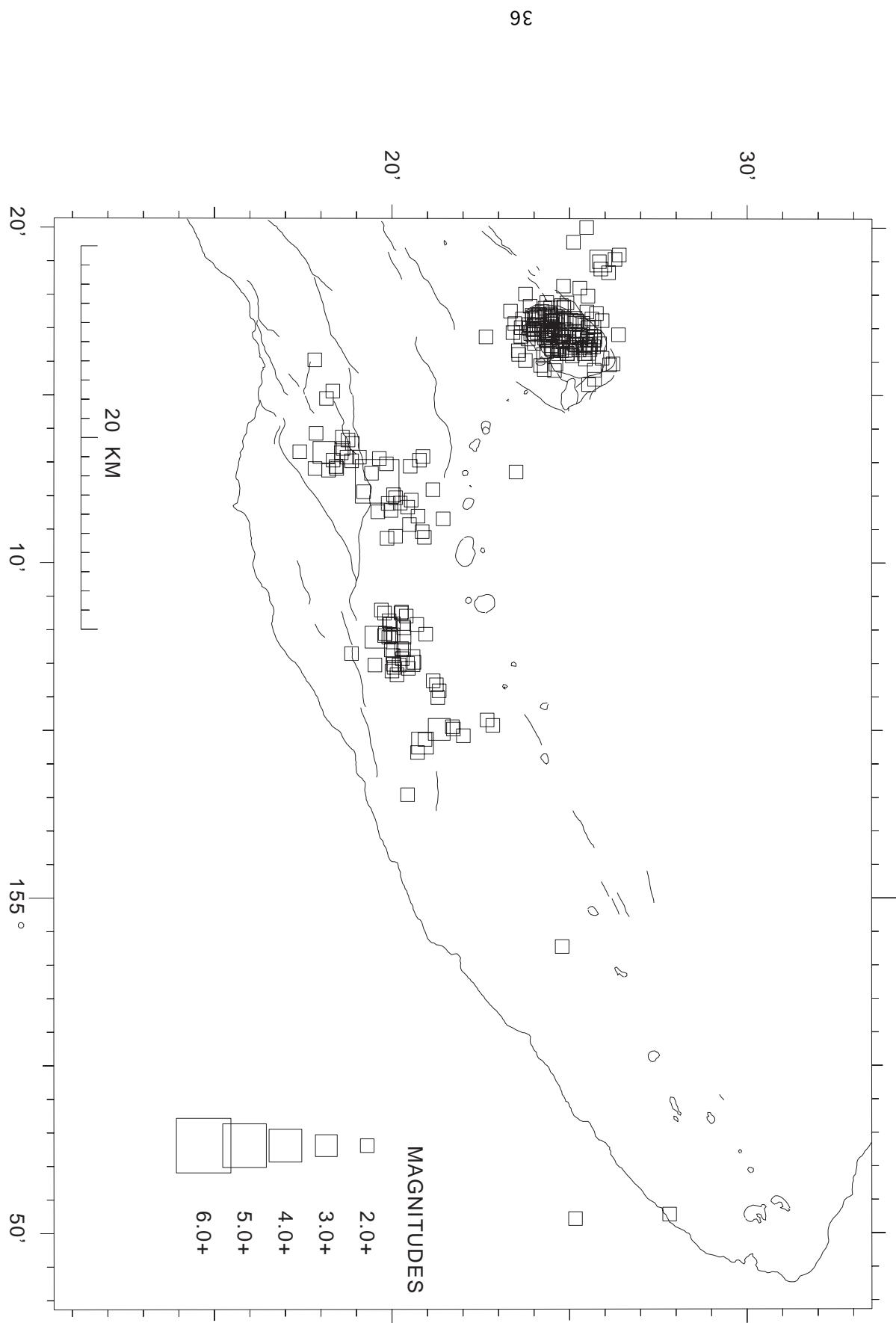


Figure 21. 2003 earthquake locations, Kilauea south flank, deep (13.1–60.0 km depth), $M \geq 2.0$.

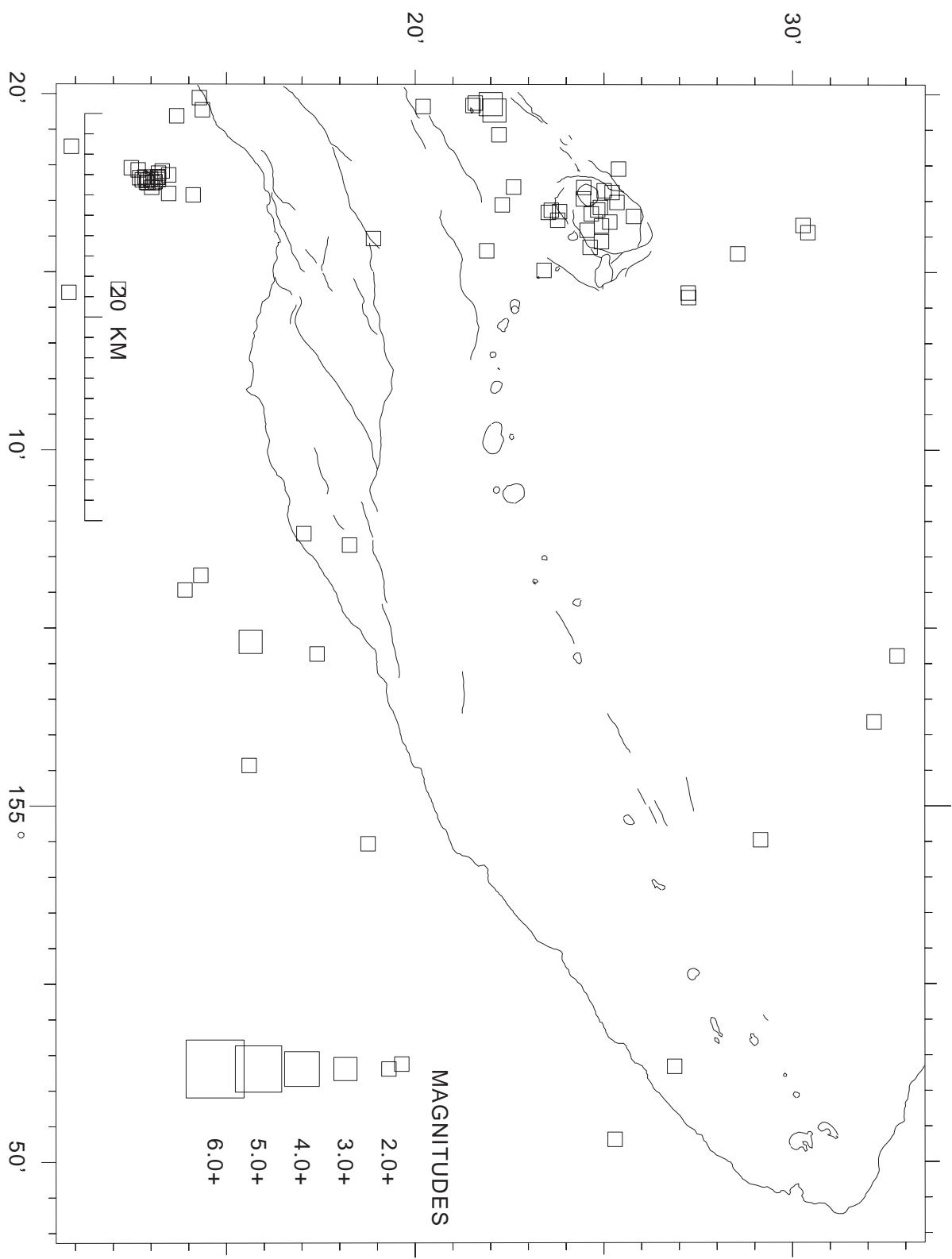


Figure 22. 2003 earthquake locations, Mauna Loa summit, shallow (0–5.0 km depth), $M \geq 2.0$.

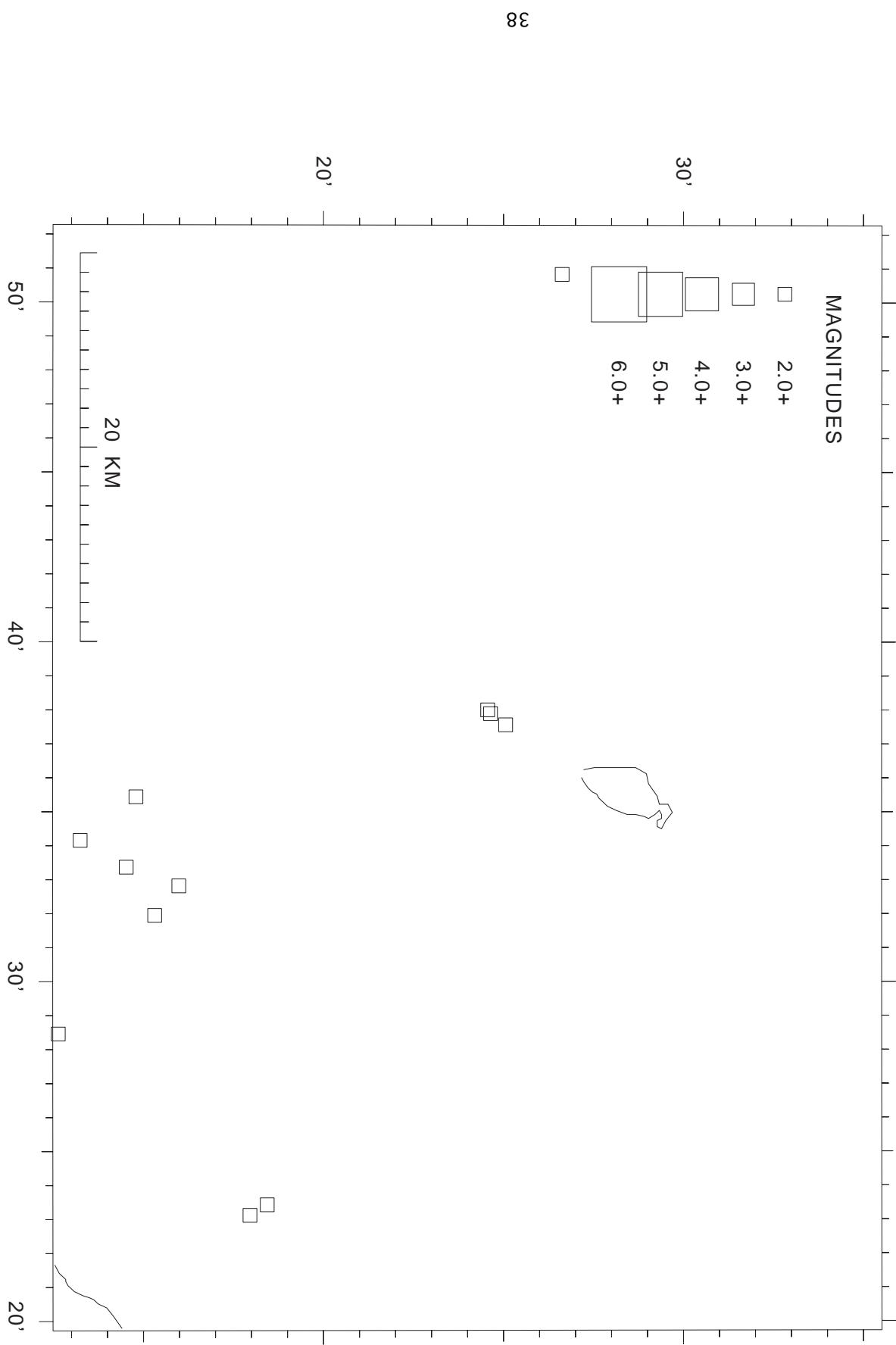


Figure 23. 2003 earthquake locations, Mauna Loa summit, intermediate (5.1–13.0 km depth), $M \geq 2.0$.

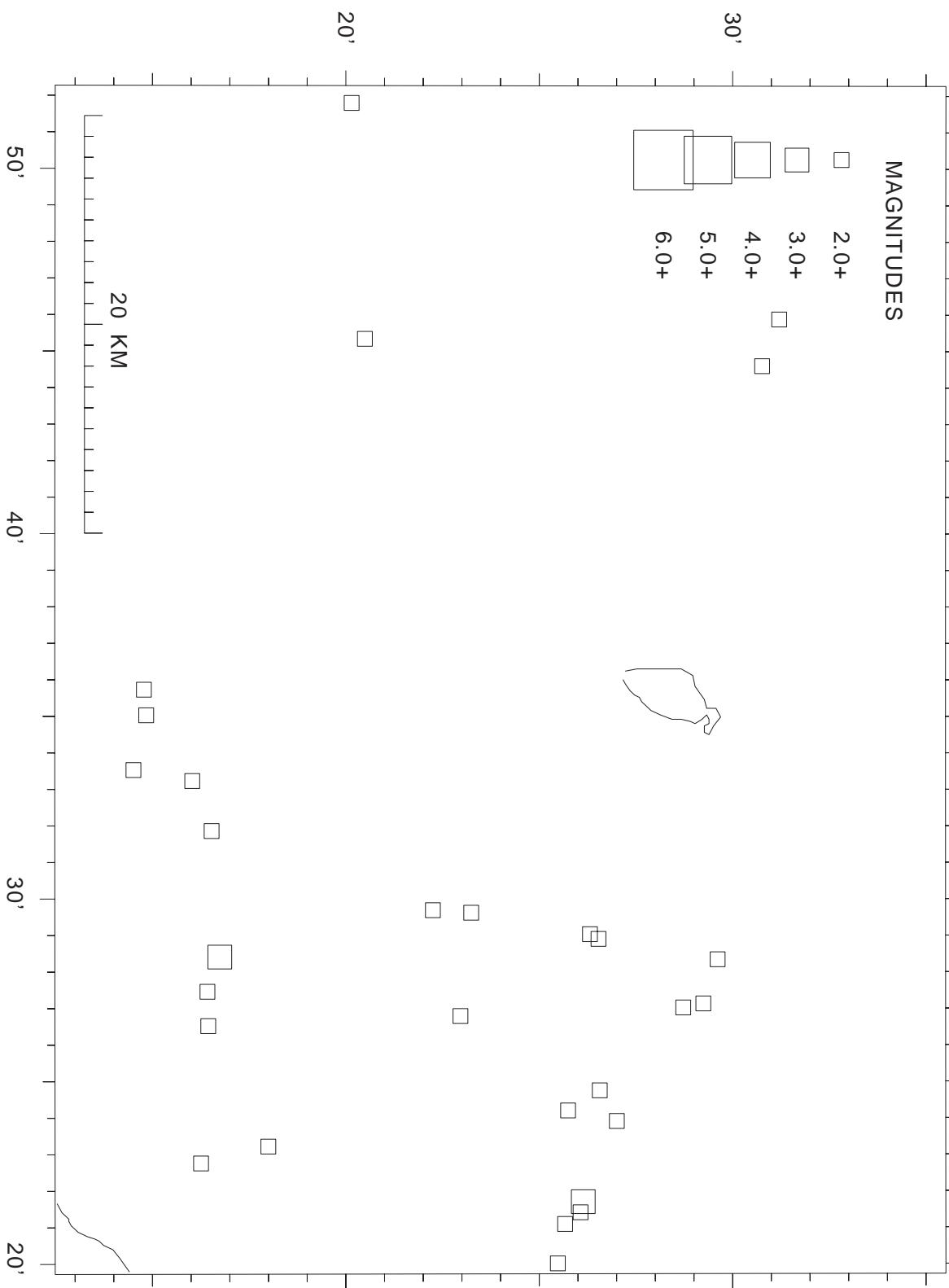


Figure 24. 2003 earthquake locations, Mauna Loa summit, deep (13.1–60.0 km depth), $M \geq 2.0$.

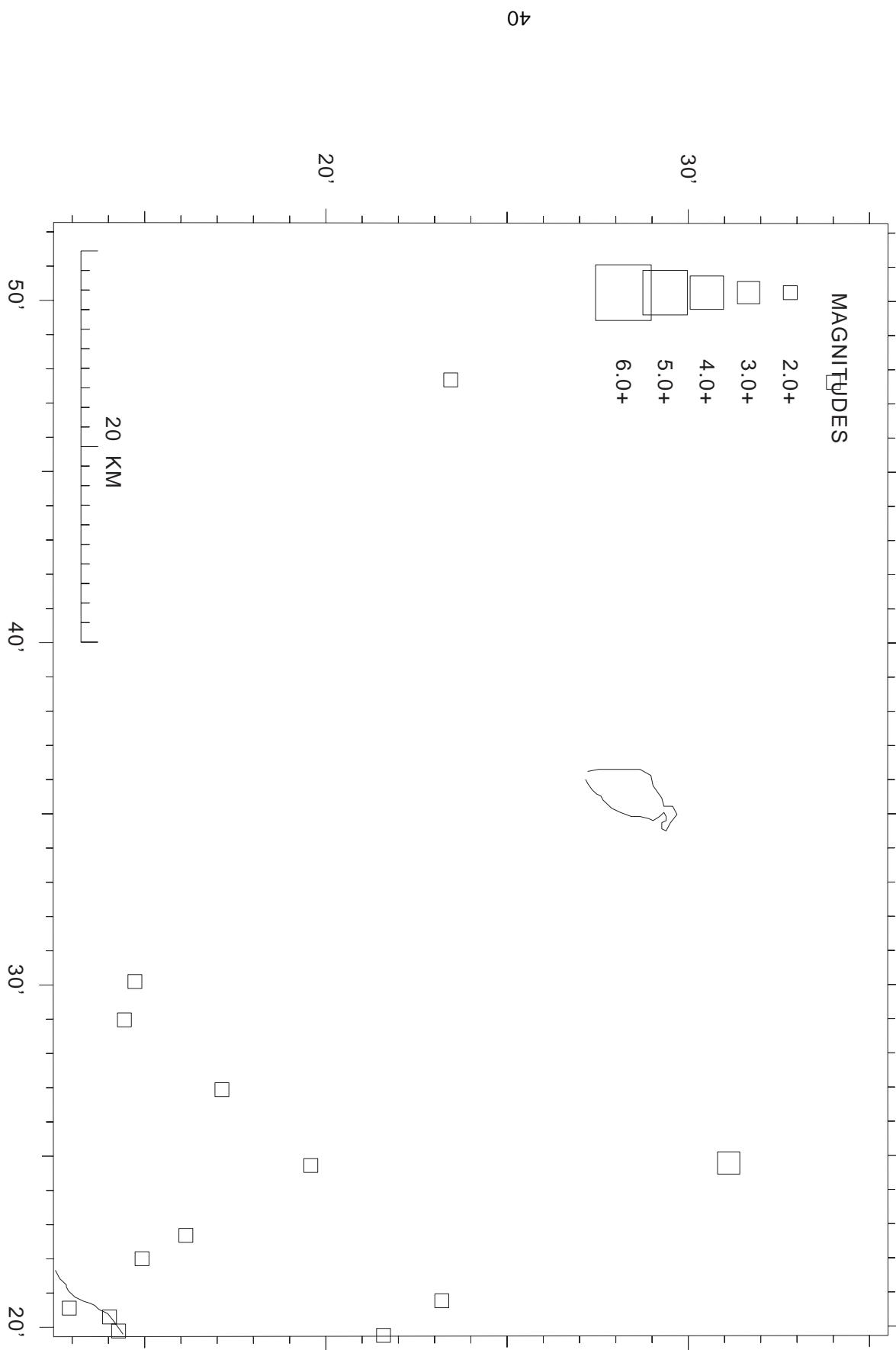


Table 4 is a chronological list of selected events successfully located during 2003. For each event, the following data are presented:

ORIGIN TIME - in Hawaiian Standard Time: date, hour (HR), minute (MN), and second (SEC).

EPICENTER - in degrees and minutes of north latitude (LAT N) and west longitude (LON W) in Old Hawaiian Datum.

DEPTH - Depth of focus in kilometers.

NRD - Number of P & S readings with final weights > 0.1.

NS - Number of S readings with final weights > 0.1

RMS SEC - Root mean square travel time residuals, in seconds.

ERH km - Standard error of the epicenter, in kilometers.

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

LOC REMKS - Remarks, three-letter code for geographic location of events. See Figures 7-10 for location of mnemonic code. Additional one-letter codes have the following meanings:

F felt

L long-period character

T associated with harmonic tremor

B quarry or other blast

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

- the depth was held fixed.

PREF MAG - The preferred magnitude chosen from the available magnitudes.

Preference set as: X-amplitude magnitude, if none

D-Develocorder equivalent duration magnitude, if none

U-external magnitude, usually calculated from drum records.

AZ GAP - Largest azimuthal gap in degrees between azimuthally adjacent stations.

MIN DS - Distance to the nearest station, in kilometers.

Table 5 is a list of events of magnitude 3.0 or greater, selected from Table 4.

Table 4.

—ORIGIN TIME (HST)—LAT N—LON W—DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRVN	SEC	DEG	MIN	DEG	MIN	KM	RD	SBC	KM	KM	REMARKS	MAG	GAP	DS		
2003	JAN	1	0056	3.48	19	28.76	155	49.73	10.94	35.	.17	.9	.5	KON	1.9X	189	7		
2003	JAN	1	0431	21.96	19	25.43	155	28.69	10.25	42.	.10	.3	.5	KAO	2.0X	34	6		
2003	JAN	1	056	44.58	19	10.24	155	8.56	6.15	38.	.13	.6	.8	SF4	1.5X	217	8		
2003	JAN	1	0716	6.81	19	18.08	155	14.97	8.23	40.	.12	.4	.7	SFI	1.6X	167	8		
2003	JAN	1	0846	5.32	19	29.82	155	53.44	9.77	20.	.13	.1.2	.8	KON	1.5X	274	13		
2003	JAN	1	1506	2.64	19	19.47	155	21.76	29.	25.	.35	.09	.8	1.2	DLS	1.8X	210	14	
2003	JAN	1	1530	56.79	19	19.47	155	21.76	29.	25.	.35	.09	.7	.9	DEP	1.6X	130	3	
2003	JAN	1	1652	5.68	19	9.72	155	34.93	2.37	30.	.13	.4	.7	LSW	1.5X	115	12		
2003	JAN	1	1846	23.59	19	5.15	155	24.57	33.24	19.	.12	1.7	1.6	LOT	1.1X	244	10		
2003	JAN	1	2255	12.10	19	24.59	155	16.41	1.39	16.	.10	.3	.2	SNC	1.5X	138	1		
2003	JAN	2	1058	28.52	19	24.60	155	17.12	1.60	16.	.09	.3	.2	SNC	1.6X	69	1		
2003	JAN	2	1927	58.81	19	20.66	155	4.85	6.30	24.	.11	.1.1	.8	SF5	1.5X	262	7		
2003	JAN	3	0316	45.66	19	15.08	156	27.39	39.	75	13.	0.9	2.8	7.0	DIS	2.1X	321	73	
2003	JAN	3	0558	27.24	19	32.92	155	54.77	28.	17	30.	.1.0	.9	1.3	KON	2.1X	226	16	
2003	JAN	3	0606	32.23	19	15.47	156	20.29	5.	11	.14	2.2	2.5	DIS	1.9X	278	61		
2003	JAN	3	0923	43.12	19	35.84	156	28.43	28.	18	26.	.10	1.8	4.3	DIS	2.3X	305	67	
2003	JAN	3	1333	19.47	19	25.55	155	17.54	10.29	16.	.11	.8	1.1	INT L	1.8X	86	0		
2003	JAN	3	1401	23.13	19	13.37	155	32.92	1.04	.13	.3	.4	.4	LSW	1.9X	78	11		
2003	JAN	3	1655	58.98	19	18.43	155	11.83	4.38	30.	.10	.6	3.3	SSF	1.3X	227	8		
2003	JAN	3	2020	10.69	19	24.69	155	38.63	3.	30	.26	.10	.4	.4	MLO	1.8X	108	2	
2003	JAN	3	2159	41.12	19	34.32	156	45.18	26.	98	23.	.12	1.9	6.8	DIS	2.1X	305104		
2003	JAN	3	2343	24.57	19	20.39	155	11.48	8.74	37.	.12	.7	.5	SF3	1.7X	202	5		
2003	JAN	3	2349	50.04	19	20.01	155	9.62	7.23	32.	.13	.8	.6	SF3	1.4X	208	5		
2003	JAN	4	0626	0.91	19	25.04	155	39.01	3.	11	.20	.10	.5	.4	MLO	1.5X	191	2	
2003	JAN	4	1143	52.84	19	18.05	155	5.72	3.	70	.28	.08	1.4	3.1	SSF	1.8X	233	10	
2003	JAN	4	1328	52.06	19	4.75	155	40.15	24.	95	.28	.09	.7	1.6	DIS	2.1X	129	11	
2003	JAN	4	1603	29.54	19	13.91	155	6.07	41.	33	.26	.10	1.6	1.4	DEP	2.0X	251	18	
2003	JAN	4	1653	6.94	19	36.20	155	57.75	33.15	13.	.08	2.5	1.3	KON	1.8X	315	1		
2003	JAN	5	1001	41.55	19	32.90	155	53.64	9.	24	19.	1.4	1.0	.8	KON	1.3X	218	14	
2003	JAN	5	1610	4.16	19	16.39	155	28.50	6.	80	.39	.12	.4	1.1	LSW	1.8X	105	11	
2003	JAN	5	1709	23.46	19	20.92	155	10.76	7.	18	44.	.13	.5	.5	SF3	2.0X	166	4	
2003	JAN	5	2158	56.07	19	18.11	155	7.80	2.	22	35.	.11	1.1	1.0	SSF	1.4X	227	10	
2003	JAN	6	0056	32.70	19	22.32	155	15.81	1.	65	18.	.10	.3	.4	SNC	1.3X	122	2	
2003	JAN	6	0201	34.17	19	15.49	155	23.51	12.	19	.30	.09	.4	.8	SWR	1.5X	153	9	
2003	JAN	6	0521	25.63	19	22.83	155	14.67	2.	07	16.	.09	.3	.4	SEC	1.5X	153	2	
2003	JAN	6	1251	48.07	19	17.47	155	35.07	16.	61	23.	.13	.8	1.7	KEA	1.7X	177	13	
2003	JAN	6	1257	2.04	18	50.68	155	9.84	8.	27	43.	.19	2.	2.8	LOT	# 2.9X	270	56	
2003	JAN	6	1637	43.47	19	55.56	156	21.12	29.	69	40.	.10	1.4	2.6	DIS	4.0X	221	46	
2003	JAN	6	2152	1.18	19	57.81	155	22.03	29.	88	18.	.07	.8	.8	KEA	1.5X	250	9	
2003	JAN	6	2203	42.85	19	20.61	155	13.87	7.	80	34.	.13	.4	.4	SF2	1.5X	166	4	
2003	JAN	6	2300	37.88	19	24.18	155	16.44	1.	61	17.	.09	.3	.3	SEC	1.2X	78	1	
2003	JAN	7	0047	26.81	19	22.90	155	14.29	2.	00	20.	.10	.3	.3	SEC	1.9X	149	2	
2003	JAN	7	0237	3.85	19	26.78	155	29.98	11.	73	21.	.13	.5	1.1	KAO	1.2X	85	6	

—ORIGIN TIME (HST)—LAT N—LON W—DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN		
YEAR	MON	DA	HRVN	SEC	DEG	MIN	DEG	MIN	KM	RD	SBC	KM	KM	REMARKS	MAG	GAP	DS				
2003	JAN	7	0303	20.86	19	15.	62	156	25.	06	21.	53	23.	.14	1.410.8	DIS	1.5X	307	70		
2003	JAN	7	1021	41.53	19	13.	43	155	29.	06	35.	41	23.	.08	.8	1.4	DIS	1.2X	99	8	
2003	JAN	7	1603	15.47	19	25.	49	155	28.	00	9.	83	24.	.11	.4	.8	KAO	1.3X	78	6	
2003	JAN	7	2140	32.92	19	15.	11	155	25.	14	6.	08	22.	.12	.5	1.3	LSW	1.3X	149	10	
2003	JAN	8	0251	35.22	19	14.	65	155	24.	41	6.	29	29.	.12	.5	1.4	SIR	1.3X	167	10	
2003	JAN	8	0332	46.04	20	22.	30	156	34.	72	6.	84	25.	.15	9.211.6	DIS	-	2.2X	319	88	
2003	JAN	8	0704	13.01	19	24.	32	155	28.	06	8.	51	40.	.12	.3	8	KAO	1.9X	51	3	
2003	JAN	8	1710	38.63	19	16.	05	155	8.	82	3.	00	29.	.14	.2	.6	1.1	SSF	1.5X	267	7
2003	JAN	8	2110	31.	46	19	17.	88	155	30.	.33	0.77	28.	.10	.3	.4	LSW	1.2X	218	19	
2003	JAN	9	1540	52.67	19	25.	54	155	29.	75	10.	44	35.	.09	.3	.8	KAO	1.5X	47	7	
2003	JAN	9	2333	57.53	19	10.	70	155	34.	87	6.	61	32.	.15	.4	1.3	LSW	1.4X	104	12	
2003	JAN	10	0139	13.51	19	32.	34	155	37.	92	11.	51	29.	.11	.6	.7	MLO	1.5X	167	5	
2003	JAN	10	0299	19.75	19	25.	18	155	29.	50	8.	93	29.	.09	.4	.8	KAO	1.3X	75	6	
2003	JAN	10	0420	35.44	19	22.	49	155	14.	56	3.	53	24.	.08	.4	.3	SBC	1.8X	120	3	
2003	JAN	10	0445	21.24	19	17.	22	155	14.	19	1.	12	26.	.10	1.0	.5	SDF	1.1X	235	10	
2003	JAN	10	0742	17.20	19	17.	85	155	14.	39	3.	88	32.	.12	.6	2.2	SSF	1.1X	188	9	
2003	JAN	10	1644	17.05	19	11.	75	155	29.	50	36.	95	25.	.08	.7	1.4	DIS	1.4X	92	5	
2003	JAN	10	2245	52.88	20	13.	77	156	4.	00	27.	52	41.	.11	.9	1.7	KOH	2.8X	305	32	
2003	JAN	11	0254	14.80	19	21.	77	155	4.	77	6.	21	26.	.13	.8	1.1	SF5	1.5X	206	6	
2003	JAN	11	0446	50.47	19	17.	43	155	12.	66	2.	01	28.	.07	.9	.8	SDF	1.9X	187	7	
2003	JAN	11	0528	59.21	19	26.	41	155	29.	01	9.	10	44.	.11	.3	.6	KAO	1.6X	41	7	
2003	JAN	11	1423	18.48	19	17.	78	155	13.	01	0.	60	34.	.11	.6	.3	SSF	1.3X	179	9	
2003	JAN	11	1809	21.99	19	14.	20	155	32.	81	0.	14	38.	.14	.4	.2	LSW	1.9X	70		

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

2003 JAN 12 2208 27.85 18 48.26 155 14.28 14.62 10 .12 7.0 9.4 LOI - 2.0X 302 46
2003 JAN 12 2242 42.27 18 50.13 155 15.88 11.22 28 .12 1.7 1.2 LOI 2.5X 267 41
2003 JAN 12 2244 34.68 18 49.46 155 15.77 10.40 16 .09 1.8 1.1 LOI 2.0X 284 43
2003 JAN 12 2246 30.47 18 52.90 155 16.26 9.33 22 .14 2.6 1.4 LOI 2.0X 258 37
2003 JAN 12 2251 50.72 18 50.63 155 17.15 14.21 26 .10 2.8 5.5 LOI 2.6X 265 40

2003 JAN 12 2308 23.73 18 53.13 155 14.25 11.84 19 .12 2.5 1.3 LOI 2.1X 260 39
2003 JAN 12 2317 45.26 18 55.05 155 18.31 10.00 19 .10 2.2 1.3 LOI 2.0X 250 39
2003 JAN 12 2332 16.93 18 48.89 155 16.53 11.67 30 .12 1.6 1.1 LOI 2.6X 271 43
2003 JAN 12 2341 44.74 18 54.67 155 17.98 10.22 20 .09 2.3 1.4 LOI 2.2X 252 40
2003 JAN 13 0030 13.79 18 53.06 155 18.31 12.57 24 .09 2.4 1.3 LOI 2.4U 256 35

2003 JAN 13 0359 13.80 19 56.41 155 31.92 42.02 20 .09 .9 1.2 KEA 1.7X 228 16
2003 JAN 13 0417 37.41 18 51.83 155 17.29 15.05 22 .11 3.0 4.9 LOI - 2.4X 262 38
2003 JAN 13 0437 19.08 18 47.66 155 16.06 11.60 48 .11 1.2 1.4 LOI F 3.0X 274 45
2003 JAN 13 0535 28.39 18 49.15 155 15.57 10.04 14 .17 2.2 1.5 LOI 1.9X 293 43
2003 JAN 13 0608 16.25 18 47.11 155 15.28 15.89 11 .12 4.8 12.3 LOI - 1.9X 297 47

2003 JAN 13 0622 6.53 18 49.62 155 16.59 12.22 33 .11 1.2 1.4 LOI 2.7X 268 42
2003 JAN 13 0652 47.01 19 20.97 155 15.31 1.25 18 .09 .3 .5 KOA 1.6X 193 3
2003 JAN 13 0909 47.97 18 52.31 155 15.62 7.91 30 .13 1.3 .9 LOI 2.3X 260 45
2003 JAN 13 0952 42.78 19 21.90 155 14.59 1.17 31 .10 .2 .3 KOA 2.3X 159 2
2003 JAN 13 0955 20.41 19 22.02 155 14.66 2.05 10 .04 .4 .5 KOA 1.5X 155 2

2003 JAN 13 1050 36.11 18 54.88 155 15.42 12.81 16 .09 2.4 1.1 LOI 2.0X 253 35
2003 JAN 13 1125 52.42 18 52.72 155 12.56 7.81 19 .09 1.6 .9 LOI 2.1X 276 41
2003 JAN 13 1319 26.45 19 18.94 155 7.30 4.71 21 .14 1.3 5.1 SSF 1.1X 223 8
2003 JAN 13 1319 40.46 19 19.52 155 19.05 5.18 20 .11 .6 1.4 SWR 1.5X 207 3
2003 JAN 13 1350 16.66 19 19.40 155 23.31 31.64 24 .11 .7 1.5 DEP 1.6X 122 1

2003 JAN 13 1712 56.63 19 27.10 154 50.39 4.01 33 .12 .9 .9 SLE F 2.5X 279 15
2003 JAN 13 1755 57.26 19 20.94 155 .4.7 8.30 41 .11 .7 .5 SF5 F 2.8X 184 7
2003 JAN 13 2130 26.97 19 15.69 155 21.27 7.01 19 .09 6.9 8.7 DIS - 1.4X 307 68

2003 JAN 14 0121 17.59 19 22.79 155 14.54 2.79 17 .08 .4 .3 SEC 1.4X 156 2
2003 JAN 14 0222 7.84 18 51.05 155 13.73 10.91 12 .10 2.0 1.3 LOI 1.8X 287 42

2003 JAN 14 0247 26.46 19 16.63 155 13.92 5.34 17 .12 2.1 2.7 SF2 1.3X 251 11
2003 JAN 14 0249 25.11 19 22.86 155 14.56 2.45 14 .08 .3 .4 SEC 1.2X 152 2
2003 JAN 14 0250 2.85 19 22.82 155 14.59 2.91 13 .02 .3 .4 SEC 1.1X 154 2
2003 JAN 14 0549 49.74 19 15.51 155 13.59 10.91 13 .23 1.6 LOI 1.7X 205 40
2003 JAN 14 0740 9.52 19 56.57 155 31.53 34.05 31 .11 .9 1.2 KEA 2.2X 230 17

2003 JAN 14 1334 37.63 18 51.99 155 14.07 11.22 15 .08 2.0 1.1 LOI 2.0X 263 40
2003 JAN 14 1552 30.00 18 52.66 155 13.76 9.29 13 .28 1.3 LOI 2.0X 259 39
2003 JAN 14 1619 37.23 19 17.79 155 13.23 2.43 20 .13 .9 1.8 SSF 1.0X 236 8
2003 JAN 14 1626 4.51 19 59.10 155 28.89 29.84 17 .11 .9 1.8 KEA 1.5X 185 18
2003 JAN 14 1642 21.74 19 19.87 155 12.65 6.72 22 .12 1.1 .8 SF2 1.2X 218 5

2003 JAN 14 1920 45.80 19 24.17 155 17.16 14.38 19 .06 .7 .4 DEP 1.2X 97 1
2003 JAN 14 2030 49.62 18 49.80 154 55.04 36.92 20 .08 2.5 4.1 DIS 2.0X 288 66
2003 JAN 15 0211 51.97 18 49.42 155 16.76 11.58 37 .12 1.1 1.1 LOI 2.3X 269 42
2003 JAN 15 0409 49.22 19 42.43 156 2.49 17.02 20 .18 2.0 18.7 HUA - 1.5X 308 36
2003 JAN 15 0528 10.89 18 49.80 155 16.21 11.33 19 .09 1.5 1.0 LOI 2.2X 267 42

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

2003 JAN 15 0609 51.02 18 49.19 155 16.65 12.21 34 .09 1.2 1.7 LOI - 2.7X 269 42
2003 JAN 15 2158 25.50 18 48.83 155 13.60 13.11 17 .13 7.6 0.8 LOI - 1.9X 318 46
2003 JAN 15 2212 26.13 19 23.66 155 3.08 3.78 17 .13 .9 2.4 SME 1.6X 190 8
2003 JAN 16 0322 59.48 19 21.47 155 5.06 6.52 25 .12 .8 .9 SPF 1.6X 208 6
2003 JAN 16 0337 15.85 19 17.87 155 13.86 9.68 42 .11 .6 .4 SPF 2.6X 175 8

2003 JAN 16 1146 27.59 18 52.55 155 12.16 9.11 24 .11 1.2 1.0 LOI 1.9X 277 42
2003 JAN 16 1311 9.89 19 21.86 155 30.16 10.22 38 .10 .5 .8 KAO 1.8X 164 5
2003 JAN 16 1810 25.68 19 20.27 155 8.56 7.79 33 .11 .5 .6 SPF 1.6X 178 5
2003 JAN 16 1851 16.45 19 29.63 155 22.22 13.20 39 .10 .5 .4 DML 1.7X 98 2
2003 JAN 16 2353 8.71 19 22.25 155 1.80 7.87 24 .15 .9 1.0 SPF 1.3X 220 8

2003 JAN 17 0057 48.80 20 12.87 155 30.89 32.24 46 .10 .9 1.5 KEA 2.4X 247 29
2003 JAN 17 0416 33.53 19 23.42 155 2.38 7.73 29 .14 .8 .7 SPF 1.4X 197 7
2003 JAN 17 0245 36.89 19 27.25 155 14.29 32.34 51 .11 .5 .7 DBP 2.5X 60 4
2003 JAN 17 0459 1.92 19 22.39 155 29.93 8.22 37 .09 .3 .8 KAO 1.4X 62 4
2003 JAN 17 0852 46.64 19 15.93 155 27.85 0.80 29 .16 .4 .5 LSW 1.4X 114 11

2003 JAN 17 1233 59.91 19 59.08 155 34.46 21.56 34 .11 .7 1.4 KOH 2.2X 166 16
2003 JAN 17 1309 16.52 19 11.60 155 29.75 33.43 34 .08 .6 1.0 DLS 1.9X 97 5
2003 JAN 17 1802 53.41 19 14.80 155 35.44 1.29 35 .15 .4 .6 LSW 2.3X 124 20
2003 JAN 17 1938 36.78 19 19.47 155 12.81 6.16 27 .12 .8 .7 SPF 1.4X 224 6
2003 JAN 17 1943 17.45 19 24.59 155 17.50 0.19 10 .12 .3 .6 SNC 1 .6X 76 1

2003 JAN 17 2345 53.71 19 21.31 155 4.23 5.32 24 .15 1.1 1.9 SPF 1.4X 214 7
2003 JAN 18 0120 38.22 19 51.67 155 35.51 22.99 21 .08 1.0 1.3 KEA 1.7X 173 7
2003 JAN 18 0317 48.63 19 15.99 155 32.82 0.27 37 .15 .4 .3 LSW 2.1X 72 15
2003 JAN 18 0414 32.25 19 23.25 155 29.62 10.27 43 .11 .3 .5 KAO 2.3X 57 4

2003 JAN 18 0458 1.53 19 16.49 155 25.92 9.19 15 .07 .6 1.0 LSW 1.2X 156 8
2003 JAN 18 1429 44.19 19 21.97 155 26.33 11.35 25 .11 .6 .9 KAO 1.5X 115 2
2003 JAN 18 1549 2.20 19 27.30 155 28.55 10.74 18 .10 .6 1.5 KAO 1.3X 72 9
2003 JAN 18 1802 32.48 19 21.24 154 59.62 7.80 19 .14 2.3 .9 LSR 1.7X 256 7
2003 JAN 18 1950 2.84 19 19.98 155 10.93 8.52 17 .06 1.4 .7 SPF 1.4X 206 5

2003 JAN 19 0056 5.69 19 21.45 155 11.31 8.93 40 .12 .6 .4 SPF 2.6X 161 3
2003 JAN 19 0120 51.10 19 21.52 155 11.53 7.87 26 .13 1.1 .6 SPF 1.5X 191 3
2003 JAN 19 0508 30.44 19 21.50 155 32.20 33.14 15 .06 1.9 3.5 DTS 2.4X 3107 2
2003 JAN 19 0541 43.39 19 23.67 155 13.83 31.47 21 .09 1.0 1.3 DEP 1.5X 96 2

2003 JAN 19 0732 47.82 20 10.13 155 37.74 31.71 17 .10 1.1 1.9 KOH 1.7X 151 4
2003 JAN 19 0900 36.99 19 3.21 155 23.30 36.03 24 .07 1.0 1.5 LOI 1.5X 210 14
2003 JAN 19 0900 52.88 19 3.32 155 23.33 36.13 30 .07 .9 1.6 LOI 2.0X 209 14
2003 JAN 19 1427 11.28 19 12.29 155 21.98 42.53 26 .08 .8 1.1 DBP 1.4X 203 12
2003 JAN 19 1610 19.88 19 12.27 155 21.45 44.64 29 .08 .9 1.0 DEP 1.6X 197 12

2003 JAN 19 2015 53.62 19 23.35 155 16.91 2.93 29 .08 .3 .2 SSC 2.2X 109 0
2003 JAN 20 0349 31.13 19 12.74 155 32.93 0.72 37 .13 .5 .3 LSW 1.7X 84 11
2003 JAN 20 0454 0.79 19 24.42 155 16.96 1.34 17 .11 .3 .2 SSC 1.3X 80 1
2003 JAN 20 0758 15.96 19 24.18 155 15.86 2.95 20 .06 .2 .3 SSC 1.4X 83 1
2003 JAN 20 0929 40.49 19 20.49 155 12.50 8.40 39 .12 .5 .5 SPF 1.9X 164 4

-ORIGIN TIME (HST)- LAT N- -LON W- DEPTH N RMS ERH ERZ LOC												PREF AZ MIN						
YEAR	MON	DA	HR	MIN	SEC	DEG	MIN	DBG	MIN	KM	RD	SRC	KM	KM	REMARKS	MAG	GAP	DS
2003	JAN	20	1656	54.31	19	22.18	155	29.82	9.09	29	.10	.4	.8	KAO	1.4X	97	4	
2003	JAN	20	2240	40.87	19	17.34	155	28.36	2.04	43	.14	.3	.6	LSW	1.9X	102	10	
2003	JAN	21	0514	4.23	19	36.61	115	5.55	14.31	33	.11	.8	.8	HIL	2.0X	190	24	
2003	JAN	21	1500	39.85	19	34.50	155	37.47	9.71	21	.12	.7	1.0	MLO	1.5X	193	6	
2003	JAN	21	1658	14.39	19	24.96	155	16.46	1.54	14	.12	.4	.3	SNC	1.6X	105	1	
2003	JAN	21	1714	58.02	19	24.72	155	16.33	7.58	23	.14	.6	.6	INT L	1.8X	114	1	
2003	JAN	21	1716	21.30	19	22.52	155	29.71	8.26	37	.10	.3	.7	KAO	1.7X	62	4	
2003	JAN	21	1734	7.43	19	23.85	155	17.24	12.50	25	.13	.6	.6	INT L	2.0X	89	1	
2003	JAN	21	1740	29.43	19	25.39	155	15.88	0.17	12	.11	.3	.5	SNC	1.4X	198	2	
2003	JAN	21	1800	20.59	19	25.46	155	14.95	0.26	19	.13	.3	.4	SNC L	1.8X	155	4	
2003	JAN	21	1834	37.99	19	24.91	155	16.82	15.69	20	.09	1.0	.6	DEP L	2.0X	151	0	
2003	JAN	21	1927	35.01	19	24.94	155	16.30	15.31	25	.11	.8	.4	DEP	2.1X	118	1	
2003	JAN	21	1957	34.10	19	24.99	155	16.93	9.74	23	.09	.6	.6	INT L	1.9X	154	0	
2003	JAN	21	2041	33.74	19	24.82	155	16.64	8.94	23	.11	.7	.5	INT L	1.6X	107	1	
2003	JAN	21	2126	30.87	19	25.54	155	15.32	12.07	21	.13	.9	.9	INT	2.0X	149	3	
2003	JAN	21	2205	59.33	19	24.86	155	15.61	9.37	15	.12	.9	1.0	INT L	1.4X	206	4	
2003	JAN	21	2223	10.51	19	22.65	155	10.84	2.74	19	.11	1.2	.4	SER	1.6X	180	1	
2003	JAN	21	2306	41.92	19	24.78	155	11.55	5.27	32	.13	.6	1.5	SF3	1.4X	75	2	
2003	JAN	21	2343	6.19	19	24.93	155	17.76	11.80	14	.11	1.8	1.0	INT	2.3X	84	1	
2003	JAN	22	0141	32.22	19	24.27	155	17.39	11.53	25	.12	.7	.5	INT L	1.8X	81	1	
2003	JAN	22	0338	4.22	19	24.47	155	17.23	11.43	21	.12	.7	.6	INT L	1.5X	71	1	
2003	JAN	22	0504	16.73	19	24.91	155	17.26	5.93	27	.11	.4	.5	INT	1.8X	81	0	
2003	JAN	22	0616	8.66	19	25.12	155	16.07	9.89	23	.14	.8	.6	INT	1.5X	124	2	
2003	JAN	22	0771	41.57	19	24.84	155	17.63	30.07	41	.11	.8	1.0	KEA	2.2X	212	6	
2003	JAN	22	0858	18.17	19	23.22	155	18.62	7.78	17	.14	.8	.8	INT L	1.6X	136	2	
2003	JAN	22	1213	4.97	19	12.64	155	28.46	2.31	42	.11	.3	.6	LSW	2.6X	103	6	
2003	JAN	22	1302	23.30	19	7.56	155	28.26	12.36	26	.13	.8	.4	LSW	1.6X	271	4	
2003	JAN	22	1650	7.28	19	23.75	155	30.20	10.12	26	.27	.07	.4	.9	1.2X	86	5	
2003	JAN	22	1955	4.68	19	20.38	155	33.22	6.44	21	.10	9.011	5	DIS	-1.7X	340	72	
2003	JAN	22	1952	27.72	19	2.83	155	13.74	32.07	38	.07	.8	1.4	LOT	2.2X	230	28	
2003	JAN	22	2136	31.99	19	25.25	155	16.68	1.52	24	.09	.3	.2	SNC	2.1X	102	1	
2003	JAN	22	2300	28.80	18	49.58	155	16.74	11.87	34	.13	1.1	1.3	LOT	2.5X	268	42	
2003	JAN	23	0051	49.71	19	28.63	155	36.83	11.73	12	.09	.8	1.1	MLO T	1.82	2		
2003	JAN	23	0053	20.42	19	28.45	155	36.99	13.41	19	.09	.6	.7	DML	1.7X	100	2	
2003	JAN	23	0155	16.92	19	23.35	155	14.68	4.43	39	.12	.3	.5	SEC F	3.2X	100	3	
2003	JAN	23	0316	42.47	19	25.32	155	17.10	1.34	24	.11	.3	.2	SNC	2.1X	93	1	
2003	JAN	23	0644	52.75	19	2.90	155	13.63	31.73	.38	.09	.9	1.5	LOT	2.1X	230	28	
2003	JAN	23	0834	13.34	18	49.41	155	16.26	11.98	39	.12	1.2	1.5	LOT	2.5X	269	42	
2003	JAN	23	1408	4.64	155	14.85	155	14.6	2.78	2.10	.12	.7	.1	SSF	1.4X	195	8	
2003	JAN	23	1536	0.92	19	19.39	155	4.30	6.30	36	.09	.6	.8	SF5	1.6X	198	9	
2003	JAN	22	1652	22.18	19	7.38	155	24.17	4.48	24	.10	1.0	1.3	LOT	2.0X	208	8	
2003	JAN	23	1652	22.18	19	24.02	155	3.05	29	.12	.3	.2	.2	SEC	2.1X	79	1	
2003	JAN	24	0341	0.24	19	28.19	155	37.60	11.48	14	.09	.8	.9	MLO	1.8X	103	3	
2003	JAN	24	0456	30.07	19	23.53	155	14.73	3.69	32	.09	.3	.3	SEC F	2.2X	105	2	
2003	JAN	24	0739	11.88	19	32.98	155	37.81	13.87	21	.11	.8	.6	DML	1.3X	174	5	

-ORIGIN TIME (HST)- LAT N- -LON W- DEPTH N RMS ERH ERZ LOC												PREF AZ MIN						
YEAR	MON	DA	HR	MIN	SEC	DEG	MIN	DBG	MIN	KM	RD	SRC	KM	KM	REMARKS	MAG	GAP	DS
2003	JAN	24	0748	49.27	19	26.09	155	22.25	10.35	18	.08	.5	1.0	KAO	1.2X	86	6	
2003	JAN	24	1005	48.96	19	18.07	155	14.95	8.67	29	.11	.6	.9	SF1	1.5X	184	6	
2003	JAN	24	1544	15.00	19	27.01	155	28.41	9.48	20	.08	.4	1.2	KAO	1.4X	74	8	
2003	JAN	24	1652	36.03	19	18.54	155	8.93	3.07	28	.11	1.5	2.1	SF5	1.5X	263	6	
2003	JAN	24	2140	3.39	19	23.05	155	3.00	4.69	27	.10	1.0	4.8	SME	1.4X	200	8	
2003	JAN	24	2205	11.29	19	18.70	155	6.48	4.47	33	.10	.7	3.6	SSP	1.6X	227	9	
2003	JAN	25	0434	23.96	19	14.97	155	19.95	8.70	29	.09	.5	1.0	SWR	1.2X	186	6	
2003	JAN	25	0643	18.01	19	20.50	155	19.72	30.02	44	.12	.5	.8	DEP F	3.3X	80	3	
2003	JAN	25	0712	53.65	19	22.31	155	16.89	26.39	35	.10	.8	.8	DEP	2.1X	116	2	
2003	JAN	25	0807	5.75	19	21.61	155	19.45	29	35	.47	.11	.5	.7	DEP	1.8X	47	4
2003	JAN	25	0836	58.67	19	21.12	155	19.49	28.29	25	.07	.8	.7	DEP	1.7X	139	4	
2003	JAN	25	1345	48.58	19	20.51	155	6.83	42.44	29	.11	.9	1.8	KON	2.2X	251	41	
2003	JAN	25	1413	20.91	19	23.62	155	16.96	2.95	17	.06	.3	.3	SSC	1.5X	70	0	
2003	JAN	25	1545	34.50	19	21.53	155	19.26	29	56	.23	.09	.9	DEP	1.5X	122	4	
2003	JAN	25	1710	14.87	19	22.45	155	30.27	9.38	18	.06	.5	1.0	KAO	1.2X	156	5	
2003	JAN	25	1711	13.62	19	22.81	155	29.98	8.75	27	.09	.4	.9	KAO	1.3X	59	4	
2003	JAN	26	0833	41.56	19	15.03	155	25.87	3.37	47	.16	.1	1.0	LSW	1.3X	111	11	
2003	JAN	26	1817	12.79	19	11.89	155	30.31	31.50	29	.10	.6	1.1	DLS	1.4X	204	14	
2003	JAN	26	1958	30.99	19	21.59	155	19.75	30.33	44	.12	.6	.8	DEP	2.5X	81	4	
2003	JAN	26	2111	32.29	19	18.55	155	6.39	3.87	29	.09	.7	1.9	SSP	1.1X	229	9	
2003	JAN	26	2255	34.96	19	20.71	155	8.16	9.18	42	.10	.6	.4	SF4	2.3X	172	5	
2003	JAN	26	2319	58.35	19	18.59	155	8.00	4.93	27	.10	.8	2.1	SSP	1.4X	273	9	
2003	JAN	26	2345	30.07	19	16.78	156	21.81	6.77	16	.12	8	8.11	DIS	-1.3X	324	68	
2003	JAN	27	0039	33.66	19	7.66	155	23.55	44.55	21	.10	1.4	.9	LOT	1.7X	278	8	
2003	JAN	27	0328	18.40	19	10.71	155	41.02	0.02	30	.15	.4	.2	LSW	#	2.1X	91	9
2003	JAN	27	0511	38.95	19	50.89	155	28.43	9.60	19	.11	.8	.6	KEA	1.3X	189	17	
2003	JAN	27	0723	16.81	19	25.58	155	22.34	21	.11	.8	1.6	KEA	1.3X	144	10		
2003	JAN	27	0732	19.52	19	26.09	155	29.98	8.01	17	.14	.6	2.0	KAO	1.6X	112	10	
2003	JAN	27	0735	44.58	19	28.08	155	25.07	1.09	16	.11	.3	.4	KAO	1.2X	99	4	
2003	JAN	27	0831	29.82	19	15.50	155	6.69	2.09	22	.11	2.5	2.0	SSP	1.1X	286	42	
2003	JAN	27	0915	12.21	19	27.54	155</											

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

2003 JAN 28 1737 11.31 19 19.16 155 6.71 2.41 27.08 2.9 2.6 SSP 1.3X 286 8
2003 JAN 28 1750 25.46 19 19.02 155 7.11 2.39 33.10 2.1 1.9 SSF 1.8X 252 8
2003 JAN 28 2225 14.44 19 32.97 155 36.40 11.47 34.13 1.4 .4 MLO 2.0X 95 3
2003 JAN 28 2307 54.95 19 33.88 155 36.83 8.04 17.15 1.2 1.5 MLO 1.0X 237 4
2003 JAN 28 2353 49.74 19 38.94 155 8.74 11.96 31.10 .6 .8 HIL 1.5X 273 25
2003 JAN 29 0647 36.70 19 29.40 155 22.60 9.99 26.09 .5 .8 KAO 1.4X 147 1
2003 JAN 29 1552 46.12 19 15.46 155 11.55 8.13 29.10 .7 1.3 SF3 1.5X 258 13
2003 JAN 29 1735 24.94 19 34.16 155 43.73 7.56 19.11 .7 1.8 KON 1.6X 122 8
2003 JAN 29 1741 52.18 19 34.20 155 43.00 5.24 19.10 .9 4.4 MLO 1.1X 222 8
2003 JAN 29 1930 29.55 18 53.23 155 13.66 29.34 33.10 1.1 2.4 LOI 1.9X 273 39
2003 JAN 29 2129 19.84 18 51.16 155 10.08 7.45 30.15 1.2 1.1 LOI 2.0X 282 46
2003 JAN 29 2201 30.31 19 24.77 155 16.90 1.90 24.11 .3 .2 SNC L 2.1X 143 0
2003 JAN 29 2236 29.15 19 18.75 155 0.29 5.98 29.10 .4 .6 SF5 1.6X 315 15
2003 JAN 30 0313 28.46 19 18.99 155 18.84 1.07 21.10 .3 .3 SWR 1.0X 103 4
2003 JAN 30 0931 50.04 19 24.62 155 16.62 1.48 22.12 .3 .2 SNC 1.6X 98 1
2003 JAN 30 1817 42.93 19 23.69 155 21.93 10.82 23.08 .5 .8 KAO 1.4X 99 4
2003 JAN 30 1820 21.39 19 24.82 155 16.49 14.48 18.09 1.0 .3 DEP 1.1X 212 2
2003 JAN 30 2255 45.28 19 20.72 155 3.56 6.23 22.12 1.1 1.3 SF5 1.2X 325 9
2003 JAN 31 0111 59.61 19 21.75 155 28.69 8.17 33.10 .3 .9 KAO 1.3X 70 2
2003 JAN 31 0555 19.81 19 27.95 155 36.29 12.25 24.13 .6 .9 MLO L 2.0X 86 1
2003 FEB 1 0835 58.96 19 25.11 155 19.57 6.88 35.10 .4 .7 KAO 2.0X 82 3
2003 FEB 1 1223 33.05 19 25.28 155 16.61 1.78 17.07 .4 .2 SNC L 1.5X 314 22
2003 FEB 1 1447 31.96 19 32.78 155 4.22 17.77 36.07 1.0 2.5 HIL F 1.2X 232 8
2003 FEB 1 1736 5.65 19 57.16 155 28.66 31.00 16.11 1.6 2.5 KEA 2.4X 91 10
2003 FEB 1 1835 22.18 19 25.31 155 24.44 7.29 21.10 .4 1.5 KAO 1.6X 283 22
2003 FEB 1 1943 41.50 19 17.23 155 2.30 5.24 25.12 .9 1.3 SF5 1.3X 316 15
2003 FEB 1 2011 1.57 19 19.56 155 7.24 7.11 29.11 .7 1.6 SF4 1.7X 203 4
2003 FEB 1 2213 17.80 19 16.61 155 33.86 12.36 26.09 .4 1.3 LSW 1.4X 97 14
2003 FEB 2 0807 27.73 19 24.09 155 29.48 9.61 26.08 .4 1.0 KAO 1.2X 124 4
2003 FEB 2 1936 38.19 19 17.78 155 8.47 6.67 28.11 .6 .7 SF4 2.0X 156 5
2003 FEB 2 2010 19.18 19 22.85 155 5.15 7.33 25.10 1.1 .7 SF5 2.2X 265 4
2003 FEB 3 0122 36.71 19 16.54 155 32.82 11.43 16.07 .5 2.0 LSW 1.5X 133 14
2003 FEB 3 0124 30.42 19 12.22 155 29.95 33.44 43.08 .5 1.0 DIS 2.9X 74 6
2003 FEB 3 0824 14.00 19 10.49 155 14.34 47.07 17.11 1.8 1.3 DEP 1.6X 290 19
2003 FEB 3 2149 49.39 19 12.42 155 26.20 1.54 17.10 .9 .5 LSW 1.3X 190 6
2003 FEB 3 2251 3.97 19 15.39 155 33.47 6.57 20.11 .5 3.7 LSW 1.4X 74 15
2003 FEB 4 1000 26.60 19 26.42 155 53.43 13.36 34.09 1.0 .4 KON 2.5X 253 15
2003 FEB 4 1024 37.91 19 6.31 155 28.22 30.48 22.05 .8 1.4 DLS 1.6X 202 6
2003 FEB 4 1045 18.27 19 18.59 155 47.33 9.64 29.14 .7 .6 KON 1.4X 206 13
2003 FEB 4 1212 19.64 19 19.37 155 11.42 3.05 20.16 .4 1.6 SSF 1.3X 99 5
2003 FEB 4 1608 51.33 20 5.66 155 29.01 8.05 19.09 1.1 1.3 KEA 1.8X 240 31

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

2003 FEB 4 1924 23.63 19 24.77 155 19.72 5.43 19.12 .4 .8 KAO 1.0X 106 2
2003 FEB 4 2153 50.77 18 49.27 155 14.23 42.51 21.08 1.3 2.1 LOI 1.6X 291 44
2003 FEB 4 2332 27.58 19 21.79 156 26.38 6.48 24.11 6.8 8.7 DLS - 1.8X 317 73
2003 FEB 5 0157 45.13 19 25.19 155 19.32 5.53 17.1.2 .5 1.1 KAO 1.4X 83 3
2003 FEB 5 0201 15.08 19 20.22 155 7.96 5.40 33.14 .6 1.2 SF4 1.4X 174 5
2003 FEB 5 0219 0.17 19 25.13 155 19.28 5.28 26.11 .4 .9 KAO 1.3X 81 3
2003 FEB 5 0226 38.20 19 25.21 155 19.31 6.27 28.13 .4 .9 KAO 1.4X 63 3
2003 FEB 5 0236 5.37 19 26.44 155 29.17 9.10 33.12 .4 1.1 KAO 1.3X 60 8
2003 FEB 5 0919 23.57 19 49.01 155 33.04 22.01 45.11 .6 1.3 KEP F 2.9X 92 10
2003 FEB 5 1025 32.16 19 21.77 155 20.62 27.29 22.08 .7 1.0 DLP 1.4X 99 6
2003 FEB 5 1404 0.34 19 22.22 155 18.86 29.59 44.12 .6 .9 DLP 2.8X 38 3
2003 FEB 5 2046 5.47 19 26.82 155 34.86 29.83 24.08 .7 1.2 DLS 1.2X 151 10
2003 FEB 5 2306 1.07 19 26.82 155 37.11 20.01 28.10 .4 1.0 KAO 1.2X 59 10
2003 FEB 6 0150 31.27 19 20.43 155 13.22 6.14 39.11 .3 .7 SF2 1.6X 63 4
2003 FEB 6 0153 52.14 19 19.44 155 11.37 5.13 33.11 .4 1.6 SF3 1.2X 98 6
2003 FEB 6 0213 43.36 19 18.77 155 13.66 10.05 38.11 .4 .4 SF2 2.2X 70 3
2003 FEB 6 0356 18.17 19 12.52 155 28.99 36.05 25.07 .7 1.4 DLS 1.2X 88 5
2003 FEB 6 1119 46.32 19 26.52 155 23.51 10.30 42.10 .3 .6 KAO 1.8X 75 6
2003 FEB 6 2129 19.11 19 21.77 155 5.26 5.69 22.12 1.0 1.5 SF5 1.4X 266 5
2003 FEB 6 2225 23.86 19 21.41 155 19.60 28.04 40.11 .5 .9 DLP 1.7X 49 4
2003 FEB 7 0621 35.51 18 48.98 155 35.49 42.47 31.07 .9 1.1 DLS 2.1X 292 20
2003 FEB 7 0638 27.81 19 23.10 155 14.54 3.52 31.12 .3 .4 SBC 2.1X 111 3
2003 FEB 7 0235 17.22 19 9.73 155 32.52 1.54 26.12 .4 .5 LSW 1.3X 122 8
2003 FEB 7 0421 59.61 19 20.63 155 7.03 5.30 37.12 6.1 1.0 SF4 2.3X 207 5
2003 FEB 7 0433 26.59 19 19.99 155 11.65 7.13 38.12 .4 .8 SF3 2.4X 86 6
2003 FEB 7 0621 35.51 18 48.98 155 35.49 42.47 31.07 .9 1.1 DLS 2.1X 292 20
2003 FEB 7 0638 27.81 19 23.10 155 14.54 3.52 31.12 .3 .4 SBC 2.1X 111 3
2003 FEB 7 1613 2.15 19 11.41 155 31.34 40.61 29.08 .7 1.1 DLS 1.4X 95 7
2003 FEB 7 1931 46.90 19 21.92 155 28.50 11.26 36.08 .3 .7 KAO 1.5X 65 2
2003 FEB 7 2308 48.95 19 13.99 155 32.89 5.56 24.12 .4 1.5 LSW 1.4X 125 5
2003 FEB 8 0519 51.16 19 19.39 155 10.49 7.45 31.09 .4 .6 SF3 1.4X 101 6
2003 FEB 8 0533 51.07 19 11.48 155 32.38 1.70 22.11 .3 .6 LSW 1.4X 97 8
2003 FEB 8 0700 3.71 19 19.88 155 8.10 3.43 28.12 1.2 2.0 SSB 1.2X 170 5
2003 FEB 8 1031 17.72 19 17.58 155 46.14 10.44 37.11 .6 .4 KON 2.0X 183 13
2003 FEB 8 1104 20.7 19 57.16 155 16.12 1.1 1.1 KEP A 1.3X 240 20
2003 FEB 8 2056 55.65 19 20.96 155 7.52 7.69 23.10 .6 .5 SF4 1.1X 190 4
2003 FEB 8 2113 32.20 19 25.23 155 18.80 6.52 27.10 .4 .7 INT 1.2X 79 2
2003 FEB 9 0325 44.64 19 25.51 155 48.09 31.34 30.10 .8 1.2 HPA 1.6X 191 18
2003 FEB 9 0329 6.42 19 22.77 155 25.23 11.23 20.08 .5 .9 KAO 1.4X 121 4
2003 FEB 9 0530 57.30 19 20.56 155 10.99 7.44 36.13 .4 .7 SF3 1.6X 90 4
2003 FEB 10 0131 16.00 19 17.48 155 46.17 10.89 32.10 .5 .5 KON 1.4X 183 13
2003 FEB 10 0207 19.06 19 19.57 155 11.50 6.51 39.12 .4 .7 SF3 1.6X 94 6
2003 FEB 10 0431 58.27 19 17.67 155 31.14 7.03 27.15 .4 1.4 LSW 1.1X 67 5
2003 FEB 10 1555 22.32 19 43.07 155 9.49 29.46 31.11 1.1 2.0 KEP A 1.6X 252 31
2003 FEB 10 1933 17.35 19 30.40 155 11.88 23.47 17.09 1.2 1.4 DEP 1.1X 205 14
2003 FEB 10 2242 36.82 20 0.75 155 30.78 42.34 19.09 1.4 1.8 KEP A 1.5X 321 26

-ORIGIN TIME (HST)- LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRVN	SEC	DBG	MIN	DBG	MIN	KM	RD	SRC	KM	KM	REMKs	MAG	GAP	DS		
2003	FEB	11	0652	54.80	19	17.56	155	12.62	5.52	31	.11	.4	1.0	SF2	1.4X	198	2		
2003	FEB	11	0747	30.56	19	14.70	155	30.87	8.69	29	.15	.4	1.0	LSW	1.5X	70	1		
2003	FEB	11	1901	31.18	19	11.93	155	27.68	2.24	35	.13	.3	.6	LSW	1.5X	116	4		
2003	FEB	11	1954	51.81	19	11.73	155	28.14	8.47	33	.12	.4	.8	LSW F	1.8X	104	4		
2003	FEB	11	2200	11.27	19	30.77	155	44.60	10.59	22	.13	.9	.7	KON	2.4X	179	2		
2003	FEB	12	0043	44.51	19	13.45	155	28.16	39.60	25	.08	.9	1.3	DLS	1.3X	181	5		
2003	FEB	12	0128	56.26	19	15.97	155	27.21	7.43	26	.15	.4	1.4	LSW	1.1X	101	5		
2003	FEB	12	0411	29.27	19	18.98	155	30.43	9.52	33	.08	.3	.9	LSW	1.3X	110	7		
2003	FEB	12	0430	19.54	19	26.55	155	51.82	14.41	24	.11	1.2	.5	KON	1.4X	246	23		
2003	FEB	12	0505	7.78	19	18.14	155	1.06	41.01	27	.10	1.8	1.1	DEP	1.4X	305	18		
2003	FEB	12	1112	45.79	19	53.24	155	39.18	34.09	16	.09	1.1	1.1	KEA	1.4X	311	3		
2003	FEB	12	2114	44.73	19	28.10	155	36.68	14.31	22	.08	.5	.7	DML	1.0X	94	2		
2003	FEB	13	0211	9.87	19	29.20	154	51.73	6.55	21	.12	1.4	1.3	LER	1.4X	302	30		
2003	FEB	13	0246	1.87	19	25.01	155	18.86	6.98	36	.10	.4	.6	INT	1.4X	56	2		
2003	FEB	13	0348	58.52	19	24.23	155	16.97	1.34	20	.12	.3	.2	SSC	1.5X	92	1		
2003	FEB	13	0522	17.00	19	2.89	155	26.48	38.57	28	.07	.8	1.3	DLS	1.2X	213	12		
2003	FEB	13	0800	50.37	19	45.92	155	35.74	15.49	43	.11	.4	.6	KEA	2.2X	115	12		
2003	FEB	13	058	46.95	19	22.92	155	14.50	3.41	14	.07	.4	.4	SEC	1.2X	135	3		
2003	FEB	13	1444	0.26	19	11.90	155	37.79	1.13	30	.17	.4	.5	LSW	1.5X	87	15		
2003	FEB	13	1918	27.36	19	20.37	155	11.07	6.52	20	.13	.6	1.5	SF3	1.4X	88	5		
2003	FEB	13	1950	55.18	19	30.48	155	51.11	16.49	12	.08	7.9	12.9	KON	-	1.1X	304	26	
2003	FEB	14	1020	17.75	19	22.39	155	30.08	10.23	16	.04	.5	1.0	KAO	1.3X	84	4		
2003	FEB	14	1055	21.47	19	12.92	155	17.50	45.35	34	.09	.9	1.2	DEP	2.0X	175	9		
2003	FEB	14	1231	3.82	19	35.46	155	6.59	7.91	16	.11	1.3	2.7	HIL	1.3X	254	21		
2003	FEB	14	1444	36.89	19	14.33	155	6.48	40.23	41	.09	.8	.9	DEP	2.2X	233	6		
2003	FEB	14	1848	15.21	19	24.84	155	31.50	12.32	19	.11	.6	1.4	KAO	1.3X	76	8		
2003	FEB	15	0336	18.96	19	1.69	155	26.18	38.39	38	.09	.8	1.3	DLS	2.1X	212	15		
2003	FEB	15	1052	54.58	19	18.50	155	13.16	5.31	22	.10	.9	1.4	SF2	1.6X	89	3		
2003	FEB	15	1337	6.67	19	17.11	155	11.79	8.03	22	.10	.9	.8	SF3	1.1X	276	3		
2003	FEB	15	2056	20.59	19	11.77	155	37.48	6.54	38	.13	.3	1.2	LSW	1.5X	89	14		
2003	FEB	16	0411	38.52	19	30.57	155	2.20	44.77	41	.08	1.0	.7	DEP	1.8X	251	12		
2003	FEB	16	0602	9.36	19	31.59	155	15.97	29.45	31	.07	.8	.9	DEP	1.5X	182	7		
2003	FEB	16	1746	1.75	19	11.19	155	30.69	40.42	30	.07	.6	1.1	DLS	1.5X	95	6		
2003	FEB	16	2224	47.18	19	19.80	155	7.83	9.79	42	.09	.5	.3	SF4	2.7X	146	5		
2003	FEB	16	2335	4.92	19	11.25	155	41.54	9.16	30	.11	.4	1.5	LSW	1.6X	104	9		
2003	FEB	17	1342	12.12	19	1.58	155	26.05	38.84	40	.08	.8	1.2	DLS	2.1X	217	15		
2003	FEB	17	1359	39.18	19	20.64	155	4.56	4.68	24	.12	.9	3.7	SSF	1.4X	240	7		
2003	FEB	17	1443	2.51	18	49.93	156	11.33	32.30	29	.09	1.7	3.8	DIS	2.6X	326	57		
2003	FEB	17	1853	14.07	19	13.51	155	29.11	39.18	25	.07	.9	1.3	DIS	1.4X	179	3		
2003	FEB	18	0717	9.35	19	23.53	155	23.53	13.64	37	.11	.4	.6	DML	1.5X	55	6		
2003	FEB	18	1778	28.76	19	18.25	155	13.38	5.65	33	.13	.4	1.1	SF2	1.4X	86	2		
2003	FEB	18	2122	59.12	19	18.81	155	30.27	11.35	6.26	.06	.3	.9	LSW	1.2X	109	7		
2003	FEB	18	2339	8.89	19	28.33	155	26.74	6.86	30	.11	.3	1.0	KAO	1.5X	83	5		
2003	FEB	19	0129	20.23	20	15.85	155	52.01	6.90	23	.10	8	8.510	KOH	-	1.8X	329	68	
2003	FEB	19	1058	4.13	19	22.49	155	14.31	3.29	26	.10	.3	.3	SEC	1.5X	102	2		

9+

-ORIGIN TIME (HST)- LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRVN	SEC	DBG	MIN	DBG	MIN	KM	RD	SRC	KM	KM	REMKs	MAG	GAP	DS		
2003	FEB	19	2342	48.19	19	15.	44	155	29	74	11.35	28	.09	.4	1.0	LSW	1.6X	87	1
2003	FEB	19	2352	3.83	19	21.	02	155	7.91	9.27	41	.08	.3	.4	SF4	1.8X	117	4	
2003	FEB	20	0145	11.64	19	24.	55	155	36.30	1.37	18	.11	.3	.4	MLO	1.4X	115	3	
2003	FEB	20	0231	56.96	19	17.	93	155	9.35	41	42	.39	.11	.8	DEP	1.5X	144	3	
2003	FEB	20	0540	50.73	19	52.	74	155	19.40	29	41	.35	.11	.7	KON	1.9X	182	2	
2003	FEB	20	0937	49.00	19	18.	78	155	23.15	33.05	41	.09	.6	.9	DEP	1.9X	106	3	
2003	FEB	20	1321	8.42	20	17.	46	155	31.42	4.55	30	.15	1.9	1.3	KEA	2.2X	276	32	
2003	FEB	20	2213	40.76	19	24.	79	155	36.71	1.66	17	.13	.4	.4	MLO	1.0X	101	2	
2003	FEB	20	2252	20.61	19	17.	72	155	12.95	9.59	40	.10	.5	.6	SF2	1.9X	141	9	
2003	FEB	20	2321	42.99	19	17.	68	155	12.71	9.75	44	.11	.4	.5	SF2	1.7X	141	8	
2003	FEB	20	2323	38.58	19	16.	65	155	12.50	8.81	36	.12	.5	.6	SF2	1.5X	163	2	
2003	FEB	21	0014	6.61	19	16.	23	155	11.93	8.56	37	.11	.6	.6	SF3	1.5X	174	3	
2003	FEB	21	036	46.90	19	22.	24	155	11.05	3.10	37	.10	.4	.3	SER	1.9X	128	2	
2003	FEB	21	0136	10.45	19	24.	34	155	16.40	1.44	15	.10	.3	.2	SFC	1.4X	149	1	
2003	FEB	21	0409	11.80	19	20.	34	155	10.91	7.69	39	.10	.4	.5	SF3	1.4X	79	5	
2003	FEB	21	0836	49.44	19	17.	34	155	13.16	6.21	28	.09	.5	.9	SF2	1.1X	134	1	
2003	FEB	21	0843	36.54	19	12.	43	155	16.91	43	.04	.08	.9	.1	DEP	1.6X	185	10	
2003	FEB	21	1054	14.04	19	9.	29	155	18.67	36.39	27	.12	1.2	1.0	LOT	1.5X	249	16	
2003	FEB	21	0855	24.89	19	12.	76	155	16.87	42.89	31	.08	.8	1.0	DEP	1.5X	227	10	
2003	FEB	21	0906	37.02	19	13.	66	155	29.21	38.83	46	.08	.5	.9	DLS	1.8X	92	3	
2003	FEB	21	1045	52.71	19	12.	57	155	36.89	0.06	20	.14	.5	.3	LSD	#	1.5X	141	13
2003	FEB	21	1322	56.89	19	16.	57	155	12.50	6.30	26	.09	.6	.9	SF2	1.0X	225	2	
2003	FEB	21	1559	39.10	19	20.	96	155	5.85	8.15	39	.13	.4	.6	SF4	1.5X	151	5	
2003	FEB	21	1603	43.73	19	13.	19	155	45.44	31	.09	.9	1.3	DLS	1.7X	174	13		
2003	FEB	22	0254	10.47	19	11.	75	155	34.90	6.71	44	.17	.4	1.0	LSW	2.1X	194	10	
2003	FEB	22	0353	51.39	19	20.	25	155	8.20	7.20	41	.12	.5	.6	SF4	1.7X	114	5	
2003	FEB	22	1159	35.69	19	21.	77	155	49.82	11.34	25	.12	1.0	.5	KON	1.6X	273	17	
2003	FEB	22	1301	56.96	19	20.	56	155	6.98	6.80	24	.08	.4	.9	SF4	1.3X	138	5	
2003	FEB	22	1639	1.28	19	11.	84	155	14.80	44.38	.08	.8	.9	DEP					

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

2003 FEB 24 0333 50.63 19 20:35 155 7.78 8.22 44 .10 .4 .5 SF4 2.1X 124 5
2003 FEB 24 0505 4.38 19 24:60 155 38.26 3.09 24 .11 .4 .3 KAO 1.6X 102 1
2003 FEB 24 1025 57.42 19 24:47 155 36.75 1.79 18 .12 .3 .4 MLO 1.4X 100 2
2003 FEB 24 1100 54.40 19 9.14 155 37.81 1.92 24 .16 .6 .8 LSW 1.4X 148 17
2003 FEB 24 1209 26.64 19 28.22 155 23.44 2.08 34 .12 .3 .5 KAO 1.8X 87 3
2003 FEB 24 1429 14.14 19 26.43 155 29.02 10.39 28 .11 .5 1.2 KAO 1.4X 59 11
2003 FEB 24 1608 30.89 19 27.83 155 23.69 1.15 24 .11 .3 .3 KAO 1.4X 80 4
2003 FEB 24 1753 24.02 19 19.29 155 12.49 5.04 31 .11 .4 1.4 SF2 1.2X 89 5
2003 FEB 24 2118 27.28 19 28.16 155 23.58 1.79 29 .07 .2 .4 KAO 1.6X 84 3
2003 FEB 25 0127 16.60 19 28.52 155 23.09 2.79 22 .10 .4 .4 KAO 1.3X 104 2
2003 FEB 25 0427 36.25 19 18.82 155 12.97 5.28 23 .14 .7 1.5 SF2 1.3X 195 3
2003 FEB 25 0500 42.45 19 24.19 154 57.06 2.43 23 .16 1.0 .4 SLE 1.4X 259 3
2003 FEB 25 1110 49.05 19 18.94 155 15.24 5.51 30 .11 .3 .9 SF1 1.2X 115 4
2003 FEB 25 1134 47.71 19 28.36 155 16.92 24.43 27 .10 .9 .9 DEP 1.2X 174 1
2003 FEB 25 1649 21.40 19 27.17 155 52.48 6.42 21 .18 1.5 2.0 KON 1.1X 302 13
2003 FEB 25 1734 11.10 19 28.70 155 14.68 13.04 30 .14 .5 .6 DEP 1.1X 71 4
2003 FEB 25 1836 34.95 19 48.45 155 20.04 28.67 33 .12 .6 1.2 KEA 1.5X 115 9
2003 FEB 25 1846 26.02 19 21.34 155 5.03 8.78 46 .10 .5 .4 SF5 F 3.5U 158 6
2003 FEB 26 0916 35.22 18 57.14 155 34.79 44.78 42 .07 .8 1.1 DLS 2.7X 240 10
2003 FEB 26 1349 1.44 19 36.59 154 54.62 42.08 44 .11 .8 .9 HIL 2.3X 249 16
2003 FEB 26 1742 35.13 19 21.73 155 19.75 4.68 20 .14 .5 2.2 SWR 1.5X 85 4
2003 FEB 26 1750 38.48 19 26.80 155 20.37 14.00 37 .12 .4 .4 DML 1.6X 49 5
2003 FEB 27 0042 16.12 19 18.16 155 13.21 4.45 32 .11 .4 1.1 SSF 1.2X 130 2
2003 FEB 27 0549 55.00 19 21.64 155 4.78 6.61 34 .14 .6 .8 SF5 1.7X 158 5
2003 FEB 27 0656 8.35 19 25.77 155 1.26 42.91 25 .10 1.3 1.0 DEP 1.7X 137 5
2003 FEB 27 1341 6.40 19 5.68 155 20.52 17.04 18 .15 1.8 6.8 LOT 1.3X 289 23
2003 FEB 27 1744 43.89 19 28.34 155 25.39 4.22 31 .13 .4 1.8 KAO 1.7X 45 5
2003 FEB 27 1923 33.54 19 35.66 155 34.72 7.31 18 .14 .8 2.0 KEA 1.3X 146 10
2003 FEB 27 2023 9.12 19 11.38 155 38.48 3.34 25 .14 .6 1.9 LSW 2.0X 174 16
2003 FEB 27 2023 53.68 19 11.15 155 38.25 6.73 20 .14 .7 1.9 LSW 1.8X 151 16
2003 MAR 5 0927 42.32 19 25.93 155 22.50 10.12 36 .11 .4 .8 KAO 2.0X 47 6
2003 MAR 5 1138 5.84 19 16.57 155 11.60 45.51 32 .07 1.3 1.8 LOT 2.3X 252 37
2003 MAR 5 1138 5.84 19 26.89 155 28.31 8.73 27 .09 .4 1.4 KAO 1.6X 55 9
2003 MAR 5 1739 1.36 19 11.89 155 40.13 0.03 18 .12 .6 .5 LSW # 1.4X 166 11
2003 MAR 5 2035 7.78 19 22.27 155 30.13 11.64 25 .07 .4 1.4 KAO 1.0X 86 13
2003 MAR 6 0302 48.49 19 28.38 154 53.22 0.12 21 .17 1.1 .4 SLE # 1.7X 182 6
2003 MAR 6 0619 3.87 19 35.51 155 52.60 5.72 26 .15 1.0 .6 KON 1.7X 280 15
2003 MAR 6 0829 50.92 19 15.14 155 26.67 5.62 24 .11 .5 2.2 LSW 1.2X 188 6
2003 MAR 6 1732 57.44 19 32.10 155 42.99 11.12 22 .11 .8 .6 MLO 1.4X 163 6
2003 MAR 6 1805 48.20 19 20.07 155 7.19 7.32 38 .09 .5 .7 SF4 1.7X 186 7
2003 MAR 6 1831 33.42 19 16.58 155 11.99 9.80 26 .09 .6 .8 SF3 1.4X 188 3
2003 MAR 6 1833 0.16 19 38.155 13.41 3.86 20 .09 .9 1.4 SF5 1.4X 156 6
2003 MAR 6 2018 13.40 19 21.84 155 4.97 6.02 21 .09 .9 1.3 SF5 1.3X 180 5
2003 MAR 6 2214 52.03 19 25.92 155 13.43 2.37 23 .11 .4 .8 SRF 1.3X 151 6
2003 MAR 6 2333 17.92 19 23.59 155 29.81 9.22 37 .07 .3 .8 KAO 1.8X 65 12
2003 MAR 6 2353 36.93 19 19.52 155 11.32 8.23 36 .11 .5 .6 SF3 1.4X 156 6
2003 MAR 7 0121 2.11 19 23.20 155 13.74 4.13 18 .11 .5 .6 SRF 1.2X 128 2
2003 MAR 7 0934 32.31 19 21.06 155 6.45 6.93 34 .11 .6 .8 SF4 1.5X 141 7
2003 MAR 7 1842 52.84 19 19.70 155 12.38 7.44 34 .12 .5 .7 SF2 1.5X 183 5
2003 MAR 7 2054 37.15 19 12.17 155 18.06 43.72 17 .07 1.1 1.5 DEP 1.4X 197 11

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

2003 MAR 1 2115 38.16 19 19.56 155 7.78 8.84 45 .10 .4 .4 SF4 F 3.3X 128 4
2003 MAR 1 2139 8.55 19 25.30 155 13.53 5.41 20 .09 .4 1.8 SF2 1.2X 146 5
2003 MAR 2 0210 19.73 19 28.36 154 52.55 2.62 36 .17 1.6 1.4 SRF F 2.2X 273 12
2003 MAR 2 0300 47.67 19 19.51 155 8.84 8.14 40 .07 .4 1.5 SF4 1.5X 99 4
2003 MAR 2 0722 11.51 19 13.04 155 27.56 39.81 41 .08 .6 1.0 DLS 1.7X 148 6
2003 MAR 2 0951 28.26 19 18.07 155 27.27 9.75 23 .09 .4 1.2 LSW 1.2X 129 7
2003 MAR 2 1310 48.77 19 21.58 155 5.26 5.79 23 .11 .8 .9 SF5 1.2X 180 5
2003 MAR 2 1431 3.86 19 18.58 155 9.66 7.40 29 .10 .5 1.0 SF3 1.2X 120 4
2003 MAR 2 2047 7.16 19 18.23 155 29.05 6.50 29 .09 .3 1.4 LSW 1.1X 104 6
2003 MAR 2 2055 41.70 19 23.02 155 16.83 3.36 37 .10 .3 .2 SF3 1.9X 47 1
2003 MAR 3 0122 26.22 20 46.85 156 5.85 3.50 21 .10 1.0 8.6 DIS - 2.4X 329 80
2003 MAR 3 0149 53.94 19 10.58 155 33.49 0.71 35 .14 .4 3.0 LSW 1.6X 135 10
2003 MAR 3 0258 17.31 19 21.37 155 10.55 35 .09 .4 1.1 KAO 1.4X 72 12
2003 MAR 3 0850 48.81 19 27.70 155 29.63 10.88 37 .10 .3 .6 KAO 1.8X 78 9
2003 MAR 3 1154 47.71 19 23.20 155 16.91 2.91 22 .09 .3 .2 SF3 1.6X 83 0
2003 MAR 3 1344 56.85 19 4.12 155 30.02 32.07 28 .08 .8 1.9 DIS 1.9X 192 20
2003 MAR 3 2107 50.50 19 28.55 155 23.54 2.89 29 .13 .5 .6 KAO 1.7X 86 2
2003 MAR 3 2216 0.75 19 25.68 155 28.66 10.76 33 .08 .4 .7 KAO 1.8X 70 12
2003 MAR 3 2226 24.78 20 7.72 155 34.91 42.59 40 .10 .9 2.0 KOR F 2.7X 302 36
2003 MAR 4 1153 45.81 19 28.98 155 27.85 7.42 40 .11 .3 .9 KAO 1.6X 54 6
2003 MAR 4 1954 58.49 19 13.53 155 28.94 8.38 23 .13 .6 .7 LSW 1.1X 231 4
2003 MAR 5 0927 42.32 19 25.93 155 22.50 10.12 36 .11 .4 .8 KAO 2.0X 47 6
2003 MAR 5 1138 5.84 19 16.57 155 11.60 45.51 32 .07 1.3 1.8 LOT 2.3X 252 37
2003 MAR 5 1739 1.36 19 11.89 155 40.13 0.03 18 .12 .6 .5 LSW # 1.4X 166 11
2003 MAR 5 2035 7.78 19 22.27 155 30.13 11.64 25 .07 .4 1.4 KAO 1.0X 86 13
2003 MAR 6 0302 48.49 19 28.38 154 53.22 0.12 21 .17 1.1 .4 SLE # 1.7X 182 6
2003 MAR 6 0619 3.87 19 35.51 155 52.60 5.72 26 .15 1.0 .6 KON 1.7X 280 15
2003 MAR 6 0829 50.92 19 15.14 155 26.67 5.62 24 .11 .5 2.2 LSW 1.2X 188 6
2003 MAR 6 1732 57.44 19 32.10 155 42.99 11.12 22 .11 .8 .6 MLO 1.4X 163 6
2003 MAR 6 1805 48.20 19 20.07 155 7.19 7.32 38 .09 .5 .7 SF4 1.7X 186 7
2003 MAR 6 1831 33.42 19 16.58 155 11.99 9.80 26 .09 .6 .8 SF3 1.4X 188 3
2003 MAR 6 1833 0.16 19 38.155 13.41 3.86 20 .09 .9 1.4 SF5 1.4X 156 6
2003 MAR 6 2018 13.40 19 21.84 155 4.97 6.02 21 .09 .9 1.3 SF5 1.3X 180 5
2003 MAR 6 2214 52.03 19 25.92 155 13.43 2.37 23 .11 .4 .8 SRF 1.3X 151 6
2003 MAR 6 2333 17.92 19 23.59 155 29.81 9.22 37 .07 .3 .8 KAO 1.8X 65 12
2003 MAR 6 2353 36.93 19 19.52 155 11.32 8.23 36 .11 .5 .6 SF3 1.4X 156 6
2003 MAR 7 0121 2.11 19 23.20 155 13.74 4.13 18 .11 .5 .6 SRF 1.2X 128 2
2003 MAR 7 0934 32.31 19 21.06 155 6.45 6.93 34 .11 .6 .8 SF4 1.5X 141 7
2003 MAR 7 1842 52.84 19 19.70 155 12.38 7.44 34 .12 .5 .7 SF2 1.5X 183 5
2003 MAR 7 2054 37.15 19 12.17 155 18.06 43.72 17 .07 1.1 1.5 DEP 1.4X 197 11

-ORIGIN TIME (HST)- LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DRG	MIN	DBG	MIN	KM	RD	SBC	KM	KM	REMKs	MAG	GAP	DS		
2003	MAR	8	0103	22.63	19	23.21	155	16.80	2.99	31.09	.3	.2	SSC	2.3X	47	0			
2003	MAR	8	0828	18.65	19	21.41	155	4.44	7.39	26.12	.7	.9	SF5	1.5X	165	5			
2003	MAR	8	1228	19.23	19	28.89	155	54.04	13.62	14.13	2.9	.8	KON	1.4X	311	15			
2003	MAR	8	1945	20.08	19	18.45	155	14.80	6.08	22.13	.6	1.5	SFI	1.3X	120	4			
2003	MAR	8	2152	17.49	19	19.29	155	30.57	3.15	21.10	.5	4.1	KAO	1.4X	110	8			
2003	MAR	9	0346	19.98	19	17.25	155	14.01	6.09	24.09	.5	1.0	SF2	1.1X	149	1			
2003	MAR	9	0606	27.07	19	12.41	155	18.36	43.48	33.10	.9	1.1	DEP	1.6X	183	10			
2003	MAR	9	1223	6.85	19	14.49	155	33.14	3.80	35.14	.5	1.1	LSW	1.6X	122	5			
2003	MAR	9	1827	45.96	19	19.57	155	11.87	6.53	21.09	.4	1.2	SF3	1.8X	91	5			
2003	MAR	10	0054	57.16	19	12.55	155	17.91	43.41	38.10	.8	1.0	DEP	1.6X	183	10			
2003	MAR	10	0311	21.21	19	14.17	155	23.57	33.75	26.09	1.0	1.3	DEP	1.2X	206	11			
2003	MAR	10	0328	49.52	19	11.01	155	32.48	7.36	27.11	.7	.9	LSW	1.3X	255	9			
2003	MAR	10	0822	38.15	19	28.47	155	26.81	8.12	36.12	.4	1.1	KAO	1.9X	55	7			
2003	MAR	10	1400	1.93	19	18.23	155	30.79	1.15	21.11	.4	.6	LSW	1.3X	123	6			
2003	MAR	10	1447	46.86	19	21.45	155	18.56	3.73	31.09	.3	.6	SWR	1.4X	73	3			
2003	MAR	10	1520	22.85	19	24.33	155	16.49	14.26	27.07	.6	.4	DEP	.9X	128	3			
2003	MAR	10	1637	58.55	19	16.88	156	8.70	7.25	24.13	2.3	3.3	HUA	1.8X	250	60			
2003	MAR	10	2003	55.50	19	13.07	155	18.25	43.58	21.08	1.2	1.2	DEP	1.3X	233	9			
2003	MAR	10	2156	44.52	19	18.83	155	13.42	7.58	33.09	.4	.7	SF2	1.4X	117	3			
2003	MAR	11	0049	27.33	19	10.92	155	28.47	9.44	21.11	.5	1.6	LSW	1.1X	158	8			
2003	MAR	11	0112	44.04	19	13.97	155	52.32	9.96	25.10	1.1	.5	KON	1.6X	294	26			
2003	MAR	11	0207	48.65	19	16.88	155	34.12	0.06	31.11	.8	.3	LSW	1.6X	194	8			
2003	MAR	11	0229	22.10	19	13.07	155	18.64	43.94	18.09	1.2	1.6	DEP	1.4X	230	9			
2003	MAR	11	1024	30.08	19	26.14	155	21.70	10.72	48.12	.3	.5	KAO	F	3.0X	47	6		
2003	MAR	11	1055	33.54	19	23.19	155	16.99	2.97	21.11	.3	.2	SSC	1.4X	66	0			
2003	MAR	11	1226	51.62	19	22.46	155	27.30	9.53	22.10	.4	1.4	KAO	1.2X	80	8			
2003	MAR	11	1514	9.69	19	19.67	155	22.87	5.78	36.11	.4	.8	SF2	1.4X	126	5			
2003	MAR	11	1845	57.48	19	49.27	155	27.78	1.62	18.14	5.7	2.1	DIS	1.7X	265	79			
2003	MAR	11	2000	37.90	19	25.35	155	19.33	3.00	20.11	.3	.5	KAO	F	1.9X	85	3		
2003	MAR	11	2312	30.18	20	4.35	155	45.55	21.64	30.10	.9	2.0	KOH	1.7X	150	7			
2003	MAR	12	0359	25.29	19	35.64	156	4.84	37.06	19.14	1.8	2.5	KON	1.3X	279	34			
2003	MAR	12	0407	34.48	19	30.82	154	57.77	42.50	38.11	.8	.9	LER	1.7X	208	11			
2003	MAR	12	0452	55.85	19	45.94	155	13.86	33.07	45.13	.6	1.2	KEA	2.1X	148	18			
2003	MAR	12	0710	59.44	19	13.01	155	17.34	44.69	38.09	.7	.8	DEP	1.9X	183	9			
2003	MAR	12	0821	2.60	19	56.05	155	54.19	27.93	29.10	1.1	1.9	KOH	1.5X	229	25			
2003	MAR	12	1122	13.29	19	16.19	155	26.89	8.79	39.11	.4	.8	LSW	1.7X	131	6			
2003	MAR	12	1515	28.76	19	15.97	155	26.61	8.13	25.15	.1	.1	LSW	1.2X	170	6			
2003	MAR	12	1524	6.34	19	29.72	155	16.38	21.15	2.516.2	KON	-	1.4X	312	29				
2003	MAR	12	1628	37.12	19	26.60	155	30.58	13.31	27.11	.4	1.5	DML	1.5X	64	8			
2003	MAR	12	1643	21.60	19	18.33	155	52.34	7.81	23.14	.1	.6	KON	1.4X	266	22			
2003	MAR	12	1646	3.86	19	47.13	155	35.54	13.13	.6	.8	KEA	# 1.8X	109	11				
2003	MAR	12	1729	12.58	19	18.67	155	11.73	5.58	36.12	.4	1.0	SF3	1.4X	97	6			
2003	MAR	12	2058	44.33	19	19.14	155	4.17	5.03	29.14	.8	2.1	SF5	1.3X	217	10			
2003	MAR	12	2352	0.44	19	24.54	155	16.24	14.54	32.09	.5	.3	DEP	1.0X	94	1			

8+

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

2003 MAR 25 1103 40.24 19 20.19 155 12.37 3.50 24 .12 .7 2.0 SSF 1.3X 160 6
2003 MAR 25 1117 2.20 19 17.71 155 13.70 6.32 18 .10 .6 1.2 SF2 1.1X 117 1
2003 MAR 25 1122 3.08 19 19.15 155 9.45 7.50 38 .10 .4 .6 SF3 1.7X 100 4
2003 MAR 25 1335 15.00 19 19.48 155 12.01 5.65 29 .11 .5 1.2 SF3 1.6X 153 5
2003 MAR 25 1602 2.04 19 19.75 155 7.55 4.30 19 .12 .8 2.9 SSF 1.3X 210 7
2003 MAR 25 1711 27.83 19 31.29 155 43.71 9.74 17 .09 .7 .6 KON 1.3X 179 4
2003 MAR 25 2134 30.04 19 25.52 155 19.57 7.98 38 .11 .4 .7 KAO 2.0X 51 3
2003 MAR 25 2204 31.92 19 19.42 155 11.96 4.27 28 .11 .4 1.9 SSF 1.2X 165 5
2003 MAR 26 0443 53.57 19 12.96 155 8.68 42.03 28 .10 1.3 .8 DEP 1.6X 271 11
2003 MAR 26 0811 58.73 19 15.81 155 22.83 8.62 36 .11 .5 1.0 SWR 1.8X 182 8
2003 MAR 26 1213 33.38 18 59.33 155 27.50 38.00 34 .07 .9 1.4 DLS 2.0X 228 22
2003 MAR 26 2108 25.44 19 12.01 155 45.63 28.08 .9 1.1 DEP 1.4X 233 10
2003 MAR 26 2144 14.63 19 22.80 155 29.97 7.40 21 .07 .4 2.3 KAO 1.9X 80 13
2003 MAR 26 2350 34.00 19 22.30 155 17.98 31.91 33 .08 .7 .8 DEP 1.6X 53 3
2003 MAR 27 0014 58.43 19 25.28 155 20.67 5.88 21 .11 .4 1.4 KAO 1.0X 84 3
2003 MAR 27 1025 4.68 19 19.59 155 8.88 6.67 25 .09 .8 .9 SF4 1.8X 197 6
2003 MAR 27 1217 56.83 19 22.27 155 16.36 30.76 38 .09 .7 .7 DEP 1.6X 76 1
2003 MAR 27 1542 38.95 19 12.68 155 18.01 41.48 35 .10 .9 1.1 DEP 1.7X 183 10
2003 MAR 27 1616 1.69 19 17.06 155 29.75 8.77 30 .10 .4 1.1 LSW 1.4X 100 4
2003 MAR 27 1644 29.39 19 22.15 155 30.06 10.07 27 .07 .4 1.8 KAO 1.3X 85 12
49
2003 MAR 27 1800 55.45 19 12.62 155 17.68 42.99 23 .09 1.1 1.2 DEP 1.4X 240 10
2003 MAR 27 2001 42.97 19 19.48 155 8.81 8.33 35 .09 .4 .6 SF4 1.5X 182 7
2003 MAR 27 2209 19.30 19 20.25 155 6.63 8.68 25 .06 .5 .6 SF3 1.1X 165 5
2003 MAR 27 2227 37.39 19 35.32 156 6.47 43.91 39 .09 .9 1.3 KON 2.1X 244 37
2003 MAR 27 2249 40.10 19 11.58 155 49.08 12.41 22 .11 1.3 .5 KON 1.4X 223 24
2003 MAR 28 0420 17.23 19 24.31 155 29.19 11.15 19 .07 .5 1.7 KAO .9X 129 12
2003 MAR 28 0540 59.36 19 25.07 155 37.56 2.78 30 .11 .3 .4 MLO 2.2X 107 1
2003 MAR 28 0803 41.19 19 18.53 155 23.44 32.15 40 .11 .7 .9 DEP 1.9X 121 3
2003 MAR 28 0918 52.53 19 23.23 155 30.35 11.19 29 .08 .4 1.6 KAO 1.3X 81 12
2003 MAR 28 1355 8.97 19 13.20 155 17.77 42.30 41 .09 .8 .8 DEP 2.1X 181 9
2003 MAR 28 1952 22.71 19 16.60 155 7.45 8.02 40 .10 .5 .4 SF4 1.8X 190 7
2003 MAR 28 2345 4.48 19 20.20 155 12.99 6.09 30 .12 .4 .9 SF2 1.3X 131 4
2003 MAR 29 0235 36.27 19 12.75 155 18.49 42.37 26 .09 .8 1.1 DEP 1.3X 189 10
2003 MAR 29 0441 9.59 19.11 155 15.45 21 .13 1.0 1.2 HUA 1.4X 216 23
2003 MAR 29 0743 30.66 19 24.91 155 29.45 11.73 21 .07 .4 1.8 KAO 1.0X 67 11
2003 MAR 29 0805 15.65 19 12.63 155 18.13 41.12 40 .10 .8 1.0 DEP 1.8X 182 10
2003 MAR 29 1150 20.40 19 1.02 155 34.98 21.5 1.0 1.5 DLS 1.2X 222 23
2003 MAR 29 1402 21.65 19 12.38 155 18.01 42.38 29 .08 .9 1.0 DEP 1.6X 196 10
2003 MAR 29 1506 30.68 19 20.51 155 6.18 7.73 40 .09 .5 .4 SF4 1.8X 188 6
2003 MAR 29 1749 59.08 19 20.04 155 7.75 8.43 36 .09 .7 .5 SF4 1.9X 182 6
2003 MAR 30 0003 54.97 19 20.41 155 24.59 10.45 35 .12 .4 .9 SWR 1.4X 112 2
2003 MAR 30 0403 58.98 19 25.01 155 19.37 7.33 38 .12 .4 .6 KAO 1.9X 44 2
2003 MAR 30 0453 13.79 19 13.22 155 17.85 43.47 33 .10 1.0 1.2 DEP 1.8X 224 9
2003 MAR 30 1218 52.64 18 58.53 155 28.45 16.15 24 .11 3.112.5 DLS - 1.4X 296 40
2003 MAR 30 1259 23.92 19 11.76 155 28.98 9.60 34 .12 .7 1.0 LSW 1.7X 243 6

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

2003 MAR 17 1235 31.75 19 20.88 155 43.71 10.12 26 .11 .8 .9 KON 1.5X 234 6
2003 MAR 17 1311 13.68 19 21.42 155 42.95 10.43 23 .13 .8 .9 MLO 1.3X 226 5
2003 MAR 17 1612 30.44 19 17.12 155 19.01 12.30 40 .09 .3 .3 SRR 1.9X 138 2
2003 MAR 17 2059 26.94 19 28.20 154 53.07 3.48 27 .15 .9 1.9 SELF 1.9X 188 6
2003 MAR 17 2213 40.08 19 10.58 155 33.77 6.94 22 .09 .9 2.0 LSW 1.4X 260 10
2003 MAR 18 0118 7.92 19 23.46 155 16.70 3.11 23 .09 .3 .2 SSC 1.6X 80 0
2003 MAR 18 0545 43.36 20 6.80 154 45.80 7.36 22 .11 1.3 .6 KEA 1.9X 309 53
2003 MAR 18 0650 4.46 19 22.16 155 30.48 9.79 18 1.0 .5 1.9 KAO 1.1X 889 13
2003 MAR 18 0852 23.51 19 28.60 155 28.13 5.73 21 .11 .4 2.4 KAO 1.2X 68 6
2003 MAR 18 1239 10.53 19 27.33 155 26.11 1.15 16 .08 .3 .5 KAO .9X 97 7
2003 MAR 18 1739 23.69 19 25.14 155 29.16 11.24 30 .08 .4 1.4 KAO 1.3X 65 12
2003 MAR 18 2108 11.18 19 21.80 155 17.98 3.35 17 .09 .3 .6 SRR 1.2X 66 3
2003 MAR 18 2227 16.31 19 17.72 155 7.45 6.76 38 .09 .4 6 SF4 1.6X 136 5
2003 MAR 18 2302 33.66 19 17.74 155 13.11 6.16 32 .08 .4 .8 SF2 1.6X 112 1
2003 MAR 19 0211 44.02 19 31.4 155 22.72 15.68 22 .09 .8 .8 DML 1.4X 169 3
2003 MAR 19 1914 21.64 19 13.95 155 6.12 40.74 34 .09 1.0 .9 DEP 1.5X 241 14
2003 MAR 19 2132 54.86 19 23.07 155 1.77 2.80 19 .09 .6 .5 SRF 1.2X 188 5
2003 MAR 20 0715 4.84 19 26.97 155 29.24 11.70 19 .08 .4 1.7 KAO 1.2X 57 10
2003 MAR 20 1727 58.26 19 27.96 154 54.72 1.16 31 .21 .9 SELF 2.2X 259 9
2003 MAR 20 2113 41.10 19 19.28 155 8.06 6.10 33 .12 .6 1.2 SF4 1.4X 191 7
2003 MAR 20 2136 31.68 19 22.55 155 14.20 3.38 22 .11 .5 .4 SBC 1.7X 127 2
2003 MAR 20 2152 56.43 19 31.72 155 33.73 7.72 25 .12 .4 .5 DML 1.5X 205 2
2003 MAR 21 0002 19.19 19.92 155 8.55 18.53 15 .05 8.53 15 .09 .7 1.3 SF4 1.5X 179 6
2003 MAR 21 0229 2.76 19 12.66 155 19.98 43.29 40 .08 .9 .7 DEP 1.8X 227 10
2003 MAR 21 0514 14.32 19 23.42 155 14.72 3.38 35 .11 .3 .3 SBC 2.4X 52 3
2003 MAR 21 0606 0.39 19 18.33 155 12.89 8.76 32 .11 .4 .5 SF2 1.4X 40 3
2003 MAR 21 1233 40.06 19 18.78 155 13.05 8.44 36 .10 .5 .6 SF2 1.6X 137 3
2003 MAR 21 1243 50.92 19 19.98 155 7.71 4.94 26 .09 .6 1.9 SRF 1.5X 204 6
2003 MAR 21 1350 12.80 18 46.55 156 48.31 16.90 30 .11 1.1 7.155.DLS - 2.8X 317122
2003 MAR 21 1625 39.30 19 21.26 155 45.33 11.67 23 .13 .7 .6 KON 1.4X 174 9
2003 MAR 21 1652 49.92 19 13.44 155 27.79 38.58 20 .08 1.1 1.6 DLS 1.2X 230 5
2003 MAR 21 2220 9.98 19 44.30 155 8.26 37.74 42 .12 1.1 1.8 HRA 2.6X 251 47
2003 MAR 21 2240 19.19 19.94 155 15.29 9.06 25 .12 .4 1.9 KAO 1.1X 65 9
2003 MAR 22 2101 44.21 19 40.77 155 17.74 37.48 19 .09 1.1 1.2 KEA 1.3X 191 20
2003 MAR 22 2150 26.74 19 10.73 155 25.34 38.32 28 .13 1.1 1.5 DLS 1.8X 248 12
2003 MAR 22 2153 59.70 19 21.12 155 12.58 28 .10 .4 .9 KAO 1.3X 101 4
2003 MAR 23 0229 21.43 19 13.20 155 17.59 43.46 41 .09 .7 .8 DEP 2.2X 181 9
2003 MAR 23 0351 59.11 19 11.97 155 30.46 31.29 26 .08 1.0 1.3 DLS 1.3X 245 6
2003 MAR 23 0902 34.27 19 9.72 155 35.96 3.58 22 .11 1.9 3.3 LSW 1.3X 265 14
2003 MAR 23 1320 19.50 19 24.72 155 38.70 3.52 25 .09 .4 .4 MLO 1.9X 182 2
2003 MAR 23 1928 17.33 19 29.21 155 26.85 6.55 18 .09 .4 1.3 KAO .9X 95 5
2003 MAR 24 1910 15.32 19 22.54 155 14.22 3.37 17 .09 .6 .4 SBC 1.4X 133 2
2003 MAR 25 0455 54.87 19 22.39 155 26.67 8.19 20 .10 .5 1.3 KAO 1.1X 81 7
2003 MAR 25 0917 20.65 19 57.43 155 17.14 13.44 11 .09 1.7 .6 KAO 1.4X 248 10

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

2003 MAR 30 1312 8.29 19 21.93 155 26.95 12.32 38 .09 .4 .6 KAO 1.6X 88 7
2003 MAR 30 1902 10.79 19 27.08 155 29.39 11.80 26 .09 .4 1.3 KAO 1.5X 57 10
2003 MAR 30 2029 12.04 19 0.17 155 27.15 34.75 21.08 1.3 2.0 DLS 1.3X 294 28
2003 MAR 31 0002 33.44 19 22.28 155 6.88 34 .13 .8 .6 SF5 1.3X 193 5
2003 MAR 31 0044 37.54 19 22.80 155 2.34 7.04 26.13 1.0 .6 SF5 1.3X 198 4
2003 MAR 31 0048 3.79 19 12.48 155 20.69 45.53 35 .09 .8 .9 DEP 1.5X 229 11
2003 MAR 31 0140 25.58 19 21.58 155 2.74 7.12 33 .13 .6 .8 SF5 1.2X 199 6
2003 MAR 31 0322 6.63 19 45.45 155 46.91 11.45 36 .11 .9 .4 HUA 2.5X 256 28
2003 MAR 31 0512 34.58 20 3.63 155 33.38 32.50 21 .07 .9 1.3 KEA 1.6X 202 25
2003 MAR 31 0619 3.16 19 22.66 155 14.55 2.47 16 .08 .5 .3 SEC 1.5X 129 2
2003 MAR 31 0800 23.91 19 18.13 154 59.08 38.09 33 .09 1.3 .9 LER 1.8X 263 13
2003 MAR 31 1104 25.43 19 18.89 155 29.22 12.93 31 .10 .4 1.1 LSW 1.4X 96 7
2003 MAR 31 1330 56.17 19 20.07 155 8.18 8.44 38 .08 .4 .4 SF4 1.8X 179 6
2003 MAR 31 1606 55.02 19 13.30 155 17.82 41.69 39 .10 .9 1.0 DEP 2.0X 181 9
2003 MAR 31 1927 21.13 19 14.68 155 12.11 46.07 22 .09 1.4 1.1 DEP 1.6X 278 5
2003 APR 1 0141 33.45 19 9.19 155 28.40 27.75 28 .08 .7 1.3 DLS 1.3X 167 11
2003 APR 1 0434 2.69 19 20.78 155 13.06 9.20 44 .12 .4 .3 SF2 F 2.6X 114 3
2003 APR 1 0524 34.79 19 8.02 155 36.81 7.39 23 .12 .9 1.9 LSW 1.4X 273 18
2003 APR 1 0742 33.00 19 19.82 155 7.89 8.54 39 .09 .6 .6 SF4 2.3X 185 6
2003 APR 1 1105 42.10 19 20.22 155 13.34 5.31 29 .09 .4 1.0 SF2 1.0X 123 4
S
2003 APR 1 1623 19.94 19 20.83 155 18.64 39.24 21 .11 .1 2 1.3 DEP 1.5X 121 5
2003 APR 1 1630 21.43 19 21.54 155 18.41 3.42 23 .12 .3 .6 SWR 1.3X 70 3
2003 APR 1 1657 49.16 19 58.61 155 4.71 35.72 47 .12 .8 1.3 KEA 2.9X 231 17
2003 APR 2 0233 13.69 19 12.13 156 16.77 5.74 44 12 .3 0 4.4 KON # 3.0X 277 64
2003 APR 2 0305 55.38 19 18.70 155 29.41 0.26 24 .09 .3 .3 LSW .9X 95 7
2003 APR 2 0313 24.67 19 21.24 155 4.49 6.14 24 .12 .9 .8 SF5 1.3X 190 6
2003 APR 2 1139 37.72 19 28.83 155 26.56 7.99 20 .08 .4 1.2 KAO 1.2X 90 6
2003 APR 2 1526 36.06 19 12.08 155 17.94 45.72 24 .09 1.2 1.1 DEP 1.6X 245 11
2003 APR 2 2214 52.57 19 19.19 155 7.67 7.05 30 .12 .6 .8 SF4 1.2X 194 8
2003 APR 3 0127 8.62 19 31.47 155 19.67 13.03 38 .10 .4 .6 DML 1.6X 59 7
2003 APR 3 0457 58.95 19 18.03 155 8.82 4.71 21 .10 .9 2.8 SSF 1.5X 232 7
2003 APR 3 0659 10.99 19 10.14 155 32.57 37.04 27 .07 .8 1.5 DLS 1.6X 145 10
2003 APR 3 0927 42.35 19 25.68 155 33.80 13.58 31 .08 .4 .9 DML 1.5X 74 5
2003 APR 3 0936 29.90 19 21.19 155 28.64 7.53 24 .12 .4 1.8 KAO 1.4X 85 10
2003 APR 3 0950 5.63 19 31.14 155 19.64 13.00 40 .12 .4 .6 DML 1.9X 59 7
2003 APR 3 1336 12.69 19 14.23 155 35.29 1.42 28 .11 .4 .4 LSW 1.6X 130 9
2003 APR 3 1611 6.71 19 47.46 155 35.88 12.52 21 .11 .5 .8 KEA 1.4X 110 10
2003 APR 3 1624 44.04 19 15.61 155 33.82 25.54 41 .11 .6 1.4 KEA 1.9X 112 10
2003 APR 3 1831 38.61 19 12.48 155 17.92 43.90 41 .09 .8 .9 DEP 2.2X 183 10
2003 APR 3 2102 41.61 19 18.47 155 21.68 2.18 33 .10 .4 .4 SWR 1.5X 148 4
2003 APR 3 2320 0.92 19 24.49 155 16.39 1.31 17 .09 .3 .3 SEC 1.4X 110 1
2003 APR 3 2348 24.76 19 25.71 155 28.59 8.71 22 .13 .5 1.4 KAO 1.0X 57 10
2003 APR 4 0800 48.61 19 7.08 155 28.09 28.17 25 .09 1.1 1.8 DLS 1.5X 268 15
2003 APR 4 0807 12.36 19 18.79 155 13.78 6.58 35 .09 .4 .7 SF2 1.6X 104 3
2003 APR 4 0808 22.64 19 46.33 155 31.46 14.69 18 .11 1.0 .5 KEA 1.3X 194 7

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

2003 APR 4 1441 30.85 19 17.94 155 23.32 2.52 18 .09 .5 .7 SWR 1.4X 152 4
2003 APR 4 1444 28.70 19 17.65 155 23.66 1.92 19 .10 .5 .9 SWR 1.2X 155 5
2003 APR 4 1608 43.80 19 25.46 155 19.05 4.65 20 .11 .4 .8 KAO 1.3X 91 3
2003 APR 4 2201 56.61 19 15.37 155 31.19 38.86 41 .09 .7 1.0 DLS 1.9X 102 2
2003 APR 4 2214 59.09 19 20.77 155 5.96 7.33 30 .14 .7 .8 SF4 1.8X 186 6
2003 APR 4 2305 49.09 19 20.24 155 11.78 8.61 40 .10 .5 .4 SF3 2.3X 139 5
2003 APR 5 0301 24.16 19 12.67 155 17.80 43.51 29 .09 1.0 1.1 DLS 1.8X 239 10
2003 APR 5 0403 25.50 19 14.42 155 18.44 39.86 21 .07 1.1 1.2 DLS 1.4X 213 7
2003 APR 5 0456 56.60 19 12.90 155 17.53 43.04 25 .10 1.0 1.1 DLS 1.5X 238 10
2003 APR 5 1835 28.15 19 24.86 155 37.02 2.04 16 .13 .4 .4 MJO 1.4X 269 32
2003 APR 5 1854 21.12 18 57.98 155 27.26 41.10 22 .06 1.3 1.9 DLS 1.2X 106 6
2003 APR 5 2110 13.22 19 20.29 155 26.73 9.98 32 .10 .4 1.0 KAO 1.3X 63 7
2003 APR 6 0127 36.81 19 26.16 155 24.30 10.47 26 .11 .4 1.2 KAO 1.3X 63 7
2003 APR 6 0243 43.49 19 5.72 155 27.45 29.77 20 .08 1.4 2.1 DLS 1.2X 274 18
2003 APR 6 0356 35.03 19 0.43 155 27.81 33.85 43 .11 .8 1.4 DLS 2.0X 215 22
2003 APR 6 0914 19.49 19 13.07 155 17.47 44.61 31 .08 .8 1.1 DEP 1.7X 182 9
2003 APR 6 1026 4.00 19 16.63 155 25.50 8.79 30 .11 .5 1.1 LSW 1.3X 153 8
2003 APR 6 1045 29.83 19 19.30 155 11.13 5.46 34 .11 .5 1.3 SF3 1.5X 152 6
2003 APR 6 1117 44.56 19 18.77 155 10.02 8.23 26 .09 .6 .9 SF3 1.2X 183 7
2003 APR 6 1854 48.81 19 56.51 155 20.75 27.74 30 .10 .8 1.3 KEA 1.5X 218 6
2003 APR 6 2127 24.90 19 25.88 155 19.01 7.20 44 .12 .4 .5 INT F 3.3U 48 3
2003 APR 6 2142 50.83 19 25.70 155 19.18 6.22 20 .10 .5 .9 KAO 1.2X 93 3
2003 APR 6 2151 29.00 19 25.24 155 19.32 7.12 30 .11 .4 .8 KAO 1.8X 80 3
2003 APR 6 2241 48.66 19 25.84 155 18.99 7.41 42 .11 .4 .5 INT 2.3X 48 3
2003 APR 7 0026 40.22 19 10.98 155 37.49 0.04 22 .13 .5 .2 LSW 1.0X 15 15
2003 APR 7 0204 57.84 19 26.02 155 18.88 6.73 23 .11 .4 .8 INT 1.2X 92 3
2003 APR 7 0206 38.84 19 25.99 155 18.70 7.00 33 .10 .4 .6 INT 1.7X 64 2
2003 APR 7 0218 5.77 19 25.84 155 18.84 7.18 40 .12 .4 .6 INT 2.0X 47 2
2003 APR 7 0328 56.59 19 25.96 155 18.85 6.98 23 .12 .6 1.0 INT 1.3X 91 2
2003 APR 7 0324 20.18 19 26.01 155 18.62 7.51 34 .12 .4 .6 INT 1.8X 66 2
2003 APR 7 0241 45.82 19 25.77 155 18.82 6.95 31 .09 .4 .6 INT 1.6X 66 2
2003 APR 7 0257 9.98 19 25.88 155 18.61 7.19 20 .09 .6 .9 INT 1.3X 86 2
2003 APR 7 0306 14.94 19 26.16 155 18.60 7.11 35 .12 .4 .6 INT 2.0X 70 2
2003 APR 7 0323 58.08 19 25.81 155 18.76 6.17 25 .09 .5 .9 INT 1.0X 88 2
2003 APR 7 0759 56.13 19 12.66 155 17.86 43.71 44 .09 .7 .9 DEP 2.4X 183 10
2003 APR 7 0851 54.87 19 16.59 155 12.81 8.82 40 .10 .6 .6 SP2 1.8X 224 1
2003 APR 7 1043 50.34 19 16.78 155 12.81 8.90 31 .10 .6 .6 SP2 1.6X 223 1
2003 APR 7 1130 26.07 19 16.64 155 12.64 9.13 33 .10 .7 .6 SP2 1.7X 224 2

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

2003 APR 8 0108 19 168 19 25.65 155 30.88 10.43 35 .09 .4 .7 KAO 1.6X 49 9
2003 APR 8 0155 45.80 19 13.50 155 17.87 42.49 36 .10 .9 1.0 DEP 1.8X 179 8
2003 APR 8 0457 1.55 19 31.57 155 27.49 32.20 36 .09 .6 .8 DML 1.8X 94 1
2003 APR 8 0617 26.47 19 27.72 154 51.92 3.82 34 .13 1.0 1.1 SLE F 2.5X 275 13
2003 APR 8 1433 47.34 19 1.56 155 27.31 35.91 28 .06 1.2 1.9 DLS 1.8X 289 25
2003 APR 8 1505 27.50 19 11.04 155 1.21 44.91 34 .10 1.2 .9 DEP 1.8X 290 24
2003 APR 8 1652 42.09 19 26.21 155 28.02 10.74 23 .10 .5 1.4 KAO 1.1X 57 11
2003 APR 8 1751 42.50 19 21.86 155 29.92 8.04 30 .08 .4 1.4 KAO 1.3X 86 12
2003 APR 8 1804 49.41 19 25.48 155 16.29 1.66 18 .11 .4 .3 SNC 1.6X 123 2
2003 APR 8 2246 21.75 19 30.52 155 45.22 9.84 16 .13 .9 1.2 KON 1.2X 131 1
2003 APR 8 2352 15.60 19 9.87 155 29.46 40.68 24 .10 .9 1.5 DLS 1.8X 256 10
2003 APR 8 2356 53.70 19 9.34 155 30.49 45.15 20 .09 1.0 1.6 DLS 1.4X 278 11
2003 APR 9 0954 47.22 19 17.27 155 25.20 15.68 32 .12 .6 .8 SSW 1.3X 165 3
2003 APR 9 2202 53.92 19 50.06 155 35.02 19.69 24 .08 .6 1.8 KEA 1.5X 146 8
2003 APR 9 2251 0.58 19 24.94 155 16.63 1.48 17 .09 .4 .2 SNC 1.3X 100 1
2003 APR 10 0032 27.45 19 13.00 155 33.53 5.73 16 .14 1.6 2.1 LSW 1.3X 246 7
2003 APR 10 0053 51.98 19 25.17 155 19.56 7.06 35 .10 .4 .6 KAO 1.7X 45 3
2003 APR 10 0101 6.14 19 25.57 155 19.12 7.79 25 .11 .5 .8 KAO 1.7X 71 3
2003 APR 10 0114 47.00 19 25.96 155 19.04 7.70 31 .11 .5 .9 KAO 1.7X 60 3
2003 APR 10 0429 57.21 18 59.95 155 27.45 37.73 22 .06 2.7 2.8 DLS 1.4X 229 23
2003 APR 10 0446 58.73 19 58.51 155 38.16 17.87 42 .12 .7 2.3 KOH F 2.5X 148 13
2003 APR 10 0608 35.26 19 31.26 155 19.67 13.34 36 .10 .3 .6 DML 1.7X 59 7
2003 APR 10 0624 10.48 19 52.90 155 51.81 42.02 17 .01 1.0 1.2 HUA 1.4X 204 21
2003 APR 10 1132 4.80 19 12.60 155 17.47 44.96 32 .09 .9 .9 DEP 1.7X 228 10
2003 APR 10 1837 9.09 19 12.68 155 16.97 44.79 23 .12 1.1 1.4 DEP 1.4X 227 10
2003 APR 10 2035 20.65 19 12.99 155 17.61 44.44 39 .10 .8 1.0 DEP 2.0X 182 9
2003 APR 10 2104 21.71 19 8.77 155 28.88 8.03 21 .17 .9 1.8 LSW 1.2X 168 12
2003 APR 10 2105 13.94 19 10.68 155 42.42 7.17 21 .21 .9 3.3 LSW 1.4X 104 7
2003 APR 11 0029 46.72 19 11.79 155 24.73 37.58 37 .08 .9 1.1 DEP 1.4X 240 11
2003 APR 11 0357 51.69 19 20.19 155 12.91 7.63 35 .13 .4 .6 SF2 1.2X 133 4
2003 APR 11 0848 39.34 19 10.92 155 31.19 9.66 21 .11 .9 1.6 LSW 1.8X 252 8
2003 APR 11 1117 30.54 19 12.75 155 18.14 43.48 24 .09 1.0 1.5 DEP 1.5X 236 10
2003 APR 11 1448 8.39 19 12.95 155 30.28 23 .06 1.2 1.6 DLS 1.4X 238 4
2003 APR 11 1635 24.59 19 10.63 155 30.26 23 .09 1.6 1.0 SF3 1.5X 6 6
2003 APR 11 1716 5.31 19 12.55 155 17.99 43.07 18 .07 1.4 2.0 DEP 1.6X 251 10
2003 APR 11 1804 41.96 18 59.66 155 27.29 38.65 38 .09 1.0 1.3 DLS 2.1X 221 23
2003 APR 12 0234 39.70 19 29.30 155 27.03 7.31 28 .11 .4 1.3 KAO 1.4X 67 5
2003 APR 12 0708 39.51 19 18.74 155 9.82 5.55 24 .10 .7 1.6 SF3 1.5X 200 7
2003 APR 12 1119 48.65 19 21.42 155 4.81 8.42 31 .09 .7 .6 SF5 1.9X 185 6
2003 APR 12 1355 33.10 19 9.94 155 41.36 11.95 21 .08 1.2 .4 LSW 1.9X 275 21
2003 APR 12 1634 32.46 19 12.92 155 18.22 42.98 36 .10 .9 1.0 DEP 1.9X 225 9
2003 APR 12 1927 26.03 19 12.47 155 17.87 43.16 36 .09 .7 .9 DEP 1.8X 183 10
2003 APR 12 2207 33.60 19 25.32 155 15.83 0.89 18 .11 .2 .3 SNC L 1.6X 133 2
2003 APR 12 2342 1.68 19 20.00 155 13.52 4.03 28 .11 .4 1.2 SSF 1.2X 120 5
2003 APR 13 0037 24.29 19 59.57 155 36.84 31.18 19 .09 1.2 1.6 KOH 1.4X 272 16

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

2003 APR 13 0307 58 .20 19 22.14 155 39.30 14.57 19 .11 .7 .6 DML 1.6X 99 2
2003 APR 13 0311 39.54 19 22.12 155 11.30 3.35 36 .11 .4 .4 SBR 1.7X 128 2
2003 APR 13 1257 2.78 19 22.15 155 154 55.68 5.58 24 .12 .9 .8 LBR 1.8X 268 7
2003 APR 13 1352 42.87 19 23.48 155 15.28 3.21 29 .10 .2 .3 SBC 1.9X 53 2
2003 APR 13 1352 58.84 19 23.77 155 15.01 3.43 26 .10 .3 .4 SBC 2.4X 107 3
2003 APR 13 1444 34.09 19 19.60 155 11.66 5.31 31 .08 .4 1.2 SF3 1.6X 149 6
2003 APR 13 1959 34.35 19 12.83 155 17.35 44.57 36 .09 .8 .7 DEP 1.9X 226 10
2003 APR 14 0026 47.48 25.23 155 15.95 3.32 18 .12 .3 .4 SNC 1.9X 129 2
2003 APR 14 0033 19.19 12.66 155 17.43 44.21 33 .09 1.0 .9 DEP 1.7X 275 25
2003 APR 14 0071 35.37 19 44.44 157 32.69 6.86 23 .12 9.6 DLS - 3.0X 33179
2003 APR 14 1147 38.55 19 18.77 155 9.93 3.74 25 .11 .5 1.6 SDF 1.5X 66 10
2003 APR 14 1550 11.36 19 11.58 155 18.26 43.79 17 .10 1.5 1.5 DEP 1.6X 257 13
2003 APR 15 1111 22.56 19 25.60 155 21.87 11.23 26 .08 .5 1.0 KAO 1.4X 109 5
2003 APR 15 2025 34.04 19 27.11 154 52.01 1.04 26 .12 2.1 1.0 SLE 1.6X 275 12
2003 APR 15 2117 54.19 19 23.27 155 16.77 3.16 12 .06 .7 .4 SSC 1.5X 122 0
2003 APR 15 2233 26.47 19 22.46 155 29.81 8.48 29 .08 .3 .8 KAO 1.3X 81 12
2003 APR 16 0655 55.52 19 16.14 155 22.68 53.11 40 .10 .8 1.1 DEP 2.2X 141 8
2003 APR 16 0822 59.83 19 53.95 155 26.41 28.12 45 .11 .6 1.3 KEA 2.6X 149 10
2003 APR 16 0916 54.71 19 23.55 155 37.21 11.64 19 .12 .6 1.1 MLO 2.0X 91 2
2003 APR 16 1122 41.13 19 31.25 155 51.70 8.87 16 .18 2.0 .9 KON 1.3X 282 10
2003 APR 16 1309 44.39 19 19.24 155 10.24 7.79 32 .13 .6 .7 SF3 1.5X 173 6
2003 APR 16 1922 17.87 19 17.72 155 27.83 10.03 26 .11 .5 1.3 LSW 1.2X 128 6
2003 APR 17 0036 38.91 19 17.75 155 29.76 6.05 28 .09 .6 2.3 LSW 1.3X 103 5
2003 APR 17 0756 9.75 19 12.51 155 18.06 42.29 34 .09 .9 1.1 DEP 1.7X 175 10
2003 APR 17 1233 22.24 19 23.25 16.73 3.00 31 .01 .4 .2 SSC 2.3X 65 0
2003 APR 17 1420 23.15 19 14.75 155 18.97 41.78 44 .09 .8 .8 DEP 1.9X 167 6
2003 APR 17 2306 38.37 19 18.96 155 15.38 5.33 28 .09 .3 1.1 SF1 1.5X 117 5
2003 APR 18 0137 57.80 19 16.75 155 34.31 0.85 25 .14 1.0 .6 LSW 1.3X 199 8
2003 APR 18 0401 0.08 19 19.58 155 7.32 6.36 38 .09 .5 .7 SF4 1.6X 192 7
2003 APR 18 1453 57.00 19 22.68 155 27.05 9.78 38 .11 .4 1.0 KAO 1.5X 77 8
2003 APR 18 1604 9.52 19 14.06 155 29.29 36.77 29 .07 .9 1.5 DLS 1.4X 228 2

2003 APR 18 1716 50.35 19 13.41 155 29.17 38.36 41 .08 .7 1.0 DLS 1.8X 141 4
2003 APR 18 2045 8.88 19 19.82 155 6.78 7.40 30 .12 .7 .9 SF4 1.3X 192 7
2003 APR 18 2331 16.88 19 20.11 155 11.77 7.71 28 .11 .5 .6 SF3 1.6X 141 5
2003 APR 19 1556 57.61 19 19.55 155 7.62 5.42 27 .12 .8 1.6 SF4 1.5X 190 7
2003 APR 20 0231 59.04 19 20.39 155 10.95 8.82 35 .09 .6 .4 SF3 1.8X 149 5

-ORIGIN TIME (HST) - LAT N - LON W - DEPTH N RMS ERH ERZ LOC

YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SCC	KM	RMS	ERH	ERZ	LOC	PREF	AZ	MIN	
2003	APR	20	0455	12.69	19	20.06	155	12.82	6.91	23	.11	.5	.8	SF2	1.4X	149	5			
2003	APR	20	0506	37.80	19	32.10	156	24.04	40.81	17	.11	3.5	5.6	DIS	1.7X	317	61			
2003	APR	20	0806	17.83	19	18.85	155	12.95	9.33	41	.12	.5	.4	SF2	2.4X	122	5			
2003	APR	20	0926	8.80	19	22.68	155	51.66	11.38	15	.13	2.7	.7	KON	1.6X	284	18			
2003	APR	20	1020	3.34	19	13.28	155	17.60	44.12	37	.10	.8	.9	DEP	1.8X	181	9			
2003	APR	20	1036	22.26	19	19.79	155	30.03	7.74	29	.09	.4	2.0	KAO	1.3X	99	9			
2003	APR	20	1314	30.06	19	21.91	155	25.33	10.92	26	.08	.4	1.1	KAO	1.1X	83	5			
2003	APR	20	1536	49.34	18	59.31	155	27.34	38.70	41	.08	.8	1.2	DLS	2.0X	223	23			
2003	APR	20	1600	1.50	19	18.58	155	13.28	8.61	40	.10	.4	.4	SF2	2.5X	123	3			
2003	APR	20	1615	38.70	19	25.35	155	19.30	7.99	28	.10	.4	.8	KAO	1.4X	85	3			
2003	APR	20	1626	31.22	19	18.66	155	13.28	4.57	31	.11	.5	1.6	SSF	1.5X	123	3			
2003	APR	20	1631	22.79	19	18.34	155	13.13	8.51	36	.08	.4	.5	SF2	1.8X	131	3			
2003	APR	20	1801	36.22	19	14.16	155	17.80	48.01	22	.08	1.2	1.7	DEP T	1.8X	220	7			
2003	APR	20	1935	18.76	19	31.99	155	15.59	24.48	33	.10	.6	1.0	DEP	1.6X	89	8			
2003	APR	20	2003	20.14	19	15.57	155	35.97	3.56	16	.12	1.61	13.0	LSW	-	1.4X	233	10		
2003	APR	20	2042	55.00	19	19.67	155	6.80	8.72	34	.09	.8	.5	SF4	1.8X	194	7			
2003	APR	20	2052	12.93	19	14.24	155	6.01	32	.13	.8	1.2	SF4	1.7X	201	8				
2003	APR	20	2345	59.43	19	21.74	155	5.04	8.30	26	.09	.7	.4	SF5	2.0X	180	5			
2003	APR	20	2353	54.34	19	3.53	156	9.27	39.73	15	.08	2.8	5.2	KON	1.9X	310	61			
2003	APR	21	0201	1.94	19	24.71	155	48.03	13.86	20	.10	1.0	.4	KON	1.4X	257	15			
2003	APR	21	0658	26.02	19	12.29	155	20.80	43.16	41	.09	.7	1.0	DEP	1.8X	177	11			
2003	APR	21	0730	4.34	19	18.83	155	7.62	8.59	37	.09	.5	.6	SF4	1.8X	187	6			
2003	APR	21	0913	10.32	19	25.73	155	14.82	1.20	16	.08	.3	.7	SNC	1.5X	149	4			
2003	APR	21	1043	43.85	20	48.20	154	49.27	5.30	15	.09	9.4	12.1	DIS	-	2.4X	3391	15		
2003	APR	21	1417	14.59	19	2.07	155	12.20	31.31	19	.08	2.2	2.6	LOT	-	1.6X	302	28		
2003	APR	21	1432	12.46	19	19.27	155	8.81	3.95	33	.12	.6	2.0	SSF	1.7X	186	7			
2003	APR	21	1851	30.43	19	24.36	155	16.90	1.42	18	.10	.3	.2	SSC	1.6X	100	1			
2003	APR	21	2005	5.30	19	28.73	155	27.02	12.11	38	.11	.3	.5	KAO	2.6X	57	6			
2003	APR	22	0102	24.80	19	33.18	155	55.23	28.08	18	.12	1.8	2.4	KON	1.6X	260	17			
2003	APR	22	0629	52.02	19	24.88	155	36.79	1.90	13	.11	.4	.5	MLO	1.1X	95	2			
2003	APR	22	0845	59.10	19	20.45	155	11.60	6.98	28	.12	.6	.8	SF3	1.4X	147	5			
2003	APR	22	1408	7.33	19	20.48	155	3.80	6.12	25	.13	1.0	1.5	SF5	1.4X	204	7			
2003	APR	22	1813	25.01	19	12.70	155	17.64	44.90	32	.09	.9	1.2	DEP	2.0X	183	10			
2003	APR	23	0809	9.37	19	15.64	155	27.78	28.24	31	.11	.6	1.3	KEA	1.8X	153	13			
2003	APR	23	0909	56.41	19	21.70	155	4.82	6.33	25	.11	1.0	.9	SF5	1.6X	182	5			
2003	APR	24	0845	59.10	19	20.45	155	11.60	6.98	28	.12	.6	.8	SF3	1.4X	147	5			
2003	APR	24	1342	17.24	19	14.09	155	16.94	14.60	36	.08	.6	.3	DEP	1.9X	91	1			
2003	APR	24	0322	25.59	19	20.29	155	12.97	7.79	26	.09	.4	.6	SF2	1.3X	142	4			
2003	APR	24	0648	9.56	19	15.32	155	37.59	0.40	21	.11	1.4	.5	LSW	1.1X	242	12			
2003	APR	24	1110	41.35	19	20.59	155	8.24	2.34	1.05	.11	.5	.6	SF3	1.7X	161	4			
2003	APR	24	1453	54.20	19	13.06	155	18.17	42.06	31	.09	1.0	1.1	DEP	2.0X	232	9			
2003	APR	25	0033	50.10	19	13.12	155	17.32	44.69	32	.10	1.0	1.1	DEP	1.6X	237	9			
2003	APR	25	0055	9.52	19	18.24	155	12.94	7.52	32	.08	.4	.6	SF2	1.6X	141	2			
2003	APR	25	0117	3.94	19	22.80	155	0.21	8.76	37	.11	.9	.4	SF5	1.6X	215	5			
2003	APR	25	0249	1.73	19	19.94	155	7.83	7.87	30	.08	.6	.8	SF4	1.2X	183	6			
2003	APR	25	1739	57.92	19	18.29	155	28.41	8.50	28	.12	.4	1.0	LSW	1.6X	112	7			

-ORIGIN TIME (HST) - LAT N - LON W - DEPTH N RMS ERH ERZ LOC

YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SCC	KM	KM	RMS	ERH	ERZ	LOC	PREF	AZ	MIN	
2003	APR	26	0125	51.50	19	22.85	155	14.11	3.91	16	.06	.4	.4	SEC	1.7X	117	2				
2003	APR	26	0232	32.44	19	12.70	155	17.82	43.15	20	.09	1.3	1.7	DEP	1.4X	239	10				
2003	APR	26	0734	33.11	19	27.49	155	14.14	31.20	34	.11	.6	1.2	DEP	1.7X	61	4				
2003	APR	26	0815	53.55	19	19.53	155	6.93	7.95	35	.10	.7	.6	SF4	1.5X	195	7				
2003	APR	26	0826	5.93	19	23.45	155	47.69	13.42	30	.08	.8	.3	KON	2.3X	190	14				
2003	APR	27	0023	15.01	19	21.90	155	13.29	5.10	24	.12	.6	2.0	SF2	1.8X	145	4				
2003	APR	27	0114	21.12	19	11.03	155	31.55	7.93	17	.12	1.4	1.2	LSW	1.4X	253	8				
2003	APR	27	0654	37.53	19	23.68	155	0.45	3.17	26	.12	.9	1.3	SF5	1.8X	194	4				
2003	APR	27	0716	40.08	19	12.84	155	17.66	44.10	39	.08	.8	.9	DEP	2.1X	208	10				
2003	APR	27	0719	14.52	19	15.21	155	9.76	6.97	28	.11	.8	1.0	SF3	1.5X	179	7				
2003	APR	27	0722	38.18	19	22.66	155	0.54	0.05	18	.13	1.0	.6	SSF	1.5X	212	6				
2003	APR	27	1443	48.17	19	21.26	155	17.59	30.57	42	.11	.6	.7	DEP	1.9X	62	2				
2003	APR	27	1828	58.18	19	20.55	155	7.98	8.98	32	.11	.7	.5	SF4	1.7X	174	5				
2003	APR	27	1909	17.47	19	12.46	155	25.79	35.70	.03	.09	.7	.1	DLS	1.8X	158	9				
2003	APR	27	1939	19.34	19	49.68	155	36.0	15.99	25	.11	.6	1.5	KEA	1.5X	104	17				
2003	APR	27	2126	8.98	19	13.70	155	16.75	45.50	35	.12	.8	1.1	DEP	2.0X	179	8				
2003	APR	27	2136	37.22	19	21.77	155	13.00	2.95	20	.06	.4	.3	SER	1.4X	113	2				
2003	APR	27	2219	15.63	19	27.24	155	14.42	31.65	47	.12	.5	.9	DEP	2.2X	60	4				
2003	APR	28	0001	11.25	19	13.47	155	17.72	44.37	49	.11	.7	.9	DEP	2.6X	179	8				
2003	APR	28	0414	19.80	19	45.59	155	23.31	16.99	16	.07	.9	1.7	KEA	1.2X	142	8				
2003	APR	28	1747	1.57	19	10.89	155	18.52	41.89	33	.04	2.0	3.0	DEP	2.0X	189	13				
2003	APR	28	2115	39.64	19	20.45	155	7.00	8.99	40	.11	.7	.5	SF4	2.1X	138	5				
2003	APR	28	2258	57.39	19																

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

2003	MAY	1	2341	56.60	19	26.95	155	17.19	13.74	30	.11	.6	.4	DEP	1.4X	117	3	
2003	MAY	2	0507	15.31	19	26.15	155	21.72	11.18	35	.10	.4	.8	KAO	1.5X	85	6	
2003	MAY	2	1644	31.74	19	28.61	155	25.72	3.73	19	.07	.3	.8	KAO	1.4X	110	4	
2003	MAY	2	1843	27.84	19	18.35	155	12.49	9.97	30	.08	.5	.6	SF2	1.4X	154	3	
2003	MAY	2	2259	47.85	19	21.33	155	18.52	3.04	32	.11	.3	.6	SWR	1.8X	59	5	
2003	MAY	2	2318	14.14	19	19.38	155	7.77	7.76	34	.10	.4	.5	SF4	1.3X	191	7	
2003	MAY	3	0335	56.15	19	37.31	155	12.38	12.71	33	.12	.4	.7	KEA	1.3X	98	19	
2003	MAY	3	0401	39.64	19	12.90	155	17.57	44.55	38	.10	.8	1.0	DEP	2.1X	183	10	
2003	MAY	3	0406	59.30	19	24.34	155	27.39	10.47	41	.11	.4	.4	KAO	1.7X	61	10	
2003	MAY	3	1251	55.81	19	29.94	155	26.85	5.10	26	.11	.4	1.4	KAO	1.3X	110	4	
2003	MAY	3	1257	9.40	19	28.81	155	25.07	12.50	36	.09	.5	.8	KAO	1.8X	66	4	
2003	MAY	3	1907	56.60	19	19.84	155	7.00	7.66	29	.09	.6	.9	SF4	1.1X	190	6	
2003	MAY	3	2108	25.47	19	25.20	155	18.65	5.74	33	.12	.4	.6	INT	1.8X	43	2	
2003	MAY	3	2331	36.77	19	19.10	155	7.09	7.32	31	.11	.7	.7	SF4	1.6X	200	8	
2003	MAY	3	2353	59.55	19	22.47	155	29.84	9.15	33	.08	.3	1.0	KAO	1.3X	81	12	
2003	MAY	4	0052	7.56	19	10.78	155	34.47	6.25	27	.11	.9	1.1	LSW	1.7X	260	11	
2003	MAY	4	0558	48.02	19	22.93	155	17.18	2.66	20	.09	.3	.2	SSC	1.6X	62	1	
2003	MAY	4	0637	29.21	19	23.95	155	26.65	12.17	30	.10	.4	1.0	KAO	1.2X	62	9	
2003	MAY	4	0715	57.62	19	9.04	155	38.17	1.23	22	.12	.6	.4	LSW	1.6X	150	18	
2003	MAY	4	1114	49.66	18	31.15	154	38.40	27	92	30	1.31	3.4	5.6	DIS	- 2.9X	32105	
2003	MAY	4	1152	34.18	20	17.25	155	34.51	36.40	36	.10	.9	1.1	KOH	2.3X	267	28	
2003	MAY	4	1202	56.15	19	22.57	155	30.31	8.77	30	.05	.3	1.6	KAO	1.2X	85	13	
2003	MAY	4	1631	56.42	19	23.37	155	30.21	7.44	38	.08	.3	1.2	KAO	1.5X	86	13	
2003	MAY	4	1653	57.62	19	9.04	155	38.17	1.23	22	.12	.6	.4	LSW	1.5X	68	13	
2003	MAY	4	1740	48.36	19	22.22	155	30.46	11.50	27	.06	.4	1.6	KAO	1.1X	89	13	
2003	MAY	4	2102	51.65	19	31.29	155	37.44	14.05	18	.11	.8	.5	DML	1.2X	152	4	
2003	MAY	5	1055	53.20	19	13.31	155	17.75	43.06	36	.08	.8	.9	DEP	1.8X	181	9	
2003	MAY	5	1146	39.76	19	17.58	155	32.71	0.55	28	.10	.6	.3	LSW	1.4X	164	6	
2003	MAY	5	1149	8.25	19	17.84	155	32.51	0.53	21	.11	.6	.5	LSW	1.3X	157	7	
2003	MAY	5	1151	1.17	19	20.32	155	19.52	3.37	18	.09	.4	.8	SWR	1.3X	109	4	
2003	MAY	5	1225	41.21	19	13.34	155	17.53	44.86	24	.08	1.2	1.6	DEP	1.5X	233	9	
2003	MAY	5	1829	25.15	19	13.33	155	17.06	43.78	29	.07	.9	1.5	DSL	1.5X	222		
2003	MAY	5	1931	32.21	19	13.33	155	17.65	35.97	29	.07	.9	1.5	DSL	1.6X	224	9	
2003	MAY	6	0211	48.29	19	29.05	154	52.96	1.90	22	.13	1.8	1.1	SLE F	1.5X	316	32	
2003	MAY	6	0214	54.52	19	27.91	154	55.15	0.09	19	.12	4.0	1.3	SLE F#	1.7X	306	8	
2003	MAY	6	0408	16.62	19	12.92	155	17.65	43.77	37	.10	.8	.9	DEP	2.0X	182	9	
2003	MAY	6	1149	4.06	19	25.68	155	18.94	6.34	31	.11	.4	.7	INT	1.7X	57	2	
2003	MAY	6	1302	58.61	20	34.85	155	35.83	1.94	39	.11	4.0	2.0	DIS	2.5X	307	54	
2003	MAY	6	1953	52.01	19	16.00	155	24.40	36.28	32	.10	.7	1.0	DEP	1.4X	138	8	
2003	MAY	6	2220	15.15	19	13.02	155	17.37	45.81	42	.10	.8	1.0	DEP	2.3X	183	9	
2003	MAY	7	0100	6.22	17	42.40	153	1.21	30.64	32	.17	3.5	2.7	DTS	3.5X	341280		
2003	MAY	7	0115	38.23	19	31.69	155	15.58	10.47	41	.13	.4	.7	GLN	1.8X	63	7	
2003	MAY	7	0424	38.41	19	12.74	155	17.19	46.00	30	.10	1.0	1.2	DEP	1.5X	242	6	
2003	MAY	7	0624	57.48	19	13.91	155	24.84	34.71	39	.10	.9	1.0	DEP	1.7X	211	10	

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

2003	MAY	7	0655	43.03	19	18.35	155	13.06	9.19	44	.11	.5	.4	SF2 F	2.5X	134	3
2003	MAY	7	1407	19.58	19	37.83	155	45.67	34.59	23	.09	1.1	1.2	KON	1.8X	234	13
2003	MAY	7	1630	52.66	19	20.24	155	5.44	7.76	38	.11	.6	.7	SF4	1.8X	196	7
2003	MAY	7	1955	46.45	19	24.98	155	36.51	3.66	18	.11	.5	.5	MLO	1.1X	205	1
2003	MAY	7	1957	29.87	19	12.85	155	17.91	43.85	29	.08	.9	1.0	DEP	1.6X	236	10
2003	MAY	7	2119	20.13	19	16.44	155	15.18	6.43	33	.08	.5	.9	SF1	1.8X	195	3
2003	MAY	7	2301	8.36	19	13.40	155	17.53	44.68	29	.10	.9	1.1	DEP	1.6X	223	9
2003	MAY	8	0034	16.14	19	18.33	155	14.51	8.55	36	.10	.4	.5	SF2	1.4X	115	3
2003	MAY	8	0146	5.66	19	12.50	155	18.29	42.08	32	.10	.9	1.1	DEP	1.7X	183	10
2003	MAY	8	0449	8.12	19	22.11	155	10.63	3.27	29	.08	.6	.3	SER	1.5X	133	1
2003	MAY	8	1735	9.94	19	20.16	155	11.36	7.25	37	.12	.5	.7	SF3	1.2X	146	5
2003	MAY	8	2129	45.07	19	46.16	155	53.96	31.04	19	.09	1.3	1.8	HUA	1.2X	275	27
2003	MAY	8	2225	54.07	19	28.62	155	36.43	0.67	14	.14	.4	.2	MLO	1.6X	97	1
2003	MAY	9	0518	24.22	19	13.07	155	17.73	43.79	33	.09	.9	1.1	DEP	1.7X	181	9
2003	MAY	9	0826	28.58	19	22.52	155	29.87	8.7	26	.07	.4	2.0	KAO	1.0X	82	12
2003	MAY	9	1759	18.42	19	12.78	155	18.02	43.53	36	.09	.7	.9	DEP	1.6X	182	10
2003	MAY	9	1829	16.07	19	13.42	155	25.75	42.81	23	.08	1.0	1.2	DEP	1.5X	230	8
2003	MAY	10	0101	58.41	19	15.25	155	27.10	38.52	44	.8	.1	.2	DS	2.9X	23	
2003	MAY	10	0224	36.58	19	19.43	155	12.51	6.78	30	.10	.4	.7	SF2	1.3X	135	5
2003	MAY	10	0427	5.84	19	13.56	155	17.83	43.32	38	.10	.9	.9	DEP	1.8X	179	8
2003	MAY	10	0449	47.05	19	26.25	155	29.55	9.56	21	.08	.4	.1	KAO	1.2X	62	10
2003	MAY	10	0941	38.30	19	13.86	155	18.50	39.12	27	.11	1.0	1.2	DEP	1.5X	219	8
2003	MAY	10	1917	1.92	19	19.73	155	6.65	5.87	34	.14	.6	.3	SF4	1.5X	194	7
2003	MAY	10	2007	20.61	19	29.24	155	23.20	3.43	25	.11	.6	.3	KAO	1.4X	112	1
2003	MAY	11	0004	49.80	19	18.76	154	58.94	38.12	40	.08	1.1	.7	LER	2.1X	262	12
2003	MAY	11	0202	52.74	19	24.23	155	16.50	1.54	19	.10	.4	.2	SBC	1.9X	105	1
2003	MAY	11	0309	12.35	19	24.49	155	30.21	10.75	30	.09	.4	1.1	KAO	1.3X	73	11
2003	MAY	11	0336	49.15	19	13.05	155	17.10	45.48	42	.10	.7	.7	DEP	2.0X	182	9
2003	MAY	11	1533	33.96	19	14.12	155	17.16	45.94	45	.12	.8	.7	DEP	2.6X	179	8
2003	MAY	11	1535	34.04	19	16.11	155	32.18	5.82	30	.12	.5	1.5	LSW	1.5X	101	4
2003	MAY	11	2214	5.46	19	30.46	155	20.22	13.85	36	.09	.4	.4	DML	1.2X	104	6
2003	MAY	11	2340	3.22	19	12.68	155	31.52	7.53	31	.13	.9	.8	LSW	1.3X	243	5
2003	MAY	11	2346	32.77	19	29.87	155	54.41	27.67	37	.09	.9	1.1	KON	1.9X	22	

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SRC	KM	KM	REMKs	MAG	GAP	DS		
2003	MAY	14	0938	48.06	19	22.40	155	29.92	9.03	36	.09	.4	1.1	KAO	1.7X	83	12		
2003	MAY	14	1102	5.60	19	17.78	155	12.87	8.85	37	.09	.4	.4	SF2	1.8X	156	2		
2003	MAY	14	1109	30.49	19	17.72	155	12.86	7.78	33	.09	.5	.8	SF2	1.6X	159	2		
2003	MAY	14	1137	11.27	19	12.88	155	17.51	4.42	21	.41	.09	.8	.9	DEP	2.1X	183	10	
2003	MAY	14	1358	35.50	19	18.10	155	31.78	1.39	26	.10	.5	.7	LSW	1.7X	141	6		
2003	MAY	14	2342	23.52	19	20.53	155	13.09	7.98	23	.10	.5	.7	SF2	1.2X	125	4		
2003	MAY	15	0320	58.16	19	20.04	155	12.49	5.30	23	.12	.6	1.5	SF2	1.3X	144			
2003	MAY	15	0659	57.99	19	12.77	155	17.58	4.29	20	.09	1.2	1.4	DEP	1.8X	240	10		
2003	MAY	15	0714	33.50	19	19.40	155	7.91	8.00	27	.08	.8	.7	SF4	1.4X	190	7		
2003	MAY	15	0914	41.30	19	21.16	155	4.68	5.96	23	.10	.9	1.0	SF5	1.5X	190	6		
2003	MAY	15	0955	25.12	19	23.05	155	14.56	3.46	22	.06	.3	.3	SBC	1.6X	132	3		
2003	MAY	15	1351	5.44	19	20.63	155	4.21	7.49	35	.11	.6	.5	SF5	1.9X	199	7		
2003	MAY	15	1834	7.00	19	44.36	155	41.47	18.51	39	.12	.5	1.7	KEA	2.3X	98	14		
2003	MAY	15	2000	46.48	19	17.57	155	31.90	0.39	20	.11	.6	.3	LSW	1.2X	152	6		
2003	MAY	16	1606	55.56	19	12.77	155	18.14	42.97	25	.09	1.1	1.1	DEP	1.5X	236	10		
2003	MAY	16	2149	56.26	19	23.43	155	16.69	3.17	29	.09	.2	.2	SSC	2.0X	75	0		
2003	MAY	17	0724	20.06	19	53.28	155	46.64	12.82	21	.12	1.5	.5	HUA	1.4X	271	13		
2003	MAY	17	0947	28.72	19	26.84	154	48.42	12.11	24	.12	.6	.6	LER	1.6X	287	18		
2003	MAY	17	1600	17.49	19	19.58	155	7.69	6.56	29	.10	.6	1.0	SF4	1.3X	189			
2003	MAY	17	1743	16.57	19	31.02	156	24.48	7.21	25	.13	8	8.410.8	DIS	-	1.7X	322	63	
2003	MAY	17	1807	2.61	19	16.25	155	5.86	39	12	.33	.12	.1	.8	DEP	1.9X	231	13	
2003	MAY	17	1848	48.07	19	17.85	155	14.54	8.25	33	.11	.4	.6	SF1	1.4X	131	2		
2003	MAY	18	0554	6.92	19	17.40	155	33.63	7.12	30	.10	.5	.9	LSW	1.6X	180	7		
2003	MAY	18	1228	18.63	19	48.53	155	35.30	17.49	16	.07	.9	2.3	KEA	1.1X	123	10		
2003	MAY	18	1318	3.70	19	48.89	156	10.77	6.78	18	.09	1.8	1.0	HUA	1.4X	319	55		
2003	MAY	19	0458	48.74	19	14.52	155	33.53	7.92	38	.15	.5	.8	LSW F	2.9X	121	6		
2003	MAY	19	0850	29.30	19	18.60	155	15.08	4.98	19	.14	.6	1.9	SF5	1.4X	122	4		
2003	MAY	19	1757	40.71	19	47.15	155	47.23	15.03	35	.12	.7	.6	HUA	2.3X	154	12		
2003	MAY	19	1956	41.75	19	24.95	155	30.73	11.64	21	.09	.5	1.5	KAO	1.3X	73	10		
2003	MAY	19	2032	9.94	19	15.22	155	21.88	6.72	22	.12	.7	1.3	SWR	1.7X	151	8		
2003	MAY	19	2147	12.97	19	5.41	155	32.65	46.20	21	.12	1.2	2.8	DLS T	1.4X	256	11		
2003	MAY	19	2331	26.20	19	9.43	155	28.05	30.27	20	.05	1.3	2.0	DLS					
2003	MAY	20	0400	20.01	19	20.96	155	7.87	9.95	45	.10	.4	.3	SF4	2.4X	118	4		
2003	MAY	20	1943	52.92	18	58.86	155	29.90	41.99	39	.08	.9	1.2	DLS	2.5X	236	19		
2003	MAY	20	2218	3.68	19	46.89	156	4.79	31.70	17	.12	2	3	3.5 HUA	1.6X	301	45		
2003	MAY	20	2224	4.11	19	17.06	155	7.65	41.18	41	.11	.8	.9	DEP	2.3X	219	1		
2003	MAY	21	0333	48.19	19	25.54	155	19.46	8.73	35	.13	.4	.7	KAO	1.9X	64			
2003	MAY	21	1331	6.11	19	20.74	155	11.39	8.61	42	.10	.4	.3	SF3	2.1X	139	4		
2003	MAY	21	1400	44.76	19	13.18	155	17.66	44.12	42	.10	1.0	.9	DEP	2.8X	181	9		
2003	MAY	22	1104	10.29	20	0.70	155	17.07	27	.61	.26	.08	1.1	1.6 KEA F	1.7X	278	15		

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SRC	KM	KM	REMKs	MAG	GAP	DS		
2003	MAY	23	0623	0.75	19	56.47	155	26.78	32.15	31	.10	.8	1.4	KEA	1.8X	176	12		
2003	MAY	23	0740	53.15	19	18.89	155	13.56	8.81	41	.11	.4	.4	SF2	2.1X	111	3		
2003	MAY	23	1254	59.81	19	16.33	155	26.84	11.52	31	.10	.4	1.0	LSW	1.5X	103	6		
2003	MAY	23	2132	0.37	19	21.85	155	12.80	3.25	13	.05	.6	.5	SBR	1.5X	119	2		
2003	MAY	23	2136	32.16	19	57.77	155	43.74	11.01	26	.13	.8	1.1	KOH	2.0X	143	14		
2003	MAY	23	2333	47.90	19	21.05	155	11.20	8.10	29	.12	.5	.6	SF3	1.8X	146	4		
2003	MAY	24	0210	44.05	19	22.28	155	25.41	9.76	42	.11	.4	.5	KAO	1.7X	155	4		
2003	MAY	24	0734	58.36	19	18.03	155	13.29	9.79	47	.11	.5	.3	SF2 F	3.9U	128	2		
2003	MAY	24	0845	42.48	19	17.76	155	12.92	8.67	24	.08	.6	.9	LSW	1.8X	155	2		
2003	MAY	24	1910	44.08	19	19.40	155	28.44	9.55	30	.10	.4	.7	KAO	1.2X	80	6		
2003	MAY	24	2239	5.50	19	29.93	155	23.76	11.12	36	.11	.4	.6	KAO	1.5X	70	1		
2003	MAY	24	2349	41.87	19	20.25	155	7.70	8.97	38	.08	.6	.5	SF4	1.9X	180	6		
2003	MAY	25	0152	7.08	19	21.28	155	8.04	8.42	41	.11	.6	.4	SF4	1.5X	165	4		
2003	MAY	25	0242	9.11	19	18.95	155	14.71	8.31	25	.10	.4	.7	SF1	1.4X	108	4		
2003	MAY	25	0411	8.84	19	25.32	155	24.07	10.69	42	.09	.4	.6	DEP	1.7X	42	8		
2003	MAY	25	0729	50.24	19	36.12	155	53.84	16.29	21	.14	2.0	1.2	KON F	2.2X	111	11		
2003	MAY	25	1817	50.59	19	36.15	155	9.24	8.80	36	.09	.6	.6	SF3	1.7X	181	6		
2003	MAY	25	2055	12.86	19	8.88	155	41.68	10.07	17	.09	.9	1.2	LSW	1.2X	195	19		
2003	MAY	26	0500	11.26	19	30.31	155	26.78	6.18	35	.10	.3	.9	MLO	1.4X	49	3		
2003	MAY	26	1549	5.85	19	12.77	155	17.58	43.89	40	.09	.9	1.0	DEP	2.1X	197	10		
2003	MAY	27	0316	42.93	19	21.98	155	30.11	9.42	42	.09	.3	.6	KAO	1.9X	71	4		
2003	MAY	27	0501	15.56	19	43.37	155	15.05	38.35	37	.10	.8	1.2	KAO	1.5X	165	23		
2003	MAY	27	0534	33.20	19	14.85	155	35.03	8.03	40	.14	.4	.9	LSW	2.3X	127	9		
2003	MAY	27	0545	12.63	19	14.95	155	35.33	0.24	27	.11	.8	.3	LSW	1.4X	129	9		
2003	MAY	27	0948	28.71	19	13.19	155	17.66	43.55	40	.09	.8	.8	DEP	2.2X	181	9		
2003	MAY	27	1001	51.63	19	13.41	155	38.04	1.04	23	.12	.4	.4	LSW	1.7X	148	14		
2003	MAY	27	1326	29.37	19	26.62	154	49.54	4.95	37	.12	.6	.6	SF E	2.5X	284	16		
2003	MAY	28	0021	44.67	19	31.54	155	19.66	12.67	34	.10	.4	.6	MLO	1.3X	60	7		
2003	MAY	28	0043	42.70	19	22.62	155	14.12	3.50	18	.08	.5	.4	SBC	1.7X	132	2		
2003	MAY	28	0127	22.34	19	18.16	155	13.42	8.41	31	.08	.4	.5	SF2	1.3X	120	2		
2003	MAY	28	0215	17.75	19	24.90	155	18.88	6.55	26	.08	.4	.7	INT	1.7X	57	2		
2003	MAY	28	0247	34.23	19	12.10	155	37.66	6.65	31	.15	.5	1.3	LSW	1.8X	147	14		
2003	MAY	28	0426	14.74	19	16.42	155	22.41	7.43	38	.13	.4	.9	SWR	1.6X	132	7		
2003	MAY	28	0850	13.01	19	24.85	155	16.69	5.57	20	.11	.3	.1	SNC L	1.4X	108	1		
2003	MAY	28	1526	38.44	19	19.95	155	10.27	7.23	33	.14	.7	.8	SF3</td					

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

2003	MAY	29	2309	3.12	19	59.81	156	45.35	6.96	28	.13	9	111.3	DIS	-	2.0X	320102
2003	MAY	30	0030	54.67	19	12.10	155	29.52	29.76	25	.09	11	1.2	DLS	1.0X	254	
2003	MAY	30	0210	0.55	19	29.25	155	27.13	7.16	43	.13	.3	1.0	KAO	2.1X	47	
2003	MAY	30	0555	1.19	19	57.33	155	44.99	8.21	22	.10	.7	.7	KOH	1.4X	153	
2003	MAY	30	0735	26.59	19	21.83	155	29.56	10.02	28	.07	.4	.9	KAO	1.3X	83	
2003	MAY	30	1408	42.97	19	13.00	155	33.88	2.69	32	.10	.4	.6	LSW	1.4X	122	
2003	MAY	30	1533	58.72	19	25.30	155	19.27	6.20	22	.09	.4	.9	KAO	1.1X	126	
2003	MAY	30	1625	23.99	19	33.62	155	52.36	10.00	19	.19	.8	.9	KON	1.3X	306	
2003	MAY	30	2039	3.99	19	21.73	155	11.30	2.91	26	.09	.4	.3	SER	1.4X	130	
2003	MAY	30	2155	11.49	19	24.92	155	16.15	1.39	26	.10	.3	.3	SNC	1.8X	101	
2003	MAY	31	0148	46.82	19	21.23	155	4.75	6.29	31	.13	.8	1.1	SF5	1.3X	189	
2003	MAY	31	0511	53.74	19	29.30	155	51.00	20	.13	.10	.6	.6	KON	.9X	258	
2003	MAY	31	1323	50.30	19	20.88	155	13.17	9.52	41	.13	.4	.3	SF2	2.7X	113	
2003	MAY	31	2331	56.54	19	30.14	155	28.78	5.08	13	.11	.4	1.7	MLO	1.3X	78	
2003	JUN	1	0045	5.60	19	24.70	155	38.05	3.23	17	.09	.4	.4	MLO	.8X	99	
2003	JUN	1	0157	12.00	19	12.05	155	29.08	31.04	25	.07	1.0	1.4	DLS	1.3X	254	
2003	JUN	1	0821	23.99	19	25.78	155	28.45	9.27	25	.10	.4	.9	KAO	.9X	83	
2003	JUN	1	1421	10.58	19	19.20	155	10.95	5.01	30	.09	.5	1.9	SF3	1.3X	177	
2003	JUN	1	2018	40.94	19	19.87	155	8.42	7.60	39	.08	.5	.6	SF4	1.5X	180	
2003	JUN	2	0506	27.49	19	13.30	155	26.45	9.35	34	.13	.4	.7	LSW	1.3X	127	
2003	JUN	2	0509	15.32	19	21.02	155	24.04	13.54	36	.12	.4	.4	DEP	1.6X	76	
2003	JUN	2	0843	22.71	19	25.45	155	19.56	6.51	19	.09	.6	.9	KAO	1.7X	160	
2003	JUN	2	0949	18.47	19	37.64	156	15.40	16.86	34	.11	1.0	1.7	KON	2.0X	242	
2003	JUN	2	1035	43.71	19	24.46	155	17.22	16.86	41	.09	.4	.5	DEP	1.9X	47	
2003	JUN	2	1257	51.75	19	9.88	155	33.34	0.02	35	.15	.5	.3	LSW	# 1.9X	120	
2003	JUN	2	1410	36.91	19	15.41	155	17.48	43.87	17	.16	2.6	1.4	DEP	1.3X	240	
2003	JUN	2	1603	47.69	18	58.62	155	27.27	39.77	35	.08	1.0	1.3	DLS	1.7X	232	
2003	JUN	3	0211	30.11	19	42.58	156	3.58	44.16	35	.10	1.0	1.4	HUA	1.8X	239	
2003	JUN	3	1257	17.96	19	19.59	155	24.72	35.62	50	.10	.5	.9	DEP	2.8X	93	
2003	JUN	3	1444	48.64	19	38.72	155	25.00	25.21	33	.09	.7	1.0	KEA	1.4X	67	
2003	JUN	3	1504	9.84	19	21.30	154	59.24	6.27	25	.10	.9	1.3	LER	1.3X	246	
2003	JUN	3	1906	45.97	19	41.47	156	28.56	7.52	34	.13	4.3	5.3	DIS	2.2X	284	
2003	JUN	3	1928	0.36	19	12.47	155	38.14	4.20	18	.16	.6	6.4	LSW	1.4X	149	
2003	JUN	3	2009	35.10	19	10.78	155	20.02	4.5	.5	.3	.3	.3	LSW	# 1.5X	110	
2003	JUN	3	2108	39.25	18	46.62	155	8.86	51.71	31	.09	1.1	2.0	LOI	1.9X	279	
2003	JUN	4	0023	49.63	19	49.86	155	58.45	15.51	21	.11	1.7	.8	HUA	1.3X	296	
2003	JUN	4	0459	45.17	19	3.72	155	23.35	38.40	37	.08	.8	1.2	LOI	1.7X	207	
2003	JUN	4	0723	47.40	19	18.66	155	13.42	4.93	31	.13	.4	1.4	SSF	1.2X	117	
2003	JUN	4	1026	50.49	19	10.65	155	38.59	0.10	39	.15	.4	.2	LSW	2.0X	92	
2003	JUN	4	1643	38.38	19	20.13	155	7.93	7.34	34	.08	.5	.6	SF4	1.6X	200	
2003	JUN	5	0538	15.97	19	24.49	155	16.67	2.75	17	.08	.4	.3	SSC	1.0X	105	
2003	JUN	5	2322	12.52	20	2.72	155	18.14	14.56	23	.08	1.1	.5	KEA	1.5X	260	
2003	JUN	5	2350	16.64	19	10.39	155	12.18	9.13	43	.10	.9	.9	DEP	1.9X	207	
2003	JUN	6	0209	47.70	19	19.97	155	12.21	8.04	39	.13	.4	.5	SF3	1.1X	143	

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

2003	JUN	6	1056	21.33	19	24.71	155	36.77	1.83	16	.14	.4	.5	MLO	1.1X	105	
2003	JUN	6	1846	9.24	19	23.07	155	14.72	3.30	27	.08	.3	.3	SEC	1.8X	127	
2003	JUN	6	2157	7.28	19	21.56	155	12.77	2.37	27	.09	.3	.3	SER	1.5X	115	
2003	JUN	7	0219	37.28	19	45.74	155	46.03	17.25	19	.07	1.0	3.1	HUA	1.8U	227	
2003	JUN	7	0259	26.75	19	31.24	155	41.82	9.58	20	.12	.6	1.4	MLO	.9X	184	
2003	JUN	7	0431	33.26	19	26.66	155	54.39	7.19	26	.17	1.0	1.1	KON	1.1X	273	
2003	JUN	7	1055	16.77	19	30.37	155	48.82	7.80	20	.23	1.7	1.1	KON	1.2X	295	
2003	JUN	7	1539	6.48	19	42.56	155	28.31	19.95	28	.12	.6	1.3	KBA	1.3X	109	
2003	JUN	7	1812	47.15	19	24.39	155	37.42	2.21	18	.20	.5	.4	MIO	1.2X	78	
2003	JUN	7	1912	6.43	19	19.81	155	13.03	5.21	27	.13	.5	1.5	SF2	.9X	134	
2003	JUN	8	0651	10.88	19	23.98	155	15.12	3.20	40	.10	.2	.3	SPC	2.4X	106	
2003	JUN	8	0855	45.82	19	19.76	155	8.40	7.13	32	.11	.6	.7	SP4	1.2X	182	
2003	JUN	8	0932	50.74	19	24.23	155	15.90	13.00	30	.14	.6	.4	INT	1.6X	60	
2003	JUN	8	1505	51.52	19	14.36	155	19.55	33.86	47	.10	.7	.8	DEP	2.6X	155	
2003	JUN	8	1516	22.90	19	14.43	155	31.52	33.68	44	.09	.6	.9	DES	1.9X	103	
2003	JUN	9	0527	22.48	19	4.80	155	23.70	37.20	20	.06	1.4	2.0	LOI	.9X	212	
2003	JUN	9	0652	59.67	18	31.54	155	3.74	27.46	20	.1215	.4	.6	DIS	-	2.1X	372
2003	JUN	9	0935	46.39	19	20.41	155	12.79	9.55	30	.10	.5	.7	SP2	1.4X	277	
2003	JUN	9	1700	50.85	19	25.43	155	19.24	7.53	23	.08	.4	.8	KAO	1.1X	92	
2003	JUN	9	4119	19.20	19	29.77	155	31.14	30.12	.4	.4	.8	KA0	1.8X	273		
2003	JUN	9	1755	8.74	19	28.72	154	52.20	0.59	19	.14	2.3	1.0	SSE	1.9X	273	
2003	JUN	9	2251	18.90	19	24.58	155	15.74	10.91	32	.14	.5	.4	INTL	2.0X	51	
2003	JUN	9	1930	59.04	19	26.38	155	14.88	3.04	24	.14	.4	.6	SSC	1.5X	203	
2003	JUN	10	1257	6.67	19	21.71	155	18.42	2.98	24	.19	.2	.5	SPR	1.7X	57	
2003	JUN	10	1615	21.52	19	14.01	155	31.40	36.00	28	.07	.8	1.3	DES	1.5X	170	
2003	JUN	11	0004	59.40	19	15.66	155	7.95	43.08	43	.11	.7	.8	DEP	1.9X	211	
2003	JUN	11	0236	5.35	19	16.22	155	22.00	.25	.12	.6	.4	.4	INTL	2.3X	93	
2003	JUN	11	0731	37.01	19	18.37	155	16.30	34.52	30	.08	.8	1.1	DEP	1.8X	137	
2003	JUN	11	1711	51.24	19	20.71	155	5.73	6.00	34	.12	.6	1.0	SF4	1.5X	188	
2003	JUN	11	1719	28.87	19	21.15	155	5.66	6.48	31	.11	.7	.9	SF4	1.3X	183	
2003	JUN	11	2030	29.49	19	30.41	155	27.04	6.05	25	.10	.3	1.1	MLO	1.4X	117	
2003	JUN	11	2246	55.53	18	53.53	155	11.85	44.04	24	.09	1.5	2.7	LOI	1.7X	310	
2003	JUN	11	2358	13.13	19	23.62	155	17.00	8.56	20	.11	.6	.8	INTL	1.4X	57	
2003	JUN	11	2439	30.96	19	27.30	155	15.68	5.88	19	.10	.7	.9	INTL	1.2X	212	
2003	JUN	12	1209	47.89	19	13.05	155	33.41	7.21	29	.16	.6	1.8	LSW	1.4X	201	

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMARKS	MAG	GAP	DS		
2003	JUN	12	1326	58.84	18	57.46	155	12.67	37.93	43	.09	.9	1.5	LOI	2.1X	249	35		
2003	JUN	12	1425	17.25	19	25.11	155	19.39	8.17	.30	.11	.4	.9	KAO	1.5X	81	3		
2003	JUN	12	1955	39.39	19	15.98	155	31.27	7.91	.29	.14	.5	1.1	LSW	1.5X	151	3		
2003	JUN	13	0405	25.00	19	29.62	155	28.34	7.33	.42	.11	.3	1.0	KAO	2.6X	47	5		
2003	JUN	13	0406	54.08	19	29.51	155	28.36	5.10	.41	.12	.3	1.8	KAO	1.9X	47	5		
2003	JUN	13	0748	23.18	19	19.08	155	10.01	7.78	.39	.09	.4	.4	SF3	F	1.7X	178	7	
2003	JUN	13	1201	24.86	19	23.30	155	16.17	13.35	.27	.14	.9	.6	DEP	L	1.9X	101	1	
2003	JUN	13	1244	14.01	19	21.71	155	5.03	8.64	.40	.08	.6	.4	SF5		1.9X	180	5	
2003	JUN	13	2202	25.17	19	25.36	155	17.52	8.39	.23	.11	.5	.7	INT	L	1.3X	92	0	
2003	JUN	14	0508	17.89	19	11.62	155	31.43	35.72	.42	.08	.5	1.1	DLS		1.7X	107	7	
2003	JUN	14	0906	33.36	19	25.94	155	18.78	6.88	.31	.10	.4	.8	INT	L	2.0X	90	2	
2003	JUN	14	1035	1.22	19	23.20	155	20.76	15.35	.23	.13	.7	1.0	DML	T	2.1X	61	2	
2003	JUN	14	1047	56.14	19	24.35	155	17.66	2.95	.31	.13	.3	.3	SSC	L	1.5X	43	2	
2003	JUN	14	1359	57.23	19	41.31	155	14.88	41.07	.26	.10	.9	1.3	KEA	1.3X	110	23		
2003	JUN	14	1704	29.41	19	9.79	155	31.90	0.01	.21	.11	.1	.3	LSW	#	1.6X	234	7	
2003	JUN	15	0152	34.14	19	6.44	155	37.87	2.88	.30	.12	.1	.6	LSW		1.8X	270	18	
2003	JUN	15	0353	33.29	19	28.85	155	26.55	7.84	.33	.11	.3	.9	KAO	1.4X	60	6		
2003	JUN	15	0705	9.03	19	19.37	155	9.20	8.61	.34	.10	.6	.8	SF3		1.6X	181	7	
2003	JUN	15	1020	11.13	19	29.32	155	26.80	4.59	.18	.14	.4	2.4	KAO	1.0X	98	5		
2003	JUN	15	1056	24.26	19	25.66	155	16.69	3.75	.19	.16	.6	.4	SNC	L	1.2X	114	1	
2003	JUN	15	1707	0.14	19	26.37	155	30.28	9.83	.38	.11	.4	.9	KAO	1.7X	63	9		
2003	JUN	15	1721	27.22	19	23.24	155	17.40	2.15	.21	.12	.3	.3	SSC		1.4X	49	1	
2003	JUN	15	1908	18.00	19	20.50	155	45.34	10.90	.37	.10	.6	.4	KON	2.0X	181	9		
2003	JUN	15	2044	59.35	19	25.22	155	16.72	10.60	.22	.13	.5	.5	INT	L	2.0X	87	1	
2003	JUN	15	2045	55.69	19	25.36	155	16.29	9.26	.26	.15	.4	.6	INT	L	1.9X	51	2	
2003	JUN	15	2047	35.64	19	25.30	155	17.02	10.99	.28	.13	.7	.5	INT	L	1.9X	83	1	
2003	JUN	15	2048	44.61	19	24.41	155	16.48	6.19	.15	.12	.5	.8	INT	L	1.5X	100	3	
2003	JUN	15	2105	11.08	19	24.43	155	16.65	3.03	.27	.11	.3	.2	SSC	L	1.7X	67	1	
2003	JUN	15	2109	22.11	19	25.38	155	17.05	6.95	.25	.11	.6	.5	INT	L	1.6X	109	1	
2003	JUN	15	2202	52.05	19	23.32	155	16.90	3.06	.41	.10	.3	.1	SSC	F	2.1X	46	0	
2003	JUN	15	2247	5.50	19	36.88	155	7.91	14.85	.32	.10	.6	.7	HIL		1.4X	178	23	
2003	JUN	16	0412	51.82	19	25.00	155	15.31	0.06	.29	.10	.2	.2	SNC	L	1.5X	120	3	
2003	JUN	16	0650	58.52	19	24.09	154	55.34	1.36	.30	.15	.1	.5	SLE		1.8X	266	6	
2003	JUN	16	1134	6.46	19	25.88	155	16.02	1.41	.30	.13	.3	.4	SNC	L	1.8X	58	2	
2003	JUN	16	1137	0.17	19	23.37	155	16.82	12.26	.24	.13	.6	.4	INT	L	1.9X	61	1	
2003	JUN	16	1322	41.12	19	18.32	155	44.84	10.64	.24	.13	.8	1.0	KON	1.3X	189	7		
2003	JUN	16	1437	51.51	19	20.73	155	4.34	8.20	.41	.13	.6	.5	SF5		2.4X	194	7	
2003	JUN	16	1637	58.53	19	25.32	155	16.29	1.57	.20	.13	.6	.3	SNC	L	1.5X	160	1	
2003	JUN	16	2147	43.93	19	25.18	155	16.93	10.07	.29	.12	.4	.5	INT	L	2.0X	50	1	
2003	JUN	17	0021	10.62	19	24.23	155	17.20	13.77	.27	.13	.6	.5	DEP	L	1.9X	63	1	
2003	JUN	17	0033	27.69	19	25.18	155	15.49	12.68	.27	.08	.6	.4	INT		1.6X	161	3	
2003	JUN	17	0034	58.55	19	24.88	155	16.77	14.38	.20	.11	.8	.4	DEP	L	1.8X	107	0	
2003	JUN	17	0035	27.69	19	25.18	155	15.49	12.68	.27	.08	.6	.4	INT		1.6X	161	1	
2003	JUN	17	0405	54.08	19	29.51	155	28.36	5.10	.41	.12	.3	1.8	KAO	1.9X	47	5		
2003	JUN	17	0438	9.53	19	24.23	155	29.69	10.05	.30	.06	.3	.6	KAO	1.5X	72	5		
2003	JUN	17	1116	5.36	19	24.21	155	15.84	13.67	.29	.11	.7	.5	DEP	L	2.0X	141	2	
2003	JUN	17	1012	32.19	19	24.64	155	15.84	8.79	.25	.10	.5	1.0	KAO	1.2X	85	4		
2003	JUN	17	1411	27.49	19	20.05	155	8.18	9.72	.45	.10	.6	.4	SF4		2.9X	176	6	
2003	JUN	17	1608	19.01	19	18.43	155	12.56	8.07	.40	.09	.4	.5	SF2		1.8X	150	3	
2003	JUN	17	1733	11.97	19	24.75	155	15.77	10.35	.38	.12	.4	.5	INT	L	2.2X	41	1	
2003	JUN	17	1830	16.82	19	3.38	155	25.49	40.67	.39	.08	1.0	1.4	DLS		2.3X	204	12	
2003	JUN	17	1834	34.88	19	3.15	155	25.67	38.91	.27	.07	.9	1.4	DLS		1.6X	205	12	
2003	JUN	17	1851	2.85	19	13.25	155	34.16	3.94	.36	.15	.6	1.5	LSW		2.0X	204	8	
2003	JUN	17	2201	24.89	19	16.9	155	17.01	5.00	.31	.13	.3	.4	SNC	L	1.9X	51	1	
2003	JUN	18	0410	56.92	19	24.83	155	16.16	14.51	.18	.08	.6	.7	DEP	L	1.6X	118	1	
2003	JUN	18	0441	43.61	19	23.66	155	16.76	3.32	.22	.08	.4	.2	SSC		1.5X	61	1	
2003	JUN	18	0531	38.69	19	15.67	155	44.54	7.47	.25	.11	.7	.5	KOH		1.8X	150	13	
2003	JUN	18	0545	46.22	19	25.54	155	16.44	10.56	.29	.14	.6	.7	INT	L	2.3X	88	2	
2003	JUN	18	0647	13.88	19	24.91	155	16.53	7.21	.33	.11	.4	.4	INT	L	1.9X	91	1	
2003	JUN	18	1224	27.14	19	25.58	155	16.37	7.30	.31	.10	.3	.5	INT	L	2.0X	57	2	
2003	JUN	18	1225	17.13	19	23.96	155	17.30	7.08	.26	.14	.5	.5	SF4		2.8X	175	4	
2003	JUN	18	1906	6.82	19	24.66	155	16.44	6.76	.26	.09	.4	.3	INT	L	2.0X	53	1	
2003	JUN	19	0358	7.15	19	25.92	155	16.11	12.81	.28	.14	.8	.6	INT	L	2.3X	108	2	
2003	JUN	19	0401	42.16	19	25.01	155	15.79	13.25	.30	.13	.7	.6	DEP	L	2.3X	81	1	
2003	JUN	19	0509	23.96	19	21.31	155	6.18	8.30	.44	.11	.6	.5	SF4		2.8X	175	4	
2003	JUN	19	0641	26.35	19	24.73	155	17.87	9.81	.24	.14	.6	.7	INT	L	1.8X	78	1	
2003	JUN	19	0902	8.69	19	20.31	155	5.90	5.13	.34	.09	.6	1.8	SF4		1.5X	192	6	
2003	JUN	19	0942	39.92	19	26.71	155	26.42	7.01	.31	.13	.4	1.5	KAO	1.6X	51	8		
2003	JUN	19	1441	26.20	19	25.52	155	15.77	5.66	.25	.11	.5	.6	INT	L	1.7X	126	2	
2003	JUN	19	1604	59.92	19	17.74	155	29.72	10.80	.35	.09	.4	.8	LSW		1.4X	102	5	
2003	JUN	19	1904	34.53	19	25.82	155	16.20	10.87	.28	.10	.6	.5	INT	L	1.6X	110	2	
2003	JUN	19	1907	14.61	19	25.92	155	17.23	10.25	.31	.12	.4	.5	INT	L	2.2X	62	1	
2003	JUN	19	2050	59.67	19	18.47	155	44.97	10.42	.24	.11	.8	1.0	KON	1.1X	245	10		
2003	JUN	19	2134	1.42	19	48.55	155	20.54	12.79	.29	.12	.4	.8	KEA	1.5X	109	9		
2003	JUN	19	2302	8.53	19	24.86	155	9.16	6.89	.25	.11	.6	.9	SF3		1.3X	175	6	
2003	JUN	20	0130	18.48	1														

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

2003 JUN 20 1514 53.89 19 30.60 155 6.04 37.06 44 .10 .6 .9 DEP 1.9X 109 12
2003 JUN 20 1805 15.79 19 11.58 155 31.26 35.18 46 .08 .5 1.0 DLS 2.6X 93 7
2003 JUN 20 2113 43.50 19 46.25 155 26.38 24.95 36 .10 .5 1.3 KEA 1.5X 97 2
2003 JUN 20 2336 17.28 19 23.73 155 17.54 0.15 36 .18 .2 .2 SSC L 1.9X 41 2
2003 JUN 20 2340 44.09 19 25.31 155 16.70 4.83 34 .16 .4 .4 SNC L 2.1X 90 1

2003 JUN 20 2345 3.34 19 27.31 155 29.60 8.97 35 .14 .4 1.1 KAO 1.4X 57 9
2003 JUN 21 0451 12.49 19 24.09 155 16.09 7.93 33 .13 .4 .5 INT L 1.9X 66 1
2003 JUN 21 0620 29.35 19 19.25 155 10.09 6.67 13 .05 .6 1.7 SF3 1.4X 175 6
2003 JUN 21 0706 55.11 19 11.31 155 31.29 35.55 44 .08 .6 1.1 DLS 2.1X 106 7
2003 JUN 21 1051 49.03 19 24.84 155 17.38 12.33 29 .15 .6 .7 INT L 1.8X 68 1

2003 JUN 21 1244 55.94 19 24.21 155 16.51 3.72 38 .11 .3 .2 SSC L 2.2X 65 1
2003 JUN 21 1556 27.47 19 49.14 155 13.56 38.15 21.11 2.7 2.4 HUA 1.8X 335 43
2003 JUN 21 1753 23.07 19 49.59 155 17.25 12.39 35 .14 .4 .4 INT L 2.2X 49 1
2003 JUN 21 1754 12.19 24.47 155 17.40 9.90 37 .13 .4 .4 INT L 2.3X 46 1
2003 JUN 21 2315 24.25 19 23.91 155 16.84 5.23 31 .12 .4 .5 INT L 2.1X 47 0

2003 JUN 22 0213 11.59 19 26.38 155 16.81 8.52 32 .14 .4 .6 INT L 2.3X 57 2
2003 JUN 22 1128 18.58 19 15.05 155 24.70 39.83 26 .09 .9 1.0 DEP 1.2X 192 9
2003 JUN 22 1143 12.61 19 24.01 155 17.35 10.23 35 .12 .4 .4 INT L 2.3X 47 1
2003 JUN 22 1148 41.63 19 24.91 155 16.26 14.47 31 .10 .6 .4 DEP L 2.0X 138 1
2003 JUN 22 1153 18.69 19 9.75 155 6.24 49.72 40 10 1.0 1.1 LOT 2.5X 246 18

2003 JUN 22 1542 32.02 19 24.68 155 16.73 11.50 37 .11 .4 .5 INT L 2.1X 52 1
2003 JUN 22 1711 34.08 19 19.92 155 7.78 8.65 37 .09 .5 .6 SF4 2.0X 184 6
2003 JUN 22 1717 40.76 19 51.25 155 55.65 15.26 34 .09 1.9 2.7 HUA 2.3X 291 28
2003 JUN 22 1951 11.87 19 26.12 155 15.77 4.53 32 .12 .4 .6 SNC L 2.1X 66 3
2003 JUN 22 2222 40.09 19 29.02 155 26.70 7.06 25 .14 .4 1.3 KAO 1.2X 78 6

2003 JUN 23 0208 0.24 19 24.00 155 17.07 6.05 39 .13 .3 .4 INT L 2.1X 48 1
2003 JUN 23 0218 25.72 19 25.15 155 17.50 13.27 29 .11 .6 .4 DEP L 1.6X 92 0
2003 JUN 23 0503 24.23 19 15.61 155 27.28 8.22 23 .14 .4 1.2 LSW 1.0X 103 5
2003 JUN 23 0650 56.33 19 13.80 155 20.29 42.34 28 .10 1.1 1.2 DEP 1.4X 177 8
2003 JUN 23 0752 1.82 19 25.52 155 17.96 6.22 35 .15 .4 .5 INT L 2.1X 49 1

2003 JUN 23 1227 0.14 19 18.75 155 13.15 5.23 29 .11 .5 1.3 SF2 1.3X 126 3
2003 JUN 23 1430 33.93 19 55.69 155 34.80 31.22 32 .08 .6 1.3 KOH 2.1X 142 11
2003 JUN 23 1630 23.42 19 24.62 155 15.93 9.52 32 .15 .6 .5 INT L 2.3X 100 2
2003 JUN 23 1850 1.59 19 25.29 155 15.93 9.52 32 .15 .5 .5 INT L 1.3X 142 0
2003 JUN 23 1904 41.75 19 24.59 155 16.97 11.25 38 .09 .3 .4 INT L 2.4X 52 1

2003 JUN 23 1906 11.26 19 25.08 155 16.18 12.70 35 .13 .5 .4 INT L 2.2X 51 1
2003 JUN 23 1928 5.98 19 24.40 155 8.99 25 .15 .6 .5 INT L 1.2X 147 1
2003 JUN 23 1941 2.33 19 25.08 155 15.91 8.10 26 .14 .7 .4 INT L 1.2X 160 2
2003 JUN 23 1953 57.99 19 25.86 155 14.93 13.07 27 .14 .8 .5 DEP L 1.6X 176 4
2003 JUN 23 2011 19.18 19 25.52 155 17.02 9.01 35 .13 .4 .5 INT L 2.3X 83 1

2003 JUN 23 2016 15.16 19 25.40 155 16.72 8.51 21 .18 .9 .6 INT L 1.8X 166 1
2003 JUN 23 2021 23.15 19 24.14 155 17.40 7.59 23 .13 .4 .7 INT L 1.5X 75 1
2003 JUN 23 2042 17.55 19 24.12 155 16.96 10.51 25 .10 .5 .7 INT L 1.6X 103 1
2003 JUN 23 2104 5.01 19 24.24 155 17.44 9.00 28 .09 .4 .6 INT L 1.3X 70 1
2003 JUN 23 2126 38.55 19 24.22 155 17.72 9.22 24 .10 .5 .6 INT L 1.5X 56 2

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

2003 JUN 23 2136 43.81 19 24.69 155 16.24 11.36 41 .12 .3 .4 INT L 2.3X 50 1
2003 JUN 23 2227 54.67 19 24.13 155 15.61 2.96 25 .10 .3 .3 SBC 1.7X 101 2
2003 JUN 23 2229 45.71 19 24.24 155 15.66 3.10 33 .10 .2 .3 SBC 2.0X 50 2
2003 JUN 23 2300 59.71 19 25.71 155 16.67 8.13 39 .13 .4 .5 INT L 2.2X 91 2
2003 JUN 23 2307 24.42 19 24.73 155 17.45 6.95 31 .14 .5 .6 INT L 1.7X 41 1

2003 JUN 23 2359 58.15 19 23.97 155 16.82 12.59 27 .10 .5 .6 INT L 1.4X 98 0
2003 JUN 24 0000 42.82 19 16.83 155 57.35 5.82 20 .09 1.1 .8 KON 1.1X 282 31
2003 JUN 24 0048 0.68 19 20.74 155 11.26 8.43 41 .12 .3 .3 SF3 2.0X 141 4
2003 JUN 24 0058 55.33 19 25.76 155 17.44 11.55 38 .14 .4 .5 INT L 2.3X 65 1
2003 JUN 24 0100 39.90 19 24.48 155 17.31 12.18 32 .12 .5 .5 INT L 2.2X 51 1

2003 JUN 24 0433 55.41 19 23.84 155 16.68 11.19 38 .15 .4 .4 INT L 2.4X 43 0
2003 JUN 24 0511 29.35 19 25.50 155 16.66 6.61 35 .15 .4 .6 INT L 2.0X 51 1
2003 JUN 24 0539 3.20 19 24.97 155 5.65 33 .13 .4 .5 INT L 1.7X 76 0
2003 JUN 24 0548 52.47 19 22.77 155 29.93 9.89 35 .12 .8 KAO 1.3X 81 4
2003 JUN 24 0805 7.31 19 22.75 155 17.53 2.91 32 .13 .2 .4 SBC L 2.1X 45 3

2003 JUN 24 0818 58.39 18 56.61 155 27.60 42.31 28 .07 1.2 1.5 DLS 1.6X 249 23
2003 JUN 24 0941 32.40 19 25.70 155 16.64 11.37 30 .12 .5 .6 INT L 2.1X 97 2
2003 JUN 24 1006 21.22 19 24.37 155 17.03 13.56 27 .14 .6 .9 DEP L 1.6X 110 1
2003 JUN 24 1413 20.10 19 25.22 155 17.24 14.62 36 .13 .6 .4 DEP L 2.3X 56 1
2003 JUN 24 1416 54.07 19 29.53 155 26.80 7.16 19 .09 .4 1.3 KAO 1.3X 103 5
2003 JUN 24 1438 21.59 19 25.45 155 16.08 12.58 30 .10 .6 .6 INT L 2.0X 118 2
2003 JUN 24 1733 40.14 19 24.05 155 17.26 7.04 25 .11 .5 .6 INT L 1.6X 84 1
2003 JUN 24 2111 48.37 19 23.50 155 17.44 10.94 31 .12 .5 .5 INT L 1.6X 47 2
2003 JUN 24 2130 51.9 21.51 155 17.48 31.11 48 .12 .6 .8 DEP L 2.3X 49 4
2003 JUN 24 2159 8.58 19 16.30 155 30.21 11.38 26 .10 .4 1.1 LSW 1.4X 124 2

2003 JUN 25 0134 21.98 19 25.85 155 16.54 11.46 35 .12 .4 .4 INT L 2.1X 52 2
2003 JUN 25 0216 19.47 19 25.19 155 16.55 10.10 26 .11 .5 .6 INT L 1.4X 104 1
2003 JUN 25 0816 56.36 19 20.29 155 4.81 4.36 35 .13 .6 2.7 SSF 1.6X 194 7
2003 JUN 25 1043 1.96 19 25.34 155 14.88 0.03 21 .20 .3 .3 SBC L# 1.1X 140 4
2003 JUN 25 1112 16.93 19 13.02 155 20.40 42.80 21 .07 1.4 1.5 DEP 1.5X 237 10

2003 JUN 25 1416 11.27 19 23.92 155 16.42 7.01 22 .09 .4 .6 INT L 1.4X 97 0
2003 JUN 25 1843 37.67 19 23.14 155 16.84 2.92 22 .08 .3 .2 SBC 1.3X 72 0
2003 JUN 25 1933 24.98 19 24.72 155 36.78 1.73 17 .12 .4 .4 MGO 1.4X 104 2
2003 JUN 25 2031 28.48 20 11.98 155 0.01 39 .13 .2 .5 .6 KBA # 2.3X 294 39
2003 JUN 25 2230 6.00 19 25.68 155 16.45 5.82 35 .11 .4 .5 INT L 2.0X 51 2

2003 JUN 26 0029 9.86 19 13.97 155 20.45 42.05 43 .09 .8 .9 DEP 2.0X 167 8
2003 JUN 26 0222 15.41 155 23.59 34.65 40 .09 .7 1.2 LSI 1.8X 207 13
2003 JUN 26 0425 26.69 19 16.98 155 12.61 6.53 33 .11 .5 .6 SFS 1.3X 226 2
2003 JUN 26 0542 5.08 19 16.82 155 12.58 8.13 33 .12 .5 .5 SFS 1.4X 208 2
2003 JUN 26 0721 20.68 19 13.85 155 33.26 5.21 29 .12 .4 2.3 LSW 1.7X 125 6

2003 JUN 26 1636 21.73 19 13.14 155 20.62 42.51 35 .10 .9 1.2 DEP 1.6X 173 10
2003 JUN 26 1711 30.44 19 15.65 155 4.61 45.99 49 .11 .7 .7 DEP F 3.1X 214 15
2003 JUN 26 2311 52.91 19 48.60 155 55.93 11.88 30 .10 1.0 .5 HJA 2.1X 232 17
2003 JUN 27 0000 6.26 19 56.37 155 26.84 33.58 34 .10 .9 1.4 KEA 2.2X 174 12
2003 JUN 27 1345 49.75 19 11.91 155 26.74 2.22 36 .14 .3 .7 LSW 1.6X 138 5

-ORIGIN TIME (HST) - LAT N - LON W - DEPTH N RMS ERH ERZ LOC

PREF AZ MIN

-ORIGIN TIME (HST) - LAT N - LON W - DEPTH N RMS ERH ERZ LOC

PREF AZ MTN

YEAR MON DA HRMN SEC DEG MIN DEG MIN KM RD SBC KM KM REMKS MAG GAP DS

YEAR MON DA HRMN SEC DEG MIN DEG MIN KM RD SBC KM KM REMKS MAG GAP DS

2003	JUN	28	0005	42.12	19	28.59	195	35.85	0.10	18	.17	.3	.2	MLO	1.5X	78	1	
2003	JUN	28	0046	35.43	19	16.54	155	29.97	11.65	38	.10	.4	.6	LSW	1.9X	112	3	
2003	JUN	28	0447	14.81	19	22.03	155	2.22	7.72	36	.13	.6	.5	SF5	1.5X	184	5	
2003	JUN	28	0531	42.69	19	27.83	155	12.63	36.02	40	.10	.6	.9	DEP	1.5X	66	7	
2003	JUN	28	1010	56.76	19	14.28	155	19.89	43.92	45	.11	.8	.9	DEP	2.3X	167	7	
2003	JUN	28	1728	52.77	19	14.06	155	40.85	0.01	25	.20	.2.3	.7	LSW	#	1.3X	260	14
2003	JUN	28	1831	55.33	19	17.12	155	12.65	8.37	36	.11	.5	.7	SF2	1.5X	205	1	
2003	JUN	28	1905	29.00	19	16.03	155	29.45	24.08	25	.08	.4	1.1	LSW	1.4X	88	2	
2003	JUN	29	0100	44.03	19	14.21	156	31.46	0.56	32	.13	6.5	1.9	DIS	#	2.0X	305	85
2003	JUN	29	0412	15.13	19	22.39	155	28.97	10.31	31	.09	.4	.7	KAO	1.3X	215	2	
2003	JUN	29	0504	47.48	19	24.58	155	37.85	3.06	29	.14	.3	.4	MLO	1.8X	95	0	
2003	JUN	29	0756	32.99	19	12.53	155	27.11	36.66	28	.07	.9	1.4	DLS	1.4X	124	6	
2003	JUN	29	0759	34.69	19	12.82	155	27.29	34.58	32	.09	.8	1.2	DLS	1.5X	118	6	
2003	JUN	29	0804	44.51	19	24.06	155	29.97	9.59	27	.06	.4	.8	KAO	1.3X	74	5	
2003	JUN	29	0812	4.02	19	13.03	155	28.32	9.30	38	.19	.5	.9	LSW	1.9X	135	5	
2003	JUN	29	1434	36.35	19	23.53	155	29.30	9.53	30	.10	.4	.8	KAO	1.1X	73	3	
2003	JUN	29	1439	38.18	19	23.48	155	29.24	15.32	32	.10	.4	.9	KAO	1.2X	73	3	
2003	JUN	29	1451	56.44	19	21.38	155	2.81	7.93	31	.11	.6	1.5	SF5	1.5X	202	6	
2003	JUN	30	0929	54.63	19	12.98	155	19.59	27.81	38	.09	.7	1.0	DEP	1.7X	192	9	
2003	JUN	30	0930	59.87	19	20.34	155	8.06	8.22	43	.09	.4	.5	SF4	2.3X	177	6	
2003	JUN	30	1050	0.69	19	28.06	155	26.99	7.58	26	.10	.4	1.2	KAO	1.4X	89	6	
2003	JUN	30	1710	22.72	19	18.87	155	6.18	9.48	35	.08	.6	5	SF4	1.8X	198	9	
2003	JUN	30	1719	41.20	19	28.89	155	27.09	6.52	17	.12	.4	1.6	KAO	1.2X	105	4	
2003	JUL	1	0254	42.70	19	16.43	155	30.57	11.60	38	.09	.4	6	LSW	2.0X	92	3	
2003	JUL	1	0444	56.75	19	14.03	155	20.30	43.28	41	.09	.8	1.0	DEP	2.1X	167	8	
2003	JUL	1	1547	6.13	19	18.23	155	11.44	7.20	41	.10	.4	.5	SF3	1.6X	159	5	
2003	JUL	1	1656	33.11	19	17.35	155	5.93	6.33	29	.15	.9	1.6	SF4	1.5X	224	11	
2003	JUL	1	1815	3.78	19	17.24	155	6.12	7.84	32	.11	.7	1.0	SF4	1.3X	228	11	
2003	JUL	1	1822	50.45	19	16.53	155	5.79	5.52	32	.10	.7	1.6	SF4	1.5X	230	13	
2003	JUL	1	2009	37.32	19	18.87	155	7.29	9.29	41	.10	.5	.4	SF4	2.6X	193	8	
2003	JUL	1	2103	17.91	19	17.28	155	6.65	8.41	32	.08	.5	.5	SF4	1.5X	225	11	
2003	JUL	1	2116	31.88	19	17.53	155	6.12	9.29	22	.10	1.2	.7	SF4	1.4X	222	11	
2003	JUL	1	2116	56.19	19	17.82	155	7.02	7.67	24	.09	.8	1.3	SF4	1.4X	216	10	
2003	JUL	1	2117	26.19	19	18.09	155	6.69	8.38	20	.09	1.3	.9	SF4	1.3X	214	10	
2003	JUL	1	2138	36.87	19	17.51	155	6.46	6.28	31	.12	.7	1.4	SF4	1.5X	221	11	
2003	JUL	2	0000	34.28	19	22.53	155	5.01	6.53	26	.12	.8	.7	SF5	1.1X	185	4	
2003	JUL	2	0022	26.20	19	22.69	155	5.31	8.05	41	.11	.6	1.5	SF4	2.5X	166	4	
2003	JUL	2	0626	25.61	19	17.96	155	4.21	4.51	44	.13	.4	1.2	SWR	2.8X	114	4	
2003	JUL	2	0642	18.67	19	20.14	155	6.77	8.06	36	.12	.6	.7	SF4	1.8X	188	6	
2003	JUL	2	0646	56.99	19	18.00	155	23.22	6.32	38	.13	.4	1.1	SWR	2.2X	113	4	
2003	JUL	2	1128	36.17	19	25.59	155	30.15	11.78	25	.10	.4	1.1	KAO	1.3X	68	7	
2003	JUL	2	1608	16.94	19	14.08	155	27.91	10.74	27	.17	.5	1.4	LSW	1.6X	117	4	
2003	JUL	3	0305	41.86	19	25.67	155	30.13	11.65	38	.10	.4	.6	KAO	1.6X	67	7	
2003	JUL	3	0324	1.89	19	19.36	155	7.14	6.45	36	.12	.7	.9	SF4	1.1X	195	7	

85

-ORIGIN TIME (HST) - -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HHRN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKs	MAG	GAP	DS		
2003	JUL	8	1443	56.20	19	15.61	155	28.05	11.13	30	.13	.4	1.1	LSW	1.6X	94	4		
2003	JUL	8	2005	27.00	19	26.05	155	29.63	10.49	28	.10	.4	.8	KAO	1.2X	62	7		
2003	JUL	8	2056	33.92	19	18.04	155	23.40	5.13	36	.12	.4	1.3	SWR	1.9X	111	4		
2003	JUL	9	0343	28.09	19	22.24	155	4.98	7.85	39	.12	.6	.4	SF5	1.9X	174	4		
2003	JUL	9	0534	7.23	19	18.93	155	12.96	8.03	42	.10	.4	.5	SF2	1.5X	130	4		
2003	JUL	9	1759	34.11	19	20.64	155	10.76	9.07	35	.10	.5	.6	SF3	1.2X	148	4		
2003	JUL	9	1800	22.05	19	20.15	155	6.66	8.65	43	.10	.4	.3	SF4	2.3X	181	6		
2003	JUL	9	2031	21.56	19	10.85	155	31.92	8.51	20	.11	.7	1.5	LSW	1.5X	215	8		
2003	JUL	9	2044	48.85	19	21.26	155	6.36	7.94	37	.10	.7	.5	SF4	2.2X	177	4		
2003	JUL	9	2231	18.42	19	19.94	155	6.90	8.17	34	.09	.7	.6	SF4	1.7X	189	6		
2003	JUL	10	0034	7.74	19	24.87	155	36.86	1.89	20	.14	.4	.5	MLO	1.2X	94	2		
2003	JUL	10	0559	59.68	19	49.06	155	22.52	28.35	44	.11	.6	1.2	KEA F	3.3X	87	9		
2003	JUL	10	2121	37.85	19	10.62	155	40.77	3.29	19	.14	.5	2.9	LSW	1.7X	93	9		
2003	JUL	11	0006	17.54	19	27.05	155	26.29	5.32	17	.10	.4	2.6	KAO	1.1X	76	7		
2003	JUL	11	0107	46.96	19	24.94	155	15.86	15.83	46	.11	.4	.3	DEP	2.2X	52	2		
2003	JUL	11	0128	15.59	19	17.00	155	31.60	6.78	20	.10	.4	.9	LSW	1.7X	94	4		
2003	JUL	11	0432	43.20	19	20.40	155	12.59	8.77	32	.13	.6	.4	SF2	1.4X	131	4		
2003	JUL	11	1151	54.03	19	26.52	155	28.85	10.06	23	.10	.4	.9	KAO	1.4X	59	8		
2003	JUL	11	1201	1.98	20	9.47	155	38.57	29.44	25	.10	1.0	1.3	KOH	2.1X	235	15		
2003	JUL	11	1811	31.33	19	57.76	155	43.38	10.36	16	.13	1.0	.5	KOH	1.6X	157	13		
2003	JUL	11	1950	56.21	19	23.67	155	16.71	10.35	23	.13	.6	.4	INT	1.9X	50	0		
2003	JUL	11	2009	7.97	19	25.73	155	17.65	13.53	16	.14	.8	1.2	DEP L	1.9X	88	1		
2003	JUL	11	2038	33.57	19	25.23	155	16.54	8.71	27	.12	.6	.7	INT L	1.5X	115	2		
2003	JUL	11	2038	55.88	19	24.83	155	15.36	8.18	23	.13	.6	.6	INT L	1.1X	144	3		
2003	JUL	11	2054	2.77	19	25.14	155	16.85	10.28	25	.10	.5	.5	INT L	1.5X	98	1		
2003	JUL	11	2058	20.73	19	25.23	155	16.13	13.63	35	.18	.6	.5	DEP L	1.8X	52	2		
2003	JUL	11	2103	37.91	19	23.86	155	17.02	6.99	33	.18	.4	.6	INT L	1.7X	45	1		
2003	JUL	11	2119	41.51	19	23.42	155	15.05	14.10	24	.11	.7	.4	DEP L	2.0X	102	2		
2003	JUL	11	2139	58.03	19	24.68	155	17.71	7.99	30	.13	.4	.5	INT L	1.9X	50	1		
2003	JUL	11	2155	4.05	19	25.75	155	14.76	10.45	26	.15	.6	.6	INT L	1.6X	165	4		
2003	JUL	11	2209	30.81	19	22.65	155	16.74	10.87	30	.15	.6	.5	INT L	2.2X	89	2		
2003	JUL	11	2351	44.52	19	25.94	155	16.58	12.32	31	.12	.5	.5	INT L	1.5X	94	2		
2003	JUL	12	0036	14.81	19	24.19	155	17.45	11.38	26	.13	.5	.7	INT L	1.5X	71	2		
2003	JUL	12	0150	15.49	19	15.24	155	26.58	9.81	23	.07	.3	.5	LSW	1.3X	112	6		
2003	JUL	12	0448	23.00	19	25.48	155	15.89	11.17	30	.09	.4	.5	INT L	1.6X	108	2		
2003	JUL	12	0746	18.16	19	24.47	155	16.13	9.27	30	.14	.5	.5	INT L	1.7X	95	1		
2003	JUL	12	0757	23.80	19	23.76	155	16.04	10.07	31	.11	.4	.4	INT L	2.1X	93	1		
2003	JUL	12	0805	55.62	19	25.38	155	16.43	9.65	33	.12	.5	.6	INT L	2.0X	51	1		
2003	JUL	12	0826	18.40	19	24.16	155	15.32	7.65	25	.12	.5	.6	INT L	1.5X	115	2		
2003	JUL	12	0837	45.39	19	25.54	155	16.25	12.00	36	.15	.5	.6	INT L	2.2X	56	2		
2003	JUL	12	0855	9.87	19	25.79	155	16.57	14.33	30	.13	.7	.5	DEP L	2.1X	95	2		
2003	JUL	12	0931	31.52	19	25.71	155	15.48	11.31	34	.17	.5	.6	INT L	2.2X	101	3		
2003	JUL	12	1014	36.64	19	24.29	155	15.77	11.12	37	.13	.4	.4	INT L	2.3X	58	2		
2003	JUL	12	1031	33.79	19	25.00	155	16.35	12.87	33	.14	.6	.6	INT L	1.8X	120	2		
2003	JUL	12	1203	33.79	19	25.00	155	16.35	12.87	33	.14	.6	.6	INT L	2.1X	95	1		

6

-ORIGIN TIME (HST) - -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HHRN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKs	MAG	GAP	DS		
2003	JUL	12	1110	0.71	19	24.93	155	17.10	9.92	27	.13	.5	.6	INT L	1.7X	100	0		
2003	JUL	12	1111	45.57	19	25.14	155	15.24	9.13	33	.15	.5	.6	INT L	1.8X	53	3		
2003	JUL	12	1133	53.55	19	23.34	155	17.51	8.08	33	.14	.4	.6	INT L	2.2X	40	2		
2003	JUL	12	1158	48.09	19	25.35	155	16.96	14.68	30	.21	.9	.7	DPP L	2.3X	84	1		
2003	JUL	12	1222	49.90	19	24.54	155	15.67	13.55	22	.18	.9	1.0	DPP L	1.8X	124	2		
2003	JUL	12	1243	15.14	19	25.20	155	17.41	5.09	39	.13	.4	.4	INT L	2.0X	49	1		
2003	JUL	12	1509	54.26	19	28.52	154	49.45	5.78	28	.15	1.0	.9	LRR	1.9X	233	16		
2003	JUL	12	1540	32.78	19	23.19	155	14.87	3.21	23	.08	.3	.3	SRCC	1.5X	103	2		
2003	JUL	12	1635	7.47	19	24.48	155	16.48	10.53	35	.08	.4	.3	INT L	2.2X	52	1		
2003	JUL	12	1734	23.47	19	22.24	155	2.54	7.00	27	.12	.7	.9	SFS	1.0X	193	5		
2003	JUL	13	0147	27.23	19	27.48	154	49.77	6.48	32	.15	.9	.8	LRR	1.9X	233	16		
2003	JUL	13	0316	52.44	19	22.13	155	2.70	7.90	34	.13	.9	.6	SFS	1.7X	193	5		
2003	JUL	13	1505	51.39	19	29.39	155	15.85	10.67	33	.11	.4	.9	GLN	1.7X	82	3		
2003	JUL	13	2006	56.50	18	57.43	155	28.74	36.13	47	.09	.8	1.1	DLS	2.8X	233	20		
2003	JUL	13	2008	9.76	18	57.28	155	28.71	35.91	48	.08	.8	1.1	DLS F	3.3X	234	20		
2003	JUL	13	2014	24.55	18	56.70	155	28.89	36.81	41	.09	.9	1.3	DSS	2.1X	237	20		
2003	JUL	14	0030	6.48	19	20.42	155	11.57	8.12	42	.12	.4	.3	SF3	1.6X	140	5		
2003	JUL	14	0401	9.77	18	57.11	155	29.13	36.44	34	.08	.4	.8	XKO	2.4X	235	20		
2003	JUL	14	0813	23.03	19	25.29	155	20.39	10.34	24	.08	.4	.8	XKO	1.3X	75	3		
2003	JUL	14	1128	7.16	19	23.30	155	17.18	10.72	23	.11	.5	.7	INT L	1.6X	52	2		
2003	JUL	14	1554	59.77	20	14.57	156	3.94	23.12	13	.10	1.7	4.4	KOH	1.8X	314	32		
2003	JUL	14	1839	7.58	19	21.56	155	13.91	11.15	31	.08	.5	.6	SF2	1.4X	98	2		
2003	JUL	14	2345	44.85	19	22.95	155	16.95	12.57	37	.11	.3	.2	SSC	2.2X	48	1		
2003	JUL	14	2551	28.53	19	23.02	155	17.15	2.46	24	.09	.3	.2	SSC	1.7X	53	1		
2003	JUL	15	0012	10.12	19	24.83	155	19.67	6.86	23	.08	.4	.8	KAO	1.3X	77	2		
2003	JUL	15	0045	11.30	19	23.04	155	17.12	2.57	30	.09	.3	.2	SSC	1.7X	54	1		
2003	JUL	15	0052	21.72	19	23.22	155	17.13	2.71	22	.08	.3	.2	SSC	1.3X	47	0		
2003	JUL	15	0101	27.73	19	22.90	155	17.25	2.49	18	.08	.3	.3	SSC	1.1X	63	1		
2003	JUL	15	0257	30.89	19	23.24	155	17.07	2.51	17	.06	.3	.2	SSC	1.3X	53	0		
2003	JUL	15	0729	44.76	19	20.51	155	10.71	30.61	34	.09	.8	.8	DPP	1.6X	150	4		
2003																			

-ORIGIN TIME (HST)- -LAT N- -LON W- -DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRVN	SEC	DEG	MIN	DBG	MIN	KM	RD	SRC	KM	KM	REMKs	MAG	GAP	DS		
2003	JUL	15	1302	7.64	19	23.30	155	17.47	11.23	31	.11	.5	.5	INT L	2.0X	44	2		
2003	JUL	15	1304	53.14	19	24.44	155	16.55	8.05	24	.12	.5	.5	INT L	1.6X	99	1		
2003	JUL	15	1310	53.98	19	23.39	155	16.03	11.38	22	.14	.7	.7	INT L	1.8X	98	1		
2003	JUL	15	1313	56.01	19	25.08	155	16.23	14.95	21	.13	.9	.9	DEP L	1.7X	119	1		
2003	JUL	15	1319	10.36	19	24.19	155	17.25	8.72	25	.13	.5	.6	INT L	2.0X	83	1		
2003	JUL	15	1324	31.58	19	24.78	155	15.24	3.20	22	.13	.6	.4	SNC L	1.2X	136	3		
2003	JUL	15	1330	52.25	19	24.60	155	17.89	5.90	18	.12	.4	.7	INT L	1.3X	63	2		
2003	JUL	15	1345	4.19	19	25.16	155	16.63	10.02	35	.13	.4	.5	INT L	1.9X	54	1		
2003	JUL	15	1420	54.51	19	25.71	155	16.31	13.10	22	.12	.7	.8	DEP L	1.5X	125	2		
2003	JUL	15	1444	13.11	19	25.61	155	16.67	9.05	20	.16	.7	.9	INT L	1.5X	114	1		
2003	JUL	15	1527	34.63	18	51.87	155	13.66	43.60	37	.09	1.1	1.8	LOT	2.3X	263	41		
2003	JUL	15	1529	41.82	19	25.34	155	16.26	8.98	26	.13	.5	.8	INT L	1.7X	55	2		
2003	JUL	15	1837	41.40	19	25.44	155	16.50	11.81	15	.10	.7	1.0	INT L	1.3X	160	2		
2003	JUL	15	2029	17.68	18	56.87	155	29.28	36.05	21	.07	1.2	2.0	DLS	2.0X	237	20		
2003	JUL	15	2031	34.91	18	56.66	155	29.36	36.52	36	.09	.8	1.4	DLS	2.1X	238	20		
2003	JUL	15	2247	9.91	19	20.01	155	25.10	9.56	37	.15	.5	.7	KAO	1.6X	87	3		
2003	JUL	16	0105	45.41	19	18.58	155	14.96	5.47	21	.15	.6	1.2	SFI	1.2X	120	4		
2003	JUL	16	0243	8.32	19	56.40	155	37.62	13.61	25	.11	.6	.6	KOH	1.8X	137	10		
2003	JUL	16	1220	32.80	19	24.69	155	38.65	3.19	15	.08	.7	.5	MLO	1.2X	185	2		
2003	JUL	16	1849	43.85	19	24.92	155	16.19	14.15	17	.10	.7	.6	DEP L	1.4X	157	1		
2003	JUL	16	2114	14.81	19	24.74	155	15.00	14.84	16	.10	.4	.4	DEP L	1.3X	250	3		
2003	JUL	17	1221	51.13	19	18.81	155	29.91	11.93	36	.10	.4	.6	KAO	1.7X	91	6		
2003	JUL	17	1504	54.85	19	47.62	155	13.01	47.03	19	.12	1.6	1.5	KEA	1.6X	224	17		
2003	JUL	17	1717	7.64	19	27.54	155	23.61	8.69	30	.10	.4	1.0	KAO	1.3X	80	4		
2003	JUL	17	1741	8.65	19	30.03	155	48.18	9.48	30	.15	1.0	.5	KON	1.7X	292	4		
2003	JUL	18	0200	39.99	19	25.11	155	15.79	13.78	19	.12	.9	.9	DEP L	1.4X	182	2		
2003	JUL	18	0218	15.26	19	24.60	155	16.27	12.34	21	.12	.7	.7	INT L	1.5X	113	1		
2003	JUL	18	0240	58.16	19	29.85	155	15.78	50.20	25	.10	.9	.8	DEP L	1.7X	116	9		
2003	JUL	18	0422	4.83	19	22.40	155	19.47	0.72	18	.15	.3	.4	KAO	1.7X	80	2		
2003	JUL	18	0423	46.36	19	23.33	155	16.83	8.49	23	.14	.6	.6	INT L	1.6X	74	1		
2003	JUL	18	0424	53.75	19	25.29	155	18.14	6.60	19	.12	.5	.8	INT L	1.3X	72	1		
2003	JUL	18	0427	18.47	19	23.66	155	16.99	9.03	24	.15	.5	.6	INT L	1.7X	56	1		
2003	JUL	18	0433	42.48	19	25.48	155	17.20	9.04	22	.11	.4	.6	INT L	1.6X	63	1		
2003	JUL	18	0437	32.40	19	25.79	155	18.57	12.41	14	.12	1.0	1.4	INT L	1.6X	85	2		
2003	JUL	18	0445	51.10	19	24.89	155	17.19	7.62	18	.13	.6	.8	INT L	1.2X	76	0		
2003	JUL	18	0500	27.73	19	24.59	155	16.66	10.27	23	.11	.5	.5	INT L	1.5X	68	1		
2003	JUL	18	0512	42.73	19	24.92	155	16.23	10.16	28	.13	.5	.5	INT L	1.6X	51	1		
2003	JUL	18	0949	20.26	19	10.36	155	40.65	1.59	37	.17	.5	.9	LSW	2.1X	86	3		
2003	JUL	18	1056	55.07	19	13.56	155	30.34	7.56	25	.12	.5	.7	LSW	1.7X	136	3		
2003	JUL	18	1402	22.49	19	22.29	155	30.28	9.04	18	.07	.7	1.1	KAO	1.6X	154	5		
2003	JUL	18	1430	23.68	19	18.74	155	13.15	9.98	39	.12	.6	.5	SF2	2.3X	173	7		
2003	JUL	18	1829	28.19	18	16.87	155	13.28	5.31	21	.13	.6	.6	SF2	1.5X	139	3		
2003	JUL	18	1924	29.29	19	18.90	155	8.94	7.39	29	.11	.7	.6	SF4	1.9X	176	6		
2003	JUL	18	1932	23.47	19	31.12	155	24.78	23.32	47	.11	.4	.8	DML F	3.2X	53	4		
2003	JUL	18	2333	23.27	19	18.53	155	12.88	9.28	33	.11	.6	.6	SF2	1.7X	175	8		

09

-ORIGIN TIME (HST)- -LAT N- -LON W- -DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRVN	SEC	DEG	MIN	DBG	MIN	KM	RD	SRC	KM	KM	REMKs	MAG	GAP	DS		
2003	JUL	19	0004	7.42	19	17.60	155	12.70	5.94	22	.09	.8	1.0	SF2	1.2X	193	2		
2003	JUL	19	0407	35.21	19	17.70	155	12.79	8.71	34	.13	.5	.5	SF2	1.8X	164	2		
2003	JUL	19	0535	54.17	19	24.84	155	16.38	11.86	18	.10	.6	.9	INT L	1.3X	114	1		
2003	JUL	19	0708	25.93	19	20.55	155	5.57	7.45	36	.13	.8	.6	SF4	1.5X	189	6		
2003	JUL	19	1418	9.59	20	41.93	155	47.66	6.40	22	.10	9.011.6	DTS	-	2.3X	339125			
2003	JUL	19	1447	48.76	19	25.11	155	16.28	14.71	26	.13	.8	.4	DBP L	1.7X	149	1		
2003	JUL	19	1457	26.58	19	27.01	155	23.91	10.29	41	.11	.4	.8	KAO	2.1X	143	5		
2003	JUL	19	2130	28.51	19	16.64	155	11.16	8.06	20	.11	.9	1.1	SF3	1.2X	258	4		
2003	JUL	19	2143	30.29	19	25.13	155	16.83	11.39	30	.11	.5	.6	INT L	1.2X	98	1		
2003	JUL	20	0030	39.68	19	25.20	155	15.91	14.13	29	.15	.7	.5	DBP L	1.4X	109	2		
2003	JUL	20	0210	12.92	19	27.10	155	23.26	9.65	30	.10	.4	.9	KAO	1.2X	83	5		
2003	JUL	20	0225	11.83	19	11.65	155	33.28	8.75	32	.13	.6	1.0	L5W	2.0X	119	8		
2003	JUL	20	0355	40.69	19	19.12	155	9.13	7.27	30	.12	.7	.8	SF3	1.1X	185	7		
2003	JUL	20	1021	33.45	19	19.66	155	6.85	6.39	34	.12	.6	1.1	SF4	1.4X	190	7		
2003	JUL	20	1023	37.86	19	25.08	155	15.61	14.66	25	.15	1.0	.4	DBP L	1.3X	151	2		
2003	JUL	20	1130	39.18	19	27.61	155	17.46	8.62	22	.13	.5	.5	KAO	1.2X	82	8		
2003	JUL	20	1307	1.52	19	26.52	155	29.20	10.15	19	.10	.4	1.4	KAO	1.2X	71	8		
2003	JUL	21	0013	39.82	19	24.41	155	15.89	13.06	20	.11	1.1	.7	DBP L	1.4X	227	2		
2003	JUL	21	0154	55.94	19	18.07	155	23.13	3.07	24	.09	.4	.7	SRR	1.6X	150	4		
2003	JUL	21	0527	27.42	19	17.43	155	13.72	5.87	18	.11	1.1	1.3	SF2	1.0X	111	1		
2003	JUL	21	0612	21.93	19	56.55	155	30.29	37.32	18	.08	.8	1.1	KOA	1.4X	228	18		
2003	JUL	21	1056	59.72	19	22.65	155	26.85	9.33	31	.10	.3	.6	KAO	1.5X	59	1		
2003	JUL	21	1131	23.69	19	25.31	155	15.41	12.47	19	.12	1.1	.7	INT L	1.6X	145	4		
2003	JUL	21	1716	55.16	19	25.39	155	15.49	3.55	31	.18	.5	.4	SNC L	1.5X	115	3		
2003	JUL	21	1726	45.22	19	24.12	155	15.75	3.52	26	.10	.4	.3	SNC L	1.3X	112	2		
2003	JUL	21	1734	51.42	19	26.00	155	16.74	14.42	30	.09	.6	.4	DBP L	1.8X	106	2		
2003	JUL	21	1741	31.52	19	25.65	155	14.97	10.74	32	.11	.6	.6	INT L	1.6X	145	4		
2003	JUL	21	1755	21.43	19	25.11	155	15.35	13.24	32	.10	.5	.4	DBP L	1.8X	114	3		
2003	JUL	21	2050	59.77	19	10.00	155	29.19	43.84	22	.09	1.3	1.5	DLS	1.2X	254	10		
2003	JUL	21	2333	53.61	19	24.21	155	16.14	3.04	18	.12</td								

9

YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	MIN	KM	RD	SRC	KM	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
2003	JUL	23	1141	12.93	19	0.96	155	25.20	44.51	40	.07	.9	1.1	DLS	1.8X	222	16		
2003	JUL	23	1351	52.93	19	12.39	155	33.64	2.55	26	.14	.6	.9	LSW	1.6X	210	8		
2003	JUL	23	1540	39.29	19	19.28	155	10.54	6.63	39	.12	.5	.7	SF3	1.7X	181	6		
2003	JUL	24	0011	35.07	19	11.56	155	40.39	1.11	19	.14	.6	.6	LSW	1.2X	164	18		
2003	JUL	24	0642	48.27	19	21.72	155	4.90	8.57	37	.08	.6	.4	SF5	1.9X	181	5		
2003	JUL	24	1147	28.13	19	23.89	155	15.62	23.86	35	.06	.7	.8	DEP	1.8X	94	2		
2003	JUL	24	1522	11.23	19	15.50	155	10.31	7.32	26	.12	.7	.7	SF3	1.7X	181	6		
2003	JUL	24	1940	49.53	19	23.81	155	17.26	9.75	18	.13	.6	.8	INT L	1.9X	69	1		
2003	JUL	24	1942	51.14	19	25.39	155	16.21	4.99	13	.13	.1	.8	SNC L	1.4X	184	2		
2003	JUL	24	1959	26.14	19	25.37	155	15.87	3.89	12	.10	.6	.5	SNC L	1.4X	172	2		
2003	JUL	24	2018	43.79	19	22.70	155	16.34	9.67	24	.14	.5	.7	INT L	1.6X	80	1		
2003	JUL	24	2144	4.53	19	34.01	155	47.63	31.25	47	.11	.6	.9	KON	2.7X	165	0		
2003	JUL	25	0145	21.11	19	25.01	155	17.01	4.89	23	.12	.5	.6	SNC L	1.5X	87	0		
2003	JUL	25	0147	42.65	19	25.69	155	24.25	9.88	40	.12	.4	.4	DEP	1.8X	40	8		
2003	JUL	25	0222	56.11	19	27.03	155	19.99	8.78	27	.10	.5	.7	KAO	1.4X	95	5		
2003	JUL	25	0752	28.76	19	24.16	155	17.55	8.19	19	.12	1.0	1.0	INT L	1.4X	71	2		
2003	JUL	25	1651	7.04	19	17.96	155	13.24	8.78	26	.08	.5	.4	SF2	1.7X	132	2		
2003	JUL	25	1913	59.22	19	19.74	155	12.25	8.34	40	.12	.4	.4	SF3	1.8X	137	5		
2003	JUL	26	0033	7.28	19	19.53	155	11.62	4.73	30	.09	.4	1.8	SSP	1.1X	150	6		
2003	JUL	26	0104	28.96	19	45.28	155	58.10	23.61	40	.12	1.0	2.6	HUA	2.2X	223	34		
2003	JUL	26	0330	49.11	19	20.02	155	10.92	8.82	35	.08	.4	.4	SF3	1.2X	153	5		
2003	JUL	26	0919	25.16	19	24.93	155	28.96	6.48	22	.09	.9	1.0	SF5	1.3X	153	4		
2003	JUL	26	1328	10.09	19	13.90	155	28.59	42.94	18	.12	1.4	2.5	DLS T	1.3X	139	3		
2003	JUL	26	1803	33.81	19	24.73	155	36.71	1.96	16	.12	.4	.5	MLO	1.1X	104	2		
2003	JUL	26	2037	20.62	19	22.83	155	15.05	29.21	34	.09	.9	.7	DEP	1.7X	122	2		
2003	JUL	27	0020	43.96	19	22.06	155	4.29	6.49	29	.13	.6	.9	SF5	1.2X	181	4		
2003	JUL	27	0109	23.53	19	21.47	155	30.19	9.93	24	.08	.4	.9	KAO	1.0X	91	5		
2003	JUL	27	0404	40.58	19	24.93	155	29.64	9.55	28	.09	.4	.9	KAO	1.3X	68	6		
2003	JUL	27	1021	19.32	19	17.93	155	45.98	9.99	38	.12	.6	.4	KON	1.9X	188	12		
2003	JUL	27	1044	9.64	19	19.90	155	3.08	6.50	31	.13	.9	1.2	SFS	1.7X	216	8		
2003	JUL	27	1437	2.08	19	14.53	155	33.37	4.70	38	.13	.5	1.4	LSW	2.0X	121	6		
2003	JUL	27	1507	39.04	19	30.64	155	29.78	2.33	20	.09	.3	.6	MLO	1.3X	77	4		
2003	JUL	27	1617	28.57	19	18.90	155	29.09	9.22	31	.14	.4	.9	LSW	1.4X	85	4		
2003	JUL	27	1749	47.29	19	21.48	155	10.32	2.23	18	.08	.5	.6	SER	1.1X	143	2		
2003	JUL	28	0143	40.10	19	16.14	155	17.09	33.39	32	.10	.8	1.0	DEP	1.7X	191	4		
2003	JUL	28	0301	59.81	19	12.73	155	19.53	45.47	29	.08	1.1	1.1	DEP	1.8X	231	10		
2003	JUL	28	1446	9.43	19	53.23	155	27.42	8.15	1.5	.07	1.5X	102						
2003	JUL	28	1512	41.95	19	28.65	155	10.89	22	.12	.8	.6	INT L	1.5X	196	3			
2003	JUL	28	1634	4.12	19	23.12	155	15.10	3.22	21	.10	.3	.3	SEC	1.4X	111	2		
2003	JUL	28	2024	46.75	19	16.96	155	26.55	9.26	36	.12	.4	.6	LSW	1.5X	101	7		
2003	JUL	28	2331	8.45	19	42.27	155	28.39	11.40	17	.11	.5	1.3	KEA	1.6X	123	9		
2003	JUL	29	0119	52.93	19	24.18	155	16.42	9.67	23	.12	.6	.6	INT L	1.4X	106	1		
2003	JUL	29	0158	20.51	19	27.58	155	27.77	10.52	23	.12	.5	1.0	KAO	1.2X	52	8		
2003	JUL	29	0556	34.55	19	23.26	155	16.99	11.57	21	.09	.7	.9	INT L	1.5X	102	1		
2003	JUL	29	0814	20.33	19	16.66	155	29.59	12.27	23	.10	.5	1.2	LSW	1.4X	98	3		

YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	MIN	KM	RD	SRC	KM	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
2003	JUL	29	0955	39.26	19	24.41	155	16.78	11.88	18	.11	.6	1.0	INT L	1.6X	116	1		
2003	JUL	29	1239	27.72	19	26.30	155	24.05	9.58	41	.11	.3	.7	KAO	1.9X	42	6		
2003	JUL	29	1358	24.76	19	19.11	155	52.57	6.56	28	.13	1.1	.7	KON	1.9X	276	22		
2003	JUL	30	0824	44.57	20	2.03	156	10.05	7.00	18	.14	1.9	1.3	KOH	1.7X	316	52		
2003	JUL	30	1618	34.96	19	21.01	155	5.46	6.50	31	.14	.7	1.1	SF4	1.5X	186	6		
2003	JUL	31	0111	41.76	19	25.55	155	16.87	6.80	24	.12	.6	.5	INT L	1.3X	109	1		
2003	JUL	31	0221	44.59	19	25.16	155	16.38	8.91	27	.18	.7	.7	INT L	1.5X	135	1		
2003	JUL	31	0231	34.95	19	23.76	155	17.06	14.78	20	.13	.9	.5	DSP L	1.3X	83	1		
2003	JUL	31	0709	4.75	19	25.79	155	15.27	13.56	20	.09	.8	.5	DSP L	1.2X	201	4		
2003	JUL	31	0848	19.84	19	25.76	155	15.23	9.14	27	.13	.6	.7	INT L	1.2X	142	3		
2003	JUL	31	1100	6.57	19	24.67	155	16.08	13.96	26	.12	1.0	.5	DSP L	1.4X	154	2		
2003	JUL	31	1957	38.65	19	22.42	155	24.83	9.84	36	.12	.4	.6	KAO	1.3X	55	1		
2003	JUL	31	2032	22.33	19	26.63	155	50.83	5.00	41	.11	.6	1.0	KON	2.3X	197	11		
2003	JUL	31	2332	25.59	19	23.14	155	14.95	3.28	17	.07	.4	.4	SRC	1.5X	135	2		
2003	JUL	31	2337	15.05	19	20.00	155	12.04	8.00	40	.11	.4	.5	SF3	1.4X	145	5		
2003	AUG	1	0503	15.20	19	23.46	155	15.25	2.88	20	.10	.4	.3	SRC	1.5X	102	2		
2003	AUG	1	0817	43.24	19	22.22	155	12.68	3.74	18	.07	.5	.3	SER	1.6X	120	1		
2003	AUG	1	0826	49.43	19	18.59	155	15.01	5.30	27	.13	.5	1.5	SF1	1.3X	120	4		
2003	AUG	1	0844	45.51	19	11.14	155	20.73	45.99	33	.09	.8	1.1	DEP	1.7X	181	13		
2003	AUG	1	0851	45.02	19	8.93	155	24.71	45.77	26	.15	1.2	1.5	LOT	2.0X	259	15		
2003	AUG	2	0810	59.97	19	29.80	155	54.43	13.70	26	.11	1.1	.5	KON	1.6X	294	15		
2003	AUG	2	1716	26.44	19	25.56	155	24.67	9.03	32	.11	.4	1.0	KAO	1.3X	56	8		
2003	AUG	2	1747	20.07	19	26.16	155	16.20	1.20	26	.12	.3	.4	SNC L	.9X	124	3		
2003	AUG	2	2006	16.02	20	7.48	155	31.15	31.26	46	.10	.8	1.4	KBA F	2.8X	221	27		
2003	AUG	2	2012	39.82	19	10.05	155	31.35	46.53	34	.22	1.3	1.5	DJS T	2.26	6			
2003	AUG	2	2125	58.97	19	24.43	155	17.06	6.84	29	.10	.4	.4	INT L	1.5X	91	1		
2003	AUG	2	2135	54.35	19	23.18	155	14.86	3.33	29	.10	.4	.4	SBC	1.4X	108	2		
2003	AUG	2																	

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	KM	RD	SEC	KM	KM	REMKs	MAG	GAP	DS				
2003	AUG	3	2056	11.28	18	56.91	155	28.82	35.88	48	.09	.8	1.1	DLS	F	3.3X	236	20	
2003	AUG	3	2102	43.42	18	56.86	155	28.78	35.43	31	.08	.9	1.3	DLS		1.8X	236	20	
2003	AUG	4	0248	17.30	19	25.52	155	16.69	12.52	24	.10	.6	.6	INT	L	1.3X	113	1	
2003	AUG	4	0625	40.04	19	25.61	155	16.17	7.73	27	.09	.4	.7	KAO		1.2X	88	3	
2003	AUG	4	0724	30.75	19	25.49	155	16.55	7.11	17	.15	.7	.7	INT	L	1.3X	117	1	
2003	AUG	4	0750	9.73	19	16.93	155	12.68	8.47	36	.10	.5	.5	SF2		1.6X	219	1	
2003	AUG	4	0900	23.60	19	24.85	155	16.54	4.17	23	.09	.4	.3	SNC	L	1.1X	110	1	
2003	AUG	4	1320	37.65	19	24.68	155	17.38	6.62	17	.12	.5	.7	INT	L	1.5X	55	1	
2003	AUG	4	1334	6.95	19	24.67	155	18.67	9.59	28	.13	.4	.6	INT	L	1.7X	37	2	
2003	AUG	4	1339	39.52	19	25.33	155	16.60	10.50	31	.14	.4	.5	INT	L	1.6X	91	1	
2003	AUG	4	1342	29.32	19	24.73	155	15.98	14.35	22	.11	.9	.4	DEP	L	1.5X	139	3	
2003	AUG	4	1343	17.28	19	25.26	155	16.66	6.58	22	.11	.6	.4	INT	L	1.2X	102	1	
2003	AUG	4	1344	17.29	19	23.98	155	16.02	8.34	17	.14	.6	.7	INT	L	1.5X	139	1	
2003	AUG	4	1345	48.43	19	25.02	155	15.80	8.74	28	.14	.7	.5	INT	L	1.3X	128	2	
2003	AUG	4	1347	37.05	19	24.72	155	17.27	9.97	23	.14	.6	.7	INT	L	1.5X	52	1	
2003	AUG	4	1349	35.55	19	25.89	155	14.95	9.06	21	.13	.5	.7	INT	L	1.2X	151	4	
2003	AUG	4	1352	52.93	19	23.46	155	17.14	10.81	31	.13	.4	.5	INT	L	2.2X	44	1	
2003	AUG	4	1355	50.51	19	25.65	155	16.53	10.82	21	.12	.6	.7	INT	L	1.6X	108	2	
2003	AUG	4	1355	58.18	19	25.61	155	17.59	6.51	19	.13	.8	.6	INT	L	1.4X	156	0	
2003	AUG	4	1356	39.81	19	25.34	155	15.60	4.50	25	.12	.5	.6	SNC	L	1.4X	138	3	
2003	AUG	4	1358	2.27	19	24.09	155	16.13	11.40	28	.12	.5	.6	INT	L	1.6X	103	1	
2003	AUG	4	1403	34.11	19	24.50	155	16.11	11.02	21	.13	.7	.6	INT	L	1.7X	123	3	
2003	AUG	4	1410	16.14	19	24.07	155	16.84	9.70	32	.11	.4	.5	INT	L	2.0X	84	1	
2003	AUG	4	1424	13.55	19	24.45	155	17.13	10.37	30	.14	.5	.6	INT	L	2.1X	48	1	
2003	AUG	4	1736	51.85	19	21.19	155	18.68	3.59	29	.09	.3	.6	SWR		1.2X	79	3	
2003	AUG	4	1803	22.66	19	23.30	155	17.23	6.88	16	.09	.6	.9	INT	L	1.6X	86	1	
2003	AUG	4	1856	2.77	19	17.77	155	13.55	4.23	24	.12	.7	.1	SSF		1.2X	112	1	
2003	AUG	4	1947	51.67	19	25.65	155	16.54	29.17	37	.12	.3	.5	INT	L	1.8X	88	2	
2003	AUG	5	0030	2.26	19	17.63	155	15.52	9.17	32	.11	.4	.7	LSW		1.9X	77	5	
2003	AUG	5	0241	18.39	19	5.40	155	51.37	41.64	26	.11	1.3	1.6	KON		1.5X	240	23	
2003	AUG	5	0659	15.06	19	23.12	155	14.69	3.32	18	.07	.4	.3	SEC		1.3X	138	2	
2003	AUG	5	1029	36.46	19	18.42	155	12.83	8.37	34	.12	.5	.8	SF2		1.8X	141	3	
2003	AUG	5	1228	19.10	19	22.49	155	29.87	8.52	22	.11	.5	.9	KAO		1.5X	82	4	
2003	AUG	5	1415	55.55	19	25.82	155	18.49	4.03	15	.21	.7	.9	SNC	L	1.3X	89	2	
2003	AUG	5	1659	51.52	19	9.58	155	33.13	4.28	16	.10	.6	7.8	LSW		1.3X	145	11	
2003	AUG	5	1812	3.17	19	20.44	155	12.42	8.16	29	.14	.6	.4	SF2		1.4X	134	4	
2003	AUG	5	2043	15.01	19	47.31	155	33.53	10.03	14	.07	.5	1.0	KEA		1.1X	116	13	
2003	AUG	6	0344	25.14	19	54.10	155	44.26	35.53	21	.10	.9	1.1	HUA		1.5X	246	9	
2003	AUG	6	0503	25.23	19	33.55	155	39.39	11	.11	.7	1.0	DLS		1.7X	144	9		
2003	AUG	6	0653	29.48	19	13.07	155	24.83	36.03	26	.10	1.0	1.5	DEP		1.5X	150	8	
2003	AUG	7	0353	51.36	19	23.41	155	14.64	3.37	29	.10	.3	.4	SEC		1.9X	106	3	
2003	AUG	7	0631	50.06	19	25.05	155	14.39	37	.09	.3	.5	KAO		1.9X	65	5		
2003	AUG	7	0729	33.11	19	24.14	154	57.76	4.66	15	.14	1.7	1.1	SLE		1.5X	256	2	
2003	AUG	7	1019	0.63	19	55.27	155	29.94	35.51	16	.09	.9	1.2	KEA		1.3X	212	17	
2003	AUG	7	1301	4.97	19	24.20	155	17.88	11.37	16	.13	.8	1.0	INT	L	2.0X	67	2	

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	KM	RD	SEC	KM	KM	REMKs	MAG	GAP	DS				
2003	AUG	7	2241	52.51	19	26.20	155	15.72	11.04	24	.11	.6	.7	INT	L	1.8X	150	3	
2003	AUG	7	2242	33.34	19	26.07	155	15.18	10.47	18	.12	1.3	.9	INT	L	1.1X	230	4	
2003	AUG	7	2243	12.25	19	23.06	155	16.92	10.04	21	.16	.8	.9	INT	L	1.9X	114	2	
2003	AUG	7	2244	22.71	19	25.72	155	15.21	9.03	25	.16	.6	.7	INT	L	1.5X	131	3	
2003	AUG	7	2245	9.23	19	23.29	155	16.15	11.57	23	.10	.6	.6	INT	L	1.7X	101	1	
2003	AUG	7	2246	30.32	19	25.26	155	15.57	8.70	23	.13	.7	.7	INT	L	1.4X	196	3	
2003	AUG	7	2255	36.30	19	23.56	155	17.28	11.35	18	.11	.6	.8	INT	L	1.7X	62	1	
2003	AUG	7	2344	32.78	19	24.58	155	15.77	3.17	18	.11	.5	.4	SEC	L	1.5X	89	1	
2003	AUG	8	0057	16.68	19	23.22	155	16.45	2.37	18	.16	.5	.6	SNC	L	1.4X	176	2	
2003	AUG	8	0151	1.36	19	25.66	155	15.91	2.15	.04	.08	.6	.5	SNC	L	1.4X	57	4	
2003	AUG	8	0718	12.16	19	24.08	155	17.30	3.20	13	.07	.4	.4	SEC		1.4X	151	1	
2003	AUG	8	0938	35.18	19	24.56	155	16.80	8.33	25	.14	.5	.6	INT	L	1.8X	51	1	
2003	AUG	8	1123	53.12	19	24.00	155	16.61	10.61	11	.12	1.1	1.1	INT	L	1.8X	171	1	
2003	AUG	8	1127	42.96	19	24.37	155	15.93	6.42	18	.12	.6	.7	INT	L	1.7X	171	1	
2003	AUG	8	1439	50.06	19	25.43	155	15.94	8.01	22	.12	.4	.6	INT	L	1.9X	88	2	
2003	AUG	8	1855	0.76	19	25.60	155	17.10	10.71	28	.15	.5	.6	INT	L	1.9X	54	1	
2003	AUG	8	2013	13.09	19	19.05	155	20.82	7.19	23	.10	.5	.6	SWR		1.2X	154	4	
2003	AUG	8	2134	38.37	19	24.76	155	16.78	1.59	13	.12	.5	.3	SNC		1.6X	106	0	
2003	AUG	8	2139	0.29	19	23.45	155	15.32	3.04	18	.09	.4	.3	SEC		1.5X	138	2	
2003	AUG	9	0021	45.73	19	23.67	155	15.30	3.20	13	.07	.4	.4	SEC		1.4X	151	2	
2003	AUG	9	0142	55.86	19	16.78	155	13.65	8.10	23	.11	1.0	.6	SF2		1.4X	240	1	
2003	AUG	9	0511	21.36	19	22.77	155	26.17	12.11	35	.10	.3	.5	KAO		1.7X	74	3	
2003	AUG	9	0543	21.36	19	25.03	155	16.45	12.40										

-ORIGIN TIME (HST)- LAT N- LON W- DEPTH N RMS ERH ERZ LOC												PREF AZ MIN					
YEAR	MON	DA	HRMN	SEC	DBG	MIN	DEG	MIN	KM	RD	SBC	KM	KM	REMKs	MAG	GAP DS	
2003	AUG	10	0120	4.32	19	24.30	155	16.92	11.89	35	.14	.4	.5	INT L	1.7X	49	1
2003	AUG	10	0226	20.87	19	22.82	155	15.51	3.15	16	.09	.4	.3	SEC	1.2X	120	1
2003	AUG	10	0229	52.75	19	23.11	155	14.96	2.84	15	.07	.4	.3	SEC	1.1X	141	2
2003	AUG	10	0352	0.59	19	23.95	155	17.39	10.46	38	.13	.4	.5	INT L	2.2X	47	1
2003	AUG	10	0405	4.15	19	47.75	155	34.83	15.24	43	.11	.4	.6	KEA F	2.4X	96	11
2003	AUG	10	0549	47.54	19	25.38	155	16.01	3.14	32	.09	.2	.2	SNC L	1.9X	52	2
2003	AUG	10	0555	55.06	19	23.53	155	16.68	24.48	33	.14	.9	.7	DEP L	2.3X	47	1
2003	AUG	10	0606	50.89	19	25.89	155	15.78	10.74	32	.12	.4	.6	INT L	1.9X	53	3
2003	AUG	10	0619	26.23	19	24.60	155	11.36	11.14	36	.14	.4	.6	INT L	2.0X	41	1
2003	AUG	10	0644	12.40	19	24.47	155	17.61	8.47	37	.11	.4	.5	INT L	2.1X	43	1
2003	AUG	10	0849	25.73	19	19.41	155	11.81	6.13	29	.10	.5	.9	SF3	1.3X	149	5
2003	AUG	10	0955	43.30	19	25.83	155	15.78	13.90	24	.14	.7	.7	DEP L	1.7X	31	3
2003	AUG	10	1518	7.18	19	22.30	155	48.21	10.91	19	.10	1.1	1.1	KON	1.2X	262	14
2003	AUG	10	2103	58.06	19	24.52	155	16.95	7.91	25	.11	.5	.6	INT L	1.5X	101	1
2003	AUG	10	2135	33.38	19	24.29	155	17.70	3.48	32	.15	.3	.3	SSC L	1.6X	45	2
2003	AUG	10	2147	12.71	19	25.37	155	17.72	8.32	31	.14	.4	.5	INT L	1.8X	45	0
2003	AUG	10	2147	27.01	19	25.39	155	17.90	13.73	20	.10	.7	.9	DEP L	2.3X	74	1
2003	AUG	10	2222	13.71	19	18.38	155	12.93	8.19	33	.07	.4	.5	SF2	1.3X	138	3
2003	AUG	11	0051	36.75	19	25.29	155	18.20	7.39	32	.11	.4	.6	INT L	2.1X	39	1
2003	AUG	11	0051	55.88	19	25.19	155	16.51	10.50	25	.14	.5	.6	INT L	2.0X	93	1
2003	AUG	11	0304	52.95	19	27.04	155	29.37	9.56	31	.15	.4	.1	KAO	1.7X	57	9
2003	AUG	11	0611	54.71	19	25.15	155	10.84	35	.13	.4	.5	INT L	2.1X	50	1	
2003	AUG	11	1210	44.89	19	24.31	155	17.60	10.16	35	.11	.3	.4	INT L	2.2X	44	2
2003	AUG	11	1219	20.37	19	25.46	155	16.60	9.27	35	.14	.4	.6	INT L	1.9X	51	1
2003	AUG	11	1240	5.64	19	24.38	155	16.54	9.24	27	.13	.6	.6	INT L	1.8X	106	1
2003	AUG	11	1304	38.96	19	25.19	155	17.20	4.04	33	.17	.3	.3	SNC L	1.6X	50	1
2003	AUG	11	1318	50.55	19	25.18	155	17.84	4.30	33	.17	.4	.4	SNC L	1.7X	56	1
2003	AUG	11	1330	23.69	19	25.25	155	16.06	12.17	35	.12	.5	.5	INT L	1.9X	56	2
2003	AUG	11	1601	31.06	19	27.14	155	28.86	10.31	29	.10	.4	1.1	KAO	1.4X	56	9
2003	AUG	11	2318	17.52	19	21.86	155	26.03	10.19	36	.09	.4	.6	KAO	1.4X	88	3
2003	AUG	11	2322	19.02	19	24.76	155	16.58	8.82	34	.13	.4	.5	INT L	1.9X	52	1
2003	AUG	12	0115	33.05	19	22.22	155	7.19	7.86	38	.11	.6	.7	SF4	1.7X	184	6
2003	AUG	12	0311	56.84	19	51.29	155	32.18	23.94	80	.08	.7	1.3	KEA	1.5X	166	12
2003	AUG	12	0702	25.76	19	24.09	155	16.87	10.26	33	.12	.4	.5	INT L	2.1X	48	1
2003	AUG	12	0709	26.82	19	25.49	155	17.49	8.86	36	.15	.5	.6	INT L	2.1X	50	0
2003	AUG	12	0720	31.72	19	24.51	155	17.36	8.84	36	.14	.5	.5	INT L	1.9X	47	1
2003	AUG	12	2047	29.68	19	25.35	155	16.88	7.72	27	.11	.5	.6	INT L	1.8X	99	1
2003	AUG	12	2122	43.94	19	24.01	155	16.26	8.64	33	.14	.5	.5	INT L	1.9X	49	1
2003	AUG	12	2137	51.59	19	25.71	155	17.78	11.05	31	.14	.5	.6	INT L	2.0X	53	1
2003	AUG	12	2139	37.79	18	47.29	155	16.91	42.34	32	.08	1.0	1.9	LOT	1.9X	280	45
2003	AUG	12	2155	37.81	19	24.08	155	17.55	4.73	30	.14	.3	.5	SSC L	2.0X	68	2
2003	AUG	12	2228	5.51	19	25.80	155	17.79	6.34	28	.12	.4	.6	INT L	1.5X	76	1
2003	AUG	13	0146	35.63	19	17.83	155	16.05	9.36	45	.12	.4	.4	SF1	2.3X	123	5
2003	AUG	13	0417	12.63	19	22.55	155	4.88	6.90	38	.16	.7	.5	SF5	1.9X	170	4

-ORIGIN TIME (HST) - LAT N - LON W - DEPTH N RMS ERH ERZ LOC PREF AZ MIN

YEAR MON DA HRMN SEC DEG MIN DBG KM RD SBC KM KM REMKS MAG GAP DS

YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	KM	RD	SBC	KM	KM	REMKs	MAG	PREF	AZ	MIN
2003	AUG	18	1252	17.20	19	19.09	155	8.63	4.50	36	1.0	.5	2.6 SSF	1.5X	207	7	
2003	AUG	18	1431	40.92	19	20.19	155	52.33	9.31	20	.19	1.4	1.3 KON	1.2X	287	22	
2003	AUG	18	1639	43.96	18	56.62	155	28.71	34.96	32	1.1	1.0	1.6 DLS	2.3X	238	21	
2003	AUG	18	1951	0.41	19	28.18	154	51.77	3.18	38	1.1	1.0	1.0 SIE F	2.8X	276	13	
2003	AUG	18	2016	39.26	19	27.90	154	52.09	1.84	36	1.2	1.7	1.0 SIE F	2.2X	274	13	
2003	AUG	18	2017	8.58	19	29.27	154	54.40	4.51	12	.06	1.9	9.5 SIE	-	2.4X	253	11
2003	AUG	18	2329	41.03	19	58.68	155	37.30	13.91	38	.12	.8	7.7 KOH	2.0X	152	14	
2003	AUG	19	1650	6.87	19	19.83	155	11.27	0.96	29	.15	.4	.5 SSP	1.5X	161	6	
2003	AUG	19	1709	53.25	19	27.25	155	23.90	10.72	28	.09	.4	.9 KAO	1.4X	73	5	
2003	AUG	19	1901	30.97	19	28.98	155	26.65	2.93	28	.12	.3	.9 KAO	1.5X	62	6	
2003	AUG	19	2227	30.77	19	28.72	155	37.41	13.16	20	.14	.5	.8 DML T	2.0X	109	3	
2003	AUG	20	0112	55.77	19	16.79	155	50.19	8.69	23	.12	.9	1.1 KON	1.3X	265	20	
2003	AUG	20	0450	28.52	19	23.04	155	17.17	2.98	17	.08	.3	.4 SSC	1.2X	71	2	
2003	AUG	20	0635	33.64	19	28.86	155	27.17	5.83	20	.09	.4	1.9 KAO	1.1X	83	6	
2003	AUG	20	0937	52.66	19	16.26	155	22.76	9.42	38	.12	.4	.8 SWR	2.2X	131	7	
2003	AUG	20	0938	32.46	19	16.22	155	22.83	8.48	33	.09	.4	1.3 SRR	2.0X	132	7	
2003	AUG	20	0948	56.31	19	23.52	155	17.62	1.93	26	.11	.2	.4 SSC L	1.4X	49	2	
2003	AUG	20	1552	6.61	19	20.54	155	7.29	7.99	35	.12	.5	.5 SF4	1.9X	180	5	
2003	AUG	20	1932	25.86	19	25.44	155	15.70	8.92	28	.13	.7	.6 INT L	1.5X	137	2	
2003	AUG	20	2047	31.10	19	26.21	155	18.55	7.14	36	.13	.4	.7 INT	1.9X	52	2	
2003	AUG	20	2328	17.96	19	25.01	155	19.42	7.38	28	.10	.4	.6 KAO	1.3X	45	2	
2003	AUG	20	2348	17.63	19	17.80	155	27.60	10.02	36	.10	.3	.6 LSW	1.5X	89	7	
2003	AUG	21	0244	39.08	19	25.35	155	15.77	6.77	25	.11	.5	.6 INT L	1.5X	123	2	
2003	AUG	21	0531	3.68	19	25.18	155	16.95	8.56	33	.10	.4	.4 INT L	1.9X	85	1	
2003	AUG	21	0707	0.63	19	11.93	155	35.73	2.34	40	.15	.4	.9 LSW	2.0X	134	11	
2003	AUG	21	0714	57.90	19	10.79	155	40.59	0.73	28	.13	.4	.5 LSW	1.6X	93	10	
2003	AUG	21	0739	30.25	19	17.48	155	14.97	8.49	30	.06	.4	.8 SFI	1.4X	129	3	
2003	AUG	21	1259	45.99	19	25.54	155	18.18	9.92	18	.12	.6	1.0 INT L	1.8X	75	1	
2003	AUG	21	1407	39.93	19	27.00	154	50.57	3.90	34	.13	.9	1.0 SIE F	2.1X	280	15	
2003	AUG	21	1716	55.06	19	24.46	155	37.49	2.85	15	.17	.6	.6 MLO	1.5X	76	1	
2003	AUG	21	2011	29.63	19	19.26	155	11.82	5.98	25	.10	.6	1.0 SF3	1.5X	171	5	
2003	AUG	21	2044	59.05	19	19.68	155	7.76	8.81	38	.12	.8	.5 SF4	1.8X	187	7	
2003	AUG	21	2125	58.43	19	19.23	155	15.55	5.11	22	.10	.5	1.8 SFI	1.3X	109	5	
2003	AUG	21	2229	7.66	19	20.71	155	21.11	32.74	36	.11	.6	.9 DEP	1.7X	98	4	
2003	AUG	21	2322	24.63	19	30.15	155	32.36	15.25	17	.11	.5	.6 DML	1.5X	55	6	
2003	AUG	21	2007	10.21	19	26.48	155	28.95	11.05	34	.12	.4	.5 KAO	1.7X	59	8	
2003	AUG	22	1936	43.82	19	20.81	155	12.87	9.12	32	.11	.4	.5 SF2	1.3X	117	6	
2003	AUG	23	0026	49.39	19	25.75	155	19.22	6.66	19	.09	.5	.9 KAO	1.4X	90	3	
2003	AUG	23	0218	24.18	19	20.41	155	8.41	9.00	43	.10	.6	.4 SF4	2.3X	173	5	
2003	AUG	23	0255	25.37	19	13.72	155	2.65	46.56	41	.09	1.1	.9 DEP	1.7X	230	20	
2003	AUG	23	0609	43.80	19	30.30	155	26.61	6.31	21	.09	.4	1.1 MLW	1.2X	101	4	
2003	AUG	23	0747	20.73	19	14.75	155	33.42	4.5	1.0 LSW	2.0X	120	6				
2003	AUG	23	1454	34.37	19	25.39	155	16.58	6.93	29	.11	.4	1.4 INT L	1.5X	105	1	
2003	AUG	23	1646	43.44	19	16.29	155	13.65	8.10	25	.11	.7	1.0 SF2	1.2X	244	1	
2003	AUG	23	1724	29.47	19	25.12	155	20.13	7.18	31	.07	.4	.8 KAO	1.8X	50	3	

-ORIGIN TIME (HST) - LAT N - LON W - DEPTH N RMS ERH ERZ LOC PREF AZ MIN

YEAR MON DA HRMN SEC DEG MIN DBG KM RD SBC KM KM REMKS MAG GAP DS

YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	KM	RD	SBC	KM	KM	REMKs	MAG	AZ	MIN	
2003	AUG	23	1725	47.66	19	12.91	155	35.94	12.32	18	.09	.9	2.1 LSW	1.8X	219	11	
2003	AUG	23	2119	2.94	19	21.28	155	4.46	7.65	37	.12	.5	.6 SSP	2.0X	190	6	
2003	AUG	23	2158	24.23	19	25.11	155	19.11	7.44	33	.10	.4	.7 KAO	1.4X	42	3	
2003	AUG	24	0018	9.43	19	19.01	155	9.04	7.87	36	.11	.6	.5 SF4	1.6X	188	7	
2003	AUG	24	0019	15.53	19	19.53	155	9.08	8.10	40	.11	.5	.6 SF4	1.5X	180	6	
2003	AUG	24	0115	22.77	19	23.55	155	17.08	9.97	25	.09	.5	.6 INT L	1.4X	51	1	
2003	AUG	24	0234	44.09	19	19.85	155	7.64	7.25	42	.11	.6	.6 SSP	2.0X	123	4	
2003	AUG	24	0548	9.06	19	20.82	155	13.18	8.96	43	.12	.4	.4 SF2	1.5X	174	7	
2003	AUG	24	1811	2.21	19	10.94	155	40.80	2.42	33	.17	.5	1.0 LSW	1.5X	96	10	
2003	AUG	24	1904	7.85	19	18.15	155	14.14	8.34	30	.09	.4	.6 SF2	1.1X	118	2	
2003	AUG	24	2011	44.75	19	23.99	155	25.53	9.48	29	.11	.4	1.0 KAO	1.2X	57	5	
2003	AUG	24	2028	12.84	19	37.03	156	25.38	7.22	17	.12	.9	3.11 DLS	-	2.0X	333	62
2003	AUG	24	2045	26.71	19	24.54	155	16.99	7.55	27	.13	.5	.6 INT L	1.3X	100	1	
2003	AUG	24	2128	19.02	19	21.28	155	6.27	7.52	25	.15	.9	.8 KON	1.6X	256	20	
2003	AUG	24	2334	11.13	19	58.98	155	22.29	12.62	45	.12	.7	.5 KEA	2.4X	199	11	
2003	AUG	25	0017	1.20	19	24.30	155	17.86	5.93	25	.08	.4	.6 INT L	1.1X	55	2	
2003	AUG	25	0913	7.51	19	24.12	155	16.80	6.83	30	.13	.4	.6 INT L	1.3X	87	1	
2003	AUG	25	0914	25.55	19	10.28	155	35.92	1.19	31	.13	.4	.5 LSW	1.4X	135	13	
2003	AUG	25	1329	18.39	19	24.25	155	17.74	6.72	26	.10	.4	.6 INT L	1.6X	55	2	
2003	AUG	25	1554	55.53	19	12.13	155	30.25	8.63	26	.10	.5	1.1 LSW	1.3X	176	5	
2003	AUG	25	2153	28.44	19	23.69	155	16.41	4.68	20	.14	.5	.6 SBC L	1.5X	122	1	
2003	AUG	26	1310	24.01	19	26.08	155	16.58	6.76	30	.11	.5	.5 INT L	1.9X	111	2	
2003	AUG	26	1811	1.12	19	19.43	155	2.09	43.79	38	.10	.8	.8 DEP	1.8X	229	10	
2003	AUG	26	2020	39.55	19	27.60	155	24.99	2.17	31	.14	.3	.8 KAO	1.8X	53	5	
2003	AUG	26	2044	9.80	19	20.28	155	12.72	6.72	24	.12	.5	1.0 SF2	1.3X	136	4	
2003	AUG	26	2320	55.69	19	19.21	155	12.12	8.92	42	.10	.5	.4 SF3 F	2.1X	146	5	
2003	AUG	27	0003	28.18	19	20.22	155	8.69	8.63	40	.10	.5	.6 SF4	1.9X	173	5	
2003	AUG	27	0010	47.05	19	19.80	155	8.50	8.46	43	.11	.5	.5 SF4</				

9

YEAR	MON	DA	HRMN	SEC	DEG	MIN	KM	RD	SEC	KM	KM	REMKs	PREF	AZ	MIN			
													MAG	GAP	DS			
2003	AUG	28	0827	52.28	19	25.45	155	16.83	10.26	34	.09	.3	.4	INT L	2.0X	92	1	
2003	AUG	28	0913	44.52	19	18.43	155	10.99	6.68	27	.10	.6	1.1	SF3	1.4X	193	5	
2003	AUG	28	1213	13.90	19	45.87	155	34.74	15.87	17	.07	.5	.9	KEA	1.5X	107	14	
2003	AUG	28	1415	4.54	19	26.07	155	24.97	8.27	33	.12	.3	1.1	KAO	1.6X	37	7	
2003	AUG	28	1415	44.35	19	25.97	155	18.74	6.62	20	.10	.4	.8	INT	1.5X	64	2	
2003	AUG	28	2040	8.85	19	56.10	155	38.82	13.81	24	.13	.7	.7	KOH	1.6X	130	8	
2003	AUG	28	2124	33.14	19	19.32	155	11.52	6.69	32	.11	.5	.8	SF3	1.5X	155	5	
2003	AUG	28	2235	31.88	19	16.81	155	12.46	10.06	35	.10	.7	.5	SF2	1.6X	187	11	
2003	AUG	28	2357	15.33	19	20.93	155	12.74	9.83	31	.10	.7	.6	SF2	1.9X	179	9	
2003	AUG	29	0228	15.90	19	20.11	155	6.77	8.31	39	.11	.6	.5	SF4	2.3X	187	6	
2003	AUG	29	0326	51.16	19	23.14	155	2.49	8.78	30	.13	.1	.4	SF5	1.7X	180	4	
2003	AUG	29	1227	15.16	19	27.84	155	43.84	11.61	22	.09	.6	.9	KON	1.4X	175	6	
2003	AUG	29	2339	5.02	19	19.38	155	11.45	9.56	33	.13	.6	.4	SF3	1.9X	155	6	
2003	AUG	30	0358	11.21	19	22.57	155	14.27	3.61	17	.06	.3	.3	SEC	1.2X	106	2	
2003	AUG	30	0659	43.05	19	57.46	155	31.13	34.18	24	.10	.8	1.2	KEA	1.5X	238	18	
2003	AUG	30	0745	54.12	19	22.69	155	30.49	9.09	22	.06	.5	.9	KAO	1.6X	86	5	
2003	AUG	30	1020	48.91	19	19.38	155	7.26	6.53	24	.10	.9	1.3	SF4	1.2X	195	7	
2003	AUG	30	2034	25.88	19	21.13	155	14.15	3.08	12	.17	.6	1.3	KOA	1.4X	105	4	
2003	AUG	30	2038	54.66	19	22.79	155	14.56	3.46	18	.09	.4	.4	SEC	1.8X	128	2	
2003	AUG	30	2357	41.66	19	25.70	155	29.08	18.89	30	.09	.4	.6	KAO	1.4X	62	6	
2003	AUG	31	0745	54.12	19	22.69	155	30.49	9.09	22	.06	.5	.9	KAO	1.6X	86	5	
2003	AUG	31	1113	1.11	19	30.93	155	49.82	9.67	19	.17	1.0	.8	KON	1.2X	223	7	
2003	AUG	31	1248	1.77	19	10.09	155	41.04	5.38	29	.15	.5	4.5	LSW	1.9X	85	9	
2003	AUG	31	1731	9.60	19	25.92	155	16.85	4.44	38	.11	.3	.4	SNC	L	1.9X	51	2
2003	AUG	31	1831	10.71	19	19.44	155	11.35	3.75	32	.14	.5	1.5	SSF	1.1X	166	6	
2003	AUG	31	1854	10.00	19	25.10	154	46.62	8.60	28	.13	1.2	.6	LER	1.8X	297	21	
2003	AUG	31	1914	59.22	19	19.96	155	8.16	9.53	43	.09	.6	.4	SF4	2.8X	177	6	
2003	SEP	1	0614	31.57	19	23.28	155	16.94	3.32	19	.10	.4	.3	SSC	1.3X	62	0	
2003	SEP	1	1215	0.36	19	21.05	155	25.73	10.67	37	.10	.4	.7	KAO	1.5X	101	4	
2003	SEP	1	1456	3.23	19	22.98	155	14.68	3.08	23	.09	.3	.3	SEC	1.8X	103	2	
2003	SEP	1	1713	43.14	19	20.30	155	7.14	7.65	42	.11	.6	.6	SF4	2.4X	184	6	
2003	SEP	2	0612	17.06	19	19.65	154	52.75	43.30	37	.10	.9	.8	LER	2.6X	266	15	
2003	SEP	2	0731	10.82	19	45.15	156	5.77	7.34	46	.11	.9	.6	HUA F	2.8X	246	44	
2003	SEP	2	0858	10.18	19	46.17	155	49.93	3.74	38	.46	.11	.9	1.3	HUA	2.0X	182	9
2003	SEP	3	0243	45.70	19	25.69	155	30.65	10.47	28	.09	.4	.7	KAO	1.4X	68	8	
2003	SEP	3	0455	31.16	19	17.73	155	12.58	8.34	38	.10	.5	.5	SF2	1.5X	170	2	
2003	SEP	3	0932	7.30	19	55.89	155	36.61	14.94	38	.13	.5	.7	KOH	2.1X	138	10	
2003	SEP	3	0937	19.83	19	18.89	155	48.90	9.88	26	.12	.8	.7	KON	1.5X	255	16	
2003	SEP	3	1804	18.49	19	25.06	155	17.14	10.10	35	.12	.5	.5	INT L	1.6X	54	0	
2003	SEP	3	1928	19.73	19	24.56	155	16.43	8.16	35	.11	.4	.4	INT L	1.6X	50	1	
2003	SEP	3	1929	35.30	19	25.06	155	16.38	12.02	26	.13	.5	.5	INT L	2.0X	62	1	
2003	SEP	3	1947	11.23	19	22.86	155	14.75	3.35	16	.07	.4	.3	SEC	1.8X	132	2	
2003	SEP	4	0439	57.03	19	19.84	155	12.40	9.48	37	.11	.5	.3	SF2	1.7X	133	5	
2003	SEP	4	1328	7.43	19	19.42	155	11.35	5.87	30	.09	.5	.9	SF3	1.7X	166	6	
2003	SEP	4	1425	5.65	19	14.09	155	26.44	8.89	24	.08	.4	.6	LSW	1.9X	135	7	

YEAR	MON	DA	HRMN	SEC	DEG	MIN	KM	RD	SEC	KM	KM	REMKs	PREF	AZ	MIN			
													MAG	GAP	DS			
2003	SEP	4	1531	5.66	19	18.48	155	15.34	5.74	21	.12	.6	1.4	SFI	1.2X	132	4	
2003	SEP	4	1614	23.02	19	18.64	155	30.52	7.26	34	.11	.3	1.3	LSW	1.7X	69	7	
2003	SEP	4	1631	58.50	19	3.14	155	26.76	48.32	18	.09	.4	1.4	1.7	DTS T	2.3X	210	12
2003	SEP	4	1844	14.77	19	19.72	155	7.65	8.04	28	.10	.8	.6	SF4	1.6X	187	7	
2003	SEP	4	2024	14.82	19	5.47	155	26.48	38.95	21	.11	.1	.4	1.7	DLS	1.6X	276	8
2003	SEP	4	2126	0.02	19	6.00	155	26.31	39.37	26	.13	.0	.1	1.9	DTS T	2.8X	189	7
2003	SEP	5	1231	46.16	19	6.12	155	26.55	46.82	24	.12	.1	.2	1.0	LOI	1.4X	203	14
2003	SEP	5	1233	6.08	19	8.00	155	26.56	39.84	14.06	.10	.1	.2	0.0	DTS T	2.0X	316	61
2003	SEP	5	1903	4.02	18	56.44	155	28.75	56.30	30	.15	.1	.7	2.5	DUS T	3.01	24	
2003	SEP	5	1225	7.51	19	25.75	155	18.81	6.66	14	.08	.7	1.0	INT T	1.5X	86	2	
2003	SEP	6	0258	23.17	19	23.66	155	17.08	14.06	13	.14	1.0	1.0	DSP L	1.9X	102	1	
2003	SEP	6	0329	9.37	19	19.59	155	8.12	7.06	30	.09	.8	.8	SF4	1.5X	186	7	
2003	SEP	6	0538	47.89	19	25.34	155	17.25	7.44	26	.12	.4	.6	INT L	1.9X	69	1	
2003	SEP	6	0611	38.00	19	24.84	155	16.62	12.68	26	.12	.6	.7	INT L	1.6X	93	1	
2003	SEP	6	0616	52.01	19	24.87	155	16.63	12.22	25	.10	.6	.7	INT L	1.3X	137	1	
2003	SEP	6	1615	6.44	19	22.60	155	27.23	10.89	31	.10	.4	.7	KAO	1.1X	79	1	
2003	SEP	6	1824	47.21	19	25.23	155	16.50	13.27	27	.10	.5	.5	DSP L	1.5X	97	1	
2003	SEP	6	1854	29.47	19	11.57	155	27.51	7.51	32	.16	.5	1.0	LSW	2.0X	123	4	
2003	SEP	6	1913	59.76	20	2.96	155	31.98	11.88	43	.12	.9	.6	KRA F	3.3X	196	25	
2003	SEP	7	0105	14.67	19	11.78	155	28.33	33.19	38	.07	.6	1.0	DLS	1.9X	100	4	
2003	SEP	7	0311	45.08	19	19.99	155	7.82	8.80	42	.09	.6	.5	SF4	2.3X	183	6	
2003	SEP	7	0523	34.53	20	3.73	155	29.27	5.19	22	.16	1.3	.7	KEA	1.6X	279	24	
2003	SEP	7	0820	5.06	19	23.48	155	16.88	2.72	28	.10	.3	.2	SSC	1.7X	59	0	
2003	SEP	7	1140	41.33	19	16.98	155	11.58	6.84	19	.08	1.1	.9	SF3	1.5X	259	3	
2003	SEP	7	1140	46.40	19	16.79	155	12.12	8.05	22	.12	.9	.6	SF3	1.7X	249	2	
2003	SEP	7	1216	46.67	19	25.62	155	12.12	6.40	31	.11	.4	.7	KAO	1.9X	85	3	
2003	SEP	7	1453	30.58	19	24.96	155	37.03	2.02	20	.14	.4	.5	MLO	1.9X	85	2	
2003	SEP	7	2252	20.95	20	2.08	155	31.92	9.96	25	.09	.8	.4	KEA	1.7X	196	24	
2003	SEP	7	2340	2.10	19	21.51	155	4.56	8.82	40	.09	.6	.4	SF5	1.9X	186	5	
2003	SEP	8	0014	45.67	19	17.60	155	12.71	8.34	35	.09	.4	.4	SF2	1.4X	172	2	
2003	SEP	8	0125	38.59	19	26.28	15											

-ORIGIN TIME (HST)- LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	MIN	KM	RD	SCC	KM	KM	REWKS	MAG	GAP	DS		
2003	SEP	9	0851	0.45	19	22.18	155	35.81	11.22	39	.11	.4	.6	MLO	1.5X	111	5		
2003	SEP	9	1211	41.52	19	23.01	155	14.43	2.27	19	.11	.3	.3	SEC	1.4X	111	2		
2003	SEP	9	1634	46.12	19	53.50	155	18.42	36.39	40	.10	.8	1.3	KEA	1.9X	187	4		
2003	SEP	9	1753	21.16	19	11.66	155	41.64	0.28	32	.21	.4	.3	LSW	2.1X	107	8		
2003	SEP	9	1758	12.20	19	18.35	155	12.81	6.98	24	.10	.6	1.0	SF2	1.2X	143	3		
2003	SEP	9	1801	27.35	19	20.75	155	10.85	8.36	36	.11	.4	.4	SF3	1.7X	145	4		
2003	SEP	9	1803	12.56	19	24.89	155	17.02	12.72	22	.08	.6	.7	INT L	1.0X	88	1		
2003	SEP	9	2018	31.14	19	24.89	155	16.56	11.58	19	.11	.6	.9	INT L	1.1X	117	2		
2003	SEP	9	2105	13.03	19	24.73	155	16.57	13.23	23	.12	.6	.6	DEP L	1.4X	133	2		
2003	SEP	9	2313	52.68	19	24.80	155	16.79	13.80	25	.11	.7	.5	DEP L	1.5X	106	0		
2003	SEP	10	0023	31.78	19	23.73	155	16.68	3.49	43	.12	.2	.2	SSC F	3.2X	48	0		
2003	SEP	10	0220	48.18	19	24.98	155	16.21	13.07	27	.13	.6	.7	DEP L	1.5X	120	2		
2003	SEP	10	0222	22.75	19	21.17	155	6.48	8.21	42	.13	.7	.5	SF4	2.0X	177	4		
2003	SEP	10	0441	36.01	19	25.09	155	16.61	13.39	23	.14	.5	.5	DEP L	1.3X	94	1		
2003	SEP	10	0906	37.35	19	25.12	155	39.29	2.29	13	.08	.4	.6	MLO	.9X	120	3		
2003	SEP	10	0933	13.48	19	22.10	155	14.09	12.79	39	.10	.4	.4	INT	1.6X	54	2		
2003	SEP	10	1201	43.92	19	24.02	155	15.23	1.35	17	.10	.2	.5	SEC	1.3X	115	2		
2003	SEP	10	1439	18.35	19	25.57	155	16.62	9.09	33	.11	.3	.4	INT L	1.6X	51	1		
2003	SEP	10	1738	3.99	19	25.42	155	16.59	6.47	26	.10	.4	.6	INT L	1.3X	142	2		
2003	SEP	10	1820	58.52	19	13.40	155	26.60	9.37	26	.15	.5	1.0	LSW	1.2X	125	7		
2003	SEP	10	1939	26.80	19	25.49	155	16.74	10.74	31	.10	.4	.4	INT L	1.2X	94	1		
2003	SEP	10	2011	24.47	19	21.93	155	4.50	7.18	26	.11	.6	.6	SF5	1.6X	182	5		
2003	SEP	11	0105	7.37	19	22.11	155	25.33	8.96	38	.12	.3	.6	KAO	1.2X	57	4		
2003	SEP	11	0242	59.30	19	24.06	155	29.69	10.16	33	.10	.4	.7	KAO	1.5X	72	5		
2003	SEP	11	0503	23.18	19	25.01	155	16.70	10.74	32	.11	.5	.5	INT L	1.4X	93	1		
2003	SEP	11	0504	58.98	19	20.52	155	5.41	36.16	30	.09	.9	.8	DEP	1.5X	193	6		
2003	SEP	11	0718	20.43	19	18.73	155	8.88	6.23	36	.09	.6	.7	SF4	1.2X	193	8		
2003	SEP	11	0919	31.96	19	18.27	155	7.33	40.51	37	.11	.7	.7	DEP	2.2X	190	9		
2003	SEP	11	1503	18.47	19	19.22	155	13.08	7.57	39	.13	.4	.7	SF2	1.8X	124	4		
2003	SEP	11	1937	23.01	19	22.74	155	30.34	9.30	33	.08	.3	.6	KAO	1.5X	84	5		
2003	SEP	11	2116	2.36	19	26.87	155	14.76	30.34	33	.07	.8	.8	DEP	1.2X	107	4		
2003	SEP	11	2119	14.45	19	19.49	155	7.58	6.62	27	.10	.7	.8	SF4	1.5X	191	7		
2003	SEP	12	0047	34.43	19	25.43	154	56.66	7.00	20	.12	1.8	.5	LER	1.3X	259	4		
2003	SEP	12	0205	32.56	19	25.44	155	19.23	5.93	38	.12	.3	.7	KAO	2.0X	46	3		
2003	SEP	12	0339	34.70	19	58.97	155	30.04	8.12	27	.25	1.4	1.0	KEA	1.4X	250	19		
2003	SEP	12	0353	1.98	19	12.53	155	41.66	1.90	35	.13	.4	.7	LSW	1.7X	117	10		
2003	SEP	12	0744	30.12	19	24.24	155	15.39	3.24	20	.08	.3	.4	SEC	1.3X	116	2		
2003	SEP	12	1034	50.27	19	24.10	155	26.86	9.62	32	.09	.3	.7	KAO	1.6X	53	3		
2003	SEP	12	1039	38.21	19	19.45	155	10.87	7.76	30	.11	.6	5	SF3	1.6X	174	6		
2003	SEP	12	1141	24.43	19	24.98	155	15.94	14.82	25	.08	.6	.3	DEP L	1.6X	140	2		
2003	SEP	12	1144	24.76	19	58.50	155	32.95	16.21	25	.10	.7	.6	SER	1.5X	167	17		
2003	SEP	12	1318	19.71	21.72	155	3.17	12	.05	.6	.6	.9	.9	INT L	1.5X	142	1		
2003	SEP	12	1501	19	22.88	155	16.14	12.47	23	.12	.9	.9	.9	INT L	1.5X	142	1		
2003	SEP	12	1435	58.58	19	21.87	155	15.12	9.7	3.21	13	.06	.5	.4	SER	1.6X	112	1	
2003	SEP	13	0007	25.75	19	23.50	155	12.71	5.16	15	.14	.8	1.0	SF2	2.0X	147	2		

99

YEAR	MON	DA	HRVN	SEC	DEG	MIN	DEG	MIN	N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN	PREF	AZ	MIN	PREF	AZ	MIN	PREF	AZ	MIN										
YEAR	MON	DA	HRVN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	RD	SEC	KM	RD	SEC	KM	RD	SEC	KM	RD	SEC	KM	RD	SEC									
2003	SEP	19	0000	6.51	19	10.59	155	32.27	3.98	22	.15	.9	2.0	LSW	1.5X	222	8	2003	SEP	26	0158	4.12	20	0.41	155	29.61	34.48	25	11	1.2	1.4	KEA	1.6X	189	20
2003	SEP	19	0441	49.55	19	19.80	155	11.71	7.73	30	.15	.7	.6	SF3	1.3X	165	6	2003	SEP	26	0237	51.27	19	19.90	155	11.83	7.89	34	.12	.6	.4	SF3	1.8X	142	5
2003	SEP	19	0815	34.15	19	12.14	155	14.51	50.59	23	.11	1.8	1.4	DEP L	2.0X	271	9	2003	SEP	26	0816	15.29	19	23.28	155	14.58	3.61	37	.11	.3	.4	SBC	2.2X	55	3
2003	SEP	19	1020	24.88	19	16.54	155	31.86	5.46	36	.16	.4	1.0	LSW	2.1X	74	4	2003	SEP	26	0857	12.41	19	57.53	155	39.05	3.99	18	.15	.9	1.9	KOH	1.1X	140	11
2003	SEP	19	2227	2.43	19	19.83	155	4.05	7.75	43	.12	.7	.5	SF5	1.9X	203	8	2003	SEP	26	0924	55.30	19	18.41	155	12.99	7.86	37	.10	.4	.7	SF2	1.6X	136	3
2003	SEP	20	1123	28.88	19	19.60	155	8.41	9.58	35	.09	.6	.6	SF4	1.5X	184	7	2003	SEP	26	0928	52.88	19	18.43	155	12.87	8.75	40	.11	.5	.6	SF2	2.1X	139	3
2003	SEP	20	1126	18.97	19	22.29	155	2.42	7.12	36	.13	.8	.7	SF5	1.4X	193	5	2003	SEP	26	0929	32.88	19	17.34	155	12.29	8.83	33	.08	.5	.7	SF3	1.5X	185	2
2003	SEP	21	1155	32.77	19	11.24	155	31.87	10.38	36	.13	.4	.7	LSW	2.2X	124	8	2003	SEP	26	1320	11.68	19	54.05	155	34.33	43.66	42	.09	.7	1.0	KBA	2.0X	132	10
2003	SEP	20	2236	36.75	19	24.15	155	17.07	1.33	.17	.11	.3	.2	SSC	1.3X	95	1	2003	SEP	26	1401	18.03	19	3.39	155	38.45	26.76	31	.09	.6	.5	DJS	1.7X	143	9
2003	SEP	21	0129	11.84	19	8.22	155	43.32	50	.08	.6	1.0	DLS	2.5X	145	9	2003	SEP	26	1537	31.67	19	54.64	156	40.97	13.67	27	.12	.6	.2	SIS	2.4X	302	98	
2003	SEP	21	0835	44.17	19	25.05	155	29.94	11.43	35	.10	.5	.7	SWR	1.4X	85	3	2003	SEP	26	1819	21.16	19	25.38	155	16.45	15.14	18	.14	1.2	.5	DPL	1.3X	217	2
2003	SEP	21	1151	32.02	19	18.73	155	11.70	6.64	41	.12	.4	.7	SF3	1.7X	146	6	2003	SEP	26	2108	17.76	19	24.97	155	16.70	11.33	27	.13	.6	.6	INTL	1.3X	92	2
2003	SEP	21	1155	32.77	19	11.24	155	31.87	10.38	36	.13	.4	.7	LSW	2.2X	124	8	2003	SEP	26	2311	24.13	19	59.43	155	28.80	43.09	32	.12	1.0	1.4	KBA	1.8X	190	18
2003	SEP	21	2030	34.49	19	24.42	155	17.06	1.52	20	.09	.3	.1	SSC	1.8X	91	1	2003	SEP	26	2313	19.73	19	59.43	155	34.33	43.66	42	.09	.4	.7	SF2	1.6X	92	3
2003	SEP	21	2256	8.84	19	23.20	155	14.68	1.57	20	.09	.3	.4	SEC	1.0X	105	3	2003	SEP	21	2259	47.55	19	37.89	155	54.49	18.45	31	.10	.9	1.1	KON	1.8X	233	10
2003	SEP	21	2259	47.55	19	37.89	155	54.49	18.45	31	.10	.9	1.1	KON	1.8X	233	10	2003	SEP	27	1436	36.91	19	16.89	155	15.56	6.66	32	.13	.6	1.1	SPI	1.1X	177	4
2003	SEP	22	0909	32.51	19	16.45	155	26.52	9.33	46	.13	.3	.6	LSW	2.2X	104	7	2003	SEP	27	1737	22.15	19	25.90	155	18.75	6.22	38	.10	.4	.6	INT	1.8X	49	2
2003	SEP	22	1111	33.62	19	21.65	155	11.03	2.19	22	.10	.4	.4	SER	1.4X	140	3	2003	SEP	27	1739	24.32	19	25.89	155	18.77	7.09	34	.12	.4	.7	INT	2.3X	50	2
2003	SEP	22	1213	50.43	19	52.24	156	5.94	41.57	39	.08	1.1	1.5	HUA	2.3X	254	44	2003	SEP	27	1742	58.83	19	25.96	155	18.66	6.82	26	.10	.4	.9	INT	1.2X	88	2
2003	SEP	22	1725	16.73	19	34.44	156	5.83	10.33	29	.18	1.6	1.6	KON	1.4X	298	36	2003	SEP	27	2154	39.46	19	22.89	155	30.01	8.04	33	.10	.3	.7	KAO	1.3X	81	4
2003	SEP	22	1821	24.87	19	25.15	155	16.25	14.86	26	.14	.9	3	DEP L	1.3X	159	1	2003	SEP	27	2250	34.87	19	17.23	155	29.30	8.37	44	.13	.3	.6	LSW	1.9X	80	4
2003	SEP	22	1920	13.31	19	20.03	155	6.87	8.41	38	.10	.6	.5	SF4	1.7X	187	6	2003	SEP	28	0702	0.33	19	30.65	155	30.05	10.39	21	.15	.7	.2	DML	1.3X	91	8
2003	SEP	23	0854	27.72	19	25.67	155	21.09	10.15	44	.10	.4	.5	KAO	2.4X	247	25	2003	SEP	28	1639	2.85	19	29.25	155	13.40	10.63	36	.09	.4	.8	GUN	1.4X	104	6
2003	SEP	23	1108	17.22	19	20.17	155	7.18	7.20	37	.12	.6	.8	SF4	1.6X	185	6	2003	SEP	28	1705	16.77	19	28.80	155	13.43	10.74	39	.10	.3	.7	GAN	1.4X	65	6
2003	SEP	23	1110	37.48	20	29.18	155	32.90	2.67	23	.13	6.7	4.3	DIS	1.8X	309	46	2003	SEP	28	1803	56.71	19	24.26	155	16.93	9.46	27	.17	.6	.7	INTL	1.3X	86	1
2003	SEP	23	1526	8.43	20	3.85	155	48.63	24.81	32	.12	1.1	1.4	KOH	2.3X	199	8	2003	SEP	28	1931	34.30	19	20.15	155	51.80	12.39	35	.11	.8	.3	KON	2.1X	81	21
2003	SEP	23	1547	47.60	19	59.66	155	50.30	7.14	34	.09	.8	.5	KOH	2.1X	201	16	2003	SEP	28	2220	8.10	19	24.01	155	16.30	8.87	30	.11	.4	.5	INTL	1.6X	107	1
2003	SEP	23	1551	39.05	19	22.67	155	30.03	9.77	27	.07	.4	.9	KAO	1.3X	82	4	2003	SEP	29	0437	4.14	19	51.59	155	52.15	13.59	21	.12	1.6	.5	HUA	1.9X	276	19
2003	SEP	23	2405	0.94	19	21.74	155	4.84	7.05	40	.13	.7	.5	SF5	1.7X	182	5	2003	SEP	29	0556	51.27	19	25.00	155	16.91	5.23	29	.11	.4	.4	INTL	1.2X	96	0
2003	SEP	24	0609	43.06	19	11.47	155	31.79	0.07	29	.13	.4	.3	LSW	1.5X	109	7	2003	SEP	29	1516	44.62	19	18.73	155	15.43	7.07	35	.11	.4	.6	SFI	1.4X	101	4
2003	SEP	24	1220	54.62	19	20.45	155	11.66	8.50	48	.11	.3	.4	SF3	2.3X	76	5	2003	SEP	29	2001	58.89	19	24.83	155	15.54	2.17	22	.12	.5	.4	SNC L	1.2X	130	3
2003	SEP	24	1353	44.37	19	19.40	155	6.84	6.31	.13	.7	.9	.8	SF4	1.3X	197	7	2003	SEP	30	0243	45.09	19	29.74	155	16.24	28.14	33	.16	.6	.9	DEP L	1.6X	78	4
2003	SEP	24	1635	49.36	19	20.49	155	24.47	9.70	23	.10	.6	.8	SWR	1.1X	160	2	2003	SEP	30	0243	45.09	19	23.19	155	17.88	12.58	22	.20	.9	.9	INTL	1.7X	76	3
2003	SEP	24	1901	19.41	19	18.24	155	15.37	8.51	.39	.11	.4	.5	SF1	1.7X	110	4	2003	SEP	30	0316	41.06	19	20.62	155	7.63	7.93	22	.10	.7	.7	SF4	1.1X	196	5
2003	SEP	25	0339	28.15	19	16.58	155	11.71	7.84	30	.09	.6	.7	SF3	1.2X	226	3	2003	SEP	30	0339	35.44	19	18.46	155	7.6	8.43	26	.11	.4	.9	LSW	1.3X	160	6
2003	SEP	25	0339	54.45	19	11.27	155	32.99	2.15	26	.13	.5	1.0	LSW	1.5X	117	9	2003	SEP	30	0340	38.01	19	18.79	155	30.47	8.68	28	.10	.4	1.1	LSW	1.2X	81	7
2003	SEP	25	0454	55.07	19	12.69	155	32.89	3.38	28	.14	.4	1.3	LSW	1.6X	131	7	2003	SEP	30	0517	2.21	19	40											

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N RMS ERH ERZ LOC												PREF AZ MIN											
YEAR	MON	DA	HRVN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	RD	SRC	KM	RD	SRC	KM	RD	SRC	KM	RD	SRC	KM	RD	SRC	KM	RD	SRC	MAG	GAP	DS			
2003	SEP	30	2056	22.90	19	23.61	155	16.74	14.45	22	1.2	1.0	.5	DEP	L	2.2X	61	1																	
2003	SEP	30	2058	39.77	19	24.08	155	17.08	11.47	23	.11	.7	.5	INT	L	1.4X	96	1																	
2003	SEP	30	2356	54.68	19	14.79	155	35.73	7.75	45	.14	.4	.8	LSW		2.3X	110	10																	
2003	OCT	1	0007	45.13	19	14.79	155	35.29	4.14	29	.12	.3	2.4	LSW		1.6X	129	9																	
2003	OCT	1	0947	42.43	19	25.25	155	16.77	8.91	27	.07	.5	.5	INT	L	1.2X	101	1																	
2003	OCT	1	1114	51.99	19	25.19	155	16.98	11.86	23	.07	.6	.7	INT	L	1.0X	147	1																	
2003	OCT	1	1347	42.37	19	16.50	155	30.33	10.90	33	.10	.4	1.0	LSW		1.6X	127	3																	
2003	OCT	1	1411	18.06	19	23.62	155	3.06	3.38	33	.11	.5	.5	SME		1.7X	168	2																	
2003	OCT	1	1838	5.69	20	3.76	155	48.37	25.78	26	.12	1.0	1.4	KOH		1.9X	196	8																	
2003	OCT	2	0537	23.79	19	20.50	155	11.14	7.67	46	.13	.4	.4	SF3		2.1X	145	5																	
2003	OCT	2	0550	33.06	19	18.92	155	13.56	8.58	40	.09	.4	.6	SF2		1.3X	111	3																	
2003	OCT	2	0607	8.27	19	18.68	155	14.60	8.48	42	.10	.4	.5	SF1		1.5X	110	4																	
2003	OCT	2	0635	59.47	19	49.43	155	58.92	12.20	18	.12	1.4	.7	HUA		1.5X	245	21																	
2003	OCT	2	0747	7.12	19	51.09	155	41.71	31.14	40	.09	.6	1.2	KEA		2.1X	124	4																	
2003	OCT	2	1026	52.02	20	14.05	155	32.87	15.17	26	.12	3.6	1614.3	KEA	-	1.9X	265	27																	
2003	OCT	2	1334	26.54	19	12.36	155	28.98	11.11	20	.08	.4	1.1	LSW		1.6X	152	5																	
2003	OCT	2	1533	12.25	19	31.43	155	20.65	10.86	17	.11	.7	1.0	MLQ		1.1X	131	6																	
2003	OCT	2	1719	22.57	19	19.52	155	12.16	6.56	22	.13	1.0	1.2	SF3		1.1X	208	6																	
2003	OCT	2	2032	44.02	19	41.88	155	32.42	32.50	32	.07	.6	1.0	KEA		1.8X	74	12																	
2003	OCT	2	2154	56.45	19	19.66	155	7.42	7.47	22	.10	.8	.7	SF4		1.2X	190	7																	
89	OCT	2	2326	38.44	19	45.23	155	49.86	28.28	24	.13	.9	1.7	HUA		1.3X	180	7																	
2003	OCT	3	0023	22.50	19	20.49	155	19.25	5.04	37	.14	.4	1.1	SWR		1.9X	51	5																	
2003	OCT	3	0045	12.82	19	27.65	154	57.08	0.01	17	.16	2.2	.4	SLE	F#	1.7X	228	5																	
2003	OCT	3	0251	59.95	19	17.49	155	12.98	8.89	32	.09	.7	.5	SF2		1.6X	165	1																	
2003	OCT	3	0254	7.33	19	46.27	156	6.53	7.37	20	.13	2.1	1.4	HUA		1.6X	273	30																	
2003	OCT	3	0538	27.34	20	8.10	155	23.69	2.55	18	.22	2.9	2.4	KEA	#	1.7X	277	28																	
2003	OCT	3	0706	59.12	19	25.18	155	19.95	5.64	35	.12	.4	.9	KAO		1.9X	46	3																	
2003	OCT	3	0851	33.99	19	45.15	154	37.95	3.11	1.7	.14	1.4	1.0	LER		1.7X	260	10																	
2003	OCT	3	1254	41.70	19	13.33	155	34.29	6.82	29	.16	.6	1.9	LSW		1.8X	130	8																	
2003	OCT	3	1604	2.09	20	3.81	155	37.00	33.40	42	.10	.8	1.2	KOH		2.3X	189	18																	
2003	OCT	3	1620	18.35	19	19.21	155	46.21	11.13	20	.11	.1	.8	KON		1.1X	294	12																	
2003	OCT	3	1717	55.17	19	25.54	155	16.45	10.09	29	.14	.5	.5	INT	L	1.4X	110	2																	
2003	OCT	3	1720	34.04	19	19.26	155	47.74	11.12	30	.09	.7	.6	KON		1.7X	194	14																	
2003	OCT	3	1854	23.12	19	21.69	155	2.12	6.93	33	.11	.8	.6	SF5		1.4X	189	6																	
2003	OCT	3	1922	49.85	20	46.74	155	6.47	6.87	30	.13	8.911.2	DIS	-	2.5X	321.01																			
2003	OCT	4	0708	10.24	20	1.15	155	34.16	5.69	24	.12	.6	.9	KOH		1.5X	182	20																	
2003	OCT	4	0145	32.68	19	24.48	155	17.27	10.84	29	.11	.5	.4	INT	L	1.7X	59	1																	
2003	OCT	4	0228	46.64	20	1.37	155	43.83	31.47	27	.09	.9	1.5	KOH		1.7X	272	20																	
2003	OCT	4	0412	21.87	19	27.13	155	26.41	11.48	40	.12	.4	.7	KAO		1.9X	50	9																	
2003	OCT	4	0506	38.75	19	21.41	155	15.93	9.91	36	.09	.3	.6	KAO		1.6X	67	5																	
2003	OCT	4	0708	10.24	20	1.15	155	34.16	5.69	24	.12	.6	.9	KOH		1.5X	182	20																	
2003	OCT	4	0823	49.64	19	23.86	155	17.11	7.08	27	.16	.6	.7	INT	L	2.0X	79	1																	
2003	OCT	4	1452	28.79	20	10.17	156	21.37	37.33	38	.12	1.1	2.0	DIS		2.5X	313	60																	
2003	OCT	4	2251	45.11	19	9.15	155	34.81	0.73	33	.12	.4	.3	LSW		1.9X	127	12																	
2003	OCT	5	0111	0.73	19	19.05	155	13.21	9.01	41	.11	.4	.4	SF2		1.6X	79	4																	

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N RMS ERH ERZ LOC												PREF AZ MIN											
YEAR	MON	DA	HRVN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	RD	SRC	KM	RD	SRC	KM	RD	SRC	KM	RD	SRC	MAG	GAP	DS									
2003	OCT	5	0306	34.29	19	25.18	155	16.50	7.97	28	.12	.6	.5	INT	L	1.5X	105	1																	
2003	OCT	6	0113	31.34	19	22.91	155	15.93	10.93	15.1	.09	.4	.4	LSW		2.78	17	10	.4	.4	SBC		1.3X	130	2										
2003	OCT	6	0448	41.05	19	25.91	155	16.93	10.84	34	.09	.4	.7	KAO		1.7X	168	2																	
2003	OCT	6	1224	1.26	19	26.98	154	15.54	15.95	16.97	.06	.4	.5	SME		1.7X	245	21																	
2003	OCT	6	1424	53.26	19	19.67	155	11.67	15.5	16.91	.09	.4	.5	INT	L	1.0X	147	1																	
2003	OCT	6	1824	35.95	19	24.61	155	15.17	17.37	15.27	.07	.5	.5	INT	L	1.0X	147	1																	
2003	OCT	6	1925	55.26	19	17.04	155	11.55	11.55	17.57	.05	.4	.5	INT	L	1.0X	151	6																	
2003	OCT	7	1935	5.55	19	19.56	155	11.55	7.57	2																									

69

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH											N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	KM	RD	SEC	KM	RMS	MAG	GAP	DS				
2003	OCT	10	0323	39.45	19	20.87	155	4.62	8.92	45	1.2	.7	.4	SF5	F			
2003	OCT	10	0438	25.73	19	19.02	155	13.56	6.01	39	.12	.4	.9	SF2				
2003	OCT	10	0935	24.09	19	17.42	155	12.23	7.65	23	.12	.6	1.0	SWR				
2003	OCT	10	1113	57.60	19	19.55	155	7.60	8.84	31	.07	.6	.7	SF4				
2003	OCT	10	1335	52.92	19	55.94	155	35.42	12.34	21	.12	1.1	.5	KOH				
2003	OCT	10	1835	36.86	19	28.49	154	52.51	0.01	28	.14	2.1	.6	SLE	#			
2003	OCT	10	1857	12.10	19	23.56	155	14.83	3.29	37	.11	.3	.3	SEC				
2003	OCT	10	1921	1.45	19	19.30	155	11.45	5.53	36	.09	.4	.9	SF3				
2003	OCT	11	0007	57.70	19	17.14	155	26.94	52.11	44	.13	.8	1.1	DLS				
2003	OCT	11	0031	25.88	20	0.53	155	44.86	9.98	42	.11	1.3	1.7	KOH	F			
2003	OCT	11	0307	11.22	19	22.72	155	20.64	9.82	34	.10	.4	.6	KAO				
2003	OCT	11	0412	5.32	19	25.36	155	17.15	6.56	32	.13	.4	.5	INT	L			
2003	OCT	11	0421	13.19	20	8.41	155	47.01	24.56	40	.10	1.0	1.1	KOH	F			
2003	OCT	12	0106	16.66	19	22.98	155	2.62	6.99	42	.14	.7	.5	SF5				
2003	OCT	12	1542	22.26	19	25.22	155	17.03	7.41	35	.14	.4	.6	INT	L			
2003	OCT	12	1633	24.31	19	21.76	155	4.98	6.27	36	.13	.7	.8	SF5				
2003	OCT	12	1826	27.38	19	22.00	155	11.19	3.14	16	.07	.6	.4	SER				
2003	OCT	12	2107	4.00	19	17.22	155	30.11	10.00	27	.10	.4	.9	LSW				
2003	OCT	13	0010	8.09	19	11.10	155	28.12	32.30	45	.08	.6	1.0	DLS				
2003	OCT	13	0257	52.56	19	25.24	155	16.22	10.71	31	.13	.5	.4	INT	L			
2003	OCT	13	0259	54.26	19	24.15	155	17.40	8.24	41	.11	.4	.4	INT	L			
2003	OCT	13	0355	23.25	19	27.95	155	10.75	3.06	31	.12	.5	.3	SER				
2003	OCT	13	0903	37.95	19	21.62	155	4.49	7.00	31	.12	.8	.7	SF5				
2003	OCT	13	0954	14.76	19	48.49	156	8.20	20.11	19	27	.14	3.1	HUA				
2003	OCT	13	1105	1.40	19	38.26	155	57.93	43.54	20	.09	1.4	1.2	KON				
2003	OCT	13	1300	40.67	19	24.59	155	17.36	9.00	29	.12	.5	.6	INT	L			
2003	OCT	13	1514	33.76	19	17.74	155	15.98	7.63	34	.09	.4	.8	SFI				
2003	OCT	13	1557	35.60	19	23.04	155	14.83	3.21	20	.07	.3	.3	SEC				
2003	OCT	13	2142	8.81	19	18.90	155	15.94	33.46	45	.12	.6	.8	DEP				
2003	OCT	14	0049	57.72	19	21.85	155	10.09	2.95	25	.12	.5	.3	SER				
2003	OCT	14	0217	50.35	19	9.67	155	32.47	37.10	34	.09	.6	1.2	DLS				
2003	OCT	14	0655	25.96	19	19.77	155	12.17	8.13	41	.14	.5	.6	SF3				
2003	OCT	14	1243	22.14	19	23.54	155	17.17	2.99	36	.13	.3	.2	SSC	L			
2003	OCT	14	1813	12.19	19	52.67	155	20.31	10.64	43	.12	.7	.3	KEA				
2003	OCT	14	1900	2.16	19	26.26	155	19.32	7.38	25	.08	.4	.8	KAO				
2003	OCT	14	2039	10.29	19	24.05	155	17.31	8.60	23	.11	.6	.6	INT	L			
2003	OCT	14	2316	36.44	19	24.60	155	37.72	2.97	23	.14	.4	.4	MLO				
2003	OCT	15	0033	6.62	19	24.71	155	16.60	5.93	35	.10	.3	.4	INT	L			
2003	OCT	15	0228	48.51	19	28.90	155	27.97	4.75	25	.10	.3	2.7	KAO				
2003	OCT	15	0705	19.69	19	22.54	155	14.57	3.05	18	.08	.4	.3	SEC				
2003	OCT	15	0723	21.97	19	22.71	155	3.92	11.29	36	.13	.8	.4	SF5				
2003	OCT	15	1246	54.85	19	26.61	155	2.94	6.07	29	.14	.9	1.5	GLN				
2003	OCT	15	1441	0.27	19	29.21	155	30.83	9.85	32	.13	.4	.7	MLO				
2003	OCT	15	1524	5.12	19	14.08	156	18.50	4.45	37	.11	1.2	1.6	KON				
2003	OCT	15	1617	4.25	19	19.71	155	7.50	7.27	35	.09	.6	.8	SF4				

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH											N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	MIN	KM	RD	SBC	KM	KM	REMKs	MAG	GAP	DS	
2003	OCT	15	1620	12.36	19	19.32	155	8.54	6.84	31	.10	.6	.7	SF4	1.4X	204	7	
2003	OCT	16	0031	57.23	18	17.99	155	17.11	6.88	42	.11	7.1	8.8	DIS	-	3.0X	86	
2003	OCT	16	1054	1.14	19	26.28	155	19.47	8.21	18	.09	.5	1.1	KAO		1.3X	102	
2003	OCT	16	1717	4.01	19	18.63	155	13.41	9.46	48	.13	.5	.4	SF2		2.3X	118	
2003	OCT	16	1855	23.35	19	26.26	155	19.63	7.24	30	.10	.4	.7	KAO		1.8X	62	
2003	OCT	17	0226	34.88	19	48.23	155	24.78	24	24	.48	.10	.5	1.1	KEA		2.2X	83
2003	OCT	17	0827	37.17	19	11.25	155	39.33	6.84	19	.10	.6	.6	LSW		1.8X	156	
2003	OCT	17	0901	1.94	19	17.93	155	12.65	7.54	25	.10	.6	.5	SF2		1.8X	170	
2003	OCT	17	1329	19.57	19	22.42	155	2.59	7.19	28	.12	1.1	.6	SF5		1.5X	190	
2003	OCT	17	1349	5.95	19	22.02	155	2.55	6.45	28	.11	.7	.7	SF5		1.2X	196	
2003	OCT	17	1723	9.94	19	21.01	155	6.14	7.94	38	.13	.6	.7	SF2		1.5X	182	
2003	OCT	17	1745	5.94	19	4.29	155	28.55	42	67	.37	1.0	1.1	1.4	DLS		1.8X	279
2003	OCT	17	1753	57.51	19	20.74	155	5.72	6.38	30	.10	.6	.9	SF4		1.1X	188	
2003	OCT	17	1910	13.82	19	47.29	155	24.86	29	75	.27	.09	.5	1.2	KEA		1.5X	105
2003	OCT	18	1237	51.45	19	19.48	155	7.85	6.82	36	.13	.6	.9	SF4		1.4X	187	
2003	OCT	18	1938	30.44	19	28.75	155	27.90	7.59	26	.12	.7	1.8	LSW		1.7X	234	
2003	OCT	18	2026	45.43	19	52.56	155	23.15	33.42	24	.08	.9	1.4	KEA		1.3X	126	
2003	OCT	18	2054	53.81	19	17.76	155	13.19	6.89	38	.13	.5	.6	SF2		1.5X	139	
2003	OCT	18	0845	39.02	19	31.21	155	45.88	9.66	38	.11	.6	.3	KON		2.1X	156	
2003	OCT	18	2140	11.95	19	18.69	155	12.96	9.23	40	.12	.5	.4	SF2		1.6X	169	
2003	OCT	18	2138	30.34	19	17.43	155	12.77	8.23	39	.11	.4	.5	SF2		1.4X	180	
2003	OCT	18	2221	51.31	19	19.09	155	13.15	9.77	43	.11	.5	.5	SF2	F	2.7X	170	
2003	OCT	18	2225	49.40	19	17.60	155	13.03	6.91	22	.09	.5	1.0	SF2		1.4X	156	
2003	OCT	18	2318	6.45	19	15.16	155	19.06	6.14	18	.08	.4	1.0	KAO		1.1X	80	
2003	OCT	18	2316	1.95	19	11.07	155	32.84	43	32	.04	.6	1.0	DLS		2.0X	173	
2003	OCT	19	0018	1.78	19	4.48	155	19.06	6.14	18	.08	.4	.5	SF2		1.0X	62	
2003	OCT	19	0033	2.29	19	27.86	155	24.42	3.35	21	.12	.3	1.0	KAO		1.0X	62	
2003	OCT	19	0517	51.50	19	20.35	155	6.04	7.97	40	.11	.6	.6	SF4		2.0X	188	
2003	OCT	19	0641	40.95	19	24.80	155	16.65	5.45	39	.13	.3	.5	INT	L	1.8X	53	
2003	OCT	19	0834	0.51	19	17.11	155	12.68	8.04	36	.12	.4	.5	SF2		1.5X	206	
2003	OCT	19	2125	12.75	19	19.90	155	6.38	6.91	27	.11	.7	.9	SF4		1.3X	193	
2003	OCT	19	2316	41.68	19	18.49	155	12.62	9.39	38	.11	.5	.4	SF2		1.8X	176	
2003	OCT	19	2318	19.65	19	20.53	155	16.65	1.26	40	.09	.2	.3	KOA		2.3X	78	
2003	OCT	19	2338	33.54	19	23.32	155	30.01	10.19	25	.08	.4	1.0	KAO		1.3X	78	
2003	OCT	20	0040	28.48	19	17.67	155	12.45	7.67	40	.15	.6	.7	SF2		1.3X	177	
2003	OCT	20	0226	7.58	19	16.97	155	12.06	7.97	34	.11	.5	.5	SF3		1.3X	207	
2003	OCT	20	0656	39.79	19	17.58	155	12.90	8.00									

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	MIN	KM	RD	SBC	KM	KM	REMKs	MAG	GAP	DS		
2003	OCT	20	1633	20.62	19	32.17	155	2.36	44.92	26.	11	.9	1.7	HIL	2.3X	150	14		
2003	OCT	20	2337	35.29	19	27.98	155	49.70	7.25	35	.12	.7	.7	KON	1.8X	196	8		
2003	OCT	21	0107	41.42	19	19.71	155	8.59	9.15	42	.10	.5	.4	SF4	2.0X	181	6		
2003	OCT	21	0225	3.16	19	25.99	155	36.20	2.46	19	.12	.4	.4	MLO	1.1X	74	2		
2003	OCT	21	0225	45.53	19	24.52	155	16.87	10.71	36	.15	.4	.5	INT L	2.1X	51	1		
2003	OCT	21	0952	41.66	19	22.83	155	14.59	2.90	19	.08	.3	.4	SEC	1.4X	106	2		
2003	OCT	21	1158	47.19	19	52.30	155	21.97	28.43	39	.11	.6	1.3	KEA	1.7X	106	3		
2003	OCT	21	1553	5.74	19	30.41	155	16.12	24.22	48	.10	.4	.8	DEP F	2.8X	59	5		
2003	OCT	21	1736	57.91	19	24.23	155	15.94	9.42	29	.08	.4	.3	INT L	1.8X	94	1		
2003	OCT	21	1929	29.04	19	20.25	155	5.92	6.55	29	.11	.7	1.1	SF4	1.4X	192	6		
2003	OCT	21	2225	28.06	19	24.27	155	16.99	9.46	32	.11	.4	.5	INT L	1.6X	49	1		
2003	OCT	22	0627	13.91	19	24.27	155	16.51	10.38	26	.10	.6	.5	INT L	1.7X	89	1		
2003	OCT	22	1839	35.36	19	52.93	155	15.42	12.75	38	.12	1.0	.6	KEA	1.8X	213	9		
2003	OCT	22	2017	39.72	19	19.97	155	18.16	2.23	25	.12	.3	.6	SWR	.9X	80	4		
2003	OCT	22	2146	48.79	19	31.65	155	43.32	7.87	25	.15	.6	1.4	KON	1.2X	84	5		
2003	OCT	22	2348	20.50	19	29.00	155	26.98	6.92	34	.12	.3	1.1	KAO	1.5X	64	6		
2003	OCT	23	0554	20.94	19	25.32	155	18.12	11.33	23	.17	.8	1.0	INT L	1.4X	79	1		
2003	OCT	23	0742	33.17	19	28.55	155	53.58	12.59	32	.13	1.0	.5	KON	1.9X	245	24		
2003	OCT	23	0838	23.81	19	22.05	155	2.24	5.20	29	.14	.8	2.0	SF5	1.2X	198	5		
2003	OCT	23	0926	44.40	19	25.22	155	16.32	7.00	26	.12	.4	.6	INT L	1.2X	110	1		
2003	OCT	23	1554	37.19	19	24.43	155	16.65	8.02	35	.11	.4	.5	INT L	2.0X	52	1		
2003	OCT	23	1835	45.40	19	11.01	156	18.29	34.55	44	.11	1.1	2.3	KON	2.6X	279	57		
2003	OCT	23	2126	24.21	19	28.80	155	8.02	41	.12	.3	1.0	KAO	1.4X	49	6			
2003	OCT	25	0327	42.51	19	19.42	155	54.42	13.23	32	.12	1.0	.5	KON	1.9X	224	5		
2003	OCT	25	0423	12.49	19	20.05	155	9.05	8.47	38	.06	.4	.3	SF4	1.5X	173	5		
2003	OCT	25	1334	2.36	20	24.27	155	31.68	28.37	35	.11	1.1	4.3	KEA	2.3X	285	40		
2003	OCT	25	1939	37.07	19	26.36	155	25.43	10.08	17	.08	.5	1.0	KAO	1.3U	80	7		
2003	OCT	25	2114	53.19	19	49.91	155	43.64	46.23	31	.11	1.2	1.3	LSW	1.4X	209	8		
2003	OCT	25	2117	51.75	19	15.92	155	35.09	35.09	31	.14	.4	.3	LSW	1.7X	129	13		
2003	OCT	26	0628	43.60	19	52.44	155	33.16	31.52	29	.08	.6	1.3	KEA	1.9X	183	11		
2003	OCT	26	1120	47.95	18	55.52	155	18.78	17.22	42	.11	1.0	12.1	LOT	-2.1X	248	30		
2003	OCT	26	1201	14.51	19	20.32	155	19.56	2.53	34	.09	.2	.5	SWR	1.3X	110	4		
2003	OCT	26	1855	58.23	19	29.07	155	3.43	11.26	36	.10	.4	.6	GLN	1.4X	124	9		
2003	OCT	26	1858	41.40	19	47.15	154	59.19	47.79	44	.12	.9	1.1	KEA	2.1X	243	10		
2003	OCT	26	2101	32.35	19	11.02	155	45.74	11.93	35	.10	.7	.4	KON	1.9X	166	3		
2003	OCT	26	2304	48.69	19	22.22	155	19.87	32.35	40	.11	.6	.8	DML	1.6X	70	3		
2003	OCT	27	0014	17.35	19	25.43	155	16.59	11.25	29	.13	.6	.6	INT L	1.5X	106	1		
2003	OCT	27	0227	25.13	19	19.85	155	10.89	8.23	41	.12	.9	1.1	KEA	2.1X	243	10		
2003	OCT	27	0230	37.39	19	10.85	155	8.44	44	.12	.5	.5	SF3	1.6X	156	6			
2003	OCT	27	0327	23.62	19	24.74	155	16.41	11.04	24	.12	.5	.7	INT L	1.5X	145	1		
2003	OCT	27	0606	46.79	19	20.04	155	7.23	9.23	45	.09	.5	.6	SF4	2.8X	185	6		
2003	OCT	27	0607	26.89	19	19.53	155	6.95	7.94	40	.12	.5	.6	SF4	2.3X	190	7		
2003	OCT	27	0714	59.57	18	57.73	155	27.74	37.95	39	.08	.9	1.2	DLS	1.9X	231	22		
2003	OCT	27	0818	39.58	19	20.28	155	7.44	7.93	45	.10	.5	.5	SF4	2.2X	182	6		
2003	OCT	27	1033	33.46	19	24.77	155	16.45	7.39	26	.10	.5	.5	INT L	1.2X	103	1		

L

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	MIN	KM	RD	SBC	KM	KM	REMKs	MAG	GAP	DS		
2003	OCT	27	1358	17.12	19	24.57	155	38.00	2.95	44	.13	.3	.3	MLO	2.4X	97	1		
2003	OCT	27	1539	31.95	19	24.19	155	17.11	8.04	25	.11	.4	.5	INT L	1.4X	87	1		
2003	OCT	27	1825	34.95	19	21.95	155	12.87	3.40	15	.03	.4	.3	SER	1.1X	111	1		
2003	OCT	27	1910	0.38	19	19.84	155	18.20	3.39	26	.09	.3	.7	SWR	1.3X	47	4		
2003	OCT	27	2113	40.79	19	31.49	155	38.16	16	10.82	30	.11	.5	MLO	1.6X	94	6		
2003	OCT	28	0204	50.63	19	29.29	155	27.70	8.80	43	.12	.3	.9	KAO	1.5X	47	5		
2003	OCT	28	0232	31.30	19	24.60	155	29.55	11.91	25	.12	.4	.6	KAO	1.0X	69	5		
2003	OCT	28	1029	28.32	19	19.40	155	11.71	6.82	36	.10	.5	.8	SF3	1.5X	151	5		
2003	OCT	28	1501	31.23	19	18.86	155	15.15	3.66	31	.14	.4	1.0	SF	1.2X	95	4		
2003	OCT	28	0127	10.31	19	21.99	155	4.52	6.57	39	.13	.6	.6	SF5	1.5X	180	4		
2003	OCT	28	1520	35.54	19	24.57	155	16.59	10.85	32	.11	.5	.6	INT L	1.9X	53	1		
2003	OCT	28	1727	12.53	19	19.49	155	8.33	5.79	34	.12	.6	1.4	SF4	1.1X	186	7		
2003	OCT	28	2210	7.70	19	27.10	154	54.70	0.85	33	.14	1.7	.6	SLE	1.8X	264	8		
2003	OCT	28	2343	40.63	19	21.94	155	48.07	9.04	28	.13	.9	.6	KON	1.4X	243	14		
2003	OCT	29	0157	20.08	18	52.21	155	31.98	.98	.95	.09	1.1	1.4	DLS	2.0X	268	19		
2003	OCT	29	0204	51.59	18	54.04	155	31.59	37.59	38	.08	.9	1.3	DLS	2.1X	256	18		
2003	OCT	29	0412	8.01	19	19.36	155	29.91	9.50	31	.11	.3	.8	KAO	1.0X	100	7		
2003	OCT	29	0910	34.51	19	17.56	155	12.69	7.09	39	.09	.4	.7	SF2	1.4X	174	2		
2003	OCT	29	1628	24.77	19	16.75	155	28.41	9.67	48	.13	.4	.5	LSW F	3.2X	87	4		
2003	OCT	30	0829	24.46	19	15.93	155	19.65	8.68	16	.14	1.4	.8	KEA	1.2X	293	2		
2003	OCT	30	0910	31.04	19	23.29	155	16.76	3.27	.45	.12	.2	.2	SSC F	2.8X	46	0		
2003	OCT	30	1826	16.58	19	19.56	155	10.50	6.23	22	.11	.7	1.1	SF3	1.2X	193	6		
2003	OCT	30	1850	17.04	19	24.50	155	16.70	12.91	11.21	.11	.7	.8	INT L	1.3X	124	1		
2003	OCT	30	1931	27.74	19	30.28	155	16.32	25.34	46	.11	.5	.9	DEP	2.4X	58	5		
2003	OCT	31	0238	46.14	19	20.52	155	26.99	5.98	17	.12	.4	1.9	KAO	1.3X	99	5		
2003	OCT	31	0323	41.77	19	10.30	155	36.33	0.23	.20	.13	.5	.4	LSW	1.4X	137	14		
2003	OCT	31	0523	13.72	18	58.84	155	28.87	37.30	29	.09	.9	1.5	DLS	1.9X	226	18		
2003	OCT	31	0604	50.39	19	21.86	155	30.00	9.22	.41	.10	.3	.5	KAO	1.9X	64	4		
2003	OCT	31	1100	34.81	19	21.18	155	4.33	3.53	16	.14	.9	1.5	SF	1.3X	192	6		
2003	OCT	31	1112	33.16	19	24.75	155	16.78	11.10	19	.10	.7	.9	INT L	2.0X	1			

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

2003 NOV 1 0831 14.37 19 20.22 155 6.69 7.73 31 .11 .8 .6 SF4 2.0X 188 6
2003 NOV 1 1025 44.54 19 19.33 155 11.75 7.11 20 .10 .7 .7 SF3 1.4X 172 5
2003 NOV 1 1932 47.51 19 31.19 155 50.07 9.57 16 .19 2.4 1.0 KON 1.1X 229 7
2003 NOV 1 2016 41.29 19 13.02 155 36.95 1.72 16 .19 1.7 2.2 LSW 1.6X 134 13
2003 NOV 1 2311 39.55 19 28.15 154 52.27 1.21 38 .13 1.4 .7 SLE F 2.3X 274 13

2003 NOV 2 0232 49.28 19 24.98 155 15.73 14.80 28 .09 .6 .4 DEP 1.3X 106 3
2003 NOV 2 0300 2.53 19 25.48 155 20.01 6.76 43 .13 .3 .7 KAO 2.0X 47 3
2003 NOV 2 0307 31.88 19 14.45 155 28.98 36.27 42 .09 .6 .9 DLS 2.0X 87 2
2003 NOV 2 0309 3.26 19 25.80 155 20.14 8.24 19 .12 .5 1.3 KAO 1.5X 94 4
2003 NOV 2 0532 12.84 19 26.58 155 29.05 8.78 21 .11 .5 1.2 KAO 1.2X 83 8

2003 NOV 2 0727 10.13 19 45.45 155 18.54 31.36 19 .09 .8 1.3 KEA 1.5X 114 15
2003 NOV 2 0850 14.93 19 27.86 155 23.97 11.23 21 .08 .4 1.0 KAO 1.3X 72 4
2003 NOV 2 2221 39.07 19 30.80 155 28.62 6.94 18 .11 .4 1.5 MLO 1.0X 71 3
2003 NOV 3 0204 33.56 19 18.89 155 12.08 5.11 19 .11 .5 1.6 SF3 1.2X 155 5
2003 NOV 3 0735 30.74 19 28.55 155 15.52 18.90 26 .11 .9 .7 DEP L 2.5X 160 2

2003 NOV 3 1057 24.54 19 17.84 155 12.94 6.35 20 .10 1.2 1.3 SF2 1.3X 184 2
2003 NOV 3 1416 59.53 19 21.53 154 47.24 42.70 27 .12 1.8 1.6 LER 2.0X 293 21
2003 NOV 3 1953 31.20 19 25.44 155 18.04 7.70 18 .15 .7 1.2 INT L 1.7X 77 1
2003 NOV 4 0852 43.82 19 0.75 155 24.98 39.21 15 .10 2.7 1.7 LOI 1.6X 260 27
2003 NOV 4 1108 2.04 18 49.81 155 50.41 12.83 25 .14 7.911.1 DIS - 1.9X 313 59

2003 NOV 4 1154 30.32 19 12.12 155 42.27 0.05 30 .13 .4 .2 LSW # 1.4X 119 8
2003 NOV 4 1514 10.11 19 27.34 155 25.98 7.71 31 .11 .4 1.2 KAO 1.4X 49 7
2003 NOV 4 2017 19.00 19 25.45 155 16.81 1.34 .3 .1 SNC 2.3X 100 1
2003 NOV 4 2134 48.90 19 31.38 155 29.57 7.08 30 .13 .3 1.3 MLO 1.6X 49 4
2003 NOV 4 2135 33.77 19 31.17 155 29.68 3.91 43 .11 .3 1.0 MLO 1.9X 45 4

2003 NOV 5 0019 12.26 19 24.59 155 16.38 7.63 27 .10 .4 .4 INT L 1.4X 103 1
2003 NOV 5 0401 8.55 19 25.71 155 55.69 42.10 49 .10 .8 1.0 KON F 2.4X 220 19
2003 NOV 5 0552 17.69 19 22.01 155 4.73 9.56 39 .10 .6 .4 SF5 2.0X 179 4
2003 NOV 5 0632 5.24 19 24.90 155 16.27 11.54 29 .14 .6 .6 INT L 1.3X 108 1
2003 NOV 5 0654 18.17 19 24.30 155 16.47 7.65 26 .11 .6 .5 INT L 1.2X 120 1

2003 NOV 5 0733 32.96 19 25.59 155 16.51 8.29 37 .10 .4 .4 INT L 2.0X 95 2
2003 NOV 5 0858 59.04 19 25.35 155 17.05 8.52 34 .11 .4 .5 INT L 2.0X 54 1
2003 NOV 5 1109 7.34 19 39.36 155 48.54 35.64 24 .11 .9 1.2 HUA 1.7X 117 1
2003 NOV 5 1111 39.02 19 24.85 155 17.82 7.51 35 .12 .4 .5 INT L 1.8X 45 1

2003 NOV 5 1151 47.30 19 24.96 155 16.71 8.92 36 .11 .4 .4 INT L 1.9X 89 1
2003 NOV 5 1324 9.92 19 24.77 155 17.68 5.48 33 .14 .4 .5 INT L 2.1X 61 1
2003 NOV 5 1329 53.61 19 24.56 155 16.93 7.29 25 .13 .5 .5 INT L 1.8X 86 1
2003 NOV 5 1419 5.00 19 25.42 155 16.96 7.92 32 .13 .4 .5 INT L 1.9X 84 1
2003 NOV 5 1750 26.53 19 25.01 155 29.57 12.19 26 .11 .5 1.1 KAO 1.2X 68 6

2003 NOV 5 1800 43.46 19 24.64 155 15.70 14.53 33 .10 .6 .3 DEP L 2.2X 55 2
2003 NOV 5 1806 56.78 19 24.20 155 17.26 11.25 30 .13 .6 INT L 1.9X 67 1
2003 NOV 5 1809 45.84 19 23.83 155 16.70 13.22 25 .12 .4 DEP L 2.0X 46 0
2003 NOV 5 1848 49.95 19 29.15 154 59.05 48.36 .33 .10 1.1 1.3 LER 2.2X 186 7
2003 NOV 5 1908 34.43 19 24.01 155 16.55 6.86 34 .13 .4 .5 INT L 2.2X 49 0

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

2003 NOV 5 1915 2.42 19 25.57 155 16.22 10.34 34 .11 .5 .5 INT L 1.9X 99 2
2003 NOV 5 1920 37.72 19 25.22 155 20.40 8.57 26 .11 .4 1.0 KZO 1.2X 84 3
2003 NOV 5 1924 42.51 19 24.51 155 17.23 7.25 38 .12 .4 .5 INT L 2.1X 59 1
2003 NOV 5 2013 55.51 19 24.42 155 16.86 5.94 30 .12 .4 .5 INT L 1.5X 95 1
2003 NOV 5 2103 4.87 19 24.52 155 16.36 9.05 35 .13 .4 .4 INT L 2.1X 49 1

2003 NOV 5 2222 8.75 19 25.16 155 16.77 3.36 34 .12 .3 .3 SNC L 2.2X 89 1
2003 NOV 5 2316 44.51 19 24.89 155 16.96 9.45 31 .13 .5 .5 INT L 1.9X 84 0
2003 NOV 6 0009 14.87 19 21.99 155 4.81 7.11 37 .13 .5 .6 SF5 1.5X 178 5
2003 NOV 6 0135 21.30 19 20.47 155 6.85 9.26 43 .10 .6 .4 SF4 2.4X 184 5
2003 NOV 6 0450 20.58 19 24.47 155 17.38 16.10 22 .12 .6 .5 DEP L 2.6X 60 1

2003 NOV 6 1506 21.58 19 24.46 155 16.84 3.59 42 .12 .3 .2 SSC L 2.1X 48 1
2003 NOV 6 1624 40.14 19 25.01 155 17.87 4.26 30 .14 .3 .5 SNC L 2.0X 53 1
2003 NOV 6 1628 15.55 19 24.71 155 16.39 7.29 38 .10 .3 .4 INT L 2.2X 50 1
2003 NOV 6 1753 4.83 19 25.63 155 16.67 12.14 30 .12 .5 .5 INT L 2.0X 96 1
2003 NOV 6 1926 48.23 19 13.84 155 28.81 6.61 16 .07 .6 1.0 LSW 1.3X 178 3
2003 NOV 6 1422 31.95 20 1.35 155 18.58 11.83 22 .14 1.1 .6 XEA 1.9X 216 15

2003 NOV 6 2152 32.43 19 24.35 155 16.57 11.50 29 .11 .5 .5 INT L 2.1X 61 1
2003 NOV 6 2240 40.14 19 25.01 155 17.87 4.26 30 .14 .3 .5 SNC L 2.0X 53 1
2003 NOV 6 2305 34.00 19 24.58 155 17.31 11.92 30 .10 .4 .6 INT L 1.8X 62 1
2003 NOV 6 2420 15.55 19 24.71 155 16.39 7.29 38 .10 .3 .4 INT L 2.2X 50 1
2003 NOV 6 2450 45.08 19 24.42 155 16.98 10.89 23 .09 .6 .6 INT L 1.4X 93 1
2003 NOV 6 2490 13.18 19 25.03 155 17.34 8.94 31 .12 .4 .5 INT L 1.9X 77 1

2003 NOV 7 0243 58.87 19 21.41 155 18.61 2.48 24 .07 .3 .5 SBR 1.2X 59 5
2003 NOV 7 0249 25.54 19 23.64 155 17.02 6.92 33 .11 .4 .5 INT L 2.2X 52 1
2003 NOV 7 0005 34.30 19 24.58 155 17.31 11.92 30 .10 .4 .6 INT L 1.8X 62 1
2003 NOV 7 0105 12.23 19 24.88 154 16.86 41.67 50 .10 .7 .7 LER 2.3X 268 11
2003 NOV 7 0106 45.08 19 24.42 155 16.98 10.89 23 .09 .7 .7 INT L 2.0X 96 1
2003 NOV 7 0243 58.87 19 21.41 155 18.61 2.48 24 .07 .3 .5 SBR 1.2X 59 5
2003 NOV 7 0310 24.47 19 24.19 155 16.97 5.52 34 .10 .3 .4 INT L 2.0X 82 1
2003 NOV 7 0311 16.19 19 30.12 155 44.98 6.90 34 .12 .5 .6 INT L 1.7X 156 2
2003 NOV 7 0411 49.29 19 24.20 155 16.98 8.42 31 .13 .5 .4 INT L 1.6X 48 1
2003 NOV 7 0504 33.88 19 19.59 155 11.42 7.23 41 .13 .5 .6 SF3 1.5X 153 6

2003 NOV 7 0811 58.43 19 25.44 155 15.43 12.13 29 .11 .5 .4 INT L 1.8X 100 3
2003 NOV 7 1143 27.53 19 27.11 155 16.17 16.20 20 .12 3.213.7 KON - 1.1X 315 30
2003 NOV 7 1320 21.56 19 23.50 155 14.81 3.35 41 .11 .3 .4 SEC 2.5X 50 3
2003 NOV 7 1351 5.21 19 23.50 155 14.81 3.35 41 .11 .3 .4 SEC 2.5X 50 3
2003 NOV 7 1437 33.39 19 24.60 155 16.84 10.68 32 .12 .5 .5 INT L 1.7X 96 1

2003 NOV 7 1625 48.46 19 24.83 155 17.19 8.13 31 .13 .5 .6 INT L 1.5X 58 0
2003 NOV 7 1639 33.49 19 24.27 155 17.18 3.58 36 .11 .3 .2 SSC L 2.0X 48 1
2003 NOV 7 1710 5.75 18 55.51 154 57.09 49.48 49 .12 1.1 1.4 DIS F 3.3X 277 49
2003 NOV 7 2055 1.00 19 24.76 155 16.89 10.06 33 .10 .4 .4 INT L 1.5X 96 0
2003 NOV 7 2116 4.93 19 18.87 155 13.06 6.51 43 .10 .4 .7 SF2 1.7X 127 3

-ORIGIN TIME (HST)--LAT N--LON W--DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	MIN	KM	RD	SRC	KM	KM	REMARKS	MAG	GAP	DS		
2003	NOV	8	0638	34.64	19	25.50	155	29.68	9.58	35.	.12	.4	1.0	KAO	1.6X	65	7		
2003	NOV	8	0801	46.43	19	17.44	155	37.36	10.33	18	.12	.5	1.9	LSW	1.6X	103	9		
2003	NOV	8	1056	28.33	19	17.28	155	12.54	7.04	27.	.07	.6	.8	SF2	1.4X	195	2		
2003	NOV	8	1141	55.36	19	23.45	155	17.40	2.93	22.	.11	.3	.4	SSC	2.0X	44	2		
2003	NOV	8	1219	11.11	19	11.39	155	31.48	7.00	23.	.13	.7	1.3	LSW	1.9X	204	7		
2003	NOV	8	1327	5.99	19	25.48	155	16.23	10.31	22.	.13	.5	.7	INT	1	1.6X	87	2	
2003	NOV	8	1343	25.24	19	16.68	155	12.23	8.13	29	.12	.7	.6	SF3	1.8X	249	2		
2003	NOV	8	1839	39.38	19	24.74	155	16.64	11.54	21	.09	.7	.7	INT	1	1.2X	129	1	
2003	NOV	8	1908	39.38	20	5.80	155	15.11	14.17	12.	.07	2.8	1.0	KEA	1.6X	329	25		
2003	NOV	8	2202	24.89	19	24.53	155	16.83	12.22	29.	.14	.4	.4	INT	1	2.1X	48	1	
2003	NOV	9	0008	50.77	19	28.86	156	5.95	20.56	16.	.11	1.512.0	KON	-	1.7X	295	47		
2003	NOV	9	0529	40.46	20	54.68	156	12.24	6.30	21.	.12	9.412.1	DIS	-	2.6X	33130			
2003	NOV	9	0556	37.02	19	24.67	155	16.64	13.48	33.	.11	.6	.5	DRP	1	2.3X	91	1	
2003	NOV	9	0701	24.24	19	25.01	155	16.40	8.66	28	.13	.4	.4	INT	1	2.0X	94	1	
2003	NOV	9	0819	58.49	19	23.28	155	15.04	3.34	19.	.07	.4	.4	SEC	1.4X	108	2		
2003	NOV	9	1252	33.42	19	24.33	155	16.77	10.65	27.	.06	.6	.6	INT	1	1.9X	102	1	
2003	NOV	9	1525	37.83	19	24.10	155	16.19	3.95	32.	.11	.3	.3	SEC	1	1.9X	93	1	
2003	NOV	9	1547	58.38	19	23.89	155	17.71	7.13	37.	.08	.4	.6	INT	1	1.9X	73	2	
2003	NOV	9	1624	4.56	19	16.98	155	7.92	45.57	39.	.11	.8	.9	DEP	2.0X	219	10		
2003	NOV	9	1756	57.63	19	23.71	155	16.99	6.80	34.	.11	.4	.5	INT	1	1.9X	59	1	
2003	NOV	9	1811	30.97	19	18.93	155	39.40	0.05	23.	.13	.9	.3	LSW	#	1.6X	220	5	
2003	NOV	9	2005	51.82	19	43.55	155	48.41	21.29	15.	.11	1.5	1.8	HUA	1.6X	252	5		
2003	NOV	9	2205	29.91	19	24.82	155	16.61	9.74	37.	.12	.3	.4	INT	1	2.2X	49	1	
2003	NOV	9	2345	11.72	19	24.56	155	16.35	13.78	26.	.11	.6	.7	DEP	1.5X	103	1		
2003	NOV	9	2345	50.71	19	23.68	155	17.07	5.54	24.	.12	.4	.6	INT	1	1.6X	58	1	
2003	NOV	10	0042	57.57	19	25.71	155	16.74	10.26	37.	.09	.3	.4	INT	1	2.2X	51	2	
2003	NOV	10	0824	12.75	19	25.17	155	16.50	8.07	30.	.13	.5	.5	INT	1	2.1X	96	1	
2003	NOV	10	0941	32.39	19	13.68	155	19.39	28.25	17.	.08	.9	1.0	DEC	2.1X	219	8		
2003	NOV	10	1317	51.18	19	23.11	155	14.42	2.42	17.	.07	.3	.3	SEC	1.7X	112	2		
2003	NOV	10	1452	48.88	19	32.69	155	36.93	9.01	38.	.12	.5	.6	MLO	1.8X	136	7		
2003	NOV	10	1501	8.59	19	24.15	155	17.11	9.86	32.	.11	.5	.5	INT	1	2.1X	78	1	
2003	NOV	10	1843	31.90	19	28.49	155	50.04	9.54	27.	.15	.1	.6	KON	1.5X	191	8		
2003	NOV	10	2135	9.80	19	24.40	155	16.88	12.13	34.	.12	.5	.4	INT	1	2.3X	87	1	
2003	NOV	11	0154	52.34	19	19.73	155	47.85	10.75	23.	.11	.9	.6	KON	1.1X	249	14		
2003	NOV	11	0627	58.16	19	24.55	155	17.20	10.50	27.	.09	.5	.5	INT	1	1.4X	70	1	
2003	NOV	11	1019	26.76	19	20.05	155	12.03	8.36	45.	.08	.4	.3	SF3	2.0X	137	5		
2003	NOV	11	1312	21.79	19	19.59	155	5.44	4.82	30.	.10	.6	.2	SSF	1.5X	203	8		
2003	NOV	11	1326	6.11	19	25.36	155	16.10	10.72	22.	.09	.6	.7	INT	1	1.6X	94	2	
2003	NOV	11	1356	21.83	19	23.41	155	16.87	11.07	18.	.13	.8	1.0	INT	1	2.1X	79	1	
2003	NOV	11	1507	19.69	19	22.06	155	12.87	3.58	14.	.03	.4	.4	SER	1.7X	112	1		
2003	NOV	11	2004	50.53	19	6.23	155	9.94	27.48	45.	.11	.7	.3	LOT	2.6X	247	21		
2003	NOV	12	0224	58.77	19	25.82	155	16.81	10.41	18.	.08	.7	.9	INT	1	1.4X	112	2	
2003	NOV	12	0225	28.07	19	24.82	155	17.30	6.49	33.	.11	.3	.5	INT	1	2.1X	63	1	
2003	NOV	12	0307	2.18	19	24.35	155	17.32	11.84	33.	.11	.4	.4	INT	1	1.6X	68	1	
2003	NOV	12	0622	15.69	19	25.30	154	50.63	39.20	47.	.11	.8	.9	LER	2.5X	272	14		

-ORIGIN TIME (HST)- LAT N- -LON W- DEPTH											N RMS ERH ERZ LOC			PREF AZ MIN			
YEAR	MON	DA	HRMN	SEC	DEG	MIN	KM	RD	SEC	KM	RWMKS	MAG	GAP	DS			
2003	NOV	17	2259	37.24	19	24.59	155	16.40	13.82	32.11	.6	.4	DEP	L	1.5X	95	1
2003	NOV	17	2345	7.24	19	25.36	155	17.61	9.03	17.13	1.1	1.5	INT	L	1.4X	108	0
2003	NOV	17	2358	0.11	19	17.82	155	16.04	7.52	18.11	.6	1.1	SFI	L	1.2X	166	5
2003	NOV	18	0243	10.08	19	18.27	155	48.29	29.10	37.17	1.0	.7	1.1	KON	1.2X	190	16
2003	NOV	18	0309	21.43	19	16.06	155	7.84	41.78	23.11	1.1	1.5	1.1	DEP	1.3X	285	10
2003	NOV	18	0929	9.30	19	24.31	155	17.34	10.25	35.11	.4	.3	INT	L	2.2X	50	1
2003	NOV	18	0934	56.08	19	24.39	155	16.74	7.85	40.10	.3	.4	INT	L	1.9X	49	1
2003	NOV	18	0941	37.48	19	25.51	155	16.75	6.74	30.10	.4	.4	INT	L	2.1X	55	1
2003	NOV	18	0959	52.95	19	24.21	155	17.00	8.13	41.10	.3	.4	INT	L	2.1X	51	1
2003	NOV	18	1014	23.97	19	24.17	155	16.70	5.42	32.13	.4	.5	INT	L	1.7X	51	1
2003	NOV	18	1019	24.13	19	24.70	155	16.99	8.22	34.11	.4	.5	INT	L	1.9X	49	0
2003	NOV	18	1038	38.76	19	24.46	155	17.06	14.69	38.12	.5	.3	DEF	L	2.2X	48	1
2003	NOV	18	1228	39.52	19	24.44	155	17.34	8.59	36.12	.4	.5	INT	L	1.9X	48	1
2003	NOV	18	1456	6.53	19	22.77	155	15.15	2.86	20.10	.3	.3	SEC	L	1.3X	101	1
2003	NOV	18	1616	54.89	19	24.49	155	17.13	9.92	41.12	.4	.4	INT	L	2.2X	51	1
2003	NOV	18	1619	22.62	19	23.82	155	17.07	8.79	32.13	.4	.6	INT	L	1.5X	75	1
2003	NOV	18	1633	23.70	19	24.35	155	16.81	10.73	35.11	.3	.4	INT	L	2.1X	51	1
2003	NOV	18	1646	41.58	19	24.27	155	16.89	11.42	37.11	.4	.5	INT	L	1.8X	51	1
2003	NOV	18	1740	55.20	19	24.64	155	17.12	8.81	32.12	.4	.6	INT	L	1.4X	74	1
2003	NOV	18	1746	1.02	19	28.05	155	36.64	13.51	32.11	.5	.6	DML	L	1.9X	93	2
2003	NOV	18	1824	20.55	19	24.31	155	16.96	8.83	32.12	.4	.5	INT	L	1.7X	92	1
2003	NOV	18	2109	45.42	19	24.30	155	16.83	8.64	37.11	.4	.4	INT	L	2.2X	51	1
2003	NOV	18	2125	45.16	19	24.56	155	17.11	9.53	41.11	.3	.4	INT	L	2.0X	49	1
2003	NOV	18	2220	52.58	19	24.75	155	16.71	8.72	32.12	.5	.5	INT	L	1.6X	99	1
2003	NOV	18	2316	16.40	19	24.48	155	17.20	9.62	34.14	.4	.5	INT	L	2.2X	64	1
2003	NOV	18	2346	56.86	19	24.39	155	17.34	10.49	38.11	.3	.4	INT	L	1.9X	48	1
2003	NOV	19	0146	21.91	19	46.50	155	34.92	15.15	36.09	.5	.5	KEA	L	1.7X	105	12
2003	NOV	19	0303	19.79	19	19.66	155	26.64	10.68	38.11	.3	.7	KAO	L	1.6X	85	6
2003	NOV	19	0313	29.91	19	24.23	155	17.50	5.79	36.13	.4	.5	INT	L	2.1X	48	2
2003	NOV	19	0419	20.90	19	24.08	155	17.52	6.49	35.12	.4	.5	INT	L	1.9X	65	1
2003	NOV	19	0537	47.37	19	25.63	155	16.65	7.07	32.13	.5	.6	INT	L	1.7X	63	2
2003	NOV	19	0540	25.46	19	24.84	155	18.26	11.67	32.13	.5	.6	INT	L	1.7X	105	1
2003	NOV	19	0544	39.34	19	26.13	155	15.91	7.30	26.14	.4	.6	INT	L	2.1X	81	3
2003	NOV	19	0627	19.97	19	23.82	155	16.21	10.04	15.13	.0	.8	INT	L	1.7X	174	1
2003	NOV	19	0837	36.99	19	21.52	155	29.96	8.61	32.14	.6	.9	KAO	L	1.4X	88	4
2003	NOV	19	0842	13.10	18	55.23	155	12.51	40.24	28.08	1.4	2.1	LOI	L	1.9X	256	38
2003	NOV	19	0932	12.55	19	24.19	155	15.89	12.61	35.14	.4	.5	INT	L	2.4X	50	1
2003	NOV	19	0934	9.18	19	24.36	155	17.77	10.66	32.12	.4	.6	INT	L	2.1X	49	2
2003	NOV	19	0940	10.83	19	24.56	155	16.18	13.88	34.12	.6	.4	DEP	L	2.2X	106	1
2003	NOV	19	1154	37.69	19	23.68	155	17.28	5.76	31.14	.3	.6	INT	L	2.2X	33	1
2003	NOV	19	1248	1.95	19	24.41	155	16.93	9.87	35.11	.4	.4	INT	L	2.1X	101	1
2003	NOV	19	1447	3.89	19	25.09	155	16.61	34.30	38.12	.3	.2	SNC	L	2.1X	50	1
2003	NOV	19	1535	59.05	19	13.20	155	24.33	34.83	32.10	.8	1.2	DEP	L	1.9X	154	9

-ORIGIN TIME (HST)--LAT N--LON W--DEPTH N RMS ERH ERZ LOC PREF AZ MIN

YEAR	MON	DA	HRMN	SEC	DEG	MIN	DBG	MIN	KM	RD	SRC	KM	KM	REMARKS	PREF	AZ	MIN
2003	NOV	23	1928	30.17	19	24.76	155	29.45	11.26	39	.08	.3	.4	KAO	1.7X	50	5
2003	NOV	23	2044	55.06	19	45.71	155	24.36	20.00	41	.12	.5	1.3	KEA	1.9X	75	6
2003	NOV	23	2108	16.92	19	44.71	156	35.82	2.49	39	.13	4.7	2.9	DIS	2.5X	293	91
2003	NOV	23	2121	7.50	19	24.47	155	15.88	1.04	26	.13	.3	3.3	SEC	1.8X	103	2
2003	NOV	23	2318	38.27	19	16.19	155	28.35	9.71	20	.13	.5	1.0	LSW	1.4X	90	4
2003	NOV	23	2326	33.02	19	28.35	155	21.43	3.05	18	.09	.5	1.0	KAO	1.5X	139	4
2003	NOV	23	2330	52.49	19	28.20	155	21.46	2.35	21	.08	.4	.7	KAO	1.5X	136	6
2003	NOV	23	2354	5.44	19	19.63	155	11.55	4.74	17	.12	.7	3.7	SSF	1.4X	170	6
2003	NOV	24	0421	53.49	19	46.32	155	51.04	40.13	15	.12	1.9	2.9	HUA	1.6X	208	30
2003	NOV	24	0504	3.35	19	19.61	155	11.52	9.50	38	.14	.4	.4	SF3	2.3X	151	6
2003	NOV	24	0715	43.06	19	52.51	155	38.18	25.94	24	.08	1.0	1.5	DEP	1.6X	114	3
2003	NOV	24	1651	0.58	19	24.94	155	19.60	5.70	26	.10	.4	.8	KAO	1.5X	77	2
2003	NOV	24	1913	45.86	19	21.92	155	14.24	24.95	34	.07	.6	.7	DEP	1.8X	94	2
2003	NOV	25	0744	33.90	19	8.16	155	21.75	48.38	18	.14	1.6	2.5	LOT	1.5X	239	11
2003	NOV	25	0745	51.67	19	11.05	155	20.00	44.61	17	.08	1.1	2.3	DEP	1.6X	192	13
2003	NOV	25	0746	57.84	19	10.35	155	19.95	46.49	24	.08	1.0	1.5	DEP	1.8X	198	14
2003	NOV	25	1236	4.43	19	18.40	155	11.68	5.00	24	.10	.5	1.9	SF3	1.2X	161	5
2003	NOV	25	2138	35.66	19	20.52	155	12.88	8.85	44	.10	.4	.3	SF2	2.1X	119	4
2003	NOV	25	2225	35.90	19	18.77	155	10.89	7.11	26	.09	.5	.6	SF3	1.2X	157	6
2003	NOV	26	0121	36.65	19	24.52	155	15.67	1.03	28	.13	.2	.3	SEC	2.0X	52	2
2003	NOV	26	0131	51.37	19	24.61	155	15.71	1.02	26	.13	.3	.5	SNC	2.3X	51	2
2003	NOV	26	1303	29.17	19	21.13	155	4.77	6.22	19	.13	1.1	1.5	SF5	1.4X	189	6
2003	NOV	26	1422	4.43	19	22.87	155	30.11	9.16	28	.10	.4	1.0	KAO	1.9X	81	4
2003	NOV	26	1650	19.65	19	18.69	155	7.68	7.14	23	.09	.8	1.0	SF4	1.5X	188	7
2003	NOV	27	0111	59.84	19	24.51	155	15.89	1.46	16	.07	.3	.4	SEC	1.9X	119	2
2003	NOV	27	0214	48.62	19	24.08	155	3.02	4.35	24	.11	.7	.8	SME	2.0X	160	2
2003	NOV	27	0604	35.96	19	24.59	155	15.62	0.87	18	.12	.3	.4	SNC	2.1X	126	2
2003	NOV	27	1136	6.65	19	11.35	155	36.07	6.29	46	.14	.9	1.0	LSW	2.9X	95	12
2003	NOV	27	1948	56.84	19	26.57	155	28.97	10.65	34	.12	.4	.6	KAO	1.3X	58	8
2003	NOV	27	2132	56.10	19	24.29	155	1.54	5.09	15	.07	.7	1.0	SF5	1.2X	166	4
2003	NOV	28	0557	54.39	19	19.03	155	13.31	7.70	28	.10	.5	.6	SF2	1.6X	119	4
2003	NOV	28	1225	49.99	19	11.40	155	39.24	1.52	17	.12	.8	LSD	1.4X	152	12	
2003	NOV	28	1641	3.97	19	36.22	155	19.38	12.73	31	.10	.5	.9	KEA	1.5X	122	14
2003	NOV	29	0644	1.68	19	21.97	155	12.79	3.29	17	.08	.4	.3	SER	1.1X	95	1
2003	NOV	29	2111	2.62	19	24.10	155	37.44	2.64	19	.20	.5	.4	MLO	1.2X	86	1
2003	NOV	29	2242	44.47	19	26.40	155	19.19	6.56	37	.12	.4	.7	KAO	2.0X	102	3
2003	NOV	29	2243	14.01	19	25.28	155	19.06	6.91	43	.09	.3	.6	KAO	2.5X	49	3
2003	NOV	29	2314	19.85	19	15.05	155	33.76	8.29	28	12	.4	.8	LSW	1.4X	121	7
2003	NOV	30	1014	34.20	19	24.88	155	29.33	9.59	44	.09	.3	.6	KAO	1.7X	67	5
2003	NOV	30	1015	17.44	19	25.55	155	29.70	10.55	40	.10	.4	.8	KAO	1.5X	65	7
2003	NOV	30	1151	46.64	19	26.53	155	29.81	9.73	36	.09	.4	.8	KAO	1.4X	61	8
2003	NOV	30	1227	19.59	19	15.31	156	27.78	6.66	1.01	.05	.3	.8	DIS	-2.5X	302	76
2003	NOV	30	1638	43.04	19	34.07	155	54.94	27.10	27	.12	1.6	1.2	KON	2.0X	260	16
2003	NOV	30	2315	25.66	19	24.80	154	58.55	5.24	36	.10	1.1	.5	LER	2.6X	251	1
2003	NOV	30	2324	9.52	19	18.64	155	25.47	9.34	33	.10	.4	.6	LSW	1.1X	97	5

74

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

2003 DEC 5 1005 36.77 19 23.24 155 14.66 3.51 18 .07 .3 .4 SEC 1.4X 118 3
2003 DEC 5 1018 11.42 19 23.41 155 14.63 3.66 35 .10 .3 .4 SEC 1.9X 106 3
2003 DEC 5 1052 27.09 19 25.13 155 16.53 9.03 33 .11 .4 .6 INT L 2.2X 105 1
2003 DEC 5 1142 51.96 19 28.81 155 53.39 13.05 33 .13 1.0 .5 KON F 2.4X 245 24
2003 DEC 5 1150 26.00 19 24.57 155 16.57 10.50 35 .10 .4 .4 INT L 2.0X 89 1
2003 DEC 5 1157 51.68 19 31.70 155 20.80 12.07 41 .11 .5 .7 MLO 1.6X 59 6
2003 DEC 5 1246 55.50 19 24.99 155 16.74 10.23 36 .13 .4 .4 INT L 2.1X 50 0
2003 DEC 5 1350 41.05 19 24.92 155 16.91 10.11 30 .11 .5 .6 INT L 1.9X 96 0
2003 DEC 5 1506 53.04 19 24.97 155 16.35 9.83 33 .10 .4 .6 INT L 2.0X 99 1
2003 DEC 5 1557 45.06 19 24.99 155 16.60 9.09 35 .12 .5 .6 INT L 2.1X 62 1
2003 DEC 5 1637 7.06 19 24.14 155 15.72 3.31 29 .10 .3 .2 SEC 2.0X 100 2
2003 DEC 5 1649 8.34 18 46.36 155 15.22 47.49 21 .10 2.5 2.6 LOT 1.8X 291 50
2003 DEC 5 1706 20.04 19 24.70 155 16.35 9.89 37 .10 .5 .5 INT L 1.6X 93 1
2003 DEC 5 1825 33.00 19 25.46 155 16.57 8.08 35 .09 .3 .5 INT L 1.7X 55 1
2003 DEC 6 0134 53.96 19 21.71 155 5.11 8.17 41 .09 .6 .4 SF5 2.1X 180 5
2003 DEC 6 0720 2.92 19 25.33 155 16.55 11.60 34 .13 .4 .4 INT L 1.6X 92 1
2003 DEC 6 0758 13.07 19 24.29 155 17.21 8.63 33 .13 .5 .5 INT L 1.5X 71 1
2003 DEC 6 0823 16.64 19 24.96 155 16.57 9.45 30 .10 .4 .6 INT L 1.8X 103 1
2003 DEC 6 0856 49.00 19 24.01 155 17.01 7.67 33 .10 .4 .5 INT L 1.9X 84 1
2003 DEC 6 0906 27.46 19 25.05 155 16.91 10.05 32 .11 .5 .5 INT L 1.7X 61 0
2003 DEC 6 0925 24.28 19 24.32 155 16.83 12.50 34 .11 .5 .5 INT L 1.8X 58 1
2003 DEC 6 0959 19.88 19 25.06 155 16.71 10.70 34 .10 .4 .5 INT L 2.0X 50 1
2003 DEC 6 1038 37.60 19 25.58 155 16.35 8.91 33 .14 .5 .6 INT L 1.9X 123 2
2003 DEC 6 1110 25.87 19 24.95 155 17.16 7.50 36 .10 .4 .5 INT L 1.8X 52 0
2003 DEC 6 1156 41.20 19 24.77 155 16.75 9.44 32 .10 .5 .6 INT L 1.5X 98 0
2003 DEC 6 1232 41.80 19 25.05 155 16.95 9.39 31 .08 .4 .6 INT L 1.7X 96 0
2003 DEC 6 1316 5.42 19 25.27 155 16.36 10.25 38 .05 .5 .6 INT L 2.0X 96 1
2003 DEC 6 1438 7.12 19 25.13 155 17.20 9.42 33 .11 .5 .6 INT L 1.6X 91 1
2003 DEC 6 1516 58.52 19 24.44 155 16.88 8.80 33 .10 .4 .5 INT L 1.9X 94 1
2003 DEC 6 1552 27.02 19 25.08 155 16.45 10.46 34 .12 .4 .4 INT L 1.8X 54 1
2003 DEC 6 1727 9.78 19 25.56 155 16.97 9.00 33 .10 .4 .4 INT L 1.8X 50 1
2003 DEC 6 1746 9.44 19 24.98 155 16.73 9.29 34 .14 .4 .6 INT L 2.1X 50 0
2003 DEC 6 1807 26.22 19 25.23 155 16.47 7.27 32 .12 .4 .5 INT L 1.9X 64 1
2003 DEC 6 1834 55.00 19 24.42 155 17.21 6.37 42 .15 .4 .5 INT L 1.8X 48 1
2003 DEC 6 1857 48.88 19 24.69 155 16.49 7.79 31 .12 .4 .5 INT L 1.4X 106 1
2003 DEC 6 1918 52.50 19 25.40 155 16.83 8.72 33 .10 .4 .4 INT L 1.6X 87 1
2003 DEC 6 1951 54.82 19 24.91 155 17.36 8.78 30 .10 .5 .6 INT L 1.7X 77 1
2003 DEC 6 2005 16.87 19 24.27 155 17.47 9.26 31 .14 .5 .6 INT L 1.5X 60 1
2003 DEC 6 2025 57.78 19 24.95 155 16.38 6.55 34 .11 .4 .5 INT L 1.6X 105 1
2003 DEC 6 2125 34.06 19 18.34 155 15.12 9.01 45 .12 .4 .4 SFI 2.2X 101 4
2003 DEC 6 2345 13.57 19 19.00 155 15.03 8.59 45 .10 .4 .4 SFI 1.9X 88 5
2003 DEC 7 0304 44.91 19 18.23 155 13.72 7.88 33 .09 .5 .7 SF2 1.3X 104 2
2003 DEC 7 0502 35.29 19 20.09 155 7.58 7.80 42 .11 .6 .6 SF4 1.9X 183 6
2003 DEC 7 0823 27.62 19 24.40 155 16.38 13.46 35 .14 .5 .4 DEP L 1.9X 49 1
2003 DEC 7 1800 4.80 19 19.91 155 10.72 8.20 39 .11 .5 .6 SF3 1.5X 158 5

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

2003 DEC 7 1827 26.97 19 24.53 155 16.55 8.92 28 .10 .4 .6 INT L 1.4X 100 1
2003 DEC 7 2236 23.82 19 20.49 155 8.28 8.06 38 .10 .6 .5 SF4 1.4X 173 5
2003 DEC 7 2258 33.34 19 23.22 155 3.38 3.02 31 .12 .6 .5 SME 1.2X 172 2
2003 DEC 8 0030 7.70 19 22.43 155 2.36 8.36 39 .15 .8 .5 SF5 1.6X 190 5
2003 DEC 8 0031 35.86 19 11.62 155 35.00 1.79 31 .14 .4 .7 LSW 2.0X 130 11
2003 DEC 8 0138 5.75 19 24.92 155 17.37 7.85 31 .13 .4 .5 INT L 1.9X 53 1
2003 DEC 8 0239 19.12 19 24.18 155 17.51 12.05 37 .11 .3 .4 INT L 2.0X 47 2
2003 DEC 8 0733 38.32 19 24.14 155 16.73 9.63 32 .11 .5 .5 INT L 1.8X 57 0
2003 DEC 8 0804 8.05 19 24.34 155 16.66 8.18 34 .09 .4 .5 INT L 2.1X 96 1
2003 DEC 8 0832 55.68 19 25.06 155 16.00 5.09 30 .14 .4 .6 INT L 1.8X 120 2
2003 DEC 8 0852 17.72 19 23.97 155 16.92 9.63 32 .11 .5 .5 INT L 1.7X 85 1
2003 DEC 8 1308 12.74 19 25.68 155 16.63 9.31 24 .14 .7 .7 INT L 2.0X 116 2
2003 DEC 8 1433 36.75 19 21.94 155 2.34 7.69 21 .12 1.2 .7 SF5 1.6X 206 6
2003 DEC 9 0526 52.36 19 24.53 155 17.90 9.71 23 .12 .5 .7 INT L 1.9X 48 2
2003 DEC 9 0537 15.87 19 24.62 155 16.82 7.06 18 .11 .4 .7 INT L 1.6X 67 1
2003 DEC 9 0610 11.02 18 59.68 155 33.15 40.87 28 .09 1.0 1.3 DLS 1.8X 217 13
2003 DEC 9 0639 29.40 19 25.69 155 17.04 11.05 22 .11 .5 .6 INT L 2.3X 73 1
2003 DEC 9 0708 19.69 19 25.29 155 16.79 9.09 20 .13 .6 .7 INT L 2.2X 125 1
2003 DEC 9 0743 47.77 19 22.07 155 16.74 11.31 23 .09 .6 .8 INT L 2.0X 71 1
2003 DEC 9 0820 16.29 19 23.63 155 16.76 11.82 25 .15 .6 .5 INT L 2.2X 60 1
2003 DEC 9 0858 40.70 19 24.53 155 16.57 9.73 21 .13 .6 .7 INT L 1.9X 107 1
2003 DEC 9 0932 18.80 19 23.30 155 18.04 8.03 16 .13 .6 .9 INT L 1.5X 74 1
2003 DEC 9 1418 21.42 19 23.80 155 17.09 12.18 13 .15 1.6 1.2 KON 1.5X 260 13
2003 DEC 9 1534 4.50 20 1.24 25.23 8.17 14.17 16 1.9 1.6 KEA 2.0X 205 16
2003 DEC 9 1657 20.40 19 25.09 155 19.30 6.40 29 .11 .4 .8 KAO 1.9X 44 3
2003 DEC 9 2255 18.00 19 24.62 155 46.85 12.41 16 .10 1.2 .6 KON 1.5X 248 11
2003 DEC 10 0714 54.90 19 24.46 155 29.65 8.34 30 .11 .4 .8 KAO 1.6X 118 5
2003 DEC 10 0749 38.05 19 19.09 155 45.22 9.56 25 .12 .9 1.1 KON 1.8X 191 10
2003 DEC 10 0811 1.09 19 19.59 155 6.88 8.62 32 .10 .8 .5 SF4 1.9X 194 7
2003 DEC 10 0838 9.32 19 24.19 155 16.77 5.09 21 .10 .3 .5 INT L 2.0X 88 1
2003 DEC 10 0846 51.75 19 35.07 155 44.17 1.53 15 .09 .5 1.2 KON 1.2X 127 9
2003 DEC 10 1004 58.45 19 22.06 155 13.81 2.85 11 .09 .5 .5 SER 1.7X 98 2
2003 DEC 10 1225 37.63 19 25.16 155 16.41 13.82 18 .12 .9 1.0 DEP L 2.2X 116 1
2003 DEC 10 1268 5.95 19 25.70 155 15.75 11.18 17 .15 .9 .9 INT L 1.7X 140 3
2003 DEC 10 1723 17.66 19 23.34 155 14.78 3.33 12 .07 .4 .5 SEC 1.2X 149 3
2003 DEC 10 2255 38.41 19 23.91 155 17.36 2.69 19 .15 .4 .3 SCL 1.8X 60 1
2003 DEC 10 2331 5.95 19 23.76 155 18.02 11.19 19 .07 .5 4 INT L 2.2X 77 2
2003 DEC 10 2332 23.84 19 25.28 155 16.12 5.37 20 .10 .4 .7 INT L 1.7X 75 2
2003 DEC 10 2335 16.91 19 25.30 155 16.35 9.98 30 .10 .4 .5 INT L 1.9X 97 1
2003 DEC 10 2337 13.45 19 23.89 155 17.66 11.41 20 .11 .6 .4 INT L 2.3X 58 2
2003 DEC 10 2339 50.57 19 24.05 155 17.32 9.41 22 .11 .4 .5 INT L 2.1X 70 1
2003 DEC 10 2343 19.98 19 24.96 155 16.58 6.47 25 .13 .6 .6 INT L 2.0X 93 1
2003 DEC 10 2349 32.64 19 24.53 155 16.44 10.48 23 .12 .5 .6 INT L 1.9X 68 1
2003 DEC 10 2355 35.10 19 26.06 155 16.70 5.44 17 .12 .5 .7 INT L 2.0X 165 2
2003 DEC 11 0004 38.82 19 25.59 155 16.40 10.47 25 .12 .7 .7 INT L 1.9X 122 2

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

92

2003 DEC 11 0010 3.65 19 24.65 155 37.89 2.45 15 .13 .5 .3 MLO 2.0X 95 1
2003 DEC 11 0011 3.10 19 25.44 155 15.69 9.77 27 .16 .7 .7 INT L 1.9X 125 2
2003 DEC 11 0013 33.32 19 24.59 155 38.07 2.89 15 .14 .5 .5 MLO 1.6X 98 1
2003 DEC 11 0019 32.40 19 24.45 155 17.38 6.50 25 .12 .5 .6 INT L 2.0X 51 1
2003 DEC 11 0034 54.41 19 24.85 155 17.69 5.20 17 .15 .6 .8 INT L 1.6X 76 1
2003 DEC 11 0055 20.37 19 25.46 155 16.53 7.50 19 .11 .5 .6 INT L 2.0X 116 1
2003 DEC 11 0120 43.01 19 25.60 155 16.23 8.34 21 .15 .7 .8 INT L 1.4X 143 2
2003 DEC 11 0134 13.18 19 24.94 155 16.25 9.47 25 .10 .6 .6 INT L 2.1X 118 1
2003 DEC 11 0202 26.83 19 24.68 155 16.11 9.20 21 .14 .8 .8 INT L 1.9X 117 2
2003 DEC 11 0218 30.33 19 24.88 155 16.34 10.17 26 .14 .5 .6 INT L 2.0X 88 1
2003 DEC 11 0253 56.44 19 25.21 155 17.22 10.51 17 .08 .6 .9 INT L 2.1X 112 1
2003 DEC 11 0327 18.65 19 23.27 155 14.49 3.48 45 .10 .3 .3 SEC F 2.9X 55 3
2003 DEC 11 0337 5.18 19 22.87 155 14.91 4.09 15 .09 .5 .5 SEC 1.6X 109 2
2003 DEC 11 0429 26.74 19 25.27 155 16.71 6.63 27 .13 .4 .6 INT L 2.0X 54 1
2003 DEC 11 0502 36.84 19 25.06 155 16.26 10.00 19 .14 1.1 1.0 INT L 1.9X 180 1
2003 DEC 11 0515 54.91 19 24.51 155 16.86 11.83 18 .10 .7 .7 INT L 2.3X 102 1
2003 DEC 11 0547 53.69 19 24.41 155 17.96 10.53 19 .13 .6 .9 INT L 2.0X 60 2
2003 DEC 11 0607 58.13 19 24.63 155 17.41 7.60 18 .08 .4 .6 INT L 1.9X 55 1
2003 DEC 11 0632 58.26 19 24.84 155 17.61 6.59 18 .17 .6 .9 INT L 2.2X 67 1
2003 DEC 11 0708 13.21 19 24.65 155 17.74 12.38 14 .14 .9 1.2 INT L 1.8X 102 1
2003 DEC 11 0726 17.32 19 24.84 155 17.64 7.78 23 .13 .5 .7 INT L 2.0X 43 1
2003 DEC 11 0745 44.59 19 24.64 155 17.38 10.09 16 .15 .8 1.1 INT L 1.9X 51 1
2003 DEC 11 0819 8.91 19 23.95 155 17.11 7.25 18 .10 .7 .9 INT L 1.8X 90 1
2003 DEC 11 0838 25.95 19 24.31 155 16.39 8.27 17 .12 .6 .7 INT L 1.9X 122 1
2003 DEC 11 0851 33.11 19 3.79 155 25.67 36.03 25 .08 .9 1.7 DLS 1.9X 210 11
2003 DEC 11 0851 48.00 19 3.14 155 25.38 37.71 16 .06 1.3 2.3 DLS 1.9X 215 13
2003 DEC 11 0853 26.98 19 3.85 155 16.69 6.40 18 .13 .6 .7 INT L 1.7X 108 1
2003 DEC 11 0914 55.01 19 25.36 155 16.54 7.39 19 .10 .6 .6 INT L 1.5X 133 1
2003 DEC 11 0942 26.34 19 24.49 155 16.40 10.87 20 .13 .6 .5 INT L 2.1X 110 1
2003 DEC 11 1007 56.53 19 24.09 155 16.98 8.66 18 .14 .6 .9 INT L 1.8X 107 1
2003 DEC 11 1012 43.08 19 3.58 155 25.50 37.47 29 .08 .8 1.4 DLS 2.5X 203 12
2003 DEC 11 1024 6.41 19 24.34 155 16.95 6.51 22 .13 .4 .7 INT L 1.9X 76 1
2003 DEC 11 1120 49.66 19 25.78 155 16.79 9.26 15 .11 .7 1.0 INT L 2.0X 129 2
2003 DEC 11 1208 22.90 19 24.15 155 15.95 8.23 19 .12 .7 .5 INT L 1.7X 186 1
2003 DEC 11 1228 7.89 19 3.25 155 25.36 35.98 21 .12 1.1 1.8 DLS 2.2X 215 12
2003 DEC 11 1222 27.21 19 23.87 155 17.00 9.25 23 .13 .4 .7 INT L 2.1X 47 1
2003 DEC 11 1237 41.22 19 3.72 155 25.63 35.26 17 .09 1.2 2.3 DLS 2.1X 212 11
2003 DEC 11 1339 48.77 19 24.27 155 17.27 7.71 21 .15 .6 .8 INT L 1.9X 90 1
2003 DEC 11 1357 58.36 19 21.51 155 18.57 3.37 16 .07 .3 .7 SWR 1.7X 73 3
2003 DEC 12 1834 30.17 19 25.42 155 16.24 9.47 27 .13 .5 .6 INT L 2.1X 51 2
2003 DEC 12 1839 51.46 19 23.93 155 16.26 10.73 18 .12 .6 .9 INT L 1.8X 106 1
2003 DEC 12 1923 43.44 19 13.91 155 11.33 43.48 25 .09 1.1 1.4 DBP 1.6X 196 7
2003 DEC 12 1934 18.70 19 23.70 155 16.35 10.01 26 .13 .5 .4 INT L 1.9X 62 1
2003 DEC 12 2013 41.42 19 24.89 155 16.50 11.75 20 .13 .7 .8 INT L 1.9X 128 1
2003 DEC 12 2118 17.55 19 24.11 155 17.51 5.82 21 .14 .5 .8 INT L 1.7X 69 2
2003 DEC 12 2154 46.07 19 25.09 155 16.90 10.84 24 .11 .5 .4 INT L 1.9X 69 0
2003 DEC 12 2162 43.00 19 25.43 155 16.29 8.85 19 .14 .6 .7 INT L 2.0X 122 2
2003 DEC 12 2172 57.64 19 24.81 155 16.12 10.63 24 .13 .7 .7 INT L 2.0X 71 2
2003 DEC 12 2182 13.15 19 23.92 155 16.59 11.54 21 .17 .8 .8 INT L 1.8X 119 0
2003 DEC 12 2187 50.63 19 24.66 155 16.80 6.50 24 .13 .5 .6 INT L 1.7X 104 1
2003 DEC 12 2350 33.42 19 20.12 155 11.87 8.19 30 .11 .6 .4 SFS 1.7X 147 5
2003 DEC 12 2357 33.42 19 20.12 155 11.87 8.19 30 .11 .6 .4 INT L 2.0X 74 1
2003 DEC 13 0130 26.97 19 24.50 155 16.24 6.49 23 .10 .4 .6 INT L 1.9X 69 1
2003 DEC 13 0415 16.13 19 25.22 155 17.07 8.08 26 .14 .6 .7 INT L 1.8X 102 1
2003 DEC 13 0501 14.60 19 24.77 155 17.20 11.17 21 .14 .7 .5 INT L 1.6X 80 0

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

2003 DEC 13 1530 51.69 19 19.56 155 11.17 5.42 23 .13 .6 1.2 SF3 1.3X 167 6
2003 DEC 13 1610 23.12 19 24.85 155 17.20 9.06 21 .19 .7 .9 INT L 2.0X 66 0
2003 DEC 13 1731 53.85 19 52.49 155 21.86 10.78 13 .10 1.1 .5 KEA 1.7X 165 3
2003 DEC 13 2238 38.79 19 20.04 155 5.33 5.84 20 .12 .9 1.9 SF4 1.3X 199 7
2003 DEC 14 0518 0.32 19 24.17 155 15.77 3.13 17 .07 .4 .3 SEC 1.5X 117 2
2003 DEC 14 0525 22.48 20 2.60 155 38.82 10.31 44 .09 .8 .9 KOH F 2.6X 173 17
2003 DEC 14 1152 35.16 19 27.82 154 50.56 6.98 19 .13 1.7 1.0 LER 2.1X 280 15
2003 DEC 14 1721 21.17 19 19.90 155 11.77 7.98 39 .12 .5 .4 SF3 2.3X 143 6
2003 DEC 14 1951 34.66 19 22.53 154 56.67 3.52 21 .13 1.1 1.5 SLE 1.9X 264 6
2003 DEC 14 2313 8.42 19 22.98 155 26.29 11.65 33 .10 .4 .6 KAO 1.6X 55 2
2003 DEC 15 0247 41.99 19 18.55 155 14.98 8.22 25 .13 .6 .6 SF1 1.5X 121 4
2003 DEC 15 0649 44.28 19 25.56 155 23.74 11.17 27 .08 .5 1.0 KAO 1.5X 66 8
2003 DEC 15 1729 46.79 19 24.28 155 16.77 2.54 13 .07 .4 .3 SSC 1.1X 122 1
2003 DEC 15 2242 27.88 19 13.59 155 29.30 38.54 33 .08 .7 1.3 DLS 1.6X 92 3
2003 DEC 16 0513 30.93 19 23.75 155 2.33 8.05 22 .10 .9 .6 SF5 1.6X 170 3
2003 DEC 16 1800 35.93 19 20.99 155 9.91 1.15 22 .13 .4 .6 SER 2.4X 153 3
2003 DEC 16 2043 25.46 19 26.90 155 28.12 8.74 22 .09 .4 1.1 KAO 1.3X 83 8
2003 DEC 17 0402 10.77 19 42.53 156 7.41 22.63 14 .11 2.0 4.3 HUA 1.4X 277 30
2003 DEC 17 2001 53.85 19 23.42 155 15.14 2.78 13 .08 .4 .5 SEC 1.3X 115 2
2003 DEC 18 0254 32.09 19 27.54 155 57.57 17.44 15 .15 3.514.4 KON - .9X 316 33
2003 DEC 18 0356 54.17 19 17.66 155 36.93 7.92 16 .11 .6 2.1 LSW 1.5X 132 9
2003 DEC 18 0440 27.56 19 24.96 155 29.25 9.14 25 .11 .4 .9 KAO 1.6X 66 5
2003 DEC 18 0528 41.19 19 24.79 155 29.32 8.44 22 .11 .4 1.0 KAO 1.5X 67 5
2003 DEC 18 0948 54.41 19 28.44 154 52.65 0.05 21 .18 2.3 .6 SER F# 2.1X 273 12
2003 DEC 18 1551 18.92 19 17.15 155 7.42 21 .09 .9 1.0 SF2 1.3X 224 1
2003 DEC 18 1715 16.12 19 19.16 155 12.07 5.67 28 .11 .6 1.2 SF3 1.5X 167 5
2003 DEC 18 2134 47.20 19 12.41 155 36.17 5.51 26 .13 .5 1.3 LSW 2.1X 137 12
2003 DEC 19 0041 23.31 19 24.84 155 16.75 15.07 20 .12 .9 .5 DEP L 2.1X 87 0
2003 DEC 19 0206 18.38 19 28.17 155 16.77 10.47 26 .11 .4 .5 INT L 1.9X 89 1
2003 DEC 19 0841 59.26 19 21.11 155 25.81 38.04 25 .08 1.0 1.5 DLS 1.7X 220 14
2003 DEC 19 1402 8.89 19 24.98 155 29.16 8.97 22 .09 .4 .9 KAO 1.5X 66 5
2003 DEC 19 1553 31.17 19 17.69 155 12.79 7.69 27 .10 .6 .9 SF2 1.5X 174 2
2003 DEC 20 0844 17.46 19 23.10 155 14.07 4.65 14 .10 .5 1.2 SEC 1.2X 115 3
2003 DEC 20 1829 47.91 19 42.67 155 56.56 16.58 18 .13 3.5 1.9 HUA 1.1X 303 11
2003 DEC 20 1847 29.75 19 21.26 155 30.23 9.74 21 .05 .4 1.0 KAO 1.2X 93 5
2003 DEC 20 2101 16.83 19 20.05 155 6.97 9.74 45 .13 .6 1.4 SF4 2.8X 180 6
2003 DEC 20 2259 31.67 19 26.64 155 29.89 8.25 20 .10 .4 1.4 KAO 1.0X 124 9
2003 DEC 21 0214 4.45 19 23.16 155 14.64 3.48 13 .07 .5 .4 SEC 1.5X 147 3
2003 DEC 21 0306 11.55 19 20.23 155 7.25 8.08 32 .13 .7 .6 SF4 1.8X 184 6
2003 DEC 21 0316 23.87 19 20.33 155 7.12 7.76 34 .14 .8 .7 SF4 1.4X 184 6
2003 DEC 21 0316 25.53 19 20.49 155 7.08 7.90 43 .12 .6 .5 SF4 3.2X 182 5
2003 DEC 21 0317 19.60 19 20.07 155 6.88 7.55 36 .12 .7 .6 SF4 2.7X 187 6
2003 DEC 21 0424 25.21 19 18.50 155 7.01 7.31 27 .11 .7 .6 SF4 1.6X 195 7
2003 DEC 21 0637 31.03 19 19.52 155 6.59 7.25 24 .13 1.0 1.2 SF4 1.7X 197 7
2003 DEC 21 0748 5.98 19 19.73 155 6.13 5.92 23 .12 .9 1.2 SF4 1.1X 197 7

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

2003 DEC 21 1053 10.11 19 23.35 155 16.74 3.40 18 .08 .4 .3 SSC 1.3X 88 0
2003 DEC 21 1324 24.45 19 55.18 155 23.66 10.10 19 .11 1.0 .5 KEA 1.7X 224 6
2003 DEC 21 1415 19.49 19 15.48 155 26.95 8.70 20 .14 .5 .8 SF3 1.3X 105 6
2003 DEC 21 1548 54.72 19 24.79 155 38.90 3.35 12 .09 .8 .6 MLO 1.1X 193 2
2003 DEC 21 1949 5.17 19 23.65 155 26.61 10.85 21 .08 .5 .9 KAO 1.3X 65 3
2003 DEC 21 2019 45.75 19 18.44 155 47 .78 9.36 22 .15 1.3 1.0 KON 1.3X 209 15
2003 DEC 21 2025 1.19 19 43.00 155 17.43 37.84 26 .10 .9 1.5 KEA 1.8X 150 19
2003 DEC 22 0016 17.01 19 18.29 155 12.64 9.33 32 .11 .5 .5 SF2 1.8X 177 8
2003 DEC 22 0558 44.61 19 55.69 155 35.16 29.97 38 .10 .6 1.0 KOH 2.0X 141 11
2003 DEC 22 0925 36.08 19 12.99 155 27.66 32.91 23 .07 .9 1.6 DLS 1.6X 122 6
2003 DEC 22 1116 13.42 19 18.45 155 12.81 9.76 39 .11 .5 .5 SF2 2.4X 171 8
2003 DEC 22 1177 47.14 19 17.57 155 12.47 7.97 31 .12 .5 .7 SF2 1.8X 182 2
2003 DEC 22 1120 5.02 19 17.39 155 12.31 5.79 17 .10 .7 1.4 SF2 1.3X 216 2
2003 DEC 22 1123 18.67 19 17.55 12.27 7.74 19 .11 .8 1.1 SF3 1.5X 208 2
2003 DEC 22 1207 37.99 19 17.12 155 12.76 8.06 20 .10 .7 .9 SF2 1.5X 204 1
2003 DEC 22 1559 11.04 19 17.97 155 12.65 9.43 31 .08 .6 .5 SF2 1.8X 179 9
2003 DEC 22 1600 1.02 19 16.80 155 12.01 7.48 17 .09 1.0 1.0 SF3 1.6X 259 3
2003 DEC 22 2140 36.54 18 51.04 155 13.43 10.21 25 .11 1.7 1.0 LDT 2.3X 266 42
2003 DEC 23 0449 26.38 19 26.32 155 29.03 10.63 41 .10 .3 .5 KAO 2.3X 43 7
2003 DEC 23 0449 59.58 19 26.54 155 28.86 8.35 16 .11 .5 1.5 KAO 1.6X 100 8
2003 DEC 23 1950 37.53 19 20.07 155 10.92 7.78 22 .12 .6 .5 SF3 1.3X 163 5
2003 DEC 23 2300 49.31 19 18.22 155 12.76 10.03 41 .10 .5 .4 SF2 2.5X 172 8
2003 DEC 23 2309 29.10 19 32.13 155 37.67 10.71 29 .12 .5 .5 MLO 1.7X 116 5
2003 DEC 23 0916 0.64 19 17.84 155 12.81 10.13 37 .10 .6 .5 SF2 2.4X 179 9
2003 DEC 23 1056 25.64 19 24.86 155 16.35 1.63 18 .09 .4 .2 SBC 1.6X 110 1
2003 DEC 23 1924 59.06 19 18.88 155 11.45 6.93 20 .08 .6 .9 SF3 1.3X 168 6
2003 DEC 23 1950 37.53 19 20.07 155 10.92 7.78 22 .12 .6 .5 SF3 1.3X 163 5
2003 DEC 24 0902 29.10 19 32.13 155 37.67 10.71 29 .12 .5 .5 MLO 1.7X 116 5
2003 DEC 24 0916 1.02 19 11.39 155 29.50 33.34 38 .07 .5 1.0 DLS 2.3X 80 5
2003 DEC 24 0419 38.87 19 19.73 155 21.71 34.78 27 .09 .8 1.2 DEP 1.8X 119 3
2003 DEC 24 0545 16.62 19 10.84 155 29.92 31.96 24 .08 1.0 1.6 DLS 1.2X 250 8
2003 DEC 24 0712 22.79 19 22.55 155 14.38 3.51 33 .11 .4 .4 SEC 2.2X 85 2
2003 DEC 24 0737 30.81 19 22.32 155 10.65 2.88 21 .12 .7 .5 SBR 1.2X 131 1
2003 DEC 24 0913 17.05 19 20.90 155 14.38 30.61 24 .10 1.1 1.5 DEP 1.7X 98 4
2003 DEC 24 0955 22.97 19 20.28 155 8.53 8.76 37 .12 .7 .6 SF4 2.2X 174 5
2003 DEC 24 1111 21.19 19 23.48 155 3.33 18 .09 .3 .4 SBC 1.3X 63 0
2003 DEC 24 1348 53.57 19 13.17 155 29.30 7.67 27 .15 .6 1.2 LSW 1.9X 150 4
2003 DEC 24 1617 56.58 19 59.03 155 22.49 12.46 38 .13 .9 .6 KEA 2.5X 199 11
2003 DEC 24 1945 28.60 19 12.89 155 10.77 36 .11 .5 .4 SF2 1.9X 178 8
2003 DEC 24 2303 53.52 19 19.60 155 11.59 7.50 29 .11 .5 .8 SF3 1.9X 150 6
2003 DEC 25 0100 47.62 19 1.92 155 25.92 36.97 30 .08 .8 1.5 DLS 1.5X 211 14
2003 DEC 25 0438 2.19 19 50.50 155 5.13 37.03 26 .12 1.1 1.7 KEA 1.4X 224 17
2003 DEC 25 0445 44.26 19 39.97 156 4.25 8.82 18 .12 2.2 1.1 HUA 1.7X 269 36
2003 DEC 25 1124 21.87 19 29.35 155 29.96 3.24 25 .11 .3 1.6 KAO 1.5X 64 6
2003 DEC 25 1403 56.65 19 23.42 155 16.48 9.19 30 .16 .5 .5 INT L 1.8X 87 1
2003 DEC 25 1639 12.90 19 19.50 155 10.70 7.76 19 .05 .7 .9 SF3 1.9X 175 6
2003 DEC 25 1639 16.85 19 19.52 155 10.67 7.52 24 .09 .6 .5 SF3 1.7X 175 6

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

2003 DEC 25 1640 25.40 19 20.11 155 10.79 8.01 42 .11 .4 .5 SF3 2.3X 154 5
2003 DEC 25 1641 34.10 19 19.36 155 10.52 6.62 27 .11 .7 1.0 SF3 1.4X 169 6
2003 DEC 25 1654 4.30 19 19.38 155 10.30 7.72 25 .08 .5 .7 SF3 1.6X 170 6
2003 DEC 25 1702 45.21 19 19.26 155 8.64 7.41 29 .10 .7 .8 SF4 1.9X 186 7
2003 DEC 25 1746 58.87 19 22.18 155 10.32 3.47 16 .08 .7 .4 SER 1.3U 142 1
2003 DEC 25 2011 42.65 19 21.90 155 15.60 25.26 40 .11 .6 .7 DEP 2.3X 81 1
2003 DEC 26 0313 35.99 19 58.31 155 22.49 6.47 27 .16 .8 .9 KEA 1.8X 196 23
2003 DEC 26 0838 38.28 18 55.82 155 29.63 13.79 17 .09 2.3 .9 DLS 1.4X 253 20
2003 DEC 26 1659 13.91 19 21.82 155 4.36 9.21 32 .12 .8 .5 SF5 2.0X 183 5
2003 DEC 26 1726 22.23 19 14.93 155 22.00 33.36 47 .11 .6 .9 DEP 2.5X 151 8
2003 DEC 26 1918 18.89 19 24.76 155 29.51 9.35 33 .09 .4 .7 KAO 1.6X 68 5
2003 DEC 26 2140 31.73 19 19.89 155 11.89 8.35 29 .10 .5 .4 SF3 1.5X 141 5
2003 DEC 26 2208 34.24 19 21.16 155 12.18 8.48 40 .13 .5 .4 SF3 2.0X 159 3
2003 DEC 26 2357 13.82 19 55.30 155 35.01 19.98 32 .10 .6 1.1 KOH 1.9X 138 11
2003 DEC 27 0103 3.19 19 24.73 155 16.68 10.50 29 .16 .5 .6 INT L 1.9X 49 1
2003 DEC 27 0109 59.84 19 25.05 155 17.41 9.09 25 .17 .6 .7 INT L 1.9X 79 1
2003 DEC 27 0143 47.61 19 24.59 155 16.45 7.79 26 .16 .5 .7 INT L 2.0X 68 1
2003 DEC 27 0156 30.64 19 25.45 155 16.40 10.66 21 .14 .7 .5 INT L 1.9X 120 1
2003 DEC 27 0226 58.53 19 24.88 155 16.96 9.05 26 .12 .4 .4 INT L 2.1X 71 0
2003 DEC 27 0239 25.14 19 25.10 155 16.03 9.35 25 .12 .5 .6 INT L 1.6X 120 2
2003 DEC 27 0252 0.64 19 25.16 155 17.30 8.70 29 .17 .4 .7 INT L 2.1X 49 1
2003 DEC 27 0325 0.34 19 25.35 155 16.27 8.37 22 .18 .6 .8 INT L 1.5X 60 2
2003 DEC 27 0435 3.36 19 24.78 155 16.34 6.65 25 .13 .5 .6 INT L 2.1X 70 1
2003 DEC 27 0538 17.17 19 25.66 155 17.29 9.78 26 .15 .5 .7 INT L 2.0X 72 1
2003 DEC 27 0547 26.38 19 26.44 155 28.84 7.81 20 .10 .4 1.2 KAO 1.1X 82 8
2003 DEC 27 0549 44.51 19 23.97 155 16.91 9.73 23 .15 .6 .6 INT L 1.8X 101 1
2003 DEC 27 0632 3.69 19 58.09 155 23.84 10.63 20 .14 1.1 .6 KEA 1.7X 212 10
2003 DEC 27 0641 43.47 19 23.57 155 17.13 6.09 24 .17 .5 .7 INT L 1.8X 60 1
2003 DEC 27 0656 9.44 19 8.08 155 24.19 40.64 36 .12 .8 1.3 INT L 2.1X 191 7
2003 DEC 27 0719 34.01 19 25.64 155 16.82 10.49 20 .12 .5 .6 INT L 1.6X 111 1
2003 DEC 27 1031 17.62 19 25.36 155 16.82 7.59 20 .10 .5 .6 INT L 2.0X 109 1
2003 DEC 27 1049 29.08 19 24.00 155 16.89 10.04 25 .13 .5 .6 INT L 1.8X 97 1
2003 DEC 27 1133 16.47 19 25.88 155 16.73 7.35 24 .15 .5 .7 INT L 1.9X 92 2
2003 DEC 27 1404 2.77 19 17.85 155 12.69 7.74 25 .11 .7 .6 SF2 1.3X 161 2
2003 DEC 27 2052 18.14 19 26.67 155 28.70 8.77 25 .12 .4 1.1 KAO 1.4X 69 8
2003 DEC 28 0352 19.41 19 24.00 155 17.02 3.18 17 .07 .5 .3 SSC 1.4X 99 1
2003 DEC 28 0507 19.32 19 13.48 155 26.15 9.42 20 .11 .6 .6 LSW 1.7X 145 8
2003 DEC 28 1315 5.81 19 157.81 155 24.05 11.69 14 .12 .9 .5 KEA 1.1X 208 10
2003 DEC 28 1705 10.70 19 11.30 155 29.66 32.75 46 .09 .5 1.0 DIS 2.1X 84 5
2003 DEC 28 1755 13.74 19 11.27 155 29.40 32.98 29 .08 .6 1.2 DLS 1.6X 96 4
2003 DEC 28 1851 52.57 19 20.55 155 11.87 8.34 38 .11 .4 .4 SF3 2.3X 135 4
2003 DEC 29 0439 10.13 19 35.67 155 19.68 13.23 34 .13 .4 .6 KEA 1.9X 71 13
2003 DEC 29 1846 24.94 19 21.54 155 18.52 2.48 21 .08 .3 .6 SWR 1.7X 72 4
2003 DEC 29 2015 13.10 19 20.27 155 8.50 9.07 33 .09 .6 .5 SF4 2.0X 174 5
2003 DEC 30 0048 44.96 19 28.61 154 52.85 1.92 31 .13 1.6 1.2 SLE F 2.5X 270 12

-ORIGIN TIME (HST)- -LAT N- -LON W- DEPTH												N	RMS	ERH	ERZ	LOC	PREF	AZ	MIN
YEAR	MON	DA	HRMN	SEC	DEG	MIN	DEG	MIN	KM	RD	SEC	KM	KM	REMKs	MAG	GAP	DS		
2003	JAN	6	1637	43.47	19	55.56	156	21.12	29.69	40	.10	1.4	2.6	DIS	4.0X	221	46		
2003	JAN	12	2024	2.71	18	50.77	155	17.01	12.23	40	.12	1.4	1.1	LOI	3.4X	265	39		
2003	JAN	13	0437	19.08	18	47.66	155	16.06	11.60	48	.11	1.2	1.4	LOI F	3.0X	274	45		
2003	JAN	23	0155	16.92	19	23.35	155	14.68	4.43	39	.12	.3	.5	SEC F	3.2X	100	3		
2003	JAN	25	0643	18.01	19	22.00	155	19.72	30.02	44	.12	.5	.8	DEP F	3.3X	80	3		
2003	JAN	25	0646	24.99	19	22.10	155	19.54	30.73	46	.11	.5	.7	DML F	3.9U	83	3		
2003	FEB	6	2253	32.48	18	59.91	155	5.67	42.55	44	.10	1.0	1.4	LOI F	3.3X	273	32		
2003	FEB	25	1846	26.02	19	21.34	155	5.03	8.78	46	.10	.5	.4	SF5 F	3.5U	158	6		
2003	MAR	1	2115	38.16	19	19.56	155	7.78	8.84	45	.10	.4	.4	SF4 F	3.3X	128	4		
2003	MAR	11	1024	30.08	19	26.14	155	21.70	10.72	48	.12	.3	.5	KAO F	3.0X	47	6		
2003	APR	6	2127	24.90	19	25.88	155	19.01	7.20	44	.12	.4	.5	INT F	3.3U	48	3		
2003	APR	14	0751	35.37	19	44.44	157	32.69	6.86	23	.12	9.61	11.6	DIS	-	3.0X	335179		
2003	MAY	7	0100	6.22	17	42.40	153	1.21	30.64	32	.17	3.5	2.7	DIS	3.5X	341280			
2003	MAY	24	0734	58.36	19	18.09	155	13.29	9.79	47	.11	.5	.3	SF2 F	3.9U	128	2		
2003	JUN	8	0355	16.89	19	2.95	156	15.52	30.78	43	.08	1.1	3.0	KON F	3.6X	301	71		
2003	JUN	26	1721	30.44	19	15.65	155	4.61	45.99	49	.11	.7	.7	DEP F	3.1X	214	15		
2003	JUL	8	0936	22.44	18	25.12	157	9.12	21.50	49	.11	2.0	5.0	DIS F	4.1X	337167			
2003	JUL	10	0559	59.68	19	49.06	155	22.52	28.35	44	.11	.6	1.2	KEA F	3.3X	87	9		
2003	JUL	13	2008	9.76	18	57.28	155	28.71	35.91	48	.08	.8	1.1	DLS F	3.3X	234	20		
2003	JUL	18	1932	23.47	19	31.12	155	24.78	23.32	47	.11	.4	.8	DML F	3.2X	53	4		
2003	AUG	3	2056	11.28	18	56.91	155	28.82	35.88	48	.09	.8	1.1	DLS F	3.3X	236	20		
2003	AUG	26	2024	22.18	19	19.59	155	12.43	9.87	39	.11	.5	.4	SF2 F	5.0U	136	5		
2003	SEP	5	0037	53.90	18	44.17	156	11.13	49.35	48	.10	1.2	1.6	DIS F	3.8X	316	61		
2003	SEP	6	1913	59.76	20	2.96	155	31.98	11.88	43	.12	.9	.6	KEA F	3.3X	196	25		
2003	SEP	10	0023	31.78	19	23.73	155	16.68	3.49	43	.12	.2	.2	SSC F	3.2X	48	0		
2003	SEP	17	2034	1.47	19	45.14	156	9.30	42.81	48	.11	1.0	1.5	HUA F	3.6X	254	38		
2003	OCT	4	0828	19.55	19	23.32	154	43.83	45.09	50	.13	.9	.9	LER	3.4X	288	26		
2003	OCT	10	0323	39.45	19	20.87	155	4.62	8.92	45	.12	.7	.4	SF5 F	3.2X	186	6		
2003	OCT	30	0346	39.02	19	16.75	155	28.41	9.67	48	.13	.4	.5	LSW F	3.2X	87	4		
2003	NOV	7	1710	5.75	18	55.51	154	57.09	49.48	49	.12	1.1	1.4	DIS F	3.3X	277	49		
2003	NOV	14	0036	54.49	20	1.94	155	23.40	13.48	38	.11	1.1	.7	KEA F	3.1X	208	17		
2003	DEC	21	0316	25.53	19	20.49	155	7.08	7.90	43	.12	.6	.5	SF4 F	3.2X	182	5		