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CATALOG OF ALASKAN EARTHQUAKES: OCTOBER-DECEMBER, 1983

By

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S. Estes, R.D. Siegrist, S. Sexsmith, and H. Biesiot

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1984

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Catalog of Alaskan Earthquakes

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CATALOG OF EARTHQUAKES IN CENTRAL AND SOUTHCENTRAL ALASKA, THE KODIAK ISLAND AND ALASKA PENINSULA AREAS

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Warning System are made available to us in the form of copies of their daily TELEX message of arrival times sent to the National Environmental Information Service in Boulder.

Figure 1 shows all stations of the University of Alaska network, and all stations operated by various other agencies (with the exception of the NOAA station Nikolski which locates just outside the map area) from which data have been used for the preparation of this catalog.

Geographic coordinates and other pertinent information about these stations are given in Table 1.

Signals from the various, usually remotely located, stations are transmitted by means of a combination of UAGI operated VHF radio links and leased commercial telephone circuits to one of the two recording centers of the University of Alaska network in Homer and Fairbanks. Remote stations are serviced and calibrated once a year, stations with year-round road access are serviced more often if necessary. In the case of malfunctioning, the difficulties of access associated with many stations can lead to lengthy data losses and, in turn, to lower detection thresholds and solution qualities for earthquakes located in the affected regions. In order to discern such conditions we provide a station use record in Figure 2. Stations with lengthy outages can be identified on this figure. It should be noted, however, that especially in the case of stations not operated by the University of Alaska non-use does not necessarily imply station outage but rather that no data were required for earthquake location purposes.

The data are recorded on 16 mm film on several Teledyne Geotech Develocorders, each of which has a maximum capacity of 20 channels. Satellite linked clocks provide timing marks which are superposed on the records. Figure 3 gives the typical response of the total system from transducer to recorder.

INTRODUCTION

This catalog lists routinely determined parameters of earthquakes occurring within and adjacent to the areas encompassed by the network of seismograph stations operated and/or recorded by the Geophysical Institute of the University of Alaska (UAGI). Our goal in generating this catalog is to provide a convenient reference source for the earthquake activity in the areas covered and to provide a quantitative set of information on the basis of which interested researchers, administrators, planners, and others can judge to what extent related data files residing on the Geophysical Institute's computer system, might be useful for their various needs. We therefore not only provide hypocentral parameters but also information about the quality of input data and accuracy of the derived- parameters, so that potential users of both raw and derived data can obtain some idea as to which type of further data analysis these data would lend themselves. While, on account of the number of events, the present catalog is the result of routine processing, reasonable care has been taken to locate earthquakes accurately and to use as many useful data as possible. This is especially true for events of magnitude 3 and larger. Additional data, primarily from networks operated by other agencies, and more sophisticated methods of anlaysis might, however, in many cases lead to more accurate locations.

DATA

The data used in preparing this catalog are derived from two principal sources: from seismic stations operated by the Geophysical Institute and from seismic stations operated by other agencies but continuously recorded by us under various data sharing or data exchange agreements. Also, for events of about magnitude 3 or larger, arrival times for many stations of NOAA's Tsunami

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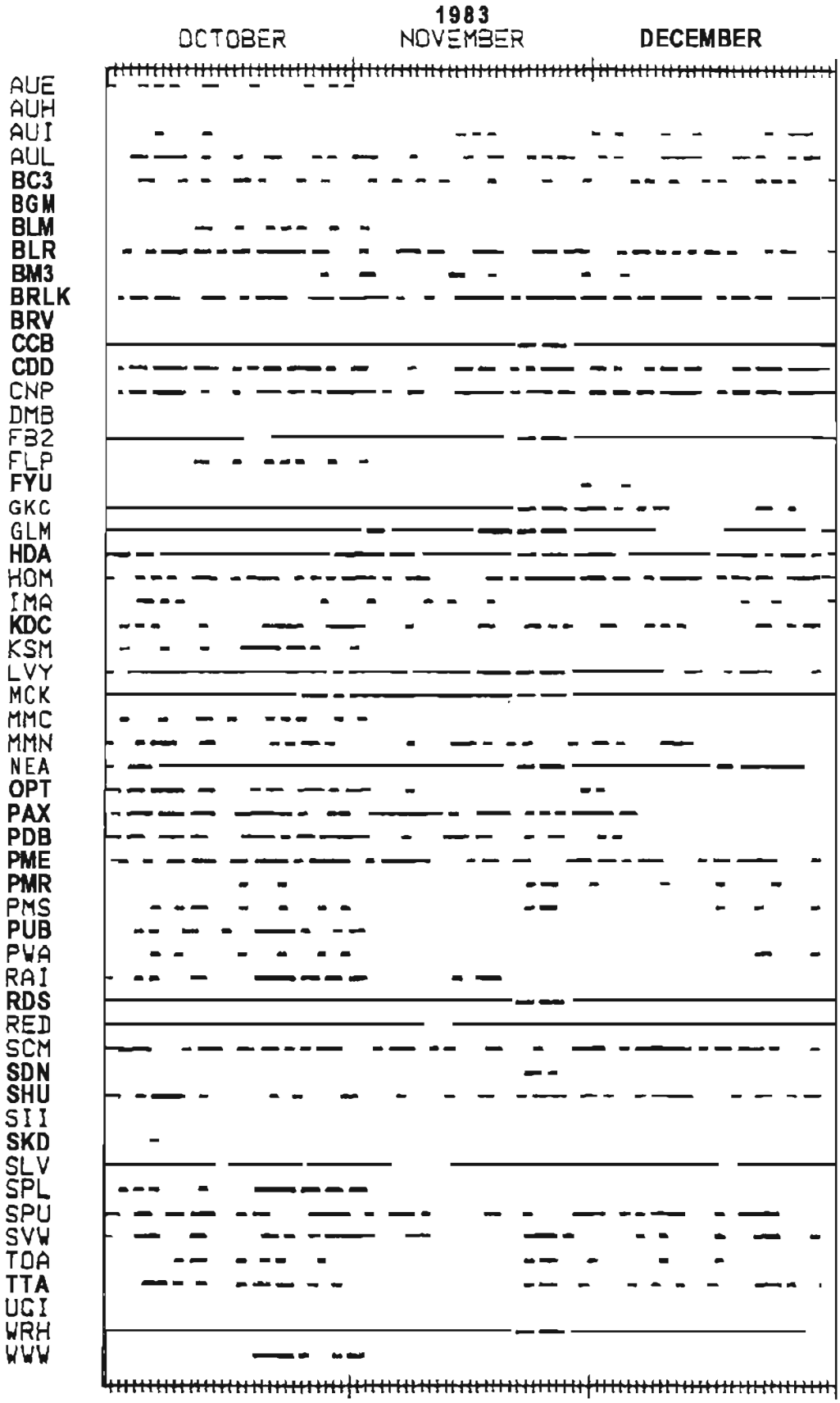

Figure-2: Station use record. A dash associated with a particular station on a particular date means that at least one arrival-time reading from that station was used on that date.

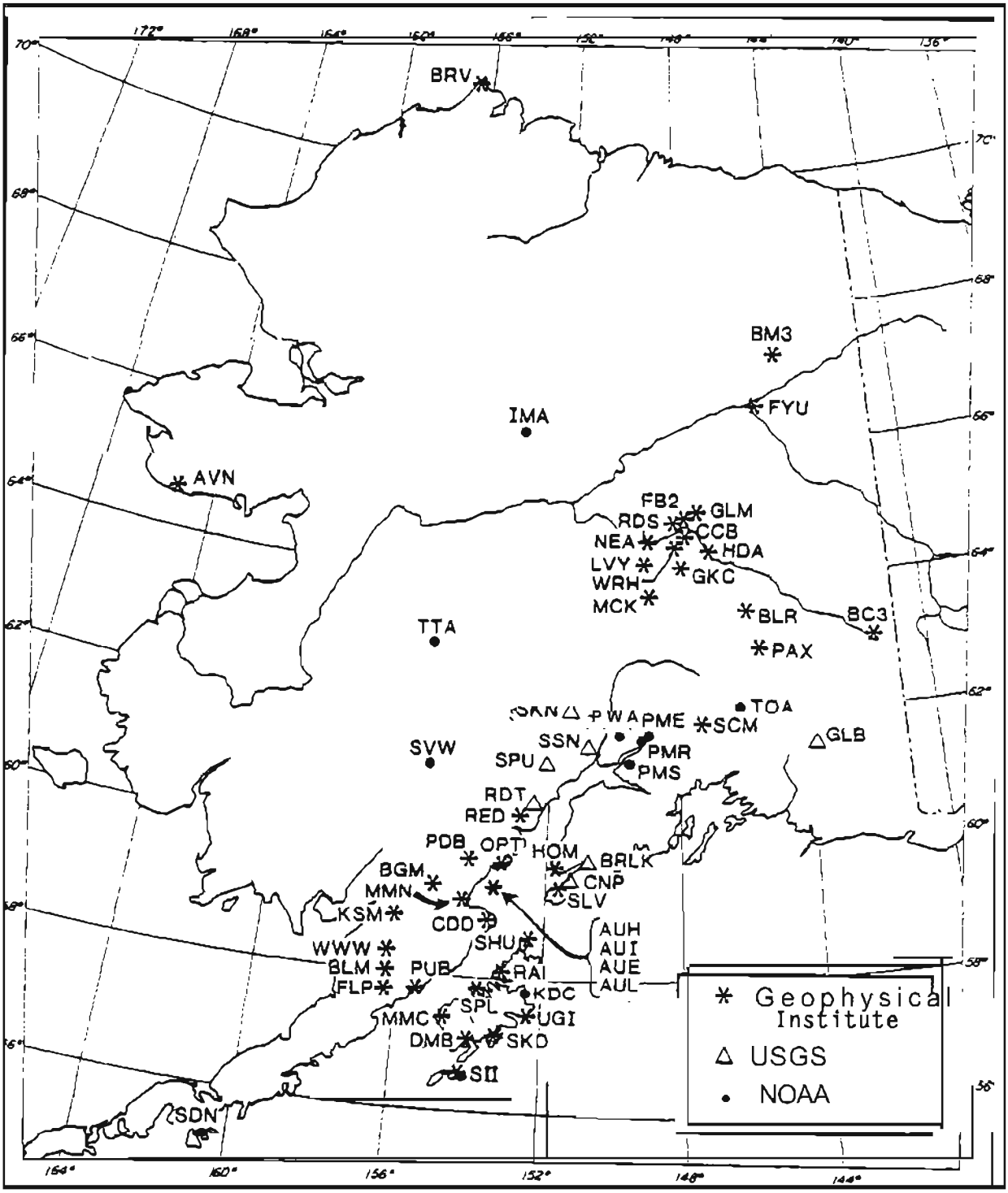

Figure 1: All seismograph stations operated by the University of Alaska and stations of other organizations from which data were used in preparing this bulletin. The stations BGM PDB, and SLV were originally installed and operated by USGS and are presently maintained by the University of Alaska.

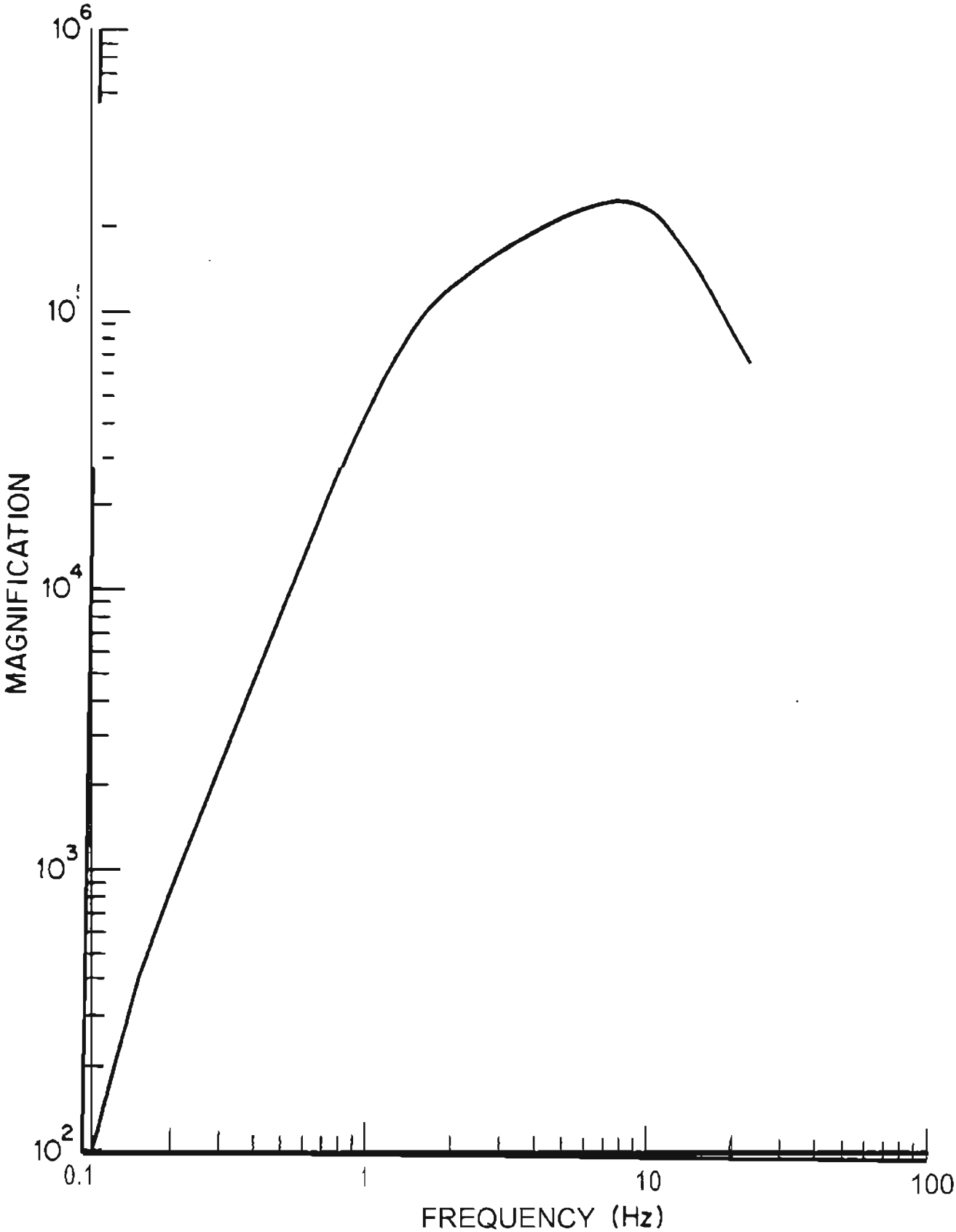

Figure 3: Typical system response curve for University of Alaska stations.

STATION NAME	CODE	LATITUDE (N)	LONGITUDE (W)	ELEV (M)	VELOCITY MODEL	OPERATOR
ANVIL MOUNTAIN	AVN	64 33.90	165 22.28	323	1	UA
AUGUSTINE EAST	AUE	59 21.54	153 22.33	172	2	UA
AUGUSTINE HILL	AUH	59 21.83	153 26.61	900	2	UA
AUGUSTINE ISLAND	AUI	59 20.11	153 25.66	293	2	UA
AUGUSTINE LAVA FLOW	AUL	59 22.93	153 26.07	360	2	UA
BEAVER CREEK	BC3	63 6.00	141 45.M	762	1	UA
BIC MOUNTAIN	BGM	59 23.56	155 13.76	625	2	UA/USGS
BLUE MOUNTAIN	BLM	58 2.70	156 20.70	539	3	UA
BLACK RAPIDS	BLR	63 30.10	145 40.70	810	1	UA
BURNT MOUNTAIN	BM3	67 17.18	144 25.17	305	1	UA
BRADLEY LAKE	BRLX	59 43.85	150 53.13	631	2	USGS
BARROW	BRV	71 16.43	156 67.08	13	1	UA
CLEAR CREEK BUTTE	CCB	64 38.80	147 68.33	219	1	UA
CAPE DOUGLAS	CDD	sa 55.79	153 38.58	622	2	UA
CHINA POOT	CNP	59 31.55	151 14.16	564	2	USGS
DEADMAN MY	DMB	57 5.23	153 57.63	300	3	UA
FAIRBANKS	FB2	64 54.00	147 47.60	320	1	UA
FEATHERLY PASS	FLP	57 42.40	156 16.10	486	3	UA
FORT YUKON	FYU	66 33.96	145 13.90	137	1	UA
GOLD KING CREEK	GKC	64 10.72	147 56.08	690	1	UA
GILAHINA BUTTE	GLB	61 26.51	143 48.63	845	5	USGS
GILMORE DOME	GLM	64 59.26	147 23.34	a20	1	UA
HARDING LAKE	HDA	64 24.35	146 57.23	450	1	UA
HOMER	HOM	59 39.50	151 38.60	198	2	UA
INDIAN MOUNTAIN	IMA	66 4.10	153 40.72	1380	1	NOM
KODIAK	KDC	57 44.87	152 29.50	13	3	NOM
KING SALMON MOUNTAIN	KSM	sa 51.80	156 10.50	560	3	UA
LEVY	LVY	64 13.00	149 15.20	230	1	UA
MCKINLEY PARK	MCK	63 63.96	148 56.10	618	1	UA
MIDDLE CAPE	MMC	57 20.00	154 38.10	340	3	UA
MCNEIL RIVER	MMN	59 11.11	154 20.20	442	2	UA
NENANA	NEA	64 34.63	149 4.63	364	1	UA
NIKOLSKI	NKI	52 56.56	168 51.44	a	2	NOM
OIL POINT	OPT	59 39.16	153 13.78	450	2	UA
PAYSON	PAX	62 58.25	145 28.12	1130	1	UA
PEDRO BAY	PDB	59 47.27	154 11.55	305	2	UA/USGS
PALMER EAST	PME	61 37.70	169 1.90	232	2	NOAA
PALMER OBSERVATORY	PMR	61 35.53	149 7.85	100	2	NOAA
ARCTIC VALLEY - PALMER	PUS	61 14.68	149 33.63	716	2	NOM
PUALE BAY	PUB	57 46.40	155 31.00	280	3	UA
HOUSTON - PALMER WEST	PWA	61 39.05	149 52.72	137	2	UA
RASPBERRY ISLAND	RAI	58 3.63	153 9.55	520	3	UA
RICHARD D. SIEGRIST	RDS	64 49.59	148 8.68	930	1	UA
REDOUBT	RDT	60 36.63	152 26.37	930	2	USGS
REDOUBT VOLCANO	RED	60 25.16	152 46.32	1067	2	UA
SHEEP MOUNTAIN	SCM	61 50.00	147 19.66	1020	4	UA
SAND POINT	SDN	55 20.40	160 29.83	19	6	NOAA
SHUYAK ISLAND	SHU	58 37.68	152 20.93	10	3	UA
SITKINAK ISLAND	SII	56 33.60	154 10.92	500	3	UA
SITKALIDAK ISLAND	SKD	57 9.65	153 4.82	135	3	UA
SKWENTNA	SKN	61 58.86	151 31.78	564	2	USGS
SELDOVIA	S W	59 28.28	151 34.83	91	2	UA/USGS
SPIRIDON LAKE	SPL	57 45.55	153 66.28	600	3	UA
MOUNT SPURR	SPU	61 10.90	152 3.26	800	2	USGS
SUSITNA MOUNTAIN	SSN	61 27.83	150 44.60	1297	1	USGS
SPARREVOHN	SVW	61 6.69	155 37.30	762	2	NOAA
TOLSONA	TOA	62 6.29	166 10.36	909	6	NOM
TATALINA	TTA	62 55.80	156 1.32	914	2	NOAA
UGAK ISLAND	UGI	57 23.67	152 16.90	213	3	UA
WOOD RIVER HILL	WRH	64 28.28	148 5.39	314	1	UA
WONDER WHY RIDGE	WWW	58 20.90	156 19.90	416	3	UA

Table 1. Names and pertinent parameters of seismic stations used in preparing this catalog. For description of velocity models see text.

Model 2

Layer	Depth (km)	P Velocity (km/sec)
1	o-2	2.75
2	2-4	5.3
3	4-10	5.6
4	10-15	6.2
5	15-20	6.9
6	20-25	7.4
7	25-33	7.7
a	33-47	7.9
9	47-65	8.1
10	below 65	a.3

This model is associated with stations located in the Cook Inlet-Kenai Peninsula area. It is based on the model of Matumoto and Page (1969) determined for the Kenai Peninsula from travel time studies of 1964 Alaska earthquake aftershocks. This model is used by USGS in this area for location purposes.

Model 3

'Layer	Depth (km)	P Velocity (km/sec)
1	O-l .6	4.2
2	1.6-12	5.5
3	12-42	6.6
4	42-60	8.06
5	60-80	8.09
6	80-100	8.11
7	100-150	8.14
a	150-200	a.27
9	200-250	8.41
10	250-300	8.50
11	300-350	a.74
12	below 350	9.02

This model is used in connection with stations located on Kodiak Island and the Alaska Peninsula. This structure was obtained by Engdahl and Tarr (1970) from refraction experiments, in the central Aleutians.

For all models the S velocity is taken to be equal to the P velocity divided by the square root of three.

The tectonic regime and geological setting vary greatly throughout the area covered by the University of Alaska network. Although our knowledge of the details of the seismic velocity structure is rather limited, considerable variation seems to exist. To take this variation into account each of the University of Alaska stations, depending on its location, is associated with one of three different velocity models. Regardless of the location of the hypocenter, that structure is used in calculating the travel time to that station. The models used are all one dimensional, varying only with depth, and lateral velocity variation (which is especially strong in the vicinity of the subduction zone) is not taken into account. For stations which are not part of the University of Alaska network we generally use models adopted by the operators of these stations. Column 6 of Table 1 indicates the particular velocity model with which each station is associated.

The University of Alaska presently uses the following models:

Model 1

Layer	Depth (km)	P Velocity (km/sec)
1		
2	24-40 0-24	5.97.4
3	40-76	7.9
4	76-300	8.3
5	301-545	10.4
6	Below 545	12.6

This model is used primarily in central and northern Alaska. It was derived from travel-time studies to central Alaskan stations from teleseismic and regional earthquakes (Biswas and Bhattacharya, 1974).

DATA PROCESSING

Arrival times are read on Geotech filmviewers which provide a resolution of up to 3 lines per millimeter. Thus; the most impulsive arrivals can be read to .05 sec.

Earthquake locations are based on P and S arrivals. As many S arrivals as possible are used to help constrain hypocentral depth. The large majority of the S readings are obtained from vertical components since only few three component systems are recorded. Owing to the nature of the multichannel film recordings in the case of a large event, traces overlap each other making the identification of S arrivals very difficult. The gradual transition to a digital tape recording system, presently underway, will greatly improve this situation.

After identification of events and determination of arrival times, phase data are processed by computer to obtain the earthquake parameters using the computer program HYPOELLIPSE (Lahr, 1980). Each solution is checked for travel time residuals greater than or equal to 0.5 sec and for the spatial distribution of stations used. Events that produce large residuals are re-read and for shocks with poor station distribution readings are sought from additional stations, not recorded by the University of Alaska. Events recorded by only five stations or less receive little additional attention. Events of magnitude 3.5 and larger are processed very carefully, sometimes by changing various control parameters in the computer program.

VELOCITY MODELS

Since most computer algorithms for locating earthquakes are based upon some iterative scheme of minimizing the difference between calculated and observed travel times between hypocenter and the stations, a seismic velocity structure has to be provided.

MAGNITUDE

Magnitudes are determined from the maximum amplitude of the body wave trace. The relationship derived by Richter (1954) for records of local California earthquakes from horizontal, standard Wood Anderson seismographs is used. Proper adjustments are made for differences in the response characteristics and magnification between the standard instrument and the system actually used. However, no corrections are made for any differences in attenuation properties between California and the various Alaskan regions or the fact that vertical rather than horizontal ground motion is measured.

For a given earthquake, its magnitude is usually calculated at several stations and then averaged.

In the case of large events, when the maximum trace amplitude saturates on most of our stations, we frequently list local magnitude as determined by NOAA's Palmer Observatory. When this is the case, it is indicated in the listings after the event. When available, we also list felt reports after the events and observations of the Modified Mercalli Intensity (Richter, 1958). The definitions of the various intensity levels are given in the Appendix.

DISCUSSION OF THE CATALOG

The Appendix lists hypocenter parameters, magnitude and quality parameters of earthquakes located during the fourth quarter of 1983. The listings are in two groups: one for events north of 61°N and one for events south of it.

Epicenters for the same time period are plotted in Figures 4 through 6. For the areas of Figures 4 and 5, the epicenters of events of ML > 3 are shown in Figures 7 and 8 respectively. Figure 6 shows only events located outside the areas encompassed by Figures 4 and 5. These events are generally of poor quality and located either because our network appeared to be the only one

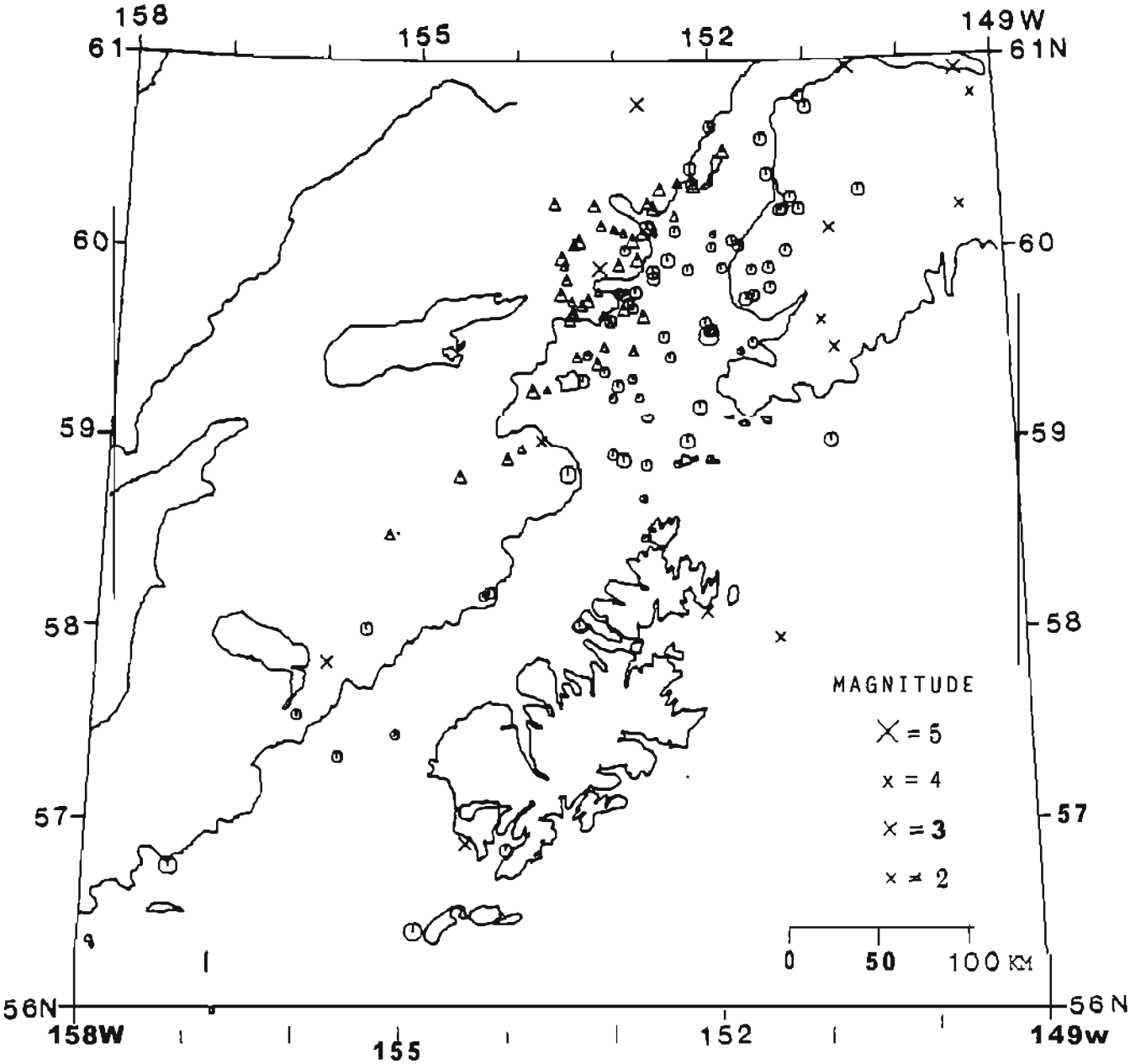

Figure 4: Epicenters of earthquakes south of 61°N located during the fourth quarter of 1983. Symbol size varies with magnitude as indicated. Different symbols are used for indicating depth range of earthquakes: x for 0 to 35 km, ⊙ for 36 to 100 km, Δ for deeper than 100 km.

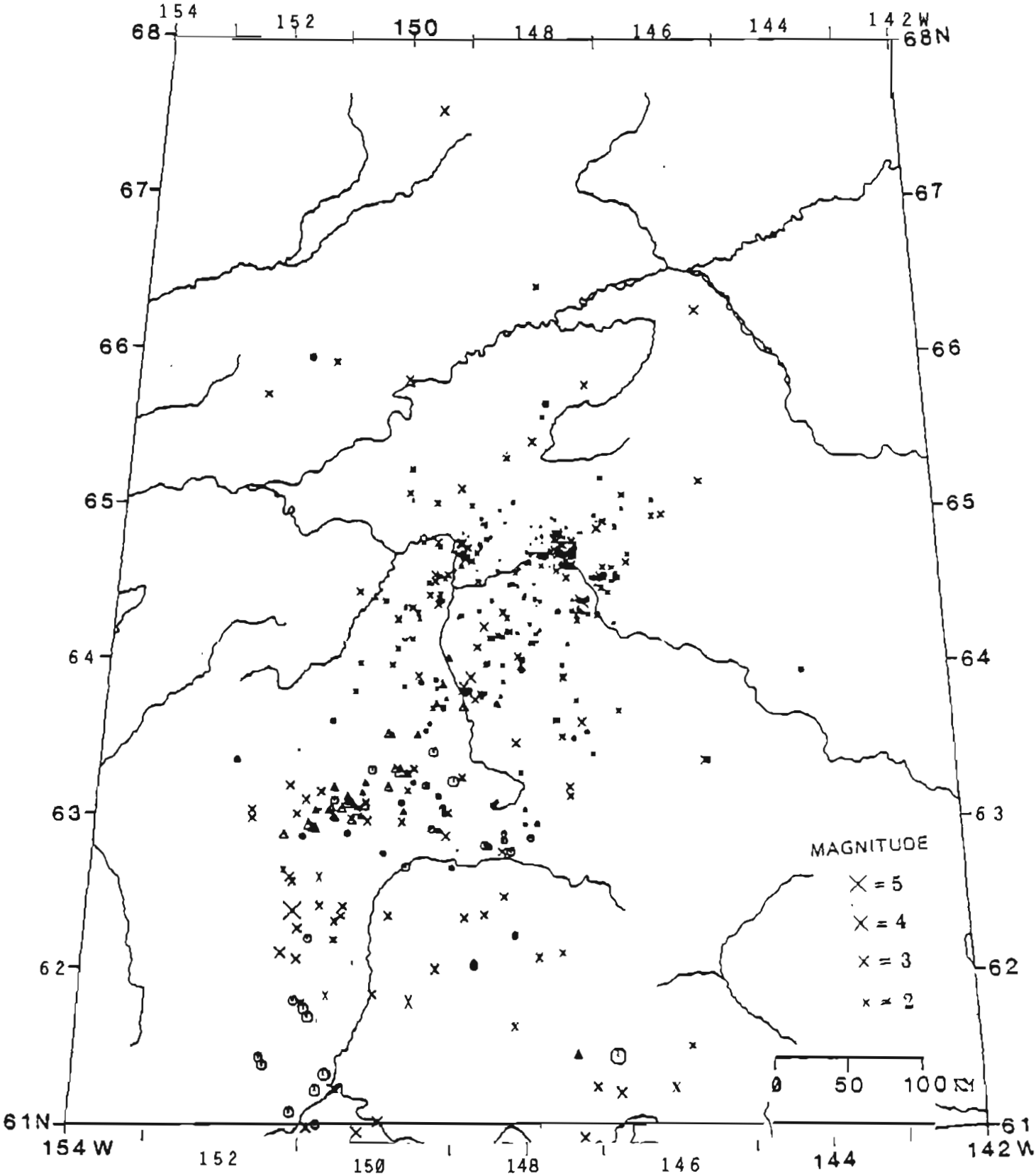

Figure 5: Epicenters of earthquakes north of 61°N located during the fourth quarter of 1983. Symbols as in Figure 4.

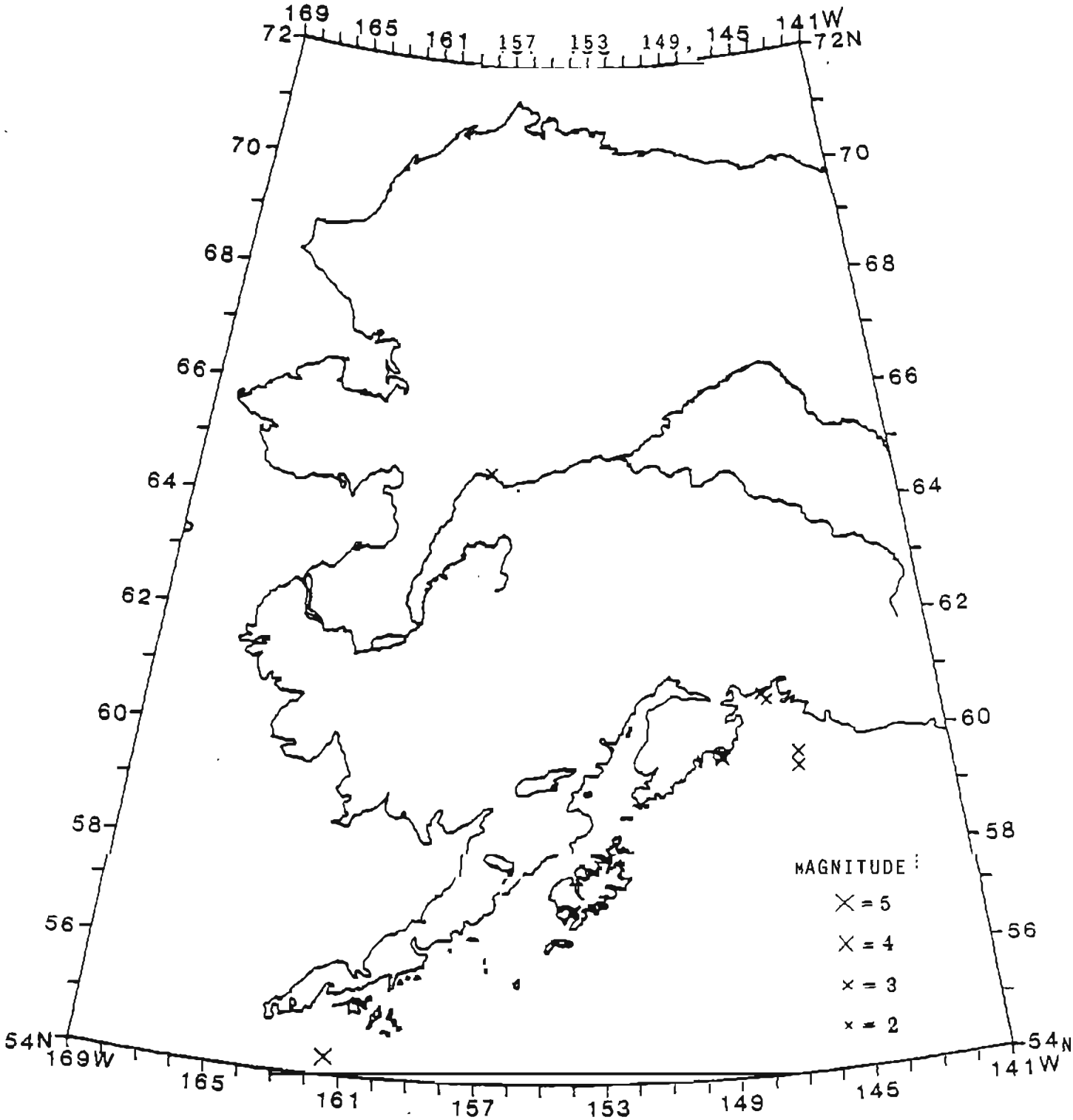

Figure 6: Epicenters of earthquakes located in the fourth quarter of 1983 and not shown in either Figure 4 or Figure 5. Symbols as in Figure 4.

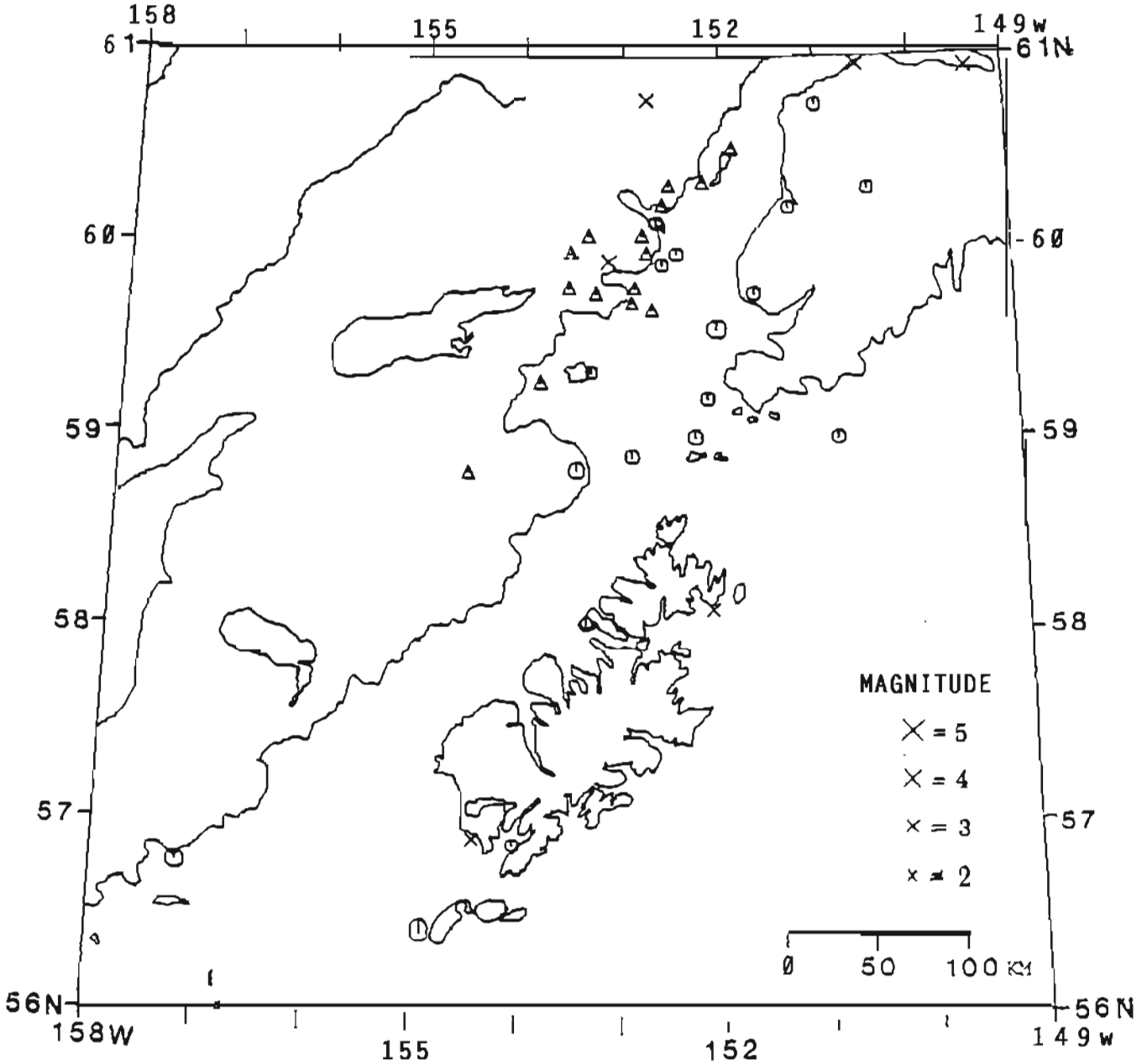

Figure 7: Epicenters of earthquakes of magnitude $M_L > 3$ south of 61°N located during the fourth quarter of 1983. Symbols as in Figure 4.

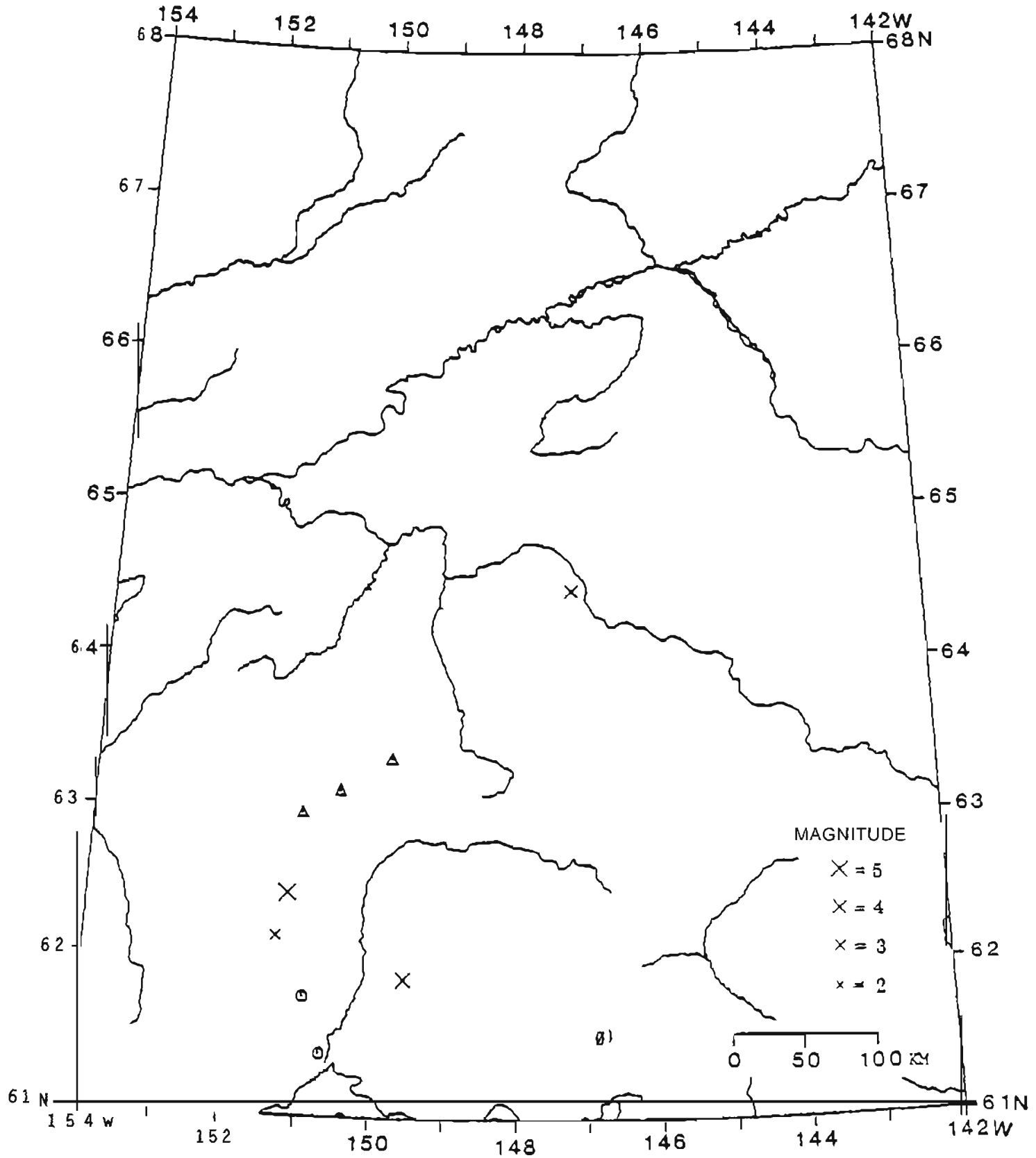

Figure 8: Epicenters of earthquakes of magnitude $M_L > 3$ north of 61°N located during the fourth quarter of 1983. Symbols as in Figure 4.

capable of locating them or because a large number of station readings was available, a fact we thought useful to disseminate by incorporation into the catalog.

Detection threshold and quality of solution vary throughout the areas shown in Figures 4 through 6. For the areas of Figures 4 and 5 the catalog is probably complete for magnitudes larger than 3.0 to 3.5 (see Figure 7 and 8, respectively). As is apparent from Figure 1, station density varies considerably throughout these areas, and with it detection threshold levels.

The quality (i.e., reliability) of a hypocenter can be assessed from two sets of information provided in the listings for each earthquake: from the quality of the input data and from the results of certain statistical tests.

The number of P and S phases used in locating the earthquake (NP and NS, respectively in the listings), the largest azimuthal separation between stations as measured from the epicenter (GAP), and the distances from the epicenter to the closest and third closest station (D1, D3) are the most important aspects of the input data that control the hypocenter quality. A GAP of more than 180" means that the event lies outside the network and locations will be less reliable. Also, the higher the ratio of D1 to hypocentral depth is above unity the less reliable will be the depth of the event. Considering the unevenness of station coverage indicated in Figure 1, it is clear that the potential for high quality solutions varies greatly throughout the area of the figure.

The root-mean-square travel-time residual (RMS) and the horizontal (ERH) and vertical (ERZ) projections of the maximum axes of the one-standard-deviation confidence ellipsoid reflect the relative accuracy of the solution.

Since we use fairly simplified velocity models,it is likely that the RMS residuals measure primarily the incompatibility of these models and only secondarily random reading errors and phase misidentifications. While ERH and ERZ measure, respectively, the precision of epicenter and depth fairly well, it

is difficult to say what the absolute accuracy of the locations is, since we lack the proper calibration events (explosions) to perform studies in that regard.

The seismicity south of 61°N (Figure 4) is dominated by the subduction of the North Pacific plate beneath the North American plate. A well-defined Benioff zone dips below Cook Inlet and the Alaska Peninsula in a generally north-westerly direction with a dip of approximately 45 degrees. The relatively high level of seismic activity near 60°N at depths larger than about 70 km is a persistent feature of the area. The Benioff zone also dominates the seismicity of the southern portion of Figure 5 and terminates at about 64°N. A cluster of intermediate depth (> 50 km) seismicity near 63°N, below Mt. McKinley (Denali), is also a static feature of the seismicity of the area and pinpoints the region where the strike of the Benioff zone changes from north-northeasterly towards a more northeasterly direction. It should be noted that because of the large station spacing, the depth resolution of the hypocenters is rather poor between 62°N and 63°N. The cluster of shallow-depth earthquakes near Fairbanks is a long-term feature of the central Alaskan seismicity. While the relatively great station density near Fairbanks provides the lowest detection threshold throughout the network (with the exception of Augustine Volcano) the concentration of epicenters is indicative of a seismically very active zone.

There was no unusual seismic activity during the period covered. The largest event recorded was of magnitude M_L = 5.0 and occurred approximately 50 km southeast of Mt. McKinley. The stations of the Kodiak Island and Alaska Peninsula portion of the network started to malfunction in early November (Figure 2) resulting in the small number of events located in these areas.

ACKNOWLEDGEMENTS

We thank Tom Sokolowski and the staff of the NOAA Tsunami Warning System in Palmer for permitting and helping us to record several of their station signals on a continuous basis. We also thank John Lahr of the USGS for sharing several of his station signals with us and also for providing us with the HYPOELLIPSE computer program.

The operation of the seismic networks and the preparation of this report were made possible by grants from the Division of Geological and Geophysical Surveys of the State of Alaska and by support from the Geophysical Institute of the University of Alaska. We are especially grateful to John Davies of the Division of Geological and Geophysics Surveys for his continued support.

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APPENDIX

Cataloa Format

Earthquakes are listed in chronological order. The following data are given for each event:

(1) ORIGIN TIME in Universal Time (UT): date, hour (HR), minute (MN), and second (SEC). To convert to Alaska Standard Time (AST) subtract nine hours.

(2) LAT N, LONG W: epicenter in degrees and minutes of north latitude and west longitude.

(3) DEPTH, depth of focus in kilometers.

(4) MAG, magnitude from maximum trace amplitude.

(5) NP, number of P arrivals used in locating earthquake.

(6) NS, number of S arrivals used in locating earthquake.

(7) GAP, largest azimuthal separation in degrees between stations.

(8) D1, distance in kilometers to the closest station to the epicenter.

(9) D3, distance in kilometers to the third closest station to the epicenter.

(10) RMS, root-mean-square error in seconds of the travel time residuals:

$$RMS = \sqrt{\sum_i (R_{P_i}^2 + R_{S_i}^2) \; / \; (NP + NS)}$$

where R_{P_i} and R_{S_i} are the observed minus the computed arrival times of P- and S-waves respectively at the i-th station.

(11) ERH, largest horizontal deviation in kilometers from the hypocenter within the one-standard-deviation confidence ellipsoid. The quantity is a measure of the epicentral precision for an event. Values of ERH that exceed 99 km are tabulated as 99 km.

(12) ERZ, largest vertical deviation in kilometers from the hypocenter within the one-standard deviation confidence ellipsoid. This quantity is a measure of the depth precision of the event. Values of ERZ that exceed 99 km are listed as 99 km.

(13) Q, Quality of the hypocenter. This index is a measure of the precision of the hypocenters and reflects both the quality of the input data and the solution. These qualities are determined as follows:

Solution Quality	RMS	ERH	ERZ
A	< .15	< 1.0	< 2.0
B	< .30	< 2.5	< 5.0
C	< .50	< 5.0	
D	others		

Data Quality	NP + NS	GAP	DI
A	> 6	< 90	< depth or 5 km
8	> 6	< 135	< 2*depth or 10 km
C	> 6	< 180	< 50 km
0	others		

Q in the average (rounded to the poorer quality) of the solution and the data qualities.

ALASKAN EARTHQUAKES SOUTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN HR	TIME MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	N	P	NS	GAP DEG	DI KM	63 KM	RMS SEC	ERH KM	ERZ KM	Q
OCT 01	3	17	14.6	59	32 3	153	5.4	104.5	2.3		18	5	67	15	26	0.39	1.4	2.4	B
01	16	55	27.3	58	43.8	152	41.7	64.3	1.9		14	5	173	23	4	0.32	2.0	2.3	C
02	21	50	35.7	59	39.6	153	1.8	104.2	2.2		11	3	87	11	85	0.19	2.2	3.9	B
03	4	21	6.8	57	51.5	155	46.6	12.3	2.7		6	1	172	40	14	0.15	4.8	99.0	c
04	9	36	27.0	59	31.1	152	47.7	102.0	2.3		12	4	123	29	69	0.25	2.4	2.4	C
05	3	39	17.1	60	7.7	150	46.4	29 2	2.5		7	2	262	41	86	0.15	5.4	8.6	D
05	4	22	18.7	59	27.0	153	9.9	104.2	2.8		22	5	65	16	23	0 37	1.3	2.7	B
05	7	7	4 7	59	16.5	152	44.5	73 7	2 1		10	4	104	50	70	0 3 0	1.2	2.9	B
07	4	31	48.5	58	56.1	154	3.0	112.8	3.0		22	3	62	23	57	0.38	1.5	2.5	B
07	16	36	43.0	59	46 3	151	38.9	93 8	3 3		19	4	131	13	36	0.42	2.5	4.6	C
07	17	9	33.7	60	4.4	151	47.0	85.7	2.6		17	7	179	47	67	0.36	1.6	2.8	c
08	15	28	30.2	60	8.3	152	59.6	120.7	2.0		12	4	165	34	88	0.23	2.1	2.1	c
08	21	30	50.6	59	49.0	153	9.1	113.1	2.0	1	2	4	110	59	97	0.23	2.0	4.4	B
09	3	51	47.2	60	13.5	151	15.6	56.8	2.5		10	4	233	56	78	0.26	2.4	3.6	D
09	12	5	23.9	60	24.6	151	24.5	46 5	2.8		9	2	246	75	85	0.32	2.2	6.8	D
09	15	10	26.4	59	52.9	153	28.4	133 4	2.6		13	4	180	29	58	0.41	3.2	2.2	D
10	3	2	25.3	58	54.6	152	21.2	55.1	2.1		11	3	137	31	77	0 19	1 8	3 6	c
10	9	28	25.0	60	49.4	147	4.2	17.5	2.9		16	1	246	13	40	0.37	3.0	2.6	D
10	10	24	7.4	60	11 6	140	46.5	34.3	3.9		7	0	183	31	60	0.12	28.9	37.8	D
12	5	59	0.9	57	22.3	155	38.8	79.1	2.5		12	6	222	45	61	0.29	3.2	2.3	D
12	16	34	40.3	60	57.2	150	32.5	27.4	3.5		8	1	272	34	57	0.19	4.8	12.0	D
13	0	33	47 5	57	34.8	156	3.2	77 1	2.5		11	6	234	39	87	0.21	4.4	2.6	D
13	4	30	16.5	59	35.2	152	1.8	72.2	4.6		27	1	71	23	45	0.27	1.4	2.5	B
									PNR		MI	FELT	HOMER AND SELDOVIA						
13	11	9	18.9	59	36.9	152	1.2	72.1	2.2		16	5	109	22	45	0 25	1.8	2.0	B
13	11	22	44.9	60	48 3	151	3 1.	71.7	2.7		17	2	117	69	16	0 35	2.1	6.3	C
13	12	55	47.4	59	37.b	152	0.5	71.4	2.8		12	3	108	21	45	0.23	2.2	2.8	B
14	1	57	50.7	60	1.6	152	52.4	99.6	2.4		11	3	145	44	80	0.27	2.2	3.2	C
16	12	1	55.3	57	29.4	155	5.9	47 7	2.3		7	3	168	33	74	0.06	4.2	4.8	C
17	8	40	31.7	60	7.2	152	53.4	118.3	2.u		11	4	170	34	88	0.37	1.9	2.3	C
19	14	4	55.2	60	35.5	151	27.5	56.5	2.9		1b	2	265	75	4	0.27	3 6	6.1	D
20	8	9	50.4	59	47 4	151	33 9	61.8	2.7		10	4	137	15	36	0.24	2.6	2.6	C
20	8	54	18.5	59	58.5	152	26 4	74 3	3.2		9	3	125	53	74	0 28	3.0	6.2	C
20	22	15	16.6	58	13 1	154	16.0	61.7	2.5		10	4	161	59	69	0.18	1.4	4.4	c
21	1	37	32.5	59	45.0	153	15.2	131.2	2.7		12	5	79	12	49	0.28	2.0	2.3	B
21	9	56	50.8	60	13.5	151	4.9	61.1	2.8		19	5	121	53	89	0.38	1.4	3.4	c

ALASKAN EARTHQUAKES SOUTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
OCT 21	12	17	28.0	60	2.3	151	59.4	70.7	2.3	10	3	117	47	67	0.32	2.1	2.4	C
21	13	28	8.2	60	12.3	152	22.1	106.0	2.4	9	3	163	33	93	0.36	3.6	2.6	C
21	18	43	36.5	58	59.5	153	54.8	102.7	2.3	11	4	193	83	13	0.28	2.5	3.8	C
22	4	54	37.7	54	19.3	161	28.5	30.0	4.7	11	0	339	97	34	0.33	99.0	99.0	D
22	16	23	55.9	60	2.9	151	42.6	78.7	2.8	13	2	178	44	64	0.28	2.4	3.0	c
22	18	12	4.8	59	20.1	152	57.3	94.1	2.9	19	5	77	28	60	0.38	1.4	2.2	B
23	9	24	35.0	58	14.1	154	12.3	67.8	2.7	11	5	165	59	93	0.38	1.8	3.5	D
24	11	32	55.7	58	31.8	155	12.0	125.1	2.7	25	9	52	68	86	0.33	1.4	2.2	B
25	7	43	37.0	58	8.2	152	5.2	24.3	3.0	9	1	189	50	27	0.22	3.2	3.9	D
26	21	11	45.0	58	2.0	155	24.2	87.6	3.0	19	6	86	30	63	0.46	1.2	2.2	B
27	6	30	39.5	59	56.0	151	53.2	72.8	2.4	9	3	150	34	58	0.21	2.7	3.4	c
27	10	36	55.7	59	57.3	152	56.5	118.5	3.0	17	5	115	37	70	0.48	2.2	2.2	c
27	23	23	4.7	59	48.9	152	46.0	93.5	2.8	17	5	93	66	77	0.48	1.5	2.8	C
29	0	8	20.5	59	46.6	153	15.4	115.0	3.3	15	5	109	14	53	0.24	1.6	2.2	B
29	18	28	38.0	60	44.9	150	59.1	46.2	3.1	14	4	131	75	10	0.41	1.4	9.0	c
30	3	15	6.5	56	56.2	154	24.4	22.6	3.0	10	2	257	46	15	0.44	3.3	3.2	D
31	1	19	50.5	58	32.0	149	50.9	23.1		4	0	235	79	0	0.12	99.0	99.0	D
31	3	36	40.2	59	55.2	152	35.2	84.3	3.2	13	4	110	47	61	0.38	1.8	2.6	C
31	11	13	52.6	60	0.9	151	13.7	55.0	2.8	10	4	207	34	55	0.33	2.2	3.5	D
NOV 01	2	24	21.0	60	8.7	152	39.3	92.7	3.2	15	3	124	31	78	0.58	2.0	3.0	c
01	14	9	25.4	59	56.2	153	8.2	23.8	3.3	8	2	294	9	45	0.40	37.9	52.8	D
02	10	33	1.7	59	13.4	152	7.6	72.6	3.3	17	5	132	42	61	0.35	1.5	2.3	C
02	12	10	21.1	56	54.2	154	1.5	37.2	3.0	12	4	261	61	32	0.49	2.1	1.5	D
03	1	13	10.6	60	4.9	152	47.9	110.4	3.5	13	5	105	38	85	0.36	1.9	2.1	c
05	14	37	0.5	60	13.2	149	24.8	5.2	2.2	6	1	315	97	39	0.30	27.2	26.9	D
08	10	43	26.9	59	48.3	153	32.0	127.1	3.2	16	4	66	24	47	0.49	1.7	1.9	B
08	14	58	22.9	59	40.5	153	26.6	113.3	2.8	10	1	161	12	74	0.39	2.2	6.3	C
09	16	56	55.3	59	35.1	152	28.9	84.6	2.8	7	2	247	48	71	0.21	4.1	6.5	D
14	17	8	53.5	58	57.5	152	60.0	68.0	2.4	16	6	80	37	53	0.29	0.9	2.5	B
15	3	10	1.1	60	6.4	151	58.2	63.8	1.7	9	3	173	56	74	0.20	2.8	4.1	c
15	16	18	22.9	59	16.4	153	0.2	78.9	2.1	10	5	150	27	57	0.25	1.4	3.8	C
16	17	10	58.3	59	48.5	152	56.4	86.2	1.8	10	3	49	55	70	0.17	2.3	3.5	c
17	3	52	47.4	57	59.5	151	23.2	33.8	2.4	9	2	240	71	44	0.49	2.8	2.8	D
18	8	17	25.7	59	22.3	152	48.5	73.2	2.1	11	4	95	36	73	0.27	1.3	3.5	B
16	13	57	18.4	59	9.5	152	39.1	65.9	2.9	15	4	101	49	62	0.25	1.2	3.5	B

ALASKAN EARTHQUAKES SOUTH OF 61 DEGREES NORTH LATITUDE. 1983

1983	ORIGIN HR	MN	TIME SEC	LAT N DEG	MIN	LONG W DEC	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
NOV 18	18	6	4.2	59	56.9	148	52.1	46.9	3.9	7	1	321	15	62	0.20	20.9	56.7	D
19	6	13	48.3	59	36.5	152	1.2	70.8	2.7	14	4	99	22	45	0.41	1.6	2.2	c
21	16	42	15.0	59	30 2	151	42.5	54 3	1.8	9	2	125	8	27	0.22	2.5	2.3	C
23	19	46	10.5	58	51.3	153	26.7	76.4	3.9	19	4	116	14	63	0.34	1.3	3.3	c
24	6	41	50.4	60	26.6	152	11 9	89.9	3.0	7	2	230	32	5	0.24	5.2	4.4	D
24	6	50	45.2	57	16.9	152	16.7	33.8		6	1	323	53	58	0.21	6.5	5.4	D
25	3	23	0.4	59	48 2	152	52.1	111.3	3.0	7	2	150	57	71	0.33	3.3	4.4	D
25	14	3	11.1	59	40.0	153	1 5	99.1	2.9	9	3	166	78	85	0.19	2.1	4.6	C
26	6	40	42 6	60	55 5	149	23.6	26 5	3.5	14	2	157	37	85	0.24	3.6	4.3	c
									FELT	ANCHORAGE								
26	15	51	50.4	56	27 5	154	53 0	42.0	4.4	11	0	209	4	85	0.31	11.3	19.0	D
27	5	7	9.1	60	4.7	153	21.1	137.3	3.4	12	3	164	50	78	0.39	2.8	2.5	C
27	7	29	2.5	60	21.5	152	10.1	108.3	3.2	9	3	211	34	97	0.31	4.1	2.4	D
28	2	16	13.9	59	39.1	152	3.7	62.7	2.8	9	4	209	24	49	0.21	2.8	2.8	D
28	15	6	36.2	59	59.6	153	31.4	157.5	3 3	12	2	111	63	1	0.37	2.5	4.6	C
DEC 01	0	50	25.4	59	1.8	153	42.9	30.0	2.5	6	0	219	12	64	0.51	41.7	40.2	D
01	5	40	53.1	59	54.4	148	49.1	15.8	3.5	16	5	194	17	63	0.38	3.9	5.2	D
01	22	29	14.3	59	29.1	153	21.8	105.1	2.6	14	5	138	17	65	0.38	1.7	2.1	c
02	8	5	52.0	59	1.0	150	49 5	57.1	3 1	9	3	218	61	83	0.33	3.1	5.7	D
02	11	52	4.3	60	3.6	153	24.3	142.3	2.8	14	4	165	47	54	0.48	2.3	2.5	C
02	17	45	1.3	60	8 2	152	58.7	115.3	1 7	9	3	139	34	8	0.16	2.9	3.3	c
02	21	51	16.8	59	29.6	153	15.6	96.7	2.0	9	2	109	16	67	0.18	2.3	3.2	C
04	5	33	42.3	59	45.4	152	50.3	94.0	2.5	11	3	129	54	74	0.17	2.3	3.9	c
04	15	48	35 G	58	54 3	152	39.7	59.9	2.7	16	6	124	36	65	0.43	1.3	2.4	C
05	13	25	55.9	59	55.7	152	14.0	87.7	2.7	7	2	188	45	63	0.21	4.3	4.1	D
06	6	9	52.7	58	3.7	153	20.2	69.4	3.1	9	3	225	61	98	G.42	2.3	4.0	D
08	6	32	30.0	60	6.8	152	42.0	109.4	2.8	10	4	180	34	95	0.39	3.6	2.5	D
08	7	26	16 9	60	22.1	152	10.9	84.8	3.0	11	4	213	33	99	0.37	3.0	2.3	D
10	14	25	27.1	58	55.7	152	53.4	77.4	3.4	19	5	101	43	55	0.43	1.4	2.3	C
10	17	56	9.6	59	49.7	151	23.9	57.0	2.8	9	3	152	23	35	0.23	2.0	2.3	C
11	8	20	25.4	59	39.4	150	53 4	6.2	2.0	6	1	232	12	42	0.25	4.6	2.6	D
11	8	30	39.2	60	55 5	147	14 3	18.0	2.8	12	2	230	1	6 2	0.23	2.8	3.5	D
11	9	58	38.0	60	20.5	152	31.1	105.9	3.1	10	5	163	16	10	0.39	4.8	2.4	D
11	16	49	10.5	59	26.8	152	25.2	65.8	2 4	15	6	90	48	59	0.24	1.6	2.1	B
11	20	36	54 U	60	17.3	151	9 7	56.4	2.9	8	3	245	60	65	0.30	4.5	7.6	D
12	6	1	10.4	59	43 7	152	53 7	108.4	3 1	20	5	131	49	77	0.32	1.3	2.1	C

ALASKAN EARTHQUAKES SOUTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEC	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
DEC 12	10	59	45.0	60	9.6	153	7.2	123.0	2.5	11	4	181	35	100	0.27	3.0	3.3	D
12	17	41	50.7	60	16.2	153	36.2	176.9	2.9	7	1	231	49	29	0.29	4.3	5.3	D
13	8	6	9.3	59	43.9	152	47.6	90.6	2.4	14	5	125	53	74	0.26	1.5	3.2	B
14	0	10	52.4	60	47.4	149	13.8	19.4	1.7	4	0	320	47	97	0.13	99.0	99.0	D
14	0	11	47.7	59	30.9	150	45.9	28.0	2.6	6	2	263	29	53	0.14	23.3	36.4	D
14	0	11	37.5	60	18.8	150	27.4	70.3	3.0	4	0	291	98	26	0.30	56.8	31.6	D
14	8	7	21.3	59	41.9	153	6.3	109.0	2.2	10	3	165	40	90	0.22	1.8	4.1	c
17	11	20	19.1	60	56.6	147	15.6	17.8	2.3	8	1	280	99	60	0.16	5.6	6.8	D
17	13	10	56.7	60	39.4	151	59.5	76.9	2.8	8	3	269	50	17	0.26	5.6	4.7	D
17	18	30	37.3	59	37.8	146	12.1	25.3	3.3	12	0	262	53	71	0.24	21.6	9.6	D
19	9	27	33.0	59	42.0	153	25.0	123.3	2.7	11	4	195	35	88	0.37	2.0	4.0	D
20	6	57	52.0	60	15.6	153	11.6	147.9	3.0	18	3	192	29	10	0.43	2.5	3.2	D
20	9	2	16.0	59	55.9	151	24.4	36.4	2.8	8	3	176	33	46	0.48	2.2	4.5	c
22	13	22	26.5	60	14.5	152	35.4	112.5	3.4	8	2	145	22	3	0.29	3.9	3.7	c
22	18	38	29.6	59	52.9	152	35.1	75.1	3.0	8	3	222	59	73	0.16	4.2	4.8	D
22	20	53	56.9	59	18.6	153	48.6	115.3	3.5	18	3	89	23	43	0.38	1.9	2.4	B
22	23	47	22.3	59	46.0	153	25.3	129.7	2.2	10	3	167	81	94	0.20	2.1	2.8	C
23	2	15	55.8	58	50.7	154	31.0	125.9	3.2	16	2	121	39	83	0.32	2.4	1.8	C
23	5	39	5.5	60	32.1	151	51.3	111.8	3.1	9	2	251	52	1	0.17	4.9	4.0	D
23	7	33	50.7	60	22.5	152	20.2	106.2	2.3	9	4	208	25	6	0.34	5.4	2.5	D
23	20	46	41.2	59	24.3	153	5.2	85.8	2.4	12	5	121	21	86	0.45	2.0	2.2	c
26	11	58	27.8	59	48.6	152	56.6	99.8	2.6	11	4	157	55	75	0.25	2.1	3.3	c
26	14	9	42.8	60	7.4	152	21.9	85.9	2.6	11	4	146	40	65	0.33	3.0	3.3	c
26	18	6	33.4	58	31.1	152	41.5	45.1	1.9	9	2	252	23	0	0.21	3.2	2.2	D
26	19	39	53.2	56	46.4	157	11.6	41.9	4.2	5	0	329	4	55	0.09	99.0	99.0	D
27	5	26	2.3	60	16.2	152	38.8	123.6	2.8	8	3	192	18	7	0.35	6.3	2.6	D
27	11	22	38.3	59	19.1	153	39.5	119.7	1.5	9	3	204	14	20	0.27	4.2	4.0	D
26	1	46	51.9	59	41.6	152	41.5	104.3	3.2	12	5	126	54	68	0.29	2.2	2.3	B
28	7	7	37.9	59	57.2	153	30.2	144.3	2.1	9	3	221	64	9	0.27	3.6	3.9	D
28	11	22	19.4	59	1.5	152	15.3	55.9	3.6	12	3	140	45	76	0.24	1.8	3.5	C
28	18	14	25.2	59	55.4	151	35.0	76.7	2.5	11	4	164	30	48	0.25	2.3	2.3	C
28	20	58	54.2	59	59.0	152	45.4	103.1	3.3	10	5	229	49	87	0.44	4.4	2.7	D
29	20	14	56.1	59	32.8	151	35.0	51.0	2.3	16	2	82	8	20	0.35	2.0	2.0	B
30	8	14	2.6	59	21.7	153	18.4	97.7	3.1	11	2	85	8	99	0.37	2.5	4.0	B
30	8	30	17.0	59	42.8	153	24.6	124.5	2.9	13	3	151	37	68	0.40	2.0	3.5	c

ALASKAN EARTHQUAKES SOUTH OF 61 DEGREES NORTH LATITUDE, 1983

ORIGIN TIME				LAT N		LONG W		DEPTH	MAG	NP	NS	GAP	D1	D3	RMS	ERH	ERZ	Q
1983	HR	MN	SEC	DEG	MIN	DEG	MIN	KM				DEG	KM	KM	SEC	KM	KM	
DEC 31	19	31	59.0	60	13.4	151	17.0	63.9	3.0	9	4	231	56	78	0.40	2.6	4.5	D

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
OCT 01	4	54	32.1	63	47.7	149	13.4	60.4	1.3	7	0	242	16	88	0.33	21.2	23.8	D
01	15	22	27.5	64	36.0	147	55.8	18.8		4	0	160	8	27	0.00	4.9	8.7	D
01	19	10	49.8	62	8.9	151	7.4	23.3	2.5	5	0	175	18	49	0.23	99.0	99.0	n
01	23	54	15.8	64	51.3	147	19.7	17.8	1.2	10	3	171	15	33	0.18	1.7	1.6	C
02	6	14	20.3	64	48.3	147	25.0	6.0	0.2	8	3	218	21	26	0.07	1.5	6.1	D
02	7	0	25.5	61	35.0	147	18.8	112.8	2.3	7	2	264	28	54	0.12	5.0	2.2	D
02	11	31	36.6	64	54.8	147	41.0	0.1	0.2	4	1	164	5	30	0.00	2.6	99.0	D
02	12	40	0.5	63	4.0	150	27.9	1.3	2.2	8	1	237	77	12	0.43	7.3	1.2	D
02	13	59	4.3	64	45.8	147	22.8	9.4	0.7	9	4	154	24	25	0.14	0.9	5.6	C
02	15	1	35.8	64	57.4	147	27.3	7.8	0.6	6	2	163	5	38	0.10	3.1	4.9	c
02	18	37	30.3	64	25.6	147	15.6	6.2	0.9	9	3	131	15	40	0.33	1.7	8.2	C
03	3	54	18.1	65	16.6	146	56.8	13.6	1.1	6	2	347	38	81	0.19	9.9	1.4	D
03	3	59	11.3	61	45.2	148	9.2	1.8	2.0	5	0	176	45	28	0.22	10.2	10.6	n
03	7	19	37.6	63	34.4	148	10.8	25.6	2.4	7	1	270	69	11	0.29	2.8	99.0	D
03	16	32	25.4	64	39.3	146	54.4	0.1	1.4	7	2	216	28	44	0.22	2.6	99.0	D
03	21	52	41.2	64	45.3	147	46.8	14.6	0.2	6	2	150	12	32	0.06	1.5	2.3	C
03	21	53	9.5	64	45.5	147	46.6	13.7	0.2	8	3	151	13	19	0.09	1.0	2.2	c
03	21	53	22.1	64	45.3	147	46.7	12.9	0.1	7	2	151	12	19	0.13	1.4	4.1	c
03	22	26	49.2	64	29.7	147	17.4	0.7	0.5	6	1	126	19	39	0.15	1.3	71.1	c
04	0	27	55.9	64	45.2	146	59.5	8.3	0.5	7	2	242	20	53	0.05	3.4	5.4	D
04	3	31	58.6	64	49.4	148	43.7	0.2	0.5	7	2	227	28	45	0.20	1.9	99.0	n
04	11	1	16.8	62	58.3	150	30.7	46.5	1.9	11	2	255	16	92	0.32	7.0	7.2	n
04	12	48	28.1	63	36.5	149	55.8	132.8	1.5	10	1	307	51	16	0.16	10.1	10.8	D
04	20	2	23.1	64	45.1	147	27.4	6.6	0.2	8	3	218	20	27	0.11	2.7	5.2	D
04	23	51	24.8	63	51.8	148	40.8	0.2	1.0	5	0	195	19	97	0.13	22.4	99.0	D
05	0	39	7.1	64	46.4	147	45.3	14.5	0.1	6	2	154	14	30	0.08	2.1	2.8	c
05	3	23	18.8	64	30.0	147	55.1	4.6	0.8	8	1	95	9	36	0.09	1.1	6.3	C
05	6	54	36.5	64	52.5	147	23.7	10.8	0.3	7	3	217	13	32	0.08	1.7	3.5	c
05	7	37	23.2	63	55.2	149	46.9	16.4	1.1	7	2	268	42	81	0.35	4.8	1.6	n
05	8	45	49.5	62	43.3	151	22.1	2.5	1.5	8	0	152	75	36	0.36	5.1	22.0	D
05	9	39	8.1	64	36.0	139	21.1	0.7		8	0	296	8	3	0.31	99.0	99.0	D
05	9	55	48.1	64	52.0	157	14.4	9.0	2.8	5	0	306	13	21	0.04	99.0	99.0	D
05	16	45	0.8	64	46.6	147	45.6	15.6	1.3	10	3	93	14	16	0.23	1.1	3.3	B
05	19	32	41.6	64	57.0	147	0.2	6.2	2.3	9	1	255	19	51	0.17	3.8	2.6	D
05	23	24	1.5	64	48.7	147	23.6	9.9	0.4	8	3	221	20	27	0.04	1.6	4.0	c

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	CAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
OCT 06	2	35	18.4	63	1.2	151	3.2	135.3	3.2	18	2	146	32	87	0.43	2.7	6.1	D
06	5	53	41.2	61	21.1	146	1.1	18.3	2.5	8	2	222	88	83	0.41	4.3	2.6	D
06	7	35	20.3	65	59.0	150	59 7	24 2	2.0	5	1	206	22	11	0.03	9.1	7.7	D
06	9	15	35.6	64	7.3	148	8.9	16.8	1.9	13	3	161	12	55	0.37	1.2	1.3	c
06	9	36	2.9	64	46.2	147	45.3	13.7	0.5	9	4	155	14	20	0.20	1.1	2.3	C
06	11	10	10.3	62	27.7	151	12.4	1 3	5 . 0	18	0	69	47	82	0.67	2.2	1.8	D
									PMR ML FELT SOUTH CENTRAL ALASKA									
07	7	44	26.9	64	48.3	147	30.7	5.6	0.7	7	2	201	17	23	0.32	1.9	14.3	D
07	22	9	52.0	63	54.1	148	52.0	9.1	1.2	4	0	159	19	74	0.00	16.3	87.9	D
08	2	6	20.1	64	43.0	147	30.7	14.9	1 8	11	2	131	16	31	0.25	1.2	1.8	B
08	2	40	57.9	66	0.4	151	22.7	45.5	2.1	9	1	205	5	100	0.16	6.7	56.2	D
08	5	10	36.6	64	55.0	148	59.2	7.4	0.5	9	4	265	38	57	0.09	2.0	17.6	D
08	7	52	23 3	64	35.0	1 5 6	6.5	15.7		5	1	216	85	35	0.23	6.9	11.4	D
08	13	28	9.4	64	57.9	147	58.5	12.7	0.2	7	2	237	11	28	0 19	4.0	2.5	D
08	14	6	8.2	63	15.4	149	41.0	14.6	1.7	8	2	286	65	56	0.26	5.3	2.3	D
08	17	24	39.0	64	45.1	147	29.0	8.0	0.7	9	3	137	19	27	0 18	1.2	8.0	c
08	20	11	55.6	64	46.5	147	20.6	10.8	1.0	7	1	161	24	26	0.07	1.7	8.2	C
09	1	48	58.5	63	6.9	149	10.2	82.1	1.7	14	4	265	70	60	0.30	2.8	2.5	D
09	2	21	27.6	65	7.1	148	15.2	20 3	0.9	8	3	296	33	43	0.13	2.5	1.1	D
09	4	47	39 3	64	48.6	147	30.2	10 0	0.5	7	3	203	17	23	0.10	1.5	4.4	c
09	5	23	59.8	64	47.3	147	45.3	8.2	0.2	7	3	151	13	19	0 13	0.9	4.8	C
09	11	31	38.6	64	44.1	146	34.8	0.0	1 9	13	2	218	41	59	0.34	2.0	3.5	D
09	11	41	53 3	63	29.3	151	15.0	47 4		8	0	211	18	61	0.34	6.3	33.1	D
09	14	16	22.6	64	43.3	147	37.6	11.6	0.2	8	3	198	12	27	0 09	1.8	2.3	C
09	17	48	16.6	64	51.7	147	23.0	4.9	0.5	7	3	221	14	31	0.10	2.0	9.2	D
09	18	40	4.8	64	59.0	148	39.3	16.9	0.4	5	1	308	30	55	0.04	5.4	11.2	D
10	8	35	10.5	6 1	50.4	150	59.6	43.b	2.5	10	4	159	93	85	0.42	2.3	4.6	D
10	10	56	18.4	64	24.0	146	59.4	10.1	1.4	10	2	159	2	52	0.09	1.5	1.7	c
10	11	8	58.9	64	31.6	150	28.7	18.1	1.6	9	3	293	68	15	0.39	2.8	1.2	D
10	12	36	5.9	64	46.1	154	59.7	5.0	2 2	5	1	282	57	83	0.31	56.1	54.9	D
10	16	37	12.0	64	42.4	146	55.3	0.6	1.5	10	3	218	34	43	0.26	1.4	99.0	D
10	21	27	4.2	64	53.6	147	29.1	10.7	0 5	6	1	186	11	31	0.09	5.0	7.9	D
10	22	26	25.0	63	9.1	149	12.0	83.5	1.9	9	2	337	66	57	0.15	8.1	2.6	D
11	3	5	0.6	64	42.5	147	31 8	5 5	1.5	10	3	128	15	32	0.34	1.0	8.9	C
11	3	40	41.2	64	41.6	148	9.1	8.6	0.1	6	2	188	15	25	0.03	1.8	3.8	C
11	6	54	40.6	64	39 0	149	11 9	13.8	1.7	10	3	254	10	57	0.17	2.2	1.9	c

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN HR	MN	TIME SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	CAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
OCT 11	8	27	27.4	64	23.0	149	1.6	4.4	0.7	4	0	189	22	65	0.00	3.8	22.5	D
11	19	46	10.7	63	56.6	149	33.0	65 8	1.5	7	0	328	33	92	0.04	40.4	32.7	D
12	5	27	6.3	63	59.3	147	30.0	16.2	2.0	14	3	126	30	61	0.31	1.1	1.1	c
12	7	36	45.3	64	51.2	147	32.9	10.1	0.2	7	2	181	13	26	0.13	2.3	6.7	D
12	7	46	6.3	64	55.1	147	32 7	10 4	0.9	10	4	159	11	30	0.27	1.3	3.2	C
12	10	19	39.4	62	8.5	148	44.0	37.4	2.2	7	2	117	59	78	0.55	4.1	5.7	c
12	21	0	54.9	61	6.3	147	48.8	22.1	4.3	19	1	193	85	95	0.31	2.9	2.0	D
									FELT III ANCHORAGE, II PALMER									
13	6	19	44.7	64	31.6	148	4.2	16.3	0.9	10	3	165	6	34	0.19	2.2	3.4	c
13	6	41	21.7	64	47.7	147	29.2	6.8	0.1	7	3	210	19	23	0.10	1.6	4.2	C
13	11	23	29.1	64	48.8	147	23.0	2.5	1.0	9	3	156	19	27	0.09	1.1	19.1	c
13	11	26	57.2	64	49.1	147	22.3	0.9	0.3	9	4	225	19	28	0.12	1.4	40.3	D
13	12	26	46 5	64	48.6	147	24.7	6.8	2.1	11	3	151	20	26	0.27	1.1	8.6	c
13	12	29	31.3	64	49 2	147	22.9	3.3	0.9	9	3	157	19	28	0.12	1.6	18.6	C
13	15	44	40.8	64	49.1	147	22.6	1.3	1.0	9	3	158	19	28	0.12	1.3	39.8	C
13	17	6	57.2	61	53.0	151	8.4	74.1	2.4	10	1	166	92	1	0.21	7.2	10.5	D
13	20	44	58.1	64	49.2	147	22.0	0.6	0.2	6	2	231	19	28	0.08	3.2	67.1	D
13	21	33	49.6	63	42.4	147	14.4	9.9	2.4	17	4	141	63	79	0.36	1.4	1.3	D
14	5	49	18.7	64	38.5	147	27.7	20.6	2.0	11	3	132	17	36	0.23	1.0	1.2	B
14	6	11	6.5	64	46.8	147	22.0	2 3	0.1	8	3	228	23	26	0.13	3.0	17 2	D
14	6	35	9.2	63	8.2	150	44.6	132.7	2.2	15	3	188	12	80	0.28	3.7	5.1	D
14	8	10	55.2	64	3.5	150	24.5	15.5	1.4	10	3	291	59	87	0.74	1.9	1.2	D
14	9	33	38.2	64	31.6	149	18.0	17.1	1.2	12	4	242	12	59	0.20	1.6	1.1	c
14	16	4	45.2	64	50 2	147	34.7	13.4	0.8	10	4	179	12	24	0.21	1.4	3.0	c
14	17	26	38 5	61	55.0	149	33.6	24 7	4.3	15	0	124	43	56	0.37	3.9	8.8	C
									PMR ML. FELT IT ANCHORAGE, III WILLOW									
15	1	11	46.2	63	41.1	150	47.1	36.5	1.6	4	1	318	92	81	0.32	21.9	22.5	D
15	6	32	1.0	64	14.9	148	32.7	4.0	1.6	13	2	76	31	35	0.28	1.0	3.0	c
15	7	19	53.5	64	15.2	148	34.5	22.7	1.1	8	1	92	32	34	0.29	1.4	1.1	B
15	14	56	6.9	64	24.4	149	37.4	18.9	1.2	9	3	274	28	74	0.24	2.6	1.2	D
15	16	25	9.2	64	26.2	149	41 8	20.4	1.6	10	3	265	33	77	0.20	3.9	1.2	D
15	21	15	17.4	64	47.8	147	32.4	17.8	1.5	10	2	128	17	22	0.17	1.4	4.6	B
16	2	41	20 0	64	50.8	147	32.3	6 0	0.5	7	3	186	14	26	0.13	1.3	6.6	D
16	9	31	52.8	64	1.4	148	6.6	105.3	1.3	12	3	180	19	52	0.29	4.1	2.5	C
16	16	42	27.0	64	44.1	148	4.6	16.2	0.1	7	3	161	11	23	0.21	2.1	3.4	c
16	17	54	43.2	63	9.9	150	30.7	83.3	1.4	5	0	333	1	73	0.15	99.0	51.0	D

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
OCT 16	21	8	36.5	64	56.7	147	31.7	9 0	0.4	8	3	165	8	32	0.13	1.6	3.0	c
17	1	47	59.9	63	14.4	150	19.6	121.2	1 8	9	1	287	89	61	0.14	7.1	5.9	D
17	6	4	54.0	64	42.6	147	41.6	12.9	0.2	6	2	228	9	25	0.05	2.2	2 2	c
17	8	50	26 1	64	48.1	147	21.5	0.1	1 8	9	2	160	21	28	0.24	1.2	99.0	c
17	10	49	23.1	65	45.0	147	46.0	49.7	1.8	7	0	334	87	4	0.11	78.9	22.8	D
17	17	1	12.6	64	47.5	148	46.8	4.0	1.1	9	3	224	28	48	0.26	1.4	13.1	D
17	23	45	41.2	63	10 5	150	28.0	118.4	2.3	18	4	227	99	68	0.36	3.0	4.3	D
18	3	37	23.3	64	29.6	147	22.1	4.9	0 7	11	5	117	22	35	0.12	0.8	6.3	C
18	10	40	52.6	63	50.6	147	19.6	9.8	1 3	11	3	145	48	79	0.37	1.2	1 9	c
18	12	25	50.0	61	33.5	146	47.5	44 0	4 4	18	0	196	42	19	0.42	3.6	3.8	D
									PNR	ML	FELT	II ANCHORAGE AND VALDEZ						
18	14	7	44.6	64	39.6	146	44.2	1.4	1.1	10	4	240	30	51	0.17	1.6	23.6	D
18	16	23	25.2	62	59.6	148	20.4	88.8	1.5	14	2	183	88	38	0.19	1.8	6.0	D
18	19	26	37.5	63	15.7	151	20.4	0 4	2.3	7	2	207	31	84	0.20	2.5	1.8	D
19	1	22	13.0	64	52.0	147	28.4	8.9	0.5	5	2	197	14	32	0.02	1.6	6.9	D
19	1	31	38.7	64	51.3	149	1.8	16.9	1.8	11	2	250	31	62	0.19	3.5	1.4	D
19	12	9	30.7	63	7.0	150	47.3	129.7	2.2	8	0	300	15	84	0.18	31.1	16.6	D
19	19	45	49.1	64	17.1	148	10.4	10.2	0.6	8	3	127	17	44	0.07	1.5	3.7	B
20	1	53	34.6	64	46.9	147	24.4	4.7	0.3	6	3	230	23	35	0.08	1.7	9.0	D
20	3	47	17.0	63	36.1	147	21.5	78 9	1 3	11	2	269	70	92	0.20	3.2	5.4	D
20	10	4	12.3	61	28.1	151	29.9	96 9	2.8	14	0	130	44	36	0.19	3.2	6.3	C
20	15	30	57.5	61	37.8	146	48.8	12.3	1.6	6	2	220	83	71	0.07	5.2	3.6	D
20	18	16	28.5	63	49.3	148	27.1	109.7	1.9	10	0	126	26	59	0.19	3.6	7 9	c
21	4	0	45.0	63	41.0	149	24.6	53.2	1.2	6	0	290	24	91	0.36	28.3	24.9	D
21	4	3	57.1	64	42.4	149	0.2	11.2	1.2	11	5	238	15	51	0.24	1.9	3.2	C
21	4	20	50.8	64	21.7	149	53.8	20 6	1.8	10	2	272	35	84	0.31	2.7	1.3	D
21	4	42	48.2	64	48.4	147	27.0	8.6	0.4	8	4	211	20	33	0.04	1 5	4.3	c
21	5	58	33.3	61	52.2	151	2.0	1.4	1 9	7	1	170	94	87	0.38	2.8	1.0	D
21	8	4	48.0	64	42.5	147	31.1	1.6	0.8	9	3	130	15	33	0.26	1.1	28.7	C
21	12	58	37.0	64	49.4	147	33.9	9.2	0.3	6	2	186	20	28	0.10	2.0	7.1	D
21	14	52	20.7	64	44.0	148	0.9	21.8	1.5	11	4	103	12	29	0.32	1.4	1.1	c
21	21	25	44 1	61	8 1	149	57.0	5 b	2.7	4	1	184	14	73	0.37	44.0	16.0	D
21	21	33	36.5	61	3.9	150	13.0	1 5.6	2 9	13	2	135	89	50	0.43	1.8	5.3	D
22	3	22	21.9	64	52.8	147	36.0	10.5	1.6	12	3	116	9	27	0.31	1.1	2 0	c
22	3	24	14.3	64	54.8	147	34.6	15.6	1.8	10	2	144	10	29	b.15	1.6	1.3	c
22	6	5	1.5	65	39 8	147	49.3	5.3	1.1	6	1	335	78	95	0.02	6.7	3.9	D

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG w DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
OCT 22	8	53	57.9	63	0.9	149	20 9	89.0	2.0	13	1	188	83	48	0.24	2.7	5.1	D
22	13	50	6.5	64	4.3	148	37.0	15.8	1.3	12	3	133	35	41	0.25	0.9	1.8	C
22	14	8	14.1	64	54.9	147	34.8	19.5	1.8	10	2	147	10	29	0.14	1.7	1.3	c
22	14	9	31.3	64	53.3	147	38.3	12.6	1.8	12	3	126	8	25	0.42	1.2	1.9	c
22	17	49	4.9	64	36.6	148	45.4	7 1	1.5	9	3	154	16	38	0.08	1.5	6.5	C
23	2	42	9.0	63	6.7	150	58.1	134.5	2.0	9	0	298	23	88	0.19	28.1	15.6	D
23	4	27	10.2	64	54.4	147	35.1	15.3	0.0	6	1	154	10	28	0.09	3.0	5.0	c
23	6	0	15.9	63	18.5	149	37.2	89.4	1.4	8	0	324	58	44	0.10	54.9	35.9	D
23	12	19	35.2	63	51.1	149	10.7	112.3	1.3	9	1	217	18	71	0.09	4.9	4.9	D
23	17	9	17.7	63	23.9	149	52.6	109.2	2.4	21	3	113	60	29	0.35	2.1	4.3	c
24	3	9	49.6	64	27.6	147	53.7	12.8	0.1	7	2	94	10	31	0.16	1.6	2.4	B
24	3	46	11.5	64	4.7	148	35.4	12.9	1.3	11	4	134	34	42	0.30	1.0	4.7	c
24	5	14	29.7	64	51.1	147	32.9	13.3	0.3	7	2	182	13	26	0.12	1.4	3.7	c
24	11	32	55.2	58	32.2	155	6.9	122.6		4	0	236	78	33	0.04	18.3	44.9	D
24	11	51	32 1	64	47.2	147	30.2	10 0	1.3	10	3	134	19	23	0.22	1.2	5.6	C
24	19	16	8.1	64	48.1	148	47.5	13.4	0.6	5	1	299	31	50	0.03	8.0	13.2	D
25	3	8	27.1	62	13.2	147	31.4	5.0	1.9	3	0	180	44	35	0.00	99.0	99.0	D
25	4	52	45.5	64	55.7	147	13.4	12.2	0.2	5	1	272	10	42	0.08	4.6	4.5	D
25	12	54	5.5	62	52.5	148	21.4	9.4	2.1	14	1	149	28	44	0.77	2.2	3.4	D
24	14	56	18.3	64	59.1	148	22.4	19.5	0.5	5	1	283	21	47	0 10	9.9	5.3	D
25	19	38	10.6	64	12.5	147	56.7	9.5	1.4	12	4	107	3	49	0.21	1.1	2.8	B
25	23	42	49.3	64	50.0	147	18.3	5.3	0.4	6	1	173	18	32	0.04	2.2	22.4	C
26	4	7	23.4	64	50.0	147	18.6	0.3	0.5	8	2	172	18	32	0.07	2.0	99.0	c
26	8	6	59.2	64	51.2	147	20.4	11.9	0.6	9	4	229	15	32	0.08	1.7	3.2	C
26	11	13	11.5	64	47.4	147	45.2	9 6	0.3	7	2	151	12	19	0.16	1.6	5.3	c
26	19	47	30.7	64	25.4	146	44.1	17.0	0.9	10	4	129	24	47	0.31	0.8	2.5	c
26	20	25	47.1	63	47.0	149	12 7	50.4	1.4	5	0	245	15	94	0.35	22.0	23.7	D
26	21	46	49.2	64	15.2	148	33.1	11.2	0.9	10	2	93	31	34	0.32	1.1	7.6	C
27	2	46	21.2	64	47.4	147	50.7	16.3	1.5	10	2	90	13	16	0.29	1.1	3.3	B
27	5	12	55.3	63	7.5	149	44 6	104.2	2.0	12	1	161	24	65	0.35	3.5	9.1	D
27	8	52	6.5	64	44.5	147	32.3	19.9	0.6	9	4	207	17	28	0.22	1.5	2.2	c
27	11	31	13.4	63	11.7	148	27.0	75.8	1 1	6	1	325	65	43	0.08	7.8	5.5	D
27	14	32	49.1	64	55.4	147	36.1	20.3	1.0	5	0	160	9	28	0.02	4.3	7.9	D
27	14	46	58.0	64	38.8	146	56.5	9.7	1.1	10	3	210	27	44	0.30	1.4	5.6	D
27	18	6	19.4	63	8.1	150	35.9	142.2	2.7	13	1	136	7	77	0.43	2.7	5.7	D

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN HR	MN	TIME SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
OCT 27	18	38	48.1	64	42.8	147	22.7	22 3	1.0	7	1	192	22	39	0.13	2.5	1.8	D
27	21	33	58.2	63	54.2	148	53.6	3.4	1.3	4	0	155	19	74	0.16	10.0	99.0	D
28	0	43	35.5	65	7.3	149	44.8	0.6	(3.9	7	3	332	83	6	0.17	3.6	99.0	D
28	1	14	1.1	63	59.2	148	50.2	10.1	2.8	19	1	126	33	65	0.52	1.1	1.7	D
28	1	18	51.0	64	45.8	147	47.5	12.1	0.3	8	4	145	13	31	0.18	1.2	2.4	C
28	3	25	47.6	63	22.9	148	6.6	15.6	1.2	5	0	206	57	42	0.37	36.3	27.5	D
28	7	33	0.4	63	49.1	148	28.2	4.3	1.1	5	0	226	25	13	0.26	9.7	4.5	D
28	9	54	45 6	64	43 7	147	28.5	7.3	07	9	4	137	18	34	0.14	0.8	4 4	c
28	12	22	50.4	64	51.3	149	21.4	16.6	2.2	11	0	221	34	71	0.26	3.7	1.5	D
28	20	8	54.0	63	24.3	152	6.4	54 3	1.9	9	1	228	62	23	0.69	11.1	58.2	D
29	11	21	56.5	64	59.7	147	0.4	12.9	0.4	6	2	317	18	54	0.08	4.6	4.7	D
29	12	55	5.1	64	59 8	146	56.7	15.4	0.4	5	1	313	21	57	0.06	6.1	5.7	D
29	14	24	40.4	62	11.5	147	50 0	0.3	1.9	4	1	188	48	49	0.35	12.6	7.4	D
29	15	27	0.2	61	10.0	151	6.7	63.9	2.9	20	3	141	51	23	0.51	1.9	2.9	D
29	20	11	36.9	64	48.7	147	35.2	8.6	02	8	3	184	14	22	0.11	1.2	4.0	c
30	7	33	50.2	63	53.2	148	38.9	9.6	1.1	11	3	173	22	48	0.38	2.0	1.9	c
30	1	0	51.1	61	5.9	150	46.0	55.2	2.5	14	5	126	70	33	0.31	1.4	5.4	c
30	2	40	7.4	65	2.0	147	2.2	17.0	0.8	7	2	326	17	57	0.09	5.2	3.4	D
30	5	8	4.5	62	45.7	149	2.8	89 1	1.6	9	1	278	8	84	0.34	7.8	8.1	D
30	8	43	14.6	64	58.6	148	42.2	16.5	0.8	8	3	304	31	56	0.07	2.4	2.5	C
30	9	29	47.7	64	26.1	147	16.7	8.8	0.5	6	2	174	16	39	0.01	3.1	5 5	c
30	11	57	45.2	64	39.6	146	53.0	3.2	0.7	8	3	220	29	44	0.18	1.5	16.7	D
30	13	18	22.5	64	49.7	149	19.4	11.9	1.0	7	1	286	30	71	0.14	2.2	9.7	D
30	13	37	4.8	64	45.0	146	26.6	10.5	0.2	6	2	268	17	35	0.04	5.0	4.9	D
30	22	32	51.2	63	10.4	148	29.7	72.9	1.8	10	3	244	66	46	0.14	2.4	6.2	D
30	23	53	12.7	64	51.2	147	59 2	14.2	0.3	9	4	172	6	25	0.18	1.3	1.6	C
31	5	27	6.6	64	34.9	148	10.2	10.6	0.7	8	2	197	13	27	0.26	1.9	3.9	c
31	13	46	53.2	64	55.6	147	38.2	19.7	1.5	8	2	171	8	27	0.09	2.3	1.3	c
31	15	29	13.1	64	45.7	147	28.5	7.4	1.0	11	5	138	20	26	0.18	0.7	7.1	c
NOV 01	0	57	4.3	64	42.9	147	49.3	11.6	1.3	14	4	95	8	21	0.55	0.7	1.7	c
01	10	58	55.8	64	47.9	144	6.2	0.1	0.9	6	0	253	15	61	0.17	4.9	99.0	D
02	6	45	7.5	63	42.9	147	37.0	8 3	15	9	2	250	54	84	0.34	2.1	2.2	D
02	8	1	38.4	64	38.4	146	54.9	4.4	1.8	9	2	239	26	51	0.13	1.9	2.7	C
02	15	33	23.0	64	51.0	148	59 9	19.0	2.5	11	0	205	31	57	0.12	3.0	1.2	D
03	1	20	46.5	62	10.8	151.	20.8	1.3	3.0	15	0	180	17	11	0.52	2.3	1.7	D

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
NOV 03	3	16	0 0	64	25.0	147	12.4	0.2	0.7	5	1	183	12	43	0.06	3.6	99.0	D
03	4	7	49.6	64	4.1	147	31.0	14 5	1.0	11	3	246	24	53	0.27	1.6	1.3	c
03	13	5	40.2	61	2.7	147	14.2	22.2	2.6	8	1	255	88	34	0.18	5.6	2.8	D
03	13	7	26.7	67	36.7	149	27.3	26.7	2.5	9	1	228	19	16	0 37	5.3	18.7	D
									FELT III WISEMAN									
03	19	55	21.1	62	26.5	150	32.8	3.6	2.5	8	0	173	20	81	0.05	2.8	3.9	c
04	0	54	53.2	63	10.8	149	46.2	97.1	1.9	10	2	278	74	44	0.28	3.7	4.2	D
04	6	23	27.7	63	59.3	149	34.7	2.2	1.9	6	0	248	43	90	0.51	15.8	99.0	D
04	12	11	16.4	63	15.9	150	43.2	140 6	2.2	11	0	293	3	67	0.22	23.2	15.4	D
04	12	47	10.7	64	38 8	149	22.8	12.9	2.1	9	1	255	17	62	0.27	4.9	4.8	D
05	0	49	19.2	63	47 1	149	22.5	32.5	1 3	5	1	262	23	99	0.31	6.9	4.4	D
05	9	39	11.4	62	27.1	148	51.8	9.5	2.4	12	2	169	92	43	0.60	2.4	3.1	D
06	4	55	51.0	62	56.8	148	20.3	37.7	2.1	8	1	192	35	70	0.17	2.7	12.5	D
06	9	54	40.3	62	52.6	148	59.3	8.3		12	1	174	39	50	0.52	2.8	2.5	D
06	14	14	59.2	62	30.2	150	31.0	0.9	2.3	13	0	167	25	68	0.55	2.7	1.8	D
06	14	52	44.0	62	26.9	149	53.5	16.1	2.0	9	2	158	2	51	0.60	1.9	2.9	D
06	18	33	15 5	64	38 3	147	0.9	2 3	1 9	10	4	198	26	43	0.72	1.2	19.2	D
06	22	2	16.5	63	59.4	144	5.7	42.6	1.8	8	2	193	55	94	2 37	4.4	99.0	D
07	1	59	18 3	62	51 1	150	0.2	81.3	1.6	8	2	171	12	15	0.18	4.2	4.5	D
07	6	26	45 3	64	22.1	149	35.4	16.6	1.0	9	4	251	24	73	0 27	1.9	0.8	C
07	8	38	12 2	63	10.8	150	42.4	98.3	2.4	10	2	188	8	75	0.33	2.6	4.3	D
07	12	27	45.1	64	4.0	146;	22.0	1b.4	1.0	9	2	158	25	47	0.28	1.6	1.1	c
07	13	49	39.6	65	4 . 0	148	27.0	1.4	0.5	4	0	251	31	56	0.06	5.2	99.0	D
07	14	16	4.8	61	55.6	150	40.7	1.3	2.5	9	3	160	93	20	0.98	2.5	1.5	D
07	14	51	24.6	64	48.9	147	20 8	10 4	1.6	10	1	163	19	38	0.25	1.5	1.7	c
07	18	59	29.3	65	1.3	147	40 4	12 3	0.6	7	3	240	14	31	0.15	2.0	3.3	c
07	1?	23	0.8	63	14.3	147	24.5	9 7	1.9	12	2	143	2	32	0 53	1.9	2.0	D
07	21	56	40 2	62	17.1	150	59.0	40 3	2.4	14	2	174	35	98	0.51	2.9	12.4	D
08	5	38	26.1	65	2.1	146	2.2	0 5	1.8	9	4	306	64	84	0.36	1.7	99.0	D
08	5	42	34.5	65	7.6	146	11.1	9.9	1.0	7	3	341	59	94	0.17	4.6	20.1	D
08	18	21	21.4	64	51.8	147	32.4	12.6	0.7	7	2	181	13	27	0.17	2.4	3.9	c
08	21	5	43.9	61	20.0	150	33.5	32.4	2 7	5	0	163	82	5 8	0.08	4.4	5.5	D
08	23	44	46 4	63	3.4	147	52 6	66 9	1 6	8	3	232	92	22	0.32	2.7	8.3	D
09	0	3	10.1	62	35.2	148	19 4	22.5	2 1	11	3	147	13	52	0.52	2.6	5.0	D
09	10	52	15.4	63	3.7	150	27.5	100 2	2.7	20	2	112	7	76	0.38	2.0	5.3	c
10	4	31	12.4	63	23.0	149	48.0	109.8	3.6	20	0	66	58	28	0.26	1.9	4.4	B

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE. 3983

1963	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
NOV 10	6	1	5	32.1	64	41.0	147	36.0	7.8	1.6	8	2	209	11	31	0.17	1.4	4.5	c
10	8	25	48.5	64	46.2	147	30.0	5.3	1.0	7	2	135	20	25	0.40	1.3	12.4	C
10	18	3	40.7	64	17.6	148	17.1	11.1	1.5	9	2	159	21	46	0.07	2.1	5.5	c
10	20	21	58.5	64	48.1	148	2.7	17.5	0.7	8	3	117	6	21	0.19	2.1	2.5	B
11	0	24	56.2	64	43.8	147	23.3	8.0	0.4	7	3	245	22	25	0.10	2.1	5.7	D
11	2	18	11.4	64	57.7	148	39.6	23.0	0.7	6	2	316	29	54	0.13	3.5	1.2	D
11	16	55	24.1	64	46.8	145	3.7	15.9	1.8	12	4	245	23	58	0.44	1.2	1.3	D
11	21	7	36.8	64	13.9	149	41.2	5.7	1.7	9	2	251	21	67	0.41	2.7	1.7	D
12	2	45	26.9	65	30.6	147	58.3	22.0	2.2	8	3	328	64	77	0.45	55.7	70.0	D
12	4	43	59.8	64	36.5	149	22.7	20.0	2.3	12	3	253	15	64	0.27	1.6	0.9	c
12	7	37	38.6	64	29.0	147	15.3	0.1	0.9	11	4	127	17	40	0.21	0.8	99.0	c
12	7	39	10.7	64	28.9	147	12.6	5.5	2.6	13	1	127	15	42	0.40	1.1	1.9	c
12	7	40	37.7	64	29.2	147	13.3	10.6	3.7	10	0	133	16	42	0.10	1.3	2.3	B
									PMR	ML	FELT	FAIRBANKS,	NORTH	POLE	AND	SALCHA		
12	7	59	58.4	64	29.8	147	8.6	11.8	0.9	8	3	150	14	52	0.27	1.8	4.4	c
12	8	25	29.1	64	29.8	147	12.8	0.8	1.2	8	1	138	16	50	0.13	2.2	95.8	C
12	13	52	10.4	64	16.8	147	54.2	20.6	1.0	12	3	115	11	41	0.27	1.1	0.9	B
12	15	26	29.5	65	24.3	148	21.9	8.4	1.9	10	3	235	62	65	0.32	2.1	1.5	D
12	19	5	46.6	64	52.5	147	22.6	9.8	1.5	9	3	161	13	33	0.25	1.6	5.1	c
12	20	42	52.0	63	3.2	150	14.5	3.6	2.2	8	0	247	39	90	0.83	18.6	11.5	D
13	5	55	23.1	64	12.6	147	58.3	7.8	1.1	10	3	119	4	49	0.12	1.1	2.6	B
13	6	47	37.9	64	10.6	148	44.4	3.3	1.9	15	4	89	25	46	0.41	0.9	2.0	c
13	11	48	15.1	65	19.1	149	46.0	2.5	1.4	7	3	337	94	19	0.16	7.9	99.0	D
13	15	25	59.5	64	13.4	149	47.8	15.4	1.4	10	3	259	26	69	0.25	1.7	1.4	c
13	20	58	12.6	65	53.4	149	51.3	4.6	2.4	12	2	136	43	51	0.29	2.4	7.0	D
14	11	36	55.3	63	56.0	145	20.2	47.1	1.3	5	0	300	69	83	0.01	33.7	30.3	D
14	16	42	35.7	64	43.2	147	23.4	19.6	2.5	11	0	125	21	30	0.42	1.4	1.1	c
									FELT	III	COLLEGE							
14	19	1	58.1	64	42.1	147	24.5	13.7	1.6	13	3	145	20	32	0.28	1.0	1.3	c
15	5	36	26.5	64	50.8	147	30.6	9.0	1.3	14	6	131	15	26	0.16	0.7	2.9	B
15	12	44	16.9	62	56.3	151	6.1	76.9	1.7	7	2	342	41	11	6.60	12.1	9.5	D
15	13	26	38.2	64	45.3	147	30.0	11.0	1.0	7	2	187	19	32	0.19	1.6	6.3	D
16	3	3	46.6	64	39.2	146	58.3	26.3	1.9	16	4	233	28	48	0.43	1.9	4.6	D
16	9	2	50.5	63	21.0	146	56.0	9.1	1.9	13	4	176	43	32	0.25	1.6	1.3	c
17	5	37	3.7	64	49.4	145	42.6	13.6	0.4	10	4	153	9	21	0.24	1.2	2.7	C
17	8	3	27.9	64	26.2	149	48.5	18.2	1.1	8	2	288	36	83	0.33	3.0	1.6	D

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	N	P	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
NOV 17	10	30	45.8	64	27.7	149	19.9	14.8	2.0	11		1	231	18	60	0.34	2.7	1.2	D
17	15	35	46.5	64	45.3	148	56.9	16.1	2.6	8		1	241	21	52	0.20	2.9	1.4	D
17	18	29	1.6	62	52.7	148	14.2	81.2	2.4	11		2	183	1	39	0.47	2.9	4.3	D
18	0	34	28.1	59	52.2	148	48.0	2.5	3.6	13		0	244	96	31	0.23	14.0	19.4	D
18	0	53	26.9	59	52.0	148	46.3	2.5	3.7	12		0	262	97	32	0.27	16.6	21.5	D
16	0	56	58.8	63	55.7	146	55.9	0.1	2.2	12		0	154	22	56	0.38	1.4	3.2	C
18	2	47	25.4	62	57.P	147	58.2	79.5	2.1	13		3	166	98	27	0.56	2.2	3.7	D
18	7 1	8	7.3	63	26.8	145	31.0	7.0	2.2	8		2	134	18	28	0.44	2.0	1.9	c
18	8	15	51.4	63	16.9	149	57.8	106.8	2.5	13		4	280	72	42	0.22	3.3	4.8	D
18	8	33	47.1	61	45.3	150	49.1	39.4		10		2	156	92	83	0.28	4.0	6.7	D
18	15	53	51.8	61	19.6	146	44.7	13.5	2.9	14		3	218	64	95	0.72	2.9	1.7	D
18	17	11	34.8	65	26.4	148	22.1	11.3		13		1	199	66	69	0.45	1.6	1.8	D
18	20	38	58.6	64	19.4	148	39.4	27.9	2.5	12		2	77	31	35	0.34	1.2	5.0	C
18	22	5	58.5	64	49.0	147	42.0	14.5	0.9	10		5	157	10	21	0.33	1.1	2.0	C
18	22	39	27.4	63	6.9	150	54.4	42.0		16		3	192	20	86	1.00	2.6	15.6	D
19	2	9	9.0	63	9.6	150	17.7	113.8	2.9	13		3	287	93	63	0.21	4.2	3.4	D
19	8	7	29.2	63	37.0	149	34.6	106.0	2.0	12		1	265	34	2	0.15	4.0	4.7	D
19	10	59	54.5	63	3.2	149	45.6	1.3	2.1	9		3	205	55	73	0.48	3.3	1.3	D
19	18	55	8.6	65	1.5	146	11.3	12.8	1.5	9		3	302	57	78	0.28	2.2	1.4	D
19	20	5	16.1	62	57.0	151	23.6	123.9	2.8	10		0	201	51	92	0.16	4.9	12.7	D
20	4	42	8.9	64	23.1	148	19.7	30.5	1.4	7		2	230	15	38	0.43	3.9	2.0	D
20	21	25	44.8	64	2.9	146	6.3	102.7	2.2	9		2	98	54	68	0.17	1.9	6.0	C
22	0	12	35.5	63	54.1	146	57.5	7.3	2.0	8		2	161	19	59	0.29	1.8	1.7	c
22	0	59	52.2	65	10.1	149	47.5	10.8	1.7	6		2	307	74	11	0.09	3.1	1.6	D
22	2	51	40.4	64	51.4	147	31.8	7.3	0.8	7		3	185	13	27	0.17	1.3	5.5	D
22	9	39	33.0	64	52.9	148	38.5	8.9	1.2	6		2	227	24	48	0.24	1.8	5.2	D
22	18	22	24.0	63	7.4	150	23.6	111.4	2.P	13		2	225	100	69	0.23	5.2	6.2	D
23	1	13	23.4	63	30.4	149	20.8	60.4	2.7	8		2	321	32	2	0.33	5.3	4.0	D
23	2	13	42.1	64	59.h	146	55.1	9.4	1.9	9		3	274	22	57	0.14	1.6	7.8	D
23	2	26	47.0	63	4.2	150	41.3	123.8	2.2	9		0	185	15	82	0.19	4.3	9.3	D
23	2	30	7.3	64	53.9	148	54.8	1.3	0.5	8		3	257	37	53	0.11	1.8	98.6	D
23	14	54	53.4	64	44.4	148	51.3	12.0	1.6	12		2	217	21	47	0.31	1.1	2.1	D
25	0	4	38.2	61	25.1	150	40.5	69.9	3.2	9		1	115	50	84	0.16	3.1	8.0	c
25	0	10	48.3	61	19.1	150	47.3	47.4	3.0	7		1	230	47	1	0.85	9.1	99.0	D
25	14	48	47.7	63	19.3	14"	3.2	92.3	3.0	20		0	88	46	10	0.25	1.9	4.2	B

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN HR	MN	TIME SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	N	P	NS	GAP DEC	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
NOV 26	5	19	23.7	64	47.2	147	59.9	15.8	1.0		7	2	116	8	18	0.44	2.6	3.2	C
26	8	57	23.6	63	52.7	150	28.8	3 2	1 3		6	2	306	78	55	0.33	4.0	3.1	D
26	12	40	42.1	63	59.2	147	30.9	17.3	1.1		11	2	126	30	61	0.25	1.2	1.0	B
26	13	35	16.3	64	29.4	148	32.9	10.1	0.9		6	2	248	22	42	0.17	3.1	11.8	D
26	16	1	52.4	64	46.6	148	58.9	2.1			5	0	241	23	58	0.54	6.1	62.7	D
26	22	27	41.8	63	22.9	150	11 8	42 9	2.5		5	0	329	74	59	0.18	99.0	99.0	D
27	7	2	18.2	63	56.5	149	13.8	123.7	2.0	14		2	210	28	69	0.30	2.5	2.6	D
27	10	55	31.4	64	46.8	147	24.1	2.2	0.8		5	0	207	23	36	0.10	2.3	48.5	D
27	17	15	45.7	64	3.4	148	6.4	107.8	2.3		13	2	97	16	54	0.18	1.8	ft.9	B
27	20	14	22.5	63	18.1	150	17.0	124.9	1.9		6	0	290	63	69	0.05	29.9	18.8	D
29	11	26	16.4	63	30.3	147	5.1	0.2	1.1		6	0	161	95	1	0.23	1.9	2.9	c
29	14	41	32.8	64	15.5	148	23.1	13.9	1.1		11	1	93	24	42	0.25	1.0	5.2	C
29	18	7	3.1	63	5.8	151	50.8	20 0	2.2		6	1	215	62	14	0.26	5.7	8.4	D
29	18	28	32.0	64	2.6	148	6.3	107 3			13	1	99	17	54	0.17	1.9	3.2	B
30	6	42	9.5	64	54.0	147	48.7	11.7	0.4		7	3	181	1	22	0.24	1 4	3.2	C
30	7	3	16.7	64	47.5	147	44.1	10 5	0.3		7	3	155	12	20	0.16	1.0	4.1	c
30	10	0	20.5	64	54.6	147	49.2	13 2	0.3		7	3	186	2	22	0.21	1.5	3.1	c
30	10	20	28.9	63	10 4	150	31 4	122.1	3.5	24		2	69	1	70	0.49	1.9	6.0	B
30	16	30	48.3	63	5.0	150	19.8	108.6	1.7		8	3	289	0	14	0.27	5.8	4.2	D
30	19	37	40.5	66	19 7	145	26.6	5.1	2.6	10		0	157	28	74	0.47	7.0	14.0	D
30	22	10	23.E	64	39.0	146	44.5	3.7	1 1		11	5	240	29	51	0.31	1.5	11.9	D
DEC 01	0	28	21.9	64	32.4	146	51.2	5.8	1.3		11	5	225	16	56	0.34	1.6	4.8	D
01	0	39	57.1	63	54.7	146	53.3	1.9	1.3		10	0	146	20	55	0.34	1 4	3.2	C
01	0	41	29.9	64	30.2	149	19.1	18.2	1.3		13	5	240	14	59	0.22	1.8	0.8	C
01	4	4	57.0	64	57.7	147	49.9	15 4	0.4		9	4	218	7	21	0.28	1.7	1.5	c
01	8	46	0.7	63	4.5	150	43.0	115.1	2.1		12	3	295	15	85	0.33	4 6	4.6	D
01	10	20	42.1	63	13.6	149	15.6	85.5	1.8		18	6	184	59	50	0.38	2.3	2.3	D
01	17	32	52.8	63	52.0	148	24.4	13.1	0.8		8	3	222	30	69	0.36	3.2	2.1	D
01	23	38	24 5	64	9.3	149	53.1	33.5	1.2		6	2	286	66	95	0.17	10 8	38.6	D
02	1	34	12.4	61	56.4	150	4.6	12 1	2.5		13	1	137	65	45	0.40	1.2	2.8	D
02	2	33	40.1	64	42.7	147	23 5	9.5			7	2	148	21	38	0.22	1.3	7.5	c
02	9	50	4.7	64	31.0	149	26.9	14 2	1.7		10	2	256	19	66	0.21	1.9	2.0	c
03	4	44	21 9	64	48 5	147	35.3	9.5	0.8		7	3	183	14	22	0.12	1.2	4.6	C
03	8	35	43.4	64	47.6	147	24.2	14.6	1.2		8	3	152	22	25	0.13	1.1	4.4	c
03	13	54	25.9	63	8.7	148	3.2	63.3	1.3		10	2	229	79	34	0.18	2.7	8.4	D

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
DEC03	15	45	2.5	64	48.5	147	41.4	17.0	0.6	8	3	161	11	22	0.19	1.6	3.7	c
04	1	18	41.8	62	20.3	148	9.8	72.0	1.8	6	1	206	91	38	0.39	12.2	9.7	D
04	6	51	36.1	64	23.5	148	59.4	6.5	1.0	9	2	135	21	44	0.17	1.7	8.8	c
04	7	20	7.0	64	41.0	148	46.6	4.8		6	2	191	19	41	0.12	2.6	9.2	D
04	12	57	37.9	64	35.9	149	28.5	18.9	1.4	10	1	260	19	68	cJ.21	2.3	1.0	D
05	1	22	6.5	64	29.0	149	15.4	13.3	0.6	7	2	220	14	56	0.22	3.9	2.8	D
05	7	1	59.3	67	15.3	145	50.3	5.0		6	0	244	61	77	0.32	75.4	64.6	D
05	16	33	7.6	62	24.3	150	37.8	7.3	2.0	12	1	168	20	71	0.35	1.8	2.3	D
06	4	28	50.2	63	26.9	145	28.9	1.4	1.3	7	1	135	19	29	0.26	2.4	3.2	C
06	15	46	2.8	65	6.3	149	22.7	18.2	1.6	11	3	285	61	78	0.21	2.5	1.2	D
06	20	6	47.9	63	53.5	148	53.9	5.1	1.0'	8	1	154	18	76	0.36	2.3	2.9	c
06	22	13	9.3	64	39.9	148	27.7	0.4	0.3	9	4	148	24	31	0.31	1.1	99.0	c
07	4	59	59.9	64	53.8	148	35.0	12.1	0.6	9	4	235	22	43	0.25	1.9	3.6	C
07	7	6	17.7	61	30.7	151	33.3	91.9	2.5	19	3	86	46	38	0.22	1.6	2.0	B
07	17	26	7.3	62	17.0	150	38.0	5.9	1.8	7	1	174	11	80	0.21	1.8	2.4	C
07	21	26	12.4	62	54.9	148	36.2	69.5	2.4	17	4	125	s3	45	0.36	2.3	6.8	c
07	22	15	24.7	62	21.0	151	7.9	1.3	2.5	16	4	256	36	7	0.53	3.5	1.0	D
07	22	27	28.0	64	24.1	147	8.2	4.5	0.8	10	5	151	9	46	0.19	1.1	5.0	c
07	23	28	9.1	64	29.0	147	50.2	20.8	0.6	8	4	260	12	41	0.09	2.4	1.9	D
08	7	40	29.6	64	11.9	147	26.4	6.2	0.8	11	5	269	33	53	0.29	1.5	7.5	D
08	9	44	44.5	64	49.4	147	38.4	24.0	2.0	12	2	69	11	22	0.42	1.8	1.2	B
08	10	10	42.9	63	38.5	147	10.6	65.7	1.4	15	6	175	68	88	0.33	1.3	3.3	D
08	17	17	0.5	64	57.5	146	44.1	1.3	1.3	8	3	287	51	63	0.30	3.6	99.0	D
08	19	46	12.4	62	6.6:	144	15.1	5.0	2.4	9	0	255	6	33	0.36	30.1	21.6	D
09	12	13	13.4	64	51.3	149	34.3	19.7	1.2	8	3	303	39	83	0.13	2.4	1.0	D
09	13	9	0.0	64	31.1	148	4.9	19.2	0.3	7	3	171	5	34	0.05	2.1	1.9	c
09	13	15	17.0	64	30.4	148	5.3	23.4	0.9	9	3	98	4	36	0.17	1.2	1.0	B
09	18	2	29.9	63	0.1	151	0.1	115.3	2.7	15	3	192	32	84	0.44	2.6	6.4	D
09	20	57	39.8	62	30.1	150	50.2	6.7	2.1	15	3	175	36	67	0.29	1.6	2.0	c
10	0	33	35.5	65	0.6	148	43.0	7.2	0.9	9	4	266	34	51	0.36	1.8	11.0	D
10	4	11	14.0	62	54.3	146	33.4	K2.2	1.9	12	3	141	94	44	0.33	3.3	3.5	D
10	7	31	31.4	63	4.9	151	13.5	1.3	2.2	11	3	200	97	16	0.41	3.2	1.6	D
10	10	23	16.9	65	12.3	149	1.4	16.4	2.2	9	2	298	59	70	0.20	3.6	1.4	D
10	11	48	36.6	64	34.5	146	56.9	27.9	1.4	9	4	228	19	54	0.25	1.9	3.6	C
10	21	33	11.4	64	28.6	149	18.5	19.7	1.5	12	5	237	16	68	0.37	1.6	0.9	D

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1963

1963	ORIGIN HR	MN	TIME SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	CAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
DEC 10	23	8	25.2	64	37.6	149	14.4	17.1	1.1	11	5	255	10	58	0.34	1.3	1.1	D
11	2	1	38.4	64	17.8	148	20.1	8.5	1.0	9	3	163	23	60	0.32	1.1	9.0	c
11	16	54	25.1	64	46.1	147	48.8	14.3	0.4	6	2	174	14	17	0.04	1.9	2.4	C
11	17	1	45.6	63	0.2	149	15.1	81.3	1.4	9	1	187	83	73	0.20	4.1	3.1	D
11	17	51	57.0	61	21.9	147	3.8	19.5	2.4	10	1	254	54	46	0.40	4.2	2.2	D
11	19	56	52.5	64	42.9	147	29.1	2.3	1.0	10	5	178	17	34	0.33	0.9	12.7	C
12	11	37	14.9	64	42.5	147	27.6	14.1	1.0	7	2	180	18	35	0.22	2.0	5.2	D
12	23	27	37.1	63	10.4	150	16.2	2.5	2.0	7	1	247	67	4	0.47	39.3	52.4	D
13	6	4	60.0	61	4.8	150	53.0	17.8	2.7	11	4	230	27	64	0.31	3.9	8.4	D
13	8	11	45.5	63	22.0	149	42.0	107.2	2.2	13	3	229	56	38	0.38	4.6	2.4	D
13	10	50	28.7	64	13.3	147	53.1	1.7	1.1	7	2	240	30	50	0.37	3.3	45.6	D
13	10	51	3.3	64	18.3	147	50.8	13.7	0.7	9	4	253	22	45	0.13	1.7	4.7	c
14	2	12	20.5	63	57.5	148	22.2	0.0	0.8	5	0	209	38	81	0.11	2.8	99 0	D
14	5	10	30.0	64	6.5	149	8.5	145.1	1.7	7	0	197	43	65	0.09	10.5	31 6	D
14	7	35	10.4	64	21.0	146	46.2	10.7	0.9	8	3	321	13	65	0.28	1.8	3.6	C
14	10	17	21.2	63	3.0	148	2.7	73.6	1.1	6	1	326	88	78	0.08	32.3	35.7	D
14	13	25	33.0	64	47.7	147	29.9	9.2	0.5	6	2	268	18	31	0.09	2.3	6.6	D
14	16	17	8.3	64	3.4	149	57.2	14.4	1.5	8	3	270	62	2	0.21	4.1	1.3	D
14	18	4	32.1	63	53.2	148	42.2	4.3	1.3	9	3	187	21	79	0.26	3.5	17.8	D
15	4	28	49.7	64	25.2	147	35.3	0.4	1.0	8	2	128	25	31	0.25	1.1	99.0	c
15	6	5	49.1	64	25.7	147	34.0	1.7	0.8	6	1	186	26	30	0.07	2.5	47.7	D
15	8	45	22.2	64	40.8	148	28.6	65.0	1.1	6	2	271	23	32	0.50	7.1	2.5	D
15	11	53	50.2	62	58.3	149	8.7	13.9	2.5	12	3	183	50	75	0.65	2.9	2.2	D
15	16	19	14.1	64	40.7	149	7.3	14.6	0.8	9	3	253	12	55	0.11	1.7	1.2	c
15	17	18	26.2	64	48.0	147	21.4	18.2	0.9	7	1	218	24	36	0.25	2.5	1.7	D
15	17	29	4.1	64	22.1	147	17.9	13.4	1.6	11	2	97	17	40	0.23	2.1	2.3	B
15	18	2	41.3	64	49.7	148	55.8	7.3	0.8	9	4	247	29	55	0.19	1.6	7.0	D
15	18	53	0.4	63	43.0	147	34 9	0.2	1.1	8	2	251	67	88	0.32	1 9	99.0	D
17	3	24	21.5	63	54.8	149	18.9	25.2	0.9	6	0	232	28	86	0.38	99.0	99.0	D
17	8	56	32.2	64	37.4	146	57.8	5.3	0.6	6	1	231	24	50	0.23	2.8	16.7	D
17	10	28	58.6	63	53.4	148	51.7	11.0	1.9	7	1	161	18	77	0.29	3.3	1.7	c
17	18	30	39.7	59	52.0	146	9.0	20.6	3.2	7	0	291	28	26	0.18	97.2	52.9	D
17	23	14	50.5	63	36.5	149	27.6	61.1	1.4	7	0	301	28	14	0.18	30.4	26.5	D
17	23	56	35.8	63	17.5	149	26.4	93.1	2.0	11	2	222	55	47	0.35	2.4	5.1	D
18	1	45	11.7	62	59.8	150	57.3	133.9	2.4	10	3	241	30	99	0.26	2.5	8.2	D

ALASKAN EARTHOLJAKES NORTH OF 61 DEGREES NORTH LATITUDE, 1983

1983	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DE PTM KM	MAG	N	P	NS	GAP DEG	DI KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
DEC 18	4	45	26.1	64	20.7	147	60.0	15.1	0.9		9	3	215	15	51	0.26	1.5	3.7	c
18	14	15	46.4	64	53 4	147	54.0	14.2	0.3		8	3	187	5	27	0.31	2.5	1.7	D
18	16	0	12.4	63	36.6	147	31.5	2.7	1.8		13	4	132	84	8	0.53	1.6	1.3	D
18	16	47	3.1	63	23.9	149	36 7	8.4	1 9		9	2	299	50	65	0.30	3.2	2.0	D
18	21	37	45.2	64	46.7	147	24.2	6.7	0.4		8	4	231	23	24	0.18	1.4	5.8	D
19	2	1	16.2	64	35.4	147	1.5	12.4	0.5		8	3	191	21	48	0.21	2.0	4.8	D
19	10	58	48.6	64	38.2	147	3.0	8.3	0.8		6	2	220	26	46	0.13	4.6	15.1	D
19	11	22	29.1	64	38.5	147	5.2	6.3	0.8		9	3	187	27	41	0.11	1.2	8.9	D
20	3	51	28 4	64	47.2	146	33.6	21.5	1.2		8	3	264	45	60	0.21	2.1	1.7	c
20	7	21	17.5	62	39.0	151	14.2	16.1	2.2		14	2	145	62	1	0.51	2.7	6.8	D
20	13	26	5 1	65	4 5	146	37.4	19.2	0.9		5	1	335	37	74	0.07	6.0	2.4	D
20	14	40	55.7	64	35.5	148	17.6	8.3	1.0		9	2	107	17	27	0.12	0.9	4.8	C
20	16	27	56.5	64	50.6	148	43.1	3.5	0.7		8	3	231	27	44	0.17	2.0	12.3	D
20	17	51	27.0	64	36.1	148	15.1	5.8	1.0		6	1	220	16	26	0.12	3.2	7.9	D
20	22	49	28.3	64	24.1	147	18.6	1.9	1 2		6	2	193	17	38	0.25	2.4	24.1	D
20	23	4	52.2	66	29.7	147	55.3	22 9	1.6		4	0	348	70	66	0.12	99.0	99.0	D
21	1	54	38.9	62	40.6	151	16.3	2.7	2.5		12	3	192	65	72	0.37	1.8	1.9	D
21	2	0	27.1	64	47.8	147	45.5	10 6	0.4		8	3	148	12	19	0.11	1.0	2.9	c
21	4	1	3.1	65	10.0	146	37.4	10.5	1.5		9	3	308	41	81	0.22	2.8	16.1	D
21	12	16	2.8	64	46.4	147	48.5	11.0	0.6		8	2	140	14	17	0.28	1.3	3.2	C
21	15	49	23.6	64	49.7	146	55.4	15.2	1.8		11	3	241	29	54	0.25	1.4	1.6	C
21	23	20	47.1	65	45.4	152	1.4	0 0	1 8		6	1	328	83	19	0.07	16.6	50.9	D
22	4	20	20.9	65	0.1	147	37.0	2.3	0 6		8	3	226	11	32	0.19	1.8	9.9	D
22	12	38	53.2	63	12.8	150	31.3	135.1	2 2		7	0	296	98	68	0.13	31.2	20.2	D
22	20	54	12.2	60	46.8	152	44.6	1.3	3.2		10	0	200	40	13	0.52	8.0	2.6	D
23	2	10	26.5	64	16.3	148	27.5	16.3	1.3		11	2	124	29	45	0.34	1.0	2.0	c
23	6	11	41.5	63	2 4	151	50 4	5.0	2 1		5	0	217	65	67	0.43	57 7	99.0	D
23	8	21	42.6	64	47.5	148	58.1	15.1	1.4		10	2	241	24	55	0.30	3.2	1.6	D
23	11	8	56.7	63	48.2	148	56 0	104.8	2 8		13	2	160	8	85	0.13	2.9	4.6	C
									PMR		ML								
23	11	14	37.5	64	46.4	147	23.1	u 3	0.9		8	2	153	24	25	0.19	1.2	99.0	c
23	13	24	36.5	64	51.9	147	48.7	10.9	0.2		6	2	124	1	24	0.16	2.6	4.3	B
23	14	34	25.6	64	47.0	147	45.1	11.9	1.4		10	3	101	13	19	0.25	0.8	3.0	B
23	21	31	49.5	63	10.6	151	6.5	0.6	2.3		5	1	332	25	7	0.36	18.2	9.4	D
23	21	35	14.3	62	40.9	150	50.7	11.0	2.4		7	1	241	51	21	0.47	11.3	9.4	D
24	3	44	24.4	63	50.7	148	46.0	2.2	1.9		5	1	186	15	14	0.27	11.6	61.9	D

ALASKAN EARTHQUAKES NORTH OF 61 DEGREES NORTH LATITUDE. 1963

1963	ORIGIN TIME HR	MN	SEC	LAT N DEG	MIN	LONG W DEG	MIN	DEPTH KM	MAG	NP	NS	GAP DEG	D1 KM	D3 KM	RMS SEC	ERH KM	ERZ KM	Q
DEC 24	4	27	19.1	62	8 0	150	22.6	12.2		6	2	161	90	63	0.32	2 3	4 5	D
24	7	33	39.8	61	47.3	150	56.2	64.2	3.2	16	0	82	90	2	0.34	2.0	3.3	c
24	9	58	50.2	64	28.4	150	5.7	25.3	1.4	7	2	281	50	0	0.30	3.0	66.2	D
24	12	23	8.0	63	14.0	150	54.1	1.9	2.3	6	2	331	13	19	0.32	14.6	8.7	D
24	22	11	14.1	64	45.9	147	24.5	0.1	0.4	7	2	223	23	25	0.12	1.5	99.0	D
25	2	25	50.0	64	50 9	148	45.3	8.6	0.9	6	1	235	29	46	0.11	2.2	13.6	D
25	8	46	15.3	65	5.5	148	52.0	14.0	1.3	8	2	269	45	58	0 20	2.7	9.5	D
25	16	22	5.7	64	47.0	147	35.2	10.3	1.8	10	2	122	16	25	0.41	0 9	2.1	c
25	18	11	1.1	65	52.3	147	9.9	29.9	1.9	5	1	206	12	25	0.35	20.4	64.5	D
25	23	44	19.2	64	38.3	146	42.2	0.2	1.3	9	1	201	29	53	0.37	1.8	3.4	D
26	10	16	46.3	64	25 0	148	23.3	19 9	1.9	10	2	109	16	38	0 27	1.1	1.0	B
26	23	19	32 7	63	49 2	149	19.3	124.2	1.9	9	0	269	21	94	0.12	9 7	11.5	D
27	4	31	44.5	64	38.5	149	18 5	21.0	1.0	7	2	304	13	62	0.25	3.1	1.0	D
27	10	30	44.0	64	47.1	147	25.9	9.5	0.4	6	2	224	21	24	0.11	2.1	8.0	D
27	12	24	20.6	64	37.0	146	47.2	20.9	0.9	6	1	255	25	57	0.10	5.4	1.4	D
27	13	51	21.6	64	42.1	146	47.4	2.2	1.1	7	1	258	34	53	0.13	3.3	3.4	D
28	6	41	34 4	63	17.6	147	25 4	5.1	2.0	6	2	309	90	74	0 34	43 1	38.2	D
25	5	13	40.5	62	45 9	149	40.8	61.1	2.7	9	1	202	14	60	0 25	5.7	9.1	D
30	15	55	27.1	64	55.7	147	16.6	9.1	0.3	6	2	258	8	40	0.10	4.0	3.0	D
30	19	56	30.4	65	14.5	145	26.2	28.6	2.0	5	1	347	95	29	0.35	15.2	99.0	D
31	1	22	13.5	63	37.2	149	59.5	140 7	2.3	19	3	71	54	62	0.31	2.3	4.6	B
31	2	47	32.6	64	40 3	148	12.b	14 3	1 4	12	5	145	18	32	0 41	0.9	1.2	c
31	3	9	20 4	63	7 1	149	7.7	9.3	2.5	14	3	163	69	66	0.34	2.5	1.6	D
31	3	20	26.3	64	6.0	148	5 8	49.2	1.7	7	3	166	58	65	0.42	2.0	5.5	D
31	9	27	6.9	64	25.b	147	22 2	6.6	1.0	8	2	160	20	57	0.24	1.9	10.9	c
31	14	57	26.9	62	28.b	148	35.7	16.8	2.0	9	1	117	97	80	0.58	3.3	7.4	D
31	15	46	3.8	63	46.5	146	42.9	8.2	1.6	9	2	144	53	10	0.40	1.6	1.7	D

MODIFIED MERCALLI SCALE, 1956 VERSION

I. Nat felt. Some very low frequency effects, such as seiching in lakes, may be observed resulting from large, distinct earthquakes.

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

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

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

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

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

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

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

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

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

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

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

Note! CFR in parentheses refers to supplemental comments by Charles F. Richter.