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ALEUTIAN SEISMIC PROGRAM
SEISMOLOGICAL BULLETIN
APRIL 1970

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY
ROCKVILLE, MARYLAND 20852

FEBRUARY 1971

PREPARED FOR THE U.S. ATOMIC ENERGY COMMISSION
NEVADA OPERATIONS OFFICE
UNDER CONTRACT AT(29-2)-746

MASTER

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SEISMOLOGICAL BULLETIN

THE PURPOSE OF THIS BULLETIN IS TO COLLECT AND DISTRIBUTE PRELIMINARY DATA ACQUIRED FROM AN ALEUTIAN NETWORK OF SEISMIC STATIONS IN ORDER TO FACILITATE CURRENT STUDIES OF EARTHQUAKE OCCURRENCE IN THE ALEUTIAN ISLANDS. RECORD ARRIVAL TIMES AND AMPLITUDES ARE SCALED BY THE SPECIAL PROJECTS PARTY, LAS VEGAS, NEVADA. FINAL REDUCTION AND COLLATION OF DATA TO EVENT HYPOCENTERS AND DERIVATION OF RELATED PARAMETERS ARE PERFORMED BY THE SEISMOLOGY DIVISION, ROCKVILLE, MARYLAND. THIS COMPILATION IS PRELIMINARY AND MAY BE SUBJECT TO LATER REVISION ON THE BASIS OF CURRENT RESEARCH.

DESCRIPTION OF COLUMN HEADINGS

DATE - DAY,MONTH, AND YEAR IN GREENWICH MEAN TIME (GMT)

STA - STATION CODE

PHASE - NAME OF PHASE REPORTED
I OR E INDICATES THE CHARACTER OF PHASE APRIVAL
C OR D IN THE FOURTH CHARACTER INDICATES DIRECTION OF FIRST MOTION

TIME - ARRIVAL TIME OF PHASE IN HOURS, MINUTES, AND SECONDS (GMT)

AMP - GROUND DISPLACEMENT OF PHASE IN MILLIMICRONS
AMPLITUDES REPORTED WITH S PHASES ARE MAXIMUM SURFACE WAVE DISPLACEMENTS

PER - PERIOD OF PHASE IN SECONDS

MAG - STATION MAGNITUDE DEFINED BY

M6.6 = -6.4 + LOG10(AMP/PER) + 3.70*LOG10(DIST)

FOR LOCATED EVENTS OF DEPTH 50 KM OR LESS AND DISTANCE GREATER THAN 10 KM AND LESS THAN 180 KM FROM STATION

DIST - GREAT CIRCLE DISTANCE TO EVENT IN KILOMETERS

AZI - STATION TO EPICENTER AZIMUTH IN DEGREES TAKEN CLOCKWISE FROM NORTH

RES - PHASE TRAVEL TIME RESIDUAL IN SECONDS (O-C)

REMARKS- DESCRIPTIVE INFORMATION

DESCRIPTION OF HYPOCENTER INFORMATION

HYPOCENTER DATA ARE LISTED IN CHRONOLOGICAL ORDER AND ARE FOLLOWED BY ASSOCIATED PHASE ARRIVALS

FIRST LINE
- DATE
- ORIGIN TIME (GMT)
- GEOGRAPHIC COORDINATES
- DEPTH OF FOCUS IN KILOMETERS
- AVERAGE BODY WAVE (MB) AND SURFACE WAVE (MS) MAGNITUDES
- TYPE OF SOLUTION

SECOND LINE
- GEOGRAPHIC REGION

ALEUTIAN SEISMIC NETWORK

CODE	STATION	PERIOD OF OPERATION	LATITUDE (DEG MIN SEC)	LONGITUDE (DEG MIN SEC)	ELEVATION (METERS)
ADK	ADAK OBSERVATORY		51 53 01.4 N	176 34 49.4 W	108
AG1	AMCHITKA GEOPHONE 1	02/10/69-04/10/69	51 24 58.2 N	179 10 49.8 E	
AG3	AMCHITKA GEOPHONE 3	02/10/69-04/10/69	51 25 25.8 N	179 11 24.6 E	
AMA	AMATIGNAK ISLAND	09/10/70-	51 17 17.5 N	179 06 33.5 W	503
AME	AMCHITKA EXPERIMENTAL	01/04/69-26/05/69	51 23 12.0 N	179 15 18.0 E	
ANA	AMCHITKA NORTH A	25/08/69-25/09/69	51 37 39.8 N	178 39 22.7 E	177
		25/09/69-05/11/69	51 37 34.9 N	178 39 41.8 E	133
		05/11/69-16/07/70	51 37 39.8 N	178 39 22.7 E	177
		16/07/70-	51 37 34.9 N	178 39 41.8 E	133
ANB	AMCHITKA NORTH B	09/12/69-18/07/70	51 36 12.0 N	178 47 21.0 E	247
AND	AMCHITKA NORTH D	18/07/70-	51 33 44.4 N	178 57 12.4 E	187
ASB	AMCHITKA SOUTH B	25/05/69-	51 21 37.8 N	179 14 50.3 E	34
ASC	AMCHITKA SOUTH C	28/07/69-25/09/69	51 27 44.9 N	179 09 53.9 E	40
		25/09/69-13/07/70	51 27 41.9 N	179 07 29.9 E	36
		13/07/70-	51 27 44.9 N	179 09 53.9 E	40
ASD	AMCHITKA SOUTH D	29/05/69-06/06/69	51 22 36.0 N	179 20 30.0 E	
		06/06/69-	51 23 26.9 N	179 20 31.6 E	61
AWA	AMCHITKA WOOD-ANDERSON		51 22 28.5 N	179 15 09.6 E	
CSA	CAPE SARICHEF	22/11/70-	54 35 40.0 N	164 52 30.0 W	152
GMA	GRANITE MOUNTAIN	18/09/70-	65 25 43.0 N	161 13 55.0 W	856
LSI	LITTLE SITKIN ISLAND	16/08/69-18/09/69	51 55 10.8 N	178 32 01.8 E	145
OB3	OCEAN BOTTOM SEIS 3	30/09/69-17/10/69	50 59 00.0 N	179 21 30.0 E	-3317
OB5	OCEAN BOTTOM SEIS 5	27/09/69-17/10/69	51 19 00.0 N	178 27 30.0 E	-1234
OB6	OCEAN BOTTOM SEIS 6	26/09/69-18/10/69	51 46 30.0 N	179 06 30.0 E	-859
OB8	OCEAN BOTTOM SEIS 8	26/09/69-16/10/69	51 22 00.0 N	179 35 42.0 E	-1408
RAT	RAT ISLAND	14/10/70-	51 47 56.7 N	178 19 48.3 E	226
SMY	SHEMYA	17/11/70-	52 43 51.0 N	174 06 11.0 E	58
SSI	SEMISOPOCHNOI ISLAND	13/08/69-04/11/69	51 54 52.2 N	179 37 26.4 E	335
		17/10/70-	51 53 32.8 N	179 35 17.9 E	177

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
01	ADK	IP D	00 13 59.4							
		IS	00 14 8.2							
01	ASC	EP	00 14 33.6	27.6	.3					
01	ASB	EP	00 14 34.8							
01	ASC	EP	00 14 35.3							
		E(S)	00 15 12.3							
01	ANB	EP	00 14 38.3							
01	ANA	EP	00 14 39.6							
01	ASD	EP	03 45 55.0	4.3	.2					
		ES	03 46 8.6							
01	ASB	EP	03 45 56.0							
01	ADK	EP	11 24 27.0							
01	ASD	EP	11 25 .5	5.3	.2					
01	ASB	EP	11 25 1.0							
01	ASC	EP	11 25 1.6							
		E	11 25 11.8							

01 14 23 25.10 39.77 N 141.79 E DEPTH = 81.0 KM MB = 5.8 TELESEISMIC SOLUTION
HONSHU, JAPAN

01	ADK	EP	14 29 35.4				3448	264		

01	ANA	EP	14 58 22.0							
01	ASC	EP	14 58 26.6							
01	ASB	EP	14 58 27.2							
		ES	14 58 53.3							
01	ASD	EP	14 58 27.4	8.7	.4					
01	ADK	EP	21 03 23.4							
		ES	21 03 45.0							
02	ADK	EP	03 11 38.8							
		ES	03 12 10.1							
02	ASD	EP	03 12 9.4	35.6	.3					
02	ASB	EP	03 12 10.8							
02	ASC	EP	03 12 11.8							

02 10 54 27.28 51.40 N 179.17 E DEPTH = 39.4 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

02	ASB	IPG	10 54 33.6	30.6	.2		7	310	-.1	
		ES	10 54 38.5						.1	
02	ASC	EP	10 54 33.7				7	173	-.0	
02	ASD	IPG	10 54 34.0	32.3	.2	-.18	12	283	.1	
		IS	10 54 38.6						-.1	

02 11 11 42.00 20.36 S 173.91 W DEPTH = 33.0 KM MB = 5.7 MS = 5.7 TELESEISMIC SOLUTION
TONGA ISLANDS

02	ADK	E(P)	11 23 3.0				8003	177		

02 14 29 46.35 51.44 N 179.69 W DEPTH = 50.0 KM FIXED DEPTH SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

02	ASD	EP	14 29 59.0	30.2	.2	2.55	68	84	-.2	
		E(S)	14 30 9.0						.5	
02	ASB	EP	14 29 59.7				74	83	-.2	
02	ASC	EP	14 30 1.0				80	92	.4	
		E(S)	14 30 10.5						-.5	

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
02	ADK	EP	15 30 24.7							
		ES	15 30 45.8							
02	ANA	EP	19 52 5.7							
02	ANP	EP	19 52 6.7							
02	ASC	EP	19 52 9.9							NOISY
		E(S)	19 52 32.7							
02	ASB	EP	19 52 11.2							
02	ASC	EP	19 52 12.5	85.4	.2					
		E(S)	19 52 37.7							

03 8 41 0.00 51.65 N 177.00 W DEPTH = 53.0 KM MB = 4.0 TELESEISMIC SOLUTION
ANDREANOF ISLANDS, ALEUTIAN IS.

03	ADK	IP	08 41 10.0				39	229	.0	
		IS	08 41 17.5						.3	
03	ASD	EP	08 41 36.0	74.9	.3		255	82	.2	
		E	08 41 38.7							
		E(S)	08 42 1.5						-.4	
03	ASB	EP	08 41 37.0				262	81	.4	
		I	08 41 39.8							
		I	08 42 11.7							
03	ASC	EP	08 41 38.0				267	84	.8	
		E	08 41 40.5							
		I	08 42 12.3							
03	ANP	EP	08 41 40.3				291	87	.1	
03	ANA	EP	08 41 42.6				300	88	1.3	

03 10 5 31.19 51.36 N 179.47 E DEPTH = 61.0 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

03	ASD	EP	10 05 40.4	10.8	.2		9	105	.0	
		ES	10 05 47.0						-.0	
03	ASB	EP	10 05 40.5	18.4	.2		15	92	-.0	
		ES	10 05 47.4						.0	
03	ANA	EP	10 05 44.2				64	118	.0	

03 13 59 2.20 51.83 N 175.23 W DEPTH = 55.0 KM MB = 5.1 TELESEISMIC SOLUTION
ANDREANOF ISLANDS, ALEUTIAN IS.

03	ADK	IP D	13 59 18.3				93	93	.1	
		IS	13 59 29.1						-.7	
03	ASD	EPN	13 59 53.7				379	80	.5	
		IP	13 59 56.7	740.2	.3					
		I	14 00 41.9							
03	ASB	IPN	13 59 54.5				385	80	.4	
		EP	13 59 56.5							
03	ASC	EPN	13 59 55.4				390	82	.8	
		EP	13 59 57.5							
03	ANB	EPN	13 59 58.7				413	84	1.2	CLIPPED
		EP	14 00 0.0							
03	ANA	EP	13 59 59.7				422	85	1.1	CLIPPED

03	ADK	EP	15 45 57.5							
		ES	15 46 7.3							

03 20 53 54.50 37.07 N 54.58 E DEPTH = 43.0 KM MB = 5.2 TELESEISMIC SOLUTION
IRAN-USSR REGION

03	ADK	EP	21 06 15.6				8983	321		

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APR   STA  PHASE    TIME        AMP   PER  MAG   DIST  AZI   RES    REMARKS
1970               (GMT)       (MU)  (SEC)       (KM) (DEG) (SEC)

03    ASC  EP     22 20  6.1    17.2  .2
03    ASB  IP     22 20  6.2    24.5  .2
           E(S)   22 20 25.2

.....................................................................................................
. 04     1 27 31.52  51.56 N  179.40 E  DEPTH =  60.7 KM                          FREE DEPTH SOLUTION .
.                   RAT ISLANDS, ALEUTIAN ISLANDS                                                     .
.                                                                                                     .
. 04    ASC  IPG    01 27 41.0    62.3  .2            21   12    -.1                                .
.            ES     01 27 48.0                                    -.0                                .
. 04    ASB  IPG    01 27 41.3    61.3  .2            25   26     .0                                .
.            IS     01 27 48.3                                    -.0                                .
. 04    ASC  IPG    01 27 41.1                        20   57     .1                                .
.            ES     01 27 48.0                                     .0                                .
. 04    ANB  IP     01 27 42.4                        43   96    -.1                                .
. 04    ANA  IPG    01 27 43.4                        52   98     .1                                .
.            E      01 27 53.2                                                                       .
.....................................................................................................

.....................................................................................................
. 04     3  7 20.69  51.20 N  179.88 W  DEPTH =  12.0 KM                          FREE DEPTH SOLUTION .
.                   DELAROF ISLANDS, ALEUTIAN ISLANDS                                                 .
.                                                                                                     .
. 04    ASC  IPG    03 07 30.8    38.8  .2  2.40      58  110     .2                                .
.            IS     03 07 37.9                                     .0                                .
. 04    ASB  IPG    03 07 31.4    12.3  .2  2.06      63  106    -.1                                .
.            ES     03 07 39.5                                     .1                                .
. 04    ASC  EP     03 07 33.0                        73  113     .0                                .
.....................................................................................................

  04    ASC  EP     08 39 43.6     8.5  .2
  04    ASB  EP     08 39 43.6     3.1  .2
           E(S)     08 39 49.6

  04    ADK  EP     08 58 37.6
           ES       08 58 49.0

.....................................................................................................
. 04     9 49 35.89  51.07 N  179.99 E  DEPTH =  34.2 KM                          FREE DEPTH SOLUTION .
.                   RAT ISLANDS, ALEUTIAN ISLANDS                                                     .
.                                                                                                     .
. 04    ASC  EP     09 49 46.6    12.9  .1  2.21      57  127     .0                                .
. 04    ASB  EP     09 49 47.2                        62  122     .0                                .
. 04    ASC  EPG    09 49 48.8                        73  127     .0                                .
.            ES     09 49 58.2                                    -.0                                .
.....................................................................................................

.....................................................................................................
. 04    12  0 29.38  52.29 N  179.71 E  DEPTH = 175.0 KM                          FIXED DEPTH SOLUTION .
.                   RAT ISLANDS, ALEUTIAN ISLANDS                                                     .
.                                                                                                     .
. 04    ANB  EP     12 00 55.8                        99   40    -.1                                .
. 04    ANA  EP     12 00 56.2                       103   44     .0                                .
. 04    ASC  EP     12 00 56.2                        99   22     .3                                .
. 04    ASC  EP     12 00 56.1    10.8  .2           104   14    -.2                                .
. 04    ASB  EP     12 00 56.5     7.7  .2           108   17     .0                                .
.            ES     12 01 16.3                                     .0                                .
.....................................................................................................

  04    ANB  EP     12 06 24.9
           ES       12 06 56.4
  04    ANA  IP     12 06 25.1
           ES       12 06 55.3
  04    ASC  EP     12 06 30.9     3.8  .2
           E(S)     12 07  3.1

  04    ADK  EP     16 44 29.5
           ES       16 44 41.0
  04    ASC  EP     16 44 43.5     3.2  .2
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APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
04	ASB	EP	16 44 43.8							
		E(S)	16 45 6.8							
04	ASC	EP	16 44 44.6							
04	ANB	EP	16 44 48.1							
04	ANA	EP	16 44 49.6							
04	ASD	IP	18 41 20.1	7.0	.2					
		E(S)	18 41 27.5							
04	ASC	IP	18 41 22.3							
04	ANB	IPG	18 48 20.7							
		IS	18 48 27.9							
04	ASC	IP	18 48 21.5							
04	ASD	IPGC	18 48 22.4	18.3	.2					
		ES	18 48 30.6							

04 20 5 5.83 51.06 N 179.70 W DEPTH = 50.0 KM FIXED DEPTH SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

04	ASD	IP	20 05 19.4	15.1	.2	2.43	75	118	-.1	WEAK S
		E(S)	20 05 29.6						.1	
04	ASB	EP	20 05 20.1				81	114	-.0	
04	ASC	IP	20 05 21.6				91	119	.2	

04	ASD	EPG	21 09 57.8	7.6	.2					
		ES	21 10 5.4							
04	ASC	EP	21 10 .1							
05	ASD	IP	05 04 50.8	13.0	.2					NOISY
05	ASB	EPG	05 04 52.1							
		E(S)	05 05 3.6							
05	ASC	EP	05 04 52.9							

05 12 10 22.59 51.08 N 177.99 E DEPTH = 0.0 KM FIXED DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

05	ANA	EPG	12 10 36.9				76	217	.4	NOISY
		E(S)	12 10 46.7						.1	
05	ANB	EPG	12 10 37.2				80	224	.0	NOISY
		E(S)	12 10 47.0						-.8	
05	ASB	EPG	12 10 38.5				93	251	-.6	NOISY
		E(S)	12 10 51.2						.1	
05	ASC	EPG	12 10 39.2				92	243	.3	NOISY
		E(S)	12 10 51.3						.5	

5 12 41 15.30 51.23 N 173.68 E DEPTH = 33.0 KM MP = 4.2 TELESEISMIC SOLUTION
NEAR ISLANDS, ALEUTIAN ISLANDS

05 13 38 51.14 51.20 N 179.13 W DEPTH = 50.0 KM FIXED DEPTH SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

05	ASD	EP	13 39 8.5	8.5	.2	2.75	108	100	-.3	
05	ASB	EP	13 39 9.7				114	98	.2	
05	ASC	EPG	13 39 10.7				122	103	.2	
		ES	13 39 24.7						.0	

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
05			14 49 22.25 50.11 N 179.88 W DEPTH = 25.0 KM							FIXED DEPTH SOLUTION
			DELAROF ISLANDS, ALEUTIAN ISLANDS							
05	ASB	IP	14 49 46.6				152	156	-.0	
		ES	14 50 4.6						.2	
05	ASD	EP	14 49 46.7	34.4	.2	3.90	152	158	.2	
		E(S)	14 50 4.7						.5	
05	ASC	EP	14 49 48.5				165	155	.1	
		ES	14 50 7.1						-.3	
05	ADK	EP	14 50 5.1				304	231	-.4	
		ES	14 50 36.2						-.9	
05	ASD	EP	17 51 29.5	12.9	.2					NOISY
		E(S)	17 51 43.0							
05	ASC	EP	17 51 31.5							
		ES	17 51 46.8							
05	ADK	EP	19 04 27.1							
		ES	19 04 53.8							
06			3 36 26.91 51.14 N 179.15 E DEPTH = 25.5 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
06	ASB	IPG	03 36 32.9	280.6	.2	1.93	25	196	.1	
		IS	03 36 37.1						-.0	
06	ASD	EPG	03 36 33.2	128.4	.2	1.84	29	208	-.1	
		E	03 36 37.3							
06	ASC	EP	03 36 34.3				35	181	.2	
06	ANB	EP	03 36 37.0				57	154	-.1	
06			4 0 30.90 53.53 N 166.68 W DEPTH = 33.0 KM MB = 4.2							TELESEISMIC SOLUTION
			FOX ISLANDS, ALEUTIAN ISLANDS							
06	ADK	EP	04 02 3.0				694	71		
		E	04 02 28.2							
6			17 51 6.90 52.51 N 172.29 E DEPTH = 33.0 KM MB = 4.4							TELESEISMIC SOLUTION
			NEAR ISLANDS, ALEUTIAN ISLANDS							
07			0 20 12.03 51.54 N 179.69 E DEPTH = 80.7 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
07	ASC	IPG	00 20 24.2	34.4	.2		30	54	-.1	
		IS	00 20 33.2						-.0	
07	ASB	EPG	00 20 24.7	24.5	.2		37	58	.1	
		ES	00 20 33.8						-.0	
07	ASC	EPG	00 20 24.9				38	77	.2	
		E	00 20 34.5							
07	ANB	EPG	00 20 26.4				63	96	-.1	
		ES	00 20 37.2						.1	
07	ANA	EPG	00 20 27.4				73	98	.0	
07	ANB	EP	01 50 1.0							
		E(S)	01 50 29.1							
07	ASC	EP	01 50 6.0							EMERGENT P
07	ASD	E(P)	01 50 7.5	22.5	.3					
07	ASB	EP	01 50 8.5							

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
07		4 14 20.62	51.44 N 179.15 W DEPTH = 25.0 KM							FIXED DEPTH SOLUTION
			DELAROF ISLANDS, ALEUTIAN ISLANDS							
07	ASD	EPG	04 14 37.8	12.9	.2	2.89	105	86	-.1	
		ES	04 14 50.5						-.0	
07	ASB	EPG	04 14 39.0	36.7	.2	3.45	112	85	.1	P SPIKE
		ES	04 14 52.4						.1	
07	ASC	EPG	04 14 39.7				118	91	-.1	
		ES	04 14 53.6						-.2	
07	ANB	EP	04 14 43.9				144	97	.1	
07	ASB	EP	05 05 39.8	42.8	.2					
		IS	05 05 58.2							
07	ASD	IP	05 05 40.2	60.2	.2					
		ES	05 05 57.7							
07	ASC	EP	05 05 41.5							
		ES	05 06 .5							
07	ANB	EP	05 05 44.1							
07	ANA	EP	05 05 45.3							
07		5 34 5.60	15.76 N 121.72 E DEPTH = 37.0 KM MB = 6.4 MS = 7.3							TELESEISMIC SOLUTION
			LUZON, PHILIPPINES							
07	ASD	EP	05 43 58.9				6423	254		NOT A LOCAL
07	ASC	EP	05 43 59.2				6413	254		
07	ADK	IP C	05 44 13.2				6710	257		ER 0601300
		ES	05 52 26.0							
		EL	05 59 16.0							
07		6 13 20.17	51.35 N 179.61 E DEPTH = 79.3 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
07	ASC	EPG	06 13 31.8	86.0	.2		19	98	-.0	
		ES	06 13 40.3						-.0	
07	ASB	EPG	06 13 32.0	97.8	.2		25	92	-.0	
		ES	06 13 40.7						-.0	
07	ASC	IPG	06 13 32.5				33	111	.0	
		IS	06 13 41.5						.1	
07	ANB	IPG	06 13 34.4				63	116	-.2	
		IS	06 13 45.0						-.1	
07	ANA	EP	06 13 35.6				73	114	.2	
07	ADK	IP D	10 02 10.8							
		IS	10 02 22.9							
07	ASC	EP	10 02 47.3	45.2	.3					
07	ASB	EP	10 02 48.2	64.2	.3					
07	ASC	EP	10 02 49.0							DOUBTFUL S
		E(S)	10 03 38.7							
07	ANB	EP	10 02 51.7							
07	ANA	EP	10 02 53.2							
07		11 30 38.93	51.04 N 179.03 E DEPTH = 28.2 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
07	ASB	EP	11 30 46.7	18.3	.2	1.42	38	203	-.0	
07	ASC	EPG	11 30 47.3	12.9	.2	1.45	43	210	-.0	
		IS	11 30 53.4						-.0	
07	ASC	EP	11 30 47.9				47	191	-.0	NOISY
07	ANA	EPG	17 37 40.0							
		E(S)	17 37 48.0							

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
07	ANP	EPG	17 37 40.5							
		E(S)	17 37 49.0							
07	ADK	EP	18 31 1.8							
		ES	18 31 19.4							
07	ASD	EP	18 31 28.4	12.9	.2					
07	ASB	EP	18 31 29.2							
07	ASC	EP	18 31 29.6							
07	ANP	EP	18 31 31.5							
07	ADK	IP D	19 08 25.0							
		ES	19 08 41.7							

07 20 37 34.04 51.33 N 178.70 E DEPTH = 32.5 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

07	ANP	EP	20 37 41.2				31	191	-.1	WEAK SIGNAL
07	ANA	EP	20 37 41.7				34	174	.1	
07	ASC	EP	20 37 41.9				35	245	.1	
07	ASB	EP	20 37 42.1				38	265	-.0	
		ES	20 37 48.0						-.0	
07	ASC	EP	20 37 42.9	8.5	.2	1.33	45	263	-.1	
		E	20 37 49.3							

08	ANA	E	00 44 34.5							
		I	00 44 36.7							
08	ANP	E	00 44 35.6							
		I	00 44 37.3							
08	ASC	E	00 44 40.8	10.8	.2					COMPLEX PHASES
		I	00 44 42.4							
		E	00 44 43.8							
08	ASB	EP	00 44 40.8							
08	ASC	E	00 44 40.8							EMERGENT PHASE
08	ASC	IPG	01 02 44.2	58.2	.2					
		ES	01 02 51.5							
08	ASB	IP	01 02 44.8	36.9	.2					
08	ASC	IP	01 02 46.3							
		E(S)	01 02 55.5							
08	ANB	EP	01 02 50.0							
08	ANA	EP	01 02 51.5							

08 2 38 52.80 51.90 N 179.56 W DEPTH = 150.0 KM FIXED DEPTH SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

08	ASD	EP	02 39 16.5	28.0	.2		95	52	-.0	
		ES	02 39 33.8						-.0	
08	ASC	IP	02 39 16.8				101	61	-.1	
08	ASB	EP	02 39 16.9				102	54	-.1	
		I	02 39 17.6							
		ES	02 39 34.0						-.6	
08	ANB	EP	02 39 18.2				118	73	-.0	
		ES	02 39 36.6						-.2	
08	ANA	EP	02 39 19.0				126	76	.1	
		E(S)	02 39 38.0						.0	

08 3 1 37.01 51.24 N 179.71 E DEPTH = 60.4 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

08	ASD	IPG	03 01 47.0	36.7	.2		30	120	-.0	
		ES	03 01 54.4						.1	
08	ASB	EPG	03 01 47.4				35	112	.0	
		E(S)	03 01 54.9						-.1	
08	ASC	EP	03 01 48.3				46	122	.1	

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
08	ANB	IPG	03 01 51.1				76	122	-.2	
		E	03 02 1.2							
08	ANA	EP	03 01 52.4				85	120	.1	
		E	03 02 3.6							

08 3 15 12.98 51.60 N 179.96 E DEPTH = 88.0 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

08	ASD	EPG	03 15 27.1	23.7	.2		49	60	-.1
		IS	03 15 37.5						-.0
08	ASB	EPG	03 15 27.6	9.2	.2		56	62	-.0
		E(S)	03 15 38.3						-.0
08	ASC	IPG	03 15 27.9				57	75	.2
		E	03 15 39.0						
08	ANB	EPG	03 15 29.5				81	90	-.2
		E	03 15 41.3						
08	ANA	EP	03 15 30.7				90	92	.1

08 4 23 52.14 51.92 N 179.01 E DEPTH = 20.0 KM FIXED DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

08	ANB	EPG	04 23 59.4				39	23	-.0
		E	04 24 4.2						
08	ANA	EPG	04 24 .1				41	36	.3
		E	04 24 6.3						
08	ASC	EPG	04 24 1.5				52	349	.1
		ES	04 24 8.5						.3
08	ASD	EPG	04 24 3.0	26.9	.2	2.44	65	340	-.3
		E	04 24 11.4						
08	ASB	EPG	04 24 3.2	27.7	.2	2.44	65	345	-.1
		ES	04 24 11.7						.3

08	ADK	EP	06 28 57.0						
		ES	06 29 12.1						

08 7 16 57.96 51.17 N 178.14 E DEPTH = 79.0 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

08	ANA	EP	07 17 12.2				62	215	-.1
08	ANB	EP	07 17 12.6				66	223	.0
08	ASB	IPG	07 17 13.7	23.0	.2		80	255	-.2
		E(S)	07 17 25.6						.1
08	ASD	EPG	07 17 14.7	9.7	.2		87	255	.2
		E(S)	07 17 26.5						-.1

08 9 38 30.16 51.64 N 179.53 E DEPTH = 77.9 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

08	ASD	EPG	09 38 42.2	20.4	.2		32	24	-.0
		ES	09 38 51.0						-.0
08	ASB	IPG	09 38 42.5	32.3	.2		37	32	.0
		ES	09 38 51.4						-.1
08	ASC	IPG	09 38 42.4				33	52	.1
		ES	09 38 51.2						.1
08	ANB	IPG	09 38 43.3				52	85	-.2
		IS	09 38 53.0						-.2
08	ANA	EPG	09 38 44.3				61	88	.1
		E(S)	09 38 54.7						.2

```
APR   STA  PHASE    TIME        AMP   PER  MAG  DIST  AZI   RES   REMARKS
1970             (GMT)       (MU)  (SEC)       (KM) (DEG) (SEC)

08    12  9 48.34  51.21 N  178.77 E  DEPTH =  35.3 KM                    FREE DEPTH SOLUTION
                 RAT ISLANDS, ALEUTIAN ISLANDS

08    ASB  EP     12 09 56.6                          37  243    -.0
08    ASC  EP     12 09 56.8                          39  224    -.0
08    ASD  EPG    12 09 57.4    9.7  .2  1.36        44  245    -.0
           E(S)   12 10  4.0                                     -.0

08    ASD  IP     13 06 53.9   21.6  .2
08    ASB  EP     13 06 54.5   30.8  .2
           E(S)   13 06 57.7
08    ASC  IP     13 06 55.1

08    ADK  IP     13 11 40.9
           ES     13 11 51.5
08    ASB  EP     13 12 15.0
           E      13 12 21.8
08    ASD  EP     13 12 16.0   11.1  .3

08    ADK  IP     13 23 45.5
           IS     13 23 53.7
08    ASC  EP     13 24  9.7    3.8  .2
08    ASB  EP     13 24 11.0   10.0  .2                          NOISY
08    ASC  EP     13 24 12.2
           E(S)   13 24 40.0
08    ANB  EP     13 24 14.1
08    ANA  EP     13 24 15.7

08    ASB  IP     13 43 15.1   14.6  .2
08    ANA  EP     13 43 15.5
08    ANB  IP     13 43 15.5
08    ASC  EP     13 43 16.0
08    ASD  IP     13 43 16.1   18.3  .2
           E(S)   13 43 20.5

08    17 11 44.38  50.90 N  177.18 E  DEPTH =  25.0 KM                    FIXED DEPTH SOLUTION
                 RAT ISLANDS, ALEUTIAN ISLANDS

08    ANA  EP     17 12  5.9                         131  232     .3
           E(S)   17 12 21.6                                      .6
08    ANB  IP     17 12  6.1                         137  236    -.4
           ES     17 12 22.2                                     -.3
08    ASC  IP     17 12  8.6                         152  246    -.1
           E(S)   17 12 26.1                                     -.3
08    ASD  IP     17 12  9.7   23.8  .2  3.83       160  251    -.2
           ES     17 12 27.4                                    -1.1
08    ASB  EP     17 12  9.8   26.9  .2  3.82       154  251     .9
           ES     17 12 27.6                                      .8

08    ASD  EP     18 41 58.5    3.2  .2
           ES     18 42 12.3
08    ASB  EP     18 41 59.3
08    ASC  EP     18 41 59.4
08    ANA  EP     18 42  4.9                                    NOISY

08    18 51 16.10  51.61 N  179.35 E  DEPTH =  95.5 KM                    FREE DEPTH SOLUTION
                 RAT ISLANDS, ALEUTIAN ISLANDS

08    ASD  IPG    18 51 29.8   10.8  .2            26    1    -.1
           ES     18 51 39.8                                    -.2
08    ASC  EPG    18 51 29.9                         21   38     .2
           ES     18 51 39.9                                     .2
08    ASB  IPG    18 51 30.1   20.8  .2            29   14     .1
           ES     18 51 40.1                                    -.0
```

```
 APR   STA  PHASE    TIME        AMP   PER  MAG   DIST  AZI   RES    REMARKS
 1970                (GMT)       (MU)  (SEC)       (KM) (DEG) (SEC)

. 08   ANB  EPG    18 51 30.3                       39   89    -.2                          .
.           E      18 51 40.6                                                               .
. 08   ANA  EP     18 51 31.0                       48   92     .0                          .
.........................................................................................

 08    ASC  EP     19 55  1.3     6.4  .3
 08    ASB  EP     19 55  1.6
 08    ASC  EP     19 55  2.3                                          POOR START
 08    ANA  EP     19 55  5.6                                          NOISY

.........................................................................................
. 08   21 30  3.56  51.42 N  179.91 W  DEPTH =  25.0 KM                 FIXED DEPTH SOLUTION .
.                  DELAROF ISLANDS, ALEUTIAN ISLANDS                                        .
.                                                                                           .
. 08   ASD  IPGD   21 30 13.2   128.4  .2  2.77   52   89     .2                            .
.           ES     21 30 20.2                                  .3                            .
. 08   ASB  IP     21 30 13.9                       59   84    -.1   PEN BROKE               .
. 08   ASC  IPG    21 30 15.3                       65   94     .4                            .
. 08   ANB  IPG    21 30 18.6                       93  182    -.4                            .
.           ES     21 30 30.7                                  .5                            .
. 08   ANA  EPG    21 30 20.2                      102  183    -.2                            .
.           E(S)   21 30 32.7                                  .8                            .
.........................................................................................

.........................................................................................
. 08   21 23 56.60  15.43 N  121.80 E  DEPTH =  33.0 KM  MB = 5.7  MS = 6.2 TELESEISMIC SOLUTION .
.                  LUZON, PHILIPPINE IS                                                     .
.                                                                                           .
. 08   ASC  EP     21 33 49.2                     6445  254                                  .
. 08   ASC  EP     21 33 49.3                     6436  254          NOT A LOCAL             .
. 08   ADK  EP     21 34  6.0                     6733  257          ER 2152200              .
.           ES     21 42 22.0                                                               .
.           EL     21 49 43.0                                                               .
.........................................................................................

 08    ANA  EP     22 16 41.4
 08    ASC  EP     22 16 45.3
 08    ASB  EP     22 16 45.5     4.6  .2
            ES     22 17 21.6
 08    ASD  EP     22 16 47.3     5.5  .2
            E(S)   22 17 21.8

 09    ADK  EP     03 01 34.2
            ES     03 01 42.8

.........................................................................................
. 09    3  6 22.20  50.03 N  179.66 W  DEPTH =  20.0 KM  MB = 4.0          TELESEISMIC SOLUTION .
.                  DELAROF ISLANDS, ALEUTIAN ISLANDS                                        .
.                                                                                           .
. 09   ASC  EPN    03 06 48.2                     166  154    -.4                            .
.           EPG    03 06 50.1    56.1  .2  4.26                                             .
. 09   ASB  EPN    03 06 48.2    40.0  .2  4.13     167  152    -.6                          .
.           ES     03 07  6.0                                  -2.1                          .
. 09   ASC  EP     03 06 50.1                     180  152    -.5                            .
.           ES     03 07  9.9                                  -1.4                          .
. 09   ANA  EP     03 06 54.3                     214  146    -.5                            .
.           E(S)   03 07 17.4                                  -1.1                          .
. 09   ADK  EP     03 07  4.8                     299  228    -.4                            .
.           ES     03 07 34.3                                  -2.3                          .
.........................................................................................

 09    ASC  EP     06 08 30.8     3.8  .2
            ES     06 08 48.6
 09    ASB  EP     06 08 30.9
```

```
APR   STA  PHASE    TIME        AMP   PER  MAG  DIST  AZI   RES    REMARKS
1970               (GMT)       (MU)  (SEC)       (KM) (DEG) (SEC)

. 09     6 25 30.18  51.18 N  179.32 E  DEPTH =  34.0 KM                    FREE DEPTH SOLUTION .
.                   RAT ISLANDS, ALEUTIAN ISLANDS                                                .
.                                                                                                .
. 09    ASD  IPGD  06 25 36.7    68.5  .2  1.11    22  184    -.1                                .
.            E(S)  06 25 41.6                                   .1                                .
. 09    ASB  IPGD  06 25 36.7                      21  166     .1                                .
.            ES    06 25 41.3                                  -.1                                .
. 09    ASC  EP    06 25 37.9                      34  160     .0                                .

 09     ASB  EP    07 15 45.7     3.1  .2
            E(S)  07 16  2.8
 09     ASD  EP    07 15 46.1     3.2  .2

 09     ASC  IPG   14 47 19.9    34.4  .2
            IS    14 47 32.8
 09     ASC  EPG   14 47 21.9
            ES    14 47 36.6

. 09    16 24 31.00  13.21 N   92.26 W  DEPTH =  41.0 KM  MB = 5.3  MS = 5.0 TELESEISMIC SOLUTION .
.                   OFF COAST OF MEXICO                                                          .
.                                                                                                .
. 09    ADK  IP    16 36 16.8                     8477   86                                      .

 09     ADK  EP    19 37  6.5
            ES    19 37 30.4
 09     ASD  IP    19 37 41.9     5.3  .2
 09     ASC  EPG   19 37 43.4
            E     19 37 51.1

. 09    23  8 51.56  51.31 N  179.34 W  DEPTH =  25.0 KM                    FIXED DEPTH SOLUTION .
.                   DELAROF ISLANDS, ALEUTIAN ISLANDS                                            .
.                                                                                                .
. 09    ASD  IP    23 09  6.8    69.4  .2  3.40    92   94    -.0                               .
. 09    ASB  IPG   23 09  7.9   192.0  .2  3.95    98   93     .1    P SPIKE                    .
.            ES    23 09 19.6                                  -.0                               .
. 09    ASC  IPG   23 09  8.9                     106   99    -.0                               .
.            IS    23 09 21.6                                   .1                               .

. 10     3 16 59.33  51.44 N  177.35 E  DEPTH =  25.0 KM                    FIXED DEPTH SOLUTION .
.                   RAT ISLANDS, ALEUTIAN ISLANDS                                                .
.                                                                                                .
. 10    ANA  IP    03 17 15.6                      93  258     .9    NOISY                      .
. 10    ANB  EPG   03 17 15.6                     101  260    -.4                               .
.            ES    03 17 27.7                                  -.5                               .
. 10    ASC  IPG   03 17 20.1                     125  270     .5                               .
.            E(S)  03 17 36.6                                  2.2                               .
. 10    ASC  IPG   03 17 21.8   207.6  .3  4.36   138  274     .2                               .
.            IS    03 17 37.9                                   .1                               .

 10     ANA  EP    03 34   .4                                                POOR NOISY
 10     ANB  EP    03 34  1.1
            E     03 34  3.1
 10     ASC  EP    03 34  5.1                                                E(S)0334135
            I     03 34  6.1
            I     03 34  7.4
 10     ASB  EP    03 34  5.6
            E     03 34  7.1
            I     03 34  7.9
 10     ASD  EP    03 34  5.9
            IP    03 34  7.9    97.0  .3
            IL    03 34 44.1
```

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
10	ASC	IPG	09 06 49.5							
		ES	09 06 57.1							
10	ASB	IPG	09 06 51.3	64.5	.2					
		IS	09 06 58.3							
10	ASD	IPG	09 06 51.4	56.0	.2					
		IS	09 06 58.6							
10	ANA	EPG	09 06 53.4							
		E(S)	09 07 .3							
		I	09 07 2.1							
10	ANA	IPGC	09 49 48.1							
		ES	09 49 54.6							
		I	09 49 57.1							
10	ASC	IPG	09 49 49.4							
		ES	09 49 57.2							
10	ASD	IPG	09 49 50.9	7.6	.2					
		ES	09 50 0.0							
		I	09 50 7.9							
10	ASB	IPG	09 49 51.1	12.3	.2					
		ES	09 50 .1							
		I	09 50 8.6							

10 9 53 7.90 51.97 N 179.07 E DEPTH = 20.0 KM FIXED DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

10	ANB	IPG	09 53 15.8				45	25	-.2	
		I	09 53 21.5							
10	ANA	IPG	09 53 16.5				47	37	.1	
		ES	09 53 22.9						.3	
10	ASC	IPG	09 53 17.9				56	354	.1	
10	ASD	EPG	09 53 19.4	3.2	.2	1.59	68	344	-.1	
10	ASB	IPG	09 53 19.6	3.1	.2	1.58	68	350	.0	
		ES	09 53 28.2						.1	

10	ADK	EP	12 18 57.9							
		IS	12 19 13.8							
10	ASD	EP	12 19 .9	5.3	.2					
		ES	12 19 17.4							
10	ASB	EP	12 19 2.9							
10	ASC	EP	12 19 3.2							
		E(S)	12 19 21.7							
10	ASD	EP	12 21 41.4	6.4	.2					
		ES	12 21 58.1							
10	ASB	EP	12 21 41.9	6.1	.2					
		ES	12 21 59.4							
10	ASC	EP	12 21 42.6							
		ES	12 22 .1							

10 14 9 16.00 27.46 S 177.91 W DEPTH = 158.0 KM MB = 5.5 TELESEISMIC SOLUTION
KERMADEC ISLANDS

10	ADK	IP C	14 21 3.1				8785	181		
		E	14 21 44.2							

10	ADK	IP D	15 55 18.9							
		IS	15 55 35.9							
10	ASD	IP C	15 55 20.1	307.4	.2					
		ES	15 55 38.9							
10	ASB	IP C	15 55 20.9	331.8	.2					
		IS	15 55 39.6							
10	ASC	IP	15 55 21.4							
10	ANA	IP	15 55 23.8							
		IP	15 55 25.1							

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
		E(S)	15 55 46.4							
10	ANB	IP	15 55 23.9							NOISY
		IP	15 55 44.5							
10	ASB	EP	16 31 31.1							
10	ASD	EP	16 31 31.3	9.7	.3					
10	ASC	EPG	16 31 31.5							
		E(S)	16 31 41.1							
		I	16 32 9.6							

10 23 22 52.31 51.37 N 178.76 E DEPTH = 37.9 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

10	ANB	EP	23 22 59.6				26	185	-.1	
10	ANA	IPG	23 23 .1				30	166	.1	
10	ASC	EPG	23 23 .2				30	250	.2	
10	ASB	EPG	23 23 .5	47.6	.2	1.64	34	272	.0	
		IS	23 23 6.4						-.0	
10	ASD	EPG	23 23 1.1	35.6	.2	1.80	41	269	-.1	

10	ASB	EP	23 57 13.7	6.1	.2					
		ES	23 57 32.1							
10	ASD	EP	23 57 13.9	8.7	.2					
		E(S)	23 57 32.1							
10	ASC	EP	23 57 15.8							
		ES	23 57 35.1							

11 0 39 38.30 51.24 N 178.70 E DEPTH = 30.0 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

11	ASB	EP	00 39 46.5				41	250	.0	
11	ASC	EP	00 39 46.5				41	232	-.0	
		ES	00 39 52.5						.0	
11	ASD	IPG	00 39 47.4	6.4	.2	1.30	47	251	.0	
		IS	00 39 54.0						-.0	

11 1 16 3.38 50.00 N 179.49 E DEPTH = 0.0 KM FIXED DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

11	ASD	IP	01 16 29.2	7.6	.2	3.27	154	176	.1	
		E(S)	01 16 49.0						1.2	
11	ASB	IP	01 16 29.2	9.2	.2	3.34	153	174	.3	
		ES	01 16 47.9						.4	
11	ASC	IP	01 16 30.7				165	172	-.0	
		ES	01 16 50.7						.1	
11	ANB	EP	01 16 33.7				185	164	-.2	LOW GAIN
11	ANA	EP	01 16 34.8				191	162	.1	LOW GAIN

11 1 49 41.55 51.96 N 179.06 E DEPTH = 20.0 KM FIXED DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

11	ANB	IPG	01 49 49.4				44	25	-.2	
		E	01 49 55.1							
11	ANA	IPG	01 49 50.1				47	37	.1	
		ES	01 49 56.4						.3	
11	ASC	EPG	01 49 51.5				56	353	.1	
11	ASD	EPG	01 49 53.0	3.2	.2	1.58	68	344	-.1	
		E	01 50 1.5							
11	ASB	EPG	01 49 53.2				68	349	.0	
		ES	01 50 1.8						.2	

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
11	ADK	IP	03 38 23.5							
		ES	03 38 40.0							
11	ASD	EP	03 39 1.8	15.1	.4					
11	ASC	EP	03 39 3.2							
		I	03 39 5.0							
11	ASB	EP	03 39 3.5							POOR START
11	ANB	EP	03 39 5.4							NOISY
11	ANA	EP	03 39 7.0							NOISY

11 4 5 41.10 59.71 N 142.74 W DEPTH = 7.0 KM MB = 5.2 MS = 6.2 TELESEISMIC SOLUTION
GULF OF ALASKA

11	ADK	EP	04 10 26.2				2266	54		

11 5 49 5.47 51.43 N 179.45 E DEPTH = 71.6 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

11	ASD	IPG	05 49 16.0	8.7	.2		9	53	.1	
		ES	05 49 23.5						-.1	
11	ASB	EP	05 49 16.1				16	62	.0	
11	ASC	EP	05 49 16.2				21	100	-.1	
		ES	05 49 24.2						.1	

11 10 45 8.10 51.46 N 178.48 W DEPTH = 43.0 KM MB = 4.6 TELESEISMIC SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

11	ADK	IP	10 45 29.8				139	251	.3	
		ES	10 45 45.1						-.0	

11 15 22 8.10 50.98 N 179.27 W DEPTH = 43.0 KM MB = 3.9 TELESEISMIC SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

11	ASD	IPG	15 22 25.2	478.4	.2	4.48	106	114	-.3	ON SECONDARYPWR
		ES	15 52 38.2						.1	
11	ASC	EP	15 22 27.5				122	115	.1	
11	ADK	IP	15 22 38.5				212	243	-.0	
		ES	15 23 1.7						1.0	

12 2 10 35.60 51.51 N 178.51 W DEPTH = 42.0 KM MB = 5.2 TELESEISMIC SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

12	ASD	IP D	02 10 57.1				150	84	-2.9	STBY GENERATOR
12	ADK	IP C	02 10 57.4				139	253	-1.1	
		IS	02 11 13.5						-1.6	
12	ASB	IP D	02 10 57.7				157	83	-3.3	FREQ 59CPS
12	ANA	EP	02 11 5.6				197	93	-1.4	EMERGENT P

12	ADK	IP D	02 32 41.6							
		IS	02 32 50.8							

12 4 1 44.00 15.06 N 122.05 E DEPTH = 24.0 KM MB = 5.9 MS = 7.0 TELESEISMIC SOLUTION
PHILIPPINE ISLANDS

12	ADK	EP	04 11 56.7				6748	257		

12	ADK	IP D	05 48 25.5							
		IS	05 48 33.9							

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
12	ASC	EP	05 48 59.8	34.3	.2					
		ES	05 49 36.1							
12	ASP	EP	05 49 .1	36.8	.2					
12	ASC	EP	05 49 1.6							
12	ANA	EP	05 49 4.6							

12 7 49 27.32 51.36 N 179.13 W DEPTH = 0.0 KM FIXED DEPTH SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

12	ASC	EP	07 49 45.7	120.1	.2	3.88	106	90	-.1	
		ES	07 49 59.2						-.1	
12	ASP	EP	07 49 46.5				113	89	-.3	
		ES	07 50 1.7						.6	
12	ASC	EP	07 49 47.9				120	95	.1	
12	ANA	EP	07 49 53.4				156	100	-.0	
12	ADK	IP	07 49 57.5				185	253	-.3	
		ES	07 50 18.3						-1.8	

13 11 24 51.90 52.64 N 173.35 W DEPTH = 93.0 KM MB = 4.2 TELESEISMIC SOLUTION
ANDREANOF ISLANDS, ALEUTIAN IS.

13	ADK	EP	11 25 26.4				236	68		
		IS	11 25 53.2							
13	ASC	EP	11 26 1.3	10.1	.3		521	71		
		E(S)	11 26 58.1							
13	ASP	EP	11 26 2.2				528	71		
13	ANB	EP	11 26 5.4				551	75		
13	ANA	EP	11 26 6.4				559	75		
13	ASC	IP	11 56 18.2	62.6	.2					
		ES	11 56 45.9							
13	ASP	IP	11 56 18.7							
		ES	11 56 46.2							
13	ASC	IP	11 56 18.7							
13	ANP	IP	11 56 19.2							
13	ANA	IP	11 56 19.4							
13	ASD	EP	12 53 36.1	17.2	.2					
		ES	12 53 59.5							
13	ASP	EP	12 53 36.8	13.1	.2					
		ES	12 54 .4							
13	ASC	EP	12 53 38.8							
13	ANP	EP	12 53 41.6							EMERGENT
13	ANA	EP	12 53 43.3							
13	ADK	IP C	13 08 25.7							
		IS	13 08 38.2							

13 15 26 22.95 50.84 N 179.56 E DEPTH = 25.0 KM FIXED DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

13	ASC	IP	15 26 33.8	5.3	.2	1.63	61	166	.1	
13	ASP	IPG	15 26 33.8	5.4	.2	1.65	61	159	.1	
		ES	15 26 41.6						-.0	
13	ASC	EP	15 26 35.8				74	158	.2	
13	ANP	EP	15 26 39.4				100	147	-.1	VERY WEAK

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
13	17 37 13.73	51.00 N 179.26 W DEPTH = 25.0 KM								FIXED DEPTH SOLUTION
		DELAROF ISLANDS, ALEUTIAN ISLANDS								
13	ASD	IP	17 37 31.2	16.1	.2	3.00	106	113	.0	
13	ASB	EPG	17 37 31.9	23.9	.2	3.26	112	111	-.1	
		ES	17 37 45.4						.1	
13	ASC	EP	17 37 33.3				122	114	-.2	
13	ANB	EP	17 37 37.9				152	116	-.1	WEAK P
13	ANA	EP	17 37 39.6				161	115	.3	
13	20 25 19.70	51.13 N 179.10 E DEPTH = 21.5 KM								FREE DEPTH SOLUTION
		RAT ISLANDS, ALEUTIAN ISLANDS								
13	ASB	IPG	20 25 25.6				28	201	.0	
		ES	20 25 29.9						.0	
13	ASD	IP D	20 25 26.2	49.6	.2	1.59	32	211	.0	
13	ASC	IP	20 25 26.9				38	186	.0	
14	0 24 36.00	51.34 N 178.75 E DEPTH = 47.2 KM								FREE DEPTH SOLUTION
		RAT ISLANDS, ALEUTIAN ISLANDS								
14	ASC	IPG	00 24 44.8				31	245	.0	
		ES	00 24 51.2						.0	
14	ASB	IPG	00 24 45.0	36.8	.2	1.55	34	267	-.1	
		ES	00 24 51.8						.1	
14	ASD	IPG	00 24 45.8	90.2	.2	2.22	41	265	.1	P SPIKE
		ES	00 24 52.7						-.1	
14	ANA	EP	12 07 36.3							
14	ANB	EP	12 07 37.5							
14	ASC	EP	12 07 42.2							
		ES	12 08 7.4							
14	ASD	EP	12 07 43.8	19.3	.3					
		ES	12 08 10.2							
14	ADK	IP D	17 38 46.3							
		IS	17 38 54.5							
14	20 17 19.47	51.17 N 178.59 E DEPTH = 0.0 KM								FREE DEPTH SOLUTION
		RAT ISLANDS, ALEUTIAN ISLANDS								
14	ANA	EP	20 17 28.6				51	185	-.1	
14	ASC	EPG	20 17 28.8				51	231	.1	
		ES	20 17 35.6						.2	
14	ASD	EPG	20 17 29.8	17.2	.2	2.02	57	247	.0	
		E(S)	20 17 37.0						-.3	
15	ADK	EP	00 17 59.7							
		ES	00 18 15.3							
15	13 15 32.57	51.28 N 178.61 E DEPTH = 24.0 KM								FREE DEPTH SOLUTION
		RAT ISLANDS, ALEUTIAN ISLANDS								
15	ANB	EPG	13 15 40.0				38	199	.0	
		E(S)	13 15 45.1						-.2	
15	ANA	E(P)	13 15 40.3				39	184	.2	
15	ASC	EPG	13 15 40.6				43	242	-.0	
		ES	13 15 46.9						.4	
15	ASB	E(P)	13 15 40.8	15.3	.2	1.60	45	259	-.1	
		ES	13 15 47.1						.1	

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APR   STA  PHASE    TIME        AMP   PER  MAG   DIST  AZI   RES    REMARKS
1970               (GMT)       (MU)  (SEC)       (KM) (DEG) (SEC)

. 15    13 14 21.40  15.07 N  122.67 E  DEPTH =  12.0 KM  ME = 5.7  MS = 6.0 TELESEISMIC SOLUTION .
.                    PHILIPPINE ISLANDS                                                            .
.                                                                                                  .
. 15    ADK  EP     13 24 31.3                          6706  256                                  .

  15    ASC  EP     16 35 48.6
             E(S)   16 36 14.1
  15    ASB  E(P)   16 35 49.2     18.4  .2
  15    ANB  EP     16 35 49.9
             E(S)   16 36 16.6

  16    ANA  IPG    00 00 41.1
             ES     00 00 44.6
  16    ANB  IPG    00 00 41.1
             ES     00 00 44.3
  16    ASC  EPG    00 00 43.7
             ES     00 00 50.0
  16    ASB  E(P)   00 00 44.9      3.1  .2
             E(S)   00 00 51.6

. 16     5 33 17.50  59.77 N  142.60 W  DEPTH =   7.0 KM  ME = 5.5  MS = 6.8 TELESEISMIC SOLUTION .
.                    GULF OF ALASKA                                                                .
.                                                                                                  .
. 16    ADK  EP     05 38    .8                         2275   54                                  .
.            ES     05 41 56.0                                                                     .

  16    ADK  IP D   06 10 58.4
             IS     06 11 14.0
  16    ASD  EPN    06 11  2.0      6.4  .2
             IPG    06 11  3.0     32.2  .2
             ES     06 11 23.8
  16    ASB  IPN    06 11  3.8     18.4  .2
             IPG    06 11  5.3     36.8  .2
             ES     06 11 25.6
  16    ASC  EP     06 11  4.0
             EP     06 11  5.5
             ES     06 11 25.8
  16    ANB  EP     06 11  7.8
             EP     06 11  9.8
             E(S)   06 11 35.6
  16    ANA  E(P)   06 11 10.1
             EP     06 11 12.1
             ES     06 11 39.5

  16    ASC  E(P)   06 41 43.6      8.5  .2
  16    ASB  E(P)   06 41 44.0     12.3  .2
  16    ASC  EP     06 41 44.3
             ES     06 42 11.1

  16    ASD  EP     08 09 18.1      6.4  .2
             E(S)   08 09 36.5
  16    ASB  EP     08 09 19.9      6.1  .2
  16    ASC  E(P)   08 09 20.9
             E(S)   08 09 40.9

. 16    10 15 10.81  51.23 N  179.83 E  DEPTH =  21.1 KM                    FREE DEPTH SOLUTION  .
.                    RAT ISLANDS, ALEUTIAN ISLANDS                                                 .
.                                                                                                  .
. 16    ASD  IPG    10 15 18.1     15.1  .2  1.30     38  116     .1                              .
.            E(S)   10 15 23.1                                     -.1                              .
. 16    ASB  IPG    10 15 18.7     18.4  .2  1.60     43  110    -.1                              .
.            ES     10 15 24.6                                      .1                              .
. 16    ASC  IPG    10 15 20.2                        53  119    -.1                              .
.            ES     10 15 27.2                                      .1                              .
```

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
16	ADK	EP	15 14 43.0							
		ES	15 15 3.0							
		ER	15 42 56.0							

17 0 24 4.94 51.10 N 179.36 E DEPTH = 40.2 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

17	ASB	IP D	00 24 13.0				30	164	-.0	
17	ASD	IP D	00 24 13.0	888.3	.2	2.77	31	177	-.1	
		E	00 24 18.8							
17	ASC	IP C	00 24 14.5				43	160	.2	
17	ANB	IPG	00 24 17.5				69	144	-.2	
		IS	00 24 26.9						-.0	
17	ANA	EPG	00 24 18.8				77	140	.1	

17 4 15 38.22 51.55 N 178.78 E DEPTH = 63.3 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

17	ANB	E(P)	04 15 47.5				6	185	-.1	
17	ANA	EP	04 15 47.8				12	133	.1	
17	ASC	IP	04 15 48.6				28	292	.2	
		E	04 15 56.8							
17	ASB	IPG	04 15 49.1	16.9	.2		39	304	-.1	
		ES	04 15 57.2						.1	
17	ASD	IPG	04 15 49.5	30.2	.2		44	297	-.8	P SPIKE
		ES	04 15 57.7						-.1	

17	ADK	EP	04 23 40.9							
		ES	04 23 49.3							
17	ANA	E(P)	06 31 31.1							
		ES	06 32 0.0							
17	ASB	IP	06 31 33.8	23.0	.2					
		ES	06 32 4.8							
17	ASC	EP	06 31 34.5							
17	ASD	EP	06 31 34.8	6.4	.2					
		ES	06 32 5.8							

17 13 44 28.89 51.14 N 178.31 E DEPTH = 40.0 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

17	ANA	EP	13 44 40.4				59	204	.1	
17	ANB	EP	13 44 40.4				61	213	-.2	
17	ASB	IPG	13 44 41.7	43.1	.2	2.76	70	250	-.0	
		S	13 44 51.0						-.8	
17	ASC	E(P)	13 44 41.7				69	239	.1	
17	ASD	IPG	13 44 42.6	15.1	.2	2.45	77	251	-.0	
		IS	13 44 52.7						.1	

17	ASD	E(P)	17 54 24.6	1.1	.2					
17	ASB	EPG	17 54 24.6	1.5	.2					
		ES	17 54 34.9							
17	ADK	EP	19 08 34.6							
		ES	19 08 49.3							
17	ASD	E(P)	19 08 38.0	8.7	.2					
17	ASB	EP	19 08 39.0	5.4	.2					
		ES	19 08 59.7							
17	ASC	EP	19 08 40.4							
17	ANB	E(P)	19 08 43.9							
17	ANA	E(P)	19 08 45.4							
17	ASC	IPG	21 06 15.2							

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
		ES	21 06 27.2							
17	ANB	EPG	21 06 17.7							
		E(S)	21 06 31.5							
17	ANA	EPG	21 06 19.0							
		E(S)	21 06 33.4							

18 2 1 1.16 51.00 N 179.92 W DEPTH = 25.0 KM FIXED DEPTH SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

18	ASC	EP	02 01 13.1	51.2	.2	2.76	67	129	.4	
		I	02 01 13.8							
18	ASB	IPGC	02 01 13.1				71	124	-.2	
		E	02 01 14.4							
		E(S)	02 01 22.2						-.0	
18	ASC	EP	02 01 14.7				83	128	-.4	
		I	02 01 16.1							
18	ANB	EP	02 01 19.7				112	126	.2	
18	ANA	EP	02 01 21.1				122	125	.2	

18 2 20 54.23 51.55 N 178.79 E DEPTH = 51.3 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

18	ANB	IPG	02 21 2.1				6	180	-.1	
		IS	02 21 8.0						.1	
18	ANA	IPG	02 21 2.2				13	133	-.1	
		IS	02 21 8.4						.2	
18	ASB	EPG	02 21 4.2				38	304	.2	
		ES	02 21 10.9						-.2	

18 2 47 7.13 51.91 N 179.35 E DEPTH = 168.0 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

18	ANB	EP	02 47 30.2				51	49	-.2	
		ES	02 47 47.4						.0	
18	ASD	EP	02 47 30.6	3.2	.2		59	0	-.1	
		ES	02 47 47.9						-.0	
18	ANA	EP	02 47 30.7				57	57	.1	
18	ASB	EP	02 47 30.9	2.3	.2		61	6	.1	
		ES	02 47 47.9						-.2	

18 4 4 47.00 52.22 N 178.28 E DEPTH = 150.0 KM FIXED DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

18	ANA	EP	04 05 9.2				71	339	.0	
		E(S)	04 05 25.4						.1	
18	ANB	EP	04 05 9.4				77	333	-.1	
18	ASB	EP	04 05 12.3	1.5	.2		117	326	-.0	
18	ASC	EP	04 05 12.5	3.2	.2		119	323	-.0	
		ES	04 05 30.9						-.2	

18	ASD	EP	05 50 40.9	3.2	.2					
18	ASB	EP	05 50 41.4							
18	ASB	IPG	06 52 3.4	4.6	.2					
		IS	06 52 9.2							
18	ASC	IPG	06 52 4.3	10.8	.2					
		IS	06 52 10.5							

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
18			7 30 27.79 51.34 N 178.69 E DEPTH = 38.5 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
18	ANB	EP	07 30 35.5				31	192	-.2	
18	ANA	EP	07 30 36.0				33	175	.1	
18	ASC	EP	07 30 36.4				35	247	.2	
18	ASB	IPG	07 30 36.5	4.6	.2	.83	39	266	-.0	
		ES	07 30 42.9						.0	
18	ASD	IPG	07 30 37.2	5.3	.2	1.15	45	264	-.1	
		IS	07 30 44.2						-.0	
18			8 50 40.50 59.86 N 152.82 W DEPTH = 94.0 KM MB = 5.7							TELESEISMIC SOLUTION
			SOUTHERN ALASKA							
18	ADK	IP D	08 54 16.4				1720	50		
		ES	08 57 13.0							
18	ASD	EP	08 54 42.4	71.1	.2		1973	51		EMERGENT P ON
		E	08 54 43.9							
18	ASB	EP	08 54 42.9				1980	51		ALL STATIONS
		I	08 54 44.9							
18	ASC	EP	08 54 44.4				1977	51		
		I	08 54 45.7							
18	ANB	EP	08 54 45.4				1987	51		
		I	08 54 46.2							
18	ANA	EP	08 54 46.2				1993	52		
		I	08 54 46.6							
18	ANA	EP	11 25 33.2							
18	ANB	EP	11 25 34.1							
18	ASB	EP	11 25 39.4							
18	ASD	EP	11 25 40.2	2.1	.2					
		E(S)	11 26 4.2							
18	ASB	EP	11 40 54.4							
18	ANA	EP	11 40 54.6							
18	ANB	EP	11 40 54.7							
18	ASD	EP	11 40 54.9	3.2	.2					
		E(S)	11 41 14.7							
18	ASD	EP	11 48 43.7	2.1	.2					
18	ASB	EP	11 48 44.7							
18	ANB	EP	11 48 48.7							
18	ASD	EP	13 34 27.5	5.3	.2					
18	ASB	IPG	13 34 28.3	7.7	.2					
		IS	13 34 41.2							
18	ANB	EPG	13 34 31.5							
		ES	13 34 46.2							
18	ASD	EP	16 42 1.2	6.4	.2					
		ES	16 42 12.5							
18	ASB	EP	16 42 2.1	4.6	.2					
		ES	16 42 13.7							
18			19 23 .60 53.54 N 166.06 W DEPTH = 46.0 KM MB = 4.7							TELESEISMIC SOLUTION
			FOX ISLANDS, ALEUTIAN ISLANDS							
18	ADK	EP	19 24 38.5				735	71		
		ES	19 25 50.8							

```
APR   STA  PHASE   TIME        AMP   PER  MAG   DIST  AZI   RES    REMARKS
1970             (GMT)       (MU)  (SEC)       (KM) (DEG) (SEC)

. 18    23 25 35.50  43.25 N  147.23 E  DEPTH =  38.0 KM  MB = 5.2  MS = 5.7 TELESEISMIC SOLUTION .
.                    KURIL ISLANDS                                                                  .
.                                                                                                   .
. 18    ADK  EP    23 31  5.5                          2854  265                                    .
.            ES    23 35 28.0                                                                       .

. 19     1 15 46.80  59.64 N  142.83 W  DEPTH =  20.0 KM  MB = 5.8  MS = 6.0 TELESEISMIC SOLUTION .
.                    GULF OF ALASKA                                                                 .
.                                                                                                   .
. 19    ADK  EP    01 20 21.8                          2260   54                                    .
.            ES    01 24 13.0                                                                       .
.            EL    01 25 55.0                                                                       .

. 19     3 43 31.61  51.22 N  179.09 E  DEPTH =  40.6 KM                    FREE DEPTH SOLUTION   .
.                    RAT ISLANDS, ALEUTIAN ISLANDS                                                  .
.                                                                                                   .
. 19    ASB  IP C  03 43 38.7                           19  215    -.1    WHITECUT                  .
. 19    ASD  IPGC  03 43 39.2  3675.0  .3  2.81         24  225     .0                             .
.            ES    03 43 44.6                                       -.1                             .
. 19    ASC  EP    03 43 39.6                           27  189     .2                             .
. 19    ANB  EP    03 43 41.5                           47  153    -.1                             .
. 19    ANA  EP    03 43 42.4                           54  146    -.0                             .
. 19    ADK  EP    03 44 14.0                          308  258    -.0                             .
.            E     03 44 46.7                                                                       .

  19    ASD  EPG   06 52 45.8    10.8  .2
             E(S)  06 52 55.3
  19    ASC  EP    06 52 46.1

. 19     7 21 20.50  54.60 N  164.47 E  DEPTH =  18.0 KM  MB = 4.4           TELESEISMIC SOLUTION  .
.                    KOMANDORSKY ISLANDS REGION                                                     .
.                                                                                                   .

. 19     7 28 36.23  50.78 N  179.96 E  DEPTH =  35.2 KM                    FREE DEPTH SOLUTION   .
.                    RAT ISLANDS, ALEUTIAN ISLANDS                                                  .
.                                                                                                   .
. 19    ASD  IP C  07 28 50.1   124.7  .2  3.43         80  147    -.1                             .
. 19    ASB  IP C  07 28 50.6                           82  142     .1                             .
. 19    ASC  IP    07 28 52.3                           95  143    -.0                             .
. 19    ANB  EP    07 28 56.3                          123  138    -.0                             .
. 19    ADK  EP    07 29 14.4                          270  244    -.0                             .
.            ES    07 29 42.3                                       .0                             .

  19    ASD  EPG   10 02 46.5     8.5  .2
             E(S)  10 03  1.7
  19    ASC  EPG   10 02 46.7
             E(S)  10 03  4.3

. 20     4 53 58.30  50.84 N  177.95 E  DEPTH =  25.0 KM                    FIXED DEPTH SOLUTION  .
.                    RAT ISLANDS, ALEUTIAN ISLANDS                                                  .
.                                                                                                   .
. 20    ANA  EP    04 54 14.8                          101  210    -.1                             .
. 20    ASB  IPG   04 54 16.1                          108  238     .1                             .
.            ES    04 54 29.1                                       .3                             .
. 20    ASC  EP    04 54 16.3                          109  231     .1                             .
.            ES    04 54 29.7                                       .5                             .
. 20    ASD  IPGC  04 54 17.0    34.4  .2  3.45        114  239     .0                             .
.            ES    04 54 30.0                                      -.5                             .
```

```
APR   STA  PHASE    TIME        AMP   PER  MAG   DIST  AZI   RES    REMARKS
1970               (GMT)       (MU)  (SEC)       (KM) (DEG) (SEC)

. 20    10 39 12.50  18.83 S  169.30 E  DEPTH = 246.0 KM  MB = 6.3          TELESEISMIC SOLUTION .
.                    NEW HEBRIDES ISLANDS                                                          .
.                                                                                                  .
. 20    ASD  IP     10 50  1.8                          7834  190            NOT A LOCAL            .
. 20    ASB  EP     10 50  1.8                          7831  190                                   .
. 20    ASC  EP     10 50  2.5                          7841  190                                   .
. 20    ADK  IP C   10 50  7.7                          7948  194                                   .
.            ES     10 59  5.0                                                                      .
.            EL     11 08 45.0                                                                      .

 20     ADK  IP D   11 10 59.9
             ES     11 11  7.0

 20     ADK  EP     12 39 14.8
             ES     12 39 37.4

 20     ADK  EP     13 10 59.7
             ES     13 11 22.9

. 20    22 27 27.34  51.40 N  178.82 E  DEPTH =  56.7 KM                   FREE DEPTH SOLUTION   .
.                    RAT ISLANDS, ALEUTIAN ISLANDS                                                 .
.                                                                                                  .
. 20    ASC  IP     22 27 36.7                          25  254    .1                              .
. 20    ANA  EP     22 27 36.8                          28  156   -.0    WEAK                      .
. 20    ASB  IP D   22 27 37.0                          30  279    .0                              .
. 20    ASD  IPGD   22 27 37.4  1428.1  .2              36  274   -.1                              .
.            IS     22 27 44.8                                    -.8                              .

. 21     7 45 17.05  51.19 N  179.51 E  DEPTH =  24.7 KM                   FREE DEPTH SOLUTION   .
.                    RAT ISLANDS, ALEUTIAN ISLANDS                                                 .
.                                                                                                  .
. 21    ASD  IPG    07 45 22.7    51.5  .2  1.09        24  150   -.0                              .
.            IS     07 45 29.8                                    3.0                              .
. 21    ASB  IPG    07 45 23.0    55.0  .2  1.28        26  135   -.0                              .
.            IS     07 45 30.3                                    3.0                              .
. 21    ASC  IPG    07 45 24.6                          39  140   -.0                              .
.            ES     07 45 30.1                                    -.0                              .

. 21     9  1 16.84  51.29 N  178.66 E  DEPTH =  25.0 KM                   FIXED DEPTH SOLUTION  .
.                    RAT ISLANDS, ALEUTIAN ISLANDS                                                 .
.                                                                                                  .
. 21    ANA  EP     09 01 24.3                          38  188   -.0                              .
. 21    ASC  IPG    09 01 24.7                          40  241    .2                              .
.            ES     09 01 30.2                                     .8                              .
. 21    ASB  IPG    09 01 25.0    61.2  .2  2.08        42  259    .2                              .
.            ES     09 01 31.0                                     .4                              .
. 21    ASD  IPG    09 01 25.5   133.0  .2  2.66        48  258   -.3    P SPIKE                  .
.            IS     09 01 32.0                                    -.3                              .

. 21    11 39 50.40  51.59 N  176.51 E  DEPTH =  33.0 KM  MB = 3.8         TELESEISMIC SOLUTION  .
.                    RAT ISLANDS, ALEUTIAN ISLANDS                                                 .
.                                                                                                  .
. 21    ANA  EP     11 40 13.2                         148  269   -.5                              .
. 21    ANB  EP     11 40 14.5                         157  271   -.3                              .
. 21    ASC  EP     11 40 17.5                         184  276   -.6                              .
.            I      11 40 17.5                                                                      .
.            E(S)   11 40 41.4                                    3.1                              .
. 21    ASB  EP     11 40 18.0                         191  279  -1.0                              .
.            I      11 40 19.5                                                                      .
.            ES     11 40 44.6                                    4.7                              .
```

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
21	ASD	EP	11 40 19.1	394.0	.3		197	278	-.7	
		I	11 40 21.4							
		ES	11 40 46.2						4.9	
21	ADK	EP	11 40 54.5				477	269	.2	
		ES	11 41 46.0						5.0	

21	11 59 26.90	54.28 N 163.34 W DEPTH = 34.0 KM MB = 4.8								TELESEISMIC SOLUTION
		UNIMAK ISLAND REGION								
21	ADK	EP	12 01 30.7				926	68		
21	ASC	EP	12 02 2.5	22.5	.3		1209	68		
21	ASB	EP	12 02 2.7				1216	68		
21	ASC	EP	12 02 3.0				1218	68		

21	ADK	EP	12 11 8.8			
		ES	12 11 21.4			
21	ASC	EP	12 11 18.9	4.3	.2	
21	ASB	EP	12 11 20.2			
		E(S)	12 11 43.6			
21	ASC	EP	12 11 20.5			
		ES	12 11 43.0			

21	15 10 6.75	51.42 N 177.70 E DEPTH = 50.0 KM								FIXED DEPTH SOLUTION
		RAT ISLANDS, ALEUTIAN ISLANDS								
21	ANA	EP	15 10 19.9				70	251	.0	
21	ASC	EP	15 10 23.7				101	268	.1	
21	ASB	EPG	15 10 24.3	73.6	.2	3.69	108	274	-.1	
		ES	15 10 37.7						.5	
21	ASC	EPG	15 10 25.1	68.9	.2	3.75	114	273	-.1	
		ES	15 10 38.1						-.5	

21	ADK	EP	23 52 47.0
		ES	23 52 54.5

22	0 45 58.78	51.32 N 179.14 E DEPTH = 31.6 KM								FREE DEPTH SOLUTION
		RAT ISLANDS, ALEUTIAN ISLANDS								
22	ASB	IPG	00 46 4.1	76.6	.2		8	240	-.0	
		IS	00 46 8.0						.0	
22	ASC	IPG	00 46 4.5	43.0	.2	.27	15	247	.0	
		ES	00 46 8.6						-.0	
22	ASC	EPG	00 46 4.5				15	183	-.0	
		ES	00 46 8.7						.0	

22	13 56 58.77	51.42 N 178.89 E DEPTH = 52.0 KM								FREE DEPTH SOLUTION
		RAT ISLANDS, ALEUTIAN ISLANDS								
22	ASC	EP	13 57 7.3				19	257	.0	
22	ASB	IPG	13 57 7.5	97.8	.2		26	285	-.2	
		ES	13 57 14.4						.3	
22	ASD	IPG	13 57 8.3	118.4	.2		32	279	.2	
		IS	13 57 14.7						-.2	

22	ASD	EPG	22 02 40.5	19.3	.2
		ES	22 02 49.3		
22	ASB	IPG	22 02 41.4	24.5	.2
		ES	22 02 50.8		
22	ASC	EPG	22 02 42.9		
		IS	22 02 53.2		

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
22	23 41 6.50		50.98 N 179.16 E DEPTH = 24.5 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
22	ASB	IPG	23 41 14.7	52.1	.2	2.07	43	188	.0	
		ES	23 41 20.6						-.0	
22	ASD	IPG	23 41 15.0	62.3	.2	2.26	46	196	-.1	
		ES	23 41 21.5						.1	
22	ASC	EPG	23 41 16.3				54	180	.1	
		ES	23 41 23.2						-.1	
23	ASD	IP	02 43 32.8	43.0	.2					
		IS	02 43 52.0							
23	ASC	EP	02 43 32.8							
		ES	02 43 51.6							
23	ASB	EP	02 43 33.3	36.8	.2					
		E(S)	02 43 52.5							
23	ASB	EP	05 14 48.5							
23	ASD	EP	05 14 49.0	19.3	.2					
23	ASC	EPG	05 14 49.2							
		E(S)	05 15 5.0							
23	ADK	EP	06 09 43.7							
		ES	06 09 55.0							
23	ASD	EPG	15 12 39.8	1.1	.2					
		E(S)	15 12 54.0							
23	ASB	EP	15 12 40.8	1.5	.2					
23	ASC	EP	15 12 42.4							
23	15 27 46.00		51.71 N 178.48 E DEPTH = 89.6 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
23	ANA	IPG	15 27 58.8				15	306	.0	
		F	15 28 8.2							
23	ANB	IPG	15 27 59.0				24	298	-.0	
		IS	15 28 8.5						-.1	
23	ASC	IPG	15 28 .8				54	300	.1	
23	ASB	EP	15 28 1.5	43.0	.2		65	306	-.0	
		IS	15 28 12.9						.0	
23	ASD	IPG	15 28 1.8	48.4	.2		70	302	-.1	
		ES	15 28 13.5						.0	
23	ANB	IPGC	15 57 59.1							
		ES	15 28 8.7							
23	18 33 55.64		52.05 N 179.25 E DEPTH = 147.1 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
23	ANB	IP D	18 34 17.0				59	33	.2	
		IS	18 34 32.1						-.2	
23	ANA	EP	18 34 17.0				62	41	.0	
23	ASC	EP	18 34 17.2				65	6	.0	
23	ASD	IP	18 34 17.5	42.0	.2		75	355	-.2	
		IS	18 34 34.0						.2	
23	ASB	IP C	18 34 17.8				76	0	.0	
24	ADK	EP	02 49 27.5							
		ES	02 49 36.0							
24	ADK	EP	04 03 36.7							
		ES	04 03 44.2							

```
APR   STA  PHASE    TIME        AMP  PER  MAG   DIST  AZI   RES   REMARKS
1970              (GMT)        (MU) (SEC)        (KM) (DEG) (SEC)

24    ASC  EP     04 04  6.1    3.2  .2
           E(S)   04 04 44.4
24    ASB  EP     04 04  7.0
           E(S)   04 04 44.5
24    ASC  EP     04 04  7.9
24    ANB  EP     04 04 10.6
           ES     04 04 46.6

24    ASD  EP     04 16 53.1    2.1  .2
           ES     04 17 10.2
24    ASB  EP     04 16 54.2
           ES     04 17 12.0

. 24     7 23 10.64  51.43 N  179.70 W  DEPTH =  62.8 KM                FREE DEPTH SOLUTION .
.                   DELAROF ISLANDS, ALEUTIAN ISLANDS                                        .
. 24    ASD  IPG    07 23 24.0   10.8  .2          67   85    -.1                          .
.           IS     07 23 34.0                                  .1                            .
. 24    ASB  IPG    07 23 24.8   16.2  .2          74   84     .0                          .
.           ES     07 23 35.1                                 -.0                            .
. 24    ASC  EPG    07 23 25.5                      80   92     .1                          .
.           ES     07 23 36.1                                 -.1                            .

24    ADK  EP     09 02 41.3
           ES     09 02 58.2

. 24    10 53 50.31  51.43 N  179.80 W  DEPTH =  25.0 KM                FIXED DEPTH SOLUTION .
.                   DELAROF ISLANDS, ALEUTIAN ISLANDS                                        .
. 24    ASD  EPG    10 54   .7    3.2  .2  1.38   60   84    -.2                          .
.           E(S)   10 54  8.8                                  .2                            .
. 24    ASB  EPG    10 54  2.0                      67   83     .1   EMERGENT P              .
.           E(S)   10 54 10.0                                 -.3                            .
. 24    ASC  EPG    10 54  2.7                      72   93    -.0                          .
.           ES     10 54 11.7                                 -.0                            .

. 24    11 31 28.66  51.02 N  179.03 E  DEPTH =  22.0 KM                FREE DEPTH SOLUTION .
.                   RAT ISLANDS, ALEUTIAN ISLANDS                                            .
. 24    ASB  IPG    11 31 36.3   46.1  .2  1.94   41  201    -.1                          .
.           ES     11 31 42.1                                  .1                            .
. 24    ASD  IPG    11 31 37.0   28.0  .2  1.88   46  208    -.0                          .
.           IS     11 31 43.1                                 -.0                            .
. 24    ASC  IPG    11 31 37.8                      50  190     .1                          .
.           ES     11 31 44.2                                 -.1                            .

24    ASB  EP     11 52 52.7
           E(S)   11 53  8.8
24    ASD  EP     11 52 53.2   19.5  .2
           E(S)   11 53  9.2
24    ASC  EP     11 52 53.7

24    ASD  EP     11 56 10.2    4.3  .2
           E(S)   11 56 27.3
24    ASB  EP     11 56 11.0
24    ASC  EP     11 56 12.3
           ES     11 56 32.4

24    ADK  IP D   12 30 37.0
           ES     12 30 47.0
24    ASD  EP     12 31   .2    9.7  .2
           ES     12 31 31.0
24    ASC  EP     12 31  1.2
```

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
		IS	12 31 36.0							
24	ASB	EP	12 31 2.2							NOISY RECORD
		ES	12 31 34.8							
24	ASD	IP	15 37 48.3	8.7	.2					
		ES	15 38 5.2							
24	ASB	EP	15 37 48.3							NOISY RECORD
		E(S)	15 38 5.0							
24	ASC	EP	15 37 49.7							
		E(S)	15 38 7.8							

. 24 18 27 14.30 50.13 N 179.74 W DEPTH = 20.0 KM MB = 3.8 TELESEISMIC SOLUTION
. DELAROF ISLANDS, ALEUTIAN ISLANDS

24	ASD	EP	18 27 38.7	45.2	.2	4.04	154	155	-.1	
		E(S)	18 27 58.4						1.7	
24	ASB	EP	18 27 38.7				155	152	-.3	
		E(S)	18 27 57.8						.8	
24	ASC	IP	18 27 40.3				168	152	-.7	
		ES	18 28 0.0						-.4	
24	ADK	EP	18 27 56.9				295	230	-.0	
		ES	18 28 27.1						-1.0	

24	ASD	EP	18 30 10.0	15.1	.2					
		ES	18 30 25.2							
24	ASB	EP	18 30 10.6							NOISY RECORD
		E(S)	18 30 27.5							
24	ASC	EP	18 30 11.5							
		ES	18 30 30.8							
24	ASD	EPG	22 38 45.7	3.2	.2					
		E(S)	22 38 54.0							
24	ASB	EPG	22 38 46.8	3.1	.2					
		E(S)	22 38 55.0							
25	ASD	EP	04 12 8.0	4.3	.2					EMERGENT P
		E(S)	04 12 26.0							
25	ASB	EP	04 12 9.3	6.1	.2					
		ES	04 12 26.7							
25	ASB	EPG	06 32 10.8	3.1	.2					
		ES	06 32 16.4							
25	ASD	EPG	06 32 12.0	2.1	.2					
		ES	06 32 18.0							
25	ASD	EPG	07 35 47.0	2.1	.2					
		E(S)	07 35 55.7							
25	ASC	EPG	07 35 47.5							
		E(S)	07 35 56.5							
25	ASB	EPG	10 51 47.5	10.8	.2					
		E(S)	10 51 54.0							
25	ASD	EPG	10 51 48.2	2.1	.2					
		IS	10 51 55.7							
25	ASC	EPG	13 12 44.2	3.2	.2					
		ES	13 12 58.4							
25	ASB	EPG	13 12 46.0							EMERGENT P
		E(S)	13 13 2.4							
25	ASC	EP	13 12 46.3							
25	ASB	EPG	14 40 24.3	1.5	.2					
		ES	14 40 31.3							
25	ASC	EPG	14 40 25.5	1.1	.2					
		E(S)	14 40 32.4							
25	ASC	EP	16 00 29.5							

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
		I	16 00 30.1	48.4	.2					
		ES	16 00 45.5							
25	ASB	E	16 00 30.3							
		I	16 00 30.8	55.3	.2					
		ES	16 00 45.7							
25	ASC	E	16 00 31.8							
		I	16 00 32.2							
		ES	16 00 49.2							
25	ADK	EP	16 00 44.0							
		ES	16 01 7.1							

25 16 11 28.37 51.46 N 178.91 W DEPTH = 50.0 KM FIXED DEPTH SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

25	ASC	IPGC	16 11 47.6	11.9	.2	3.09	122	85	-.1	
		ES	16 12 1.4						-.3	
25	ASB	EPG	16 11 48.5	12.3	.2	3.19	128	84	.0	
		ES	16 12 3.4						.2	
25	ASC	EPG	16 11 49.2				134	89	.0	
		E(S)	16 12 4.4						.1	

25 16 12 18.94 51.36 N 179.64 E DEPTH = 56.9 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

25	ASD	IPG	16 12 27.8	6.4	.2		21	96	-.3	
		IS	16 12 35.0						.3	
25	ASB	EPG	16 12 28.3	10.8	.2		28	91	-.1	
		IS	16 12 35.5						.2	
25	ASC	EPG	16 12 29.4				36	109	.4	WEAK P PHASE
		ES	16 12 35.9						-.4	

25 21 22 12.17 51.46 N 179.00 E DEPTH = 52.8 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

25	ASC	EP	21 22 20.4				11	268	-.0	
25	ASB	EPG	21 22 20.7	1.5	.2		20	302	-.1	NOISY RECORD
		E(S)	21 22 27.2						.1	
25	ASD	EPG	21 22 21.2	2.7	.2		26	291	.1	
		ES	21 22 27.5						-.1	

26	ASD	EP	00 42 59.0	6.4	.2					
		E(S)	00 43 17.0							
26	ASB	EP	00 42 59.5	2.3	.2					

26 4 26 42.88 51.01 N 179.73 W DEPTH = 25.0 KM FIXED DEPTH SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

26	ASD	EPG	04 26 56.0	8.5	.2	2.20	77	122	.1	
		E(S)	04 27 5.7						.3	
26	ASB	EPG	04 26 56.7	9.2	.2	2.33	81	118	.1	
		E(S)	04 27 6.5						-.1	
26	ASC	EP	04 26 58.2				92	123	-.1	

26 5 1 59.65 51.40 N 178.43 E DEPTH = 63.0 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

26	ASC	IPG	05 02 11.5				51	263	-.1	
		ES	05 02 20.3						.1	
26	ASB	IPGC	05 02 12.1	55.2	.2		57	275	-.0	
		ES	05 02 21.2						.0	

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
26	ASD	IPGC	05 02 12.8	43.0	.2		63	273	.1	
		ES	05 02 22.2						-.1	
26	ASD	IPG	09 13 1.4	32.2	.2					
		ES	09 13 17.6							
26	ASB	EPG	09 13 2.0	64.4	.2					P SPIKE
		ES	09 13 18.2							
26	ASC	EPG	09 13 2.2							
		ES	09 13 18.3							

26 14 20 29.70 52.93 N 171.48 E DEPTH = 33.0 KM MB = 5.8 MS = 5.7 TELESEISMIC SOLUTION
NEAR ISLANDS, ALEUTIAN ISLANDS

26	ASC	EP	14 21 43.9				550	290		EMERGENT P
		E	14 21 51.3							
26	ASD	EP	14 21 45.7	74.3	.3		565	291		
		I	14 21 53.3							
		I	14 22 .7							
26	ASB	EP	14 21 47.0	64.4	.3		560	291		
		I	14 21 52.5							
		I	14 22 .1							
26	ADK	EP	14 22 17.8				821	283		
		ES	14 23 37.0							
		EL	14 25 16.4							

26 16 7 28.40 52.24 N 170.79 W DEPTH = 97.0 KM MB = 4.1 TELESEISMIC SOLUTION
FOX ISLANDS, ALEUTIAN ISLANDS

26	ADK	EP	16 08 22.9				399	82		
		ES	16 09 10.2							
27	ASD	EPG	02 57 39.8	38.8	.2					IL0257524
		I	02 57 42.0	66.6	.2					
		IS	02 57 49.0	64.5	.2					
27	ASB	IPG	02 57 41.0	70.5	.2					IL0257527
		I	02 57 42.6	73.6	.2					
		ES	02 57 49.5	67.4	.2					
27	ASC	EPG	02 57 41.2							
		E	02 57 43.7							
		E(S)	02 57 50.8							

27 3 56 59.60 54.68 N 161.61 E DEPTH = 51.0 KM MB = 5.2 TELESEISMIC SOLUTION
COAST OF KAMCHATKA

27	ASC	EP	03 59 33.4				1227	294		
27	ASD	EP	03 59 35.3	15.8	.4		1243	294		
27	ASB	EP	03 59 35.7				1237	294		NOISY
27	ADK	EP	04 00 2.4				1483	291		
27	ADK	EP	06 41 46.6							
		ES	06 42 7.1							
27	ASD	EP	06 41 49.9	4.3	.2					
		E(S)	06 42 14.2							
27	ASC	EP	06 41 52.3							
		ES	06 42 17.6							
		ELG	06 42 21.4							

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
27		8 8 44.17	51.41 N 179.95 E DEPTH = 76.8 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
27	ASD	IPG	08 08 56.7	48.4	.2		42	85	-.0	
		ES	08 09 5.9						.0	
27	ASB	EPG	08 08 57.2	66.1	.2		49	83	.0	
		ES	08 09 6.7						.0	
27	ASC	EPG	08 08 57.7				55	96	.0	
		IS	08 09 7.5						-.0	
27	ASC	IP C	09 50 42.9							
		ES	09 51 1.2							
27	ASB	IP	09 50 43.1	44.5	.2					
		ES	09 51 1.2							
27	ASD	IP	09 50 44.7	29.1	.2					
		ES	09 51 4.3							
27	ADK	EP	15 54 35.0							
		ES	15 55 22.1							
27	ASD	IP C	22 22 13.7	39.9	.2					
		ES	22 22 34.2							
27	ASB	IP	22 22 14.0	53.8	.2					
		ES	22 22 34.5							
27	ASC	IP	22 22 14.1							
		ES	22 22 35.2							
28	ADK	EP	00 11 52.0							
		E	00 11 52.9							
28		2 44 17.48	52.20 N 178.61 E DEPTH = 151.6 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
28	ASC	EP	02 44 41.0				90	335	-.0	
28	ASB	EP	02 44 41.9	5.4	.2		103	335	-.0	
28	ASD	EP	02 44 42.0	6.4	.2		104	331	-.0	
		E(S)	02 44 59.9						-.0	
28	ASB	IP C	03 14 49.4	9.2	.2					
		ES	03 15 3.8							
28	ASD	EP	03 14 49.9	4.3	.2					
		ES	03 15 5.0							
28	ASC	EP	03 14 50.4							
		IS	03 15 6.2							
28	ADK	EP	03 32 43.1							
		ES	03 33 11.3							
28	ASD	IP C	03 33 16.5	33.5	.2					
		E(S)	03 34 10.0							
28	ASB	IP C	03 33 17.2	29.3	.2					
		ES	03 34 11.0							
28	ASC	IP	03 33 18.0							
28	ADK	EP	04 29 .9							
		ES	04 29 13.1							
28	ASB	IP C	06 35 30.4							
28	ASC	EP	06 35 30.7							
		E(S)	06 35 45.7							
28	ASD	IP	06 35 31.5	90.6	.2					
		ES	06 35 46.0							
28	ADK	IP C	06 46 36.0							
		ES	06 46 50.5							
28	ASD	E(P)	06 46 41.5	5.3	.2					

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
		I	06 46 43.3	20.4	.2					
		ES	06 47 2.4							
28	ASB	E(P)	06 46 42.3	3.8	.2					
		I	06 46 44.0	23.9	.2					
		ES	06 47 3.7							
28	ASC	E(P)	06 46 43.7							
		I	06 46 45.2							
		ES	06 47 7.2							
28	ASD	EP	07 44 14.0	4.3	.2					
		E(S)	07 44 28.4							
28	ASB	E(P)	07 44 15.0	2.3	.2					
28	ASC	E(P)	07 44 16.0							

28 15 43 48.49 51.45 N 178.84 E DEPTH = 35.2 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

28	ASC	E(P)	15 43 55.2				22	266	.0	VERY NOISY
28	ASB	EP	15 43 55.9	10.7	.2	.78	30	289	-.0	
		ES	15 44 1.4						.0	
28	ASD	IPG	15 43 56.6	15.1	.2	1.22	36	283	.0	
		IS	15 44 2.4						-.0	

29 0 35 2.00 52.47 N 173.43 W DEPTH = 91.0 KM MB = 5.1 TELESEISMIC SOLUTION
ANDREANOF ISLANDS, ALEUTIAN IS.

29	ADK	IP C	00 35 35.8				225	72		
		IS	00 36 1.4							
29	ASD	EP	00 36 10.2	555.9	.3		512	73		
		I	00 36 10.9							
29	ASB	EP	00 36 10.6				519	73		
		I	00 36 11.9							
29	ASC	E(P)	00 36 12.3				522	75		
		I	00 36 13.7							

29	ADK	EP	08 03 42.0							
		ES	08 04 .2							
29	ASD	E(P)	08 04 17.5	4.3	.2					
29	ASB	EP	08 04 17.5	3.1	.2					
		I	08 04 20.2							
29	ASD	EP	08 41 10.9	4.3	.2					
		E(S)	08 41 28.2							
29	ASB	E(P)	08 41 10.9	1.5	.2					
		ES	08 41 28.2							

29 10 52 13.80 50.17 N 179.55 W DEPTH = 20.0 KM MB = 4.1 TELESEISMIC SOLUTION
DELAROF ISLANDS, ALEUTIAN ISLANDS

29	ASB	IP	10 52 38.5	41.6	.2	4.05	157	147	-.4	
		ES	10 52 57.0						-.1	
29	ASD	IP	10 52 38.3	46.8	.2	4.08	155	149	-.3	E(P)1052385
		ES	10 52 57.5						.0	
		IT	10 53 43.2							
29	ASC	EP	10 52 40.1				170	147	-.7	
		ES	10 52 58.2						-2.3	
29	ADK	EP	10 52 54.8				282	229	.0	
		ES	10 53 24.7						.1	

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
29		12 0 39.80	51.73 N 177.06 E DEPTH = 53.0 KM MB = 5.0							TELESEISMIC SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
29	ANP	E(P)	12 00 59.7				120	278	.7	WHITEOUT
29	ASC	EP	12 01 2.7				148	283	.3	WHITEOUT
29	ASP	EP	12 01 3.1				157	286	-.4	WHITEOUT
29	ASC	EP	12 01 4.2	183.3	.2		163	285	.0	
29	ADK	IP C	12 01 39.3				438	270	1.2	
		IS	12 02 26.8						6.1	
29	ASC	IP	12 36 12.2							
		E(S)	12 36 30.7							
29	ASP	EP	12 36 12.3	2.3	.2					
		EP	12 36 13.1	18.5	.2					
		E(S)	12 36 33.4							
29	ASC	EP	12 36 13.1	1.1	.2					
		IP	12 36 13.7	19.5	.2					
		E(S)	12 36 34.3							
29	ASC	E(P)	12 57 49.7							
29	ASP	EP	12 57 50.5	2.3	.2					
		E(S)	12 58 12.4							
29	ASC	EP	12 57 51.2	2.1	.2					
		ES	12 58 13.5							
29	ASC	IP	13 03 2.5							
		E(S)	13 03 23.1							
29	ASP	IP	13 03 3.3	6.9	.2					
		E(S)	13 03 25.7							
29	ASC	EP	13 03 4.0	14.0	.2					
		E(S)	13 03 25.8							
29	14	1 19.10	14.58 N 92.75 W DEPTH = 33.0 KM MB = 5.6							TELESEISMIC SOLUTION
			NEAR COAST OF MEXICO							
29	ADK	EP	14 12 57.6				8327	86		
29	ASC	E(P)	14 13 12.9				8614	82		TELESEISMIC
29	ASP	E(P)	14 13 13.0				8621	82		
29	14	1 32.80	14.52 N 92.60 W DEPTH = 33.0 KM MB = 5.8 MS = 7.3							TELESEISMIC SOLUTION
			NEAR COAST OF MEXICO							
29	ADK	EP	14 13 11.3				8342	86		
		ES	14 22 52.0							
29	ASD	E(P)	14 13 26.4				8629	82		TELESEISMIC
		I	14 13 35.4	51.8	.4					
		I	14 13 35.7							
29	ASP	E(P)	14 13 26.0				8636	82		
		I	14 13 31.0							
		I	14 13 35.7							
29	ASC	E(P)	14 13 29.2				8640	82		
29	ADK	IP	14 43 53.7							
		ES	14 44 19.1							
29	ASD	EPN	14 44 28.6	8.1	.3					
		EPG	14 44 29.6	22.7	.3					
		E(S)	14 44 36.5							
29	ASP	EPN	14 44 29.4	4.6	.3					
		IPG	14 44 30.4	27.7	.3					
		E(S)	14 44 38.2							
29	ASC	EPG	14 44 30.1							
		E(S)	14 44 39.4							

APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
29	ASB	EP	17 08 24.8	3.1	.2					
		IS	17 08 51.2							
29	ASD	EP	17 08 25.5	2.1	.2					
		ES	17 08 53.0							

29 17 33 13.23 51.10 N 178.49 E DEPTH = 51.0 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

29	ASB	EPG	17 33 25.3	6.2	.2		60	241	.1	
		E(S)	17 33 33.9						-.1	
29	ASC	E(P)	17 33 25.4				62	229	.0	
29	ASD	EPG	17 33 26.0	4.3	.2		67	243	.0	
		ES	17 33 35.5						.2	

29	ASD	EP	18 36 36.4	17.2	.2					
		ES	18 36 55.7							
29	ASB	IP	18 36 36.6	13.9	.2					
		ES	18 36 55.7							
29	ASC	EP	18 36 38.1							
29	ASD	EP	19 37 50.1	1.1	.2					
		ES	19 38 11.1							
29	ASB	E(P)	19 37 51.1	1.5	.2					
		E(S)	19 38 12.4							
29	ASC	E(P)	21 06 2.1							
29	ASB	E(P)	21 06 3.1	2.3	.2					
		E(S)	21 06 25.4							
29	ASD	E(P)	21 06 3.7	2.1	.2					
		E(S)	21 06 26.4							
29	ASD	E(P)	22 28 9.8	1.1	.2					
		ES	22 28 28.7							
29	ASB	EP	22 28 10.7	2.3	.2					
		ES	22 28 29.7							
30	ASD	IP	00 12 41.0							WHITECUT
30	ASB	IP	00 12 41.5							WHITECUT
30	ASC	EPG	00 12 43.3							
		ES	00 12 57.2							
30	ANR	EPG	00 12 47.4							
		ES	00 13 1.5							
30	ASB	EP	02 40 7.7	1.5	.2					
		E(S)	02 40 24.2							
30	ASD	E(P)	02 40 9.2	1.1	.2					
30	ASB	E(P)	02 54 20.9	1.5	.2					
		E(S)	02 54 42.3							
30	ASD	EP	02 54 21.8	2.1	.2					

30 4 10 49.19 51.21 N 178.70 E DEPTH = 54.6 KM FREE DEPTH SOLUTION
RAT ISLANDS, ALEUTIAN ISLANDS

30	ASB	EP	04 10 59.5	13.9	.2		42	246	-.1	
		ES	04 11 7.2						.1	
30	ASC	E(P)	04 10 59.7				43	229	.1	
		ES	04 11 7.2						-.1	
30	ASD	E(P)	04 11 .2	4.3	.2		48	247	.0	
		ES	04 11 8.2						-.0	

30	ASD	E(P)	04 59 25.7	2.1	.2					
		E(S)	04 59 44.7							
30	ASB	EP	04 59 26.0	3.1	.2					
		E(S)	04 59 45.4							

```
APR   STA  PHASE   TIME        AMP  PER  MAG  DIST  AZI  RES  REMARKS
1970               (GMT)       (MU) (SEC)        (KM) (DEG) (SEC)

 30    ASD  E(P)   06 51 44.2    1.1  .2
            E(S)   06 51 57.4
 30    ASB  E(P)   06 51 45.2     .8  .2
            E(S)   06 51 58.0

 30    ASC  EP     08 42  2.1
            E(S)   08 42  9.8
 30    ASD  EPG    08 42  2.2    7.6  .2
            E(S)   08 42 10.0
 30    ASB  EP     08 42  2.5    4.6  .2
.......................................................................................
. 30     8 32 59.10  14.70 N   93.19 W  DEPTH =  19.0 KM  MB = 5.6  MS = 6.4 TELESEISMIC SOLUTION .
.                   NEAR COAST OF MEXICO                                                          .
.                                                                                                 .
. 30    ADK  EP     08 44 39.5                          8286  86                                  .
.            ES     08 54 16.0                                                                    .
.            EL     09 09 50.0                                                                    .
.......................................................................................
 30    ASD  IPGC   08 46 11.6   19.5  .2
            IS     08 46 19.1
 30    ASC  EPG    08 46 11.6
            IS     08 46 18.9
 30    ASB  IPGC   08 46 11.7   13.9  .2
            ES     08 46 19.1

 30    ASD  E(P)   12 07 10.4    2.1  .2
            E(S)   12 07 42.4
 30    ASB  E(P)   12 07 11.2    1.5  .2
            E(S)   12 07 43.7

 30    ASD  E(P)   12 14 50.7    4.2  .2
 30    ASB  E(P)   12 14 51.1    4.6  .2
 30    ASC  E(P)   12 14 52.7
            E(S)   12 15  5.7
.......................................................................................
. 30    14 10 58.64  50.96 N  178.54 E  DEPTH =  50.0 KM                  FIXED DEPTH SOLUTION .
.                   RAT ISLANDS, ALEUTIAN ISLANDS                                                 .
.                                                                                                 .
. 30    ASB  EPG    14 11 11.2    3.1  .2  1.54    67  228    -.1                                .
.            E(S)   14 11 20.7                                   .1                                .
. 30    ASC  E(P)   14 11 11.9                    71  218     .1                                  .
.            E(S)   14 11 21.3                                  -.1                                .
. 30    ASD  EPG    14 11 12.2    1.1  .2  1.24    73  231     .2                                .
.            E(S)   14 11 22.0                                   .2                                .
.......................................................................................
.......................................................................................
. 30    14 12 12.33  50.96 N  178.51 E  DEPTH =  51.0 KM                  FREE DEPTH SOLUTION  .
.                   RAT ISLANDS, ALEUTIAN ISLANDS                                                 .
.                                                                                                 .
. 30    ASB  IPG    14 12 25.2   12.3  .2            68  230    -.0                               .
.            ES     14 12 34.6                                   .0                                .
. 30    ASC  EP     14 12 25.7                    72  220     .1                                  .
.            E(S)   14 12 35.3                                  -.0                                .
. 30    ASD  EPG    14 12 26.0   11.9  .2            74  232     .1                               .
.            ES     14 12 36.1                                   .3                                .
.......................................................................................

 30    ASD  E(P)   15 13 26.3    3.2  .2
 30    ASB  E(P)   15 13 27.0    1.5  .2
            E(S)   15 13 42.4
 30    ASC  EP     15 13 28.7
            E(S)   15 13 43.9
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APR 1970	STA	PHASE	TIME (GMT)	AMP (MU)	PER (SEC)	MAG	DIST (KM)	AZI (DEG)	RES (SEC)	REMARKS
30			15 37 51.54 51.58 N 178.46 E DEPTH = 66.2 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
30	ASC	EPG	15 38 3.7				50	286	.0	
		E(S)	15 38 12.5						-.0	
30	ASB	IPG	15 38 4.5	16.2	.2		60	294	-.1	
		ES	15 38 14.1						.1	
30	ASD	EPG	15 38 5.1	7.6	.2		65	291	.0	
		E(S)	15 38 14.9						-.0	
30			15 44 49.00 63.09 N 150.99 W DEPTH = 125.0 KM MB = 3.3							TELESEISMIC SOLUTION
			CENTRAL ALASKA							
30	ADK	E(P)	15 48 47.8				1957	41		
30	ASD	EP	15 54 11.9	3.2	.2					
		ES	15 54 31.2							
30	ASC	EP	15 54 12.2							
		ES	15 54 32.2							
30	ASB	EP	15 54 12.3	5.4	.2					
		ES	15 54 32.7							
30			16 23 58.43 51.37 N 179.76 E DEPTH = 11.0 KM							FREE DEPTH SOLUTION
			RAT ISLANDS, ALEUTIAN ISLANDS							
30	ASD	EP	16 24 4.1	3.2	.2	.23	29	90	-.0	
30	ASB	IPG	16 24 5.2	6.9	.2	.89	36	87	.0	P SPIKE
		IS	16 24 10.0						-.1	
30	ASC	E(P)	16 24 6.2				43	103	-.1	
		E(S)	16 24 12.0						.0	
30	ASB	EP	18 29 19.0	6.9	.2					
		ES	18 29 37.2							
30	ASD	EP	18 29 19.2	5.3	.2					
		E(S)	18 29 36.7							
30	ASC	EP	18 29 20.5							
		ES	18 29 40.1							
30			19 10 18.29 51.11 N 179.00 W DEPTH = 50.0 KM							FIXED DEPTH SOLUTION
			DELAROF ISLANDS, ALEUTIAN ISLANDS							
30	ASD	E(P)	19 10 37.3	1.1	.2	2.03	119	104	-.0	
		E(S)	19 10 51.0						-.2	
30	ASB	E(P)	19 10 38.1	.8	.2	1.96	125	102	.1	
		ES	19 10 52.5						.1	
30	ASC	E(P)	19 10 39.1				134	106	-.0	
		E(S)	19 10 54.5						.2	
30	ASD	E(P)	20 37 42.4	1.1	.2					
		E(S)	20 37 49.2							
30	ASB	IPG	20 37 42.9	3.1	.2					P SPIKE
		IS	20 37 49.8							
30	ASB	E(P)	20 47 24.4	1.5	.2					
30	ASD	E(P)	20 47 25.0	1.1	.2					
		E(S)	20 47 45.9							

APR 1970	ORIGIN TIME (GMT)	LAT	LONG	DEPTH* (KM)	MB	MS	GEOGRAPHIC REGION
01	14 23 25.10	39.77 N	141.79 E	81.0 T	5.8		HONSHU, JAPAN
02	10 54 27.28	51.40 N	179.17 E	39.4 F			RAT ISLANDS, ALEUTIAN ISLANDS
02	11 11 42.00	20.36 S	173.91 W	33.0 T	5.7	5.7	TONGA ISLANDS
02	14 29 46.35	51.44 N	179.69 W	50.0 D			DELAROF ISLANDS, ALEUTIAN ISLANDS
03	8 41 0.00	51.65 N	177.00 W	53.0 T	4.0		ANDREANOF ISLANDS, ALEUTIAN IS.
03	10 5 31.19	51.36 N	179.47 E	61.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
03	13 59 2.20	51.83 N	175.23 W	55.0 T	5.1		ANDREANOF ISLANDS, ALEUTIAN IS.
03	20 53 54.50	37.07 N	54.58 E	43.0 T	5.2		IRAN-USSR REGION
04	1 27 31.52	51.56 N	179.40 E	60.7 F			RAT ISLANDS, ALEUTIAN ISLANDS
04	3 7 20.69	51.20 N	179.88 W	12.0 F			DELAROF ISLANDS, ALEUTIAN ISLANDS
04	9 49 35.89	51.07 N	179.99 E	34.2 F			RAT ISLANDS, ALEUTIAN ISLANDS
04	12 0 29.38	52.29 N	179.71 E	175.0 D			RAT ISLANDS, ALEUTIAN ISLANDS
04	20 5 5.83	51.06 N	179.70 W	50.0 D			DELAROF ISLANDS, ALEUTIAN ISLANDS
05	12 10 22.59	51.08 N	177.99 E	0.0 D			RAT ISLANDS, ALEUTIAN ISLANDS
5	12 41 15.30	51.23 N	173.68 E	33.0 T	4.2		NEAR ISLANDS, ALEUTIAN ISLANDS
05	13 38 51.14	51.20 N	179.13 W	50.0 D			DELAROF ISLANDS, ALEUTIAN ISLANDS
05	14 49 22.25	50.11 N	179.88 W	25.0 D			DELAROF ISLANDS, ALEUTIAN ISLANDS
06	3 36 26.91	51.14 N	179.15 E	25.5 F			RAT ISLANDS, ALEUTIAN ISLANDS
06	4 0 30.90	53.53 N	166.68 W	33.0 T	4.2		FOX ISLANDS, ALEUTIAN ISLANDS
6	17 51 6.90	52.51 N	172.29 E	33.0 T	4.4		NEAR ISLANDS, ALEUTIAN ISLANDS
07	0 20 12.03	51.54 N	179.69 E	80.7 F			RAT ISLANDS, ALEUTIAN ISLANDS
07	4 14 20.62	51.44 N	179.15 W	25.0 D			DELAROF ISLANDS, ALEUTIAN ISLANDS
07	5 34 5.60	15.76 N	121.72 E	37.0 T	6.4	7.3	LUZON, PHILIPPINES
07	6 13 20.17	51.35 N	179.61 E	79.3 F			RAT ISLANDS, ALEUTIAN ISLANDS
07	11 30 38.93	51.04 N	179.03 E	28.2 F			RAT ISLANDS, ALEUTIAN ISLANDS
07	20 37 34.04	51.33 N	178.70 E	32.5 F			RAT ISLANDS, ALEUTIAN ISLANDS
08	2 39 52.80	51.90 N	179.56 W	150.0 D			DELAROF ISLANDS, ALEUTIAN ISLANDS
08	3 1 37.01	51.24 N	179.71 E	60.4 F			RAT ISLANDS, ALEUTIAN ISLANDS
08	3 15 12.98	51.60 N	179.96 E	88.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
08	4 23 52.14	51.92 N	179.01 E	20.0 D			RAT ISLANDS, ALEUTIAN ISLANDS
08	7 16 57.96	51.17 N	178.14 E	79.0 F			RAT ISLANDS, ALEUTIAN ISLANDS

APR 1970	ORIGIN TIME (GMT)	LAT	LONG	DEPTH* (KM)	MB	MS	GEOGRAPHIC REGION
08	9 38 30.16	51.64 N	179.53 E	77.9 F			RAT ISLANDS, ALEUTIAN ISLANDS
08	12 9 48.34	51.21 N	178.77 E	35.3 F			RAT ISLANDS, ALEUTIAN ISLANDS
08	17 11 44.38	50.90 N	177.18 E	25.0 C			RAT ISLANDS, ALEUTIAN ISLANDS
08	18 51 16.10	51.61 N	179.35 E	95.5 F			RAT ISLANDS, ALEUTIAN ISLANDS
08	21 30 3.56	51.42 N	179.91 W	25.0 C			DELAROF ISLANDS, ALEUTIAN ISLANDS
08	21 23 56.60	15.43 N	121.80 E	33.0 T	5.7	6.2	LUZON, PHILIPPINE IS
09	3 6 22.20	50.03 N	179.66 W	20.0 T	4.0		DELAROF ISLANDS, ALEUTIAN ISLANDS
09	6 25 30.18	51.18 N	179.32 E	34.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
09	16 24 31.00	13.21 N	92.26 W	41.0 T	5.3	5.0	OFF COAST OF MEXICO
09	23 8 51.56	51.31 N	179.34 W	25.0 C			DELAROF ISLANDS, ALEUTIAN ISLANDS
10	3 16 59.33	51.44 N	177.35 E	25.0 C			RAT ISLANDS, ALEUTIAN ISLANDS
10	9 53 7.90	51.97 N	179.07 E	20.0 C			RAT ISLANDS, ALEUTIAN ISLANDS
10	14 9 16.00	27.46 S	177.91 W	158.0 T	5.5		KERMADEC ISLANDS
10	23 22 52.31	51.37 N	178.76 E	37.9 F			RAT ISLANDS, ALEUTIAN ISLANDS
11	0 39 38.30	51.24 N	178.70 E	30.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
11	1 16 3.38	50.00 N	179.49 E	0.0 C			RAT ISLANDS, ALEUTIAN ISLANDS
11	1 49 41.55	51.96 N	179.06 E	20.0 C			RAT ISLANDS, ALEUTIAN ISLANDS
11	4 5 41.10	59.71 N	142.74 W	7.0 T	5.2	6.2	GULF OF ALASKA
11	5 49 5.47	51.43 N	179.45 E	71.6 F			RAT ISLANDS, ALEUTIAN ISLANDS
11	10 45 8.10	51.46 N	178.48 W	43.0 T	4.6		DELAROF ISLANDS, ALEUTIAN ISLANDS
11	15 22 8.10	50.98 N	179.27 W	43.0 T	3.9		DELAROF ISLANDS, ALEUTIAN ISLANDS
12	2 10 35.60	51.51 N	178.51 W	42.0 T	5.2		DELAROF ISLANDS, ALEUTIAN ISLANDS
12	4 1 44.00	15.06 N	122.05 E	24.0 T	5.9	7.0	PHILIPPINE ISLANDS
12	7 49 27.32	51.36 N	179.13 W	0.0 C			DELAROF ISLANDS, ALEUTIAN ISLANDS
13	11 24 51.90	52.64 N	173.35 W	93.0 T	4.2		ANDREANOF ISLANDS, ALEUTIAN IS.
13	15 26 22.95	50.84 N	179.56 E	25.0 C			RAT ISLANDS, ALEUTIAN ISLANDS
13	17 37 13.73	51.00 N	179.26 W	25.0 C			DELAROF ISLANDS, ALEUTIAN ISLANDS
13	20 25 19.70	51.13 N	179.10 E	21.5 F			RAT ISLANDS, ALEUTIAN ISLANDS
14	0 24 36.00	51.34 N	178.75 E	47.2 F			RAT ISLANDS, ALEUTIAN ISLANDS
14	20 17 19.47	51.17 N	178.59 E	0.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
15	13 15 32.57	51.28 N	178.61 E	24.0 F			RAT ISLANDS, ALEUTIAN ISLANDS

APR 1970	ORIGIN TIME (GMT)	LAT	LONG	DEPTH* (KM)	MB	MS	GEOGRAPHIC REGION
15	13 14 21.40	15.07 N	122.67 E	12.0 T	5.7	6.0	PHILIPPINE ISLANDS
16	5 33 17.50	59.77 N	142.60 W	7.0 T	5.5	6.8	GULF OF ALASKA
16	10 15 10.81	51.23 N	179.83 E	21.1 F			RAT ISLANDS, ALEUTIAN ISLANDS
17	0 24 4.94	51.10 N	179.36 E	40.2 F			RAT ISLANDS, ALEUTIAN ISLANDS
17	4 15 38.22	51.55 N	178.78 E	63.3 F			RAT ISLANDS, ALEUTIAN ISLANDS
17	13 44 28.89	51.14 N	178.31 E	40.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
18	2 1 1.16	51.00 N	179.92 W	25.0 D			DELAROF ISLANDS, ALEUTIAN ISLANDS
18	2 20 54.23	51.55 N	178.79 E	51.3 F			RAT ISLANDS, ALEUTIAN ISLANDS
18	2 47 7.13	51.91 N	179.35 E	168.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
18	4 4 47.00	52.22 N	178.28 E	150.0 D			RAT ISLANDS, ALEUTIAN ISLANDS
18	7 30 27.79	51.34 N	178.69 E	38.5 F			RAT ISLANDS, ALEUTIAN ISLANDS
18	8 50 40.50	59.86 N	152.82 W	94.0 T	5.7		SOUTHERN ALASKA
18	19 23 .60	53.54 N	166.06 W	46.0 T	4.7		FOX ISLANDS, ALEUTIAN ISLANDS
18	23 25 35.50	43.25 N	147.23 E	38.0 T	5.2	5.7	KURIL ISLANDS
19	1 15 46.80	59.64 N	142.83 W	20.0 T	5.8	6.0	GULF OF ALASKA
19	3 43 31.61	51.22 N	179.09 E	40.6 F			RAT ISLANDS, ALEUTIAN ISLANDS
19	7 21 20.50	54.60 N	164.47 E	18.0 T	4.4		KOMANDORSKY ISLANDS REGION
19	7 28 36.23	50.78 N	179.96 E	35.2 F			RAT ISLANDS, ALEUTIAN ISLANDS
20	4 53 58.30	50.84 N	177.95 E	25.0 D			RAT ISLANDS, ALEUTIAN ISLANDS
20	10 39 12.50	18.83 S	169.30 E	246.0 T	6.3		NEW HEBRIDES ISLANDS
20	22 27 27.34	51.40 N	178.82 E	56.7 F			RAT ISLANDS, ALEUTIAN ISLANDS
21	7 45 17.05	51.19 N	179.51 E	24.7 F			RAT ISLANDS, ALEUTIAN ISLANDS
21	9 1 16.84	51.29 N	178.66 E	25.0 D			RAT ISLANDS, ALEUTIAN ISLANDS
21	11 39 50.40	51.59 N	176.51 E	33.0 T	3.8		RAT ISLANDS, ALEUTIAN ISLANDS
21	11 59 26.90	54.28 N	163.34 W	34.0 T	4.8		UNIMAK ISLAND REGION
21	15 10 6.75	51.42 N	177.70 E	50.0 D			RAT ISLANDS, ALEUTIAN ISLANDS
22	0 45 58.78	51.32 N	179.14 E	31.6 F			RAT ISLANDS, ALEUTIAN ISLANDS
22	13 56 58.77	51.42 N	178.89 E	52.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
22	23 41 6.50	50.98 N	179.16 E	24.5 F			RAT ISLANDS, ALEUTIAN ISLANDS
23	15 27 46.00	51.71 N	178.48 E	89.6 F			RAT ISLANDS, ALEUTIAN ISLANDS
23	18 33 55.64	52.05 N	179.25 E	147.1 F			RAT ISLANDS, ALEUTIAN ISLANDS

APR 1970	ORIGIN TIME (GMT)	LAT	LONG	DEPTH* (KM)	MB	MS	GEOGRAPHIC REGION
24	7 23 10.64	51.43 N	179.70 W	62.8 F			DELAROF ISLANDS, ALEUTIAN ISLANDS
24	10 53 50.31	51.43 N	179.80 W	25.0 C			DELAROF ISLANDS, ALEUTIAN ISLANDS
24	11 31 28.66	51.02 N	179.03 E	22.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
24	18 27 14.30	50.13 N	179.74 W	20.0 T	3.8		DELAROF ISLANDS, ALEUTIAN ISLANDS
25	16 11 28.37	51.46 N	178.91 W	50.0 C			DELAROF ISLANDS, ALEUTIAN ISLANDS
25	16 12 18.94	51.36 N	179.64 E	56.9 F			RAT ISLANDS, ALEUTIAN ISLANDS
25	21 22 12.17	51.46 N	179.00 E	52.8 F			RAT ISLANDS, ALEUTIAN ISLANDS
26	4 26 42.88	51.01 N	179.73 W	25.0 C			DELAROF ISLANDS, ALEUTIAN ISLANDS
26	5 1 59.65	51.40 N	178.43 E	63.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
26	14 20 29.70	52.93 N	171.48 E	33.0 T	5.8	5.7	NEAR ISLANDS, ALEUTIAN ISLANDS
26	16 7 28.40	52.24 N	170.79 W	97.0 T	4.1		FOX ISLANDS, ALEUTIAN ISLANDS
27	3 56 59.60	54.68 N	161.61 E	51.0 T	5.2		COAST OF KAMCHATKA
27	3 8 44.17	51.41 N	179.95 E	76.8 F			RAT ISLANDS, ALEUTIAN ISLANDS
28	2 44 17.48	52.20 N	178.61 E	151.6 F			RAT ISLANDS, ALEUTIAN ISLANDS
28	15 43 48.49	51.45 N	178.84 E	35.2 F			RAT ISLANDS, ALEUTIAN ISLANDS
29	0 35 2.00	52.47 N	173.43 W	91.0 T	5.1		ANDREANOF ISLANDS, ALEUTIAN IS.
29	10 52 13.80	50.17 N	179.55 W	20.0 T	4.1		DELAROF ISLANDS, ALEUTIAN ISLANDS
29	12 0 39.80	51.73 N	177.06 E	53.0 T	5.0		RAT ISLANDS, ALEUTIAN ISLANDS
29	14 1 19.10	14.58 N	92.75 W	33.0 T	5.6		NEAR COAST OF MEXICO
29	14 1 32.80	14.52 N	92.60 W	33.0 T	5.8	7.3	NEAR COAST OF MEXICO
29	17 33 13.23	51.10 N	178.49 E	51.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
30	4 10 49.19	51.21 N	178.70 E	54.6 F			RAT ISLANDS, ALEUTIAN ISLANDS
30	8 32 59.10	14.70 N	93.19 W	19.0 T	5.6	6.4	NEAR COAST OF MEXICO
30	14 10 58.64	50.96 N	178.54 E	50.0 C			RAT ISLANDS, ALEUTIAN ISLANDS
30	14 12 12.33	50.96 N	178.51 E	51.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
30	15 37 51.54	51.58 N	178.46 E	66.2 F			RAT ISLANDS, ALEUTIAN ISLANDS
30	15 44 49.00	63.09 N	150.99 W	125.0 T	3.3		CENTRAL ALASKA
30	16 23 58.43	51.37 N	179.76 E	11.0 F			RAT ISLANDS, ALEUTIAN ISLANDS
30	19 10 18.29	51.11 N	179.00 W	50.0 C			DELAROF ISLANDS, ALEUTIAN ISLANDS

* F = FREE DEPTH SOLUTION
D = FIXED DEPTH SOLUTION
T = TELESEISMIC SOLUTION

SEISMICITY MAPS

ALEUTIAN EARTHQUAKES WHICH WERE LOCATED DURING THE MONTH BY THE ALEUTIAN SEISMIC NETWORK AND BY THE WORLD NETWORK OF SEISMOLOGICAL STATIONS REPORTING TO THE NATIONAL OCEAN SURVEY (NOS) ARE PLOTTED ON SIX MAPS COVERING THE ALEUTIAN ISLANDS FROM THE NEAR ISLANDS TO UNIMAK ISLAND (170 DEGREES EAST LONGITUDE TO 160 DEGREES WEST LONGITUDE).

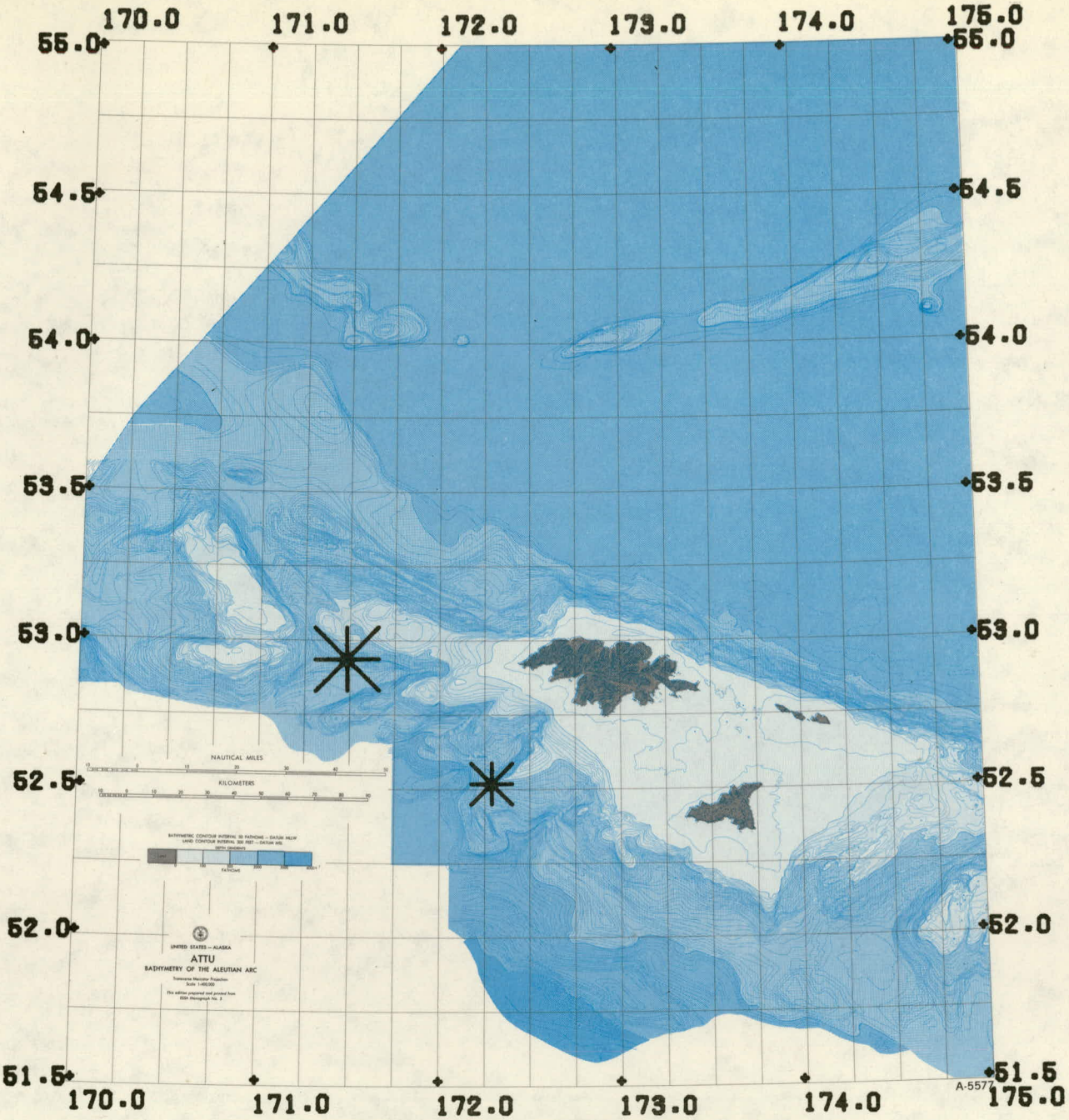
THE BASE MAPS ARE MODIFIED VERSIONS OF LARGE PLATES PUBLISHED BY THE NOS AS PART OF ESSA MONOGRAPH NO. 3 (BATHYMETRY OF THE ALEUTIAN ARC). THE TRANSVERSE MERCATOR PROJECTION, IN WHICH AREAL DISTORTION IS SMALL AND BEARINGS REMAIN TRUE, WAS EMPLOYED.

EPICENTERS WERE PLOTTED AUTOMATICALLY BY A FLAT-BED INCREMENTAL PLOTTER TO PRODUCE PLATES WHICH WERE USED TO OVERPRINT THE BASE MAPS. REGISTRATION MARKS ALONG THE MARGINS OF THE MAPS ALLOW AN ESTIMATION OF THE PRECISION OF PRINTING REGISTRATION.

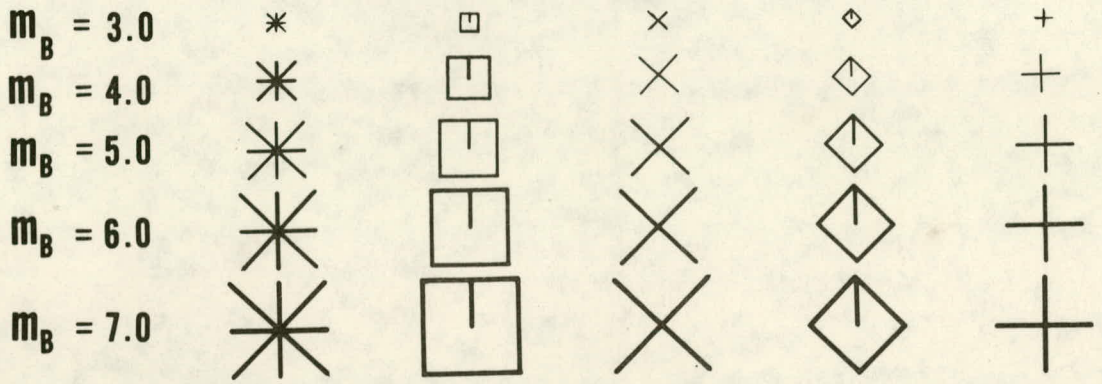
EACH PLOTTED SYMBOL, CENTERED UPON THE EPICENTRAL COORDINATES, REPRESENTS ONE EARTHQUAKE. THE TYPE OF SYMBOL DENOTES THE DEPTH-OF-FOCUS CLASS OF THE SEISMIC EVENT. THE BODY-WAVE MAGNITUDE (MB) IS INDICATED BY THE SYMBOL SIZE, WHICH VARIES CONTINUOUSLY ACCORDING TO THE RELATIONSHIP

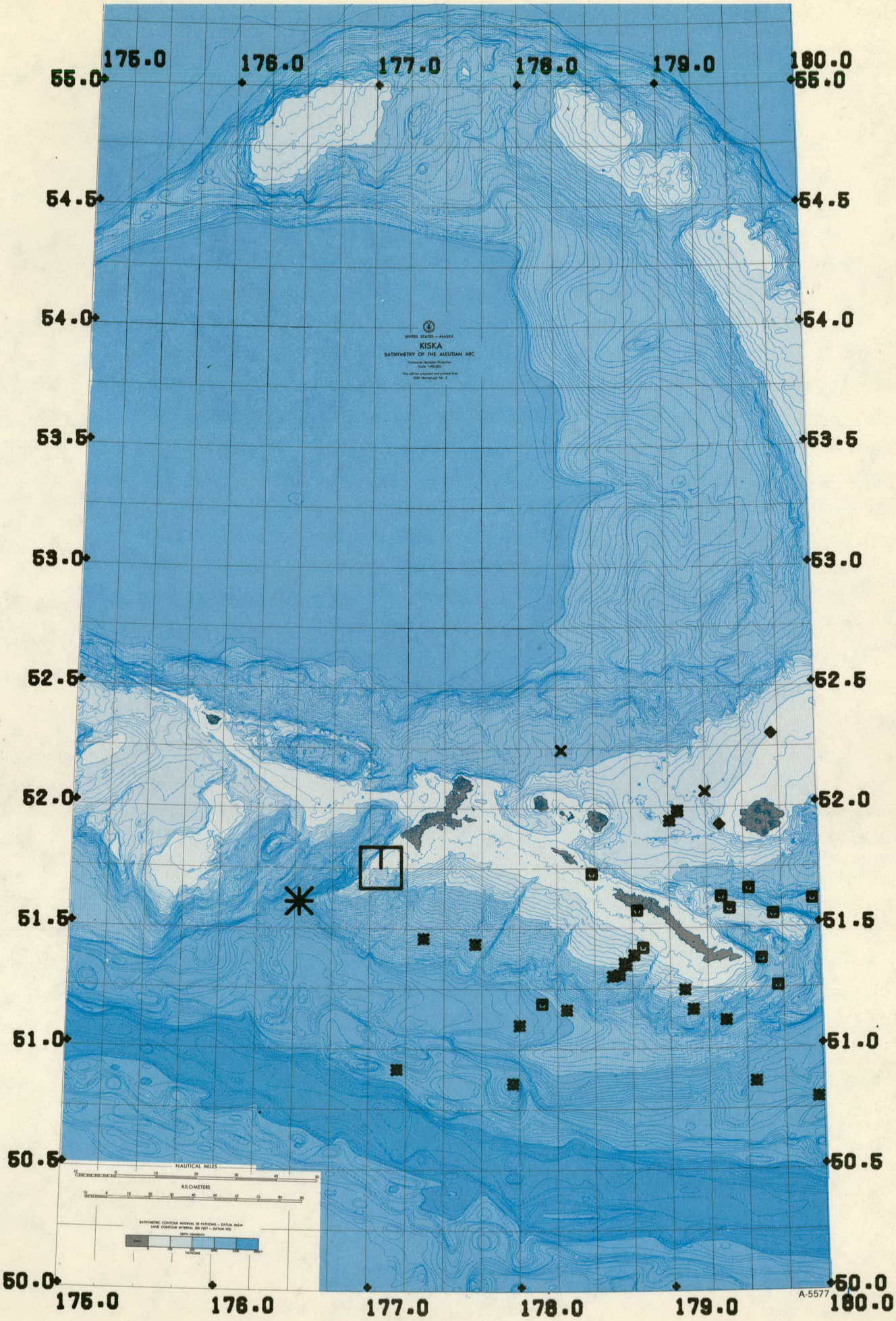
$$\text{SYMBOL SIZE (INCHES)} = .07 + (MB - 2.5)*.10$$

EVENTS WHOSE MAGNITUDES ARE UNDETERMINED OR LESS THAN 2.5 ARE PLOTTED AS .07 INCH SYMBOLS. A LEGEND BLOCK DEPICTING THE FIVE DEPTH-OF-FOCUS CLASSES AND A RANGE OF MAGNITUDES IS PROVIDED ON THE ATTU PLATE.



DEPTH OF FOCUS (km)

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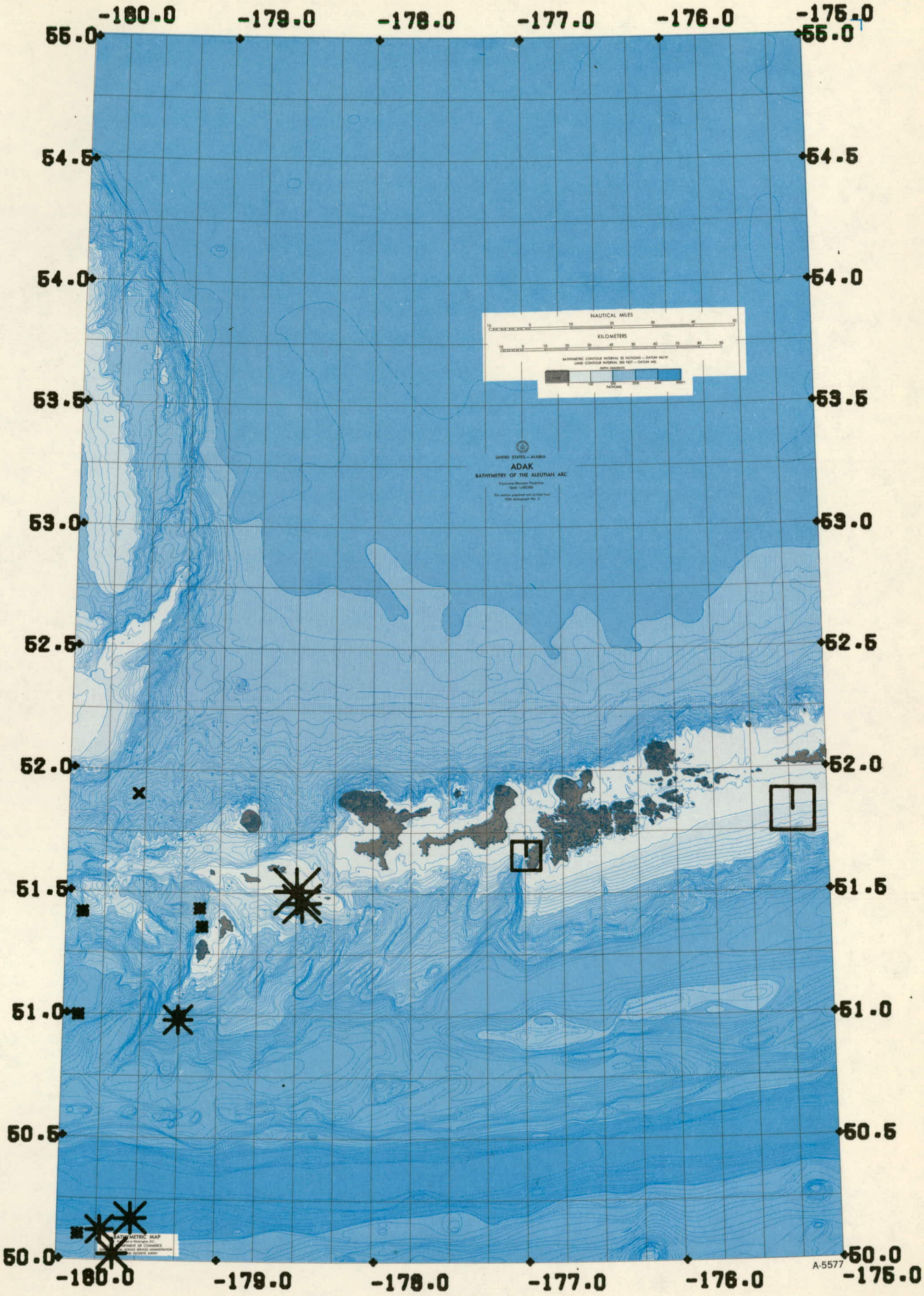
UNITED STATES — ALASKA
KISKA
BATHYMETRY OF THE ALEUTIAN ARC
NAUTICAL MILES
KILOMETERS
A-5577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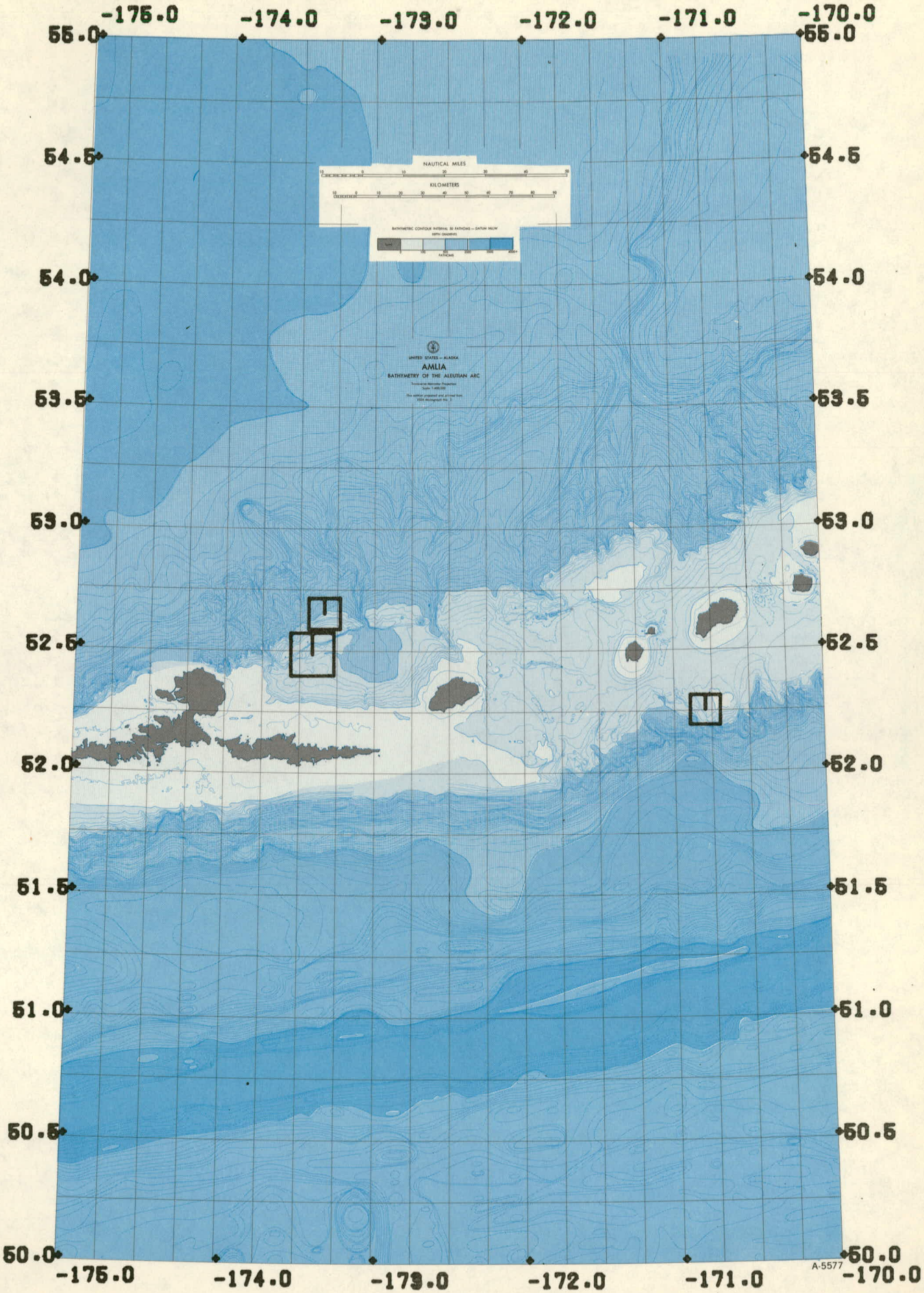
NAUTICAL MILES
KILOMETERS
UNITED STATES — ALASKA
ADAK
BATHYMETRY OF THE ALEUTIAN ARC
A-5577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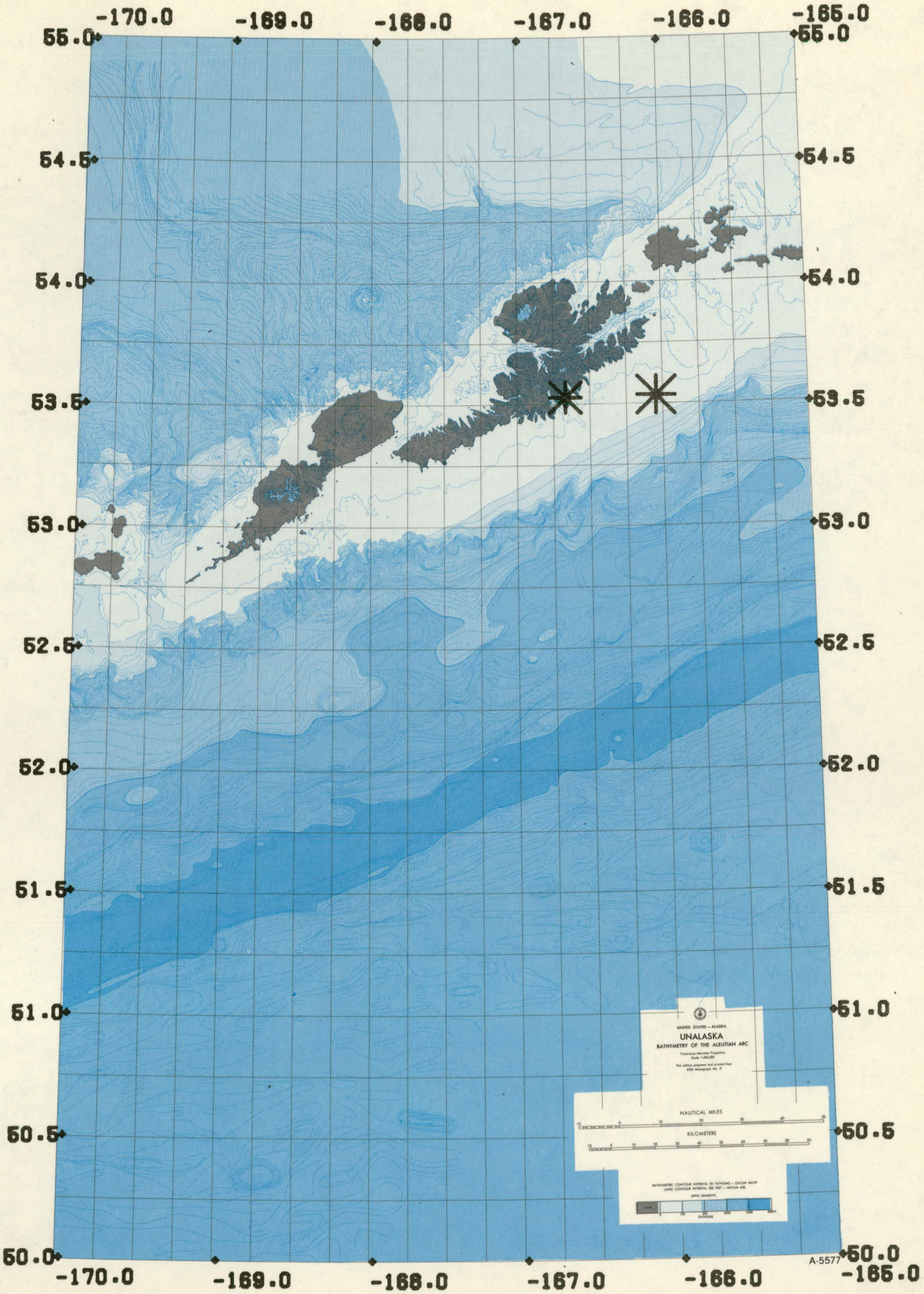
NAUTICAL MILES
KILOMETERS
BATHYMETRIC CONTOUR INTERVAL 50 FATHOMS — DATUM MLLW
DEPTH CHANNELS
FATHOMS
UNITED STATES — ALASKA
AMLIA
BATHYMETRY OF THE ALEUTIAN ARC
A-5577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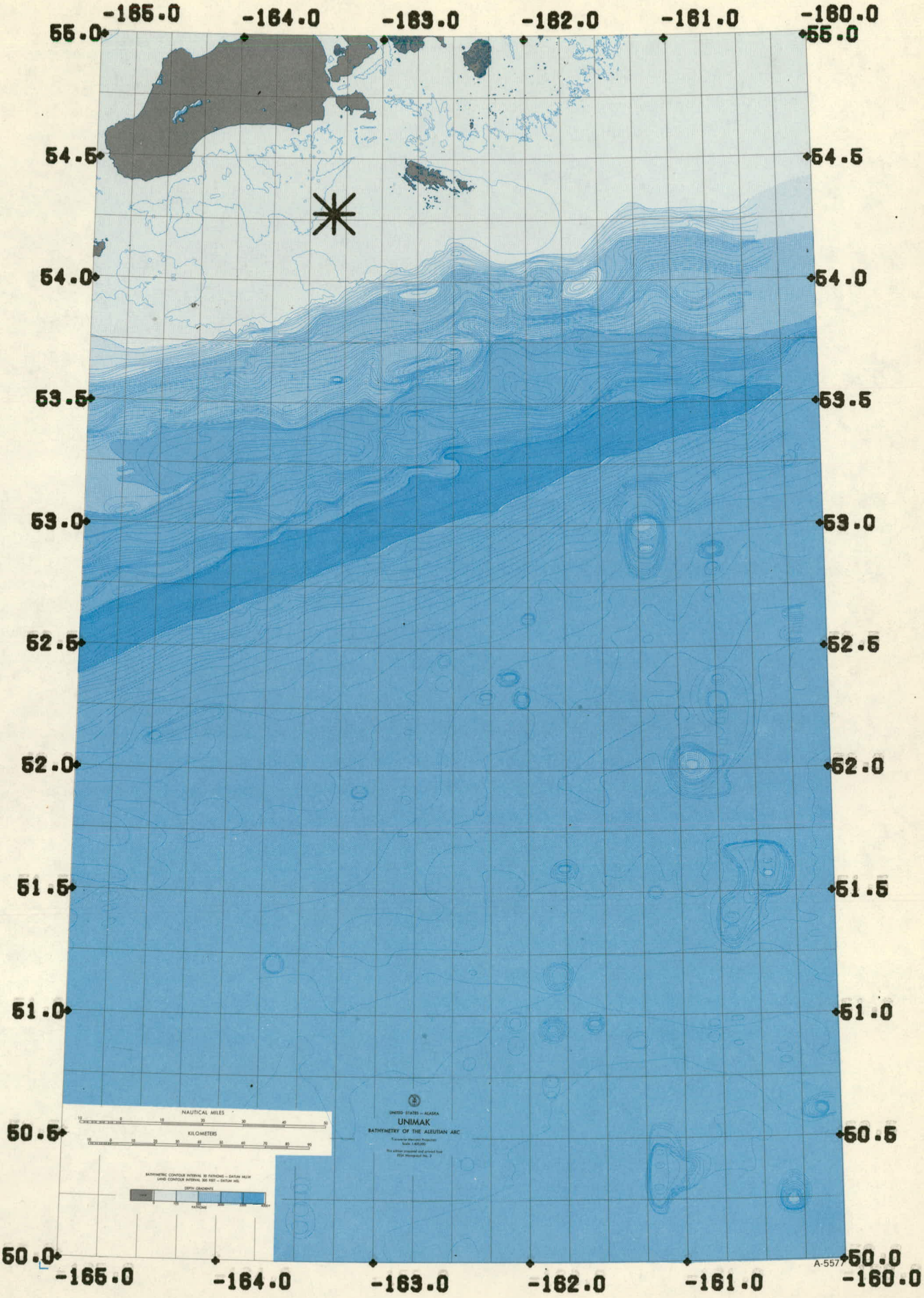
UNITED STATES — ALASKA
UNALASKA
BATHYMETRY OF THE ALEUTIAN ARC
Transverse Mercator Projection
Scale 1:400,000
This edition prepared and printed from
ESSA Monograph No. 3
NAUTICAL MILES
KILOMETERS
BATHYMETRIC CONTOUR INTERVAL 50 FATHOMS — DATUM MLLW
LAND CONTOUR INTERVAL 500 FEET — DATUM MSL
SOFTO CHANGEOVER
Land
FATHOMS
A-5577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NAUTICAL MILES
KILOMETERS
UNITED STATES — ALASKA
UNIMAK
BATHYMETRY OF THE ALEUTIAN ARC
A-5577