

Geophysikalisches Observatorium Collm
der Karl-Marx-Universität Leipzig



Geophysikalische Meßreihen

1. 1977

Seismische Registrierungen

Geophysikalisches Observatorium

DDR - 7261 COLLM

Geophysical measuring series
of the
Geophysical Observatory
of the Karl-Marx-University
Leipzig

Geophysikalische Meßreihen
des Geophysikalischen
Observatoriums
der Karl-Marx-Universität
Leipzig

C O L L M

S E I S M I C
R E C O R D S

S E I S M I S C H E
R E G I S T R I E R U N G E N

1st quarter of 1977

1. Quartal 1977

EISMOLOGICAL STATION COLEM (CII)

GEOGRAPHICAL CO-ORDINATES: LATITUDE = 51°18.6'N; LONGITUDE = 13°00.2'E; ELEVATION = 230 m
FOUNDATION: GREYWACKE OF ORDOVICE

EISMOGRAPHS AND ITS CONSTANTS:

TYPE	COMPONENT	T_B (s)	D_B	T_G (s)	D_G	r/T_B^2	MAGNIFICATION (STATIC)	MAGNIFICATION (MAXIMAL)	RECORDING SPEED (mm/min)
BENIOFF	Z	0.452	0.65	1.43	1			(38000)	60
VSJ-II	z	2.175	0.537	0.296	1.474			55000	60
HSJ-II NS	n	2.171	0.537	0.294	1.474			60000	60
HSJ-II EW	e	2.171	0.537	0.293	1.474			58000	60
WIECHERT NS	WN	10.0	0.28			0.026	370		15
WIECHERT EW	WE	10.0	0.34			0.020	340		15
HSJ-I NS	N	20.0	0.50	1.10	9.09		1075		15
HSJ-I EW	E	20.0	0.51	1.21	8.24		1120		15
VSJ-I	V	20.0	0.51	1.20	8.35		1090		15

TIME SERVICE:

QUARTZ CLOCK (MINUTE PULSES OF 2 s AND HOUR PULSES OF 20 s; DAILY DIGITAL CONTROL; MAXIMUM ERROR ± 0.2 s)

SUPPLEMENTARY EQUIPMENTS:

SPECIAL RECORDER WITH VARIABLE AMPLIFICATION FOR ANNOUNCED EXPLOSIONS
PERMANENT RECORDS WITH CONSIDERABLY REDUCED SENSITIVITY FOR THE COMPLETE REGISTRATION OF STRONG EARTHQUAKES
AUTOMATIC AMPLIFICATION OF RECORDING LIGHT FOR AMPLITUDES GREATER THAN A GIVEN LIMIT

EVALUATION:

- THE FIRST LINE OF EVALUATION OF EACH EVENT CONTAINS
DATE AND (FOR KNOWN FOCI) GEOGRAPHICAL REGION OF EPICENTER (MOSTLY FOLLOWING FLINN & ENGAHL 1965)
BODY WAVE MAGNITUDE MB WITH THE NUMBER OF USED OBSERVATIONS.
DETAILED INFORMATION, WITH RESPECT TO GEOGRAPHICAL REGION OR OTHER COMMENTS CAN BE WRITTEN ALSO HERE.
THE NEXT LINES ARE DIVIDED INTO THE FOLLOWING COLUMNS
- THE NOMENCLATURE OF THE PHASES CORRESPONDS TO THE LIST OF ISC, COMPLETED BY SOME PHASES (pP APPEARS AS AP, sP APPEARS AS XP, MULTIPLE PHASES AS P(1) FOR INSTANCE)
 - TIME OF ONSET IN G.M.T.
 - DIRECTION OF VERTICAL COMPONENT OF THE GROUND MOTION
 - PERIODS, AMPLITUDES, AND EVENTUALLY MAGNITUDES FOR IMPORTANT ONSETS APPEAR IN THE CORRESPONDING LINE IF MEASUREMENT IS POSSIBLE;
FOR SHORTPERIODIC WAVES IN THE SEQUENCE OF COMPONENTS z, n, e (PERIOD IN SECONDS/AMPLITUDE IN NANOMETRES)
FOR LONGPERIODIC WAVES T, AN, AE, AV (MEAN PERIOD IN SECONDS, AMPLITUDES FOR N, E, V COMPONENTS IN MICROMETRES)
 - MAGNITUDES CAN BE DETERMINED - FOR BODY WAVES THROUGH THE EARTH MANTLE (MPV, MPH, MPMV, MPMH, MPPV, MPPH, MSH)
- FOR SHORTPERIODIC LONGITUDINAL CORE WAVES (MC)
- FOR MAXIMUM OF SURFACE WAVES (MLH, MLV)
- FOR STRONG QUAKES SOMETIMES FROM WIECHERT RECORDS (MAG)
 - HYPOCENTER DATA (LATITUDE, LONGITUDE, DEPTH, ORIGIN TIME) OF THE FOLLOWING INSTITUTIONS ARE USED IN GENERAL
(U) U.S. NATIONAL EARTHQUAKE INFORMATION SERVICE
(B) EUROPEAN-MEDITERRANEAN SEISMOLOGICAL CENTRE
(M) ACADEMY OF SCIENCES OF U.S.S.R., INSTITUTE OF PHYSICS OF THE EARTH
(I) INTERNATIONAL SEISMOLOGICAL CENTRE
(A) INSTITUTE FOR METEOROLOGY AND GEODYNAMICS IN VIENNA, AUSTRIA
(C) GEOPHYSICAL INSTITUTE OF THE CZECHOSLOVAK ACADEMY OF SCIENCES
(G) NATIONAL OBSERVATORY OF ATHENS, GREECE
(P) POLISH ACADEMY OF SCIENCES
(S) SEISMOLOGICAL INSTITUTE, UPPSALA, SWEDEN
OWN COMMENTS ARE GIVEN WITHOUT MENTION OF SOURCE.
 - MB IS THE BODY WAVE MAGNITUDE GIVEN BY (U). /MB/ IS PRINTED IN FEW OTHER CASES WITH FOCAL DATA OF OTHER INSTITUTIONS.
 - EPICENTRAL DISTANCE D AND STATION AZIMUTH AZ ARE CALCULATED USING THE FIRST EPICENTER INDICATION AND ARE PRINTED ABOVE THESE DATA.
D AND AZ ARE CALCULATED ACCORDING TO GEOCENTRIC CO-ORDINATES (D COMMONLY IN DEG, FOR NEAR EVENTS IN km, WITH A MAXIMUM ERROR OF ± 0.1 DEG AND ± 1 km, RESPECTIVELY; AZ IN DEG WITH A MAXIMUM ERROR OF ± 1 DEG).
 - FOR COMPARISON WITH THE FIRST OWN EVALUATION "DISTANCE" AND "DEPTH" ARE GIVEN BELOW THE HYPOCENTER DATA.
 - ROUND BRACKETS INDICATE UNCERTAINTIES.

NUMEROUS EXPLOSIONS AND ROCK BURSTS ARE LEAVED OUT IN THIS BULLETIN BECAUSE OF ITS UNIMPORTANT FORCE.
VENTUAL INTERRUPTIONS OF RECORDS ARE INDICATED IN THE TIME SEQUENCE.
THE COMPILATION WAS PERFORMED AT THE COMPUTER CENTER OF ZENTRALINSTITUT DER METALLURGIE, LEIPZIG.

1977 JAN 01	03 18 02							
1977 JAN 01	RYUKYU ISLANDS	MB=5.1(5)	D= 83.8 DEG AZ= 52	28.1N;130.6E	33KM	H=06 23 45.1 (U)		
I(P)	06 36 16.3D 1.1 / 25					06 23 49 (M)		
E	36 22							
1977 JAN 01	06 36 55							
E(P)	37 03.8							
I								
1977 JAN 01	SOUTH OF HONSHU, JAPAN	MB=5.2(28)	D= 84.7 DEG AZ= 46	30.7N;137.1E	476KM	H=11 33 41.6 (U)		
E P	11 45 24					31.1N;137.1E	460KM	11 33 35 (M)
E AP	47 24							
E(PP)	49 02							
1977 JAN 01	12 45 45							
E								
1977 JAN 01	KERMADEC ISLANDS REGION	MB=4.9(1)	D=155.8 DEG AZ= 20	28.1S;176.2W	33KM	H=14 24 23.9 (U)		
E	14 44 33							
1977 JAN 01	NORTHERN ITALY	FRIULI	NO MB COMP.	D= 5.0 DEG AZ=180				
I PN	17 10 22.3			46.3N; 13.0E	10KM	H=17 09 07.5 (B)		
E SN	11 17			46.6N; 12.8E	33KM	17 09 11.9 (U)		
E SG	11 47							
1977 JAN 01	JAVA	MB=5.7(22)	D= 99.9 DEG AZ= 90	7.9S;109.0E	113KM	H=17 35 54.9 (U)		
E P	17 49 47			7.8S;108.8E	100KM	17 35 53 (M)		
E	52 50							
1977 JAN 01	CERAM SEA	MB=6.0(40)	D=106.5 DEG AZ= 73	2.5S;126.6E	33KM	H=19 01 39.6 (U)		
E AP	19 16 02	1.6 / 35		1.9S;126.5E		19 01 40 (M)		
E	17 34							
F	19 07							
E PP	20 19							
E SKS	26.4							
E S	27.9							
E	30.3							
E PKKP	31 34							
E SSS	39.5							
LM	57	T 20 AM 6.5 AE 2	MLH =6.2					
L	20 17	T 18 AM 3.5 AE 2.5 AV 3.5	MLV =6.0					
1977 JAN 01	20 45 50							
E								
1977 JAN 01	TSINGHAI PROVINCE, CHINA	MB=5.9(64)	D= 54.5 DEG AZ= 72	38.1N; 91.0E	27KM	H=21 39 41.3 (U)		
I P	21 49 08.7D 1.9 / 330			38.0N; 91.0E		21 39 37 (M)		
E	49 11							
E	49 78							
E	50 76							
E	56 37							
E S	56 51							
E	57 09							
E	57 21							
E	57 52							
E	58.4							
E(SSS)	22 01.1							
LM	13	T 15 AM 7.5 AE 15.5 AV 17.5	MLH =6.1 MLV =6.3					
1977 JAN 01	EASTERN TURKEY	MB=5.0(6)	D= 24.5 DEG AZ=108	39.2N; 43.5E	24KM	H=22 26 40.6 (U)		
E P	22 31 59			39.6N; 43.6E	10KM	22 26 43.2 (B)		
				39.5N; 43.6E	25KM	22 26 43 (M)		
1977 JAN 01	SOUTH PACIFIC CORDILLERA	MB=5.4(3)	D=165.0 DEG AZ=242	56.2S;142.9W	33KM	H=23 24 16.6 (U)		
E PKP2	23 45 14	1.4 / 18						
1977 JAN 02	SUMBA REGION	MB=5.8(27)	D=107.9 DEG AZ= 84	10.2S;119.0E	19KM	H=09 55 28.4 (U)		
E	10 10 11			9.3S;118.9E		09 55 35 (M)		
E	11 29							
E PP	14 26							
E SKS	20.5							
E(PPS)	24.5							
E PKKP	25 26							
LM	59	T 24 AM 9 AE 3	MLH =6.2					
L	11 03	T 20 AM 3 AE 6 AV 7.5	MLV =6.3					
FINAL	12							
1977 JAN 02	EASTERN TURKEY	MB=4.9(5)	D= 24.5 DEG AZ=108	39.2N; 43.6E	34KM	H=19 37 25.2 (U)		
E P	19 42 46	2.0 / 57		39.3N; 43.7E	40KM	19 37 29.1 (B)		
E(PP)	43 24			39.5N; 43.7E		19 37 28 (M)		
1977 JAN 02	OFF EAST COAST OF HONSHU, JAPAN	MB=4.8(7)	D= 84.1 DEG AZ= 41	33.5N;141.2E	32KM	H=22 28 58.6 (U)		
E P	22 41 27			33.4N;141.0E		22 28 59 (M)		
1977 JAN 03	CARLSBERG RIDGE	MB=5.0(15)	D= 59.1 DEG AZ=122	6.7N; 60.3E	33KM	H=06 15 50.0 (U)		
E P	06 25 51	2.1 / 73		7.0N; 59.8E	25KM	06 15 53 (M)		
1977 JAN 03	CARLSBERG RIDGE	MB=4.8(4)	D= 58.7 DEG AZ=122	7.2N; 60.2E	33KM	H=06 41 07.8 (U)		
E P	06 51 04							
1977 JAN 03	SOUTH OF FIJI ISLANDS	MB=5.1(5)	D=150.6 DEG AZ= 25	23.6S;180	540KM	H=13 53 14.2 (U)		
I PKP1	14 12 06.4							



Year	Month	Day	Time	Region	Station	Mag	D (DEG)	AZ (DEG)	H (KM)	Dip (DEG)	Depth (KM)	Mag	D (DEG)	AZ (DEG)	H (KM)	Dip (DEG)	Depth (KM)																																																																																																																																																																																																																																																																																																																							
1977	JAN	04	02 52 34.80	KURILE ISLANDS REGION	1.1 / 18	4.9 (7)	77.4	30	53	02 40	44.0 (U)	1977	JAN	06	14 21 45.14	GERMAN DEMOCRATIC REPUBLIC	22 10	5.2 (36)	88.7	293	33	14 56	46.1 (U)	1977	JAN	06	16 09 15		16 09 15	5.1 (15)	31.2	112	45	16 09	56.5 (U)	1977	JAN	06	16 13 59.20	ANDREANOF ISLANDS, ALEUTIAN IS.	14 14.1	5.2 (44)	77.3	5	38	16 02	07.6 (U)	1977	JAN	06	18 43 10.80	LAKE TANGANYIKA REGION	43 21.4 1.8 / 46	5.3 (25)	55.3	161	21	18 33	43.5 (U)	1977	JAN	06	21 59 50	TIBET		5.2 (15)	57.5	80	33	21 50	08.1 (U)	1977	JAN	06	22 17 09			5.2 (11)	62.5	151	33	20 44	39.4 (U)	1977	JAN	06	23 39 00	FRANCE JURA		5.5 (37)	40.2	110	29	05 44	39.9 (U)	1977	JAN	06	01 44 35	POLAND, UPPER SILESIA		5.0 (4)	150.4	25	538	10 20	29.1 (U)	1977	JAN	07	00 39 21	PAKISTAN	40 00.13	5.1 (12)	91.2	44	21	10 37	23.8 (U)	1977	JAN	07	14 50 59	SOUTH ATLANTIC RIDGE	54 17	5.0 (6)	85.4	202	33	14 38	22.4 (U)	1977	JAN	07	17 34 35	SOUTH OF FIJI ISLANDS		5.1 (4)	152.8	20	76	17 18	47.3 (U)	1977	JAN	07	19 49 15.80	TAIWAN REGION	1.5 / 140	5.0 (8)	144.4	11	33	10 36	29.4 (U)	1977	JAN	07	20 28 30	TUVA AU 3 AE 1		5.0 (3)	149.0	15	167	11 44	40 (I)	1977	JAN	07	21 44 05	LUZON, PHILIPPINE ISLANDS	1.2 / 22	NO MB COMP.	146.6	19	389	13 26	35.4 (I)	1977	JAN	07	21 47 09	PHILIPPINE ISLANDS REGION		5.2 (16)	148.3	20	575	13 29	48.1 (U)	1977	JAN	07	00 53 59.40	LUZON, PHILIPPINE ISLANDS	1.3 / 32	5.4	DISTANCE 148	DEG	DEPTH 570	KM	5.5 (49)	89.5	66	36	00 41	04.1 (U)	1977	JAN	08	07 59 50.20	SANTA CRUZ ISLANDS	1.3 / 26	4.8 (12)	65.8	79	104	14 10	56.5 (U)	1977	JAN	08	12 43 37	NEW BRITAIN REGION	43 58	4.9 (13)	86.2	65	52	21 31	27.3 (U)	1977	JAN	08	13 31 57	GREENLAND SEA	1.7 / 30	5.2 (29)	93.9	44	33	22 44	59.7 (U)	1977	JAN	08	21 56 50.40	LOYALTY ISLANDS REGION	1.9 / 84	5.3 (15)	122.7	52	61	12 24	45.4 (U)	1977	JAN	08	23 31 41.90	VOLCANO ISLANDS REGION		5.5 (49)	134.5	38	42	07 40	41.9 (U)	1977	JAN	09	09 38 10	SOUTH ATLANTIC RIDGE		5.5 (19)	22.4	354	01	01 44	36 (I)	1977	JAN	09	11 44 40			5.3 (18)	71.9	207	33	09 26	54.3 (U)	1977	JAN	09	14 27 44.15	NORTHERN ITALY FRIULI		NO MB COMP.	5.0	179	10	14 26	29.6 (B)	1977	JAN	10	03 41 49	LUZON, PHILIPPINE ISLANDS		5.4 (42)	74.8	24	60	07 55	57.5 (U)	1977	JAN	10	07 59	KURILE ISLANDS	1.5 / 46	5.4 (42)	74.8	24	60	07 56	00 (M)



Date	Time	Region	Station	Magnitude	Depth (km)	Distance (deg)	Azimuth (deg)	Other Data
1977 JAN 10	00 35 19			MB=5.5(40)				
1977 JAN 10	09 50 24.1D	FIJI ISLANDS REGION	I PKP1		D=148.0 DEG 20.75N179.2W	AZ= 22 853KM	H=09 31 49.6 (U)	
1977 JAN 10	18 24 40			MB=5.0(5)				
1977 JAN 10	20 59 01	BULGARIAN ISLANDS	E PKP		D=125.7 DEG 7.08N154.7E	AZ= 49 52KM	H=20 40 03.0 (U)	
1977 JAN 10	23 04 00	KERMADEC ISLANDS REGION	E PKP2		D=196.0 DEG 28.48N176.7W	AZ= 21 33KM	H=22 43 43.0 (U)	
1977 JAN 10	23 37 43.1D	LOYALTY ISLANDS	I PKP		D=144.7 DEG 21.95N168.7E	AZ= 42 16KM	H=23 18 07.0 (U)	
1977 JAN 11	12 09 54			MB=5.1(15)				
1977 JAN 11	15 00 10.8C	ARABIAN SEA	I P		D= 52.5 DEG 12.9N1 57.5E	AZ=120 33KM	H=14 51 05.0 (U)	
1977 JAN 12	02 48 00			NO MB COMP.				
1977 JAN 12	04 00 10.17	LOYALTY ISLANDS	I PKP		D=144.6 DEG 21.45N168.6E	AZ= 42 33KM	H=07 40 41.9 (U)	
1977 JAN 12	09 23 54							
1977 JAN 12	17 54 38	SZECHUAN PROVINCE, CHINA	E		D= 98.3 DEG 28.2N1102.6E	AZ= 72 33KM	H=17 43 33.4 (U)	
1977 JAN 12	18 45 23							
1977 JAN 12	18 51 37.2	KURILE ISLANDS	I P		D= 77.3 DEG 44.5N1149.1E	AZ= 31 117KM	H=18 39 54.5 (U)	
1977 JAN 12	23 47 45.1C	NORTHERN SUMATERA	I AP		D= 86.8 DEG 1.0N1 99.9E	AZ= 91 178KM	H=23 35 19.1 (U)	
1977 JAN 13	09 21 07.1C	CENTRAL YUGOSLAVIA	I PH		D= 8.3 DEG 48.3N1 17.1E	AZ=159 20KM	H=09 19 06.1 (U)	
1977 JAN 13	12 58 29	POLAND UPPER SILESIA	E SG		D= 14.9 DEG 38.0N1 22.5E	AZ=150 74KM	H=03 39 00.0 (U)	
1977 JAN 14	00 34 45							
1977 JAN 14	03 45 25	TRACES! GREECE	E		D= 14.9 DEG 38.0N1 22.2E	AZ=150 10KM	H=03 38 57.0 (U)	
1977 JAN 14	07 32 52							
1977 JAN 14	11 07 49	HEIHELAND REGION	E PKP		D=122.9 DEG 4.75N153.0E	AZ= 50 75KM	H=10 48 58.5 (U)	
1977 JAN 14	11 19 52							
1977 JAN 14	11 58 15							
1977 JAN 14	15 54 00	AFGHANISTAN-USSR BORDER REGION	E P		D= 43.4 DEG 30.0N1 71.4E	AZ= 86 149KM	H=15 46 11.1 (U)	
1977 JAN 14	17 38 17	FIJI ISLANDS REGION	I PKP		D=147.5 DEG 19.88N177.3W	AZ= 19 850KM	H=17 58 35.2 (U)	
1977 JAN 14	19 10							
1977 JAN 14	19 48							
1977 JAN 14	20 41							
1977 JAN 14	21 55							
1977 JAN 14	18 33 44							
1977 JAN 14	22 57 57	NORTHEASTERN CHINA	E P		D= 88.3 DEG 40.2N118.8E	AZ= 52 33KM	H=22 46 56.9 (U)	
1977 JAN 15	00 31 49	NORTHERN ITALY	E PG		D= 61.9 DEG 44.9N1 91.0E	AZ=204 10KM	H=00 29 25.1 (U)	
1977 JAN 15	11 02 20	TRACES! PHILIPPINE ISLANDS REGION	E P		D= 93.7 DEG 18.0N1126.0E	AZ= 64 33KM	H=10 49 05.8 (U)	
1977 JAN 15	11 09 02	TRACES! PHILIPPINE ISLANDS REGION	E P		D= 93.7 DEG 18.1N1125.9E	AZ= 64 33KM	H=10 55 47.2 (U)	
1977 JAN 15	10 25 34							
1977 JAN 15	22 14 55	SOUTH OF HONSHU, JAPAN	E P		D= 85.3 DEG 32.7N1142.8E	AZ= 41 33KM	H=22 02 19.3 (U)	
1977 JAN 16	00 39 40	HINDU KUSH REGION	E PP		D= 43.4 DEG 36.9N1 70.7E	AZ= 88 89KM	H=00 30 08.2 (U)	
1977 JAN 16	03 49 09	KURILE ISLANDS	E		D= 74.6 DEG 49.7N1156.1E	AZ= 24 66KM	H=03 36 48.8 (U)	
1977 JAN 16	09 20 20.1C	SOUTHERN GREECE	I(P)		D= 15.1 DEG 37.9N1 22.9E	AZ=149 52KM	H=09 16 49.1 (U)	
1977 JAN 16	09 55 23.7	SOUTHERN GREECE	I P		D= 15.2 DEG 37.8N1 22.8E	AZ=149 0KM	H=09 29 07.2 (U)	
1977 JAN 16	10 34 37	KERMADEC ISLANDS REGION	E(PKP2)		D=196.0 DEG 28.38N176.3W	AZ= 20 28KM	H=06 14 12.3 (U)	
1977 JAN 17	05 24 40	EASTERN TURKEY	E P		D= 24.5 DEG 39.2N1 43.8E	AZ=108 33KM	H=05 19 23.7 (U)	
1977 JAN 17	00 36 30.3	BUNIN ISLANDS REGION	I P		D= 90.6 DEG 20.7N1142.6E	AZ= 44 33KM	H=06 23 36.1 (U)	
1977 JAN 17	09 54 00.3C	SOUTH OF ALASKA	I P		D= 74.9 DEG 53.9N1158.2W	AZ=355 22KM	H=09 42 25.6 (U)	
1977 JAN 17	15 38 43	WESTERN POLAND	E PH		D= 2.0 DEG 51.0N1 16.1E	AZ= 98 0KM	H=15 38 09 (U)	

Date	Region	Time	Station	MB	D	AZ	H	MLH	MLV	Other
1977 JAN 17	UNIMAK ISLAND REGION	19 09 21	E P	5.3(11)	74.9 DEG 54.1N;164.3W	AZ=358 33KM	H=18 57 41			
1977 JAN 17	FIJI ISLANDS REGION	19 24 08	E PKF L	6.3(56)	142.8 DEG 14.9S;177.2W 14.6S;176.4W	AZ=16 36KM	H=19 04 37.4 19 04 37			
1977 JAN 17	CHILE-ARGENTINA BORDER REGION	21 41 14	P		104.0 DEG 24.8S; 68.7W 25.2S; 69.0W	AZ=248 33KM 100KM	H=21 27 12.6 21 27 19			DISTANCE 103 DEG
1977 JAN 17	SOUTH OF FIJI ISLANDS	23 02 12.87	I PKP1	4.9(13)	150.7 DEG 23.8S;179.9E	AZ=25 505KM	H=22 43 18.5			
1977 JAN 18	TRACES	00 00 59								
1977 JAN 18	TRACES	04 23 24								
1977 JAN 18	COOK STRAIT, NEW ZEALAND	06 01 46.3	I PKP(1) E PKP(2) E PKP(1) E PKP(2) E PP(1) E SCPP(1)	5.9(25) MC =5.8 MC =6.3	164.0 DEG 41.7S;174.3E 41.3S;174.6E	AZ=60 50KM	H=05 41 49.6 05 41 45			DISTANCE 162.5 DEG
1977 JAN 18	MEDITERRANEAN SEA	08 55 19.4	I P E	5.2(36)	31.2 DEG 33.2N; 48.0E 33.3N; 48.0E 32.9N; 47.9E	AZ=112 48KM 71KM	H=08 48 54.1 08 48 59.0 08 48 51			
1977 JAN 18	TRACES, EXPLOSION OF 10 TONS; CZECHOSLOVAKIA	07 01 15.2	I PG I SG		143 KM 50.12N; 12.23E	AZ=203				
1977 JAN 18	TRACES	07 01 45.2	I P							
1977 JAN 18	TRACES	12 22 58	E							
1977 JAN 18	SOUTH OF FIJI ISLANDS	14 54 15.4	I PKP1	4.6(3)	146.9 DEG 21.3S;175.0E	AZ=32 539KM	H=14 35 33.3			
1977 JAN 18	AUSTRIA-SWITZERLAND-LICHTENSTEIN BORDER REG.	17 02 43	E SG		4.8 DEG 47.1N; 9.5E	AZ=210 33KM	H=17 00 03.2			
1977 JAN 18	EASTERN MEDITERRANEAN SEA	20 51 16	E P	4.4(16)	19.5 DEG 35.6N; 29.4E 35.7N; 29.5E	AZ=136 57KM 58KM	H=20 46 51.9 20 46 53.6			
1977 JAN 19	TSINGHAI PROVINCE, CHINA	00 56 39.20	I AP I PP I S I PS E L E PKP LH FINAL	5.9(73)	58.0 DEG 37.0N; 95.7E 36.9N; 95.8E	AZ=73 33KM	H=00 46 18.3 00 46 12			DISTANCE 58 DEG
1977 JAN 19	LOYALTY ISLANDS REGION	01 40 23	E PKP		147.4 DEG 23.4S;171.2E	AZ=39 33KM	H=01 20 37			
1977 JAN 19	SOLOMON ISLANDS	03 57 53	E PKP E(SKP)	5.3(16)	129.9 DEG 8.9S;160.2E 9.1S;160.6E	AZ=44 80KM	H=03 34 51.2 03 34 44			
1977 JAN 19	POLAND, UPPER SILESIA	07 31 46	E SG							
1977 JAN 19	MINDANAO, PHILIPPINE ISLANDS	14 07 48	(PP) SKP L LH FINAL	5.8(39)	100.5 DEG 5.0N;126.6E 4.6N;126.7E	AZ=68 50KM 50KM	H=13 54 04.5 13 54 03			DISTANCE 103 DEG
1977 JAN 19	FIJI ISLANDS REGION	15 13 43.30	I PKP1 I PKP2 E APKP	5.0(6)	148.2 DEG 20 8N;178 7W	AZ=21 634KM	H=14 55 05.7			DISTANCE 148 DEG
1977 JAN 19	TUNISIA	20 50 27	E P LH	5.1(24)	15 / 32 50 38 56	AZ=194	H=20 46 53.3 20 46 55.4 20 46 55			
1977 JAN 20	ICELAND	03 01 58.15	I P		21.1 DEG 68.8N; 17.3W	AZ=325 10KM	H=02 57 13.0			
1977 JAN 20	POLAND, UPPER SILESIA	03 25 12	E SG							
1977 JAN 20	ICELAND	04 39 25	E P	4.3(11)	20.9 DEG 68.7N; 16.8W 68.8N; 17.0W	AZ=325 10KM	H=04 34 37.8 04 34 39.8			
1977 JAN 20	POLAND, UPPER SILESIA	05 42 13.12	I SG							
1977 JAN 20	EXPLOSION OF 10 TONS; CZECHOSLOVAKIA	08 00 34.15	I PG E(SG)		110 KM 50.41N; 13.64E	AZ=156				
1977 JAN 20	KURILE ISLANDS REGION	08 14 41.6	I P	4.5(2)	77.6 DEG 43.8N;148.1E	AZ=32 44KM	H=08 02 49.3			
1977 JAN 20	TONGA ISLANDS REGION	10 04 08	E PKP1		146.9 DEG 16.8S;172.8W	AZ=10 33KM	H=09 44 25.0			
1977 JAN 20	SOUTH OF FIJI ISLANDS	12 52 42	E PKIP I PKP1 I PKP2 E APKP	5.0(7)	150.5 DEG 28.3S;179.9W 28.3S;179.9W	AZ=25 546KM	H=12 33 59.2			DISTANCE 151 DEG DEPTH 550 KM
1977 JAN 20	TRACES	13 11 29.17	I(P)							
1977 JAN 20	QUESTIONABLE EVENT	15 20 39	E							
1977 JAN 20	TRACES	19 27 11	E							
1977 JAN 20	TAIWAN REGION	20 22 30.18	I P	5.2(21)	84.1 DEG 21.0N;120.3E 21.3N;120.4E	AZ=64 30KM	H=20 10 09.7 20 10 11			
1977 JAN 20	TAIWAN REGION	20 27 00	E P	4.0(3)	94.0 DEG 21.0N;120.2E	AZ=64 33KM	H=20 14 31.0			
1977 JAN 20	MINDANAO, PHILIPPINE ISLANDS	21 34 30.18	I P E E(PP) LH	5.4(15)	95.7 DEG 8.4N;123.0E 8.0N;123.1E	AZ=69 37KM	H=20 51 14.9 20 51 16			
1977 JAN 21	POLAND, UPPER SILESIA	00 25 33	E SG							
1977 JAN 21	TAIWAN	02 32 27	E P LH	5.3(40)	82.8 DEG 23.8N;121.9E 24.1N;122.1E	AZ=61 36KM	H=02 20 06.3 02 20 07			
1977 JAN 21	FIJI ISLANDS REGION	06 29 37.10	I PKIP I PKP1 I E E APKP E PP E SCPP	5.8(32)	145.6 DEG 19.8S;178.4W 19.8S;178.5W	AZ=19 604KM (575KM)	H=06 11 05.6 06 11 01 DEPTH 620 KM			
1977 JAN 21	FIJI ISLANDS REGION	09 46 38	E PKP	5.0(2)	144.3 DEG 19.5S;177.1W	AZ=17 33KM	H=09 27 03.8			
1977 JAN 21	TONGA ISLANDS	05 50 03	E PKP	5.3(18)	113.0 DEG 15.8N;173.1W	AZ=6 33KM	H=05 30 30.9			
1977 JAN 22	TRACES	12 16 05	E							
1977 JAN 22	TRACES	13 43 03	E							
1977 JAN 22	TRACES	15 27 25	E							
1977 JAN 22	TRACES	19 04 40	E							

1977 JAN 23	NEW HEBRIDES ISLANDS		MB=5.5(41)	D=156.5 DEG 13.45N106.5E 13.55N107.1E	AZ=39 39KM	H=01 38 23.15 01 38 21	(U) (M)
1977 JAN 23	MARIANA ISLANDS		MB=5.1(41)	D=99.5 DEG 18.0N1145.5E 18.9N1145.4E	AZ=45 210KM 200KM	H=05 38 49.6 05 38 44	(U) (M)
1977 JAN 23	WESTERN POLAND			DISTANCE 215 KM			
1977 JAN 23	TRACESI BUNIA ISLANDS REGION		MB=5.0(14)	D=90.6 DEG 20.0N1142.9E 20.0N1142.9E	AZ=43 33KM	H=14 54 14.9 14 54 16	(U) (M)
1977 JAN 23	NEAR COAST OF GUATEMALA		MB=5.1(41)	D=08.2 DEG 15.9N 91.7.	AZ=290 85KM	H=17 00 39.3	(U)
1977 JAN 23	RYUKYU ISLANDS		MB=4.9(5)	D=03.5 DEG 26.4N1130.5E	AZ=52 33KM	H=21 01 22.3	(U)
1977 JAN 23	TRACESI AFGHANISTAN-USK BORDER REGION		MB=4.7(11)	D=43.1 DEG 30.0N 71.0E 37.2N 70.9E	AZ=87 218KM 225KM	H=22 22 59.6 22 22 55	(U) (M)
1977 JAN 24	KURILE ISLANDS		MB=5.1(53)	D=77.0 DEG 45.5N1151.1E 45.5N1151.2E	AZ=29 33KM 50KM	H=06 11 21.7 06 11 23	(U) (M)
1977 JAN 24	CRETE		MB=4.1(4)	D=18.9 DEG 34.9N 25.9E 34.9N 25.6E	AZ=145 106KM 65KM	H=06 38 04.3 06 38 05.2	(U) (B)
1977 JAN 24				D=150.4 DEG 23.8S1178.8E	AZ=27 464KM	H=19 43 47.3	(U)
1977 JAN 24	SOUTH OF FIJI ISLANDS		MC=4.9	DISTANCE 151 DEG DEPTH 570 KM			
1977 JAN 25	TRACESI BURMA		MB=4.8(5)	D=71.2 DEG 17.5N 94.2E 17.1N 94.4E	AZ=86 25KM	H=02 05 52.0 02 05 52	(U) (M)
1977 JAN 25	SOUTH OF HONSHU JAPAN		MB=4.9(7)	D=85.9 DEG 37.4N1140.9E	AZ=43 53KM	H=05 20 23.2	(U)
1977 JAN 25	CENTRAL MID-ATLANTIC RIDGE		MB=5.0(4)	D=40.0 DEG 7.0N 37.2W	AZ=242 33KM	H=06 34 55.1	(U)
1977 JAN 25	NEW HEBRIDES ISLANDS		MB=5.0(25)	D=139.5 DEG 15.9S1168.2E 16.4S1168.5E	AZ=38 266KM	H=08 15 13.6 08 14 46	(U) (M)
1977 JAN 25	SANTA CRUZ ISLANDS REGION		MB=5.7(47)	D=133.6 DEG 10.9S1104.7E 10.2S1104.3E	AZ=40 25KM 20KM	H=10 31 04.9 10 31 08	(U) (M)
1977 JAN 25	FIJI ISLANDS REGION		MB=4.5(2)	D=148.1 DEG 20.4S1179.0.	AZ=22 599KM	H=10 58 25.4	(U)
1977 JAN 25	WESTERN TURKEY		MB=4.0(2)	D=15.9 DEG 39.4N 28.1E 39.7N 28.2E	AZ=133 23KM	H=23 54 18.1 23 54 22	(U) (M)
1977 JAN 26	TONGA ISLANDS		MB=4.0(4)	D=147.1 DEG 16.7S1173.3W	AZ=11 33KM	H=03 19 24.9	(U)
1977 JAN 26	TRACESI EASTERN MEDITERRANEAN SEA			D=19.5 DEG 39.1N 28.0E	AZ=140 10KM	H=14 40 04.6	(B)
1977 JAN 26	NORTHERN ITALY	FRIULI	NO MB COMP.	D=5.0 DEG 46.3N 13.3E 46.3N 13.2E	AZ=178 10KM 10KM	H=15 33 51.7 15 33 50.5	(B) (U)

1977 JAN 26								
1977 JAN 26	NORTH ATLANTIC OCEAN							(U)
1977 JAN 27	NEAR COAST OF PAKISTAN	14.7(6)	MB=5.1(14)	D=46.2 DEG 24.0N 62.6E	AZ=106	H=00 20 40	(M)	
1977 JAN 27	POLAND/UPPER SILESIA			D=53.4 DEG 52.2N 85.1E 52.3N 85.2E	AZ=120 33KM	H=11 41 01.1 11 41 01	(U) (M)	
1977 JAN 27	ARABIAN SEA			D=124.3 DEG 6.58N152.8E 6.28N153.0E	AZ=51 58KM	H=13 59 45.0 13 59 43	(U) (M)	
1977 JAN 27	NEW BRITAIN REGION		MB=5.7(43)	D=77.9 DEG 48.3N147.0E 48.5N147.6E	AZ=32 41KM	H=10 15 16.4 10 15 16	(U) (M)	
1977 JAN 27	KURILE ISLANDS		MB=5.0(8)	D=77.8 DEG 48.4N147.0E 48.5N147.7E	AZ=32 41KM	H=10 52 09.8 10 52 09	(U) (M)	
1977 JAN 27	EASTERN SEA OF JAPAN		MB=4.5(4)	D=74.5 DEG 44.4N140.9E	AZ=36 280KM	H=20 11 03.0	(U)	
1977 JAN 28	NORTH ATLANTIC RIDGE		MB=4.7(16)	D=26.5 DEG 50.3N 29.3W 50.4N 29.4W 50.3N 29.4W	AZ=285 33KM 10KM	H=00 48 12.6 00 48 12.2 00 48 06	(U) (B) (M)	
1977 JAN 28	NORTH ATLANTIC RIDGE		MB=4.7(15)	D=26.5 DEG 50.3N 29.3W 50.2N 29.4W	AZ=284 33KM 10KM	H=01 12 47.9 01 12 47.0 01 12 43	(U) (B) (M)	
1977 JAN 28	POLAND/UPPER SILESIA	NO MB COMP.		D=3.9 DEG 50.8N 19.1E	AZ=95 0KM	H=03 05 29	(I)	
1977 JAN 28	SOUTH OF HONSHU JAPAN		MB=4.9(12)	D=86.2 DEG 29.8N138.8E 27.8N139.4E	AZ=45 409KM	H=04 25 14.8 04 24 26	(U) (M)	
1977 JAN 28	NORTH ATLANTIC RIDGE		MB=4.9(14)	D=27.0 DEG 57.7N 33.0W 57.4N 33.2W 57.3N 33.8W	AZ=302 33KM 10KM	H=14 11 31.0 14 11 30.1 14 11 27	(U) (B) (M)	
1977 JAN 28	NEW HEBRIDES ISLANDS		MB=5.4(13)	D=141.0 DEG 17.4S1105.7E 17.5S1108.0E	AZ=39 14KM	H=18 00 51.8 18 00 50	(U) (M)	
1977 JAN 29	NEW BRITAIN REGION		MB=5.0(20)	D=122.7 DEG 5.2S1151.8E 5.3S1152.1E	AZ=51 55KM	H=00 52 52.7 00 52 48	(U) (M)	
1977 JAN 29	SOUTH BURMA		MB=4.9(8)	D=74.2 DEG 15.2N 96.5E 15.1N 96.4E	AZ=85 40KM	H=05 10 52.7 05 10 52	(U) (M)	
1977 JAN 29	KERMADEC ISLANDS REGION		MB=5.1(5)	D=156.0 DEG 28.4S1176.8W	AZ=22 68KM	H=10 28 18.0	(U)	
1977 JAN 30	BALBEIY ISLANDS REGION		MB=4.6(3)	D=156.9 DEG 62.4S1155.1E	AZ=133 33KM	H=00 13 28.4	(U)	
1977 JAN 30	NORTHEASTERN CHINA		MB=5.2(14)	D=08.4 DEG 39.5N118.0E 40.0N118.2E	AZ=53 33KM	H=04 11 57.3 04 12 00	(U) (M)	
1977 JAN 30	TRACESI		MB=5.0(21)	D=42.9 DEG 39.0N 73.6E 39.8N 73.2E	AZ=81 33KM	H=10 36 06.4 10 36 08	(U) (M)	
1977 JAN 30	TADZHIK-SINKIANG BORDER REGION			D=14.225414	AZ=81			

Date	Time	Location	Station	Depth (km)	Magnitude	Distance (deg)	Azimuth (deg)	Other Data
1977 JAN 30	21 20 24	CENTRAL YUGOSLAVIA	E SH					
1977 JAN 31	02 27 11	CENTRAL MID-ATLANTIC RIDGE	E P	1.2	17			
1977 JAN 31	07 14 14	CENTRAL YUGOSLAVIA	E SH					
1977 JAN 31	11 26 14		E					
1977 JAN 31	12 47 20	CHAGOS ARCHIPELAGO REGION	I P	0.9	13			
1977 JAN 31	14 25 00	CHAGOS ARCHIPELAGO REGION	I P	1.7	66			
1977 JAN 31	14 33 57	TADZHIK SSR	I P	0.9	200			
1977 JAN 31	15 27 33		E (P)					
1977 JAN 31	15 47 32	NORTHERN ITALY	E SG					FRIULI
1977 JAN 31	20 56 50	TONGA ISLANDS	E PKP					
1977 FEB 01	12 19 59	KURILE ISLANDS	I P	0.9	50			
1977 FEB 01	10 24 13	RYUKYU ISLANDS	E P					
1977 FEB 01	10 37 20		E					
1977 FEB 01	21 44		LH					
1977 FEB 01	23 39 50		E					
1977 FEB 02	12 22 49	NORTHERN ITALY	E SH					FRIULI
1977 FEB 02	20 20 30		E					
1977 FEB 02	20 24 04		E					
1977 FEB 02	21 08 00	KURILE ISLANDS	E P					
1977 FEB 02	21 40 21		E P	1.7	30			
1977 FEB 02	23 03 40	WESTERN POLAND	E P					DISTANCE 230 KM
1977 FEB 02	03 43 12		I PG					
1977 FEB 02	03 57 11		I					
1977 FEB 02	04 12		E SG					
1977 FEB 02	23 05 19		E					
1977 FEB 02	23 08 00	FIJI ISLANDS REGION	E PKIP					
1977 FEB 02	08 00 20		I PKP1	1.0	97			
1977 FEB 02	10 30		E (APKP)					
1977 FEB 03	04 52 44	NEW HEBRIDES ISLANDS	I PKP	1.1	22			
1977 FEB 03	07 29 10	TRACES	I					
1977 FEB 03	10 50 13	KURILE ISLANDS	I P	1.1	39			
1977 FEB 03	10 06 02	IONIAN SEA	E (P)					
1977 FEB 03	10 45 52		E					
1977 FEB 03	20 31 53	LOYALTY ISLANDS REGION	I PKP	0.8	19			
1977 FEB 04	00 59 45	LOYALTY ISLANDS REGION	E PKP					
1977 FEB 04	07 59 25	SALTA PROVINCE, ARGENTINA	I P	1.0	165			
1977 FEB 04	00 01 27		E AP					
1977 FEB 04	03 30 14		I PP					
1977 FEB 04	05 52		E PPP					
1977 FEB 04	08 12		E					
1977 FEB 04	09 12		E SKS					
1977 FEB 04	09 52		E (SKKS)					
1977 FEB 04	13 10		E PS					
1977 FEB 04	14 05		E (XS)					
1977 FEB 04	16 00 19		I PKKP					
1977 FEB 04	18 07 14		I SKKP					
1977 FEB 04	25 10		E SSSS					
1977 FEB 04	26 22		E SKPPKP					
1977 FEB 04	26 37		E					
1977 FEB 04	00 41 34	TRACES	E P					
1977 FEB 04	10 52 13	TRACES	E					

1977 FEB 10 CENTRAL YUGOSLAVIA E(S4) 06 23 50 E SG 24 29		D= 6.5 DEG AZ=109 44.9N 14.8E 10KM H=06 21 03 13	1977 FEB 13 NEW BRITAIN REGION 04 40 28 0,9 / 15	MB=5.4(10)	D=123.3 DEG AZ= 51 5,0N152.2E 33KM H=04 21 28.8 (U) 3,9S151.5E 04 21 37 (M)
1977 FEB 10 LOYALTY ISLANDS REGION I PKP 06 15 32 30 1,1 / 28 0	MB=5.2(13)	D=145.5 DEG AZ= 40 21,8S169.9E 41KM H=07 55 56.7 21,9S170.0E 07 55 51	1977 FEB 13 05 14 48		
1977 FEB 10 HUNGARY E P 09 07 31			1977 FEB 13 05 17 23		
1977 FEB 10 HUNGARY E SG 10 15 20 E SG 15 40		D= 5.8 DEG AZ=148 46,5N 17.4E 10KM H=10 12 33.6	1977 FEB 13 KAMCHATKA 00 02 40 1,3 / 23 03 26	MB=5.0(37)	D= 71.0 DEG AZ= 21 54,1N158.3E 167KM H=05 51 45.3 (U) 53,1N158.2E 250KM 05 51 44 (M)
1977 FEB 10 HUNGARY E SG 10 17 01 E SG 17 20		D= 5.7 DEG AZ=148 46,4N 17.3E 10KM H=10 14 18.6	1977 FEB 13 LOYALTY ISLANDS REGION 00 49 02 49 09	NO MB COMP.	D=145.5 DEG AZ= 40 21,9S169.7E 33KM H=06 29 24.9 (U)
1977 FEB 10 SOUTH SANJWHICH ISLANDS REGION E PKP 22 59 40 E APP 23 31 09 I PKP 10 20 17 LH 45	MB=6.3(16)	D=115.5 DEG AZ=199 60,9S 23.1W 33KM H=22 41 06.2 60,5S 20.9W 22 41 06	1977 FEB 13 LOYALTY ISLANDS REGION 07 54 29	NO MB COMP.	D=145.5 DEG AZ= 40 21,9S169.8E 33KM H=07 34 54.3 (U)
1977 FEB 10 KERMADEC ISLANDS I PKP 23 25 30 1,2 / 24	MB=4.3(1)	D=156.8 DEG AZ= 23 29,3S177.0W 53KM H=23 05 11.3	1977 FEB 13 KURILE ISLANDS 11 07 43	MB=4.0(9)	D= 76.2 DEG AZ= 27 46,9N152.7E 33KM H=10 55 56.9 (U)
1977 FEB 10 KERMADEC ISLANDS I PKP 23 40 34 0	NO MB COMP.	D=157.0 DEG AZ= 23 29,5S177.0W 51KM H=23 20 13.6	1977 FEB 13 LOYALTY ISLANDS REGION 11 56 30 1,2 0,8 / 23	MB=4.5(1)	D=145.7 DEG AZ= 40 21,9S169.9E 33KM H=11 37 00.7 (U)
1977 FEB 10 KERMADEC ISLANDS E PKP 23 47 44	NO MB COMP.	D=157.0 DEG AZ= 24 29,5S177.4W 33KM H=23 27 12	1977 FEB 13 MOLOCCA SEA 13 20 51 1,4 / 30 24 10 25 10 25 26	MB=5.8(27)	D=103.7 DEG AZ= 73 0,1S125.1E 33KM H=13 06 51.3 (U) 0,1N124.9E 13 06 52 (M)
1977 FEB 11 WESTERN POLAND I P 07 40 21 0 E SG 40 40		DISTANCE 240 KM	1977 FEB 13 PERU 13 23 04	MB=4.0(1)	D= 97.5 DEG AZ=260 12,2S 73.9W 33KM H=13 09 31.7 (U)
1977 FEB 11 KERMADEC ISLANDS REGION E PKP 11 21 20	NO MB COMP.	D=157.2 DEG AZ= 23 29,7S176.9W 54KM H=11 00 55.2	1977 FEB 13 LOYALTY ISLANDS REGION 14 21 44 1,3 0,52	MB=5.2(3)	D=145.7 DEG AZ= 40 21,9S169.9E 33KM H=14 02 08.2 (U)
1977 FEB 11 NEAR EAST QUAKE E 11 25 30			1977 FEB 13 JAN MAYEN ISLAND REGION 15 13 32	MB=4.5(13)	D= 23.1 DEG AZ=337 70,7N 14.0W 33KM H=15 08 29.8 (U) 70,7N 14.4W 10KM 15 08 29.0 (B)
1977 FEB 11 FROM SOUTH WESTERN REGION SOUTH OCEAN JURA E P 10 34 50 I P 35 07.4 E SG 35 50	NO MB COMP.	D= 3.9 DEG AZ=222 46,4N 9.1E 33KM H=10 33 52.6 46,3N 9.1E 6KM 18 33 51.6 DISTANCE 410 DEG	1977 FEB 13 15 15 21		
1977 FEB 11 NORTH ATLANTIC RIDGE I P 22 07 10 1,1 / 28 E 27 34	MB=4.8(27)	D= 46.8 DEG AZ=286 50,6N 30.0W 33KM H=22 01 36.3 50,6N 30.0W 10KM 22 01 36.1 50,6N 30.2W 20KM 22 01 32	1977 FEB 13 TRACES 23 03 42		
1977 FEB 12 01 30 30			1977 FEB 14 PAKISTAN 00 31 04 I PP 32 57.7 E PPPP 33 53 E 35 08	MB=5.4(35)	D= 46.5 DEG AZ= 88 33,6N 73.3E 33KM H=00 22 38.4 (U) 33,5N 73.2E 00 22 38 (M)
1977 FEB 12 TRACES E 02 04 44			1977 FEB 14 NEAR EAST COAST OF HONSHU, JAPAN 09 20 30 1,4 / 28	MB=4.8(10)	D= 81.7 DEG AZ= 41 35,7N140.1E 79KM H=09 08 26.1 (U) 30,5N139.6E 115KM 09 08 33 (M)
1977 FEB 12 LOYALTY ISLANDS REGION I PKP 04 26 30 1,1 / 22 E 27 02	MB=4.7(1)	D=145.6 DEG AZ= 40 22,9S169.8E 36KM H=04 08 55.0	1977 FEB 14 12 07 36		
1977 FEB 12 AFGHANISTAN-USSR BORDER REGION I P 04 57 07 1,1 / 25 I AP 57 2/15 E PPP 59 24	MB=5.4(26)	D= 43.1 DEG AZ= 86 37,1N 71.3E 98KM H=04 49 16.1 37,2N 71.2E 100KM 04 49 16	1977 FEB 14 POLAND/ UPPER SILESIA 12 57 07		
1977 FEB 12 00 47 50 1,0 0,8 / 15			1977 FEB 14 14 53 20		
1977 FEB 12 SOUTH OF FIJI ISLANDS I PKP 13 05 40 1,0 0,6 / 19	NO MB COMP.	D=151.2 DEG AZ= 26 24,3S179.8E 523KM H=12 46 44.5	1977 FEB 14 POLAND/ UPPER SILESIA E SG 15 18 13		
1977 FEB 13 TRACES NORTH ATLANTIC OCEAN E P 01 20 37	1/4,7(3) /	D= 56.8 DEG AZ=240 9,5N 34.3W 33KM H=01 18 52.9	1977 FEB 14 SOUTH OF FIJI ISLANDS E PKP 10 44 17	MB=4.4(2)	D=150.8 DEG AZ= 25 23,9S179.9E 540KM H=10 25 24.5 (U)
1977 FEB 13 LOYALTY ISLANDS REGION I PKP 01 43 27 1,2 / 31 E APK 48 42 E 49 04	MB=4.7(1)	D=145.6 DEG AZ= 41 22,1S169.6E 33KM H=01 28 51.8	1977 FEB 15 00 53 24		
1977 FEB 13 LOYALTY ISLANDS I PKP 01 58 50 1,0 0,9 / 24 E 02 00 04	MB=5.0(1)	D=145.5 DEG AZ= 41 22,9S169.6E 39KM H=01 39 15.2	1977 FEB 15 LOYALTY ISLANDS REGION E PKP 03 41 17	NO MB COMP.	D=145.5 DEG AZ= 40 21,9S169.7E 33KM H=03 21 45 (U)
1977 FEB 13 LUZON PHILIPPINE ISLANDS E P 04 19 33	MB=5.4(17)	D= 87.7 DEG AZ= 68 15,7N119.2E 44KM H=04 06 46.9 15,9N119.1E 04 06 47	1977 FEB 15 TRACES KURILE ISLANDS I P 05 01 25 1,2	1/4,4(4) /	D= 77.0 DEG AZ= 30 44,9N149.4E 40KM H=04 49 36 (U)
1977 FEB 13 LUZON PHILIPPINE ISLANDS I P 04 20 00 1,7 / 70 E 20 53 E PP 23 23 E SCS 30 42 E SS 36 36 LH 58 L 05 02	MB=5.7(19)	D= 87.7 DEG AZ= 68 15,7N119.2E 44KM H=04 06 46.9 15,9N119.1E 04 06 47 DISTANCE 87 DEG	1977 FEB 15 POLAND/ UPPER SILESIA E 00 04 12		
T 14 All 5.5 AB 2	MLH =6.1				

Date/Time	Location	Depth (km)	Magnitude	Latitude	Longitude	AZ	M	Magnitude	Distance (km)	AZ	M	Magnitude	Distance (km)
1977 FEB 15 10 47 20	SOUTHEASTERN AUSTRIA	4.7	173	40.0N	13.9E		10	44	54				
1977 FEB 15 23 00 44.8C	TONGA ISLANDS	147.5	15	19.4S	175.2W		22	41	10.2				
1977 FEB 16 00 40 10	TRACES! SOUTHERN IRAN	38.3	110	28.7N	54.0E		00	32	46				
1977 FEB 16 00 56 54.7C	NORTH ATLANTIC OCEAN	39.1	245	20.1N	26.3W		00	49	31.2				
1977 FEB 16 02 50 15	NORTH OF SVALBARD	29.2	355	80.1N	1.9W		02	44	01.4				
1977 FEB 16 04 16 01.1C	FIJI ISLANDS REGION	146.4	19	18.8S	178.0W		03	57	13.8				
1977 FEB 16 17 54 21	MOLUCCA PASSAGE	103.8	71	0.5N	126.0E		10	40	20.9				
1977 FEB 16 19 35 30.5	NORTHERN YUGOSLAVIA	5.7	158	49.1N	16.0E		19	34	12.2				
1977 FEB 17 03 21 25	MEDITERRANEAN SEA	17.1	154	35.9N	22.2E		03	17	09.6				
1977 FEB 17 13 43 10	POLAND/ UPPER SILESIA	07.6	16	58.9N	163.8E		13	32	31.7				
1977 FEB 17 13 43 20	KANCHATKA	145.0	13	10.8S	174.0W		18	20	04.2				
1977 FEB 17 18 40 00	TONGA ISLANDS	145.0	13	10.8S	174.0W		18	20	04.2				
1977 FEB 17 19 02 03.6C	TONGA ISLANDS	22.6	108	40.4N	41.7E		00	08	59.9				
1977 FEB 17 19 25 20	EASTERN TURKEY	22.6	108	40.4N	41.8E		00	09	02.7				
1977 FEB 17 20 59 07	SOUTH OF FIJI ISLANDS	152.5	18	24.7S	176.0W		01	56	47.3				
1977 FEB 17 21 19 46.4	HOKKAIDO JAPAN REGION	77.5	37	41.4N	142.0E		04	08	13.4				
1977 FEB 18 00 14 02.7C	SOUTH OF FIJI ISLANDS	152.2	18	24.6S	176.3W		00	31	23.7				
1977 FEB 18 00 40 00	SOUTH OF FIJI ISLANDS	152.2	18	24.6S	176.3W		00	31	23.7				
1977 FEB 18 01 11 19 1.1	TONGA ISLANDS	145.0	13	10.8S	174.8W		12	57	06.2				
1977 FEB 18 02 16 41.8D	SOUTH OF FIJI ISLANDS	32.1	102	36.5N	53.2E		05	56	23.3				
1977 FEB 18 04 20 11.9	HOKKAIDO JAPAN REGION	71.5	352	37.0N	153.9W		07	02	20.4				
1977 FEB 18 05 11 16	NORTH ATLANTIC OCEAN	7.6	165	43.9N	15.8E		11	19	58.4				
1977 FEB 18 06 51 01	ADRIATIC SEA	7.6	165	43.9N	15.7E		11	20	00.2				
1977 FEB 18 08 51 16	ADRIATIC SEA	7.6	165	43.9N	15.7E		11	20	00.2				
1977 FEB 18 11 24 10	SOUTH OF FIJI ISLANDS	152.2	18	24.6S	176.3W		00	31	23.7				
1977 FEB 18 12 38 07	ADRIATIC SEA	7.6	165	43.9N	15.7E		11	20	00.2				
1977 FEB 18 13 04 39 04	ADRIATIC SEA	7.6	165	43.9N	15.7E		11	20	00.2				
1977 FEB 18 13 16 17.9C	TONGA ISLANDS	145.0	13	10.8S	174.8W		12	57	06.2				
1977 FEB 18 17 32 24	KERMADEC ISLANDS	157.8	26	30.6S	178.0W		17	55	29.8				
1977 FEB 18 21 03 58.2	SOUTH OF HONSHU JAPAN	86.2	42	33.1N	140.8E		20	51	29.8				
1977 FEB 19 04 14 51.7	SOUTH OF HONSHU JAPAN	86.2	42	33.1N	140.8E		20	51	29.8				
1977 FEB 19 04 15 09	SOUTH OF HONSHU JAPAN	86.2	42	33.1N	140.7E		20	51	28				
1977 FEB 19 06 02 30	NEAR EAST COAST OF KANCHATKA	73.0	21	52.1N	158.8E		05	51	08.2				
1977 FEB 19 06 24 23	TIBET-INDIA BORDER REGION	50.9	86	31.8N	78.4E		06	15	25.0				
1977 FEB 19 09 02 07	MID-INDIA RISE	14.0	14	52.0N	170.0E		22	34	04.1				
1977 FEB 19 17 44 49	SOUTHERN IRAN	38.5	113	27.2N	53.2E		17	37	26.9				
1977 FEB 19 22 45 35.9C	NEAR ISLANDS ALEUTIAN ISLANDS	73.7	14	52.0N	169.3E		22	34	05				
1977 FEB 19 23 49 30	TRACES! TLANOTO EXPLOSION	143.5	312	22.1S	138.8W		23	29	57.9				
1977 FEB 19 23 52 27	TIBET	50.8	81	34.7N	81.3E		23	43	26.4				
1977 FEB 20 04 38 23	SOUTH OF FIJI ISLANDS	32.1	102	36.5N	53.2E		05	56	23.3				
1977 FEB 20 07 13 45	KODIAK ISLAND REGION	71.5	352	37.0N	153.9W		07	02	20.4				
1977 FEB 20 11 23 49	ADRIATIC SEA	7.6	165	43.9N	15.8E		11	19	58.4				
1977 FEB 20 13 15 00	TRACES! CYPRUS	22.5	129	34.8N	34.1E		13	09	54				

1977 FEB 26 FIJI ISLANDS REGION
1977 FEB 26 CANARY ISLANDS REGION
1977 FEB 27 AZORES ISLANDS REGION
1977 FEB 27 SUNDA STRAIT
1977 FEB 27 TADZHIK SEA
1977 FEB 27 OFF EAST COAST OF KAMCHATKA
1977 FEB 27 HOKKAIJU JAPANESE REGION
1977 FEB 27 MARIANA ISLANDS
1977 FEB 28 SOUTH OF HAWAII
1977 FEB 28 MINUAJAO PHILIPPINE ISLANDS
1977 FEB 28 ARABIAN SEA
1977 FEB 28 TONGA ISLANDS
1977 FEB 28 FRENCH CENTRAL REGION
1977 FEB 28 ARABIAN SEA
1977 FEB 28 KURILE ISLANDS
1977 FEB 28 GERMAN DEMOCRATIC REPUBLIC

MB=4,0(2)
MB=4,7(29)
MB=4,0(19)
MB=5,4(14)
MB=5,1(48)
MB=4,4(6)
MB=4,8(7)
MB=5,0(27)
MB=5,1(32)
MB=5,7(31)
MB=5,1(48)
NO MB COMP.
MB=5,1(40)
MB=5,3(19)

D=144.9 DEG 17,08N176.8W AZ=16 33KM H=14 11 58
D= 34.0 DEG 28,5N 20.8W AZ=241 10KM H=22 48 48
D= 34.4 DEG 37,5N 31.9W AZ=264 33KM H=04 03 09
D= 96.1 DEG 6,38N104.9E AZ=92 59KM H=08 30 00
D= 43.3 DEG 38,1N 72.7E AZ=84 112KM H=09 21 57
D= 72.0 DEG 53,8N161.5E AZ=19 44KM H=12 28 00
D= 77.4 DEG 41,0N142.0E AZ=37 76KM H=15 32 33
D= 98.8 DEG 18,0N145.3E AZ=45 579KM H=18 34 08
D= 90.4 DEG 4,0N 82.5W AZ=277 33KM H=01 32 02
D= 96.9 DEG 9,2N126.1E AZ=66 64KM H=01 50 31
D= 49.5 DEG 14,9N 55.0E AZ=122 33KM H=08 43 55
D=146.9 DEG 18,85N175.1W AZ=14 61KM H=12 32 03
D= 3.4 DEG 51,0N 7.6E AZ=277 10KM H=16 46 08
D= 49.5 DEG 14,8N 55.0E AZ=122 33KM H=17 35 06
D= 76.4 DEG 44,6N146.8E AZ=32 10KM H=17 50 54
D= 76.4 DEG 49,9N146.4E AZ=32 90KM H=17 51 09

DISTANCE 65 KM

1977 MAR 01 MINUAJAO PHILIPPINE ISLANDS
1977 MAR 01 MID-INDIAN RISE
1977 MAR 01 TRACES
1977 MAR 01
1977 MAR 01
1977 MAR 01
1977 MAR 01 NEAR WEST COAST OF COLOMBIA
1977 MAR 01 POLAND: UPPER SILESIA
1977 MAR 02 SOUTH OF FIJI ISLANDS
1977 MAR 02 FIJI ISLANDS
1977 MAR 02
1977 MAR 02 MINUAJAO PHILIPPINE ISLANDS
1977 MAR 02
1977 MAR 02
1977 MAR 02
1977 MAR 02 SOUTHEASTERN AUSTRIA
1977 MAR 02 OFF EAST COAST OF KAMCHATKA
1977 MAR 03 FIJI ISLANDS REGION
1977 MAR 03 TRACES
1977 MAR 03
1977 MAR 03 TRACES
1977 MAR 04 POLAND: UPPER SILESIA
1977 MAR 04
1977 MAR 04
1977 MAR 04 BAKHALIN ISLAND
1977 MAR 04

MB=5,5(12)
MB=4,8(6)
MB=4,8(17)
MB=4,7(3)
MB=5,5(18)
MB=6,1(46)
MLN =0,4 MLV =0,3
MB=5,1(20)
MB=4,8(8)
MB=4,8(5)

D= 97.5 DEG 6,9N126.0E AZ=69 45KM H=00 35 00.8 (U)
D= 74.9 DEG 7,48N 67.9E AZ=123 33KM H=01 44 11.7 (U)
D= 85.5 DEG 6,3N 77.6W AZ=274 23KM H=20 37 25.1 (U)
D=151.5 DEG 24,75N179.7E AZ=26 481KM H=23 57 10.8 (U)
D=143.2 DEG 16,45N178.0E AZ=24 33KM H=05 05 23.6 (U)
D= 97.4 DEG 6,8N123.7E AZ=70 52KM H=09 53 23.2 (U)
D= 41.4 DEG 47,0N 14.3E AZ=168 52KM H=17 30 55 (A)
D= 71.6 DEG 54,7N163.7E AZ=17 42KM H=23 11 01.8 (U)
D=146.0 DEG 18,25N177.0W AZ=17 386KM H=11 55 59.7 (U)
D= 69.6 DEG 51,8N143.8E AZ=30 33KM H=06 47 44.3 (U)



Date	Time	Location	Station	Magnitude	Depth (km)	Distance (deg)	Azimuth (deg)	Magnitude	Depth (km)	Distance (deg)	Azimuth (deg)
1977	MAR 09	NORTHERN ITALY	FRIULI	5.0	17.8	46.3N 13.2E	OKM	10	44		
1977	MAR 09	TRACES/ NGW BRITAIN REGION		5.0	(2)						
1977	MAR 09	TRACES		5.2	(46)						
1977	MAR 09	KURILE ISLANDS		5.0	(25)						
1977	MAR 09	KURILE ISLANDS REGION		5.0	(25)						
1977	MAR 09	LOYALTY ISLANDS REGION		5.0	(25)						
1977	MAR 09	FOX ISLANDS/ MLEUTIAN ISLANDS		4.7	(18)						
1977	MAR 09	EASTERN SEA OF JAPAN		5.0	(28)						
1977	MAR 09	RUSSIA		5.0	(28)						
1977	MAR 09	TRACES		5.0	(28)						
1977	MAR 09	KURILE ISLANDS		5.0	(28)						
1977	MAR 09	NORTH KURIA		5.0	(28)						
1977	MAR 09	MUJUCA PASSAGE		5.0	(28)						
1977	MAR 10	NORTHERN ITALY		5.0	(28)						
1977	MAR 10	NEAR S/ EAST OF HONSHU JAPAN		5.0	(28)						
1977	MAR 10	SOUTHERN GREECE		5.0	(28)						
1977	MAR 10	CARIBBEAN SEA		5.0	(28)						
1977	MAR 10			5.0	(28)						
1977	MAR 11			5.0	(28)						
1977	MAR 11	PULAWI/ UPPER SILESIA		5.0	(28)						
1977	MAR 11	PHILIPPINE ISLANDS REGION		5.4	(16)						
1977	MAR 11			5.4	(16)						
1977	MAR 11			5.4	(16)						
1977	MAR 12	NORTH ATLANTIC RIDGE		5.4	(43)						
1977	MAR 12			5.4	(43)						
1977	MAR 12	SOUTHERN YUGOSLAVIA		5.4	(2)						
1977	MAR 12	KURILE ISLANDS		4.5	(2)						
1977	MAR 12			4.5	(2)						
1977	MAR 12			4.5	(2)						
1977	MAR 12	TUJGA ISLANDS		4.7	(4)						
1977	MAR 13	PERU-BOLIVIA BORDER REGION		5.2	(29)						
1977	MAR 13	TALAU ISLANDS		5.3	(9)						
1977	MAR 13	BAJUA ISLANDS REGION		5.0	(3)						
1977	MAR 13	PERU-BRAZIL BORDER REGION		5.1	(31)						
1977	MAR 14	SOUTH OF FIJI ISLANDS		5.1	(3)						
1977	MAR 14	EXPLOSION		5.1	(3)						
1977	MAR 14	FIJI ISLANDS REGION		4.6	(2)						
1977	MAR 14	FIJI ISLANDS REGION		4.9	(10)						
1977	MAR 14	FIJI ISLANDS REGION		5.4	(31)						
1977	MAR 14	WESTERN CAUCASUS		4.5	(1)						
1977	MAR 14	JAN MAYEN ISLAND REGION		4.5	(13)						



1977 MAR 14 KERMADEC ISLANDS REGION
I PKP1 21 12 02.5 1.1 / 62
I PKP2 12 25.2

1977 MAR 14 23 57.40
E

1977 MAR 15 00 02 33
E PG 02 47
E SG

1977 MAR 15 TRACESI MINDANAO, PHILIPPINE ISLANDS
E(P) 00 06 23

1977 MAR 15 00 09 50
E

1977 MAR 15 TIBET
E P 01 11 31

1977 MAR 15 WESTERN PJLANJ
E PG 02 02 31
E(SG) 02 58

1977 MAR 15 SOUTHERN YUGOSLAVIA
E SG 02 35 33
E 06 17

1977 MAR 15 02 48 30
E

1977 MAR 15 TONGA ISLANDS
E PKP 04 31 26

1977 MAR 15 RYUKYU ISLANDS
E P 07 35 01

1977 MAR 15 BANUA SEA
E PKP 09 13 04
E PP 13 29
I PP 14 1-19
E 14 23
E 16 20
E SKS 20 13
E SKKS 21 11
E PS 23 30
E PPS 24 51
LH 57
FINAL 10 30 T 10 AU 1.5 AE 1 AV 0.5 MLH = 5.8

1977 MAR 15 NORTHERN ITALY FRIULI
E SG 15 49 40 50 17

1977 MAR 15 FIJI ISLANDS REGION
I PKP1 17 31 20.11 1.0 / 19
E(APKP) 33 23

1977 MAR 15 FIJI ISLANDS REGION
E PKP1 17 53 10

1977 MAR 15 SOLOMON ISLANDS
I PKP 20 14 42.8 1.0 / 25
E PP 16 40
LH 21 10 T 10 AU 1 AE 0.5 AV 0.5

1977 MAR 15 TRACES
E 21 39 20

1977 MAR 15 SOUTH OF TONGA ISLANDS
E PKP1 22 54 50
E 55 15

1977 MAR 16 NORTHERN ITALY FRIULI
E SG 01 02 20

1977 MAR 16 ALASKA PENINSULA
I P 00 33 49.15 1.0 / 14

1977 MAR 16 EXPLOSION
I PG 12 44 21.14
I SG 44 23.17
I LH 44 23.12

1977 MAR 16 TIBET
E P 13 06 45

1977 MAR 16 SAHITA CRUZ ISLANDS
E PKP 15 04 40

1977 MAR 16 FIJI ISLANDS REGION
E PKP1 10 00 15 0 1.0 / 15

1977 MAR 16 21 28 04
I 28 04.15

MB=5.0(7)
D=157.5 DEG AZ= 31
31.08N179.9E 368KM H=20 52 38.12
31.18N178.4E 20 51 58

MB=4.7(2)
D= 96.1 DEG AZ= 66
9.8N125.7E 33KM H=23 52 52.18

MB=4.7(5)
D= 57.9 DEG AZ= 79
31.4N 89.3E 33KM H=01 01 39.9
31.7N 89.5E 01 01 38

D= 10.1 DEG AZ=151
42.2N 19.5E 10KM H=02 00 07.2

MB=4.9(6)
D=143.6 DEG AZ= 10
13.25N173.2E 32KM H=04 11 51.2

MB=4.9(2)
D= 84.4 DEG AZ= 52
27.4N130.6E 8KM H=07 22 26.2

MB=5.0(22)
D=111.2 DEG AZ= 71
3.05N131.0E 41KM H=08 54 58.8
3.45N131.5E 120KM 08 55 02
DISTANCE 113 DEG

D= 5.0 DEG AZ=178
40.5N 13.2E 10KM H=15 47 30.7

MB=5.0(6)
D=148.1 DEG AZ= 20
24.25N178.0E 441KM H=17 12 30.8

MB=4.0(6)
D=147.4 DEG AZ= 19
19.35N177.7E 432KM H=19 34 22.5

MB=5.5(11)
D=145.6 DEG AZ= 49
0.78N155.0E 31KM H=19 55 42.6
0.05N155.1E 19 55 43

MB=5.0(2)
D=153.5 DEG AZ= 17
25.55N175.1E 33KM H=22 34 59.4

MB=5.1(10)
D= 73.2 DEG AZ=354
59.5N157.0E 18KM H=06 22 19.7
59.4N157.2E 06 22 19

MB=4.8(1)
D= 58.1 DEG AZ= 79
31.3N 89.4E 33KM H=12 56 52.0
31.6N 89.5E 12 56 55

MB=5.0(5)
D=134.4 DEG AZ= 39
11.46N165.8E 24KM H=15 21 29.0

MB=4.7(1)
D=148.2 DEG AZ= 22
24.95N178.9E 621KM H=17 41 35.3

1977 MAR 16 SZECHUAN PROVINCE, CHINA
E P 22 19 39 MB=4.8(4)
D= 68.9 DEG AZ= 67
32.9N104.4E 33KM H=22 08 51.8 (U)
34.0N104.3E 22 08 53 (M)

1977 MAR 17 YUNAN PROVINCE, CHINA
E P 00 06 01 1.3 / 24 MB=5.1(9)
LH 36
D= 68.2 DEG AZ= 76
28.8N 99.5E 33KM H=23 55 01.6 (U)
28.9N 99.9E 23 54 57 (M)

1977 MAR 17 YUNAN PROVINCE, CHINA
E P 00 08 35 1.4 / 20 MB=5.0(5)
D= 68.6 DEG AZ= 76
28.6N100.0E 33KM H=23 57 34.0 (U)

1977 MAR 17 WESTERN PJLANJ
E PG 04 41 13
I(SN) 41 35.15
I SG 41 42.10
DISTANCE 25- KM

1977 MAR 17 SAHITA CRUZ ISLANDS REGION
E SKP 09 11 10 MB=4.8(8)
D=137.1 DEG AZ= 33
12.85N169.3E 649KM H=08 50 28.2 (U)

1977 MAR 17 SAHITA CRUZ ISLANDS REGION
E PKP 13 00 45 MB=4.9(6)
I SKP 03 19.2D 1.0 / 19
D=137.2 DEG AZ= 33
12.95N169.4E 649KM H=12 42 30.9 (U)
15.38N170.3E 12 41 16 (M)

1977 MAR 17 13 13 30
E

1977 MAR 17 16 47 58
E

1977 MAR 17 SOLOMON ISLANDS
E PKP 17 06 49 MB=4.7(5)
D=125.0 DEG AZ= 49
0.28N154.7E 406KM H=16 48 34.1 (U)

1977 MAR 17 HUNGARY
E 17 57 45
E SG 57 54
D= 5.3 DEG AZ=138
42.3N 18.2E 10KM H=17 54 53.1 (B)

1977 MAR 17 HUNGARY
E SG 18 04 26
D= 5.5 DEG AZ=119
48.4N 20.2E 10KM H=18 01 14.0 (B)

1977 MAR 17 19 38 58
E

1977 MAR 18 00 30 00
E P 32 25

1977 MAR 18 NORTH ATLANTIC RIDGE
E P 10 30 53 1.7 / 27 MB=4.7(5)
D= 57.6 DEG AZ=257
17.5N 46.6E 33KM H=16 20 59 (I)

1977 MAR 18 19 19 22
E

1977 MAR 18 / LUZON, PHILIPPINE ISLANDS
E P 21 56 42.16C 1.8 / 18) MB=6.2(43)
I 21 AU 8.5 AE 9.1 AV 16.3 MPH =7.2 MPV =0.9
D= 88.6 DEG AZ= 65
16.8N122.3E 37KM H=21 43 52.4 (U)
17.1N122.3E 21 43 53 (M)
DISTANCE 88 DEG

I AP 56 55.19
I 56 59
I PP 22 00 15.11
E 03 09
E SKS 07 24
E SKKS 07 47
E S 07 59
E 08 20
E 08 45
E 10.17
E 11.6
E 13.17
E PKKP 14 30
I 15 25.17
LH 20.14
L 31 T 25 AU(300) AE 135 MLH =7.7
FINAL 02 T 17 AU(165) AE(120) AV>150 (MLV =7.6)

1977 MAR 18 LUZON, PHILIPPINE ISLANDS
I P 22 22 43.10 H=22 09 56 (S)

1977 MAR 18 PHILIPPINE ISLANDS REGION
E P 22 23 15 MB=4.9(2)
D= 85.5 DEG AZ= 65
19.0N120.0E 33KM H=22 10 29.3 (U)

1977 MAR 18 LUZON, PHILIPPINE ISLANDS
E P 22 29 24 MB=5.1(2)
D= 88.7 DEG AZ= 65
16.1N122.4E H=22 16 33 (M)

1977 MAR 18 TRACES
E P 22 43 08

1977 MAR 18 LUZON, PHILIPPINE ISLANDS
E P 22 46 55 MB=5.2(3)
D= 88.7 DEG AZ= 65
16.0N122.2E 33KM H=22 34 00.7 (U)
16.9N122.5E 22 34 04 (M)

1977 MAR 18 23 25 20
E

1977 MAR 18 23 50 19
E



1977 MAR 19 LUZON, PHILIPPINE ISLANDS
I P 00 10 30 18D 1,4 / 38
E P 11 24
E 11 42
E 12 17

1977 MAR 19 LUZON, PHILIPPINE ISLANDS
E P 00 12 48

1977 MAR 19 LUZON, PHILIPPINE ISLANDS
E P 00 53 59 1,5 / 30
E 54 11
E 57 25

1977 MAR 19 FIJI ISLANDS REGION
I PKP1 00 54 20 12C 0,9 / 38

1977 MAR 19 LUZON, PHILIPPINE ISLANDS
I P 02 06 00 18C 1,2 / 37
E 09 18

1977 MAR 19 TONGA ISLANDS
I PKP1 02 31 40 10D

1977 MAR 19 LUZON, PHILIPPINE ISLANDS
E P 03 15 32 1,3 / 19

1977 MAR 19
I P 07 30 12 10

1977 MAR 19 LUZON, PHILIPPINE ISLANDS
E P 08 35 00

1977 MAR 19 SVALBARD REGION
E P 08 35 25

1977 MAR 19 TONGA ISLANDS
I PKP 09 42 02 18D 1,6 / 115

1977 MAR 19 KURILE ISLANDS
I P 11 08 12 18C 1,4 / 120D
E S 17 55
E 18 20
L 41
LI 46 T 10 AN 1,5 AE 1 AV 2 MLH =5,5 MLV =5,6 (NO DEPTH CORRECTION)

1977 MAR 19 LUZON, PHILIPPINE ISLANDS
E P 12 29 55 1,7 / 39
E LI 13 10

1977 MAR 19 LUZON, PHILIPPINE ISLANDS
E P 13 08 50 C
E 10 02
L 46
LM 51 T 10 AN 2 AE 1 AV 1,5

1977 MAR 10 LUZON, PHILIPPINE ISLANDS
E P 13 40 01 1,4 / 18
E PP 43 34

1977 MAR 19 LUZON, PHILIPPINE ISLANDS
E P 14 43 45

1977 MAR 19 FIJI ISLANDS REGION
I PKP1 10 30 54 10

1977 MAR 19 LUZON, PHILIPPINE ISLANDS
I P 19 47 50 1,4 / 72
E 48 04 17
E 48 35
E 48 47
E PP 48 57
E S 51 20
E SCS 58 30
E (PS) 58 44
L 20 00 10
LM 23
33 T 25 AN 8 AE 5
T 10 AN 9 AE 5 4,5 AV 10,5

1977 MAR 19 FIJI ISLANDS REGION
I PKP 23 18 05 19D

1977 MAR 19 TUAMOTU ARCHIPELAGO REGION
E PKP 23 20 33 1,3 / 43
E 21 07
E PP 23 47

1977 MAR 20
E 00 20 37

1977 MAR 20 PHILIPPINE ISLANDS REGION
E 02 09 55
E 10 20

MB=5,3(26) D= 88,7 DEG AZ= 65
16,8N122,5E 33KM H=23 57 38,1 (U)
17,1N122,4E 23 57 40 (M)

1/5,2(10) D= 88,9 DEG AZ= 65
16,8N122,5E 33KM H=23 59 57,0 (U)
17,1N122,4E H=00 00 00 (M)

MB=5,2(15) D= 88,6 DEG AZ= 65
16,8N122,4E 33KM H=00 41 08,7 (U)
17,1N122,4E 00 41 10 (M)

MB=5,0(12) D= 148,8 DEG AZ= 22
21,5S178,9W 884KM H=00 35 41,5 (U)

MB=5,3(4) D= 88,4 DEG AZ= 64
17,1N122,4E 49KM H=01 53 19,2 (U)
17,1N122,4E 01 53 17 (M)

NO MB COMPID=148,4 DEG AZ= 16
20,4S175,8W 176KM H=02 12 13 (U)

MB=5,1(4) D= 88,4 DEG AZ= 64
17,1N122,5E 34KM H=03 02 42,6 (U)
17,4N122,5E 03 02 44 (M)

MB=4,9(2) D= 88,7 DEG AZ= 65
16,7N122,4E 45KM H=08 22 16,4 (U)
17,0N122,4E 08 22 17 (M)

MB=4,8(7) D= 25,1 DEG AZ=356
70,4N1 6,4E 10KM H=08 29 59,6 (U)

MB=5,1(10) D= 145,9 DEG AZ= 13
17,7S174,7 176KM H=09 22 42,4 (U)

MB=6,0(64) D= 77,3 DEG AZ= 31
44,2N148,2E 70KM H=10 56 25,1 (U)
44,7N148,2E 80KM 10 56 28 (M)
DISTANCE 77 DEG

MB=5,4(46) D= 88,8 DEG AZ= 65
16,6N122,4E 33KM H=12 17 03,6 (U)
16,9N122,4E 12 17 05 (M)

MB=5,3(22) D= 88,8 DEG AZ= 65
16,7N122,5E 33KM H=12 56 03,7 (U)
17,1N122,4E 12 56 06 (M)

MB=4,7(3) D= 88,8 DEG AZ= 65
16,7N122,5E 53KM H=13 27 10,0 (U)
17,5N122,4E 13 27 13 (M)

MB=5,2(1) D= 88,4 DEG AZ= 64
17,1N122,4E 33KM H=14 30 54,8 (U)
16,9N122,5E 14 30 54 (M)

MB=4,5(1) D= 148,1 DEG AZ= 19
20,5S177,7W 543KM H=10 12 08,5 (U)

MB=5,0(54) D= 88,6 DEG AZ= 65
16,8N122,4E 39KM H=19 35 08,0 (U)
16,8N122,5E 40KM 19 35 08 (M)
DISTANCE 80 DEG

MB=4,6(2) D= 145,5 DEG AZ= 19
17,9S178,4W 596KM H=22 59 33,1 (U)

MB=5,0(63) D= 143,5 DEG AZ=313
21,9S139,0W 0KM H=23 00 58,2 (U)

MB=4,6(2) D= 85,6 DEG AZ= 63
20,4N122,1E 33KM H=01 57 09,2 (U)
21,1N122,0E 01 57 11 (M)

1977 MAR 20 CENTRAL YUGOSLAVIA
E S 07 45 20
E S 45 50
E S 46 30

1977 MAR 20 SOUTHEASTERN AUSTRIA
WIENER BECKEN
E S 10 04 35

1977 MAR 20
E 17 10 27

1977 MAR 20
E 21 59 41

1977 MAR 21 NORTHERN ITALY FRIULI
E PG 01 27 54
E S 28 54

1977 MAR 21
E 03 05 04

1977 MAR 21
E 04 11 01

1977 MAR 21 TONGA ISLANDS
I PKP1 04 19 20 18C

1977 MAR 21 SOUTH OF FIJI ISLANDS
I PKP1 04 23 17 14C 0,8 / 32
I APKP 25 21

1977 MAR 21 MARIANA ISLANDS
E P 04 49 57
E (PP) 54 01
L 05 45

1977 MAR 21 MARIANA ISLANDS
E P 07 11 39
E 15 00
E PP 16 04
E SCS 22 20
L 08 06 T 10 AN 2,5 AE 1,5 AV 2,5 MLH =5,8 MLV =5,8

1977 MAR 21 AFGHANISTAN-USSR BORDER REGION
E P 07 45 21 1,8 / 39

1977 MAR 21
E 07 49 30

1977 MAR 21 LUZON, PHILIPPINE ISLANDS
E P 08 18 25

1977 MAR 21
E 11 24 04

1977 MAR 21
E 17 51 10

1977 MAR 21
E 19 40 19

1977 MAR 21 / SOUTHERN IRAN
I P MAR 22 21 26 20 12C 1,6 / 40D 1,1 / 52 1,7 / 44U
T 9,5 AN 4,0 AE 11,0 AV 17,9 MPH =0,7 MPV =0,7
20 39 18 1,8 / 165U T 11 AN 5,0 AE 13,4 AV 10,5 MPPH =0,8 MPPV =0,8 DISTANCE 40 DEG
28 07 T 11 AN 5,0 AE 13,4 AV 10,5 MPPH =0,8 MPPV =0,8
28 30
32 30 T(11) AN 9,0 AE 31,7 AV 11,3 MSH =7,2
35 10
36 30
43 T 24 AN 19,0 AE 13,7 AV 9,7 MLH =7,0
45 T 20 AN 11,4 AE 11,0 AV 5,6
46 T 10 AN 10,4 AE 30,5 AV 60,5 MLV =0,7
FINAL 02

1977 MAR 21 SUPERPOSED BY MAIN SHOCK
E 21 36(17)

1977 MAR 21 SOUTHERN IRAN
I P 21 40 54 1,4 / 44

1977 MAR 21 SUPERPOSED BY MAIN SHOCK
E 21 43 01

1977 MAR 21 SOUTHERN IRAN
E 21 49 27

1977 MAR 21 SOUTHERN IRAN
E AP 21 59 25

1977 MAR 21 LUZON, PHILIPPINE ISLANDS
I AP 22 01 35

MB=4,7(1) D= 8,8 DEG AZ=152
49,4N1 18,6E 33KM H=07 41 38,1 (U)
49,2N1 19,0E 10KM 07 41 36,3 (B)

MB=4,7(1)

NO MB COMPID= 4,9 DEG AZ=178
40,4N1 13,2E 33KM H=01 26 25 (U)

MB=4,6(2) D= 146,1 DEG AZ= 15
18,0S175,5W 294KM H=04 00 13,0 (U)

MB=4,6(2) D= 150,1 DEG AZ= 25
23,2S179,6E 574KM H=04 04 29,3 (U)

MB=5,4(40) D= 143,6 DEG AZ= 48
18,2N145,3E 56KM H=04 36 00,6 (U)
18,5N145,3E 04 35 55 (M)

MB=5,5(46) D= 143,6 DEG AZ= 48
18,2N145,3E 33KM H=06 57 46,4 (U)
18,1N145,5E 06 57 39 (M)

MB=4,9(2) D= 43,4 DEG AZ= 86
30,8N1 71,4E 123KM H=07 35 28,0 (U)
30,8N1 71,3E 120KM 07 35 31 (M)

MB=4,5(5) D= 88,8 DEG AZ= 65
16,6N122,5E 38KM H=08 05 33,2 (U)
16,6N122,3E 08 05 33 (M)

MB=6,2(56) D= 40,2 DEG AZ=109
27,0N1 56,1E 29KM H=21 18 54,2 (U)
27,7N1 56,4E 57KM 21 18 59,8 (B)
27,4N1 56,5E 21 18 53 (M)

MB=5,1(48) D= 40,3 DEG AZ=109
27,5N1 56,1E 33KM H=21 33 18,2 (U)
27,0N1 56,3E 70KM 21 33 25,1 (B)

MB=4,7(11) D= 40,8 DEG AZ=109
27,2N1 56,8E 33KM H=21 41 23,8 (U)

MB=4,9(15) D= 40,2 DEG AZ=109
27,0N1 56,1E 33KM H=21 51 39,3 (U)

NO MB COMPID= 88,9 DEG AZ= 65
16,8N122,4E 77KM H=21 48 28 (U)



1977 MAR 21 NEW HEBRIDES ISLANDS
E SKP 22 17 42
MB=5.2(9)
D=138.6 DEG AZ=39
15.381167.3E 85KM H=21 54 56.8 (U)

1977 MAR 21 TRACES
E 22 40 00
MB=5.0(21)
D=40.3 DEG AZ=109
27.0NI 56.5E 36KM H=22 42 06.5 (U)
27.7NI 56.4E 71KM 22 42 13.5 (B)
27.4NI 56.5E 22 42 05 (M)
DISTANCE 4U DEG

1977 MAR 21 SOUTHERN IRAN
I P 22 49 41.8C 1.8 / 340
E PP 51 19
E S 55 47
E S 23 08 T 1V AN 14 AE 5
MLM =5.9
MB=4.9(2)
D=40.4 DEG AZ=109
27.4NI 56.5E 40KM H=23 56 58.4 (U)
27.5NI 56.5E 70KM 23 57 03.5 (B)
27.4NI 56.5E 23 56 58 (M)

1977 MAR 22 SOUTHERN IRAN
E P 00 04 34 1.6 / 19
MB=4.7(4)
D=40.3 DEG AZ=110
27.4NI 56.3E 33KM H=01 28 18.8 (U)
27.7NI 56.4E 70KM 01 28 25.1 (B)
26.5NI 56.2E 01 28 12 (M)

1977 MAR 22 SOUTHERN IRAN
E P 01 35 54 1.6 / 16
MB=4.7(8)
D=40.2 DEG AZ=110
27.5NI 56.2E 56KM H=01 37 09.1 (U)
27.6NI 56.3E 66KM 01 37 12.8 (B)

1977 MAR 22 SOUTHERN IRAN
E P 02 33 32.4 1.6 / 45
E(PP) 35 13
MB=5.2(3)
D=40.2 DEG AZ=109
27.5NI 56.3E 43KM H=02 25 58.8 (U)
27.7NI 56.2E 73KM 02 26 05.1 (B)
27.2NI 56.4E 02 25 51 (M)

1977 MAR 22 SOUTH OF KERMADEC ISLANDS
E PKKP 02 42 30 C 2.2 / 90
E PKP1 42 51 1.7 / 33
I PKP2 43 17.7D 1.6 / 115
E PP 47 02
E SKKS 56 16
E 59 26
E 03 02 47
LH 30 T 17 AN 2 AE 1.5 AV 2
MLM =6.0 MLV =6.1 (NO DEPTH CORRECTION)

1977 MAR 22 SOUTHERN IRAN
E P 02 49 42
E PP 51 24
MB=4.9(21)
D=40.2 DEG AZ=109
27.7NI 56.5E 60KM H=02 42 10.2 (U)
27.0NI 56.3E 68KM 02 42 13.4 (B)
27.4NI 56.6E 02 42 01 (M)

1977 MAR 22 SOUTHERN IRAN
E P 03 26 03
MB=4.4(2)
D=40.4 DEG AZ=109
27.5NI 56.5E 33KM H=03 18 26.1 (U)
27.0NI 56.4E 10KM 03 18 32.6 (B)

1977 MAR 22 SOUTH ATLANTIC RIDGE
E P 04 22 35 2.3 / 59
MB=5.1(15)
D=68.0 DEG AZ=209
12.5S 14.7E 33KM H=04 11 37.7 (U)
11.6S 14.1E 04 11 39 (M)

1977 MAR 22 GDR/FRG BORDER REGION
E 05 39 02
(POTSDAM)

1977 MAR 22 I P 06 19 29.0 0.8 / 13
MB=5.0(16)
D=40.1 DEG AZ=109
27.7NI 56.4E 54KM H=07 46 59.4 (U)
27.7NI 56.4E 76KM 07 47 04.1 (B)
27.2NI 56.5E 07 46 49 (M)

1977 MAR 22 CRETE
E P 06 42 14
NO MB COMP.

1977 MAR 22 SOUTHERN IRAN
E P 07 37 12
NO MB COMP.
D=19.3 DEG AZ=145
34.5NI 26.2E 55KM H=06 37 47.9 (U)
34.6NI 26.2E 10KM 06 37 48.9 (B)
34.5NI 26.0E 06 37 47 (M)

1977 MAR 22 SOUTHERN IRAN
I P 08 22 10.2 1.2 / 32
E PPPP 24 30
E S 28 23
E 29 12
E SSS 32.11
L 42
FINAL 10 30 T 1V AN 2.5 AE 2.5 AV 2
MLM =5.4 MLV =5.2
MB=5.0(50)
D=40.3 DEG AZ=109
27.0NI 56.6E 33KM H=09 14 39.7 (U)
27.0NI 56.5E 86KM 09 14 48.1 (B)
27.2NI 56.6E 09 14 32 (M)

1977 MAR 22 SOUTHERN IRAN
I P(1) 12 05 00.10C 1.4 / 220
I P(2) 05 12.18
E PP 06 52
E PPP 07 13
E S 11 11 T 1V AN 1.0 AB 4.9
E SS 14 14
E SSSS 15.2
L 21
LH 24 T 2V AN 11 AE 11
L 25 T 1V AN 15.5 AE 0
L 26 T 1V AN 4.5 AE 10.5 AV 11
FINAL 13 30
MLM =6.0
MLV =5.9
MB=5.7(29)
D=40.3 DEG AZ=109
27.0NI 56.5E 39KM H=11 57 30.9 (U)
27.0NI 56.5E 58KM 11 57 35.2 (B)
27.0NI 56.5E 11 57 30 (M)
DISTANCE 4U DEG

1977 MAR 22 SOUTHERN IRAN
E P 12 40 30 1.5 / 27
E PP 42 11
MB=4.8(15)
D=40.3 DEG AZ=109
27.0NI 56.6E 62KM H=12 32 57.3 (U)
27.7NI 56.6E 99KM 12 33 03.3 (B)
27.2NI 56.6E 12 32 52 (M)

1977 MAR 22 SOUTHERN IRAN
(P) 10 44 33
MB=4.5(8)
D=40.3 DEG AZ=109
27.0NI 56.5E 36KM H=16 37 03.7 (U)
27.6NI 56.4E 66KM 16 37 08.6 (B)
26.8NI 56.6E 16 36 55 (M)

1977 MAR 22 18 42 13

1977 MAR 22 18 53 12

1977 MAR 22 AFGHANISTAN-USSR BORDER REGION
PP 20 19 19
NO MB COMP.

1977 MAR 22 SOUTHERN IRAN
AP 21 36 05
MB=4.5(9)
D=40.3 DEG AZ=109
27.0NI 56.6E 55KM H=21 28 11.8 (U)
27.0NI 56.6E 64KM 21 28 15.4 (B)
26.4NI 56.5E 21 28 00 (M)

1977 MAR 22 SOUTHERN IRAN
P 21 38 30 1.5 / 25
MB=4.8(27)
D=40.1 DEG AZ=109
27.7NI 56.4E 33KM H=21 31 02.6 (U)
27.8NI 56.5E 70KM 21 31 08.4 (B)
27.5NI 56.4E 21 31 00 (M)

1977 MAR 23 FIJI ISLANDS REGION
PKP1 00 05 45.5D 0.8 / 35
MB=4.7(2)
D=147.8 DEG AZ=20
20.281178.0W 567KM H=23 47 02.4 (U)

1977 MAR 23 SOUTHERN IRAN
P 00 25 20 1.6 / 30
MB=4.9(2)
D=40.2 DEG AZ=109
27.6NI 56.4E 33KM H=00 17 50.8 (U)
27.7NI 56.4E 72KM 00 17 57.0 (B)
27.4NI 56.3E 00 17 46 (M)

1977 MAR 23 NORTHERN COLOMBIA
I P 02 23 18.9 0.8 / 26
I 23 24.8
MB=5.5(55)
D=82.2 DEG AZ=271
6.8NI 73.0W 164KM H=02 11 14.6 (U)
6.4NI 72.5W 02 10 59 (M)

1977 MAR 23 SOUTHERN IRAN
(P) 02 39 17
MB=4.9(10)
D=40.3 DEG AZ=109
27.0NI 56.5E 55KM H=02 31 39.1 (U)
27.7NI 56.6E 84KM 02 31 44.2 (B)
26.7NI 56.5E 02 31 30 (M)

1977 MAR 23 KURIL ISLANDS
P 03 57 54.8C 1.0 / 70
AP 58 05.5
MD=5.3(22)
D=77.5 DEG AZ=33
43.4NI 146.9E 36KM H=03 46 01.3 (U)
43.0NI 146.9E 60KM 03 46 05 (M)

1977 MAR 23 FIJI ISLANDS REGION
PKP 07 38 40 1.8 / 46
PP 40 54
41 46
42 40
43 20
43 47
SKKS 45 47
PKKS 50.5
55.5
SS 00 00.2
LH 38 T 2V AN 3.5 AE 3 AV 3
MLM =6.2 MLV =6.1
MB=5.5(43)
D=142.2 DEG AZ=17
14.581177.9W 33KM H=07 19 11.1 (U)
14.961177.3W 07 19 14 (M)

1977 MAR 23 SOUTHERN IRAN
P 07 54 32.1 1.5 / 35
E PP 55 03
56 15
MB=5.0(16)
D=40.1 DEG AZ=109
27.7NI 56.4E 54KM H=07 46 59.4 (U)
27.7NI 56.4E 76KM 07 47 04.1 (B)
27.2NI 56.5E 07 46 49 (M)

1977 MAR 23 TRACES EXPLOSION OF 12 TONS CZECHOSLOVAKIA
(SG) 09 47 02
D=326 KM AZ=139
49.06NI 15.92E (C)

1977 MAR 23 TRACES
E 10 18 24
MB=4.0(2)
D=15.9 DEG AZ=131
39.7NI 28.5E 23KM H=11 55 53.4 (U)
39.6NI 28.7E 10KM 11 55 54.5 (B)
40.0NI 28.7E 11 55 57 (M)

1977 MAR 23 WESTERN TURKEY
L 11 59 37
12 05

1977 MAR 23 15 36 31.9 0.8 / 18
NO MB COMP.
D=145.2 DEG AZ=20
17.751178.9W 609KM H=16 49 52.8 (U)

1977 MAR 23 FIJI ISLANDS REGION
PKP 17 08 22.8D 1.0 / 25
NO MB COMP.
D=142.1 DEG AZ=18
14.451178.0W 2KM H=17 10 19.5 (U)
14.051178.8W 17 10 23 (M)

1977 MAR 23 FIJI ISLANDS REGION
PKP 17 29 55 1.0 / 21
30 03 1.8 / 71
31 24
32 14
PKS 33 50
SS 33 50
LH 51.6
FINAL 10 30 T 1V AN 3 AE 2 AV 3
MLM =6.1 MLV =6.1
MB=4.0(2)
D=79.0 DEG AZ=33
44.1NI 147.8E 33KM H=17 53 22.4 (U)
44.3NI 147.8E 17 53 20 (M)

1977 MAR 23 OFF COAST OF HOKKAIDO, JAPAN
AP 18 05 32
MB=5.1(8)
D=143.4 DEG AZ=10
15.051173.2W 33KM H=18 57 36.6 (U)
15.151173.3W 18 57 36 (M)

1977 MAR 23 TONGA ISLANDS
PKP 19 17 00 1.2 / 18



1977 MAR 23 SOUTHERN IRAN
 I P 20 48 32.19D 1.4 / 32
 MB=4.9(16)
 D= 40.4 DEG AZ=109
 27.5NI 56.5E 42KM H=30 40 37.9 (U)
 27.5NI 56.5E 71KM 20 41 02.9 (B)
 27.1NI 56.5E 20 40 49 (M)

1977 MAR 23 E 21 39 27

1977 MAR 23 E 21 48 45

1977 MAR 23 LH 23 52

1977 MAR 23 / SOUTHERN IRAN
 MAR 24 I P 23 58 51.14C 1.3 / 280
 T 5 AN 0.5 AE 1.1 AV 1.4
 MB=5.18(29)
 D= 40.3 DEG AZ=109
 27.6NI 56.6E 35KM H=23 51 15.8 (U)
 27.7NI 56.6E 65KM 23 51 21.7 (B)
 27.6NI 56.6E 23 51 15 (M)
 DISTANCE 4.0 DEG

E PP 00 00 29
 E(S) 05 08
 E SS 08 10
 E SSSS 09 11
 LH 17 T 1.0 AN 2.5 AE 2.5 AV 2 MLH =5.3
 LI 21 T 1.5 MLV =5.3
 FINAL 01

1977 MAR 24 SOUTHERN IRAN
 E P 00 12 24
 MB=4.10(8)

1977 MAR 24 SOUTHERN IRAN
 I P 00 21 20.13C 1.5 / 50
 E 21 49
 MB=5.1(15)
 D= 40.2 DEG AZ=109
 27.6NI 56.6E 33KM H=00 04 50.17 (U)
 27.8NI 56.5E 70KM 00 04 56.11 (B)

1977 MAR 24 NEAR EAST COAST OF HONSHU JAPAN
 E P 01 26 50
 NO MB COMP.

1977 MAR 24 SOUTHERN IRAN
 I P 04 50 00.13 1.6 / 56
 E 50 29
 E PP 51 40
 L 05 11
 MB=5.13(24)
 D= 40.3 DEG AZ=109
 27.6NI 56.6E 32KM H=04 42 24.13 (U)
 27.7NI 56.6E 63KM 04 42 30.12 (B)
 27.4NI 56.6E 04 42 18 (M)

1977 MAR 24 WESTERN POLAND
 I P 07 32 50.18 1.1 / 220
 I PG 33 04.15
 I 33 10.10
 I SG 33 28.16
 E LI 33 42 T 5.15
 E LI 33 48 T 4 AN 3.5 AE 3 AV 3
 FINAL 07 41
 MB=5.10(5)
 D= 1.9 DEG AZ= 83
 51.3NI 16.1E 1KM H=07 32 26.17 (B)
 51.3NI 15.8E 33KM 07 32 30.15 (U)
 DISTANCE 22.0 KM

1977 MAR 24 SOUTH OF PANAMA
 E P 07 40 09 1.7 / 81
 MB=5.12(20)
 D= 88.5 DEG AZ=273
 3.4NI 78.5W 24KM H=07 27 17.12 (U)

1977 MAR 24 ICELAND
 E P 09 30 18 1.8 / 46
 MB=4.10(6)
 D= 21.0 DEG AZ=318
 65.0NI 19.2W 10KM H=09 25 33.19 (U)
 65.3NI 19.6W 10KM 09 25 35.10 (B)

1977 MAR 24 NORTHERN ITALY
 E SG 12 11 02 FRIULI
 MB=5.10(9)
 D= 40.9 DEG AZ=110
 26.9NI 56.6E 33KM H=13 57 51.17 (U)
 26.5NI 56.5E 13 57 49 (M)

1977 MAR 24 TRACES! SOUTHERN IRAN
 E P 14 05 35
 MB=4.10(1)

1977 MAR 24 TRACES! SOUTHERN IRAN
 E P 14 18 19
 MB=4.7(3)

1977 MAR 24 E 18 34 19

1977 MAR 24 LUZON PHILIPPINE ISLANDS
 E P 19 46 25
 MB=5.1(1)

1977 MAR 24 E 22 32 49

1977 MAR 25 EASTERN TURKEY
 E P 02 45 00 1.3 / 59
 E S 45 07 1.5 / 140
 E SS 49 14
 E SSSS 49 16
 LH 54 16 T 1.0 AN 3 AE 3 AV 1.7
 MB=5.12(25)
 D= 22.8 DEG AZ=113
 38.0NI 40.0E 21KM H=02 39 58.12 (U)
 38.0NI 40.0E 45KM 02 40 02.16 (B)
 37.0NI 40.0E 02 40 01 (M)
 DISTANCE 22 DEG

1977 MAR 25 E 11 28 52 MLH =5.0

1977 MAR 25 POLAND UPPER SILESIA
 E SG 11 49 50
 MB=4.9(5)
 D= 40.2 DEG AZ=109
 27.6NI 56.6E 33KM H=04 09 49.2 (U)
 27.8NI 56.5E 70KM 04 09 52.8 (B)
 27.3NI 56.6E 04 09 45 (M)

1977 MAR 25 KEHALI PENINSULA ALASKA
 P 13 50 34
 MB=4.10(9)
 D= 67.2 DEG AZ=350
 60.8NI 148.1W 55KM H=13 39 45.2 (U)

1977 MAR 25 10 27 30.17 0.7 / 15

1977 MAR 25 10 33 12

1977 MAR 25 18 16 37

1977 MAR 25 TONGA ISLANDS
 PKP1 22 38 54
 MB=4.7(2)
 D=148.6 DEG AZ= 16
 20.081173.18W 180KM H=22 19 27.5 (U)

1977 MAR 25 SOUTHERN IRAN
 P 23 02 50.13 1.1 / 16
 PP 04 33
 MB=4.9(16)
 D= 40.2 DEG AZ=109
 27.6NI 56.6E 56KM H=22 55 23.17 (U)
 27.6NI 56.6E 79KM 22 55 28.16 (B)
 27.5NI 56.7E 22 55 19 (M)

1977 MAR 26 NORTH ATLANTIC RIDGE
 P 00 37 42 0.8 / 15
 MB=4.5(11)
 D= 46.5 DEG AZ=289
 52.0NI 30.2W 33KM H=00 32 04.16 (U)

1977 MAR 26 SOUTHERN IRAN
 P 00 40 12
 MB=4.9(6)
 D= 40.3 DEG AZ=109
 27.6NI 56.6E 47KM H=00 32 37.17 (U)
 26.3NI 56.5E 00 32 28 (M)

1977 MAR 26 FOX ISLANDS, ALEUTIAN ISLANDS
 I P 04 43 03.16C 1.7 / 340
 T 0 AV 2.1
 MPPV =6.4
 E S 48 37 T 1.2 AN 2.0 AE 0.9
 E SS 57 52
 E SSSS 58 07
 LH 05 02.5
 LI 07 20 T 1.0 AN 5 AE 5 AV 5
 MLH =6.1 MLV =6.0

1977 MAR 26 04 50 39
 (P)

1977 MAR 26 EASTERN TURKEY
 I P 05 09 53
 I PP 10 35
 MB=5.10(3)
 D= 24.3 DEG AZ=108
 39.3NI 43.4E 21KM H=05 04 35.2 (U)
 38.0NI 43.3E 93KM 05 04 45.7 (B)
 39.3NI 43.5E 05 04 32 (M)

1977 MAR 26 SOUTHERN GREECE
 (P) 05 52 25 0.9 / 21
 MB=4.7(6)
 D= 15.3 DEG AZ=148
 37.8NI 23.2E 37KM H=05 48 44.0 (U)
 37.9NI 23.2E 38KM 05 48 46.4 (B)

1977 MAR 26 TONGA ISLANDS
 PKIP 06 38 49.7C 1.6 / 48
 PKP1 38 51.7C 1.9 / 650
 PKP2 39 10.12
 SKP (UR PP) 42 15
 LI 43 02
 MB=5.10(28)
 MC =5.17
 D=146.9 DEG AZ= 12
 16.681174.1W 93KM H=08 19 18.5 (U)
 16.161174.5W 08 19 14 (M)
 DISTANCE 147 DEG DEPTH 90 KM

1977 MAR 26 TRACES! KERMADEC ISLANDS
 PKP2 12 50 57
 MB=5.10(2)
 D=197.7 DEG AZ= 27
 30.781178.4W 58KM H=12 30 31.3 (U)

1977 MAR 26 SOUTH OF FIJI ISLANDS
 I 19 15 12.18
 I PKP1 16 21.5C 0.8 / 50
 I PKP2 16 30.12
 MB=4.10(9)
 D=151.3 DEG AZ= 24
 24.181179.2W 396KM H=18 57 11.7 (U)

1977 MAR 26 NORTH OF ASCENSION ISLAND
 I P 22 36 30.15 1.5 / 49
 E S 44 30
 LH 58 T 1.0 AN 2 AE 0 AV 2
 LI 23 32 T 1.0
 MLH =5.16
 MLV =5.14
 DISTANCE 56 DEG

INTERRUPTION OF SHORTPERIODIC RECORDS FROM 03H 55M TO 06H 20M (AT MAR 26)

1977 MAR 27 TRACES
 E 04 59 50
 MB=5.10(9)
 D= 50.4 DEG AZ= 85
 32.7NI 78.5E 26KM H=05 36 49.2 (U)
 32.9NI 78.5E 05 36 52 (M)

1977 MAR 27 KASHMIR-TIBET BORDER REGION
 E P 05 45 40
 MB=4.5(3)
 D=150.8 DEG AZ= 25
 23.851179.8W 441KM H=07 25 33.2 (U)

1977 MAR 27 SOUTH OF FIJI ISLANDS
 I PKP1 07 44 33.10
 E PKP2 44 42
 MB=5.7(19)
 D=138.0 DEG AZ= 39
 14.781167.1E 100KM H=01 15 41.8 (U)
 14.561168.0E 100KM 01 15 41 (M)

1977 MAR 28 NEW HEBRIDES ISLANDS
 E PKP 01 34 55
 E SKP 38 20
 E PKKS 38 28
 LH 47 06
 LI 02 35
 MB=4.9(5)
 D= 40.2 DEG AZ=109
 27.6NI 56.6E 33KM H=04 09 49.2 (U)
 27.8NI 56.5E 70KM 04 09 52.8 (B)
 27.3NI 56.6E 04 09 45 (M)

1977 MAR 28 SOUTHERN IRAN
 E P 04 17 22



1977 MAR 28 SOUTHERN IRAN
E P 05 01 42
E 03 30
MB=4,9(5)
D= 40,3 DEG AZ=109
27,6NI 56,6E 49KM H=04 54 07,6 (U)
27,7NI 56,5E 69KM 04 54 12,0 (B)
27,2NI 56,6E 04 53 58 (M)

1977 MAR 28 NEAR EAST COAST OF HONSHU, JAPAN
E P 05 27 10
INTERRUPTION OF SOME RECORDS FROM 05H 53M TO 05H 55M (AT MAR 29)
NO MB COMP.

1977 MAR 28 ALBANIA
E SH 08 21 22
E 21 48
E (SG) 23 05
MB=5,1(11)
D= 10,7 DEG AZ=150
41,8NI 20,1E 10KM H=08 16 43,0 (U)
41,8NI 20,2E 10KM 08 16 45,5 (B)

1977 MAR 28 SOUTH OF FIJI ISLANDS
I PKP1 08 23 34 1,0 / 28
E PKP2 23 44
MB=5,1(11)
D=150,9 DEG AZ= 25
23,9S 179,8W 527KM H=08 04 40,9 (U)

1977 MAR 28 DUDECAESE ISLANDS
E P 10 54 27
LH 11 02 T 1, AN 1 AG 1,5
MB=4,8(11)
D= 17,8 DEG AZ=139
30,8NI 27,5E 24KM H=10 50 18,0 (U)
30,8NI 27,7E 27KM 10 50 20,3 (B)
37,3NI 27,7E 10 50 24 (M)

1977 MAR 28 NORTH ATLANTIC RIDGE
E(P) 13 07 39
MB=4,8(4)
D= 39,2 DEG AZ=265
34,6NI 36,7W 33KM H=13 00 15,9 (U)
35,4NI 36,2W 13 00 16 (M)

1977 MAR 28
E 16 42 50

1977 MAR 28
E 17 45 20

1977 MAR 29 SOUTHERN ITALY
E(SG) 01 23 15
NO MB COMP.

1977 MAR 29
E 01 48 45

1977 MAR 29
E 03 13 37

1977 MAR 29 UNDERGROUND EXPLOSION
I P 04 04 37,2C
I PH 06 04,0
E PP 06 19
E SCP 09 10
E L 10 21
E L 19 45
MB=5,4(36)
D= 40,2 DEG AZ= 66
49,8NI 78,1E 0KM H=05 56 57,7 (U)

1977 MAR 29 SOUTH OF FIJI ISLANDS
E PKP1 10 03 24,0 0,7 / 32
1977 MAR 29
E 15 21 31

1977 MAR 29 SOUTH OF FIJI ISLANDS
E PKP1 15 44 37
MB=4,7(1)
D=149,2 DEG AZ= 23
22,1S 179,7W 605KM H=15 25 54,5 (U)

1977 MAR 29 FIJI ISLANDS REGION
E PKP1 10 02 04
I PKP1 02 08,6D 0,9 / 63
I PKP2 02 12,8 1,0 / 32
E APKP 04 10
MB=5,0(8)
D=147,8 DEG AZ= 20
20,3S 178,3W 543KM H=17 43 23,5 (U)
20,9S 177,9W 17 42 26 (M)

1977 MAR 29 SOUTHERN IRAN
I P 22 36 52,9C 1,9 / 90
E 37 11
E PP 38 25
LH 57
MC =4,9
MB=5,2(12)
D= 40,2 DEG AZ=109
27,6NI 56,4E 35KM H=22 29 16,8 (U)
27,7NI 56,4E 58KM 22 29 21,0 (B)
27,4NI 56,4E 22 29 10 (M)

1977 MAR 29 TRACES I SOUTHERN IRAN
E P 23 32 51
MB=4,0(1)
D= 40,4 DEG AZ=109
27,5NI 56,5E 54KM H=23 25 11,9 (U)
27,3NI 56,6E 23 25 00 (M)

INTERRUPTION OF ONE SHORTPERIODIC RECORD FROM 06H 50M TO 06H 29M

1977 MAR 30 SOUTH OF HONSHU, JAPAN
E P 11 33 11
I 33 14,9 1,5 / 80
E PP 36 33
E S 43 44
LH 12 16 T 1,5 AN 1,5 AG 1,5 AV 1,5
MLH =5,7 MLV =5,6
MB=5,6(21)
D= 65,4 DEG AZ= 43
31,3NI 140,2E 33KM H=11 20 35,7 (U)
34,1NI 140,0E 11 20 35 (M)

1977 MAR 30 KERMADEC ISLANDS
E(PKP) 11 53 09
NO MB COMP.

1977 MAR 30 NORTH ATLANTIC RIDGE
E P 17 45 04
E SG 46 25
NO MB COMP.

1977 MAR 30 NEAR ISLANDS, ALEUTIAN ISLANDS
P 17 53 18,4 1,5 / 35
MB=5,0(80)
D= 75,0 DEG AZ= 13
52,6NI 172,5E 31KM H=17 41 38,0 (U)
52,6NI 172,2E 17 41 39 (M)

1977 MAR 30 NORTH ATLANTIC RIDGE
P 21 33 33
MB=4,7(4)
D= 52,1 DEG AZ=261
28,3NI 45,0W 33KM H=21 24 24,3 (U)

1977 MAR 30 NORTH ATLANTIC RIDGE
P 21 45 23
MB=4,6(15)
D= 52,2 DEG AZ=260
28,4NI 45,0W 33KM H=21 36 12,5 (U)

1977 MAR 30 NORTH ATLANTIC RIDGE
PCP 21 51 37
MB=4,8(2)
D= 52,3 DEG AZ=260
28,3NI 45,0W 33KM H=21 42 28,0 (U)

1977 MAR 30
23 57 00

1977 MAR 31 OFF EAST COAST OF HONSHU, JAPAN
P 00 19 43
MB=4,7(3)
D= 80,9 DEG AZ= 38
37,7NI 142,5E 52KM H=00 07 32,9 (U)

1977 MAR 31 KERMADEC ISLANDS REGION
PKP2 02 00 30
MB=5,3(2)
D=158,5 DEG AZ= 29
31,7S 179,0W 66KM H=01 40 04,7 (U)

1977 MAR 31 KERMADEC ISLANDS
PKP1 05 27 51
PKP2 28 10
MB=4,5(3)
D=156,7 DEG AZ= 23
29,4S 177,1W 43KM H=05 07 48,2 (U)
29,6S 177,3W 05 07 41 (M)

1977 MAR 31
09 39 50

1977 MAR 31 TRACES I SOUTHERN IRAN
P 10 13 39
MB=4,0(7)
D= 40,2 DEG AZ=109
27,7NI 56,5E 63KM H=10 06 03,6 (U)
27,9NI 56,5E 70KM 10 06 07,2 (B)
27,5NI 56,5E 10 05 59 (M)

1977 MAR 31
10 20 25
20 42

1977 MAR 31 QUESTIONABLE EVENT
12 02 05,7
02 22
03 27

1977 MAR 31 SOUTHERN IRAN
P 13 44 02
MB=4,7(16)
D= 40,3 DEG AZ=109
27,7NI 56,6E 62KM H=13 36 29,8 (U)
27,8NI 56,4E 78KM 13 36 34,7 (B)
27,4NI 56,5E 13 36 23 (M)

1977 MAR 31 FRG, SOUTHWESTERN REGION
SU 15 22 00
MB=4,7(13)
D= 3,9 DEG AZ=221
46,3NI 9,2E 9KM H=15 20 02,6 (B)

1977 MAR 31 SOUTHERN IRAN
P 19 18 55 1,4 / 25
D= 40,2 DEG AZ=109
27,6NI 56,3E 52KM H=19 11 21,4 (U)
27,3NI 56,2E 81KM 19 11 28,2 (B)
27,4NI 56,3E 19 11 15 (M)

1977 MAR 31 SOUTHERN IRAN
P 20 00 29
NO MB COMP.
D= 57,6 DEG AZ=116
27,7NI 52,1E 35KM H=19 53 15,1 (U)

October 1979

Dr. B. Tittel
H. Merkel
Dr. S. Wendt

Geophysikalisches Observatorium Collm
der Karl-Marx-Universität Leipzig



Geophysikalische Meßreihen

2. 1977

Seismische Registrierungen



Geophysikalisches Observatorium

DDR - 7261 COLLM

Geophysical measuring series
of the
Geophysical Observatory
of the Karl-Marx-University
Leipzig

Geophysikalische Meßreihen
des Geophysikalischen
Observatoriums
der Karl-Marx-Universität
Leipzig

C O L L M

S E I S M I C
R E C O R D S

S E I S M I S C H E
R E G I S T R I E R U N G E N

2nd quarter of 1977

2. Quartal 1977

L 649/78 III/18/397

SEISMOLOGICAL STATION COLLM (CLL)

GEOGRAPHICAL CO-ORDINATES: LATITUDE = 51°18.6'N; LONGITUDE = 13°00.2'E; ELEVATION = 230 m
FOUNDATION: GREYWACKE OF ORDOVICE

SEISMOGRAPHS AND ITS CONSTANTS:

TYPE	COMPONENT	T_g (s)	D_g	T_g (s)	D_g	r/T_g^2	MAGNIFICATION (STATIC)	MAGNIFICATION (MAXIMAL)	RECORDING SPEED (mm/min)
BENIOFF	Z	0.452	0.65	1.43	1			(38000)	60
VSJ-II	z	2.175	0.537	0.296	1.474			55000	60
HSJ-II NS	n	2.171	0.537	0.294	1.474			60000	60
HSJ-II EW	e	2.171	0.537	0.293	1.474			58000	60
WIECHERT NS	WN	10.0	0.28			0.026	370		15
WIECHERT EW	WE	10.0	0.34			0.020	340		15
HSJ-I NS	N	20.0	0.50	1.10	9.09		1075		15
HSJ-I EW	E	20.0	0.51	1.21	8.24		1120		15
VSJ-I	V	20.0	0.51	1.20	8.35		1090		15

TIME SERVICE:

QUARTZ CLOCK (MINUTE PULSES OF 2 s AND HOUR PULSES OF 20 s; DAILY DIGITAL CONTROL; MAXIMUM ERROR ± 0.2 s)

SUPPLEMENTARY EQUIPMENTS:

- SPECIAL RECORDER WITH VARIABLE AMPLIFICATION FOR ANNOUNCED EXPLOSIONS
- PERMANENT RECORDS WITH CONSIDERABLY REDUCED SENSIVITY FOR THE COMPLETE REGISTRATION OF STRONG EARTHQUAKES
- AUTOMATIC AMPLIFICATION OF RECORDING LIGHT FOR AMPLITUDES GREATER THAN A GIVEN LIMIT

EVALUATION:

- THE FIRST LINE OF EVALUATION OF EACH EVENT CONTAINS
DATE AND (FOR KNOWN FOCI) GEOGRAPHICAL REGION OF EPICENTER (MOSTLY FOLLOWING FLINN & ENGDahl 1965)
BODY WAVE MAGNITUDE MB WITH THE NUMBER OF USED OBSERVATIONS.
DETAILED INFORMATION, WITH RESPECT TO GEOGRAPHICAL REGION OR OTHER COMMENTS CAN BE WRITTEN ALSO HERE.
THE NEXT LINES ARE DIVIDED INTO THE FOLLOWING COLUMNS
- THE NOMENCLATURE OF THE PHASES CORRESPONDS TO THE LIST OF ISC, COMPLETED BY SOME PHASES (pP APPEARS AS AP, sP APPEARS AS XP, MULTIPLE PHASES AS P(1) FOR INSTANCE)
 - TIME OF ONSET IN G.M.T.
 - DIRECTION OF VERTICAL COMPONENT OF THE GROUND MOTION
 - PERIODS, AMPLITUDES, AND EVENTUALLY MAGNITUDES FOR IMPORTANT ONSETS APPEAR IN THE CORRESPONDING LINE IF MEASUREMENT IS POSSIBLE;
FOR SHORTPERIODIC WAVES IN THE SEQUENCE OF COMPONENTS z, n, e (PERIOD IN SECONDS/AMPLITUDE IN NANOMETRES)
FOR LONGPERIODIC WAVES T, AN, AE, AV (MEAN PERIOD IN SECONDS, AMPLITUDES FOR N, E, V COMPONENTS IN MICROMETRES)
 - MAGNITUDES CAN BE DETERMINED - FOR BODY WAVES THROUGH THE EARTH MANTLE (MPV, MPH, MPV, MPH, MPPV, MPPH, MSH)
- FOR SHORTPERIODIC LONGITUDINAL CORE WAVES (MC)
- FOR MAXIMUM OF SURFACE WAVES (MH, MLV)
- FOR STRONG QUAKES SOMETIMES FROM WIECHERT RECORDS (MAG)
 - HYPOCENTER DATA (LATITUDE, LONGITUDE, DEPTH, ORIGIN TIME) OF THE FOLLOWING INSTITUTIONS ARE USED IN GENERAL
(U) U.S. NATIONAL EARTHQUAKE INFORMATION SERVICE
(B) EUROPEAN-MEDITERRANEAN SEISMOLOGICAL CENTRE
(M) ACADEMY OF SCIENCES OF U.S.S.R., INSTITUTE OF PHYSICS OF THE EARTH
(I) INTERNATIONAL SEISMOLOGICAL CENTRE
(A) INSTITUTE FOR METEOROLOGY AND GEODYNAMICS IN VIENNA, AUSTRIA
(C) GEOPHYSICAL INSTITUTE OF THE CZECHOSLOVAK ACADEMY OF SCIENCES
(G) NATIONAL OBSERVATORY OF ATHENS, GREECE
(P) POLISH ACADEMY OF SCIENCES
(S) SEISMOLOGICAL INSTITUTE, UPPSALA, SWEDEN
OWN COMMENTS ARE GIVEN WITHOUT MENTION OF SOURCE.
 - MB IS THE BODY WAVE MAGNITUDE GIVEN BY (U). /MB/ IS PRINTED IN FEW OTHER CASES WITH FOCAL DATA OF OTHER INSTITUTIONS.
 - EPICENTRAL DISTANCE D AND STATION AZIMUTH AZ ARE CALCULATED USING THE FIRST EPICENTER INDICATION AND ARE PRINTED ABOVE THESE DATA.
D AND AZ ARE CALCULATED ACCORDING TO GEOCENTRIC CO-ORDINATES (D COMMONLY IN DEG, FOR NEAR EVENTS IN km, WITH A MAXIMUM ERROR OF ± 0.1 DEG AND ± 1 km, RESPECTIVELY; AZ IN DEG WITH A MAXIMUM ERROR OF ± 1 DEG).
 - FOR COMPARISON WITH THE FIRST OWN EVALUATION "DISTANCE" AND "DEPTH" ARE GIVEN BELOW THE HYPOCENTER DATA.
 - ROUND BRACKETS INDICATE UNCERTAINTIES.

NUMEROUS EXPLOSIONS AND ROCK BURSTS ARE LEAVED OUT IN THIS BULLETIN BECAUSE OF ITS UNIMPORTANT FORCE.
EVENTUAL INTERRUPTIONS OF RECORDS ARE INDICATED IN THE TIME SEQUENCE.
THE COMPILATION WAS PERFORMED AT THE COMPUTER CENTER OF ZENTRALINSTITUT DER METALLURGIE, LEIPZIG.

1977 APR 01	EXPLOSION OF 9.8 TONS; CZECHOSLOVAKIA		D=144 KM AZ=126	
I PG	06 30 21.5		50.54N; 14.65E	(C)
I SG	30 41		DISTANCE 160 KM	
1977 APR 01	SOUTH OF AUSTRALIA	MB=5.8(1)	D=137.6 DEG AZ=115	
E PKF	08 53 58		49.0S;124.6E	33KM H=08 34 36.9 (U)
1977 APR 01				
E	12 18 04			
1977 APR 01	SOUTHERN IRAN	MB=6.2(6)	D= 40.2 DEG AZ=109	
I P	13 44 00.1C 1.3 / 390		27.5N; 56.3E	29KM H=13 36 24.7 (U)
E	44 37		27.6N; 56.4E	58KM 13 36 30.1 (B)
E PP	45 36		27.3N; 56.3E	13 36 18 (M)
E S	52 03	- 9 AM 1.5 AE 4.1	DISTANCE 40 DEG	
E(SS)	51.2			
L	14 02	- 18 AM 12 AE 8.5		
LH	04	- 15 AM 14.5 AE 8.5 AV 11	MLH =6.0 MLV =5.9	
1977 APR 01	SOUTHERN IRAN	MB=4.9(11)	D= 40.2 DEG AZ=109	
E P	16 03 00		27.6N; 56.3E	33KM H=16 00 25.2 (U)
			27.7N; 56.2E	77KM 16 00 32.2 (B)
			26.6N; 56.2E	16 00 14 (M)
1977 APR 01	COSTA RICA	MB=4.6(4)	D= 87.3 DEG AZ=282	
E P	16 26 18		9.6N; 84.6W	48KM H=16 15 33.5 (U)
E	20 16			
1977 APR 01	WESTERN POLAND			
E FN	22 17 39			
E PG	19 42			
E SG	20 06			
1977 APR 02	SOUTHERN IRAN	MB=4.8(3)	D= 40.0 DEG AZ=109	
E F	07 01 07		27.7N; 56.2E	33KM H=05 53 34.5 (U)
			27.8N; 56.2E	75KM 06 53 40.4 (B)
1977 APR 02	SAMOA ISLANDS REGION	MB=6.8(33)	D=145.2 DEG AZ= 9	
E PDIF	07 32 37		16.7S;172.1W	33KM H=07 15 22.7 (U)
I PKIKP	34 57.40 1.2 / 100		16.0S;171.8W	07 15 20 (M)
		- 15 AM 32.5 AE 12 AV(110)	DISTANCE 147 DEG	
I PKP1	35 00.1 (1.3) / 2210 (1.6) / 600 1.6 / 290			
I APKP	35 06.9			
I	35 13			
E	37 45			
I	37 29.3			
E PP	38 27	1.9 / 1050		
I SKP	38 35	7.5 / 2310		
E	38 44			
I	39 09			
E	41 15			
E PPF	41 36			
E(PKYS)	46.6			
E(SKSP)	48.3			
E	49.6			
E PPE	52.6			
E SS	57.0			
E PSFS	58.5			
E SSS	03 03.0			
L	47	- 20 AM(100) AE 56	MLH =7.6	
L	47	- 19 AM(94) AE 29	AV(135) MLV =7.8	
L	47	- 19 AM 39 AE 79		
FINAL	12			
1977 APR 02				
E	07 32 29			
1977 APR 02	SAMOA ISLANDS REGION		NO MB COMP, D=145.0 DEG AZ= 9	
E PKF	08 05 42 D 1.6 / 49		16.5S;172.5W	116KM H=07 46 18.2 (I)
I	05 52.5C			
1977 APR 02				
E	08 11 21			
1977 APR 02				
E	09 36 17			
1977 APR 02	SAMOA ISLANDS REGION	MB=5.1(4)	D=144.9 DEG AZ= 9	
E PKF	11 13 36		16.4S;172.6W	33KM H=10 54 00.6 (U)
1977 APR 02	TRACES			
E	11 48 03			
1977 APR 02				
E	13 36 33			
1977 APR 02	SAMOA ISLANDS REGION		NO MB COMP, D=144.9 DEG AZ= 9	
E PKF	14 56 23		16.4S;172.6W	33KM H=14 36 46.9 (I)
1977 APR 02	NORTH ATLANTIC OCEAN	MB=4.8(14)	D= 22.6 DEG AZ=237	
E P	16 09 55		36.2N; 10.5W	33KM H=16 04 54.3 (U)
			36.1N; 10.7W	10KM 16 04 52.1 (B)
1977 APR 02				
I P	16 14 00.3C			
1977 APR 02	SAMOA ISLANDS REGION	MB=4.8(9)	D=145.4 DEG AZ= 8	
E PKF	20 14 07 0.8 / 13		16.0S;171.9W	33KM H=19 54 30.8 (U)

1977 APR 02 CHIAPAS, MEXICO
E P 20 51 23 D
E AP 52 20
MB=5.3(15) D= 86.5 DEG AZ=293
16.9N 92.8W 249KM H=20 39 06.2 (U)

1977 APR 02 IRAN
I P 22 23 20.3 1.2 / 24
E 23 42
MB=4.7(3) D= 37.0 DEG AZ=104
32.2N 56.6E 33KM H=22 16 10.7 (U)
32.4N 56.5E 10KM 22 16 11.7 (B)
32.3N 56.6E 22 16 11 (M)

1977 APR 03 NORTHERN ITALY FRIULI
I SN 00 26 27.9
E SG 26 54
H=00 24.3 (8)

1977 APR 03 NORTHERN ITALY FRIULI NO MB COMP.
I FN 03 19 30.3C 0.3 / 360
I PG 19 50.3
I SN 20 26.7
I SG 20 55.0
LM 21.4 T 8 AM 6.5 AE 0 AV 5.5 MLH =4.3
D= 5.0 DEG AZ=178
46.3N 13.2E 10KM H=03 18 15.9 (B)
46.2N 13.1E 33KM 03 18 15.7 (U)
46.4N 13.0E 03 18 13 (M)

1977 APR 03 NORTHERN ITALY FRIULI NO MB COMP. D= 5.0 DEG AZ=178
E SG 06 22 46
E 22 50
46.3N 13.3E 0KM H=06 20 05.0 (I)

1977 APR 03
E 07 26 46

1977 APR 03 POLAND, UPPER SILESIA
E SG 07 49 18

1977 APR 03
E 16 23 00
E 23 41
E 25 46

1977 APR 03
E 16 38 59

1977 APR 03 POLAND, UPPER SILESIA
E 19 56 40
E PG 56 47
E 57 18
E SG 57 39
NO MB COMP. D= 3.6 DEG AZ=103
50.4N 18.5E 0KM H=19 55 37 (I)

1977 APR 03
E 21 19 31

1977 APR 04 SZICHUAN PROVINCE, CHINA
E 04 25 48
E 26 14
E PP 28 03
MB=4.6(2) D= 67.8 DEG AZ= 73
27.6N 101.0E 33KM H=04 13 38.8 (U)

1977 APR 04 NEW HEBRIDES ISLANDS
I PKF 04 47 43.1C 1.3 / 22
E PP 52 37
E PKE 53 24
MB=5.2(12) D=137.8 DEG AZ= 38
14.3S 167.6E 15KM H=04 30 20.6 (U)
13.7S 167.3E 04 30 21 (M)

1977 APR 04 NEAR EAST COAST OF HONSHU, JAPAN
I P 07 20 31.4D
MB=4.6(2) D= 81.9 DEG AZ= 41
35.8N 140.7E 61KM H=07 08 16.8 (U)
36.7N 140.1E 07 08 20 (M)

1977 APR 04 FIJI ISLANDS REGION
E PKF 07 47 40
MB=4.7(9) D=143.6 DEG AZ= 17
15.8S 177.6W 431KM H=07 28 55.5 (U)

1977 APR 04 TONGA ISLANDS REGION
I PKF 08 33 53.8C 1.5 / 32
MB=4.9(9) D=145.8 DEG AZ= 9
17.3S 172.4W 68KM H=08 19 20.4 (U)

1977 APR 04
E 10 29 17

1977 APR 04
E 13 40 15

1977 APR 04 FIJI ISLANDS REGION
I(PKF2) 15 44 44.47
E APKP 46 59
MB=5.0(15) D=149.0 DEG AZ= 23
21.8S 179.4W 597KM H=15 25 55.3 (U)

1977 APR 04 CENTRAL MID-ATLANTIC RIDGE
I P 18 02 16.7C 2.5 / 290
E 02 23
E PP 04 34
E PPF 07 50
E S 10 24
E SS 14.5
E SSE 16.9
LM 23
T 21 AM 5 AE 8.5 AV 10
MLH =5.9 MLV =6.0
MB=5.5(22) D= 59.0 DEG AZ=239
7.3N 34.9W 33KM H=17 52 19.7 (U)
7.6N 34.5W 17 52 17 (M)
DISTANCE 60 DEG

1977 APR 04 OFF COAST OF CHIAPAS, MEXICO
E P 18 08 52
MB=4.9(7) D= 88.8 DEG AZ=292
14.9N 94.1W 28KM H=17 56 00.3 (U)

1977 APR 04 SOUTHERN SUMATRA
E P 19 19 30
MB=5.1(7) D= 91.7 DEG AZ= 92
2.8S 102.3E 133KM H=19 06 35.5 (U)
3.1S 102.3E 19 06 17 (M)

1977 APR 04
E 23 31 20

1977 APR 05 MINDANAO, PHILIPPINE ISLANDS
E(AP) 04 43 37
E 43 47
MB=5.2(13) D= 99.4 DEG AZ= 67
6.6N 126.9E 67KM H=04 29 47.8 (U)
6.7N 126.7E 04 29 39 (M)

1977 APR 05
E 05 10 05

1977 APR 05 NEAR EAST COAST OF KAMCHATKA
I P 07 51 05.0 1.3 / 19
MB=4.6(6) D= 71.5 DEG AZ= 19
54.4N 161.8E 53KM H=07 39 47.6 (U)

1977 APR 05 SOUTH OF MARIANA ISLANDS
E P 10 56 36
E 11 00 10
E 01 43
LM 39
L 47 T 20 AM 2 AE 1
MB=5.6(21) D=104.1 DEG AZ= 49
12.0N 144.2E 17KM H=10 42 35.0 (U)
12.3N 144.3E 10 42 33 (M)

1977 APR 05 NEW IRELAND REGION
I PKF 12 06 13.3 1.1 / 26
E PKKP 16 17
MB=5.2(2) D=122.9 DEG AZ= 49
4.6S 153.2E 59KM H=11 47 21.2 (U)
4.3S 153.2E 11 47 20 (M)

1977 APR 05 SANDA ISLANDS REGION
E PKF 14 50 38
/4.8(4) D=144.9 DEG AZ= 9
16.4S 172.6W 33KM H=14 31 02.2 (I)

1977 APR 05 UNDERGROUND EXPLOSION
>HARSILLY<
I P 15 12 18.4C 1.4 / 62
I 12 37.6
MB=5.6(65) D= 81.3 DEG AZ=321
37.1N 116.1W 0KM H=15 00 00.2 (U)

1977 APR 05
E 16 43 36

1977 APR 05
E P 16 53 40 1.4 / 16
E 54 03

1977 APR 05 TRACOS; AEGEAN SEA
E(P) 17 18 30
MB=4.7(2) D= 14.0 DEG AZ=145
39.3N 23.3E 37KM H=17 15 08.1 (U)
39.3N 23.3E 10KM 17 15 07.5 (B)

1977 APR 05 TONGA ISLANDS REGION
I PKF 17 27 37.1 1.2 / 18
E 27 52
/5.1(3) D=145.9 DEG AZ= 10
17.5S 173.0W 33KM H=17 07 58.1 (I)

1977 APR 05
E 18 54 03

1977 APR 05 CRETE
E P 19 55 38
MB=4.2(8) D= 18.9 DEG AZ=144
35.0N 26.3E 54KM H=19 50 48.2 (U)
35.1N 26.4E 46KM 19 50 50.6 (B)
34.3N 26.0E 19 50 41 (M)

1977 APR 06
E P 04 10 12
E 10 40
E 10 48

1977 APR 06
E 04 18 11

1977 APR 06 TONGA ISLANDS REGION
E PKF 07 14 15
NO MB COMP. D=145.7 DEG AZ= 10
17.3S 173.0W 33KM H=06 54 36.5 (I)

1977 APR 06 NORTHERN ITALY FRIULI
E SG 07 57 26

1977 APR 06 IRAN
I P(1) 13 43 15.0D
I P(2) 43 17.0D 1.5 / 140
I 43 22
I 43 32.2
E PPF 44 42
E S 48 40
E PCS 49 42
E SCF 49 48 3.2 / 640
E 50 14
E SCF 53 46
LM 57 T 22 AM 13 AE 16.5 AV 10.5 MLH =5.8
L 58 T 20 AM 12 AE 8 AV 14.5 MLV =5.8
FINAL 15 30

1977 APR 06
E 17 00 32

1977 APR 06 NORWEGIAN SEA
I P 19 34 36.4
E PPF 34 51
E S 36 43
E SS 37 01
E LQ2 38 52
MB=5.0(13) D= 11.8 DEG AZ=335
61.6N 2.5E 33KM H=19 31 47.5 (U)
61.7N 2.3E 10KM 19 31 47.0 (B)
DISTANCE 12.5 DEG

1977 APR 07
E P 02 32 59 1.7 / 23

1977 APR 07 TONGA ISLANDS REGION
E PKF 03 26 35
E 26 46
E 27 03
E 28 03
NO MB COMP. D=146.0 DEG AZ= 9
17.5S 172.3W 33KM H=03 06 54.0 (I)

1977 APR 07	SOUTHERN IRAN	MB=4.9(17)	D= 40.4 DEG AZ=108 27.9N 97.1E 33KM H=03 34 38.1 (U) 28.3N 97.1E 96KM 03 34 48.7 (B) 27.9N 97.0E 03 34 38 (M)
1977 APR 07	FIJI ISLANDS REGION	MB=4.7(11)	D=147.2 DEG AZ= 19 19.68N 177.8W 617KM H=09 34 09.8 (U)
1977 APR 07	TONGA ISLANDS REGION	MB=5.1(1)	D=146.2 DEG AZ= 10 17.78N 172.6W 33KM H=11 01 56.0 (U)
1977 APR 07	TONGA ISLANDS REGION	MB=4.9(5)	D=145.9 DEG AZ= 10 17.98N 172.9W 33KM H=11 07 07.0 (U)
1977 APR 07	SOUTH AFRICA	MB=5.5(1)	D= 78.8 DEG AZ=168 26.98N 26.7E 11KM H=11 54 37.1 (U)
1977 APR 07	COSTA RICA	MB=4.9(8)	D= 86.8 DEG AZ=282 10.1N 84.4W 33KM H=17 27 32.6 (U)
1977 APR 07			
1977 APR 08	TONGA ISLANDS	NO MB COMP.	D=145.7 DEG AZ= 11 17.35N 173.2W 33KM H=23 59 44 (I)
1977 APR 08	TRACES; SAMOA ISLANDS REGION	NO MB COMP.	D=144.8 DEG AZ= 10 16.35N 172.7W 33KM H=00 44 42.1 (I)
1977 APR 08			
1977 APR 08	AFGHANISTAN-USSR BORDER REGION	MB=4.8(5)	D= 43.1 DEG AZ= 87 36.6N 71.0E 243KM H=04 46 02.6 (U) 36.7N 70.9E 240KM 04 46 03 (M)
1977 APR 08	CENTRAL ITALY	NO MB COMP.	D= 7.7 DEG AZ=182 43.6N 12.6E 33KM H=11 31 20.6 (U)
1977 APR 08	SOUTHERN IRAN	MB=4.7(6)	D= 40.3 DEG AZ=110 27.4N 96.3E 22KM H=16 49 42.9 (U) 27.3N 96.5E 83KM 16 49 50.7 (B) 27.2N 96.5E 16 49 38 (M)
1977 APR 08	POLAND, UPPER SILESIA		
1977 APR 09			
1977 APR 09	TONGA ISLANDS REGION	MB=4.9(3)	D=145.9 DEG AZ= 9 17.48N 172.5W 35KM H=00 43 19.0 (U)
1977 APR 09	NEAR EARTHQUAKE		
1977 APR 09	PERU-BRAZIL BORDER REGION	MB=5.5(29)	D= 94.1 DEG AZ=259 10.05N 71.2W 564KM H=04 04 12.5 (U) 10.2S 71.3W 500KM 04 04 07 (M)
1977 APR 09	ASCENSION ISLAND REGION	MB=5.0(17)	D= 60.1 DEG AZ=208 5.2S 11.5W 33KM H=04 44 29.6 (U) 4.9S 11.8W 04 44 25 (M)
1977 APR 09	NORTHERN ITALY	NO MB COMP.	D= 7.4 DEG AZ=196 44.2N 10.1E 33KM H=10 57 41.0 (U) 44.1N 10.1E 10KM 10 57 40.5 (B)

1977 APR 09			
1977 APR 09	TRACES		
1977 APR 09	SOUTHERN IRAN	MB=4.9(6)	D= 37.4 DEG AZ=113 28.0N 52.0E 22KM H=17 34 19.1 (U) 26.7N 52.6E 10KM 17 34 09.9 (B) 27.4N 52.1E 17 34 12 (M)
1977 APR 09	NEH HEDRIDES ISLANDS	MB=5.4(8)	D=142.9 DEG AZ= 39 19.38N 169.6E 29KM H=21 16 14.6 (U) 19.25N 170.0E 21 16 13 (M)
1977 APR 09	FRG, SOUTHWESTERN REGION	NO MB COMP.	D= 3.5 DEG AZ=240 49.3N 8.4E 33KM H=21 46 42.2 (U) 49.4N 8.6E 10KM 21 46 40.5 (B) DISTANCE 3.4 DEG
1977 APR 10	NEW HEDRIDES ISLANDS	MB=4.9(3)	D=142.8 DEG AZ= 38 19.05N 169.6E 18KM H=00 54 16.5 (U) 18.75N 169.8E 00 54 14 (M)
1977 APR 10	FIJI ISLANDS REGION	MB=4.8(7)	D=146.9 DEG AZ= 19 19.35N 173.1W 505KM H=04 11 29.1 (U)
1977 APR 10	KURILE ISLANDS	MB=5.4(26)	D= 76.8 DEG AZ= 32 44.5N 147.5E 84KM H=08 31 33.4 (U) 45.0N 147.6E 110KM 08 31 38 (M)
1977 APR 10	FIJI ISLANDS REGION	MB=4.8(10)	D=148.3 DEG AZ= 22 21.05N 179.3W 647KM H=18 09 58.9 (U)
1977 APR 10	TRACES; NEAR EAST COAST OF KAMCHATKA	MB=4.7(14)	D= 72.5 DEG AZ= 21 52.6N 158.9E 34KM H=18 45 07.2 (U)
1977 APR 10	SAMOA ISLANDS REGION	MB=4.7(5)	D=145.1 DEG AZ= 9 16.65N 172.3W 33KM H=22 44 36.7 (U)
1977 APR 11	SOUTH OF AUSTRALIA	MB=5.6(11)	D=133.8 DEG AZ=124 52.35N 114.6E 33KM H=02 15 18.1 (U) 52.75N 116.1E 02 15 13 (M)
1977 APR 11	SOUTHERN IRAN	MB=4.8(6)	D= 40.2 DEG AZ=110 27.5N 96.2E 33KM H=03 10 06.3 (U) 27.5N 96.4E 10KM 03 10 04.5 (B) 27.6N 96.1E 03 10 07 (M)
1977 APR 11	TRACES; NEW HEDRIDES ISLANDS	MB=4.9(6)	D=143.1 DEG AZ= 38 19.25N 169.7E 29KM H=08 17 27.8 (U)
1977 APR 11	EL SALVADOR	MB=5.2(15)	D= 86.6 DEG AZ=287 13.2N 88.1W 10KM H=10 01 23.6 (U)
1977 APR 11	LAKE TANGANYIKA REGION	MB=4.8(7)	D= 60.4 DEG AZ=160 7.45N 30.5E 33KM H=16 12 19.4 (U) 7.25N 31.6E 16 12 24 (M)
1977 APR 11	WESTERN TURKEY	MB=4.6(31)	D= 19.1 DEG AZ=132 36.9N 30.7E 93KM H=16 23 01.9 (U) 36.9N 30.9E 10KM 16 22 59.5 (B) 36.5N 30.5E 16 22 53 (M)
1977 APR 11	VOLCANO ISLANDS REGION	MB=4.6(3)	D= 93.5 DEG AZ= 46 23.1N 142.2E 33KM H=17 15 00.7 (U) 22.4N 142.8E 17 14 51 (M)
1977 APR 11	NORTH ATLANTIC OCEAN	MB=4.3(7)	D= 25.6 DEG AZ=305 59.1N 30.5W 33KM H=18 04 27.2 (U)
1977 APR 11	KURILE ISLANDS	MB=4.8(6)	D= 76.2 DEG AZ= 26 47.3N 154.0E 34KM H=18 46 18.4 (U) 47.3N 153.9E 18 46 14 (M)
1977 APR 11			
1977 APR 11	NORTH ATLANTIC OCEAN	MB=4.5(26)	D= 25.4 DEG AZ=306 59.6N 30.2W 33KM H=22 26 29.6 (U) 59.0N 30.1W 10KM 22 26 26.2 (B) 59.3N 30.8W 22 26 22 (M)
1977 APR 11	NORTH ATLANTIC OCEAN	MB=4.6(25)	D= 25.5 DEG AZ=306 59.5N 30.3W 33KM H=22 44 42.3 (U) 58.9N 31.6W 10KM 22 44 33.1 (B) 60.0N 29.6W 22 44 41 (M)
1977 APR 11			



Date	Region	Time	Magnitude	D (DEG)	AZ (DEG)	Depth (KM)	Other Data
1977 APR 11	VOLCANO ISLANDS REGION	23 09 58	5.0 (7)	93.5	46	23.2N/142.3E 33KM	H=22 56 45.3 (U) 22 56 42 (M)
1977 APR 11	NORTH ATLANTIC OCEAN	23 26 08	4.5 (17)	25.5	303	59.4N/30.3W 33KM	H=23 20 42.4 (U) 59.4N/30.4W 10KM 23 20 38.2 (B) 60.5N/29.5W 23 20 45 (M)
1977 APR 12	KOMANDORSKY ISLANDS REGION	04 06 03	5.0 (11)	70.7	17	55.8N/164.5E 42KM	H=03 54 45.3 (U) 55.7N/164.1E 03 54 46 (M)
1977 APR 12	KYUSHU, JAPAN	10 51 02.1C 1.4 / 39	5.1 (29)	81.2	49	31.8N/131.5E 44KM	H=10 38 49.8 (U) 32.0N/131.6E 10 38 49 (M)
1977 APR 12	IRAN	23 18 44 1.3 / 19	4.9 (6)	33.6	110	32.0N/50.7E 33KM	H=23 12 09.1 (U) 32.0N/50.7E 10KM 23 12 04.7 (B)
1977 APR 13	TONGA ISLANDS	00 27 50	4.9 (2)	146.6	12	18.3S/174.1W 50KM	H=00 08 15.3 (U)
1977 APR 13	TRACES; SOUTH SANDWICH ISLANDS REGION	01 57 44	5.3 (6)	113.3	201	57.9S/25.3W 33KM	H=01 38 10.6 (U)
1977 APR 13	TONGA ISLANDS REGION	06 40 35.8 1.3 / 22	4.9 (1)	146.2	10	17.7S/172.6W 33KM	H=06 20 57.9 (U)
1977 APR 13	TONGA ISLANDS	10 22 20.5 1.4 / 25	4.3 (1)	145.5	10	17.1S/173.0W 33KM	H=10 02 42.8 (U)
1977 APR 13	HINDU KUSH REGION	11 41 34.2 1.5 / 120	5.3 (32)	43.1	87	36.5N/70.9E 196KM	H=11 33 51.8 (U) 36.6N/70.9E 200KM 11 33 53 (M)
1977 APR 13	SOUTH OF FIJI ISLANDS	12 27 30	4.4 (2)	192.5	20	24.9S/177.0W 132KM	H=12 02 48.2 (U)
1977 APR 13	TALAUH ISLANDS	12 59 32.1 1.7 / 50	5.7 (22)	101.6	69	3.8N/126.8E 43KM	H=12 45 42.0 (U) 4.2N/126.4E 12 45 44 (M)
1977 APR 13	CENTRAL YUGOSLAVIA	14 06 25	NO MB COMP.	8.9	152	43.3N/18.8E 10KM	H=14 02 51.3 (U) 43.1N/18.8E 10KM 14 02 52.7 (B)
1977 APR 13	TADZHIK-SIKHIANH BORDER REGION	17 22 09	4.8 (2)	44.3	82	38.2N/74.9E 148KM	H=17 12 21.9 (U) 38.4N/74.2E 170KM 17 12 24 (M)
1977 APR 13	TRACES; ANDREANOF ISLANDS, ALEUTIAN IS.	18 32 31	5.1 (14)	76.8	8	51.7N/179.6W 46KM	H=18 20 43.3 (U)
1977 APR 13	SOUTH OF FIJI ISLANDS	19 30 49.0D 1.1 / 35	5.0 (4)	149.1	25	22.2S/179.5E 555KM	H=19 12 02.8 (U)
1977 APR 13		20 20 17	MC =4.6				
1977 APR 13		21 45 44					
1977 APR 13		46 04					
1977 APR 14	FIJI ISLANDS REGION	04 24 08.9D	5.2 (19)				
1977 APR 14	ALGERIA	07 20 55	4.7 (3)	15.9	202	36.3N/5.7E 18KM	H=07 17 09.0 (U) 36.4N/5.6E 10KM 07 17 10.1 (B) 36.2N/6.0E 07 17 12 (M)
1977 APR 14	BANDA SEA	16 59 04	5.0 (2)	111.2	72	6.0S/129.7E 142KM	H=16 40 01.5 (U)
1977 APR 14		19 29 44					
1977 APR 15		05 14 09					
1977 APR 15		11 10 27					
1977 APR 15		20 19 34					
1977 APR 15	TRACES	22 11 33					
1977 APR 15	TONGA ISLANDS REGION	23 23 25.2 1.7 / 50	5.1 (2)	145.8	10	17.3S/172.7W 33KM	H=23 03 46.9 (U)
1977 APR 16	TRACES; NORTHEAST OF TAIWAN	03 27 27	5.0 (5)	82.3	59	25.3N/123.2E 178KM	H=03 15 24.7 (U)
1977 APR 16	FOX ISLANDS, ALEUTIAN ISLANDS	04 14 11	4.9 (10)	77.0	2	52.0N/170.5W 19KM	H=04 02 17.1 (U)
1977 APR 16	MINDANAO, PHILIPPINE ISLANDS	04 15 26	5.5 (1)	95.5	69	8.9N/123.4E 33KM	H=04 01 40.9 (U)
1977 APR 16	NEAR COAST OF PAKISTAN	04 15 26	5.0 (4)	48.3	105	23.5N/64.7E 33KM	H=04 06 29.5 (U)
1977 APR 16	FIJI ISLANDS REGION	06 49 50.7	5.2 (12)	148.8	22	21.5S/179.2W 600KM	H=06 31 13.7 (U) 21.5S/177.5W 06 30 06 (M)
1977 APR 16	OFF EAST COAST OF KAMCHATKA	18 06 41	NO MB COMP.	71.1	17	55.2N/163.8E 40KM	H=17 55 16.6 (U) 55.2N/164.2E 17 55 14 (M)
1977 APR 17		00 46 49					
1977 APR 17	TONGA ISLANDS	02 54 29 1.5 / 32	5.0 (1)	149.3	13	21.0S/173.9W 33KM	H=02 34 43.0 (U)
1977 APR 17	TRACES	04 01 21					
1977 APR 17		23 43 24.9 1.5 / 25					
1977 APR 18	HINDU KUSH REGION	00 20 44.6C 1.3 / 120	5.4 (59)	43.1	87	36.5N/70.8E 217KM	H=00 13 01.6 (U) 36.5N/70.8E 210KM 00 13 09 (M) DISTANCE 45 DEG DEPTH 220 KM
1977 APR 18	FIJI ISLANDS REGION	07 24 47.2C	5.3 (1)	144.6	18	16.9S/177.9W 130KM	H=07 05 31.5 (U)
1977 APR 18	JAH MAYEN ISLAND REGION	11 08 58	4.3 (4)	23.3	336	70.5N/15.4W 10KM	H=11 03 50.5 (U) 70.8N/16.3W 10KM 11 03 48.1 (B)
1977 APR 18	TRACES; POLAND, UPPER SILESIA	11 17 27					



1977 APR 18 TRACES, EXPLOSION OF 8.5 TONS, CZECHOSLOVAKIA
E(SQ) 12 28 22 D=264 KM AZ=164 (49.02N) 14.00E (C)

1977 APR 18 JAN HAYEN ISLAND REGION MB=4.6(4)
I P 12 40 56.7 1.3 / 19 D= 23.2 DEG AZ=336 70.5N) 15.2W 10KM H=12 35 48.2 (U)

1977 APR 18 TRACES
E 13 37 27

1977 APR 18 FIJI ISLANDS REGION MB=4.5(1)
I PKP1 13 50 08.8 0.7 / 19 D=147.1 DEG AZ= 23 19.9S)179.8W 637KM H=13 31 30.5 (U)

1977 APR 18 KURILE ISLANDS MB=3.9(2)
E P 13 53 42 D= 76.2 DEG AZ= 30 45.9N)149.5E 380KM H=13 42 33.2 (U)

1977 APR 18 MID-INDIAN RISE MB=5.0(5)
I P 16 18 12.8D 1.4 / 23 D= 77.2 DEG AZ=126 10.6S) 66.8E 33KM H=16 06 20.4 (U) 10.7S) 66.9E 16 06 14 (M)

1977 APR 18 JAN HAYEN ISLAND REGION NO MB COMP. D= 23.6 DEG AZ=337
E P 18 01 44 71.1N) 15.3W 0KM H=17 56 31 (I)

1977 APR 18 E 18 39 07

1977 APR 18 GUERREPO, MEXICO MB=5.0(31)
E P 19 09 46 D= 90.0 DEG AZ=300 18.6N)101.4W 91KM H=18 56 55.2 (U) 19.4N)101.4W 18 56 52 (M)

1977 APR 19 E 01 51 23

1977 APR 19 CENTRAL YUGOSLAVIA NO MB COMP.
E 02 27 49 D= 8.7 DEG AZ=156 43.2N) 17.8E 33KM H=02 23 42.9 (U) 43.1N) 17.8E 10KM 02 23 41.8 (B)

E SQ 28 28

1977 APR 19 JAN HAYEN ISLAND REGION MB=4.3(7)
E P 04 31 32 1.2 / 18 D= 23.3 DEG AZ=338 71.1N) 13.9W 10KM H=04 26 22.8 (U) 71.0N) 15.1W 10KM 04 26 22.2 (B)

1977 APR 19 NEAR EAST COAST OF HONSHU, JAPAN MB=5.3(39)
I P 06 27 09.8C 1.2 / 90 D= 81.2 DEG AZ= 40 36.5N)140.6E 65KM H=06 14 59.6 (U) 36.7N)140.4E 50KM 06 14 59 (M)

1977 APR 19 E 19 49 36

1977 APR 19 E 19 58 31

1977 APR 19 BANDA SEA MB=5.7(33)
E PKP 22 04 02 D=108.2 DEG AZ= 76 5.5S)125.4E 526KM H=21 46 33.7 (U) 5.9S)125.5E 410KM 21 46 22 (M)

E PP 04 40

E SP 17 02

E PKKP 17 16

E PKKP 17 31

1977 APR 20 CENTRAL YUGOSLAVIA MB=4.6(9)
I PN 00 37 36.2 1.7 / 110 D= 7.1 DEG AZ=154 44.9N) 17.4E 33KM H=00 31 53.8 (U) 44.9N) 17.3E 10KM 00 31 53.5 (B) 45.0N) 17.4E 00 31 50 (M) DISTANCE 7.2 DEG

E 33 44

E PQ 34 08

E 34 43

E SN 34 53

E 35 10

E 35 13

E SB 35 19

E 35 23

I SG 35 46

E 35 48

L 36.5 T 6 AN 2.5 AE 2.5 AV 3 MLH =4.5

1977 APR 20 CENTRAL YUGOSLAVIA NO MB COMP.
E SQ 00 50 35 D= 6.7 DEG AZ=153 45.3N) 17.3E 33KM H=00 46 49.0 (U) 44.8N) 17.2E 10KM 00 46 45.2 (B)

1977 APR 20 TRACES
E P 02 04 05

1977 APR 20 KERMADOC ISLANDS MB=5.3(11)
E(PKIP) 03 33 50 D=157.0 DEG AZ= 26 29.9S)178.3W 138KM H=03 14 07.7 (U) 29.7S)179.3W 03 13 51 (M)

E PKP1 33 58

E PKP2 34 18

1977 APR 20 SOUTHERN IPAN MB=5.1(8)
I P 04 29 58.6C 1.8 / 88 D= 40.2 DEG AZ=111 26.9N) 55.5E 33KM H=04 22 24.8 (U) 27.1N) 55.5E 56KM 04 22 29.6 (B) 26.7N) 55.6E 04 22 18 (M)

E 30 14

LH 48

1977 APR 20 E P 10 15 00

1977 APR 20 NEW HEBRIDES ISLANDS MB=4.6(4)
E(PKP) 11 37 30 D=142.5 DEG AZ= 39 18.8S)169.1E 224KM H=11 18 17.4 (U)

1977 APR 20 NEW BRITAIN REGION MB=5.7(17)
E PKP 15 40 19 D=121.3 DEG AZ= 55 5.6S)148.3E 177KM H=15 21 45.9 (U) 6.2S)148.4E 15 21 21 (M)

1977 APR 20 E P 18 55 41

1977 APR 20 E PKP 18 56 05 E 36 25

1977 APR 20 TRACES
E 19 50 57

1977 APR 20 SOUTH OF HONSHU, JAPAN MB=5.5(52)
I P 20 16 12.0D 1.4 / 260 D= 85.0 DEG AZ= 46 30.6N)137.5E 493KM H=20 04 29.4 (U) 30.4N)137.7E (495KM) 20 04 26 (M) DEPTH 520 KM

E 16 31

E AP 18 07

E 22 31

E 24 37

E S 25 57

E SP 26 44

E SS 26 56

E(XSS) 31.6

E SKKS 34 16

LH 40 09 5"

1977 APR 20 SOLOMON ISLANDS MB=6.4(14)
APR 21 END SUPERPOSED D=130.7 DEG AZ= 45 9.8S)160.3E 33KM H=23 13 10.4 (U) 9.7S)159.7E 23 13 06 (M)

E PKP 23 32 20 2.5 / 260

E PP 32 37 9 AN 1.2 AE 1.7 AV 4.0 HPPH =6.7 HPPV =6.7 DISTANCE 130 DEG

E SKP 34 35

I 35 44

E 36 24.0

E 36 32

E 40 05

E SS 52.0

E 54.4

LH 00 27 T 16 AN 23 AE 16 MLH =7.0

1977 APR 21 SOLOMON ISLANDS MB=6.3(18)
HEAVILY SUPERPOSED D=130.8 DEG AZ= 45 9.9S)160.3E 19KM H=23 42 50.5 (U) 10.0S)161.0E 23 42 49 (M) DISTANCE 130 DEG

E PKP(1) 00 02 02 1.8 / 42

I 02 16.6

I PKP(2) 02 19.0 2.4 / 310

E 02 23 2.0 / 320

E 02 52

E 04 29

E PP(2) 04 39

I 04 54.5

E SKP 05 39

I 06 11.2

E 06 28

E(PPF) 07 06

LH 53 T 22 AN 137 AE 56.5 AV(140) MLH =7.6 MLV =7.7

L 01 10 T 19 AN 68 AE 47 AV(120)

1977 APR 21 SOLOMON ISLANDS MB=6.8(11)
HEAVILY SUPERPOSED D=130.9 DEG AZ= 44 9.8S)160.8E 33KM H=23 49 13.1 (U) DISTANCE 130 DEG

E(PKP) 00 08 32 2.2 / 610

E 08 39

I PP 10 44.8

I SKP 11 47.0

I 11 58

(LM 01 05 T 20 AN 53 AE 40) (MLH =7.3)

1977 APR 21 SOLOMON ISLANDS MB=5.7(6)
E(PKP) 01 03 53 D=130.7 DEG AZ= 48 10.9S)158.2E 33KM H=00 44 33.5 (U) 5.9S)156.7E 00 44 54 (M)

E 05 19

E(SKP) 07 26

1977 APR 21 SOLOMON ISLANDS MB=5.5(7)
E SKP 01 29 49 D=130.7 DEG AZ= 45 9.8S)160.2E 32KM H=01 07 09.6 (U)

1977 APR 21 SOLOMON ISLANDS MB=5.5(12)
E PKP 01 30 44 D=130.7 DEG AZ= 45 9.9S)160.0E 32KM H=01 20 32.8 (U) 9.8S)160.4E 01 20 32 (M)

1977 APR 21 BOMIN ISLANDS REGION MB=5.8(32)
I P 01 58 49.2 1.3 / 87 D= 90.3 DEG AZ= 44 26.9N)142.4E 33KM H=01 45 50.2 (U) 27.1N)142.0E 01 45 48 (M)

I 58 59

E PP 02 02 23

1977 APR 21 TRACES; SOLOMON ISLANDS NO MB COMP.
E SKP 02 26 56 D=130.2 DEG AZ= 46 9.7S)159.4E 33KM H=02 04 22.9 (U)

1977 APR 21 E 02 49 31

1977 APR 21 JAN HAYEN ISLAND REGION MB=4.9(14)
E P 04 05 04 2.3 / 230 D= 23.2 DEG AZ=338 70.9N) 14.2W 10KM H=03 59 56.2 (U) 70.9N) 14.7W 10KM 03 59 56.7 (B) 70.8N) 13.4W 04 00 02 (M)

1977 APR 21 SOLOMON ISLANDS MB=5.1(4)
E 04 27 19 D=130.6 DEG AZ= 45 9.9S)159.9E 27KM H=04 07 44.5 (U) 9.8S)159.9E 04 07 45 (M)

E(PKS) 30 19

1977 APR 21 SOLOMON ISLANDS MB=6.6(27)
E 04 43 11 D=131.1 DEG AZ= 44 10.0S)160.7E 33KM H=04 24 09.6 (U) 9.7S)160.6E 04 24 11 (M) DISTANCE 130 DEG

I PKP 43 19.3C 2.4 / 220

I 43 26.8 2.9 / 690

I 43 36.1

I 45 39 T 9 AN 3.2 AE 4.8 AV 14.0 HPPH =7.1 HPPV =7.2



(CONT.)

E SKF 04 46 43
 I PKS 46 53.8
 E 47 21
 E 47 28
 E SKKKS 52 36
 E SS 05 03.0
 LM 42 T 20 AN 97 AE 40 MLH = 7.5

1977 APR 21 KURILE ISLANDS
 E P 05 04 13 /4.7(3) / D= 75.7 DEG AZ= 27
 47.5N/152.9E 40KM H=04 52 26.1 (I)

1977 APR 21 SOLOMON ISLANDS
 I PKF 05 25 33.4C 1.4 / 30 HB=5.8(9) D=130.7 DEG AZ= 45
 9.8S/160.3E 34KM H=05 06 28.5 (U)
 E 26 15 9.8S/160.4E 05 06 30 (M)
 I(SKF) 29 04.8

1977 APR 21 SOLOMON ISLANDS
 E SKF 05 29 03 HB=4.7(4) D=131.2 DEG AZ= 44
 10.1S/160.7E 45KM H=06 06 28.6 (U)

1977 APR 21 SOLOMON ISLANDS
 E ARKP 06 53 23 HB=5.3(15) D=130.8 DEG AZ= 45
 9.9S/160.2E 31KM H=06 31 03.9 (U)
 9.7S/159.9E 06 31 06 (M)

1977 APR 21 SOLOMON ISLANDS
 E PKF 07 38 01 HB=5.6(23) D=131.2 DEG AZ= 44
 10.2S/160.7E 33KM H=07 18 51.1 (U)
 E 38 12 10.1S/160.7E 07 18 46 (M)
 E PP 40 27 DISTANCE 130 DEG
 E SKF 41 25
 I PKS 41 34.2
 LM 08 36 T 19 AN 2 AE 1 AV 2 MLH = 5.9 MLV = 5.9

1977 APR 21 SOLOMON ISLANDS
 E PKF 10 04 43 HB=5.6(23) D=131.3 DEG AZ= 44
 10.3S/160.7E 33KM H=09 45 38.2 (U)
 I 05 14.0 1.7 / 30 10.2S/160.6E 09 45 33 (M)
 E PP 07 17 DISTANCE 130 DEG
 I SKF 08 12.0
 LM 11 02 T 20 AN 1.5 AE 1 AV 1 MLH = 5.7 MLV = 5.6

1977 APR 21 TADZHIK SSR
 I P 10 11 35.4C 0.7 / 30 HB=5.1(28) D= 40.9 DEG AZ= 83
 I 11 39.2 40.1N/ 70.8E 47KM H=10 03 55.8 (U)
 E PP 17 15 40.3N/ 70.7E 10 03 51 (M)
 E 14 36

1977 APR 21 TRACES, EXPLOSION
 I PG 11 00 15.0
 E SG 00 29

1977 APR 21 POLAND, UPPER SILEZIA
 E SG 11 01 10

1977 APR 21
 E 13 36 02

1977 APR 21 UZBEK SSR
 I P 13 45 51.0 1.9 / 25 HB=4.9(12) D= 36.3 DEG AZ= 87
 E(PP) 47 22 40.5N/ 63.8E 33KM H=13 38 49.2 (U)
 40.6N/ 63.7E 13 38 48 (M)

1977 APR 21 GUATEMALA
 E AP 15 22 00 HB=4.9(20) D= 87.5 DEG AZ=290
 14.7N/ 91.5W 109KM H=15 08 54.9 (U)

1977 APR 21 SOLOMON ISLANDS
 E SKF 16 22 54 HB=4.6(5) D=131.3 DEG AZ= 44
 E 27 04 10.2S/160.8E 14KM H=16 00 15.5 (U)

1977 APR 21 POLAND, UPPER SILEZIA
 E 16 57 42

1977 APR 21 SOLOMON ISLANDS
 E PP 17 14 41 HB=5.3(12) D=131.2 DEG AZ= 45
 E SKF 17 47 10.2S/160.6E 12KM H=16 53 11.5 (U)
 E 16 32 9.9S/160.0E 16 53 11 (M)
 LM 18 15

1977 APR 21 BOMBY ISLANDS REGION
 I P 17 33 45.0 1.2 / 18 HB=5.2(26) D= 90.5 DEG AZ= 44
 E AP 33 54 26.7N/142.4E 27KM H=17 20 44.7 (U)
 E 36 55 26.8N/142.1E 17 20 42 (M)
 E(PP) 37 23

1977 APR 21
 E 22 43 42

1977 APR 22 NORTHWEST OF KURILE ISLANDS
 I P 01 02 42.8C 1.0 / 62 HB=4.8(31) D= 71.6 DEG AZ= 24
 E AP 04 13 52.3N/153.8E 390KM H=00 52 01.6 (U)
 E(PP) 05 20 52.2N/154.0E 390KM 00 52 01 (M)

1977 APR 22 SOLOMON ISLANDS
 E PKF 03 31 09 HB=5.6(29) D=131.2 DEG AZ= 44
 E 33 46 10.2S/160.7E 51KM H=03 11 00.2 (U)
 E PP 33 30 10.2S/160.8E 03 10 58 (M)
 E(SKF) 33 48
 E SS 59.0
 LM 04 28 T 20 AN 3.5 AE 2.5 AV 3 MLH = 6.1 MLV = 6.0

1977 APR 22 TRACES; KURILE ISLANDS NO MB COMP. D= 76.5 DEG AZ= 28
 E P 04 26 57 46.5N/152.3E 40KM H=04 15 10 (I)

1977 APR 22 OFF COAST OF OREGON HB=5.0(18) D= 79.4 DEG AZ=333
 E P 06 34 38 1.0 / 17 44.2N/129.4W 15KM H=06 22 31.5 (U)
 44.7N/129.6W 06 22 36 (M)

1977 APR 22 OFF COAST OF OREGON HB=5.2(12) D= 79.3 DEG AZ=333
 E P 08 28 10 44.3N/129.3W 15KM H=08 16 04.5 (U)
 I 28 16.6 1.6 / 42 44.8N/129.3W 08 16 05 (M)
 LM 09 05

1977 APR 22 OFF COAST OF OREGON HB=4.7(9) D= 79.4 DEG AZ=333
 E AP 08 38 08 44.2N/129.4W 15KM H=08 25 52.9 (U)

1977 APR 22 OFF COAST OF OREGON HB=4.5(7) D= 79.3 DEG AZ=333
 E AP 08 45 09 44.3N/129.3W 15KM H=08 32 56.5 (U)

1977 APR 22 SOUTHWESTERN RYUKYU ISLANDS HB=4.6(4) D= 84.1 DEG AZ= 58
 E P 09 37 30 24.3N/125.2E 66KM H=09 25 02.9 (U)
 E 37 38 25.1N/125.0E 09 25 04 (M)

1977 APR 22
 E 10 42 47

1977 APR 22
 E 12 57 35

1977 APR 22 CORSICA HB=4.8(3) D= 8.0 DEG AZ=203
 E 13 08 53 43.9N/ 8.7E 41KM H=13 06 06.3 (U)
 E SN 09 28
 E SG 09 39
 E 10 23
 E 10 39

1977 APR 22 SOLOMON ISLANDS HB=5.3(15) D=130.6 DEG AZ= 45
 E(PP) 13 42 07 9.9S/159.9E 33KM H=13 20 36.3 (U)

1977 APR 22 EAST CHINA SEA HB=5.0(4) D= 82.4 DEG AZ= 55
 E(P) 14 19 50 27.4N/126.7E 33KM H=14 07 27.8 (U)
 LM 53 T 16 AN 2 AE 1 29.2N/125.6E 14 07 35 (M)
 L 15 01

1977 APR 22
 I 17 07 52.9
 E L 08 02

1977 APR 22 SOLOMON ISLANDS HB=5.3(17) D=131.1 DEG AZ= 44
 E PP 18 46 48 10.0S/160.7E 25KM H=18 25 11.0 (U)
 E SKF 47 46 9.8S/160.1E 18 25 14 (M)
 L 19 45

1977 APR 22 TRACES; SAMOA ISLANDS REGION HB=5.1(2) D=145.1 DEG AZ= 9
 I PKF 21 05 39.6 16.6S/172.5W 33KM H=20 46 02.5 (U)

1977 APR 22 EASTERN SEA OF JAPAN HB=5.0(9) D= 75.2 DEG AZ= 38
 I P 22 27 29.4 0.8 / 15 43.0N/139.9E 33KM H=22 15 44.0 (U)
 E AP 27 37 43.0N/139.3E 22 15 44 (M)

1977 APR 22 FIJI ISLANDS REGION HB=5.5(19) D=145.3 DEG AZ= 19
 I PKF 23 30 26.9 1.2 / 102 17.7S/178.3W 539KM H=23 11 47.9 (U)
 I 30 30.8 17.8S/178.4W 220KM 23 11 16 (M)
 E ARKP 32 43
 I SKF 33 17.8

1977 APR 23 GREECE HB=4.3(7) D= 13.7 DEG AZ=152
 E 00 00 25 38.9N/ 21.2E 70KM H=23 57 07.2 (U)
 E 01 39 38.9N/ 21.0E 65KM 23 57 08.6 (B)
 E 03 23 38.6N/ 21.0E 170KM 23 57 14 (M)
 E 03 50
 E 04 18

1977 APR 23 TRACES; RYUKYU ISLANDS HB=5.2(10) D= 83.2 DEG AZ= 56
 E P 01 45 03 26.6N/126.9E 33KM H=01 32 38.3 (U)
 26.4N/127.2E 01 32 38 (M)

1977 APR 23 FIJI ISLANDS REGION HB=4.5(3) D=148.2 DEG AZ= 22
 I PKF1 09 47 26.3C 1.0 / 27 20.9S/178.9W 559KM H=09 28 41.8 (U)
 I PKF2 47 31.7

1977 APR 23 LAPTEV SEA HB=5.0(14) D= 48.1 DEG AZ= 17
 E P 14 57 45 75.2N/134.4E 37KM H=14 49 09.1 (U)
 I AP 57 56.3 75.1N/136.2E 14 49 06 (M)
 E 59 00
 E 59 52

1977 APR 23 WESTERN POLAND
 E PG 15 26 14
 E SG 26 39

1977 APR 23
 L 17 15

1977 APR 24 COOK STRAIT, NEW ZEALAND HB=5.1(6) D=162.7 DEG AZ= 58
 I PKF2 02 10 28.2 1.3 / 15 40.4S/173.7E 201KM H=01 50 01.7 (U)

1977 APR 24 E 02 58 30	MB=4.7(9)	D=145.1 DEG AZ= 10 16.6S;172.8W 33KM H=03 24 01.4 (U)	1977 APR 27 SOUTH PACIFIC CORDILLERA E PKIKP 04 13 51 1.3 / 19	MB=5.1(11)	D=156.1 DEG AZ=245 55.2S;127.2W 33KM H=03 53 57.5 (U)
1977 APR 24 SAHOA ISLANDS REGION E PKP 03 43 40 E 44 08	MB=5.4(17)	D=130.7 DEG AZ= 45 9.9S;160.1E 29KM H=06 28 52.3 (U) 9.7S;159.8E 06 28 54 (M)	1977 APR 27 EXPLOSION; CZECHOSLOVAKIA I PG 08 30 58.2 I SG 31 11.1		
1977 APR 24 SOLOMON ISLANDS E PKP 06 48 06 3.2 / 200 E PP 50 23			1977 APR 27 EXPLOSION; GERMAN DEMOCRATIC REPUBLIC I PG 10 58 24.0 I SG 58 25.6 I 58 51		D= 10 KM AZ=311 51.37N; 12.89E
1977 APR 24 POLAND, UPPER SILESIA E 08 27 05 E SG 27 54			1977 APR 27 SOUTH OF HONSHU, JAPAN E P 12 11 42 0.8 / 17 E 11 57 E(PP) 15 18	MB=5.3(20)	D= 88.0 DEG AZ= 43 29.4N;142.0E 25KM H=11 58 54.1 (U) 29.4N;142.1E 11 58 55 (M)
1977 APR 24 POLAND, UPPER SILESIA E SG 11 36 04			1977 APR 27 UNDERGROUND EXPLOSION >BULKHEAD< I P 15 12 18.1C 1.3 / 36	MB=5.4(59)	D= 81.3 DEG AZ=321 37.1N;116.0W 0KM H=15 00 00.1 (U)
1977 APR 24 NEW BRITAIN REGION E PKP 15 17 23	MB=5.0(1)	D=122.4 DEG AZ= 50 4.2S;152.9E 70KM H=14 58 33.5 (U)	1977 APR 27 TRACES E 20 42 47		
1977 APR 24 NEAR EAST COAST OF HONSHU, JAPAN I P 20 54 43.4 1.0 / 31 E PP 57 32	MB=5.0(16)	D= 78.9 DEG AZ= 37 40.1N;142.7E 44KM H=20 42 43.2 (U) 40.2N;142.7E 20 42 42 (M)	1977 APR 27 FRANCE E SG 23 29 38	NO MB COMP.	D= 8.2 DEG AZ=238 46.5N; 3.0E 20KM H=23 25 20.2 (B) 46.5N; 3.0E 29KM 23 25 19.9 (U)
1977 APR 24 QUESTIONABLE EVENT E 21 52 13			1977 APR 28 FRANCE E SG 03 26 44	NO MB COMP.	D= 8.2 DEG AZ=238 46.5N; 3.0E 22KM H=03 22 23.0 (U)
1977 APR 25 SOUTHERN ALASKA E AP 02 39 50	NO MB COMP.	D= 66.5 DEG AZ=350 61.4N;147.2W 36KM H=02 28 54.4 (U)	1977 APR 28 CENTRAL YUGOSLAVIA I PN 03 43 44.5 E 44 13 E 44 50 E 45 15 E(SG) 45 44	MB=4.0(1)	D= 7.1 DEG AZ=154 44.9N; 17.4E 14KM H=03 41 56.5 (U) 44.9N; 17.3E 10KM 03 41 58.6 (B) DISTANCE 7.2 DEG
1977 APR 25 BANDA SEA E ARKP 03 51 27	MB=4.5(1)	D=111.8 DEG AZ= 74 7.6S;128.7E 135KM H=03 32 52.9 (U)	1977 APR 28 MARIANA ISLANDS LM 05 01 L 08		
1977 APR 25 UNDERGROUND EXPLOSION I P 04 14 37.2C 0.6 / 47 E PN 16 05	MB=5.1(40)	D= 40.2 DEG AZ= 66 49.8N; 78.2E 0KM H=04 06 57.8 (U)	1977 APR 28 CENTRAL YUGOSLAVIA E 06 24 58 E SG 25 33	NO MB COMP.	D= 6.9 DEG AZ=156 44.9N; 17.0E 10KM H=06 21 37.0 (U) 45.2N; 17.3E 10KM 06 21 41.6 (B)
1977 APR 25 SZECHWAN PROVINCE, CHINA E P 06 02 31	MB=4.8(3)	D= 67.0 DEG AZ= 68 31.4N;104.4E 33KM H=05 51 40.0 (U)	1977 APR 28 ANDREANOF ISLANDS, ALEUTIAN IS. E AP 13 49 47	MB=4.4(5)	D= 78.1 DEG AZ= 7 50.6N;177.6W 21KM H=13 37 37.7 (U) 50.5N;177.7W 13 37 34 (M)
1977 APR 25 POLAND, UPPER SILESIA E 07 28 15 E SG 28 47			1977 APR 29 EXPLOSION; GDR-CZECHOSLOVAKIA BORDER REGION I PG 08 00 09.7 I SG 00 25.1		
1977 APR 25 SOLOMON ISLANDS E PKP 11 50 30	MB=4.8(6)	D=131.1 DEG AZ= 44 10.0S;160.8E 33KM H=11 31 24.9 (U)	1977 APR 29 GULF OF ALASKA E P 08 26 13 I 26 19.5	MB=4.7(19)	D= 68.2 DEG AZ=348 59.4N;145.0W 8KM H=08 15 11.8 (U) 59.2N;145.0W 08 15 09 (M)
1977 APR 25 SOUTH OF TONGA ISLANDS E PKP1 15 22 58 E 23 15	MB=5.3(6)	D=152.3 DEG AZ= 17 24.4S;175.6W 33KM H=15 03 03.9 (U)	1977 APR 29 EXPLOSION; CZECHOSLOVAKIA I PG 10 59 56.8 I SG 11 00 12.7		
1977 APR 25 SAHOA ISLANDS REGION E PKP 17 29 01	MB=4.9(3)	D=144.7 DEG AZ= 9 16.2S;172.6W 33KM H=17 09 26.5 (U)	1977 APR 29 EXPLOSION; CZECHOSLOVAKIA I PG 10 59 56.8 I SG 11 00 12.7		
1977 APR 25 TONGA ISLANDS E PKP1 18 21 54 1.1 / 22	MB=4.6(3)	D=149.1 DEG AZ= 12 20.8S;173.5W 33KM H=18 02 06.5 (U)	1977 APR 29 TRACES; ALBANIA E L 18 46 18		
1977 APR 26 EAST PAPUA NEW GUINEA REGION E APP 04 19 56	MB=5.2(8)	D=119.6 DEG AZ= 57 5.3S;145.6E 87KM H=03 59 30.0 (U) 5.5S;145.8E 80KM 03 59 28 (M)	1977 APR 29 FIJI ISLANDS REGION I PKP1 19 27 00.0C 0.6 / 23		
1977 APR 26 WESTERN IRAN I P 16 31 53.2C 1.4 / 68 E PP 32 57 E PCF 34 43 E PCS 38 20 E 38 44 E 39 41 E 40 38 LM 40	MB=5.4(51)	D= 32.1 DEG AZ=111 32.7N; 48.9E 47KM H=16 25 29.0 (U) 32.6N; 48.9E 50KM 16 25 31.0 (B) 32.3N; 48.9E 16 25 25 (M) DISTANCE 31 DEG	1977 APR 29 KURILE ISLANDS E P 21 34 47 E 35 18	MB=4.7(3)	D= 75.3 DEG AZ= 25 48.6N;155.0E 33KM H=21 23 06.3 (U) 48.6N;155.3E 21 23 03 (M)
1977 APR 26 T 14 AN 2.5 AE 2 AV 3 E L 22 40 10 E 40 16	MLH =5.2 MLV =5.2		1977 APR 29 TONGA ISLANDS E PKP 00 19 52 1.2 / 18 E 20 19	MB=5.3(2)	D=145.7 DEG AZ= 10 17.3S;173.0W 33KM H=00 00 14.0 (U)
1977 APR 26 KURILE ISLANDS REGION I P 23 18 36.0C 0.9 / 28 E AP 18 49 LM 57	MB=5.0(9)	D= 77.9 DEG AZ= 32 43.4N;148.0E 34KM H=23 06 40.4 (U) 43.4N;148.4E 23 06 34 (M)			
1977 APR 27 E 03 04 33					



1977 APR 30 TONGA ISLANDS REGION
E ARKP 00 39 32
NO MB COMP, D=145.8 DEG AZ=10
17.3S/172.8W 0KM H=00 19 43.7 (I)

1977 APR 30 TONGA ISLANDS
E PKF 02 25 20
MB=5.0(10) D=145.3 DEG AZ=12
17.0S/174.1W 42KM H=02 05 45.7 (U)

1977 APR 30 WESTERN IRAN
E P 06 20 17
MB=4.6(9) D= 32.2 DEG AZ=112
32.5N/ 48.9E 48KM H=06 13 52.4 (U)
32.6N/ 49.3E 90KM 06 13 56.6 (B)
32.2N/ 48.8E 06 13 44 (M)

1977 APR 30 SOUTHERN IRAN
I P 14 43 12.7C 1.2 / 42
I PP 44 52.6
E 45 16
MB=5.0(23) D= 40.3 DEG AZ=109
27.6N/ 56.5E 38KM H=14 35 37.3 (U)
27.7N/ 56.4E 53KM 14 35 41.7 (B)
27.4N/ 56.5E 14 35 30 (M)

1977 APR 30 HOKKAIDO, JAPAN, REGION
E P 15 35 19
MB=4.8(4) D= 76.8 DEG AZ= 35
42.7N/143.1E 121KM H=15 23 39.7 (U)
43.4N/142.5E 15 23 36 (M)

1977 APR 30 NORTH ATLANTIC RIDGE
I P 16 30 44.5 1.5 / 32
E 31 54
E S 37 10
LH 45 T 20 AN 0.5 AE 1 AV 0.5 MLH =4.8 MLV =4.6
MB=4.6(10) D= 42.9 DEG AZ=265
32.4N/ 40.3W 33KM H=16 22 45.3 (U)
32.4N/ 40.7W 16 22 45 (M)
DISTANCE 42 DEG

1977 APR 30 NORTH ISLAND, NEW ZEALAND
E PKIP 18 53 50
E PKF2 54 35
MB=4.8(1) D=162.7 DEG AZ= 46
38.0S/177.4E 33KM H=18 33 50.1 (U)

OR ANOTHER POSSIBILITY

1977 APR 30 PHILIPPINE ISLANDS REGION
E P 18 53 50
E 54 35
MB=5.2(5) D= 98.1 DEG AZ= 66
8.5N/127.3E 77KM H=18 40 17.2 (U)

1977 APR 30 ANDREANOF ISLANDS, ALEUTIAN IS.
E P 22 01 31
E AP 01 45
L 42
MB=4.8(26) D= 77.3 DEG AZ= 4
51.6N/173.4W 42KM H=21 49 40.7 (U)
52.0N/173.6W 21 49 36 (M)

1977 APR 30 NORWEGIAN SEA
E P 23 36 41
E S 39 43
E(SS) 40 10
E 41 54
E LG1 42 07
E L 43 30
MB=4.1(4) D= 17.0 DEG AZ=397
68.2N/ 10.5E 14KM H=23 32 42.2 (U)
68.1N/ 10.8E 10KM 23 32 43.8 (B)
68.2N/ 11.1E 23 32 46 (M)

1977 MAY 01 NORTHERN PERU
E P 00 22 15
E AP 22 43
E XP 22 53
MB=4.9(32) D= 94.8 DEG AZ=266
6.1S/ 77.1W 123KM H=00 09 06.2 (U)
6.2S/ 77.3W 00 08 56 (M)

1977 MAY 01 TRACES; NORTHERN SUMATERA
E P 01 09 39
MB=4.8(6) D= 84.7 DEG AZ= 93
2.1N/ 97.2E 68KM H=00 57 11.6 (U)
2.0N/ 97.2E 00 57 07 (M)

1977 MAY 01 NORTH ATLANTIC RIDGE
E(P) 01 50 50
MB=4.6(2) D= 43.0 DEG AZ=265
32.3N/ 40.4W 33KM H=01 50 46.1 (U)

1977 MAY 01 SZICHUAN PROVINCE, CHINA
E P 02 50 19
E 50 29
MB=4.7(9) D= 68.1 DEG AZ= 73
27.3N/101.2E 53KM H=02 47 22.9 (U)
27.2N/101.4E 02 47 15 (M)

1977 MAY 01 POLAND, UPPER SILESIA
E SG 03 12 45
MB=4.6(7) D= 84.7 DEG AZ= 93
2.1N/ 97.2E 52KM H=03 26 23.7 (U)
2.1N/ 97.4E 03 26 21 (M)

1977 MAY 01 TRACES; NORTHERN SUMATERA
E P 03 33 54
MB=4.9(7) D= 84.7 DEG AZ= 93
2.1N/ 97.2E 52KM H=03 26 23.7 (U)
2.1N/ 97.4E 03 26 21 (M)

1977 MAY 01 SOLOMON ISLANDS
E PP 03 57 07
MB=5.5(3) D=131.0 DEG AZ= 44
9.9S/160.7E 19KM H=08 35 29.5 (U)
10.6S/162.7E 08 35 28 (M)

1977 MAY 01 SOUTH OF HONSHU, JAPAN
E P 16 35 07 1.0 / 18
E 35 45
E(PP) 35 03
LH 17 07 T 14 AN 1.5 AE 1
L 11
MB=4.5(3) D= 78.9 DEG AZ= 47
35.2N/132.6E 6KM H=16 23 01.7 (U)
35.2N/132.7E 16 22 59 (M)

1977 MAY 01
E 17 59 49

1977 MAY 01 SOLOMON ISLANDS
I PKF 18 58 24.9C 1.0 / 28
MB=5.6(15) D=129.7 DEG AZ= 50
7.2S/154.4E 32KM H=18 39 23.8 (U)
6.6S/154.9E 18 39 26 (M)

1977 MAY 02
E 00 02 14

1977 MAY 02
E 00 11 53

1977 MAY 02 TONGA ISLANDS REGION
I PKF1 01 59 57.6 1.4 / 27
NO MB COMP, D=147.1 DEG AZ= 10
18.7S/172.8W 33KM H=01 40 14.5 (I)

1977 MAY 02 NEW BRITAIN REGION
E PKF 03 19 19
MB=4.7(1) D=123.3 DEG AZ= 55
7.3S/149.4E 27KM H=03 00 25.4 (U)

1977 MAY 02 SOUTH OF HONSHU, JAPAN
E AP 05 13 06
E 13 29
NO MB COMP, D= 85.1 DEG AZ= 44
31.1N/138.7E 33KM H=05 05 24.4 (I)

1977 MAY 02 FIJI ISLANDS REGION
I PKF1 07 43 38.0C 1.1 / 33
I PKF2 43 44.0
MB=4.9(12) D=148.6 DEG AZ= 21
21.2S/178.8W 579KM H=07 24 56.0 (U)

1977 MAY 02 FRANCE
E SG 14 47 25
NO MB COMP. D= 5.3 DEG AZ=242
48.6N/ 6.0E 10KM H=14 44 26.5 (B)
48.3N/ 6.1E 20KM 14 44 29.1 (U)

1977 MAY 02 IRAN
E P 15 24 25 1.2 / 35
MB=5.3(3) D= 33.0 DEG AZ= 99
37.0N/ 55.2E 19KM H=15 17 48.9 (U)
37.1N/ 55.3E 33KM 15 17 53.1 (B)
36.9N/ 55.3E 15 17 48 (M)

1977 MAY 02
E 16 36 52

1977 MAY 02 SWITZERLAND
E SG 17 55 55
NO MB COMP. D= 5.5 DEG AZ=213
46.6N/ 8.7E 33KM H=17 53 11.2 (U)
46.4N/ 8.7E 10KM 17 53 02.3 (B)

1977 MAY 02 TRACES; IRAN
E P 18 16 57
NO MB COMP, D= 36.8 DEG AZ=104
32.4N/ 56.4E 33KM H=18 09 53 (I)

OR ANOTHER POSSIBILITY

1977 MAY 02 TRACES; WESTERN TURKEY
E 18 16 57
D= 16.4 DEG AZ=130
39.4N/ 29.1E 10KM H=18 11 24.7 (B)

1977 MAY 02 N.W. IRAN-USSR BORDER REGION
E 19 00 42
MB=4.7(1) D= 24.5 DEG AZ=106
39.6N/ 44.0E 42KM H=18 55 01.8 (U)
39.5N/ 43.9E 10KM 18 54 58.8 (B)
39.4N/ 43.9E 18 54 56 (M)

1977 MAY 02 MINDANAO, PHILIPPINE ISLANDS
E P 22 07 28 2.1 / 98
E 03 06
E 11 42
E S 13 48
E PS 21 20
E SS 25 40
E(SSS) 37.1
L 59 T 14 AN 2 AE 1 AV 2 MLH =5.8 MLV =5.8



Date	Time	Region	MB	D (DEG)	AZ (DEG)	Depth (KM)	H (KM)	Other Data
1977 MAY 03	03 27 27.0	ROMAN ISLANDS REGION	4.8(6)	88.9	45	312	03 19 07.6	
1977 MAY 03	12 37 29	SZICHUAN PROVINCE, CHINA	5.0(6)	68.0	73	33	12 26 33.0	
1977 MAR 03	14 00 10.5	TRACES, EXPLOSION OF 8.9 TONS; CZECHOSLOVAKIA		290	160	48.85N	14.35E	
1977 MAY 03	15 39 21	WESTERN POLAND						
1977 MAY 03	16 34 06	IRAN	5.0(2)	37.1	105	42	16 26 57.7	
1977 MAY 03	17 53 29	SPAIN	NO MB COMP.	18.8	228	37.1N	4.3W	
1977 MAY 03	18 18 08							
1977 MAY 03	22 37 41	RYUKYU ISLANDS REGION	4.9(5)	84.9	53	33	22 25 07.9	
1977 MAY 04	02 03 07.7	IRAN	4.8(21)	33.9	110	46	02 01 25.7	
1977 MAY 04	02 44 37							
1977 MAY 04	02 45 35	AFGHANISTAN-USSR BORDER REGION	5.3(3)	43.2	86	122	02 37 44.4	
1977 MAY 04	03 02 53							
1977 MAY 04	06 14 08	N.W. IRAN-USSR BORDER REGION	NO MB COMP.	24.8	107	39.3N	44.1E	
1977 MAY 04	08 36 01.8	FIJI ISLANDS REGION	4.7(6)	147.8	20	20.3S	178.4W	
1977 MAY 04	13 47 22		4.8					
1977 MAY 04	13 52 11	CZECHOSLOVAKIA-AUSTRIA-FRG BORDER REGION	NO MB COMP.	2.6	165	48.8N	14.0E	
1977 MAY 04	23 56 39.7							
1977 MAY 05	02 14 13.7	FIJI ISLANDS REGION	4.6(3)	145.3	20	17.8S	178.7W	
1977 MAY 05	08 39 58	CENTRAL YUGOSLAVIA		8.1	157	43.8N	17.4E	
1977 MAY 05	14 51 19							
1977 MAY 05	18 13 57	TRACES						
1977 MAY 05	22 26 22.6	HOKKAI DO, JAPAN, REGION	5.0(11)	77.2	36	41.9N	142.3E	
1977 MAY 05	22 26 57	TONGA ISLANDS REGION	5.2(14)	145.7	9	17.2S	172.1W	
1977 MAY 05	22 29 42.4							
1977 MAY 05	22 37 50							
1977 MAY 05	22 44 35	POLAND, UPPER SILESIA						
1977 MAY 05	23 17 26	CRETI	4.2(15)	18.8	148	34.6N	24.8E	
1977 MAY 06	04 05 20.9	MURILE ISLANDS REGION	5.4(52)	76.9	28	45.9N	152.1E	
1977 MAY 06	04 57 47							
1977 MAY 06	06 58 28.3	EXPLOSION OF 6.5 TONS; CZECHOSLOVAKIA		143	203	50.12N	12.23E	
1977 MAY 06	10 56 47.2	EXPLOSION OF 10 TONS; CZECHOSLOVAKIA		99	142	50.6N	13.86E	
1977 MAY 06	14 58 16							
1977 MAY 06	21 16 18							
1977 MAY 06	21 42 27.6	MURILE ISLANDS REGION	2.4(4)	76.9	27	46.5N	154.0E	
1977 MAY 06	21 50 09.6		4.6(2)	76.9	26	46.6N	154.1E	
1977 MAY 06	22 22 26.7	MURILE ISLANDS REGION	4.9(4)	76.1	26	47.4N	153.8E	
1977 MAY 06	22 36 24.3	MURILE ISLANDS						
1977 MAY 07	01 37 28	POLAND, UPPER SILESIA						
1977 MAY 07	01 00 45	SOUTH ATLANTIC RIDGE	4.8(6)	83.1	203	29.3S	12.7W	
1977 MAY 07	02 10 19.6	JAN MAYEN ISLAND REGION	5.4(9)	21.6	347	71.8N	1.3W	
1977 MAY 07	02 32 27		4.9(4)	75.4	35	44.1N	142.5E	
1977 MAY 07	02 31 27.5	TONGA ISLANDS REGION	5.0(4)	146.7	9	18.2S	172.4W	
1977 MAY 07	02 31 44		5.0(25)	76.6	27	46.8N	153.8E	
1977 MAY 07	02 32 27	MURILE ISLANDS	5.1(17)	76.4	26	47.0N	153.7E	
1977 MAY 07	02 32 27		5.4(30)	152.5	26	25.7S	179.9E	
1977 MAY 07	02 32 27		5.0(17)	146.5	10	18.0S	172.6W	
1977 MAY 07	02 32 27		NO MB COMP.	76.6	27	46.8N	153.6E	
1977 MAY 07	02 32 27		4.8(39)	77.2	4	51.7N	173.2W	
1977 MAY 08	00 16 22	CANTON ISLANDS REGION	4.4(3)	144.9	9	16.4S	172.6W	

1977 MAY 08 E P KURILE ISLANDS 02 15 33	MB=4.7(2)	D= 75.6 DEG 48.3N/155.0E	AZ= 25 27KM	H=02 03 50.2 (U)	1977 MAY 10 E P HALMAHERA 22 47 41	MB=5.6(9)	D=105.8 DEG 1.0S/127.3E	AZ= 71 20KM	H=22 28 31.9 (U)
1977 MAY 08 I PKF1 E TONGA ISLANDS 04 57 13.6 5- 18 1.1 / 43	MB=5.0(6)	D=147.6 DEG 19.6S/175.9W	AZ= 16 33KM	H=04 37 31.3 (U)	1977 MAY 11 E PKF E PP NEW BRITAIN REGION 00 12 18 14 15	MB=5.3(9)	D=124.6 DEG 7.7S/151.2E	AZ= 53 25KM	H=23 53 19.6 (U)
1977 MAY 08 E P TRACES; KURILE ISLANDS 05 11 52	NO MB COMP.	D= 76.2 DEG (47.2N)/153.6E	AZ= 26 40KM	H=05 00 10 (I)	1977 MAY 11 E PKF2 E SG TRACES; SOUTH ISLAND, NEW ZEALAND 03 07 52	MB=5.0(3)	D=163.6 DEG 43.1S/172.0E	AZ= 68 33KM	H=02 41 57.3 (U)
1977 MAY 08 E PG E SN E(SB) E SG CENTRAL YUGOSLAVIA 10 05 40 06 26 07 01 07 39	NO MB COMP.	D= 9.0 DEG 43.2N/ 18.9E	AZ=151 33KM	H=10 02 43.9 (U)	1977 MAY 11 E(P) E HOLUCCA PASSAGE 03 36 24 39 47 40 18	MB=5.7(15)	D=103.1 DEG 2.0N/126.9E	AZ= 70 77KM	H=03 22 25.2 (U)
1977 MAY 08 E P NORTH ATLANTIC RIDGE 15 36 31	MB=4.9(11)	D= 59.7 DEG 13.5N/ 44.9W	AZ=253 33KM	H=15 26 25.5 (U)	1977 MAY 11 E SG POLAND, UPPER SILESIA 11 24 48	MB=4.6(9)	D=150.4 DEG 23.4S/180	AZ= 25 545KM	H=14 00 03.9 (U)
1977 MAY 08 E P OFF COAST OF ECUADOR 16 58 30 17 09.1	MB=5.1(24)	D= 93.6 DEG 1.3S/ 81.1W	AZ=272 27KM	H=16 45 16.0 (U)	1977 MAY 11 I PKF1 I PKF2 E APKP SOUTH OF FIJI ISLANDS 14 18 54.1C 1.0 / 79 19 03.0D 1.0 / 17 20 59	HC =4.7	D= 31.2 DEG 33.2N/ 48.0E	AZ=112 33KM	H=23 46 16.7 (U)
1977 MAY 08 E P ARABIAN SEA 17 11 08	NO MB COMP.	D= 52.0 DEG 13.5N/ 57.5E	AZ=120 33KM	H=17 02 00 (I)	1977 MAY 11 E TRACES 22 17 55	MB=4.8(1)	D=190.3 DEG (22.3S)/175.6W	AZ= 16 33KM	H=00 11 56.6 (U)
1977 MAY 08 E SG POLAND, UPPER SILESIA 17 46 49	MB=5.1(24)	D= 93.5 DEG 1.2S/ 81.1W	AZ=272 42KM	H=18 00 00.0 (U)	1977 MAY 12 E PKF E APKP TONGA ISLANDS REGION 00 37 02 32 13	MB=4.8(6)	D= 85.3 DEG 31.0N/139.0E	AZ= 44 33KM	H=19 26 31.1 (I)
1977 MAY 08 E P OFF COAST OF ECUADOR 18 13 13	MB=5.1(24)	D= 93.5 DEG 1.0S/ 80.3W	AZ=272 42KM	H=18 00 03 (M)	CR ANOTHER POSSIBILITY	NO MB COMP.	D=161.0 DEG (34.7S)/179.8W	AZ= 34 217KM	H=00 12 38 (I)
1977 MAY 08 E P SOUTH OF HONSHU, JAPAN 19 37 30 LM 20 17 L 20	/5.1(11)/	D= 85.5 DEG 31.0N/139.6E	AZ= 44 33KM	H=19 24 47 (M)	1977 MAY 12 E SOUTH OF KIRGADEC ISLANDS 00 30 02 32 13	NO MB COMP.	D= 91.3 DEG 13.0N/121.7E	AZ= 67 33KM	H=08 09 52.9 (U)
1977 MAY 08 E P SOUTH OF HONSHU, JAPAN 19 39 07	/4.2(3)/	D= 85.3 DEG 31.0N/139.0E	AZ= 44 33KM	H=19 26 31.1 (I)	1977 MAY 12 E MINDORO, PHILIPPINE ISLANDS 08 23 02.2C 1.5 / 37 26 34	MB=5.4(17)	D= 68.4 DEG 39.3N/117.7E	AZ= 54 22KM	H=11 17 53.1 (U)
1977 MAY 08 I P 20 41 11.6	MB=4.3(15)	D= 23.3 DEG 71.5N/ 12.5W	AZ=340 33KM	H=21 07 47.4 (U)	1977 MAY 12 E NORTHEASTERN CHINA 11 28 54.4D 1.2 / 230 31 32	MB=5.8(61)	D= 67.2 DEG 21.7N/ 93.0E	AZ= 83 40KM	H=12 20 00.7 (U)
1977 MAY 08 E P JAM HAYEN ISLAND REGION 21 12 52 1.1 / 16	NO MB COMP.	D= 3.9 DEG 49.8N/ 7.4E	AZ=249 33KM	H=23 09 24.1 (U)	1977 MAY 12 E LUTON, PHILIPPINE ISLANDS 14 17 49 1.6 / 30 14 04	MB=5.0(21)	D= 88.6 DEG 16.0N/121.2E	AZ= 66 16KM	H=14 00 57.0 (U)
1977 MAY 08 I FG E E SG FRG. CENTRAL REGION RHINEGRABEN, NORTHEAST OF ST. GOAR 23 12 23.7 12 26.2 11 13 11 15	NO MB COMP.	D= 3.9 DEG 50.0N/ 7.8E	AZ=249 10KM	H=23 09 19.0 (B)	1977 MAY 12 E EXPLOSION; CZECHOSLOVAKIA (QUESTIONABLE) 13 06 39 07 16	MB=5.4(58)	D= 145.9 DEG 18.2S/177.6W	AZ= 18 628KM	H=15 25 46.2 (U)
1977 MAY 08 E PKF SOLOMON ISLANDS 06 02 17	MB=4.9(3)	D=126.0 DEG 6.8S/155.7E	AZ= 48 66KM	H=05 41 20.7 (U)	1977 MAY 12 E FIJI ISLANDS REGION 15 44 16.7 0.9 / 98 44 18.3 0.6 / 26	HC =5.0	D= 82.7 DEG 27.1N/126.8E	AZ= 55 109KM	H=15 02 44.6 (U)
1977 MAY 08 I PKF FIJI ISLANDS REGION 07 42 50.5D 0.8 / 24	MB=4.8(5)	D=145.2 DEG 17.7S/178.5W	AZ= 19 581KM	H=07 24 15.5 (U)	1977 MAY 12 E POLAND, UPPER SILESIA 15 14 36	MB=4.8(21)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)
1977 MAY 08 E PKF1 E EASTER ISLAND CORDILLERA 10 45 34 2.1 / 60	MB=5.2(4)	D=147.2 DEG 49.8S/114.5W	AZ=252 33KM	H=10 25 54.2 (U)	1977 MAY 12 I PKF1 I PKF2 POLAND, UPPER SILESIA 15 14 36	MB=4.8(21)	D=145.9 DEG 18.2S/177.6W	AZ= 18 628KM	H=15 25 46.2 (U)
1977 MAY 08 E 11 25 35	MB=5.4(3)	D= 82.7 DEG 27.2N/126.8E	AZ= 55 120KM	H=15 02 45 (M)	1977 MAY 12 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)
1977 MAY 08 E P E XP E E PP L L EAST CHINA SEA 15 14 56.7D 2.0 / 140 15 37 16 12 17 08 50 50	MB=5.4(3)	D= 82.7 DEG 27.1N/126.8E	AZ= 55 109KM	H=15 02 44.6 (U)	1977 MAY 12 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)
1977 MAY 08 E 21 44 30	MB=4.9(14)	D=145.3 DEG 17.8S/178.8W	AZ= 20 569KM	H=02 02 29.7 (U)	1977 MAY 12 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)
1977 MAY 08 E SG NORTHERN ITALY 22 06 30	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)	1977 MAY 12 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)
1977 MAY 08 E P 22 44 41	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)	1977 MAY 12 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)
1977 MAY 10 I PKF FIJI ISLANDS REGION 02 21 05.4C 0.9 / 38	MB=4.9(14)	D=145.3 DEG 17.8S/178.8W	AZ= 20 569KM	H=02 02 29.7 (U)	1977 MAY 12 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)
1977 MAY 10 I PKF1 FIJI ISLANDS REGION 12 52 56.3D	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)	1977 MAY 12 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)
1977 MAY 10 E SG POLAND, UPPER SILESIA 15 14 36	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)	1977 MAY 12 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)
1977 MAY 10 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)	1977 MAY 12 E SG POLAND, UPPER SILESIA 20 24 52	MB=4.6(2)	D=147.7 DEG 20.1S/177.8W	AZ= 19 445KM	H=12 32 02.3 (U)



1977 MAY 12 FIJI ISLANDS REGION
E PKF1 16 20 37
D=146.1 DEG AZ=18
18.4S;177.6W 617KM H=16 02 05.6

1977 MAY 12
E 17 57 40

1977 MAY 12
E 18 31 00

1977 MAY 12 KURILE ISLANDS
I P 21 46 54.9D 1.3 / 68
I 49 02.2
E AP 49 27
E APP 52 12
MB=5.3(66)
D=73.8 DEG AZ=24
50.2N;155.0E 126KM H=21 37 33.4
50.4N;154.8E 160KM H=21 37 38

1977 MAY 12 POLAND, UPPER SILESIA
E SG 22 32 55

1977 MAY 13 TRACES
E 00 46 40

1977 MAY 13 NEAR EAST COAST OF HONSHU, JAPAN
I P 01 38 49.0D 1.2 / 32
MB=4.9(22)
D=80.2 DEG AZ=38
38.3N;141.9E 50KM H=01 26 43.0

1977 MAY 13 HINDORO, PHILIPPINE ISLANDS
E(P) 02 29 03 1.5 / 22
L 13 11
MB=5.2(19)
D=91.3 DEG AZ=67
13.0N;121.7E 39KM H=02 15 55.1
12.8N;121.4E 02 15 49

1977 MAY 13 FIJI ISLANDS REGION
I PKF1 09 19 47.6D 0.2 / 19
I PKF2 19 51.6
NO MB COMP. D=146.6 DEG AZ=17
18.7S;176.7W 33KM H=09 00 05.6

1977 MAY 13 DOMINICAN ISLANDS REGION
I P 11 25 32.9D 1.5 / (450)
AV 2.1 MPV =6.1
D=87.7 DEG AZ=45
28.4N;139.5E 430KM H=11 13 31.2
28.4N;139.5E 430KM 11 13 29
DISTANCE 87 DEG DEPTH 440 KM

1977 MAY 13
E AP 27 13
E XP 27 26
E 20 12
E PP 29 14
E PPH 31 20
E SKP 35 16
E S 35 22
E SP 36 28
E XS 35 24
E SS 41 22
E PKMP 42 15
E XSP 44 10
E SSP 42 13
E PKPKP 51 23
L 12 04
LM 13
T 17 AN 1 AE 2.3
T 15 AN 4.5 AE 2.5 AM 6

1977 MAY 13
E 12 46 25
MLH =6.1 HLV =6.2 (NO DEPTH CORRECTION)

1977 MAY 13 TRACES; NORTHERN IZEU
E P 13 47 24
MB=5.0(16)
D=94.5 DEG AZ=266
5.8S; 77.1W 49KM H=13 35 16.9 (U)

1977 MAY 13 AERIAN STA
E(P) 16 18 25
MB=4.7(1)
D=14.3 DEG AZ=145
39.1N; 23.6E 33KM H=16 14 34.7 (U)
39.1N; 23.7E 10KM 16 14 34.3 (B)

1977 MAY 13 LUZON, PHILIPPINE ISLANDS
I P 18 19 17.2
MB=4.2(2)
D=85.9 DEG AZ=65
18.7N;120.3E 13KM H=18 06 36.1 (U)
18.4N;120.7E 18 06 37 (M)

1977 MAY 13 AERIAN STA
E P 13 21 17
E PP 21 17
E S 27 23
E LG 25 13
E L 25 03
LM 27
T 24 AN 2 AE 3.5
T 21 AN 7.5 AE 3

1977 MAY 13 DOMINICAN ISLANDS REGION
I PKMP 00 20 44
I PKF1 01 40.3D 1.6 / 61
I PKF2 01 58 1.0 / 25
E APPP 03 05
MB=4.8(7)
D=149.5 DEG AZ=23
22.4S;179.6W 627KM H=29 42 07.8 (U)

1977 MAY 14 CENTRAL YUGOSLAVIA
E(P) 03 41 02
E(S) 42 14
E SN 42 26
E SKP 43 10
E SG 43 13
E LM 47 06
E 44 28
T 7 AN 2.5
AV 0.5
MB=4.7(6)
D=8.5 DEG AZ=165
43.1N; 16.0E 47KM H=03 39 22.1 (U)
43.1N; 16.0E 35KM 03 39 23.7 (B)
43.0N; 15.7E 03 39 18 (M)
DISTANCE 8.6 DEG

1977 MAY 14 TRACES
E 04 20 06
AV 0.5

1977 MAY 14 OFF COAST OF ECUADOR
E(P) 06 17 02
E(PP) 21 22
E PS 30 26
E(SS) 30 26
LM 35 50
MB=5.2(23)
D=94.0 DEG AZ=277
1.5N; 85.3W 33KM H=06 04 39.7 (U)

1977 MAY 14 OFF COAST OF ECUADOR
E P 07 12 07
E 15 17
E PS 24 30
E LM 49
T 18 AN 0.5 AE 1.5 AV 1
MLH =5.5 HLV =5.4
MB=5.1(18)
D=94.0 DEG AZ=277
1.6N; 85.3W 33KM H=06 04 39.9 (U)

1977 MAY 14 ICELAND REGION
E(P) 07 33 47
NO MB COMP. D=23.0 DEG AZ=330
68.5N; 18.8W 33KM H=07 28 49 (I)

1977 MAY 14 LUZON, PHILIPPINE ISLANDS
E P 16 35 39
MB=4.4(2)
D=86.0 DEG AZ=65
18.6N;120.3E 36KM H=16 23 01.2 (U)
18.8N;120.5E 16 23 01 (M)

1977 MAY 14 POLAND, UPPER SILESIA
E SG 20 38 25

1977 MAY 14 HOKKAIDO, JAPAN, REGION
I P 21 40 33.1 1.1 / 20
MB=4.8(18)
D=78.4 DEG AZ=36
41.1N;143.7E 26KM H=21 28 33.5 (U)
41.7N;143.6E 21 28 32 (M)

1977 MAY 14 EASTERN TURKEY
E P 21 48 43 1.6 / 24
E SS 53 24
E 58 18
L 22 16
MB=4.7(7)
D=22.7 DEG AZ=113
38.8N; 40.0E 10KM H=21 43 38.1 (U)
38.7N; 39.9E 10KM 21 43 41.5 (B)
39.0N; 40.2E 21 43 38 (M)

1977 MAY 14 TRACES
E 21 54 18

1977 MAY 15 NORTHWEST OF KURILE ISLANDS
I P 00 32 10.0D 1.2 / 46
E 32 43
E AP 33 06
MB=5.0(50)
D=73.8 DEG AZ=26
49.6N;152.9E 221KM H=00 20 59.6 (U)
49.7N;153.0E 220KM 00 21 00 (M)

1977 MAY 15 SUDAN
E P 04 25 24
MB=4.3(4)
D=38.3 DEG AZ=142
17.9N; 36.8E 33KM H=04 17 57.5 (U)

1977 MAY 15 MID-INDIAN RISE
E P 14 10 12 1.6 / 18
MB=4.9(5)
D=77.9 DEG AZ=128
12.3S; 65.3E 33KM H=13 58 15.5 (U)

1977 MAY 15 ISTRIA, YUGOSLAVIA
E SG 15 46 37
(A)

1977 MAY 15 FOX ISLANDS, ALEUTIAN ISLANDS
I P 15 02 35.3D 1.5 / 44
L 46
MB=5.3(61)
D=76.7 DEG AZ= 1
52.4N;168.0W 33KM H=15 50 47.1 (U)
52.9N;168.3W 15 50 45 (M)

1977 MAY 15
E 17 05 56

1977 MAY 15
E 18 48 50

1977 MAY 15 MID-INDIAN RISE
E P 18 51 08 1.9 / 33
MB=4.9(6)
D=77.4 DEG AZ=127
11.6S; 65.6E 33KM H=18 39 14.5 (U)
12.2S; 65.8E 18 39 06 (M)

1977 MAY 15 TRACES
E 16 57 19

1977 MAY 15 TRACES
E 19 00 22

1977 MAY 15 MID-INDIAN RISE
E P 19 07 50
NO MB COMP. D=77.0 DEG AZ=127
11.3S; 65.3E 33KM H=18 55 58 (I)
9.7S; 65.2E 18 56 02 (M)

1977 MAY 15 MID-INDIAN RISE
E P 19 32 26
MB=4.8(4)
D=77.9 DEG AZ=127
12.0S; 66.0E 33KM H=19 20 29.3 (U)
12.0S; 65.8E 19 20 24 (M)

1977 MAY 15 NEAR WEST COAST OF COLOMBIA
I P 22 05 24.4
MB=4.9(15)
D=85.5 DEG AZ=274
6.2N; 77.5W 9KM H=21 52 43.9 (U)

1977 MAY 15 FIJI ISLANDS REGION
I PKMP 23 31 37.1D 1.6 / 43
I PKF1 31 40.1D 1.3 / 220
I PKF2 31 42.4C 1.4 / 140
E APKP 37 36
E PP 35 05
MB=5.5(27)
HC =5.2
D=146.8 DEG AZ=19
19.1S;177.7W 499KM H=23 12 53.6 (U)
19.1S;177.4W 400KM 23 12 43 (M)
DISTANCE 146 DEG DEPTH 500 KM

1977 MAY 16
E 02 14 01

1977 MAY 16 SOLOMON ISLANDS
E SKP 02 20 39
MB=5.1(11)
D=131.5 DEG AZ= 44
10.3S;161.2E 85KM H=01 58 14.4 (U)

1977 MAY 16
E 04 06 03

1977 MAY 16 CRETE
I P 08 21 17.3 1.6 / 33
I 23 27.7
E 21 35
MB=4.3(17)
D=18.6 DEG AZ=143
35.4N; 26.5E 47KM H=08 16 00.6 (U)
35.5N; 26.6E 40KM 08 16 03.9 (B)
36.3N; 26.4E 08 16 11 (M)

1977 MAY 16 NEW HERRIDGES ISLANDS
E PKF 21 33 54
E 34 31
E SKF 37 37
MB=5.1(6)
D=140.7 DEG AZ= 40
17.4S;167.9E 30KM H=11 14 30.7 (U)
17.3S;167.4E 11 14 27 (M)



Date	Location	Time	Magnitude	Depth (km)	D (DEG)	AZ (DEG)	H (KM)	Other Data
1977 MAY 16	SOUTHERN SINKIANG PROV., CHINA	13 01 54.6	4.6	8	46.0	76	57	
1977 MAY 16		15 12 39						
1977 MAY 16		16 26 25						
1977 MAY 16		16 35 04						
1977 MAY 16		16 40 45						
1977 MAY 16	ICELAND	16 52 45	4.6	23	22.4	318	10	
1977 MAY 16	ICELAND REGION	17 03 13	4.1	8	22.6	318	10	
1977 MAY 16	TRACES	17 14 13						
1977 MAY 16		19 42 03						
1977 MAY 16		19 56 42						
1977 MAY 17		02 04 33						
1977 MAY 17	POLAND, UPPER SILESIA	02 39 09						
1977 MAY 17	TRACES	03 29 45						
1977 MAY 17	PANAMA	14 27 57.50	5.1	33	84.9	275	8	
1977 MAY 18	KANCHAKA	04 05 09.00	5.1	40	70.1	19	158	
1977 MAY 18	NEW HEBRIDES ISLANDS	07 07 23.30	5.2	18	142.7	39	217	
1977 MAY 18	KURILE ISLANDS	11 37 18.8	4.7	15	77.0	31	56	
1977 MAY 18	EXPLOSION OF 14 TONS; CZECHOSLOVAKIA	13 04 26.9			109	139	50.56	
1977 MAY 18		15 35 22						
1977 MAY 18		16 00 42						
1977 MAY 19	WESTERN IRAN	00 15 13.50	4.9	30	35.5	112	40	
1977 MAY 19	FIJI ISLANDS REGION	00 27 15.57	4.2	4	147.8	20	558	
1977 MAY 19		12 57 11						
1977 MAY 19		17 27 27						
1977 MAY 19	FIJI ISLANDS REGION	19 07 35.00	4.7	9	146.7	19	35.6	
1977 MAY 19	NEAR EAST COAST OF HONSHU, JAPAN	19 32 44			82.0	41	55	
1977 MAY 19	SOUTHERN IRAN	23 06 04.20	5.2	47	39.9	111	30	
1977 MAY 19	SOUTHERN IRAN	23 12 26.20	5.3	40	39.9	111	30	
1977 MAY 20		00 07 44						
1977 MAY 20		09 31 37						
1977 MAY 20	TRACES	10 16 39						
1977 MAY 20	SOUTHERN IRAN	12 32 48	4.6	4	40.6	109	33	
1977 MAY 20	FIJI ISLANDS REGION	14 30 35	5.0	24	148.0	19	533	
1977 MAY 20	SOUTHERN IRAN	17 45 17	4.8	4	40.6	109	33	
1977 MAY 20	SOUTH OF FIJI ISLANDS	21 24 42	5.6	13	151.6	19	48	
1977 MAY 20	SALTA PROVINCE, ARGENTINA	21 26 23	5.0	97	102.5	247	178	
1977 MAY 20	POLAND, UPPER SILESIA	21 45 41						
1977 MAY 20	SOUTHERN SUMATRA	23 04 24.90	5.7	18	92.8	94	37	
1977 MAY 21	SOLOMON ISLANDS	00 15 55	5.4	11	131.2	45	33	
1977 MAY 21	LUZON, PHILIPPINE ISLANDS	05 47 53.20	5.7	57	88.6	67	189	
1977 MAY 21	MID-INDIAN RISE	10 30 42	4.6	3	75.8	124	33	
1977 MAY 21	TRACES; NEW HEBRIDES ISLANDS	12 50 28	5.2	19	138.1	40	35	
1977 MAY 21	BONIN ISLANDS REGION	13 53 10.40	5.1	42	88.7	45	340	
1977 MAY 21	NEAR COAST OF ECUADOR	14 27 55	5.0	11	93.7	272	48	
1977 MAY 22		02 28 18						
1977 MAY 22	FIJI ISLANDS REGION	23 46 06.70	5.2	28	147.2	18	350	



Date	Region	Time	Magnitude	Depth (D)	Latitude (N)	Longitude (E)	Focal Mechanism (M)	Depth (D)	Latitude (N)	Longitude (E)	Focal Mechanism (M)
1977 MAY 23	FIJI ISLANDS REGION	12 15 49.6	4.6 (2)	147.5 DEG	19.9S	178.1W	AZ=20 600KM H=11 57 18.1				
1977 MAY 23	FIJI ISLANDS REGION	12 32 16.80	5.0 (3)	145.3 DEG	17.8S	178.5W	AZ=20 571KM H=12 13 40.1				
1977 MAY 23	EXPLOSION: GERMAN DEMOCRATIC REPUBLIC	12 57 47.8									
1977 MAY 23	NORTHERN SUMATRA	22 05 35.70 1.3 / 65	5.5 (54)	86.8 DEG	0.7N	98.7E	AZ=93 40KM H=21 55 54.1				
1977 MAY 24	LUZON, PHILIPPINE ISLANDS	05 33 22	4.9 (5)	88.7 DEG	16.7N	122.4E	AZ=65 33KM H=05 20 26.8				
1977 MAY 24	VOLCANIC ISLANDS REGION	07 59 21.80 1.2 / 47	5.7 (59)	91.6 DEG	25.5N	142.5E	AZ=44 9KM H=07 46 13.8				
1977 MAY 24	MARIANA ISLANDS	10 36 39.8 1.2 / 20	5.7 (46)	98.7 DEG	18.6N	145.4E	AZ=45 207KM H=10 23 23.4				
1977 MAY 24	EXPLOSION OF 5.4 TONS: CZECHOSLOVAKIA	10 50 38.7		127 KM			AZ=170 50.16N; 13.30E				
1977 MAY 24	SOUTHERN IRAN	12 51 01.0 1.2 / 20	4.8 (20)	40.0 DEG	27.1N	55.4E	AZ=111 45KM H=12 43 28.7				
1977 MAY 24	SOUTHERN IRAN	13 06 43 1.6 / 4E	4.7 (23)	40.1 DEG	27.1N	55.4E	AZ=111 47KM H=12 43 31.5				
1977 MAY 25	FIJI ISLANDS REGION	05 37 31	4.6 (2)	144.6 DEG	16.8S	177.3W	AZ=17 42KM H=05 17 25.9				
1977 MAY 25	LUZON, PHILIPPINE ISLANDS	05 53 23	4.5 (4)	86.1 DEG	18.5N	120.4E	AZ=65 57KM H=05 40 58.6				
1977 MAY 25	FIJI ISLANDS REGION	06 09 19	4.7 (7)	144.8 DEG	17.0S	177.1W	AZ=17 42KM H=05 49 46.6				
1977 MAY 25	FIJI ISLANDS REGION	06 41 41	4.9 (7)	144.9 DEG	17.0S	177.0W	AZ=17 33KM H=06 22 04.4				
1977 MAY 25	IRAN	11 08 15.70 1.1 / 80	5.4 (55)	32.5 DEG	34.9N	52.1E	AZ=105 26KM H=11 01 45.5				
1977 MAY 25	FIJI ISLANDS REGION	12 28 35.0 1.0 / 20	5.4 (33)	145.4 DEG	17.9S	178.6W	AZ=20 578KM H=12 10 01.2				
1977 MAY 25	NORTHERN SUMATRA	15 08 01.20 1.5 / 125	5.9 (52)	82.2 DEG	4.2N	95.8E	AZ=93 56KM H=14 55 45.0				
1977 MAY 25	TAIWAN	15 24 54 D	4.9 (3)								
1977 MAY 25	UNDERGROUND EXPLOSION	17 12 18.4 1.3 / 37	5.3 (52)								
1977 MAY 25	SOUTHERN IRAN	21 13 49	4.8 (21)	37.2 DEG	29.3N	53.4E	AZ=111 22KM H=21 06 38.3 (U)				
1977 MAY 25	IRAN-IRAQ BORDER REGION	01 40 36.8 1.4 / 64	5.2 (50)	25.2 DEG	38.9N	44.4E	AZ=107 37KM H=01 35 13.8 (U)				
1977 MAY 26	OFF COAST OF EQUATOR	06 33 02	5.0 (12)	94.1 DEG	1.9S	81.2W	AZ=272 10KM H=06 19 40.8 (U)				
1977 MAY 26	N.W. IRAN-ISSP BORDER REGION	09 55 47 1.2 / 27	4.8 (21)	25.1 DEG	39.0N	44.4E	AZ=107 41KM H=09 50 24.6 (U)				
1977 MAY 26	SOUTHERN IRAN	16 50 34	4.9 (12)	35.5 DEG	29.8N	51.1E	AZ=113 29KM H=16 43 37.9 (U)				
1977 MAY 26	SOUTHERN IRAN	22 47 14	4.8 (21)	40.3 DEG	27.7N	56.6E	AZ=109 39KM H=22 39 29.1 (U)				
1977 MAY 27	TADZHIK SSD	02 40 16.27 1.5 / 80	4.9 (28)	43.3 DEG	37.6N	72.2E	AZ=85 123KM H=02 32 25.9 (U)				
1977 MAY 27	EXPLOSION OF 20.6 TONS: CZECHOSLOVAKIA	08 24 10.7	5.2 (5)	139.6 DEG	50.58N	14.02E	AZ=39 179KM H=05 00 51.6 (U)				
1977 MAY 27	EXPLOSION: GERMAN DEMOCRATIC REPUBLIC	10 57 36.3		108 KM			AZ=138 50.58N; 14.02E				
1977 MAY 27	KEPAPERO ISLANDS	12 37 52.37	4.7 (3)	156.7 DEG	29.4S	177.5W	AZ=24 51KM H=12 17 33.7 (U)				
1977 MAY 27	EXPLOSION OF 20.6 TONS: CZECHOSLOVAKIA	18 24 10.7									
1977 MAY 27	EXPLOSION: GERMAN DEMOCRATIC REPUBLIC	10 57 36.3									
1977 MAY 27	SOLOMON ISLANDS	23 17 21	4.7 (40)	18.8 DEG	35.2N	26.5E	AZ=144 68KM H=22 31 49.1 (U)				
1977 MAY 27	CRETE	22 36 34.70 0.2 / 35	5.3 (17)	129.8 DEG	9.4S	159.0E	AZ=46 33KM H=22 58 13.3 (U)				
1977 MAY 28	TRACFS	01 23 43									

MLH =5.8 (NO DEPTH CORRECTION)
MLV =5.6 (NO DEPTH CORRECTION)

Date	Location	Time	Depth (km)	Magnitude	Coordinates	Other Data
1977 MAY 28	HINDANAO, PHILIPPINE ISLANDS	02 59 15 03 45		5.1 (5)	D= 98.0 DEG 6.3N/124.0E 6.3N/124.9E	AZ= 70 48KM H=02 41 32.1
1977 MAY 28	SULAWESI	06 05 46 09 30 10 02.0 15 40 17 22 25.0		5.9(29)	D=102.2 DEG 1.7S/120.5E 1.8S/120.5E DISTANCE 102 DEG	AZ= 77 54KM H=05 51 48.1
1977 MAY 28	BALLENY ISLANDS REGION	07 02		5.1 (5)		MLH =6.0 MLV =5.8
1977 MAY 28	BALLENY ISLANDS REGION	15 31 05.2D 1.1 / 47		5.7(17)	D=163.6 DEG 64.9S/175.5E 64.3S/173.2E	AZ=153 33KM H=15 09 11.7
1977 MAY 29	NEAR COAST OF PAKISTAN	02 31 44 D 1.1 / 25 37 47		4.9(37)	D= 48.3 DEG 23.4N/ 64.6E 23.5N/ 64.8E DISTANCE 49 DEG	AZ=105 33KM H=02 22 03.8
1977 MAY 29	UNDERGROUND EXPLOSION	03 04 39.9C 0.7 / 100 06 12 25		5.6(60)	D= 40.5 DEG 49.9N/ 78.8E	AZ= 65 0KM H=02 56 57.8
1977 MAY 29	NEAR COAST OF PAKISTAN	03 29 15		4.6 (5)	D= 48.3 DEG 23.4N/ 64.6E	AZ=105 33KM H=03 20 35.1
1977 MAY 29	SOUTH OF KERMADEC ISLANDS	03 41 08 1.7 / 76		5.5 (6)	D=161.2 DEG 34.7S/179.1W 34.5S/178.3W	AZ= 32 33KM H=03 20 28.2
1977 MAY 29	NEAR COAST OF PAKISTAN	09 01 05 1.9 / 29		5.0 (3)	D= 48.3 DEG 23.3N/ 64.6E 24.3N/ 64.7E	AZ=105 33KM H=08 51 54.4
1977 MAY 29	AZORES ISLANDS REGION	16 43 40		4.7(28)	D= 31.1 DEG 40.5N/ 29.5W 40.4N/ 29.8W 40.7N/ 29.6W	AZ=266 12KM H=16 37 20.5
1977 MAY 29	SOUTH OF HONSHU, JAPAN	17 39 04		4.9(18)	D= 84.7 DEG 31.3N/138.3E 31.3N/138.5E	AZ= 45 381KM H=17 25 36.8
1977 MAY 30	HONSHU, JAPAN	00 35 40		5.0 (8)	D= 80.2 DEG 36.7N/138.4E	AZ= 42 7KM H=00 23 28.7
1977 MAY 30	FOX ISLANDS, ALEUTIAN ISLANDS	15 27 49.0C 1.1 / 62 37 40 47.1		5.6(73)	D= 76.6 DEG 52.4N/169.7W 52.7N/170.1W	AZ= 2 33KM H=15 16 01.6
1977 MAY 30	TRACES; TURKEY-IRAN BORDER REGION	13 13 28		4.6 (7)	D= 25.1 DEG 38.9N/ 44.3E 38.9N/ 44.2E 38.9N/ 44.3E	AZ=107 36KM H=18 06 55.2
1977 MAY 30	FIJI ISLANDS REGION	18 44 54 45 44		5.0 (6)	D=148.0 DEG 20.1S/176.2W	AZ= 16 261KM H=18 25 36.4
1977 MAY 30	FIJI ISLANDS REGION	19 30 15.5D 0.8 / 18		4.5 (5)	D=147.4 DEG 19.7S/177.5W	AZ= 19 564KM H=19 11 32.4
1977 MAY 31	HINDU KUSH REGION	07 46 05		4.7(11)	D= 42.5 DEG 36.2N/ 69.6E 36.2N/ 69.4E	AZ= 88 139KM H=07 38 23.5
1977 MAY 31	SANTA CRUZ ISLANDS	15 07 03 07 41 09 41 13 24 10 58		5.6(19)	D=135.1 DEG 11.8S/166.5E 11.7S/166.3E	AZ= 38 138KM H=14 47 59.1
1977 MAY 31	CZECHOSLOVAKIA (POSSIBLY EXPLOSION)	18 12 18.3 12 39.1 12 56		NO MB COMP.		D= 1.6 DEG 49.8N/ 13.9E 33KM H=18 11 52 (1)
1977 MAY 31	OFF E. COAST OF N. ISLAND, N.Z.	19 10 59 11 47		5.2 (4)		D=162.6 DEG 37.9S/177.3E 37.7S/175.1E
1977 MAY 31	POLAND, UPPER SILESIA	20 44 17				AZ= 46 125KM H=18 51 07.1 (U)
1977 MAY 31	POLAND, UPPER SILESIA	23 40 45				18 51 02 (M)



Date	Time	Location	Depth (km)	Magnitude	Distance (km)	Direction	Other
1977 JUN 01	02 21 24	CENTRAL YUGOSLAVIA	9.8 DEG	43.2N 21.0E	33KM	10KM	NO MB COMP.
1977 JUN 01	05 51 58		149.4 DEG	21.2S 174.4W	33KM	10KM	MB=5.2(12)
1977 JUN 01	09 17 17.8	TONGA ISLANDS	20.6S 177.4W				
1977 JUN 01	10 38 02.0C		20.0 DEG	36.2N 31.3E	67KM	10KM	MB=5.7(46)
1977 JUN 01	12 59 17.4D	WESTERN TURKEY	36.1N 31.7E				
1977 JUN 01	13 01 51.1		35.7N 31.0E				
1977 JUN 01	19 24 11	TRACES					
1977 JUN 01	20 03 44						
1977 JUN 01	22 39 57	LUTON, PHILIPPINE ISLANDS	90.9 DEG	13.9N 122.3E	56KM	22 26 37	MB=4.9(4)
1977 JUN 02	01 52 17.1	WESTERN POLAND	11.8N 123.9E				DISTANCE 230 KM
1977 JUN 02	05 21 58.5						
1977 JUN 02	13 37 02.0	FRG, NORTHERN REGION	2.8 DEG	53.1N 9.4E	0KM	13 32 14.8	NO MB COMP.
1977 JUN 02	15 00 16.0C	ICGLAV	20.9 DEG	63.7N 19.0W	10KM	14 55 31.9	MLH =3.4
1977 JUN 02	17 24 44	DOMECANESE ISLANDS	19.3 DEG	35.2N 27.7E	33KM	17 20 19.5	MB=4.9(34)
1977 JUN 02	19 17 02	TRACES; DOMECANESE ISLANDS	35.3N 27.9E				MLH =3.2 MLV =4.9
1977 JUN 02	19 42 52.3	NORTH ATLANTIC OCEAN	19.3 DEG	35.1N 27.6E	33KM	19 08 29.7	MB=4.3(13)
1977 JUN 03	01 13 11.1C	TADZHIK SSR	28.9 DEG	54.2N 35.2W	33KM	19 36 56.4	MB=3.9(3)
1977 JUN 03	02 33 04.1C	OFF EAST COAST OF KAMCHATKA	41.6 DEG	39.9N 71.8E	24KM	01 05 23.7	MB=4.4(17)
1977 JUN 03	02 38 45.2C	HINDU KUSH REGION	73.1 DEG	52.1N 159.1E	33KM	02 21 36.8	MB=5.1(50)
1977 JUN 03	04 51 28.9C	WESTERN IRAN					MLH =5.6 MLV =5.4
1977 JUN 03	05 05 33.0C	IRAN-IRAQ BORDER REGION					MB=4.7(12)
1977 JUN 03	06 05 15	WESTERN IRAN					MB=5.5(83)
1977 JUN 03	04 18 11	UZBEK SSR					D= 70.8E 210KM H=02 31 04.7
1977 JUN 03	09 25 03.5	GERMAN DEMOCRATIC REPUBLIC					30.0 DEG 220KM H=02 31 08
1977 JUN 03	11 24 16	TRACES					DEG 220KM H=02 31 08
1977 JUN 03	11 54 39	KUPILE ISLANDS					DEG 220KM H=02 31 08
1977 JUN 03	12 11 13						
1977 JUN 03	14 51 44.9	FIJI ISLANDS REGION					
1977 JUN 03	15 36 45.6	NEW HEBRIDES ISLANDS					
1977 JUN 03	23 02 06.3D	OFF EAST COAST OF HONSHU, JAPAN					
1977 JUN 03	23 11 23						
1977 JUN 03	23 39 43	NEAR EAST COAST OF HONSHU, JAPAN					
1977 JUN 04	03 32 59						
1977 JUN 04	09 25 32	EXPLOSION; CZECHOSLOVAKIA					DISTANCE 190 KM
1977 JUN 04	15 07 52.9	LAKE BAIKAL REGION					
1977 JUN 04	00 37 25						
1977 JUN 05	02 17 51	SOUTH OF KURILIAEC ISLANDS					NO MB COMP, D=160.7 DEG AZ=30
1977 JUN 05	03 04 32	NEAR EAST OF NORTHERN CHILE					D=104.2 DEG AZ=250
1977 JUN 05	04 51 28.9C	WESTERN IRAN					D=31.7 DEG AZ=113
1977 JUN 05	06 05 33.0C	IRAN-IRAQ BORDER REGION					D=31.8 DEG AZ=113
1977 JUN 05	06 05 15	WESTERN IRAN					D=31.5 DEG AZ=113

1977 JUN 05 WESTERN IRAN E P 06 33 58	MB=4.7(6)	D= 31.9 DEG AZ=112 32.5N; 48.3E 33KM H=06 27 33 32.5N; 48.2E 10KM 06 27 32 32.4N; 48.3E 06 27 29	1977 JUN 06 I(P) 21 24 53.2		
1977 JUN 05 HOKKAIDO, JAPAN, REGION I P 06 53 11.7 0.8 / 15 E AP 53 34	MB=4.6(14)	D= 77.3 DEG AZ= 36 42.1N;142.9E 66KM H=06 41 23 42.5N;142.8E 06 41 22	1977 JUN 06 TRACES 22 02 15		
1977 JUN 05 WESTERN IRAN E P 07 50 35	MB=4.7(13)	D= 31.8 DEG AZ=113 32.4N; 48.1E 33KM H=07 48 38 32.4N; 48.7E 10KM 07 48 38 31.9N; 47.9E 07 48 30	1977 JUN 06 I 22 42 23.8 1977 JUN 06 E 23 15 03		
1977 JUN 05 WESTERN IRAN I P 08 31 53.20 1.7 / 53 E(POS) 33 33 LM 45	MB=5.1(37)	D= 31.7 DEG AZ=112 32.6N; 48.2E 33KM H=08 25 30 32.5N; 48.2E 65KM 08 25 30 32.1N; 48.1E 08 25 23	1977 JUN 07 SOUTH OF KERMADEC ISLANDS I PKF2 08 26 41.70 1.3 / 33 I APIP2 26 54.6	MB=4.9(5)	D=159.9 DEG AZ= 29 33.1S;178.6W 33KM H=08 06 06.6 (U)
1977 JUN 05 IRAN-IPAD BORDER REGION E P 08 51 32 1.3 / 22	MB=4.6(13)	D= 31.5 DEG AZ=113 32.7N; 47.9E 54KM H=08 45 13 32.5N; 48.7E 10KM 08 45 14 32.2N; 47.9E 08 45 03	1977 JUN 07 SAHITA GRU7 ISLANDS I PKF 09 00 28.90 1.0 / 23	MB=5.2(14)	D=134.0 DEG AZ= 38 10.8S;166.0E 77KM H=08 41 17.9 (U) 10.6S;166.0E 08 41 13 (M)
1977 JUN 05 NEAR EAST COAST OF HONSHU, JAPAN E P 11 17 53	MB=4.6(5)	D= 82.1 DEG AZ= 40 35.9N;141.5E 36KM H=11 05 14 36.0N;141.9E 11 05 13	1977 JUN 07 E 15 14 50 1977 JUN 08 TRACES; TOKAGANESI ISLANDS E 04 55 53	MB=4.0(7)	D= 18.9 DEG AZ=137 36.2N; 28.8E 33KM H=04 49 53.8 (U) 36.1N; 28.6E 10KM 04 49 53.7 (B)
1977 JUN 05 SICILY I P 14 03 34.00 1.6 / 42 I PP 00 45.2 E SSES 07 34 E L 07 40 L 10	MB=4.9(15)	D= 13.4 DEG AZ=175 37.9N; 14.5E 8KM H=13 59 21 37.9N; 14.4E 12KM 13 59 21 37.8N; 14.3E 13 59 21	1977 JUN 08 CHILD-POLYNIA BORDER REGION E 13 42 49	MB=5.4(39)	D=101.1 DEG AZ=249 22.1S; 67.3W 144KM H=13 25 15.6 (U) 21.8S; 66.0W 13 25 04 (M)
1977 JUN 05 NORTHERN ITALY FRIULI I PV 15 16 25.1 E SG 16 48	NO MB COMP.	D= 5.0 DEG AZ=178 46.3N; 13.3E 10KM H=15 15 11 46.3N; 13.2E 33KM 15 15 11	1977 JUN 08 SOUTH OF FIJI ISLANDS I PKIKP 14 24 58.7 I PKT1 25 33.50 1.0 / 200 I 25 15.5 1.0 / 28 E APIP 26 03	MB=5.2(19)	D=149.8 DEG AZ= 19 22.1S;177.0W 226KM H=14 05 39.3 (U) 21.8S;178.9W 14 05 15 (M)
1977 JUN 05 NEW BRITAIN REGION I PKF 15 37 52.7	MB=5.4(15)	D=122.2 DEG AZ= 51 4.6S;151.9E 150KM H=15 19 13 4.6S;152.0E 15 19 00	1977 JUN 08 NEAR EAST COAST OF HONSHU, JAPAN I P 14 37 47.40 1.0 / 55 I AP 30 07.0 E S 47 40 E(SSC) 57.0 LM 15 10 T 16 AN 0 AE 2 LM 16 T 15 AV 1	MB=5.5(50)	D= 79.9 DEG AZ= 39 38.5N;141.5E 78KM H=14 25 46.5 (U) 38.8N;141.6E 60KM 14 25 45 (M)
1977 JUN 05 NORTHERN SIKHANG PROV., CHINA I P 18 28 13.10 0.8 / 23 E 30 23	MB=4.7(13)	D= 48.8 DEG AZ= 71 42.0N; 85.7E 33KM H=18 19 29 42.2N; 85.6E 18 19 30	1977 JUN 08 GDR-FRG BORDER REGION E SG 18 00 19		
1977 JUN 05 SOUTHERN ITALY E L 23 25 32 L 27.0	NO MB COMP.	D= 12.3 DEG AZ=158 39.7N; 18.9E 33KM H=23 19 49 39.7N; 19.2E 10KM 23 19 51	1977 JUN 08 JAVA SEA E P 21 30 47 E(FP) 35 02	MB=5.4(13)	D=100.9 DEG AZ= 86 5.9S;113.1E 636KM H=21 18 03.2 (U) 6.0S;112.9E 550KM 21 17 56 (M)
1977 JUN 05 TRACES; SCOTIA SPA E APKP 23 45 09	MB=5.3(10)	D=121.3 DEG AZ=211 60.2S; 47.3W 33KM H=23 26 10	1977 JUN 09 00 04 08		
1977 JUN 06 SOUTH SANDWICH ISLANDS REGION LM 02 13			1977 JUN 09 TRACES 04 11 50		
1977 JUN 06 SOUTHERN GREECE E(P) 04 36 39 L 41.9 L 43.3	MB=4.2(1)	D= 15.5 DEG AZ=153 37.1N; 21.7E 33KM H=04 32 57 37.7N; 22.2E 10KM 04 33 07	1977 JUN 09 NORTH ATLANTIC RIDGE E P 06 50 20	MB=4.0(5)	D= 51.7 DEG AZ=263 24.9N; 45.9W 33KM H=06 41 15.0 (U)
1977 JUN 06 DOMINICAN REPUBLIC REGION E P 05 49 53 L 07 18	MB=4.9(16)	D= 70.5 DEG AZ=277 19.4N; 69.5W 49KM H=06 38 46	1977 JUN 09 NEAR EAST COAST OF KAMCHATKA E P 07 35 17	MB=4.7(7)	D= 71.0 DEG AZ= 18 55.1N;162.6E 33KM H=07 24 01.4 (U) 54.9N;162.7E 07 24 02 (M)
1977 JUN 06 SPAIN E P 10 50 12 E L 58 42 LM 11 01	MB=4.2(3)	D= 17.1 DEG AZ=224 37.8N; 1.8W 33KM H=10 49 12 37.6N; 1.9W 10KM 10 49 12	1977 JUN 09 08 22 22		
1977 JUN 06 TONGA ISLANDS I PKF1 13 05 26.70 1.0 / 42 I APKP 06 26.30	MB=5.1(21)	D=147.2 DEG AZ= 15 19.2S;175.6W 253KM H=12 46 11 19.2S;176.1W 12 45 48	1977 JUN 09 TRACES, EXPLOSION OF 5.2 TONS; CZECHOSLOVAKIA I(SG) 09 26 15.9		D=264 KM AZ=164 (49.02N; 14.00E (C))
1977 JUN 06 SOUTHERN ITALY E SN 18 02 29 E SG 07 20 E 07 43 E 04 34 E 05 30	NO MB COMP.	D= 10.5 DEG AZ=171 40.9N; 15.2E 33KM H=17 58 32 41.1N; 15.4E 10KM 17 58 35	1977 JUN 09 NORTHERN SUMATRA E P 10 11 28	MB=5.0(5)	D= 82.2 DEG AZ= 93 4.2N; 95.8E 43KM H=09 59 10.6 (U) 6.7N; 96.3E 09 59 21 (M)
1977 JUN 06 SOUTHERN IRAN I P 18 46 43.2 0.9 / 17 E PPF 40 29 L 19 04	MB=4.9(27)	D= 35.6 DEG AZ=113 29.7N; 51.1E 30KM H=18 39 47 29.5N; 51.5E 10KM 18 39 48 29.7N; 51.1E 18 39 48	1977 JUN 09 TRACES; YUNAN PROVINCE, CHINA E P 11 26 06	MB=5.0(2)	D= 67.9 DEG AZ= 74 26.9N;100.3E 33KM H=11 14 45.0 (U) 26.3N;100.8E 11 14 40 (M)
1977 JUN 06 FIJI ISLANDS REGION I PKF 20 10 31.10 1.2 / 45 E(SKF) 11 14 L 13 16	MB=4.8(14)	D=145.6 DEG AZ= 19 18.0S;178.4W 609KM H=19 51 59 18.0S;176.9W 19 50 51	1977 JUN 09 HUNGARY BAKONY MOUNTAINS E SG 11 31 33		H=11 28 43.5 (A)
			1977 JUN 09 TRACES; SOUTH ATLANTIC RIDGE E P 16 51 53	MB=5.0(8)	D= 79.6 DEG AZ=204 25.1S; 13.6W 33KM H=16 39 46.2 (U)
			1977 JUN 10 NORTHEASTERN CHINA I P 00 51 58.00 LM 01 10	MB=5.1(7)	D= 68.3 DEG AZ= 53 39.6N;117.9E 46KM H=00 41 00.0 (U) 39.7N;118.1E 00 40 54 (M)

1977 JUN 10 CZECHOSLOVAKIA
I PG 02 39 09.0
I SG 39 27.2
MB=5.4(19)

1977 JUN 10 SOUTHERN SUMATRA
E P 02 43 19 1.1 / 22
E AP 43 38
E 48 58
E(SKKS) 59.2
MB=5.1(11)

1977 JUN 10 FIJI ISLANDS REGION
I PKF1 03 42 47.2D 0.9 / 105
MB=5.1(8)

1977 JUN 10 ARABIAN SEA
I P 05 40 26.9 1.6 / 59
MB=4.2(16)

1977 JUN 10 MEDITERRANEAN SEA
E P 23 06 38
E 06 48
MB=4.2(16)

1977 JUN 11 TRACES
E 08 09 24

1977 JUN 11
E 09 09 47
E SG 17 16

1977 JUN 11
E 12 41 14

1977 JUN 11 NORTH ATLANTIC RIDGE
I P 20 41 13.3C 1.3 / 22
L 55
MB=4.8(4)

1977 JUN 11 OFF EAST COAST OF HONSHU, JAPAN
E F 22 31 21
MB=4.6(2)

1977 JUN 12
E 01 31 49

1977 JUN 12 HOKKAIDO, JAPAN, REGION
I F 08 59 26.6C 1.0 / 27
E AP 59 53
MB=5.1(11)

1977 JUN 12 POLAND, UPPER SILESIA
E SG 09 39 26

1977 JUN 12 NEW HERFIDDS ISLANDS
E PKF 12 36 09
MB=5.0(3)

1977 JUN 12 FIJI ISLANDS REGION
I PKF1 15 33 41.9C 1.2 / 22
MB=4.5(7)

1977 JUN 12 SOUTH OF FIJI ISLANDS
E PKF1 19 37 29 1.5 / 16
E 33 48
MB=4.7(3)

1977 JUN 12 TRACES
E 21 27 24

1977 JUN 13 TONGA ISLANDS
E PKF 10 28 26 0.2 / 410
I APKP 21 38.4
E 29 59
LH 35
MB=5.5(33)

1977 JUN 13 EXPLOSION
I PG 12 00 02.2
I SG 00 17.2
E L 00(27)

1977 JUN 13 LUZON, PHILIPPINE ISLANDS
E(P) 12 00 54
E PP 04 37
E SKS 11.3
E(S) 17.1
LH 38
L 47
- 22 AM 2.5 AE 2
MLH =5.7

1977 JUN 13 AFGHANISTAN-USSR BORDER REGION
E P 13 48 42 1.5 / 35
E PP 50 25 1.6 / 40
MB=5.6(27)

1977 JUN 13 PRG. CENTRAL REGION
QUESTIONABLE EVENT
E PG 14 46 24
E SG 46 57
MB=5.0(21)

1977 JUN 13
E 16 09 17

1977 JUN 14
E 01 24 27

D= 1.3 DEG AZ=154
50.1N 13.9E 0KM H=02 38 44 (U)
DISTANCE 150 KM

D= 91.5 DEG AZ= 93
3.1S 101.5E 33KM H=02 35 14.0 (U)
3.0S 101.4E 02 35 13 (M)

D=145.8 DEG AZ= 19
18.2S 178.0W 332KM H=03 24 05.4 (U)
18.3S 176.0W 03 23 10 (M)

D= 53.6 DEG AZ=121
11.6N 57.7E 33KM H=05 40 06.8 (U)
11.7N 57.5E 05 40 08 (M)

D= 17.7 DEG AZ=153
35.1N 22.8E 33KM H=23 02 32.3 (U)
35.0N 22.7E 10KM 23 02 31.6 (M)
34.8N 22.9E 23 02 30 (M)

D= 41.1 DEG AZ=266
33.9N 39.0W 33KM H=20 33 30.7 (U)
33.9N 38.3W 10KM 20 33 34.4 (M)
33.5N 38.8W 20 33 26 (M)

D= 84.1 DEG AZ= 41
33.7N 141.6E 24KM H=22 18 51.5 (U)

D= 76.7 DEG AZ= 36
42.4N 142.1E 108KM H=08 47 46.2 (U)
43.1N 142.0E 110KM 08 47 50 (M)

D=143.4 DEG AZ= 40
19.8S 169.1E 106KM H=12 16 49.2 (U)

D=145.5 DEG AZ= 20
18.0S 178.7W 574KM H=15 15 06.9 (U)
17.8S 177.8W 15 14 03 (M)

D=150.9 DEG AZ= 18
23.0S 176.2W 123KM H=19 13 49.2 (U)

D=146.8 DEG AZ= 12
18.5S 174.1W 41KM H=10 08 48.0 (U)
18.3S 175.3W 10 08 50 (M)

D= 92.7 DEG AZ= 65
13.3N 124.6E 39KM H=11 47 41.4 (U)
13.2N 124.7E 40KM 11 47 41 (M)

D= 43.4 DEG AZ= 87
36.4N 71.3E 121KM H=13 40 50.3 (U)
36.6N 71.3E 100KM 13 40 50 (M)

D= 2.7 DEG AZ=258
50.7N 8.9E 33KM H=14 45 43.1 (U)



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1977 JUN 14 TRACES
E 01 42 08

1977 JUN 14 TRACES TONGA ISLANDS
E PKF 02 20 26
MB=5.0(3)

1977 JUN 14
E 04 56 39
E(SG) 56 57
MB=4.6(3)

1977 JUN 14 TONGA ISLANDS
E PKF1 05 34 28
MB=4.6(3)

1977 JUN 14
E 06 33 18

1977 JUN 14 PHILIPPINE ISLANDS REGION
E P 08 04 42
MB=5.1(5)

1977 JUN 14 TONGA ISLANDS
I PKF1 08 56 25.7D 1.4 / 85
E APKP 57 25
MB=5.0(21)

1977 JUN 14 TAIWAN REGION
E P 10 43 19 1.0 / 15
MB=4.9(1)

1977 JUN 14 NORTHERN ITALY FRIULI
E SG 16 56 54

1977 JUN 14 SOUTH PACIFIC CORDILLEPA
E(PKF) 18 25 05
NO MB COMP, D=156.7 DEG AZ=244
55.8S 128.1W H=18 05 15 (M)

1977 JUN 14
E 20 02 10

1977 JUN 14 EASTERN MEDITERRANEAN SEA
I P 21 00 31.8 1.4 / 20
NO MB COMP, D= 19.7 DEG AZ=147
33.9N 25.6E 33KM H=20 56 03.1 (U)
33.9N 25.6E 10KM 20 56 03.0 (M)
34.1N 25.5E 20 56 05 (M)

1977 JUN 14 SOUTH ATLANTIC RIDGE
I F 21 50 41.9 2.1 / 205
E PP 53 14
E S 59 50
E SS 22 04 18
E SSS 07 34
LH 15
- 22 AM 3 AE 1.5 AV 2
MLH =5.6 MLV =5.4

1977 JUN 14 NORTH ATLANTIC RIDGE
I P 22 42 07.5
MB=6.0(6)

1977 JUN 15 NORTH ATLANTIC RIDGE
I P 00 02 52.3C 1.3 / 18
MB=4.6(2)

1977 JUN 15 NORTH ATLANTIC RIDGE
I P 00 02 52.3C 1.3 / 18
MB=5.1(17)

1977 JUN 15 NORTH ATLANTIC RIDGE
I P 00 03 43.2 1.4 / 52
I 03 49.6
E PPS 12.0
L 27
MB=5.3(6)

1977 JUN 15 SOUTH ATLANTIC RIDGE
E P 00 21 56
MB=4.9(12)

1977 JUN 15 SOUTHERN IRAN
E P 03 30 44
MB=4.8(1)

1977 JUN 15 SOUTHERN SINKIANG PROV., CHINA
E P 03 31 46
MB=4.7(3)

1977 JUN 15 KODIAK ISLAND REGION
E AP 09 29 57 1.4 / 18
MB=4.6(10)

1977 JUN 15 EXPLOSION OF 11 TONS; GERMAN DEMOCRATIC REPUBLIC
I PG 10 53 53.1
I SG 57 54.7
D= 10 KM AZ=311
51.37N 12.89E

1977 JUN 16
E 01 07 37

1977 JUN 16 ROMANIA
E P 02 23 37
MB=4.1(11)

1977 JUN 16
E 03 47 37

1977 JUN 16 POLAND, UPPER SILESIA
E 03 48 04
MB=4.1(11)

1977 JUN 16 SAMOA ISLANDS REGION
E PKF 04 37 07
MB=5.0(10)

D=144.1 DEG AZ= 11
15.8S 173.9W 47KM H=02 00 58.1 (U)

D=146.6 DEG AZ= 14
18.5S 175.2W 137KM H=05 15 00.9 (U)

D= 95.3 DEG AZ= 65
11.0N 126.0E 49KM H=07 51 21.4 (U)
11.0N 126.0E 07 51 19 (M)

D=146.1 DEG AZ= 14
18.0S 175.1W 223KM H= 8 37 0.8 (U)
17.9S 175.8W 08 36 51 (M)

D= 85.0 DEG AZ= 62
21.1N 122.1E 7KM H=10 30 41.3 (U)
21.4N 121.8E 10 30 48 (M)

D= 58.3 DEG AZ=256
16.6N 146.6W 33KM H=22 32 14.4 (U)

D= 58.3 DEG AZ=256
16.6N 146.6W 33KM H=23 52 58.6 (U)

D= 58.4 DEG AZ=256
16.5N 146.6W 33KM H=23 53 49.9 (U)

D= 69.4 DEG AZ=208
14.1S 14.4W 33KM H=00 09 49.0 (U)

D= 42.2 DEG AZ=108
26.8N 58.8E 33KM H=03 22 53.2 (U)

D= 47.5 DEG AZ= 72
41.9N 83.3E 39KM H=03 23 12.6 (U)
42.1N 83.4E 03 23 10 (M)

D= 72.2 DEG AZ=352
56.3N 153.3W 33KM H=09 18 25.4 (U)

D= 10.6 DEG AZ=117
45.7N 26.6E 151KM H=02 26 10.3 (U)
45.9N 26.8E 136KM 02 26 10.8 (M)
45.8N 26.5E 140KM 02 26 11 (M)

D=143.7 DEG AZ= 9
15.2S 172.8W 33KM H=04 17 35.7 (U)



Date	Time	Region	Station	Distance (KM)	D (DEG)	AZ (DEG)	H (KM)	Depth (KM)	MB	Other Data
1977 JUN 16	14 58 12.4			240						
1977 JUN 16	22 15 07	FRANCE (QUESTIONABLE)			45.1N	6.9E	0KM		5.6	
1977 JUN 17	02 47 35.40	FIJI ISLANDS REGION			19.9S	179.1W	690KM		5.7	
1977 JUN 17	03 01 20	FRANCE (QUESTIONABLE)			45.1N	6.9E	0KM		5.6	
1977 JUN 17	14 58 36	MARIANA ISLANDS			19.0N	145.7E	108KM		4.3	
1977 JUN 17	15 02 33	FRANCE (QUESTIONABLE)			45.1N	6.9E	0KM		5.6	
1977 JUN 17	15 45 09	GREECE			38.4N	20.4E	59KM		4.3	
1977 JUN 17	20 52 56	FIJI ISLANDS REGION			21.0S	178.7W	608KM		4.7	
1977 JUN 18	00 07 29	FRANCE (QUESTIONABLE)			45.1N	6.9E	0KM		5.6	
1977 JUN 18	00 09 32	TRACES: TONGA ISLANDS			15.5S	174.4W	55KM		5.1	
1977 JUN 18	02 08 10	NEW HEBRIDES ISLANDS			15.3S	166.1E	37KM		4.7	
1977 JUN 18	06 34 20	FRANCE (QUESTIONABLE)			45.1N	6.9E	0KM		5.6	
1977 JUN 18	07 34 08	FRANCE (QUESTIONABLE)			45.1N	6.9E	0KM		5.6	
1977 JUN 18	10 22 46.3	FIJI ISLANDS REGION			20.3S	178.0W	567KM		5.0	
1977 JUN 18	10 35 50.40	HOKKAIDO, JAPAN, REGION			41.9N	142.3E	72KM		4.7	
1977 JUN 18	11 24 17	KURILE ISLANDS			42.3N	142.3E	80KM		4.6	
1977 JUN 18	11 55 31	NORTHERN ITALY (FRIULI)			45.3N	150.2E	70KM		4.7	
1977 JUN 18	14 37 36	WESTERN CAUCASUS			46.2N	13.1E	33KM		4.5	
1977 JUN 18	17 03 18	CHILE-COLIVIA BORDER REGION			41.9N	44.0E	17KM		5.4	
1977 JUN 18	19 51 22	SOUTH ATLANTIC RIDGE			20.9S	68.5W	131KM		4.7	
1977 JUN 18	20 27 17	TRACES: BANDA SEA			13.8S	14.2W	33KM		5.3	
1977 JUN 18	20 47 51	SOUTH ATLANTIC RIDGE			4.0S	127.8E	13KM		5.5	
1977 JUN 18	21 14	SOUTH ATLANTIC RIDGE			13.7S	14.6W	33KM		5.5	
1977 JUN 18	22 30 03.7	SOLOMON ISLANDS			22.30	179.1W	690KM		5.6	
1977 JUN 18	22 52 47.20	SOUTH OF FIJI ISLANDS			22.52	179.1W	690KM		5.2	
1977 JUN 19	04 00 33.7	SOUTH OF FIJI ISLANDS			04.00	179.1W	690KM		5.2	
1977 JUN 19	04 02 43.4	CELEBES SEA			07.45	124.9E	271KM		4.7	
1977 JUN 19	07 45 23.20	CELEBES SEA			07.45	124.9E	271KM		5.7	
1977 JUN 19	11 57 51.30	KURILE ISLANDS			47.2N	151.1E	149KM		5.6	
1977 JUN 19	18 20 44	NORTH ATLANTIC RIDGE			15.4N	46.6W	33KM		4.6	
1977 JUN 19	18 27 38.20	NORTH ATLANTIC RIDGE			15.5N	46.7W	33KM		5.3	
1977 JUN 20	01 02 12	TRACES			01.02	12.0E	1000KM		4.7	
1977 JUN 20	01 57 16	HINDU KUSH REGION			36.1N	70.5E	111KM		4.7	
1977 JUN 20	02 06 59	SOUTHERN ITALY			39.3N	15.8E	267KM		4.2	
1977 JUN 20	16 46 13	NORTH ATLANTIC RIDGE			15.5N	46.7W	33KM		4.6	
1977 JUN 20	20 27 38	LOYALTY ISLANDS REGION			22.7S	170.6E	45KM		5.2	
1977 JUN 20	21 46 07	NEAR EARTHQUAKE			21.46	07.0E	1000KM		4.2	
1977 JUN 21	07 37 59	NEW HEBRIDES ISLANDS			15.3S	167.3E	122KM		5.1	
1977 JUN 21	08 57 22	FIJI ISLANDS REGION			17.9S	178.5W	979KM		4.9	
1977 JUN 21	09 17 18.90	TONGA ISLANDS			15.8S	174.8W	306KM		4.7	
1977 JUN 21	19 07 09	TONGA ISLANDS REGION			23.7S	174.8W	33KM		5.0	
1977 JUN 21	19 10 28.60	LOYALTY ISLANDS REGION			22.0S	170.1E	22KM		5.0	



1977 JUN 21 EASTERN MEDITERRANEAN SEA
 19 17 53.2 1.8 / 17
 I P 18 14
 E PP 18 15
 E 19 24
 E LH 25

1977 JUN 21 AFGHANISTAN-USUR BORDER REGION
 21 42 10
 E AP 43 24
 E PP

1977 JUN 22 TONGA ISLANDS REGION
 00 20 20 1.1 / 16
 E (APPP2)

1977 JUN 22 NEAR EAST COAST OF HONSHU, JAPAN
 07 23 45.20 1.1 / 24
 I P 23 55
 E 26 53
 E PP 26 53
 L 08 07

1977 JUN 22 NEAR EAST COAST OF KAMCHATKA
 09 01 49 1.1 / 20
 E P

1977 JUN 22 TONGA ISLANDS REGION
 12 26 13
 E PDIF 23 23.27
 I PKIKP 20 16.2
 I 21 21.9
 I 21 75
 I 28 47
 I 29 23
 E PKP1 20 33 (* 02 AM 50 AE 74 AV 165)
 E PP 30 59 - 12 AM 20.7 AE 7.7
 E PPI 30 02 - 16 AM(20.5)AE 13.2 AV(43.5) MPPH = 7.5 MPPV = 7.3
 E (PPP) 35.0
 E SKMS 30.0
 E SKMS 42.0
 I 41 59
 E PS 43.7
 E 44.0
 E 45 19
 E SS 51 12
 SSC 57.0
 E SSFS 13 01.7
 E 37.7
 E 04.7
 L 12 * 74 AM(23.2) AE(570)
 L 24 * 77 AM(32.2) AE(140) AM(272) MLH = 7.9 MLV = 8.0 (NO DEPTH CORRECTION)
 LH 25
 FINAL 16

1977 JUN 22
 I P 13 05 04
 E 05 44

1977 JUN 22 AFGHANISTAN-USUR BORDER REGION
 15 30 10

1977 JUN 22 TRACES; HADHUP-INDIA BORDER REGION
 16 02 10

1977 JUN 22
 E 18 30 70

1977 JUN 22
 L 20 20

1977 JUN 22 SOUTH OF TONGA ISLANDS
 I (APPP2) 20 24 07.0 1.1 / 12

1977 JUN 22
 E 20 32 20

1977 JUN 22 TRACES
 E 21 34 43

1977 JUN 22 SOUTH OF HONSHU, JAPAN
 I P 21 49 51.4 1.1 / 10

1977 JUN 23 TRACES
 E 00 41 45

1977 JUN 23 TONGA ISLANDS REGION
 I (PKP) 00 40 04.2 1.3 / 14

1977 JUN 23 FIJI ISLANDS REGION
 E PKP1 02 23 52
 E APPP 16 20
 E 16 30

1977 JUN 23
 E 07 43 16

1977 JUN 23 TONGA ISLANDS REGION
 I PKP1 09 53 44.3 1.3 / 22

1977 JUN 23 11 00 10

1977 JUN 23 POLAND, UPPER SILESIA
 I PG 12 04 59.5
 E SG 05 51

1977 JUN 23 TRACES; SOUTH OF FIJI ISLANDS
 E PKP1 14 00 30

1977 JUN 23 17 33

1977 JUN 23 SOUTH OF FIJI ISLANDS
 E PKP1 18 21 10

1977 JUN 23 KOMANDORSKY ISLANDS REGION
 E P 20 32 49

1977 JUN 24 TONGA ISLANDS REGION
 E PKIKP 00 50 05
 I PKP1 50 11.10 1.3 / 140
 I PKP2 50 15.2 1.1 / 105
 I APKP 50 25.6
 E PP 53 44
 LH 01 51

1977 JUN 24 03 24 04

1977 JUN 24 NORTHERN ITALY
 E SG 05 56 13
 E 56 37

1977 JUN 24 08 57 42

1977 JUN 24 TADZHIK-SINKIANG BORDER REGION
 E P 13 05 48
 E 10 47

1977 JUN 24 SOUTHERN SUMATRA
 I P 16 35 28.70 1.7 / 50
 E 37 41

1977 JUN 24 16 41 28

1977 JUN 24 TONGA ISLANDS REGION
 I PKP1 17 05 14.4 1.0 / 11

1977 JUN 24 TONGA ISLANDS REGION
 I PKP1 17 38 41.2

1977 JUN 24 POLAND, UPPER SILESIA
 E SG 22 27 48

1977 JUN 24 HINDU KUSH REGION
 E P 00 05 41

1977 JUN 24 TRACES; TONGA ISLANDS REGION
 E PKP1 01 16 07

1977 JUN 24 SOUTHERN SUMATRA
 E P 06 52 29 1.4 / 16

1977 JUN 24 09 36 34

1977 JUN 24 TONGA ISLANDS REGION
 I PKP1 12 31 49.6 1.1 / 12

1977 JUN 24 FIJI ISLANDS REGION
 I PKIKP 15 47 16
 I PKP1 43 20.00 1.5 / 60
 I PKP2 47 26.70 1.5 / 47
 E 47 35
 E APKP 47 45
 E 47 50

1977 JUN 24 EVENTUALLY LATER PHASES OF PRECEDING QUAKE
 I (P) 15 46 18.60

1977 JUN 24 FIJI ISLANDS REGION
 I PKP1 16 24 31.0 0.8 / 10

1977 JUN 24 17 12 44

1977 JUN 24 TONGA ISLANDS
 I PKP 17 17 31.4

1977 JUN 23 NO MB COMP, D=4.2 DEG AZ=103
 50.2N; 19.4E 33KM H=12 03 92 (I)

1977 JUN 23 MB=4.5(1) D=150.6 DEG AZ=17
 22.7S; 176.1W 138KM H=13 40 47.7 (U)

1977 JUN 23 MB=4.8(4) D=150.7 DEG AZ=17
 22.8S; 176.1W 98KM H=18 01 27.5 (U)

1977 JUN 23 MB=4.9(16) D=71.6 DEG AZ=16
 55.0N; 165.6E 32KM H=20 19 27.9 (U)
 55.0N; 165.6E 20 19 23 (M)

1977 JUN 23 MB=5.5(28) D=150.8 DEG AZ=17
 22.9S; 175.9W 33KM H=00 30 20.9 (U)
 DISTANCE 151 DEG

1977 JUN 23 MC = 5.6

1977 JUN 24 NO MB COMP. D=7.7 DEG AZ=211
 44.5N; 7.5E 33KM H=05 51 49.3 (U)
 44.5N; 7.5E 8KM 05 51 48.6 (M)

1977 JUN 24 MB=4.9(9) D=42.6 DEG AZ=82
 39.5N; 73.0E 43KM H=13 00 55.1 (U)
 39.5N; 73.1E 13 00 50 (M)

1977 JUN 24 MB=5.5(18) D=90.4 DEG AZ=93
 2.3S; 100.8E 53KM H=16 20 30.3 (U)
 2.2S; 100.8E 16 20 28 (M)

1977 JUN 24 NO MB COMP, D=151.2 DEG AZ=14
 23.0S; 174.4W 33KM H=16 45 19.9 (I)

1977 JUN 24 MB=4.9(3) D=151.3 DEG AZ=15
 23.2S; 174.8W 33KM H=17 18 49.6 (U)

1977 JUN 24 MB=4.7(16) D=42.8 DEG AZ=87
 36.5N; 70.4E 209KM H=23 58 01.6 (U)
 36.8N; 70.4E 220KM 23 58 05 (M)

1977 JUN 24 NO MB COMP, D=150.7 DEG AZ=16
 22.7S; 175.3W 33KM H=00 56 16 (I)

1977 JUN 24 MB=5.5(11) D=93.1 DEG AZ=93
 4.6S; 102.2E 47KM H=06 39 18.3 (U)
 4.6S; 102.2E 06 39 11 (M)

1977 JUN 24 NO MB COMP, D=150.8 DEG AZ=15
 22.7S; 174.8W 33KM H=12 12 01 (I)

1977 JUN 24 MB=5.4(26) D=148.6 DEG AZ=22
 21.3S; 179.2W 633KM H=15 24 42.9 (U)
 DISTANCE 148.5 DEG DEPTH 660 KM

1977 JUN 24 MC = 4.7

1977 JUN 24 MB=4.3(6) D=145.5 DEG AZ=20
 18.0S; 178.5W 607KM H=16 05 58.8 (U)

1977 JUN 24 MB=4.3(4) D=145.1 DEG AZ=13
 16.9S; 174.7W 142KM H=16 58 09.0 (U)



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1977 JUN 25 TRACES; OFF COAST OF NORTHERN CALIFORNIA
E AP 18 44 55
MB=4.5(2) D= 81.3 DEG AZ=331
41.6N;127.6W 19KM H=18 32 27.5

1977 JUN 25 SOUTH OF HONSHU, JAPAN
E P 18 50 53
E S 50 57 1.3 / 18
E L 51 16.9
I 19 30
MB=5.1(5) D= 84.4 DEG AZ= 43
32.3N;139.6E 34KM H=18 38 22.0
32.5N;139.8E 18 38 19

1977 JUN 25 OFF COAST OF OREGON
E P 19 21 38
NO MB COMP. D=150.3 DEG AZ= 17
22.4S;176.0W 149KM H=21 36 35.0

1977 JUN 25 TRACES; TONGA ISLANDS REGION
E PKF1 21 56 11
MB=4.9(31) D= 51.3 DEG AZ= 68
42.0N; 89.8E 26KM H=22 02 11.5
42.3N; 89.6E 22 02 15

1977 JUN 25 NORTHERN SINKIANG PROV., CHINA
I P 22 11 15.5 1.9 / 10
I 11 23.8
MB=5.2(56) D= 76.9 DEG AZ= 29
45.5N;150.7E 47KM H=00 10 58.2
45.3N;150.9E 00 10 56

1977 JUN 26 KURILE ISLANDS
I P 30 22 46.30 1.2 / 48
MB=4.8(19) D= 40.1 DEG AZ=110
27.5N; 56.1E 39KM H=02 25 29.4
27.6N; 56.0E 59KM 02 25 34.9
26.5N; 56.3E 02 25 16

1977 JUN 26 SOUTHERN IRAN
E P 02 37 02
MB=4.6(4) D= 84.2 DEG AZ= 43
32.5N;139.5E 51KM H=02 40 35.4

1977 JUN 26 SOUTH OF HONSHU, JAPAN
E P 02 57 03 1.3 / 13
MB=4.7(6) D=150.4 DEG AZ= 16
22.4S;175.7W 33KM H=04 07 53.4

1977 JUN 26 TONGA ISLANDS REGION
E PKF1 04 27 42
E 27 58
NO MB COMP. D= 84.0 DEG AZ= 43
32.7N;139.4E 33KM H=05 24 34.3

1977 JUN 26 SOUTH OF HONSHU, JAPAN
E P 05 37 02
MB=4.8(4) D=149.4 DEG AZ= 14
21.2S;174.7W 33KM H=05 34 51.5

1977 JUN 26 TONGA ISLANDS
I PKF1 05 54 39.2 1.3 / 16
MB=5.4(23) D=150.7 DEG AZ= 16
22.7S;175.5W 51KM H=05 59 21.2
21.8S;178.0W 05 59 21

1977 JUN 26 TONGA ISLANDS REGION
E PKIF 06 19 32
I PKF1 17 37.90 1.0 / 40
E APF 17 17
MB=4.6(10) D= 58.3 DEG AZ=254
15.2N; 44.9W 33KM H=10 27 10.0

1977 JUN 26 NORTH ATLANTIC RIDGE
E P 10 37 54
/4.5(3)/ D=147.9 DEG AZ= 15
19.8S;175.4W 241KM H=10 57 38

1977 JUN 26 TONGA ISLANDS
I PKF1 11 15 37 1.9 / 15
MB=4.6(4) D= 32.1 DEG AZ=113
32.0N; 48.0E 33KM H=13 58 58.0
32.3N; 47.8E 35KM 13 59 03.3

1977 JUN 26 WESTERN IRAN
E(P) 14 07 27
NO MB COMP. D= 89.6 DEG AZ= 93
1.8S;100.2E 81KM H=13 54 10.6

1977 JUN 26 SOUTHERN SUMATRA
E(AP) 14 07 17

1977 JUN 26 TRACES
E 16 04 31

1977 JUN 26
E 20 57 58

1977 JUN 27 TONGA ISLANDS REGION
E PKF1 00 17 45
MB=5.0(2) D=150.2 DEG AZ= 17
22.3S;175.8W 33KM H=23 52 57.2

1977 JUN 27
E 10 27 15

1977 JUN 27 NORTHERN ITALY
I PKF 12 37 20.1
E PG 37 55
E SN 36 39
E 37 23
E SG 37 32
E 37 44
NO MB COMP. D= 7.1 DEG AZ=188
44.3N; 11.6E 33KM H=12 33 36.9
44.3N; 11.5E 10KM 12 33 37.2
44.4N; 11.9E 12 33 35

1977 JUN 27 SOUTH OF FIJI ISLANDS
I PKIF 14 31 36.6 1.7 / 78
I PKF1 31 43.7 1.7 / 170
MB=5.2(10) D=151.9 DEG AZ= 19
24.2S;176.9W 33KM H=14 11 46.4

1977 JUN 27 EXPLOSION OF 17 TONS; CZECHOSLOVAKIA
I PG 15 00 17.7
I SG 00 30
MC = 0.6 D=105 KM AZ=171
50.38N; 13.24E

1977 JUN 27
E 15 06 28

1977 JUN 27 SOUTH OF FIJI ISLANDS
E PKF1 15 50 21 1.6 / 24

1977 JUN 27 SOUTH OF FIJI ISLANDS
I PKF1 16 00 04.40 1.6 / 30
NO MB COMP. D=151.0 DEG AZ= 20
23.4S;177.3W 33KM H=15 38 32

NO MB COMP. D=151.1 DEG AZ= 19
23.4S;177.1W 33KM H=15 49 15.2

1977 JUN 27 SOUTH OF FIJI ISLANDS
I PKF1 16 26 29.80 1.1 / 14
I 26 38.3

1977 JUN 27 SOUTH OF FIJI ISLANDS
E PKF1 16 52 42

1977 JUN 27
E 21 03 25

1977 JUN 27
E 22 37 08
I 37 30.2

1977 JUN 27 SOUTH OF FIJI ISLANDS
E PKF1 22 41 06

1977 JUN 27 DOVECAIENESE ISLANDS
E(P) 22 50 07

1977 JUN 27 NORTH ATLANTIC RIDGE
E P 23 37 06

1977 JUN 28 TONGA ISLANDS
I PKF1 01 47 21.0 1.1 / 130
I PKF2 47 25.6

1977 JUN 28 KYUSHU, JAPAN
E P 02 53 51
E AP 57 59
LM 03 31

1977 JUN 28 SOUTHERN IRAN
I P 03 57 27.50 1.5 / 17
I PP 54 03

1977 JUN 28 JAVI HAVEN ISLAND REGION
E P 05 57 43
E 57 54

1977 JUN 28 TONGA ISLANDS REGION
E PKF1 06 07 04 1.0 / 13
I 07 15.4

1977 JUN 28 SICILY
I P 07 15 44.10(1.2 / 700)
I 15 46.5
E S 17 00
E 17 12

1977 JUN 28 TONGA ISLANDS REGION
E(PKF1) 08 06 02

1977 JUN 28 TONGA ISLANDS REGION
I PKF1 03 59 23.9 1.0 / 15
E 57 36

1977 JUN 28 SOLOMON ISLANDS
I PKF 09 17 21.3 1.6 / 13

1977 JUN 28 NORTH ATLANTIC RIDGE
I P 05 47 51.7 1.6 / 110
E 47 59
E S 57 50
LM 57 22
16 07 - 18 AM 1 AE 2 AV 2 MLH =5.3 MLV =5.3

1977 JUN 28 NORTH ATLANTIC RIDGE
E 16 27 23.0 1.5 / 125
E S 32 17
E 37 02 - 14 AM 1.1 AE 1.4 MSH =5.7
LM 36 40 - 19 AM 1.5 AE 4 AV 4 MLH =5.5 MLV =5.5

1977 JUN 28
E 16 35 53

1977 JUN 28 NORTH ATLANTIC RIDGE
I 19 06 03
E 06 03.2

1977 JUN 28 NORTH ATLANTIC RIDGE
E S 19 27 49.10 1.1 / 490
LM 37 22 - 13 AM 1.8 AE 2.3
L 47 - 19 AM 2.5 AE 5.5
E 47 - 17 AM 2 AE 5 AV 7 MLV =5.7

1977 JUN 28 NORTH ATLANTIC RIDGE
I P 19 44 15.7 1.7 / 47

1977 JUN 28
E I SG 01 07 43
04 01.6

NO MB COMP. D=151.8 DEG AZ= 20
24.1S;177.0W 33KM H=22 21 14.2 (U)

D= 18.7 DEG AZ=141
35.7N; 27.3E 33KM H=22 53 44.4 (U)

D= 60.8 DEG AZ=249
10.6N; 42.9W 33KM H=23 28 55.8 (U)

D=149.1 DEG AZ= 15
21.0S;175.2W 68KM H=01 23 39.7 (U)

D= 80.0 DEG AZ= 49
32.8N;130.7E 18KM H=02 46 41.8 (U)
32.5N;131.3E 02 46 41 (M)

D= 40.0 DEG AZ=110
27.6N; 56.1E 46KM H=03 44 55.1 (U)
27.8N; 56.2E 85KM 03 45 02.1 (B)
27.0N; 56.1E 03 44 45 (M)

D= 21.8 DEG AZ=347
72.0N; 2.1W 33KM H=05 52 54.8 (U)

D=151.5 DEG AZ= 16
23.5S;175.3W 47KM H=05 43 12.5 (U)

D= 12.8 DEG AZ=174
38.6N; 14.7E 261KM H=07 12 49.3 (U)
38.6N; 14.7E 255KM 07 12 50.3 (B)
38.6N; 14.6E 250KM 07 12 48 (M)

NO MB COMP. D=151.8 DEG AZ= 15
23.7S;174.8W 33KM H=07 46 07 (I)

D=151.5 DEG AZ= 16
23.5S;175.4W 33KM H=08 30 32.0 (U)

D=125.4 DEG AZ= 48
6.3S;155.4E 164KM H=08 56 38.8 (U)

D= 52.8 DEG AZ=260
22.6N; 45.1W 33KM H=15 38 37.0 (U)
22.9N; 44.8W 15 38 34 (M)
DISTANCE 54 DEG

D= 52.8 DEG AZ=260
22.7N; 45.1W 33KM H=16 18 19.2 (U)
23.0N; 45.0W 16 18 12 (M)
DISTANCE 54 DEG

D= 52.8 DEG AZ=260
22.6N; 45.1W 33KM H=19 18 35.8 (U)
22.9N; 45.0W 19 18 32 (M)
DISTANCE 54 DEG

D= 52.8 DEG AZ=260
22.6N; 45.1W 33KM H=19 35 01.9 (U)
23.4N; 44.7W 19 35 08 (M)

1977 JUN 28 E(F) TRACES; SOUTHERN GREECE 21 07 16	MB=4.7(1)	D= 14.8 DEG 37.7N; 21.2E 37.8N; 21.2E	AZ=154 33KM 40KM	H=21 03 41.4 (U) 21 03 43.8 (B)
1977 JUN 28 I P SOUTH OF HONSHU, JAPAN 21 22 21.5 1.1 / 12	MB=4.9(5)	D= 85.0 DEG 32.7N; 141.8E 33.5N; 141.6E	AZ= 41 33KM	H=21 09 47.0 (U) 21 09 51 (M)
1977 JUN 28 I PKF TONGA ISLANDS 21 47 28.2 1.2 / 14 47 53	MB=4.5(1)	D=145.3 DEG 16.9S; 173.6W	AZ= 11 37KM	H=21 27 53.7 (U)
1977 JUN 28 I P MOLUCCA SEA 22 16 42.0 1.4 / 18 22 33 E PP 21 02	MB=5.6(30)	D=103.7 DEG 0.1S; 125.1E 0 125.0E	AZ= 73 33KM	H=22 02 42.5 (U) 22 02 37 (M)
1977 JUN 28 I P 23 45 27.70 1.1 / 14	NO MB COMP.	D=152.0 DEG 24.0S; 175.5W	AZ= 17 33KM	H=02 43 18 (U)
1977 JUN 28 I PKF1 TONGA ISLANDS REGION 23 07 12.6 1.0 / 14	MB=5.3(53)	D= 40.5 DEG 50.0N; 78.9E	AZ= 65 0KM	H=03 06 58.0 (U)
1977 JUN 29 I P UNDERGROUND EXPLOSION 23 14 39.60 1.6 / 56 16 09 I PP 16 14.3	MB=5.2(4)	D=151.2 DEG 23.2S; 175.2W 21.9S; 176.5W	AZ= 16 38KM	H=03 11 39.8 (U) 03 11 43 (M)
1977 JUN 29 I PKF1 I PKF2 E APKP I TONGA ISLANDS REGION 23 31 30.4 1.5 / 70 31 37.0 31 42 31 48.7				
1977 JUN 29 E 04 48 18				
1977 JUN 29 E 07 18 56				
1977 JUN 29 E BAHIA SEA 07 42 24	MB=6.0(29)	D=111.2 DEG 7.6S; 127.7E 5.1S; 126.5E	AZ= 75 58KM 50KM	H=07 24 24.8 (U) 07 24 38 (M)
1977 JUN 29 I PKF E PP E E E PS E PKMP L 40 53.2 1.1 / 22 47 38 44 16 45 58 46 46 57 08 57 51 08 27				
1977 JUN 29 E P TRACES; ANDREANOF ISLANDS, ALEUTIAN IS. 08 59 02	MB=5.0(27)	D= 77.0 DEG 51.8N; 176.2W 51.7N; 175.9W	AZ= 6 60KM	H=08 47 15.6 (U) 08 47 06 (M)
1977 JUN 29 I P MID-INDIAN RISE 13 07 38.20 1.6 / 70	MB=5.2(22)	D= 80.5 DEG 14.7S; 66.5E 14.8S; 66.7E	AZ=128 33KM	H=12 57 27.3 (U) 12 57 27 (M)
1977 JUN 29 E 13 55 06 56 36				
1977 JUN 29 E PKF1 I APKP TONGA ISLANDS REGION 19 53 29 1.0 / 13 20 39.7 1.1 / 33	MB=4.7(1)	D=151.5 DEG 23.5S; 175.3W	AZ= 16 33KM	H=19 30 36.4 (U)
1977 JUN 29 I PKF1 TONGA ISLANDS REGION 21 47 02.8 1.2 / 27	MB=4.9(3)	D=150.6 DEG 22.6S; 175.4W	AZ= 16 33KM	H=21 25 13.7 (U)
1977 JUN 30 E P TRACES; MINDANAO, PHILIPPINE ISLANDS 00 28 46	MB=5.2(11)	D= 96.1 DEG 9.9N; 125.8E 10.1N; 125.6E	AZ= 66 33KM	H=00 12 20.3 (U) 00 12 22 (M)
1977 JUN 30 I P BOHIN ISLANDS REGION 03 02 57.60 1.1 / 12	MB=4.8(12)	D= 89.6 DEG 27.7N; 140.0E 27.3N; 140.1E	AZ= 45 465KM 400KM	H=02 50 55.0 (U) 02 50 47 (M)
1977 JUN 30 E PP TRACES; NORTHERN CHILE 03 03 40	MB=5.4(19)	D=100.4 DEG 19.4S; 69.5W	AZ=252 106KM	H=02 46 03.8 (U)
1977 JUN 30 E PKF1 TONGA ISLANDS REGION 03 34 14 1.4 / 14	MB=4.7(3)	D=150.8 DEG 22.9S; 175.9W	AZ= 17 33KM	H=02 44 23.0 (U)
1977 JUN 30 I PKF 03 11 54.60 1.2 / 22				
1977 JUN 30 I PKF1 TONGA ISLANDS REGION 03 34 02.4 1.3 / 28	MB=4.8(2)	D=151.7 DEG 23.8S; 175.6W	AZ= 17 33KM	H=03 14 09.4 (U)
1977 JUN 30 E INTERRUPTION OF ALL RECORDS FROM 05H 45M TO 07H 40M 08 23 50				
1977 JUN 30 E P MID-INDIAN RISE 08 23 07 1.8 / 26	MB=5.1(3)	D= 80.4 DEG 14.6S; 66.5E 14.5S; 66.2E	AZ=128 33KM	H=08 15 58.2 (U) 08 15 58 (M)

1977 JUN 30 I PG E SG TRACES, EXPLOSION OF 4.5 TONS; 09 01 09.5 01 22				
1977 JUN 30 I PKF TONGA ISLANDS 09 11 00.40 1.2 / 28	MB=5.3(10)			
1977 JUN 30 E E SG NORTHERN ITALY 16 07 30 08 02 07 30				FRIULI
1977 JUN 30 I PKF1 TONGA ISLANDS REGION 17 46 25.3 1.5 / 22				
1977 JUN 30 E PKF1 TONGA ISLANDS REGION 18 51 36				
1977 JUN 30 E(P) E L TYRRHENIAN SEA 19 31 46 1.3 / 17 37 20 36	MB=4.6(1)			
1977 JUN 30 E(P) TRACES; SICILY 19 37 30				
1977 JUN 30 I PKF I 21 17 13.7 1.9 / 25 17 21.0				
1977 JUN 30 E 22 20 22				
1977 JUN 30 E P OFF EAST COAST OF HONSHU, JAPAN 22 37 50	MB=5.0(3)			

October 1979

Dr. B. Tittel
H. Merkel
Dr. S. Wendt

Geophysikalisches Observatorium Collm
der Karl-Marx-Universität Leipzig



Geophysikalische Meßreihen

3. 1977

Seismische Registrierungen

Geophysikalisches Observatorium

DDR - 7261 COLLM

Geophysical measuring series
of the
Geophysical Observatory
of the Karl-Marx-University
Leipzig

Geophysikalische Meßreihen
des Geophysikalischen
Observatoriums
der Karl-Marx-Universität
Leipzig

C O L L M

S E I S M I C
R E C O R D S

S E I S M I S C H E
R E G I S T R I E R U N G E N

3rd quarter of 1977

3. Quartal 1977

L 649/78 III/18/397

SEISMOLOGICAL STATION COLLIM (OIL)

GEOGRAPHICAL CO-ORDINATES: LATITUDE = 51°18.6'N; LONGITUDE = 13°00.2'E; ELEVATION = 230 m
FOUNDATION: GREYWACKE OF ORDOVICE

SEISMOGRAPHS AND ITS CONSTANTS:

TYPE	COMPONENT	T_B (s)	D_B	T_G (s)	D_G	r/T_B^2	MAGNIFICATION (STATIC)	MAGNIFICATION (MAXIMAL)	RECORDING SPEED (mm/min)
BENTOFF	Z	0.452	0.65	1.43	1			(38000)	60
VSJ-II	z	2.175	0.537	0.296	1.474			55000	60
HSJ-II NS	n	2.171	0.537	0.294	1.474			60000	60
HSJ-II EW	e	2.171	0.537	0.293	1.474			58000	60
WIECHERT NS	WN	10.0	0.28			0.026	370		15
WIECHERT EW	WE	10.0	0.34			0.020	340		15
HSJ-I NS	N	20.0	0.50	1.10	9.09		1075		15
HSJ-I EW	E	20.0	0.51	1.21	8.24		1120		15
VSJ-I	V	20.0	0.51	1.20	8.35		1090		15

TIME SERVICE:

QUARTZ CLOCK (MINUTE PULSES OF 2 s AND HOUR PULSES OF 20 s; DAILY DIGITAL CONTROL; MAXIMUM ERROR ± 0.2 s)

SUPPLEMENTARY EQUIPMENTS:

- SPECIAL RECORDER WITH VARIABLE AMPLIFICATION FOR ANNOUNCED EXPLOSIONS
- PERMANENT RECORDS WITH CONSIDERABLY REDUCED SENSITIVITY FOR THE COMPLETE REGISTRATION OF STRONG EARTHQUAKES
- AUTOMATIC AMPLIFICATION OF RECORDING LIGHT FOR AMPLITUDES GREATER THAN A GIVEN LIMIT

EVALUATION:

THE FIRST LINE OF EVALUATION OF EACH EVENT CONTAINS

DATE AND (FOR KNOWN FOCI) GEOGRAPHICAL REGION OF EPICENTER (MOSTLY FOLLOWING FLINN & ENGDahl 1965)
BODY WAVE MAGNITUDE MB WITH THE NUMBER OF USED OBSERVATIONS.

DETAILED INFORMATION, WITH RESPECT TO GEOGRAPHICAL REGION OR OTHER COMMENTS CAN BE WRITTEN ALSO HERE.

THE NEXT LINES ARE DIVIDED INTO THE FOLLOWING COLUMNS

- THE NOMENCLATURE OF THE PHASES CORRESPONDS TO THE LIST OF ISC, COMPLETED BY SOME PHASES (pP APPEARS AS AP, sP APPEARS AS XP, MULTIPLE PHASES AS P(1) FOR INSTANCE)
- TIME OF ONSET IN G.M.T.
- DIRECTION OF VERTICAL COMPONENT OF THE GROUND MOTION
- PERIODS, AMPLITUDES, AND EVENTUALLY MAGNITUDES FOR IMPORTANT ONSETS APPEAR IN THE CORRESPONDING LINE IF MEASUREMENT IS POSSIBLE;
- FOR SHORTPERIODIC WAVES IN THE SEQUENCE OF COMPONENTS z, n, e (PERIOD IN SECONDS/AMPLITUDE IN NANOMETRES)
- FOR LONGPERIODIC WAVES T, AN, AE, AV (MEAN PERIOD IN SECONDS, AMPLITUDES FOR N, E, V COMPONENTS IN MICROMETRES)
- MAGNITUDES CAN BE DETERMINED
 - FOR BODY WAVES THROUGH THE EARTH MANTLE (MPV, MPH, MPMV, MPMH, MPPV, MPPH, MSH)
 - FOR SHORTPERIODIC LONGITUDINAL CORE WAVES (MC)
 - FOR MAXIMUM OF SURFACE WAVES (MLH, MLV)
 - FOR STRONG QUAKES SOMETIMES FROM WIECHERT RECORDS (MAG)
- HYPOCENTER DATA (LATITUDE, LONGITUDE, DEPTH, ORIGIN TIME) OF THE FOLLOWING INSTITUTIONS ARE USED IN GENERAL
 - (U) U.S. NATIONAL EARTHQUAKE INFORMATION SERVICE
 - (B) EUROPEAN-MEDITERRANEAN SEISMOLOGICAL CENTRE
 - (M) ACADEMY OF SCIENCES OF U.S.S.R., INSTITUTE OF PHYSICS OF THE EARTH
 - (I) INTERNATIONAL SEISMOLOGICAL CENTRE
 - (A) INSTITUTE FOR METEOROLOGY AND GEODYNAMICS IN VIENNA, AUSTRIA
 - (C) GEOPHYSICAL INSTITUTE OF THE CZECHOSLOVAK ACADEMY OF SCIENCES
 - (G) NATIONAL OBSERVATORY OF ATHENS, GREECE
 - (P) POLISH ACADEMY OF SCIENCES
 - (S) SEISMOLOGICAL INSTITUTE, UPPSALA, SWEDEN
- OWN COMMENTS ARE GIVEN WITHOUT MENTION OF SOURCE.
- MB IS THE BODY WAVE MAGNITUDE GIVEN BY (U). /MB/ IS PRINTED IN FEW OTHER CASES WITH FOCAL DATA OF OTHER INSTITUTIONS.
- EPICENTRAL DISTANCE D AND STATION AZIMUTH AZ ARE CALCULATED USING THE FIRST EPICENTER INDICATION AND ARE PRINTED ABOVE THESE DATA.
D AND AZ ARE CALCULATED ACCORDING TO GEOCENTRIC CO-ORDINATES (D COMMONLY IN DEG, FOR NEAR EVENTS IN km, WITH A MAXIMUM ERROR OF ± 0.1 DEG AND ± 1 km, RESPECTIVELY; AZ IN DEG WITH A MAXIMUM ERROR OF ± 1 DEG).
- FOR COMPARISON WITH THE FIRST OWN EVALUATION "DISTANCE" AND "DEPTH" ARE GIVEN BELOW THE HYPOCENTER DATA.
- ROUND BRACKETS INDICATE UNCERTAINTIES.

NUMEROUS EXPLOSIONS AND ROCK BURSTS ARE LEAVED OUT IN THIS BULLETIN BECAUSE OF ITS UNIMPORTANT FORCE.

EVENTUAL INTERRUPTIONS OF RECORDS ARE INDICATED IN THE TIME SEQUENCE.

THE COMPILATION WAS PERFORMED AT THE COMPUTER CENTER OF ZENTRALINSTITUT DER METALLURGIE, LEIPZIG.

1977 JUL 01	TRACES! SOUTH OF FIJI ISLANDS			
E PKP2	00 12 43	NO HB COMP	D=153.2 DEG AZ=20	25,6S/177,0E 33KM M=7 52 39.8 (I)
1977 JUL 01	TRACES! NORTHERN SUMATRA			
E AP	10 00 15	M=5,0(9)	D= 85.4 DEG AZ= 93	4,0N/ 98,1E 70KM M=09 47 29.7 (U)
				1,9N/ 98,1E 09 47 25 (M)
1977 JUL 01	TONGA ISLANDS			
I PKP	12 26 45.5C 1,3 / 22	M=5,0(6)	D=145.2 DEG AZ= 11	16,8S/173,6E 50KM M=12 07 10.1 (U)
E	27 12			
1977 JUL 01				
E	13 15 30			
1977 JUL 01	AFGHANIST-NUSSR BORDER REGION			
I P	14 51 40.0C 1,6 / 31	M=4,7(44)	D= 43.3 DEG AZ= 87	36,4N/ 71,1E 257KM M=14 44 10.3 (U)
I AS	52 42.0			36,6N/ 71,1E 260KM 14 44 12 (M)
E PP	53 30			
E	53 45			
E SCP	53 50			
1977 JUL 01	KURILE ISLANDS			
I P	15 44 31.0C 1,1 / 46	M=5,0(51)	D= 77.0 DEG AZ= 29	42,0N/151,5E 36KM M=15 32 41.2 (U)
E	15 23			42,0N/151,5E 15 32 36 (M)
1977 JUL 01				
E	15 49 11			
1977 JUL 01	ICELAND			
E P	16 35 40	M=4,0(12)	D= 60.8 DEG AZ=322	64,0N/ 17,8W 6KM M=18 31 03.6 (U)
E	35 55			64,2N/ 18,2W 44KM 18 31 09.4 (B)
1977 JUL 01				
E	21 51 32			
1977 JUL 01	EASTERN CUCUJUS			
E P	21 54 27	M=4,0(1)	D= 43.5 DEG AZ= 98	42,2N/ 45,5E 53KM M=21 49 19.9 (U)
E	54 40			42,2N/ 45,5E 21 49 14 (M)
1977 JUL 01				
E	24 29 41			
E SU	23 59			
1977 JUL 02				
E	07 43 02			
1977 JUL 02	SOLOMON ISLANDS			
E PKP	01 14 21	M=5,7(22)	D=131.0 DEG AZ= 45	10,4S/160,5E 16KM M=00 55 09.0 (U)
E	14 24			1,2S/160,3E 00 55 08 (M)
I	14 30.0 1,2 / 20			
E	14 52			
E SU	16 30			
E PKS	17 40			
E SS	34.1			
E LI	02 13	T 1.0 M 1 AE 1.5 MV 1.5 MLK =5.9 MLV =5.8		
1977 JUL 02				
E	02 29 14			
1977 JUL 02	TRACES			
E	04 07 44			
1977 JUL 02	TRACES! WEST CHILE RISE			
E PKP	12 00 44	M=5,1(4)	D=165.0 DEG AZ=245	41,7S/ 84,1E 33KM M=11 49 40.6 (U)
1977 JUL 02	NEAR EAST COAST OF KAMCHATKA			
E P	10 02 05	M=4,7(41)	D= 72.2 DEG AZ= 20	53,2N/160,0E 55KM M=15 50 44.7 (U)
E AP	02 14 1,3 / 22			53,1N/159,9E 70KM 15 50 46 (M)
1977 JUL 02				
E	10 40 00			
1977 JUL 02				
E	21 39 35			
1977 JUL 03	(POLAND) UPPER SILESIA			
E	03 43 01			
1977 JUL 03	SOUTHERN IRAN			
I P	00 46 54.0 1,1 / 22	M=4,0(22)	D= 44.7 DEG AZ=107	23,2N/ 60,9E 33KM M=00 38 41.4 (U)
I AP	47 02.3			23,4N/ 60,9E 00 38 43 (M)
1977 JUL 03	NORTHERN ITALY			
E SU	11 32 17	NO HB COMP	D= 6.5 DEG AZ=193	45,0N/ 10,9E 33KM M=10 28 38.7 (U)
				45,0N/ 10,7E 10KM 10 28 39.2 (B)
1977 JUL 03	NORTHERN ITALY FRIULI			
I P	11 43 11.7 0,4 / 37	NO HB COMP	D= 5.1 DEG AZ=179	46,2N/ 13,1E 10KM M=11 44 56.5 (B)
I SI	47 00			46,2N/ 13,1E 33KM 11 44 56.6 (U)
E SU	47 30			
E	47 44			
E LI	43 00			
1977 JUL 03	FRANCE			
E P	12 15 34	M=4,7(1)	D= 7.9 DEG AZ=215	44,7N/ 6,6E 10KM M=12 13 26.9 (B)
E (SU)	15 53			44,5N/ 6,7E 33KM 12 13 27.5 (U)
E	17 20			
E SU	17 34			

Date	Time	Region	Depth (km)	Magnitude	Latitude	Longitude	Distance (km)	AZ	MLH	MLV	Other Data
1977 JUL 03	13 07 29.30	FOX ISLANDS, ALEUTIAN ISLANDS	1.3	1.3	1.3	1.3	30				
1977 JUL 03	14 53 10	MOLUCCA PASSAGE	53	17.10							
1977 JUL 03	15 03 40	SEA OF OKHOTSK	04	20							
1977 JUL 03	17 41 37	FOX ISLANDS, ALEUTIAN ISLANDS	17	41.37							
1977 JUL 04	02 13 21	NORTH ATLANTIC OCEAN	02	13.21							
1977 JUL 04	07 33 50.13	FIJI ISLANDS REGION	07	33.50.13	0.14	28					
1977 JUL 04	08 52 09.17	EASTER ISLAND CORDILLERA	08	52.09.17	1.0	46					
1977 JUL 04	11 37 41	HINDU KUSH REGION	11	37.41							
1977 JUL 04	12 49 57	TRACESI KARAJEC ISLANDS REGION	12	49.57							
1977 JUL 04	13 25 20.13	SEA OF OKHOTSK	13	25.20.13	1.0	15					
1977 JUL 04	13 44 33.15	SOUTH OF FIJI ISLANDS	13	44.33.15	0.9	17					
1977 JUL 04	16 44 23.70	SEA OF OKHOTSK	16	44.23.70	0.4	30					
1977 JUL 04	21 09 47	TAJIK BGR	21	09.47							
1977 JUL 04	22 04 27	OFF COAST OF NORTHERN CALIFORNIA	22	04.27							
1977 JUL 05	03 43 51	TRACESI SANTA CRUZ ISLANDS	03	43.51							
1977 JUL 05	07 04 10.13	FIJI ISLANDS REGION	07	04.10.13	0.0	12					
1977 JUL 05	10 12 41.50	RYUKYU ISLANDS	10	12.41.50	1.3	45					
1977 JUL 05	22 45 36		22	45.36							
1977 JUL 05	23 41 59		23	41.59							
1977 JUL 06	00 32 24	ICELAND REGION	00	32.24							
1977 JUL 06	03 31 15	FRU SOUTHWESTERN REGION	03	31.15							
1977 JUL 06	04 55 19	SOUTH OF PANAMA	04	55.19							
1977 JUL 06	05 22.18	LAKE TANGANYIKA REGION	05	22.18	1.9	69					
1977 JUL 06	05 30 46	LAKE TANGANYIKA REGION	05	30.46	1.0	46					
1977 JUL 06	05 44.13	EXPLOSION GERMAN DEMOCRATIC REPUBLIC	05	44.13							
1977 JUL 06	07 07.19	FIJI ISLANDS REGION	07	07.19	1.7	115					
1977 JUL 06	07 10.33	FIJI ISLANDS REGION	07	10.33	1.5	50					
1977 JUL 06	08 13 21	TUAKOTO EXPLOSION	08	13.21							
1977 JUL 06	08 43 01	NORTHERN ITALY FRIULI	08	43.01							
1977 JUL 06	09 03 37	ICELAND	09	03.37							
1977 JUL 06	10 10 50.10	TONGA ISLANDS	10	10.50.10	1.4	32					
1977 JUL 06	10 23 07	EASTER ISLAND CORDILLERA	10	23.07							
1977 JUL 06	10 10 31	FOX ISLANDS, ALEUTIAN ISLANDS	10	10.31							
1977 JUL 06	22 04 15		22	04.15	1.1	17					
1977 JUL 06	04 24 34		04	24.34							
1977 JUL 06	03 33 00.19	AFGHANISTAN-USSR BORDER REGION	03	33.00.19	1.7	82					
1977 JUL 06	03 31 54	ETHIOPIA	03	31.54							
1977 JUL 06	03 31 14	ETHIOPIA	03	31.14							
1977 JUL 06	03 10 47.12	SOLOMON ISLANDS	03	10.47.12	0.9	15					
1977 JUL 06	04 47 11.15	SOUTH OF FIJI ISLANDS	04	47.11.15	1.1	18					
1977 JUL 06	13 45 13		13	45.13							
1977 JUL 06	16 07 30		16	07.30							
1977 JUL 06	17 54 30		17	54.30							
1977 JUL 06	22 04 15		22	04.15	1.1	17					
1977 JUL 06	04 24 34		04	24.34							
1977 JUL 06	03 33 00.19	AFGHANISTAN-USSR BORDER REGION	03	33.00.19	1.7	82					
1977 JUL 06	03 31 54	ETHIOPIA	03	31.54							
1977 JUL 06	03 31 14	ETHIOPIA	03	31.14							
1977 JUL 06	03 10 47.12	SOLOMON ISLANDS	03	10.47.12	0.9	15					
1977 JUL 06	04 47 11.15	SOUTH OF FIJI ISLANDS	04	47.11.15	1.1	18					
1977 JUL 06	13 45 13		13	45.13							
1977 JUL 06	16 07 30		16	07.30							
1977 JUL 06	17 54 30		17	54.30							
1977 JUL 06	22 04 15		22	04.15	1.1	17					



Date	Time	Region	Magnitude	Dip	Strike	Azimuth	Hypocenter	Depth	Notes
1977 JUL 13	13 08 42	TONGA ISLANDS REGION	4.4	121.7	175.2	16	33KM H=14 48 49.8 (U)		
1977 JUL 13	16 50 31		4.8	156.0	176.3	20	33KM H=18 44 33.6 (U)		
1977 JUL 13	19 04 55	KERMADEC ISLANDS REGION	4.9	143.7	176.5	16	33KM H=17 30 48 (U)		
1977 JUL 14	00 36 12		4.7	181.4	271.7	139	10KM H=00 39 01.4 (U)		
1977 JUL 14	00 43 15	DUJECHESS ISLANDS	5.1	141.3	241.6	141	10KM H=01 02 56.8 (G)		
1977 JUL 14	01 06 41	TRACES; AEGEAN SEA	5.5	30.3	63.7	87	33KM H=05 49 08.7 (U)		
1977 JUL 14	05 56 10	UZJEK SSR	4.7	40.3	63.7	87	05 49 04 (M)		
1977 JUL 14	07 23 14	ICELAND	3.8	40.6	171.5	321	45KM 07 15 40.6 (B)		
1977 JUL 14	08 11 04	FIJI ISLANDS REGION	3.8	145.6	178.4	19	557KM H=07 52 31.7 (U)		
1977 JUL 14	09 49 11		4.0	149.1	176.4	13	90KM H=15 17 11.1 (U)		
1977 JUL 14	11 39 03		5.2	66.8	120.0	68	72KM H=15 38 00.8 (U)		
1977 JUL 14	14 02 26	MOLUCCA PASSAGE	5.2	103.7	112.6	70	45KM 13 48 24 (M)		
1977 JUL 14	15 31 26	SOUTHERN IRAN	4.3	69.0	53.5	113	33KM H=15 23 57.3 (U)		
1977 JUL 14	17 46 24	SOUTH ATLANTIC RIDGE	5.4	77.1	121.8	204	33KM H=17 32 32.9 (U)		
1977 JUL 15	01 47 55	KAZAKH-TURKISH BORDER REGION	NO MB COMP.	45.7	86.8	63	33KM H=01 39 35.8 (U)		
1977 JUL 15	02 25 15	TAIWAN REGION	5.5	82.7	122.2	60	33KM H=02 12 54.6 (U)		
1977 JUL 15	02 27 02	NEW HEBRIDES ISLANDS	5.0	144.6	169.8	40	121KM H=02 07 40.2 (U)		
1977 JUL 15	05 05 41	EASTERN ISLAND REGION	5.2	134.2	112.3	277	33KM H=04 46 08.7 (U)		
1977 JUL 15	09 06 26	MOROCCO	NO MB COMP.	40.5	31.7	222	33KM H=05 41 47.5 (U)		
1977 JUL 15	10 11 09		4.9	149.9	176.4	18	54KM H=23 46 40.2 (U)		
1977 JUL 15	10 24 36		5.3	113.4	133.7	69	33KM H=07 11 03.9 (U)		
1977 JUL 15	17 00 23		4.9	77.6	145.8	34	99KM H=07 38 45.0 (U)		
1977 JUL 15	21 09 20		4.9	147.1	172.8	10	51KM H=11 16 29.4 (U)		
1977 JUL 15	22 03 00		4.0	5.1	126.7	170	6KM H=15 13 29.6 (U)		
1977 JUL 16	00 30 12		4.0	149.1	176.4	13	90KM H=15 17 11.1 (U)		
1977 JUL 16	07 29 41	ARJE ISLANDS REGION	5.4	66.8	120.0	68	72KM H=15 38 00.8 (U)		
1977 JUL 16	07 50 32	MUKKAJJO; JAPAN REGION	4.9	103.7	112.6	70	45KM 13 48 24 (M)		
1977 JUL 16	11 36 01	TONGA ISLANDS REGION	4.9	145.6	178.4	19	557KM H=07 52 31.7 (U)		
1977 JUL 16	13 14 47	NORTHERN YUGOSLAVIA	4.0	149.1	176.4	13	90KM H=15 17 11.1 (U)		
1977 JUL 16	14 49 18		5.2	66.8	120.0	68	72KM H=15 38 00.8 (U)		
1977 JUL 16	15 04 18		4.9	77.6	145.8	34	99KM H=07 38 45.0 (U)		
1977 JUL 16	15 14		4.0	5.1	126.7	170	6KM H=15 13 29.6 (U)		
1977 JUL 16	15 42		4.0	149.1	176.4	13	90KM H=15 17 11.1 (U)		
1977 JUL 16	15 55		5.2	66.8	120.0	68	72KM H=15 38 00.8 (U)		
1977 JUL 16	16 13		4.9	103.7	112.6	70	45KM 13 48 24 (M)		
1977 JUL 16	15 44		4.9	145.6	178.4	19	557KM H=07 52 31.7 (U)		
1977 JUL 16	15 57 14		4.0	149.1	176.4	13	90KM H=15 17 11.1 (U)		
1977 JUL 16	16 41		5.2	66.8	120.0	68	72KM H=15 38 00.8 (U)		
1977 JUL 16	16 57 45		4.9	103.7	112.6	70	45KM 13 48 24 (M)		
1977 JUL 16	20 58 12		4.9	145.6	178.4	19	557KM H=07 52 31.7 (U)		
1977 JUL 17	02 05 41	EASTERN TURKEY	4.3	62.7	121.8	113	33KM H=07 00 33.1 (U)		
1977 JUL 17	06 23 13	SYVALBJERG REGION	4.5	40.5	31.7	222	33KM H=05 41 47.5 (U)		
1977 JUL 17	06 40 03		NO MB COMP.	45.7	86.8	63	33KM H=01 39 35.8 (U)		
1977 JUL 17	06 42		5.5	82.7	122.2	60	33KM H=02 12 54.6 (U)		
1977 JUL 17	07 05 14	BALLENT ISLANDS REGION	5.0	144.6	169.8	40	121KM H=02 07 40.2 (U)		
1977 JUL 17	14 12 21	TRACES; FIJI ISLANDS REGION	4.8	144.6	169.8	40	121KM H=02 07 40.2 (U)		
1977 JUL 17	21 56 45		5.2	134.2	112.3	277	33KM H=04 46 08.7 (U)		
1977 JUL 18	11 44 14		4.0	149.9	176.4	18	54KM H=23 46 40.2 (U)		

Table with 5 main columns: Date/Time, Location, Magnitude (MB), Depth (D), and Azimuth (AZ). Rows list seismic events from July 18 to July 23, 1977, including locations like 'QUESTIONABLE EVENT', 'HINDU KUSH REGION', 'TONGA ISLANDS', 'LUZON, PHILIPPINE ISLANDS', 'TIBET', 'KERMADEC ISLANDS REGION', 'ALASKA PENINSULA', and 'NORTHERN SINKIANG PROVINCE, CHINA'. Includes station codes (I, P, S, etc.) and distance (DISTANCE) information.

T 10 AN 10 AE 13 AV 12
T 10 AN 9.5 AE 8 AV 9.5
MLH = 0.8 MLV = 0.7



Time	Location	MB	D	AZ	H	Other
1977 JUL 23	WESTERN POLAND					
1977 JUL 24	NEAR EAST OF VENEZUELA	MB=4,8(28)	D=70.6 DEG	AZ=271	15KM	H=05 44 43.9 (U)
1977 JUL 24	TONGA ISLANDS	MB=6,0(30)	D=143.7 DEG	AZ=10	33KM	H=06 22 51.3 (U)
1977 JUL 24	SOUTHERN ITALY	NO MB COMP.	D=10.3 DEG	AZ=171	33KM	H=09 55 27.5 (U)
1977 JUL 24	CARLSBERG RIDGE	MB=4,7(5)	D=80.7 DEG	AZ=122	33KM	H=13 10 30.0 (U)
1977 JUL 24	MARIANA ISLANDS	MB=5,4(45)	D=77.8 DEG	AZ=43	400KM	H=14 55 36.8 (U)
1977 JUL 25	SAKHALI ISLAND	MB=4,7(8)	D=88.9 DEG	AZ=31	43KM	H=00 05 53.3 (U)
1977 JUL 25	CARIBBEAN SEA	MB=4,9(46)	D=79.1 DEG	AZ=285	33KM	H=04 51 40.6 (U)
1977 JUL 25	KURILE ISLANDS	MB=5,0(2)	D=77.7 DEG	AZ=30	33KM	H=10 32 44.4 (U)
1977 JUL 25	SOUTH OF FIJI ISLANDS	MB=4,9(9)	D=152.2 DEG	AZ=27	510KM	H=12 59 26.8 (U)
1977 JUL 25	CRETE	MB=4,3(19)	D=18.0 DEG	AZ=150	46KM	H=22 28 54.9 (U)
1977 JUL 25	TRACES; NEU NEBRIDES ISLANDS	MB=5,1(7)	D=142.5 DEG	AZ=40	30KM	H=22 41 04.5 (U)
1977 JUL 26	SOUTHERN IRAN	MB=4,6(7)	D=40.3 DEG	AZ=109	39KM	H=01 18 00.0 (U)
1977 JUL 26	HONSHU JAPAN	MB=4,7(7)	D=78.6 DEG	AZ=38	100KM	H=04 25 17.5 (U)
1977 JUL 26	TRACES; CHILE-ARGENTINA BORDER REGION	MB=4,7(6)	D=149.8 DEG	AZ=245	118KM	H=07 43 03.7 (U)
1977 JUL 26	SAJUA ISLANDS REGION	MB=4,8(5)	D=144.7 DEG	AZ=9	41KM	H=10 27 59.9 (U)
1977 JUL 26	TRACES					
1977 JUL 26	JINDERGROUD EXPLOSION	MB=4,9(38)	D=34.1 DEG	AZ=53	0KM	H=16 59 57.6 (U)
1977 JUL 26	TRACES					
1977 JUL 26	TONGA ISLANDS	MB=4,6(16)	D=145.5 DEG	AZ=11	46KM	H=02 55 08.5 (U)
1977 JUL 26	SWITZERLAND	NO MB COMP.	D=8.1 DEG	AZ=221	10KM	H=07 50 19.3 (U)
1977 JUL 26	FIJI ISLANDS REGION	MB=5,1(15)	D=148.3 DEG	AZ=21	570KM	H=06 11 00.5 (U)
1977 JUL 26	EXPLOSION OF 27 TONN CZECHOSLOVAKIA		D=144 KM	AZ=120		
1977 JUL 26	ANDAMAN ISLANDS REGION	MB=4,7(5)	D=74.3 DEG	AZ=90	38KM	H=15 20 42.0 (U)
1977 JUL 26	MARIANA ISLANDS REGION	MB=5,1(41)	D=75.1 DEG	AZ=46	302KM	H=17 17 05.2 (U)
1977 JUL 26	LUZON PHILIPPINE ISLANDS	MB=5,4(14)	D=86.4 DEG	AZ=64	41KM	H=17 25 16.2 (U)
1977 JUL 26	POLAND; UPPER SILESIA					
1977 JUL 26	TRACES					
1977 JUL 26	FIJI ISLANDS REGION	MB=4,2(4)	D=148.7 DEG	AZ=20	390KM	H=23 57 33.0 (U)
1977 JUL 26	NORTH OF ASCENSION ISLAND	MB=5,3(41)	D=37.0 DEG	AZ=213	33KM	H=01 47 32.7 (U)
1977 JUL 26	TRACES; EXPLOSION; FRU					
1977 JUL 26	OFF COAST OF OREGON	MB=5,1(45)	D=79.3 DEG	AZ=333	15KM	H=15 22 18.5 (U)
1977 JUL 26	SOUTH OF TONGA ISLANDS	MB=5,1(5)	D=152.2 DEG	AZ=17	33KM	H=10 10 27.0 (U)
1977 JUL 26	POLAND; UPPER SILESIA					
1977 JUL 26	KURILE ISLANDS	MB=4,5(3)	D=77.1 DEG	AZ=32	161KM	H=23 13 11.0 (U)
1977 JUL 26	TRACES					

1977 JUL 29
E
01 01 34



1977 JUL 29 RYUKYU ISLANDS
 I P 00 12 47.12D
 I AP 12 50.11
 LI 56
 MB=4.9(4)
 D= 84.0 DEG AZ= 33
 21.1N/129.3E 30KM H=00 00 18.0 (U)

1977 JUL 29 SOUTHERN SIKIANG PROV, CHINA
 I P 00 22 13.13C 1.5 / 79
 E AP 22 44
 E PCP 23 49
 E 24 15
 E(SCS) 32.12
 E 33 40
 MB=5.2(43)
 D= 44.8 DEG AZ= 82
 30.2N/ 75.2E 102KM H=09 14 08.1 (U)

1977 JUL 29 SOLOMON ISLANDS
 E P/IF 11 31 37
 I PKP 34 4.5 1.5 / 130
 I 34 50 2.2 / 430
 E 35 2
 E PP 36 4.5 T 11 AN 3.0 AB 3.5 AV 9.4 MPPH =7.1 MPPV =7.1
 E 37.0
 E PPPP 41 3.7
 E SKS 41.9
 E 44.6
 E PS 45.6
 E PPS 43.0
 E 43.1
 E SS 53.9
 L 12 26
 L 29 T 22 AN 19 AB 59.5 AV 70 MLH =7.4
 L 32 T 17 AN 42 AB 43 AV 55 MLV =7.4
 MB=6.4(41)
 D=126.9 DEG AZ= 49
 8.0S/155.5E 33KM H=11 15 45.3 (U)

1977 JUL 29 SOLOMON ISLANDS
 E PKP 12 37 32
 MB=4.9(4)
 D=126.9 DEG AZ= 49
 8.0S/155.5E 36KM H=11 48 30.3 (U)

1977 JUL 29 SOLOMON ISLANDS
 I PKP 10 10 20.10C 1.1 / 14
 MB=5.0(9)
 D=127.0 DEG AZ= 49
 8.0S/155.5E 33KM H=15 57 24.8 (U)

1977 JUL 29 TOJUA ISLANDS
 I PKP1 17 11 30.17D 0.9 / 60
 I 17 5-10
 E APKP 11 13
 E 11 4
 MB=5.1(22)
 D=127.6 DEG AZ= 14
 19.5S/175.0W 129KM H=16 51 06.0 (U)

1977 JUL 29 CENTRAL YUGOSLAVIA
 E(P) 10 25 23
 E 26 03
 (A)

1977 JUL 29 SOUTH OF FIJI ISLANDS
 I PKP1 20 40 01.7D 1.4 / 53
 I PKP2 40 1-10C 1.1 / 29
 MB=5.1(3)
 D=150.3 DEG AZ= 26
 23.0S/179.1E 550KM H=20 27 12.1 (U)

1977 JUL 29 SOUTHERN SUMATRA
 E AP 21 12 07
 MB=5.3(10)
 D= 90.0 DEG AZ= 94
 2.4S/110.0E 33KM H=21 05 59.5 (U)

1977 JUL 29 CENTRAL YUGOSLAVIA
 E P 21 50 31
 E 50 30
 E S1 57 45
 E 53 20
 E SG 53 20
 E LI 53 44
 NO MB COMP.
 D= 7.1 DEG AZ=153
 44.9N/ 17.5E 10KM H=21 54 47.8 (U)

1977 JUL 29 LUZON PHILIPPINE ISLANDS
 E P 22 30 20
 E 40 00
 E SKS 46 4
 LI 40 10
 MB=5.2(19)
 D= 66.5 DEG AZ= 65
 18.0N/121.1E 40KM H=22 23 41.2 (U)

1977 JUL 31 UJERBUJUD EXPLOSION
 I P 02 04 37.14C 0.0 / 32
 E PP 30 05
 MB=5.3(24)
 D= 40.2 DEG AZ= 66
 49.8N/ 78.2E 0KM H=01 56 58.0 (U)

1977 JUL 31 NORTH OF ASCENSION ISLAND
 E P 07 41 11 2.2 / 52
 E PP 43 00
 LI 05 07
 MB=5.1(17)
 D= 38.4 DEG AZ=210
 3.2S/ 12.2W 33KM H=07 31 07.0 (U)

1977 JUL 31 JAN BATEN ISLAND REGION
 E P 10 14 30 1.1 / 26
 E PPPP 15 09
 E SS 18 40
 LI 23
 MB=4.4(10)
 D= 21.7 DEG AZ=347
 71.9N/ 1.9W 33KM H=10 09 43.7 (U)

1977 JUL 31 SOUTHERN GREECE
 E P 19 55 15
 I 55 21.9D 1.4 / 50
 E PPP 55 30
 E SSSS 59 04
 E LI 21 02 10 T 14 AN 1 AB 0.5 AV 1
 MB=4.8(14)
 D= 15.8 DEG AZ=153
 30.0N/ 21.7E 51KM H=19 51 37.5 (U)

1977 JUL 31 02 56 47
 E 02 56 47
 MB=5.0(8)
 D=155.4 DEG AZ= 29
 19.2S/175.0E 15KM H=02 41 36.2 (U)

1977 JUL 31 SOUTH OF FIJI ISLANDS
 I PKP 05 01 12.10 1.1 / 57
 I APKP 01 10.19D 0.9 / 37
 MB=4.5(2)
 D=150.7 DEG AZ= 16
 22.7S/175.4W 123KM H=03 06 46.4 (U)

1977 JUL 31 TOJUA ISLANDS REGION
 I PKP1 05 26 20.16 1.0 / 13
 E 26 30

1977 JUL 31 07 19 00
 E 07 19 00

1977 JUL 31 11 33 30
 E 11 33 30

1977 JUL 31 TRACESI UZBEK SSR
 I P 20 14 09.14
 MB=4.7(2)
 D= 50.1 DEG AZ= 87
 40.4N/ 63.5E 33KM H=23 07 08.5 (U)

41.0N/ 63.1E 23 07 07 (M)



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Date	Time	Location	Magnitude	Depth	Distance	AZ	H	Source	Other Data
1977 AUG 01	10 10 31	BURIA	4.5	90	100	13			
1977 AUG 01	11 15 14	TALAU ISLANDS	2.1	15	12	13			
1977 AUG 01	10 52 40	LOYALTY ISLANDS REGION	5.2	40	15	17			
1977 AUG 01	11 01 40	KURILE ISLANDS	4.0	11	01	40			
1977 AUG 01	11 26 40	NEW HEBRIDES ISLANDS	5.5	11	26	40			
1977 AUG 01	14 10 51	FIJI ISLANDS REGION	5.3	14	10	51			
1977 AUG 01	17 39 50	TRACES! OFF COAST OF NORTHERN CALIFORNIA	5.3	17	39	50			
1977 AUG 02	00 34 44	FIJI ISLANDS REGION	4.8	00	34	44			
1977 AUG 02	02 23 04	LUZON PHILIPPINE ISLANDS	5.1	02	23	04			
1977 AUG 02	00 13 20	AEGEAN SE.	NO MB COMP.	00	13	20			
1977 AUG 02	1 30 10	SOLOMON ISLANDS	4.4	1	30	10			
1977 AUG 02	1 55 20	TRACES	NO MB COMP.	1	55	20			
1977 AUG 02	2 10 50	SOLOMON ISLANDS REGION	5.0	2	10	50			
1977 AUG 03	01 25 27	TIBET	4.7	01	25	27			
1977 AUG 03	02 37 30	PAJAMA-COLOMBIA BORDER REGION	4.7	02	37	30			
1977 AUG 03	1 10 40	TRACES! PHILIPPINE ISLANDS	4.5	1	10	40			
1977 AUG 03	11 20 01	SOUTH OF FIJI ISLANDS	4.8	11	20	01			
1977 AUG 03	11 23 37	CENTRAL YUGOSLAVIA	4.8	11	23	37			
1977 AUG 03	14 10 50	KURILE ISLANDS	4.9	14	10	50			
1977 AUG 03	10 20 37	TRACES! TIBET	4.8	10	20	37			
1977 AUG 03	08 09 DEG	NEAR EAST COAST OF COLOMBIA	4.5	08	09				
1977 AUG 04	01 29 30	SOUTH SANJICH ISLANDS REGION	6.1	01	29	30			
1977 AUG 04	10 02 14	NEAR COAST OF NICARAGUA	5.4	10	02	14			
1977 AUG 04	14 24 39	TRACES! EXPLOSION OF 4.3 TONS! CZECHOSLOVAKIA	5.0	14	24	39			
1977 AUG 04	10 52 10	UNDERGROUND EXPLOSION STRAKA	5.0	10	52	10			
1977 AUG 04	17 13 55	TRACES! TIBET	4.7	17	13	55			
1977 AUG 04	24 35 00	ROMANIA	4.7	24	35	00			
1977 AUG 05	11 17 10	CRETE	4.4	11	17	10			
1977 AUG 05	17 16 20	TRACES! SOLOMON ISLANDS	5.0	17	16	20			
1977 AUG 06	05 46 34	SOUTH OF FIJI ISLANDS	5.1	05	46	34			
1977 AUG 06	11 45 07	SOLOMON ISLANDS	5.4	11	45	07			
1977 AUG 06	11 53 24	SOUTHERN YUGOSLAVIA	NO MB COMP.	11	53	24			
1977 AUG 06	12 12 31	TONGA ISLANDS	5.2	12	12	31			
1977 AUG 06	21 51 21	SOUTHERN IRAN	4.3	21	51	21			
1977 AUG 06	25 55 50	NEAR EAST COAST OF HONSHU JAPAN	4.6	25	55	50			
1977 AUG 07	02 04 30	SANTA CRUZ ISLANDS	5.2	02	04	30			
1977 AUG 07	02 14 14	SANTA CRUZ ISLANDS	5.2	02	14	14			
1977 AUG 07	07 20 40	PAJAMA-COSTA RICA BORDER REGION	5.2	07	20	40			
1977 AUG 07	07 20 31	CARLSBERG RIDGE	5.2	07	20	31			
1977 AUG 08	02 07 DEG	TRACES! TIBET	4.2	02	07				
1977 AUG 08	02 08 02	TRACES! TIBET	4.2	02	08	02			



Date	Time	Location	Station	Depth (km)	Magnitude	Distance (DEG)	Azimuth (AZ)	Other Data
1977 AUG 07	11 23 00	SOUTH INDIAN OCEAN	MB=4,8(17)			07,9	124	
1977 AUG 07	11 45 10	CARLSBERG RIDGE	MB=5,0(6)			03,0	121	
1977 AUG 07	17 06 10	TONGA ISLANDS REGION	MB=5,3(11)			19,1	15	
1977 AUG 07	23 39 07	ANDAMAN ISLANDS, ALEUTIAN IS.	NO MB COMP.			4,3	153	
1977 AUG 08	05 12 45	SOUTHERN AUSTRIA	MB=5,2(40)			85,2	275	
1977 AUG 08	07 12 41	NEAR WEST COAST OF COLOMBIA	MB=5,8(46)			131,9	44	
1977 AUG 08	15 10 02	SOLOMON ISLANDS	MB=5,0(3)			151,8	116	
1977 AUG 08	14 29 04	WEST OF MICHAELIS ISLAND	MB=5,1(11)			144,7	24	
1977 AUG 08	15 24 21	FIJI ISLANDS REGION	MB=4,9(3)			151,4	15	
1977 AUG 08	17 34 14	TONGA ISLANDS REGION	MB=4,7(11)			84,1	92	
1977 AUG 08	22 14 40		MB=4,5(18)			44,6	265	
1977 AUG 08	22 36 21		MB=4,7(4)			155,4	21	
1977 AUG 08	22 39 54	SOUTH OF FIJI ISLANDS	NO MB COMP.			7,9	214	
1977 AUG 08	23 37 30	NORTHERN SUMATRA	MB=5,0(1)			135,6	39	
1977 AUG 08	23 38 00		MB=4,5(18)			36,1	95	
1977 AUG 08	23 38 14		NO MB COMP.			127,7	124	
1977 AUG 09	01 46 29	NORTH ATLANTIC RIDGE	MB=5,7(15)			99,2	92	
1977 AUG 09	05 26 17	KERMADEC ISLANDS REGION	MB=5,3(6)			97,1	69	
1977 AUG 09	10 35 41	FRANCE-ITALY BORDER REGION	MB=5,0(32)			1,8	352	
1977 AUG 09	10 03 40	SANTA CRUZ ISLANDS						
1977 AUG 09	21 53 02	IRAN-USSR BORDER REGION						
1977 AUG 09	22 07							
1977 AUG 10	02 15 13	TRACES: SOUTHEAST INDIAN RISE						
1977 AUG 10	07 21 05	JAVA						
1977 AUG 10	09 46 57	MINDANAO PHILIPPINE ISLANDS						
1977 AUG 10	07 19	KODIAK ISLAND REGION						
1977 AUG 10	07 35							
1977 AUG 10	07 50							

Date	Time	Location	Depth (km)	Magnitude	Distance (deg)	Azimuth (deg)	Station	Other Data
1977 AUG 13	23 13 51							
1977 AUG 14	00 56 15	SOUTHERN SUMATRA		4.9 (4.5)	72.4	266	US1100.6E	
1977 AUG 14	04 34 00	WINDWARD ISLANDS		4.4 (5)	103.1	24	US1179.0E	
1977 AUG 14	12 15 44	SOUTH OF FIJI ISLANDS		4.8 (12)	62.7	61	US1121.5E	
1977 AUG 14	10 04 10	TAIWAN		4.9 (5.1)	77.2	204	US1121.7E	
1977 AUG 14	19 15 30	SOUTH ATLANTIC RIDGE		5.0 (9)	77.1	204	US1121.7E	
1977 AUG 14	19 16 11	SOUTH ATLANTIC RIDGE		5.7 (4.8)	78.9	91	US1107.0E	
1977 AUG 14	21 25 02	POLAND/UPPER SILESIA		5.7 (4.8)	78.9	91	US1107.0E	
1977 AUG 14	21 52 29	JAVA		5.6 (MLV)	76.0	39	US1138.0E	
1977 AUG 15	00 50 50	EASTERN SEA OF JAPAN		4.9 (5.0)	76.0	39	US1138.0E	
1977 AUG 15	00 00 50	TOJGA ISLANDS REGION		5.3 (12)	151.3	16	US1175.4E	
1977 AUG 15	00 33 29	FIJI ISLANDS REGION		4.8 (2)	145.4	20	US1173.7E	
1977 AUG 15	10 50 50	LOYALTY ISLANDS REGION		4.9 (1)	140.3	39	US1171.0E	
1977 AUG 15	21 36 54	OFF COAST OF CENTRAL AMERICA		5.2 (5.1)	92.3	277	US1184.3E	
1977 AUG 15	21 13 30	SOUTHERN ITALY		5.0 (7)	12.8	100	US1171.0E	
1977 AUG 15	23 25 00	SOUTH OF FIJI ISLANDS		4.8 (6)	149.4	23	US1179.5E	
1977 AUG 16	00 05 03	TAIWAN		4.3 (3)	35.3	97	US1158.5E	
1977 AUG 16	00 06 53	TOJGA ISLANDS REGION		4.9 (6)	146.0	8	US1171.8E	
1977 AUG 16	00 34 47	NEI HEARJES ISLANDS REGION		5.5 (1.1)	142.3	41	US1107.7E	
1977 AUG 16	07 22 31	NEI HEARJES ISLANDS REGION		5.7 (3)	142.0	41	US1167.0E	
1977 AUG 16	14 52 37	TOJGA ISLANDS REGION		4.8 (8)	146.3	125	US1168.4E	
1977 AUG 16	20 20 13	POLAND/UPPER SILESIA		5.0 (8)	46.3	125	US1175.1E	
1977 AUG 16	23 30 43	EASTERN GULF OF ADEN		4.8 (8)	46.3	125	US1175.1E	
1977 AUG 17	00 44 14	NORTHERN ITALY		5.1 (3)	140.4	9	US1172.5E	
1977 AUG 17	00 27 09	TOJGA ISLANDS REGION		5.0 (24)	40.2	66	US1176.3E	
1977 AUG 17	04 34 37	UNDERGROUND EXPLOSION		5.0 (2)	155.0	22	US1177.2E	
1977 AUG 17	07 46 50	KERMAJUC ISLANDS REGION		5.1 (2)	95.5	158	US1142.9E	
1977 AUG 17	10 55 03	ATLANTIC-INDIAN RIBE		4.7 (5)	87.8	45	US1139.5E	
1977 AUG 17	13 20 00	BONIN ISLANDS REGION		5.4 (50)	76.9	3	US1175.3E	
1977 AUG 18	00 47 23	TAIWAN REGION		4.8 (3)	63.6	62	US1121.3E	
1977 AUG 18	07 46 19	TIBET		5.2 (34)	17.8	151	US1121.3E	
1977 AUG 18	09 16 21	CRETE		4.1 (4)	17.8	151	US1121.3E	
1977 AUG 18	14 11 24	KURILE ISLANDS		5.7 (22)	76.8	27	US1153.7E	
1977 AUG 18	10 03 51	ALBUTIAN ISLAND REGION		5.3 (22)	77.0	12	US1174.7E	
1977 AUG 18	14 54 17	CRETE		4.1 (4)	17.8	151	US1121.3E	
1977 AUG 18	17 17 04	CZECHOSLOVAKIA LITTLE CARPATIANS		NO MB COMP.	8.6	183	US1121.4E	
1977 AUG 19	04 19 27	CENTRAL ITALY		6.1 (12)	148.2	85	US1118.4E	
1977 AUG 19	00 23 24	SOUTH OF SUMBAWA ISLAND		7.0 (24)	148.3	85	US1118.5E	
1977 AUG 19	00 23 15	SOUTH OF SUMBAWA ISLAND		7.0 (24)	148.3	85	US1118.5E	

(CONT)

1977 AUG 19 06 30 25
 I PPP 37 33
 E SKS 34 10
 E SKKS 34 44
 E(SKKKS) 35 03
 E(S) 35 18
 E PS 37 13
 E PPS 38 13
 E PKKP 33 52
 E SS 43 10
 E(PCSP) 46 33
 L1 07 04 (T 3J AN() AE 1080)
 E 08 (T 3J AN() AE 1080)
 L1 13 (T 2J AN 450 AE 465)
 FINAL 13

1977 AUG 19 06 45 20
 E P 06 45 20
 1977 AUG 19 06 47 42
 E P 06 47 42
 1977 AUG 19 10 05 20
 E P 10 05 20

1977 AUG 19 11 52 20
 E PP 11 52 20
 1977 AUG 19 13 38 02
 E P 13 38 02
 E 41 10
 E(PKP) 41 38
 E PP 42 27
 E 42 50
 E 44 50
 E 45 00
 E SKS 48 40
 E PS 51 10
 E 52 10
 L1 14 29 (T 2J AN 3 AE 2 AV 1)
 FINAL 15

1977 AUG 19 17 05 30
 E P 17 05 30
 1977 AUG 19 18 07 30
 I P 18 07 30
 E 18 07 30

1977 AUG 19 19 57 14
 E(PKP) 19 57 14
 E 57 50
 E 20 07 11
 E(PS) 07 32
 L1 43

1977 AUG 19 20 37 57
 E PP 20 37 57
 L 21 31

1977 AUG 19 21 53 41
 E 21 53 41
 E 54 32

1977 AUG 21 02 58 37
 I AP 02 58 37 1,0 / 13
 E 58 41 1,0 / 32
 E 53 40
 E PP 03 01 52
 E SKS 03 04
 E(PS) 03 40
 E SS 14 15
 L1 33 (T 1J AN 1,5 AE 2,5 AV 2,5)

1977 AUG 20 04 04 17
 I AP 04 04 17 1,3 / 59
 E 04 27 1,5 / 175
 E 04 39
 E 04 54
 E 08 00
 E 08 14
 E S 11 21
 E PS 14 40
 E PKPP 15 20
 E 34 25
 E 34 39
 L1 49 (T 2J AN 5 AE 3 AV 4)

1977 AUG 20 04 30 24
 E(P) 04 30 24
 E 30 37

MLH =8,3

NO MB COMP: D=75,4 DEG AZ=24
 48,9/1156,0E 33KM H=08 36 00

MB=5,0(12)

D=108,3 DEG AZ=85
 11,05/1118,7E 33KM H=11 33 27,8
 9,05/1118,2E 11 33 36

MB=5,0(9)

D=108,5 DEG AZ=84
 10,05/1119,2E 33KM H=13 23 37,0
 10,85/1119,3E 13 23 36
 DISTANCE 109 DEG

MLH =6,0 MLV =5,5

MB=5,0(32)

D=01,3 DEG AZ=321
 32,1/1116,1 0KM H=17 55 00,1

MB=5,0(17)

D=108,4 DEG AZ=84
 10,05/1119,1E 33KM H=19 38 59,7
 10,05/1119,2E 19 38 59

MB=5,0(11)

D=108,5 DEG AZ=84
 10,05/1119,1E 33KM H=20 20 18,0
 10,05/1119,9E 20 20 18

MB=5,0(15)

D=108,6 DEG AZ=84
 10,05/1119,2E 33KM H=21 35 03,5
 11,25/1119,0E 21 35 01

MB=5,0(26)

D=03,3 DEG AZ=288
 10,0/1085,9 14KM H=02 46 11,8
 10,0/1085,4 02 46 16
 DISTANCE 84 DEG

MLH =5,7 MLV =5,7

MB=5,0(32)

D=03,0 DEG AZ=288
 10,0/1085,0 36KM H=03 51 54,7
 10,0/1085,4 03 51 58

MLH =5,9 MLV =5,9



1977 AUG 20 SOUTH OF SUMBA ISLAND
 E 09 39 40
 E PP 43 44
 E PS 53 12
 L1 10 27 (T 22 AN 4 AE 1,5)
 L 33 (T 18 AN 1,5 AE 1,5 AV 2)

D=108,6 DEG AZ=84
 11,18/1119,1E 33KM H=09 21 50,3 (U)
 11,06/1118,9E 09 21 51 (M)

1977 AUG 20 SANTA CRUZ ISLANDS
 I PKP 12 41 00 1,1 / 17
 E 44 10

D=135,9 DEG AZ=38
 12,48/1167,1E 242KM H=12 22 11,1 (U)

1977 AUG 20 SOUTH OF SUMBA ISLAND
 E 19 31 04
 E 31 34
 E 34 01
 E(PKP) 34 42
 E 35 24
 E PP 35 31
 E 35 48
 E 36 43
 E PPP 37 50
 E SKS 41 30
 E PS 44 50
 L1 20 22 (T 22 AN 12 AE 0,5 V)
 FINAL 22 30

D=108,6 DEG AZ=84
 11,06/1119,1E 33KM H=19 16 32,7 (U)
 10,95/1119,0E 19 16 28 (M)
 DISTANCE 109 DEG

1977 AUG 20 UNDERGROUND EXPLOSION
 I P 22 03 1,170 0,9 / 28
 E PP 09 51
 1977 AUG 21 00 20 20,0 0,8 / 14
 I P 00 20 20,0 0,8 / 14
 1977 AUG 21 00 35 03,2 1,2 / 18
 I PKP1 00 35 03,2 1,2 / 18
 E APKP 35 15

D=44,3 DEG AZ=39
 04,2/1099,0E 0KM H=21 59 58,7 (U)

1977 AUG 21 00 20 20,0 0,8 / 14
 I P 00 20 20,0 0,8 / 14

1977 AUG 21 00 35 03,2 1,2 / 18
 I PKP1 00 35 03,2 1,2 / 18
 E APKP 35 15

D=151,1 DEG AZ=13
 22,98/1173,9 33KM H=00 15 16,1 (U)

1977 AUG 21 01 44 52
 E SG 01 44 52
 1977 AUG 21 02 31 11
 E(PKP) 02 31 11
 L1 03 29

D=108,7 DEG AZ=85
 11,25/1119,0E 33KM H=02 12 25,5 (U)
 11,05/1118,9E 02 12 21 (M)

1977 AUG 21 02 31 11
 E(PKP) 02 31 11
 L1 03 29

1977 AUG 21 05 31 53,70 1,1 / 105
 I P 05 31 53,70 1,1 / 105
 E PP 34 50
 E 36 45
 L1 00 14 (T 14 AN 1,5 AE 1,5 AV 2)

D=143,2 DEG AZ=11
 14,08/1173,5 33KM H=04 44 32,3 (U)

1977 AUG 21 07 09 19
 E 07 09 19

D=02,6 DEG AZ=41
 32,4N/141,1E 42KM H=05 19 34,2 (U)
 32,4N/141,2E 05 19 28 (M)

1977 AUG 21 07 09 19
 E 07 09 19

D=108,5 DEG AZ=85
 11,28/1118,8E 33KM H=06 50 33,1 (U)
 10,95/1118,6E 06 50 28 (M)

1977 AUG 21 11 48 20
 E P 11 48 20

D=87,3 DEG AZ=289
 13,0N/190,1W 84KM H=11 33 50,8 (U)

1977 AUG 21 13 50 34
 E(PKIK) 13 50 34
 E(PP) 14 01 10
 L1 15 15

D=101,1 DEG AZ=247
 58,06/136,0 33KM H=13 36 32,0 (U)
 58,26/138,3 13 36 31 (M)

1977 AUG 21 15 43 54
 E PKP1 15 43 54

NO MB COMP: D=101,6 DEG AZ=15
 25,38/1174,8 33KM H=15 21 08 (U)

1977 AUG 21 17 55 13
 E PKP 17 55 13

D=108,7 DEG AZ=85
 11,28/1119,1E 33KM H=15 36 48,5 (U)
 11,18/1119,2E 15 36 49 (M)

1977 AUG 21 19 37 07
 E 19 37 07
 E 07 35

D=157,2 DEG AZ=25
 30,06/177,9 59KM H=19 35 05,6 (U)
 30,18/178,0 19 34 57 (M)
 DISTANCE 157 DEG

1977 AUG 21 19 54 53 2,4 / 58
 E PKIK 19 54 53 2,4 / 58
 I PKP1 55 00 3,0 1,5 / 30
 I PKP2 55 20 1,3 / 58
 E PP 59 02

MB=5,7(15)

MC =5,4

1977 AUG 21 20 54 02
 E 20 54 02

1977 AUG 21 23 29 30
 E 23 29 30

1977 AUG 22 02 47 14
 E 02 47 14

1977 AUG 22 03 35 24
 E(PKP2) 03 35 24

MB=4,2(2)

D=133,3 DEG AZ=19
 25,38/1176,1 157KM H=03 15 31,4 (U)

1977 AUG 22 05 36 44,5 1,1 / 10
 I P 05 36 44,5 1,1 / 10
 E AP 36 50

MB=4,7(3)

D=77,4 DEG AZ=30
 44,5N/149,6E 45KM H=03 24 49,9 (U)



Date	Time	Location	Depth (km)	Magnitude	Latitude	Longitude	Azimuth	Distance (km)	Station	Other Data
1977 AUG 22	09 15 51.70	RYUKYU ISLANDS	1.2	1.9						
1977 AUG 22	18 06 41	AFGHANISTAN-USSR BORDER REGION								
1977 AUG 23	01 27 41	TRACES								
1977 AUG 23	00 27 00.80	SOUTH OF FIJI ISLANDS	1.2	2.5						
1977 AUG 23	10 43 03	SOUTH OF SUMBAWA ISLAND								
1977 AUG 23	12 48 59.17	OFF EAST COAST OF HONSHU JAPAN	0.8	2.1						
1977 AUG 23	14 47 47	TIBET								
1977 AUG 24	03 57 10.80	RYUKYU ISLANDS	1.5	4.5						
1977 AUG 24	05 33 31.7									
1977 AUG 24	11 23 40.14	LAKE BAIKAL REGION	1.1	1.9						
1977 AUG 24	12 01 27	NORTHERN ITALY								
1977 AUG 24	13 51 31.30	TONGA ISLANDS	1.3	4.5						
1977 AUG 24	23 35 1.0	POLAND: UPPER SILESIA								
1977 AUG 25	03 06 4.0	TRACES								
1977 AUG 25	03 07 43	EASTERN MEDITERRANEAN SEA								
1977 AUG 25	03 32 17.13	GERMAN DEMOCRATIC REPUBLIC								
1977 AUG 25	07 55 03	FIJI ISLANDS REGION								
1977 AUG 25	11 24 10	TRACES								
1977 AUG 25	14 14 02									
1977 AUG 25	10 40 00.12	FIJI ISLANDS REGION	1.0	3.2						
1977 AUG 25	13 08 03	CENTRAL ITALY								
1977 AUG 25	13 19 34	SUMBA REGION								
1977 AUG 25	17 58 47.13	CENTRAL ITALY								
1977 AUG 25	21 59 24	TRACES: SUMBA REGION								
1977 AUG 25	22 39 38									
1977 AUG 25	23 59 20	NEW HEBRIDES ISLANDS								
1977 AUG 26	00 01 30									
1977 AUG 26	00 10 15.17	KERMADEC ISLANDS	0.7	1.7						
1977 AUG 26	04 59 03.10	AFGHANISTAN-USSR BORDER REGION	1.1	1.5						
1977 AUG 26	05 08 35									
1977 AUG 26	07 27 47	RAT ISLANDS; ALBUTIAN ISLANDS								
1977 AUG 26	08 44 08	SUMBA REGION								
1977 AUG 26	14 25 32.15	NEW HEBRIDES ISLANDS	1.1	4.1						
1977 AUG 26	20 05 04	SOUTHEASTERN ATLANTIC OCEAN								
1977 AUG 26	22 32 20	POLAND: UPPER SILESIA								
1977 AUG 26	23 08 23	MINAHASSA PENINSULA								
1977 AUG 26	23 13 45									
1977 AUG 26	23 53 34									
1977 AUG 27	01 18 37	HOKKAIDO, JAPAN: REGION								
1977 AUG 27	07 26 55	TIMOR								

T 20 AN 4.5 AE 4.5 AV 4.5 MLH 26.1 MLV 26.1

Table with multiple columns containing seismic event data including date, time, location (e.g., ANDREANOF ISLANDS, ALBUJTIAN IS., WESTERN MEDITERRANEAN SEA), magnitude (ML, mb), depth (D), distance, and station codes (E, S, P, SK, SS, PP, SG, LI, PK, etc.).

1977 AUG 31 14 02 50
E
1977 AUG 31 17 45 50
E PG
E SG
1977 AUG 31 10 45 57
E LH
1977 AUG 31 25 23 50
E

NO NB COMP.

D= 4.1 DEG AZ=102
50.0N 19.3E 33KM H=17.46 (U)
DISTANCE 4.0 DEG

MB=5.1(7)

D=130.6 DEG AZ=22
29.18N 176.8W 69KM H=23.03 (U)

977 SEP 01 POLAND: UPPER SILESIA
SG 00 27 27
NO NB COMP. D= 5.1 DEG AZ=169
40.3N 14.4E 0KM H=1 27 50.3 (U)

977 SEP 01 NORTHERN YUGOSLAVIA
SG 01 30 30
MB=5.7(48) D= 46.3 DEG AZ= 24
MPV =5.6 70.5N 54.0E 0KM H=02 59 57.5 (U)
70.5N 54.0E 0KM 02 50 59.4 (R)
DISTANCE 20 DEG

977 SEP 01 UNDERGROUND EXPLOSION
P 03 05 53.5C 1.5 / 130
06 10.5
09 00.4
11 16
15 23
17.4 T 13 AN 0.5 AE 1 MLH =4.6
L 19.7

977 SEP 01 LUZON: PHILIPPINE ISLANDS
P 08 11 21
14.0(6) / D= 67.3 DEG AZ= 66
10.9N 120.3E 108KM H=07 58 43.7 (U)

977 SEP 01 TRACES: GREECE
(P) 11 34 50
D= 14.6 DEG AZ=147
30.0N 23.1E 10KM H=11 31 17.1 (R)

INTERRUPTION OF LONGPERIODIC RECORDS FROM 14H 25H TO 15H 00H

977 SEP 01 NORTHERN COLOMBIA
P 17 49 35.5
49 41 1.3 / 27
MB=5.3(18) D= 83.8 DEG AZ=274
7.0N 75.3E 28KM H=17 37 26.6 (U)
1.1N 89.1E 17 36 08 (R)

977 SEP 01 POLAND: UPPER SILESIA
(SG) 10 48 41
48 45
NO NB COMP. D= 5.9 DEG AZ=101
50.4N 19.0E H=16 46 33.2 (P)

977 SEP 01 20 46 00

977 SEP 01 SOUTH OF KERMADEC ISLANDS
PKP2 21 06 30.2D 2.1 / 00
MB=5.1(4) D=159.1 DEG AZ= 31
32.5S 179.0W 38KM H=20 46 06.6 (U)

977 SEP 01 23 00 51

977 SEP 02 SOUTH OF FIJI ISLANDS
PKP1 00 20 50.1D 1.2 / 68
PKP2 21 03.7 0.8 / 24
APKP 23 17
MB=4.9(8) D=149.7 DEG AZ= 26
MC =5.0 22.7S 179.1E 590KM H=00 02 11.1 (U)
DISTANCE 15.0 DEG DEPTH 600 KM

977 SEP 02 03 37 23

977 SEP 02 RYUKYU ISLANDS
P 05 54 07.1D 1.0 / 100
54 14
54 49.0
57 12
MB=5.0(46) D= 83.1 DEG AZ= 56
20.4N 126.4E 97KM H=05 41 45.6 (U)
20.7N 125.3E 110KM 05 41 48 (R)

977 SEP 02 RYUKYU ISLANDS
P 09 26 14.7C
LH 10 02
LH 09
MB=4.9(3) D= 24.5 DEG AZ= 53
27.0N 130.1E 33KM H=04 13 43.1 (U)
26.0N 130.3E 04 13 36 (R)

977 SEP 02 SOUTH OF LUIBH ISLAND
(P) 10 51 00
54 20
54 46
55 06
55 21
PP 55 40
PS 11 04 34
PKKP 06 04
LH 4J T 21 AN 4.5 AE 2 MLH =6.1
L 47 T 17 AN 2.5 AE 2 AV 2.5 MLV =5.9

977 SEP 02 NEAR EAST COAST OF KAMCHATKA
P 17 23 00.1D 1.2 / 24
MB=4.9(17) D= 72.6 DEG AZ= 21
52.5N 159.9E 33KM H=17 16 35.2 (U)
52.5N 159.1E 100KM 17 16 41 (R)

977 SEP 02 18 10 54

977 SEP 02 FRI: SOUTHWESTERN REGION
(PH) 22 43 21
PG 48 29.5
48 34
49 22.2
SG 49 20.0
49 32
NO NB COMP. D= 4.1 DEG AZ=217
46.0N 9.3E 33KM H=22 47 14.5 (U)
46.0N 9.2E 10KM 22 47 13.7 (R)
47.0N 9.9E 22 47 06 (R)

977 SEP 02 23 00 00

977 SEP 03 04 42 00

977 SEP 03 TRACES
11 07 29

Table with multiple columns containing seismic event data: Date (e.g., 1977 SEP 03), Location (e.g., TONGA ISLANDS), Magnitude (e.g., MB=5.4(13)), Depth (e.g., D=143.7 DEG), Azimuth (e.g., AZ=10), and other parameters like distance and focal mechanism solutions (e.g., MLH =6.6 MLV =6.4).

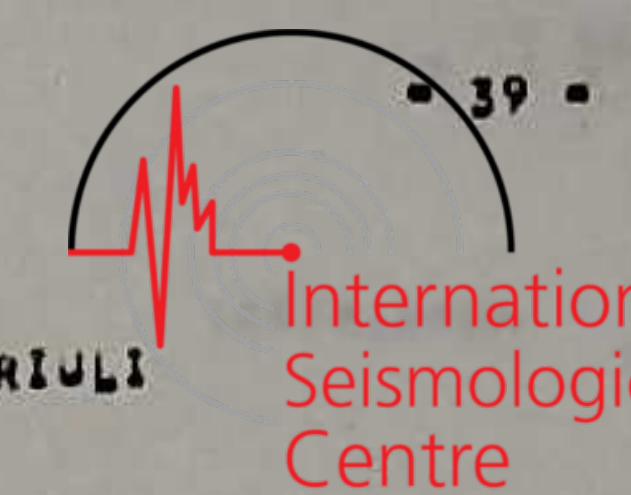
NO MB COMP: D=4.0 DEG AZ=150 OKM H=10 05 26 (1)

Date	Time	Location	Station	Depth (km)	Magnitude	Distance (km)	Azimuth (deg)	Other Data
1977 SEP 08	12 16 44							
1977 SEP 08	16 52 59							
1977 SEP 08	24 28 20	POLAND/ UPPER SILESIA			4.9		177	
1977 SEP 09	02 45 30	E. USSR/ NE. CHINA BORDER REGION			7.1	43	43	
1977 SEP 09	03 17 30	POLAND/ UPPER SILESIA						
1977 SEP 09	04 20 04							
1977 SEP 09	05 59 33							
1977 SEP 09	07 08 43							
1977 SEP 09	09 05 42.3	CZECHOSLOVAKIA ROCKBURST IN NEADHO REGION (PRU)			1.3	150	150	
1977 SEP 09	09 25 10	NORTHERN ITALY FRIULI			5.0	178	178	
1977 SEP 09	12 25 24	MOROCCO			22.2	221	221	
1977 SEP 09	17 01 10.2	EXPLOSION OF 16.0 TONSI CZECHOSLOVAKIA			143	203	203	
1977 SEP 09	17 52 14							
1977 SEP 09	17 50 59.7	FIJI ISLANDS REGION			4.7	14	19	
1977 SEP 09	20 04 31	TONGA ISLANDS REGION			151.2	15	15	
1977 SEP 09	23 27 45							
1977 SEP 10	00 57 20	NORTHERN YUGOSLAVIA			5.8	161	161	
1977 SEP 10	01 00 41	CRETE						
1977 SEP 10	01 30 50	SOUTH OF FIJI ISLANDS			19.2	145	145	
1977 SEP 10	01 35 50	CRETE						
1977 SEP 10	07 17 40							
1977 SEP 10	09 43 34.8	TONGA ISLANDS			149.0	25	25	
1977 SEP 10	10 33 50	NORTH COAST OF GUATEMALA			143.9	13	13	
1977 SEP 10	13 52 24.9	JAVA			88.2	290	290	
1977 SEP 10	14 02 45				97.7	91	91	
1977 SEP 10	10 09 01.2	TRACES/ LAKE UAIKAL REGION			50.6	45	45	
1977 SEP 10	19 59 40	TRACES						
1977 SEP 10	20 49 43	NORTHERN ITALY FRIULI						
1977 SEP 11	05 27 29	WEST OF MACQUARIE ISLAND			5.4	4	4	
1977 SEP 11	14 27 37	TONGA ISLANDS			5.4	16	16	
1977 SEP 11	14 32 02	TONGA ISLANDS			5.3	20	20	
1977 SEP 11	20 42 42	POLAND/ UPPER SILESIA						
1977 SEP 11	23 23 30.4	CRETE			5.8	61	61	
1977 SEP 11	23 35 55	CRETE			4.0	14	14	
1977 SEP 12	00 07 56	CRETE			3.9	6	6	
1977 SEP 12	02 34 51.9	CRETE			4.0	6	6	
1977 SEP 12	03 02 03.3	CRETE			4.5	29	29	
1977 SEP 12	07 08 39.8	CRETE			4.0	9	9	
1977 SEP 12	07 42 21	CRETE						
1977 SEP 12	10 50 05.9	EXPLOSION OF 3.55 TONSI GERMAN DEMOCRATIC REPUBLIC			10	311	311	
1977 SEP 12	11 03 27							
1977 SEP 12	12 41 09							
1977 SEP 12	14 29 00	SOUTH ATLANTIC RIDGE			5.3	35	35	
1977 SEP 12	17 23 25	BYALBIRD REGION						
1977 SEP 12	22 27 14.0	PYRENEES						
1977 SEP 12	23 14 20	CRETE						
1977 SEP 12	23 28 34.9	EASTERN SEA OF JAPAN			5.2	38	38	
1977 SEP 13	00 23 43.8	SOUTHERN IRAN			4.7	16	16	



Date	Location	Time	Magnitude	Depth (km)	Azimuth (AZ)	Distance (D)	Station	Other Data
1977 SEP 13	TONGA ISLANDS	01 24.1	5.7(38)	33	10	143.9 DEG	I PKP	15,561173.3W
1977 SEP 13	POLAND UPPER SILESIA	06 04 30	4.3(7)	33	16	150.8 DEG	E SG	22,051175.3W
1977 SEP 13	TONGA ISLANDS REGION	03 43 40	5.1(16)	33	10	144.0 DEG	E PKP	15,551173.0W
1977 SEP 13	TONGA ISLANDS	04 19 10	4.8(40)	33	10	145.1173.5W	E PKP	15,451173.5W
1977 SEP 13	HOKKAIDO JAPAN REGION	05 07 10.8	4.7(2)	49	36	77.8 DEG	I P	41,3N1142.5E
1977 SEP 13	SOUTHERN IRAN	11 50 50	4.3(15)	33	106	42.2 DEG	E (AP)	27,7N1 59.9E
1977 SEP 13	CRETE	13 00 19.0	4.3(15)	62	152	17.9 DEG	I P	35,0N1 23.1E
1977 SEP 13	TRACES OFF EAST COAST OF HONSHU JAPAN	12 23 47	NO MB COMP.	33	41	64.2 DEG	E P	35,3N1141.1E
1977 SEP 13	TRACES	17 44 07					E	
1977 SEP 13	LEEWARD ISLANDS	10 49 24.8	4.8(8)	33	267	67.7 DEG	I P	15,5N1 00.4W
1977 SEP 13	TRACES	19 09 15					E	
1977 SEP 14		00 31 10					E	
1977 SEP 14	CRETE	00 38 40	NO MB COMP.	52	152	18.3 DEG	E P	34,0N1 23.3E
1977 SEP 14	SOUTHERN SHIKING PROVIN CHINA	00 04 07	4.8(21)	16	80	48.2 DEG	E PP	37,0N1 79.6E
1977 SEP 14	CENTRAL YUGOSLAVIA	00 53 30	NO MB COMP.	0	148	9.5 DEG	E SG	45,1N1 19.9E
1977 SEP 14	GERMAN DEMOCRATIC REPUBLIC	00 14 15.0					I PG	
1977 SEP 14	NORTHERN ITALY	13 30 34.0	NO MB COMP.	10	178	5.0 DEG	E SG	40,3N1 13.3E
1977 SEP 14	SOUTH SANDWICH ISLANDS REGION	13 10 21	5.9(10)	38	202	112.0 DEG	E PH	50,4S1 25.7W
1977 SEP 14	POLAND UPPER SILESIA	10 33 47					E SG	54,5S1 25.6W
1977 SEP 14	CRETE	10 53 30.4	4.5(31)	33	152	17.9 DEG	I P	35,0N1 23.1E
1977 SEP 14		21 50 00					E	
1977 SEP 15	CRETE	15 57 47.0	4.5(8)	33	152	17.9 DEG	I P	34,9N1 23.1E
1977 SEP 15	SOUTHWESTERN KYUKYU ISLANDS	17 04 50	4.1(2)	37	58	83.9 DEG	E P	24,7N1125.3E
1977 SEP 15		17 47 02					E	
1977 SEP 15		20 21 55					E	
1977 SEP 16	KERNADEC ISLANDS	03 29 44.8	5.0(4)	33	27	156.7 DEG	I PKP	29,7E1175.8W
1977 SEP 16	IRAN	07 12 03.3	4.4(5)	33	112	55.5 DEG	I P	30,1N1 51.3E
1977 SEP 16	HINDU KUSH REGION	10 10 34	4.6(19)	33	87	43.0 DEG	E P	30,5N1 75.7E
1977 SEP 16	NORTHERN ITALY	23 49 23.7C	5.1(24)	10	179	5.1 DEG	I PH	40,2N1 13.1E
1977 SEP 17	NORTHERN ITALY	00 23 10.5	NO MB COMP.	10	180	4.8 DEG	I PH	40,3N1 13.0E
1977 SEP 17	NORTHERN ITALY	00 32 29.2	NO MB COMP.	10	180	5.1 DEG	I PH	40,2N1 13.0E
1977 SEP 17	NORTHERN ITALY	03 19 22					E SG	
1977 SEP 17	NORTHERN ITALY	05 16 23					E	
1977 SEP 17	NORTHERN ITALY	05 18 18					E SG	
1977 SEP 17	NORTHERN ITALY	05 20 47	NO MB COMP.	34	182	4.8 DEG	E SG	40,3N1 12.8E
1977 SEP 17	SOUTH OF IARIAHA ISLANDS	05 37 29.3C	6.0(42)	16	50	103.7 DEG	I P	11,8N1143.1E
1977 SEP 17	EXPLOSION OF 14.0 TONS CZECHOSLOVAKIA	09 00 10.2					I PG	
1977 SEP 17	ANDREANOF ISLANDS; ALBUTIAN IS.	10 40 54.2	4.8(25)	33	4	78.5 DEG	I P	50,4N1173.4W
1977 SEP 17	NORTHERN ITALY	17 52 12	4.8(29)	150	353	67.5 DEG	E SG	61,0N1152.9W
1977 SEP 17	SOUTHERN ALASKA	18 37 10.2					I P	
1977 SEP 17	NORTHERN ITALY	21 28 00					E SG	
1977 SEP 17	NORTHERN ITALY	23 18 07.0	NO MB COMP.	1	181	5.0 DEG	I PH	40,3N1 12.9E
1977 SEP 18	NEAR COAST OF GUATEMALA	05 56 45	5.0(16)	108	288	87.4 DEG	E P	13,0N1 90.0W
1977 SEP 18	CRETE	06 01 29.1	4.3(2)	60	152	18.0 DEG	I P	34,9N1 23.3E
1977 SEP 18		00 56 54					E	
1977 SEP 18	NORTHERN ITALY	07 03 34.9	5.0(18)	10	181	5.0 DEG	I PH	40,3N1 12.9E

Date	Time	Location	Station	Depth (km)	Magnitude	Other Data
1977 SEP 18	00 43 14	TRACES! MINDANAO PHILIPPINE ISLANDS				
1977 SEP 18	00 55 42					
1977 SEP 18	09 15 33	NORTHERN ITALY	FRIULI			
1977 SEP 18	09 59 35	NORTHERN ITALY	FRIULI			
1977 SEP 18	10 05 20	NEW HEBRIDES ISLANDS				
1977 SEP 18	13 10 40	TRACES! SVALBARD REGION				
1977 SEP 18	14 18 01	14 18 01 UC 1.0 / 18				
1977 SEP 18	15 28 00					
1977 SEP 18	10 08 10	POLAND! UPPER SILESIA				
1977 SEP 18	21 40 04.5	NORTHERN ITALY	FRIULI			
1977 SEP 18	22 55 37	TRACES! NORTHERN ITALY	FRIULI			
1977 SEP 18	23 54 25					
1977 SEP 19	00 01 15.2	FRG! SOUTHWESTERN REGION				
1977 SEP 19	00 06 00	FRG! SOUTHWESTERN REGION				
1977 SEP 19	00 30 03.5	SOUTHERN IRAN				
1977 SEP 19	02 37 44	NORTHERN ITALY	FRIULI			
1977 SEP 19	05 27 24	CERAM SEA				
1977 SEP 19	00 10 13	MOLUCCA SEA				
1977 SEP 19	00 31 24	TRACES! S-MOA ISLANDS REGION				
1977 SEP 19	11 12 40					
1977 SEP 19	12 10 17					
1977 SEP 19	13 09 14	FIJI ISLANDS				
1977 SEP 19	14 37 22	KERMADEC ISLANDS REGION				
1977 SEP 19	16 37 32					
1977 SEP 19	17 40 30					
1977 SEP 19	18 40					
1977 SEP 19	19 25					
1977 SEP 19	20 27 22					
1977 SEP 19	21 37 32					
1977 SEP 19	23 40 30					
1977 SEP 19	24 40					
1977 SEP 19	25 41 20					
1977 SEP 19	06 29 27.14					
1977 SEP 19	06 29 32					
1977 SEP 19	14 49 45.4	KURILE ISLANDS				
1977 SEP 19	17 59 04	NORTHERN ITALY	FRIULI			
1977 SEP 19	22 29 15	TRACES! SOUTHERN ALASKA				
1977 SEP 20	02 11 49.0	KURILE ISLANDS				
1977 SEP 20	03 55 25.2					
1977 SEP 20	10 21 40	WESTERN POLAND				
1977 SEP 20	11 20 50	TRACES				
1977 SEP 20	12 34 41.2					
1977 SEP 20	13 46 42	SOUTH OF HONSHU JAPAN				
1977 SEP 20	13 57 37	SOUTH OF KERMADEC ISLANDS				
1977 SEP 20	15 07 45	NEAR N. COAST OF PAPUA NEW GUINEA				
1977 SEP 20	16 37 45	NORTHERN CHILE				
1977 SEP 20	20 09 09					
1977 SEP 20	20 25 12	CENTRAL YUGOSLAVIA				
1977 SEP 20	20 30 34	CENTRAL YUGOSLAVIA				
1977 SEP 20	21 09 30					
1977 SEP 21	01 36 34					
1977 SEP 21	03 24 00.5	BAKHALIN ISLAND				
1977 SEP 21	09 47 40	TONGA ISLANDS REGION				
1977 SEP 21	10 47 10	ANDREWS ISLANDS, ALEUTIAN IS.				
1977 SEP 21	13 29 04	REVILLA GIGEDO ISLANDS REGION				
1977 SEP 21	14 31 10.6	TRACES! EXPLOSION				
1977 SEP 21	15 01 10.3	KODIAK ISLAND REGION				
1977 SEP 21	17 25 10	TONGA ISLANDS				
1977 SEP 19	08 18 DEG AZ=67					
1977 SEP 19	05.1 DEG AZ=179					
1977 SEP 19	136.8 DEG AZ=39					
1977 SEP 19	25.1 DEG AZ=357					
1977 SEP 19	4.1 DEG AZ=218					
1977 SEP 19	4.0 DEG AZ=221					
1977 SEP 19	35.8 DEG AZ=112					
1977 SEP 19	106.1 DEG AZ=72					
1977 SEP 19	77.7 DEG AZ=30					
1977 SEP 19	146.0 DEG AZ=77					
1977 SEP 19	144.3 DEG AZ=9					
1977 SEP 19	143.2 DEG AZ=24					
1977 SEP 19	155.1 DEG AZ=24					
1977 SEP 19	77.5 DEG AZ=30					
1977 SEP 19	5.0 DEG AZ=180					
1977 SEP 19	08.2 DEG AZ=352					
1977 SEP 19	77.9 DEG AZ=31					
1977 SEP 19	86.7 DEG AZ=42					
1977 SEP 19	159.1 DEG AZ=31					
1977 SEP 19	116.6 DEG AZ=50					
1977 SEP 19	142.7 DEG AZ=249					
1977 SEP 19	9.1 DEG AZ=153					
1977 SEP 19	9.0 DEG AZ=153					
1977 SEP 19	73.2 DEG AZ=35					
1977 SEP 19	151.5 DEG AZ=16					
1977 SEP 19	77.2 DEG AZ=7					
1977 SEP 19	92.9 DEG AZ=307					
1977 SEP 19	71.7 DEG AZ=352					
1977 SEP 19	149.3 DEG AZ=13					



1977 SEP 21 NEAR EAST COAST OF KAMCHATKA
 I P 17 50 46.6 1.7 / 45
 E LI 18 24

1977 SEP 21 NORTHWEST OF KURILE ISLANDS
 I P 21 12 45.7D 1.3 / 130
 I 12 49.5 1.5 / 250
 I AP 13 44.1
 E(XP) 14 04
 E 14 22
 E(PP) 15 24
 E 16 44
 E PPP 17 20
 E 18 34
 E SCS 22 24
 E(PPS) 23 12
 E(SSS) 30 30
 E 31 40
 LH 53 T 14 AN 2 AB 1 AV 1.5
 FINAL 22 30

1977 SEP 21 TONGA ISLANDS REGION
 E(PKP) 22 39 50

1977 SEP 22 SOUTH OF KERMADEC ISLANDS
 E PKP2 04 01 25

1977 SEP 22 NORTHERN ITALY FRIULI
 E PI 07 52 50
 E SH 53 44
 E SG 54 12

1977 SEP 22 EAST OF NORTH ISLANDS
 E PKIP 09 37 2.1 / 32
 E APKIP 09 47
 I PKP2 10 20.4 1.6 / 22
 I APKIP 10 30.5

1977 SEP 22 NORTHERN ITALY FRIULI
 E SG 10 25 50

1977 SEP 22 TRACES EXPLOSION OF 0.10 TONNI CZECHOSLOVAKIA
 I PG 10 59 09.0
 E SG 59 20

1977 SEP 22 EXPLOSION OF 5.7 TONNI GERMAN DEMOCRATIC REPUBLIC
 I PG 11 14 10.2
 I SG 14 20.1

1977 SEP 23 NEW HEBRIDES ISLANDS
 E PKP 00 01 15 1.1 / 22

1977 SEP 23 ALBANIA
 E PI 03 00 40
 I 00 52.18
 E 02 13
 E 02 30
 E 03 04
 E 03 14
 E 03 40
 E SG 04 10
 E LI 05 12 T 10 AN 3.5 AB 2 AV 3.5 MLH =4.6

1977 SEP 23 SOUTH OF SUMBAWA ISLAND
 E P 00 12 15
 E 12 45
 E 15 24
 E(PP) 16 39
 LH 07 03 MB=6.0(30)

1977 SEP 23 TRACES EXPLOSION (1.0 TONNI) CZECHOSLOVAKIA
 I PG 07 45 2.43
 I SG 45 37.14

1977 SEP 23
 E 00 20 40

1977 SEP 23
 I(P) 14 25 14.7

MB=5.1(42)
 D=70.4 DEG AZ=18
 55.7N/162.3E 48KM H=17 39 38.18
 55.7N/161.8E 90KM 17 39 40

MB=5.6(82)
 D=72.6 DEG AZ=24
 51.8N/153.2E 231KM H=21 01 44.10
 51.8N/153.2E (235KM) 21 01 43
 DEPTH 280 KM

MB=4.0(1)
 D=150.9 DEG AZ=13
 28.76/173.9W 33KM H=22 19 53.18

MB=5.0(1)
 D=100.0 DEG AZ=39
 38.86/178.5W 33KM H=03 40 51.10

MB=5.2(13)
 D=5.1 DEG AZ=179
 40.2N/13.1E 10KM H=07 51 31.50

MC =5.3
 D=162.9 DEG AZ=37
 36.86/179.7W 33KM H=07 49 38.17
 37.26/177.8W 07 49 33
 DISTANCE 162 DEG

MB=5.1(1)
 D=117 KM AZ=195
 50.29N/12.59E

MB=4.7(15)
 D=10 KM AZ=311
 51.37N/12.89E

MB=5.1(1)
 D=139.1 DEG AZ=40
 18.98/167.3E 25KM H=23 41 44.40

MB=4.6(16)
 D=11.0 DEG AZ=151
 41.5N/20.1E 23KM H=03 58 01.8
 41.5N/20.2E 8KM 02 58 01.8
 41.1N/20.1E 02 57 55
 DISTANCE 11 DEG

MB=6.0(30)
 D=108.2 DEG AZ=85
 11.28/118.2E 33KM H=05 57 55.10
 10.76/118.0E 50KM 05 58 00

MB=4.0(17)
 D=136 KM AZ=126
 50.58N/14.55E

1977 SEP 23 NORTHERN ITALY (QUESTIONABLY)
 E SG 15 15 50
 E 16 20

1977 SEP 23 SOUTH OF FIJI ISLANDS
 I PKP1 15 44 25.3 1.0 / 21

1977 SEP 23 BANDA SEA
 E PKP 21 03 50
 E PP 04 34
 E APKP 05 10

1977 SEP 23 TRACES NORTH OF FIJI ISLANDS
 E PKP 21 29 30

1977 SEP 23 TRACES
 E 22 34 50

1977 SEP 23 NORTHERN ITALY FRIULI
 E SG 22 38 30

1977 SEP 24 NORTHERN ITALY FRIULI
 E 00 52 05
 E SG 52 39

1977 SEP 24 TUNISIA
 E P 01 36 10

1977 SEP 24 CRETE
 I P 20 47 14.0 0.8 / 17
 I 47 17.0
 LH 55

1977 SEP 24 CRETE
 E 21 27 55
 E 28 00

1977 SEP 25 CRETE
 I P 03 16 31.5 0.8 / 24

1977 SEP 25 SOUTHWESTERN USSR
 E(PKI) 08 26 58
 E 27 48
 E 28 34
 E SG 28 57

1977 SEP 25 POLAND UPPER SILESIA
 I SG 09 38 45.7

1977 SEP 25 FIJI ISLANDS REGION
 E PKIP 10 33 43
 I PKP1 33 48.0D 1.2 / 92
 I PKP2 33 54.7C 1.2 / 49
 E 34 04
 E 34 12
 I APKP 36 09.1
 I 36 10.3
 E PP 37 22

1977 SEP 25 SOUTH OF SUMBAWA ISLAND
 E 18 50 37

1977 SEP 25 WESTERN TURKEY
 E(P) 20 01 09

1977 SEP 26 OFF EAST COAST OF KAMCHATKA
 I P 01 48 20.1C 1.0 / 24

1977 SEP 26 WEST OF MACQUARIE ISLAND
 E(PKIP) 05 16 50
 E 17 10
 LH 00 39 T 17 AN 1.5 AB 1.5 AV 1.5

NO MB COMP. D=151.0 DEG AZ=27
 24.45/173.8E 479KM H=15 25 31.4 (1)

MB=5.5(20) D=110.5 DEG AZ=73
 2.6S/123.8E 309KM H=20 45 56.0 (U)
 2.7S/123.8E 300KM 20 45 56 (M)

1/4.3(4) D=139.4 DEG AZ=21
 12.3S/173.9E 33KM H=21 10 09 (1)

NO MB COMP. D=7.9 DEG AZ=211
 44.4N/7.4E 10KM H=22 34 09.7 (U)
 44.3N/7.5E 10KM 22 34 11.0 (B)

NO MB COMP. D=4.9 DEG AZ=120
 46.4N/13.0E 0KM H=00 49 51.7 (1)

NO MB COMP. D=17.3 DEG AZ=190
 34.4N/9.3E 33KM H=05 09 41.6 (1)

MB=4.3(14) D=17.8 DEG AZ=152
 35.1N/23.2E 64KM H=20 43 08.9 (U)
 33.1N/23.1E 56KM 20 43 10.6 (B)
 34.9N/23.3E 20 43 06 (M)

MB=4.2(13) D=18.0 DEG AZ=152
 34.7N/23.1E 64KM H=03 12 23.5 (U)
 34.9N/23.1E 54KM 03 12 26.1 (B)
 34.4N/23.1E 03 12 13 (M)

NO MB COMP. D=7.1 DEG AZ=110
 48.4N/23.0E 1KM H=00 25 02 (1)

MB=5.4(27) D=149.0 DEG AZ=23
 21.3S/179.5W 606KM H=10 15 05.9 (U)
 21.3S/179.7W 500KM 10 14 57 (M)
 DISTANCE 148.5 DEG DEPTH 620 KM

MC =5.0

MB=5.0(12) D=107.6 DEG AZ=86
 11.3S/117.2E 33KM H=18 31 39.1 (U)
 11.2S/117.1E 18 31 40 (M)

MB=4.3(18) D=17.9 DEG AZ=128
 38.7N/31.1E 18KM H=19 56 56.7 (U)
 38.7N/31.0E 10KM 19 56 58.5 (B)
 39.1N/31.2E 19 57 01 (M)

MB=4.0(17) D=72.0 DEG AZ=21
 52.7N/159.1E 33KM H=01 36 55.4 (U)

MB=5.3(7) D=135.0 DEG AZ=127
 60.1S/153.0E 33KM H=04 56 57.1 (U)
 60.0S/149.3E 04 56 59 (M)



1977 SEP 26 NEAR EAST COAST OF KAMCHATKA
I P 00 32 43.1C 1.4 / 41
MB=4.0(35)
D= 72.2 DEG AZ= 20
53.4N 160.7E 43KM H=08 21 21.7 (U)
53.2N 160.6E 80KM 08 21 25 (M)

1977 SEP 26 TRACES
E 14 36 10

1977 SEP 26
E 10 57 41

1977 SEP 26
E 10 43 34
E 43 50
E 40 10

1977 SEP 26 PAKISTAN
E P 19 57 35
E LM 20 25
MB=4.5(23)
D= 49.0 DEG AZ=100
25.4N 68.2E 33KM H=19 48 48.5 (U)
25.0N 68.2E 19 48 46 (M)

1977 SEP 27 TRACES
E 00 24 17

1977 SEP 27
E 14 52 50

1977 SEP 27 UNDERGROUND EXPLOSION
PCOULMIEISK
E P 14 12 10
MB=4.8(34)
D= 81.2 DEG AZ=321
37.2N 116.1W 0KM H=14 00 00.2 (U)

1977 SEP 27 TONGA ISLANDS
E PKP1 17 41 40
I PKP1 41 50.0C 1.5 / 32
I PKP2 41 50.0D 1.3 / 36
E 42 17
MB=5.0(9)
D=149.7 DEG AZ= 14
21.5S 176.3W 33KM H=17 22 05.8 (U)

1977 SEP 27
I P 20 51 40.9D

1977 SEP 27
E 20 30 47

1977 SEP 28 NORTHERN ITALY FRIULI
I P 01 44 31.1 0.7 / 38
I PU 44 50.0
I S1 45 20.0
I S2 45 50.5
E L1 46 30
NO HB COMP.

1977 SEP 28 NORTHERN ITALY FRIULI
I P 01 57 54.3 0.5 / 15
E S1 50 51
I S2 59 19.8
NO HB COMP.

1977 SEP 28 OFF E. COAST OF N. ISLANDS H.Z.
E(PKP2) 04 59 54
NO HB COMP.

1977 SEP 28 EXPLOSION OF 5.8 TONS CZECHOSLOVAKIA
E PU 00 00 50
I S2 01 13.0

1977 SEP 28 TONGA ISLANDS
E PKP1 12 31 50
I PKP1 31 50.1C 1.4 / 140
I PKP2 32 06.7C 1.7 / 92
MB=5.0(18)

1977 SEP 28 NORTHERN ITALY FRIULI
E 13 30 10
MC =5.5

1977 SEP 28 NORTHERN ITALY FRIULI
E S1 13 42 17
E S2 42 45
NO HB COMP.

1977 SEP 28
E 17 17 57

1977 SEP 28
E 19 30 47

1977 SEP 29 TRACES NORTHERN COLOMBIA
E P 00 21 20
E 21 50
MB=4.0(10)

1977 SEP 29 OFF EAST COAST OF KAMCHATKA
I P 00 08 14.9D 1.3 / 37
MB=4.7(12)

1977 SEP 29
E 00 48 42

1977 SEP 29
I P 11 29 57.3D 0.9 / 18
E 30 07

1977 SEP 29
E 10 34 50

1977 SEP 29 TONGA ISLANDS REGION
I PKP1 10 51 07.8C 1.5 / 79
MB=5.8(16)
D=146.7 DEG AZ= 10
18.8S 172.8W 33KM H=18 31 29.4 (U)

1977 SEP 30 UNDERGROUND EXPLOSION
I P 07 05 02.8D 1.4 / 97
MB=5.1(36)
D= 22.9 DEG AZ= 85
47.8N 149.1E 0KM H=06 59 55.6 (U)
48.0N 148.4E 0KM 06 59 57.0 (M)

1977 SEP 30 NICARAGUA
E(P) 07 23 07
E AP 23 25
E LM 56
MB=5.2(46)
D= 86.8 DEG AZ=284
11.2N 85.8W 66KM H=07 10 25.3 (U)

1977 SEP 30 UTAH
I P 10 31 07.6D 1.1 / 23
MB=5.0(25)
D= 76.1 DEG AZ=319
40.5N 110.4W 5KM H=10 19 21.0 (U)
40.2N 110.1W 10 19 18 (M)

1977 SEP 30 TONGA ISLANDS
E PKP 11 57 22
MB=5.0(8)
D=144.4 DEG AZ= 10
10.0S 173.0W 33KM H=11 37 46.2 (U)

1977 SEP 30 WESTERN MEDITERRANEAN SEA
E P 10 44 40
E LM 50
NO HB COMP.
D= 12.5 DEG AZ=189
38.9N 10.8E 10KM H=10 41 42.5 (U)
38.8N 10.6E 10KM 16 41 45.1 (M)

1977 SEP 30 EASTERN CAUCASUS
I P 10 56 01.8C
E 56 04
E L 56 11 1.6 / 59
L 17 01.1
07
MB=4.8(4)
D= 24.8 DEG AZ=104
40.1N 45.0E 9KM H=10 50 37.2 (U)
39.9N 45.1E 81KM 16 50 46.4 (M)
40.1N 45.1E 16 50 36 (M)

1977 SEP 30 CENTRAL YUGOSLAVIA
E 10 07 00
E 08 10
NO HB COMP.
D= 6.3 DEG AZ=138
43.5N 17.2E 0KM H=18 03 03.9 (I)

1977 SEP 30 TADZHIK-BINKIANG BORDER REGION
I P 19 25 00.9D 1.4 / 33
E PP 26 40
E LM 49
MB=5.0(36)
D= 42.9 DEG AZ= 82
39.4N 73.4E 10KM H=19 17 08.0 (U)
39.0N 73.3E 19 17 11 (M)

1977 SEP 30
E 19 31 51

1977 SEP 30
E 20 52 38

1977 SEP 30 FIJI ISLANDS REGION
I PKP1 21 26 11.2C
/4.4(3) /
D=146.2 DEG AZ= 19
10.5S 173.1W 713KM H=21 07 44.7 (I)

1977 SEP 30 BANUA ISLANDS REGION
E PKP 21 42 30 1.7 / 50
E 42 50
E 44 40
E 44 54
E LM 22 54
MB=5.4(13)
D=144.5 DEG AZ= 10
10.5S 172.9W 33KM H=21 22 57.5 (U)
10.9S 173.1W 21 22 59 (M)

April 1980

Dr. B. Tittel
H. Merkel
Dr. S. Wendt

Geophysikalisches Observatorium Collm
der Karl-Marx-Universität Leipzig



Geophysikalische Meßreihen

4. 1977

Seismische Registrierungen

Geophysikalisches Observatorium

DDR - 7261 COLLM

Geophysical measuring series
of the
Geophysical Observatory
of the Karl-Marx-University
Leipzig

Geophysikalische MeBreihen
des Geophysikalischen
Observatoriums
der Karl-Marx-Universität
Leipzig

C O L L M

S E I S M I C
R E C O R D S

S E I S M I S C H E
R E G I S T R I E R U N G E N

4th quarter of 1977

4. Quartal 1977

L 649/78 III/18/397

SEISMOLOGICAL STATION COLLM (CLL)

GEOGRAPHICAL CO-ORDINATES: LATITUDE = 51°18.6'N; LONGITUDE = 13°00.2'E; ELEVATION = 230 m
FOUNDATION: GREYWACKE OF ORDOVICE

SEISMOGRAPHS AND ITS CONSTANTS:

TYPE	COMPONENT	T_B (s)	D_B	T_G (s)	D_G	r/T_B^2	MAGNIFICATION (STATIC)	MAGNIFICATION (MAXIMAL)	RECORDING SPEED (mm/min)
BENIOFF	Z	0.452	0.65	1.43	1			(38000)	60
VSJ-II	z	2.175	0.537	0.296	1.474			55000	60
HSJ-II NS	n	2.171	0.537	0.294	1.474			60000	60
HSJ-II EW	e	2.171	0.537	0.293	1.474			58000	60
WIECHERT NS	WN	10.0	0.28			0.026	370		15
WIECHERT EW	WE	10.0	0.34			0.020	340		15
HSJ-I NS	N	20.0	0.50	1.10	9.09		1075		15
HSJ-I EW	E	20.0	0.51	1.21	8.24		1120		15
VSJ-I	V	20.0	0.51	1.20	8.35		1090		15

TIME SERVICE:

QUARTZ CLOCK (MINUTE PULSES OF 2 s AND HOUR PULSES OF 20 s; DAILY DIGITAL CONTROL; MAXIMUM ERROR ± 0.2 s)

SUPPLEMENTARY EQUIPMENTS:

- SPECIAL RECORDER WITH VARIABLE AMPLIFICATION FOR ANNOUNCED EXPLOSIONS
- PERMANENT RECORDS WITH CONSIDERABLY REDUCED SENSITIVITY FOR THE COMPLETE REGISTRATION OF STRONG EARTHQUAKES
- AUTOMATIC AMPLIFICATION OF RECORDING LIGHT FOR AMPLITUDES GREATER THAN A GIVEN LIMIT

EVALUATION:

THE FIRST LINE OF EVALUATION OF EACH EVENT CONTAINS

DATE AND (FOR KNOWN FOCI) GEOGRAPHICAL REGION OF EPICENTER (MOSTLY FOLLOWING FLINN & ENGDahl 1965)
BODY WAVE MAGNITUDE MB WITH THE NUMBER OF USED OBSERVATIONS.

DETAILED INFORMATION, WITH RESPECT TO GEOGRAPHICAL REGION OR OTHER COMMENTS CAN BE WRITTEN ALSO HERE.

THE NEXT LINES ARE DIVIDED INTO THE FOLLOWING COLUMNS

- THE NOMENCLATURE OF THE PHASES CORRESPONDS TO THE LIST OF ISC, COMPLETED BY SOME PHASES (pP APPEARS AS AP, sP APPEARS AS XP, MULTIPLE PHASES AS P(1) FOR INSTANCE)
- TIME OF ONSET IN G.M.T.
- DIRECTION OF VERTICAL COMPONENT OF THE GROUND MOTION
- PERIODS, AMPLITUDES, AND EVENTUALLY MAGNITUDES FOR IMPORTANT ONSETS APPEAR IN THE CORRESPONDING LINE IF MEASUREMENT IS POSSIBLE;
FOR SHORTPERIODIC WAVES IN THE SEQUENCE OF COMPONENTS z, n, e (PERIOD IN SECONDS/AMPLITUDE IN NANOMETRES)
FOR LONGPERIODIC WAVES T, AN, AE, AV (MEAN PERIOD IN SECONDS, AMPLITUDES FOR N, E, V COMPONENTS IN MICROMETRES)
- MAGNITUDES CAN BE DETERMINED - FOR BODY WAVES THROUGH THE EARTH MANTLE (MPV, MPH, MPMV, MPMH, MPPV, MPPH, MSH)
- FOR SHORTPERIODIC LONGITUDINAL CORE WAVES (MC)
- FOR MAXIMUM OF SURFACE WAVES (MLH, MLV)
- FOR STRONG QUAKES SOMETIMES FROM WIECHERT RECORDS (MAG)
- HYPOCENTER DATA (LATITUDE, LONGITUDE, DEPTH, ORIGIN TIME) OF THE FOLLOWING INSTITUTIONS ARE USED IN GENERAL
(U) U.S. NATIONAL EARTHQUAKE INFORMATION SERVICE
(B) EUROPEAN-MEDITERRANEAN SEISMOLOGICAL CENTRE
(M) ACADEMY OF SCIENCES OF U.S.S.R., INSTITUTE OF PHYSICS OF THE EARTH
(I) INTERNATIONAL SEISMOLOGICAL CENTRE
(A) INSTITUTE FOR METEOROLOGY AND GEODYNAMICS IN VIENNA, AUSTRIA
(C) GEOPHYSICAL INSTITUTE OF THE CZECHOSLOVAK ACADEMY OF SCIENCES
(G) NATIONAL OBSERVATORY OF ATHENS, GREECE
(P) POLISH ACADEMY OF SCIENCES
(S) SEISMOLOGICAL INSTITUTE, UPPSALA, SWEDEN
OWN COMMENTS ARE GIVEN WITHOUT MENTION OF SOURCE.
- MB IS THE BODY WAVE MAGNITUDE GIVEN BY (U). /MB/ IS PRINTED IN FEW OTHER CASES WITH FOCAL DATA OF OTHER INSTITUTIONS.
- EPICENTRAL DISTANCE D AND STATION AZIMUTH AZ ARE CALCULATED USING THE FIRST EPICENTER INDICATION AND ARE PRINTED ABOVE THESE DATA.
D AND AZ ARE CALCULATED ACCORDING TO GEOCENTRIC CO-ORDINATES (D COMMONLY IN DEG, FOR NEAR EVENTS IN km, WITH A MAXIMUM ERROR OF ± 0.1 DEG AND ± 1 km, RESPECTIVELY; AZ IN DEG WITH A MAXIMUM ERROR OF ± 1 DEG).
- FOR COMPARISON WITH THE FIRST OWN EVALUATION "DISTANCE" AND "DEPTH" ARE GIVEN BELOW THE HYPOCENTER DATA.
- ROUND BRACKETS INDICATE UNCERTAINTIES.

NUMEROUS EXPLOSIONS AND ROCK BURSTS ARE LEAVED OUT IN THIS BULLETIN BECAUSE OF ITS UNIMPORTANT FORCE.
EVENTUAL INTERRUPTIONS OF RECORDS ARE INDICATED IN THE TIME SEQUENCE.
THE COMPILATION WAS PERFORMED AT THE COMPUTER CENTER OF ZENTRALINSTITUT DER METALLURGIE, LEIPZIG.

Date	Time	Location	Station	Mb	Depth (km)	Dip (DEG)	AZ (DEG)	Hypocenter (Lat, Lon, H)	Quality
1977 OCT 01	15 07 27	WESTERN POLAND	E PG			3.3	90	51.4N 13.2E 33KM	(U)
	07 50		E SG					DISTANCE 215 KM	
1977 OCT 01	13 17 40	NICOBAR ISLANDS REGION	E P	4.9(29)		76.8	91	9.3N 93.7E 114KM	(U)
								9.1N 93.8E 13 05 56	(M)
1977 OCT 01	15 15 40	KERMADEC ISLANDS	E PKP2	5.4(5)		157.7	25	30.5S 177.8E 33KM	(U)
1977 OCT 01	19 23 50.3D		I P						
1977 OCT 01	19 29 20		E						
	29 40		E						
1977 OCT 01	19 39 19		E						
1977 OCT 02	01 53 50	POLAND/ UPPER SILESIA	E						
1977 OCT 02	17 52 30	NORTHERN ITALY FRIULI	E SG			4.9	162	46.4N 12.7E 33KM	(U)
								H=11 40 58.3	(M)
1977 OCT 02	13 16 00	PANAY PHILIPPINE ISLANDS	E P	5.4(45)		2.3	68	11.5N 121.6E 33KM	(U)
	16 20		E					11.5N 121.8E 13 02 50	(M)
	16 32		E						
	19 10		E						
	19 50		E PP						
	55		L						
	14 02		L						
					17				
					3				
1977 OCT 02	16 03 20.6D 0.6 / 15	NEW IRELAND REGION	I PKP	5.3(5)		122.8	49	4.5S 153.3E 89KM	(U)
	03 52		E APKP					2.9S 153.6E 15 44 36	(M)
1977 OCT 03	04 40 40	NORTH ATLANTIC OCEAN	E P	5.1(28)		01.2	256	14.1N 48.2E 33KM	(U)
								H=04 38 33.7	(M)
1977 OCT 03	05 08 00	LOYALTY ISLANDS	E PKP	5.4(16)		143.6	41	20.4S 168.3E 33KM	(U)
	08 19		E APKP					H=04 48 33.6	(M)
1977 OCT 03	05 50 40	NEW IRELAND REGION	E(PKP)	4.9(6)		119.5	52	2.6S 149.9E 12KM	(U)
								4.6S 149.1E 05 19 53	(M)
1977 OCT 03	06 25 50	TONGA ISLANDS	E PKP			145.2	11	10.6S 173.4E 33KM	(U)
								H=06 04 20.0	(M)
1977 OCT 03	07 50 31	TRACES/ NEW HEBRIDES ISLANDS	E APKP	4.9(2)		143.6	39	17.9S 169.4E 48KM	(U)
								H=07 36 51.1	(M)
1977 OCT 03	12 39 50	LOYALTY ISLANDS	E PKP	5.1(6)		143.6	41	20.4S 168.3E 11KM	(U)
								H=12 20 21.5	(M)
1977 OCT 03	10 25 27	TRACES	E						
1977 OCT 03	10 33 33	GREECE/TURKISH BORDER REGION	E L			12.3	155	40.0N 19.8E 41KM	(R)
								H=16 26 51.1	(M)
1977 OCT 03	19 22 49.6D 0.9 / 36	FIJI ISLANDS REGION	I PKP1	4.0(7)		147.9	20	20.4S 173.2E 547KM	(U)
	22 50.0D 0.9 / 33		I PKP2					H=19 04 01.5	(M)
1977 OCT 03	19 55 29	KERMADEC ISLANDS REGION	E(PKP)	4.0(2)		157.6	23	30.1S 176.8E 33KM	(U)
	56 10.1 1.0 / 38		I APKP2					30.0S 175.5E 19 35 27	(M)
1977 OCT 03	22 57 30.4D 1.4 / 39	NORTHERN SUMATRA	I P	5.5(51)		86.9	93	0.3N 93.7E 13KM	(U)
								0.5N 93.6E 22 44 55	(M)
1977 OCT 04	11 14 10	TRACES/ PHILIPPINE ISLANDS REGION	E P	4.0(5)		86.7	66	17.3N 119.7E 66KM	(U)
								H=11 01 33.1	(M)
1977 OCT 04	13 50 21	NEAR COAST OF VENEZUELA	E P	5.1(22)		72.8	265	10.4N 62.3E 21KM	(U)
	56 29		E AP					10.5N 62.3E 13 44 55	(M)
	56 35		E						
1977 OCT 04	15 13 23	NEAR EAST COAST OF HONSHU JAPAN	E	4.8(4)		81.7	41	35.8N 140.2E 75KM	(U)
								35.6N 140.2E 15 00 58	(M)
1977 OCT 04	15 51 05.6D 1.1 / 38	HONSHU JAPAN	I P	5.4(61)		81.2	41	36.1N 139.7E 66KM	(U)
								36.3N 139.7E 15 38 49	(M)
1977 OCT 04	17 49 59	KURILE ISLANDS	E P	3.9(1)		76.4	27	40.3N 152.9E 44KM	(U)
								40.7N 154.3E 17 38 03	(M)



1977 OCT 04 KARHATKA E(P) 21 40 11	MB=5.2(45)	D= 73.0 DEG 51.5N156.0E 51.5N157.0E	AZ= 23 95KM 140KM	H=21 34 43.5 (U) 21 34 46 (M)	1977 OCT 07 GREECE E 12 46 23	MB=4.4(1)	D= 13.6 DEG 36.0N 23.0E 37.4N 20.8E	AZ=184 33KM 44KM	H=12 42 51.3 (U) 12 42 58.4 (B)
OR ANOTHER POSSIBILITY									
1977 OCT 04 GREECE E(P) 21 40 11	NO HB COMP.	D= 13.5 DEG 30.9N 20.4E 38.8N 20.4E	AZ=154 33KM 10KM	H=21 42 45.7 (U) 21 42 45.0 (B)	1977 OCT 07 SOUTH OF SUMBA ISLAND E(P) 14 57 33	MB=5.5(15)	D= 14.9 DEG 11.8N119.3E 11.4N119.2E	AZ= 84 33KM	H=14 38 36.0 (U) 14 38 37 (M)
1977 OCT 04 TRACES1 CRETE E P 23 34 13	NO HB COMP.	D= 17.9 DEG 35.0N 23.1E 34.3N 23.1E	AZ=152 0KM	H=23 30 03 (U) 23 30 00 (G)	1977 OCT 07 I PKP 10 25 00.3D				
1977 OCT 05 WESTERN TURKEY E P 05 38 47 38 49.4 2.5 / 420 I 42 11 T 15 AH 2.0 AE 3.8 AV 3.3 E S 43.17 T 10 AH 9.5 AE 3.0 AV 3.2 L 45.19 T 10 AH 30 AE 24.5 AV(30) L 47 T 10 AH 28.5 AE 21.5 AV(29) FINAL 07	MB=5.3(2)	D= 17.4 DEG 41.0N 33.4E 41.0N 33.5E 41.1N 33.5E	AZ=118 33KM 10KM	H=05 34 46.8 (U) 05 34 46.0 (B) 05 34 45 (M)	1977 OCT 07 SULAWESI ISLAND REGION E 17 20 14	MB=5.0(20)	D= 10.6 DEG 9.9S117.3E 9.5S117.1E	AZ= 85 33KM	H=17 01 13.2 (U) 17 01 13 (M)
1977 OCT 05 KERMADEC ISLANDS REGION E PKP1 10 47 40 E PKP2 48 04 1.7 / 41 E 48 19 E PP 51 40	MB=5.4(10)	D= 15.5 DEG 29.5S117.6E 29.1S117.6E	AZ= 22 56KM	H=10 27 46.3 (U) 10 27 38 (M)	1977 OCT 07 SULAWESI ISLAND REGION E(PKP) 21 50 40 54 32	MB=5.0(14)	D= 10.6 DEG 9.9S117.3E 10.0S117.3E	AZ= 85 33KM	H=21 36 11.3 (U) 21 36 10 (M)
1977 OCT 05 TONGA ISLANDS REGION I PKP1 13 43 40.14D 1.0 / 28	MB=4.0(6)	D= 15.0 DEG 22.0S117.5E	AZ= 17 33KM	H=13 28 50.6 (U)	1977 OCT 07 RYUKYU ISLANDS I(P) 22 22 57.3	NO HB COMP.	D= 83.0 DEG 26.9N133.4E	AZ= 52 33KM	H=22 10 31.3 (U)
1977 OCT 05 FIJI ISLANDS REGION I PKIP 14 35 50.14D 1.4 / 49 I PKP1 34 06.12D 1.1 / 600 I PKP2 34 05.2 E APKP 36 24 I PP 57 30.6D	MB=5.0(58)	D= 14.6 DEG 16.0S117.7E 16.5S117.8E	AZ= 19 573KM 550KM	H=14 15 24.3 (U) 14 15 22 (M)	1977 OCT 07 RYUKYU ISLANDS E P 23 18 23 L 52 T 10 AH 2.5 AE 1.5 L 59	MB=5.1(12)	D= 82.0 DEG 26.9N128.2E	AZ= 53 33KM	H=23 06 04.9 (U)
1977 OCT 05 TRACES E P 15 03 20					1977 OCT 08 PBRU E AP 03 17 39	MB=5.5(34)	D= 98.9 DEG 9.5S174.7E 9.5S174.3E	AZ=202 129KM	H=03 03 51.5 (U) 03 03 40 (M)
1977 OCT 05 CRETE E P 16 11 44	MB=4.2(1)	D= 17.8 DEG 35.1N 23.3E 35.0N 23.7E	AZ=151 60KM	H=10 25 30.8 (U) 10 25 31.8 (B)	1977 OCT 08 GREECE E P 19 29 30	MB=4.2(1)	D= 17.8 DEG 35.1N 23.3E 35.0N 23.7E	AZ=151 60KM	H=10 25 30.8 (U) 10 25 31.8 (B)
1977 OCT 05 BURIA E 19 04 40	MB=4.0(9)	D= 66.3 DEG 20.7N 97.4E 21.4N 97.3E	AZ= 77 33KM	H=17 53 54.7 (U) 17 54 01 (M)	1977 OCT 08 FIJI ISLANDS REGION I PKP1 17 38 00.6D 1.1 / 48	MB=5.0(10)	D= 14.8 DEG 21.0S117.9E	AZ= 23 605KM	H=17 19 27.9 (U)
1977 OCT 05 SOUTH OF SUMBA ISLAND E(P) 16 22 57	MB=5.5(10)	D= 10.7 DEG 11.5S117.4E 11.5S117.4E	AZ= 86 33KM	H=18 04 11.8 (U) 18 04 12 (M)	1977 OCT 08 LUZON PHILIPPINE ISLANDS E P 21 20 02 E PP 23 47 E SKS 30 36 E PPS 33 02 LH 57 T 21 AH 4 AE 2 L 22 08 T 10 AH 1 AE 2 AV 3	MB=5.4(18)	D= 92.6 DEG 13.2N124.5E 14.2N124.5E DISTANCE 93 DEG	AZ= 65 32KM	H=21 06 52.8 (U) 21 06 52 (M)
1977 OCT 05 19 09 04					1977 OCT 09 KURIL ISLANDS REGION E P 04 18 10	MB=4.9(25)	D= 71.9 DEG 54.8N166.0E 54.6N166.3E	AZ= 16 33KM	H=04 06 55.4 (U) 04 06 54 (M)
1977 OCT 05 SOUTH OF SUMBA ISLAND I 19 10 07.11C 1.5 / 25 E PKKP 20 51	MB=5.0(13)	D= 10.7 DEG 11.2S117.2E 11.5S117.1E	AZ= 86 33KM	H=18 51 10.1 (U) 18 51 11 (M)	1977 OCT 09 UNDERGROUND EXPLOSION E P 11 05 55 E PH 06 10 E(PCP) 06 57 E 11 30 LH 12 E 13 11	MB=4.5(24)	D= 48.0 DEG 73.8N 53.2E 73.5N 54.1E	AZ= 23 0KM	H=11 00 00.3 (U) 11 00 01.0 (B)
1977 OCT 06 TRACES1 PHILIPPINE ISLANDS REGION E P 02 17 31	MB=5.0(8)	D= 90.2 DEG 10.0N125.1E 10.0N125.7E	AZ= 66 74KM	H=02 04 09.2 (U) 02 04 05 (M)	1977 OCT 09 04 31 24				
1977 OCT 06 NORTH ATLANTIC OCEAN E P 07 32 40 LH 43 T 17 AH 0.5 AE 1 AV 1	MB=4.0(7)	D= 27.9 DEG 50.7N 34.4E 57.0N 34.2E	AZ=300 33KM	H=07 26 52.0 (U) 07 26 52.2 (B)	1977 OCT 09 09 32 54				
1977 OCT 06 FRG. SOUTHWESTERN REGION SCH-ADISCHE ALB E(SG) 13 20 09	NO HB COMP.	D= 4.1 DEG 40.0N 9.2E	AZ=218 15KM	H=13 18 04 (U)	1977 OCT 10 FRANCE OLEROU E PG 00 09 30 E 11 44 E 11 51 E SG 11 50 I 12 05.3	NO HB COMP.	D= 11.0 DEG 40.0N 1.5E 40.0N 1.5E	AZ=247 10KM 33KM	H=06 05 55.5 (B) 06 05 55.9 (U)
1977 OCT 07 SOUTH OF SUMBA ISLAND E 05 03 10 E(PKP) 04 19 L 43 L 55	MB=5.7(17)	D= 10.6 DEG 10.5S117.3E 0.4S116.9E	AZ= 85 33KM	H=04 45 43.2 (U) 04 45 46 (M)	1977 OCT 10 CRETE E P 08 53 44 E 53 57 E 54 00	MB=4.3(3)	D= 17.6 DEG 35.4N 23.4E 34.9N 23.5E	AZ=151 81KM 57KM	H=08 49 42.5 (U) 08 49 38.2 (B)
1977 OCT 07 08 24 00					1977 OCT 10 09 32 54				
1977 OCT 07 SOUTH OF SUMBA ISLAND E 12 25 00 E PP 28 40 E PPPP 29 20 E SKS 33 30 E S 35 40 E(S) 37.0 E PPS 36.9 E 39 33 LH 40 54 L 13 11 T 25 AH 13.5 AE 4 L 21 T 10 AH 2.5 AE 0.5 AV 0.5	MB=5.9(28)	D= 10.6 DEG 10.5S117.3E 9.7S117.2E	AZ= 85 33KM	H=12 10 43.7 (U) 12 10 39 (M)	1977 OCT 10 EXPLOSION OF 10 TONS GERMAN DEMOCRATIC REPUBLIC I PG 10 55 50.4 I SG 55 52.3	INTERRUPTION OF ONE SHORTPERIODIC RECORD FROM 10H 40H TO 05H 45M (AT OCT 11)	D= 10 KM 51.7N 12.0E	AZ=311	H=
1977 OCT 07 GREECE E 12 46 23	MB=4.4(1)	D= 13.6 DEG 36.0N 23.0E 37.4N 20.8E	AZ=184 33KM 44KM	H=12 42 51.3 (U) 12 42 58.4 (B)	1977 OCT 10 SOUTH OF TONGA ISLANDS E(PDIP) 12 11 42 E PKIP 13 45 I PKP1 13 50.1 I 13 54.2 I 13 58.0 (CONT.)	MB=6.0(23)	D= 15.8 DEG 29.9S117.4E 29.8S117.6E DISTANCE 151 DEG	AZ= 17 33KM	H=11 53 53.6 (U) 11 53 55 (M)



(CONT.)

I PKP2 12 14 05 11 T 10 AN 8,5 AE 4,1 AV 26,1
 I 15 17 12
 I 15 22 14
 I 15 37 11
 E PP 17 35 T 14 AN 15,5 AE 3,8 AV 20,0 MPPH = 7,3 MPPV = 7,1
 E PPP 21 05
 E 27 10
 E PSK6 28 10
 E (PP6) 31 11
 LM 13 29 T 10 AN 38,5 AE 47,5 MLH = 7,4
 L 43 T 17 AN 34 AE 34 MLV = 7,3
 L 46 T 10 AN 42 AE 20,5
 FINAL 17

1977 OCT 10 TRACES! SOUTH OF TONGA ISLANDS M=12 26 42 (S)
 E PKP1 12 46 34

1977 OCT 10 SOUTH OF TONGA ISLANDS M=13 02 02 (S)
 E PKP2 13 22 07
 E 22 10

1977 OCT 10 SOUTH OF TONGA ISLANDS MB=5,4(12) D=153,9 DEG AZ=18
 E PKP1 13 28 30 26,08/175,5W 33KM H=13 08 40,7 (U)
 E PKP2 28 50

1977 OCT 10 SOUTH OF TONGA ISLANDS MB=4,9(2) D=153,8 DEG AZ=17
 E PKP1 13 50 47 25,98/175,4W 33KM H=13 30 38,0 (U)
 E PKP2

1977 OCT 10 POLAND! UPPER SILESIA NO MB COMP! D=3,9 DEG AZ=101
 E PG 15 06 31 50,4N/19,0E 0KM H=15 05 20 (I)
 E SG 07 23 DISTANCE 410 DEG

1977 OCT 10 SOUTH OF TONGA ISLANDS NO MB COMP! D=123,3 DEG AZ=17
 E PKP1 10 49 52 25,46/175,4W 33KM H=10 29 56,0 (I)

1977 OCT 10 SOUTH OF TONGA ISLANDS H=16 31 44 (S)
 E PKP1 10 51 41

1977 OCT 10 SOUTH OF TONGA ISLANDS NO MB COMP! D=153,7 DEG AZ=18
 E PKP1 10 05 22 25,08/175,8W 33KM H=17 45 27 (I)

1977 OCT 10 SOUTH OF TONGA ISLANDS MB=4,6(1) D=123,7 DEG AZ=16
 E PKP1 21 29 10 25,78/174,9W 33KM H=21 09 19,2 (U)

1977 OCT 10 FIJI ISLANDS REGION MB=5,0(12) D=145,6 DEG AZ=19
 I PKP1 21 40 20/30 18,05/178,3W 606KM H=21 21 47,8 (U)

1977 OCT 11 TRACES E 04 06 40

1977 OCT 11 ANDREANOF ISLANDS; ALBUTIAN IS; MB=4,7(17) D=77,6 DEG AZ=6
 E P 05 15 05 51,1N/178,8W 33KM H=05 03 11,0 (U)
 50,8N/177,0W 05 03 10 (M)

1977 OCT 11 TRACES! SOUTH OF TONGA ISLANDS NO MB COMP! D=123,4 DEG AZ=17
 E (PKP) 00 03 30 25,98/175,1W 33KM H=05 43 23 (I)

1977 OCT 11 UTAH MB=4,0(45) D=76,1 DEG AZ=319
 I P 08 07 55/20 1,0 / 13 40,5N/110,5W 6KM H=07 56 06,5 (U)

1977 OCT 11 FIJI ISLANDS REGION NO MB COMP! D=144,5 DEG AZ=20
 I PKP 09 27 24/30 17,1S/179,2W 487KM H=09 08 43,4 (I)

1977 OCT 11 SOUTH OF HONSHU, JAPAN MB=4,0(11) D=85,8 DEG AZ=43
 E P 12 06 30 1,2 / 18 31,4N/140,9E 61KM H=11 53 55,1 (U)
 I AP 06 47,3 31,9N/141,3E 11 53 53 (M)

1977 OCT 11 E 12 25 50

1977 OCT 11 SOUTH OF FIJI ISLANDS MB=5,4(6) D=150,5 DEG AZ=25
 I PKP1 12 32 55/17D 0,7 / 23 25,05/179,8E 548KM H=12 14 03,4 (U)
 E APKP 35 09

1977 OCT 11 TRACES! SOUTH OF TONGA ISLANDS H=13 32 11 (S)
 E PKP1 13 52 07

1977 OCT 11 EAST CHINA SEA MB=5,0(5) D=81,5 DEG AZ=53
 E L 14 33 35 27,5N/128,3E 27KM H=14 21 10,4 (U)
 L 15 07 27,1N/129,1E 14 20 58 (M)
 L 13

1977 OCT 11 GERMAN DEMOCRATIC REPUBLIC NO MB COMP! D=0,9 DEG AZ=264
 SAIGERHAUSEN (51,2N) 11,6E 33KM H=14 08 50 (I)

I PG 14 09 10/10 DISTANCE 125 KM
 I 09 11,8
 E SG 09 25
 E L 09 37
 E LI 09 42 1,8 / 390 1,5 / 165 1,8 / 320 (MLH = 2,7)
 E L 09 47

1977 OCT 11 WEST CHINA RISE MB=4,9(3) D=125,4 DEG AZ=244
 E PKP 21 21 32 42,98/183,4W 33KM H=21 02 34,7 (U)

1977 OCT 11 E 22 53 44

1977 OCT 12 NORTH ATLANTIC OCEAN MB=5,1(14) D=01,2 DEG AZ=256
 E P 01 03 45 D 14,1N/48,2W 33KM H=00 53 29,0 (U)

1977 OCT 12 TRACES! SOUTH OF GUMBA ISLAND MB=5,0(20) D=108,9 DEG AZ=84
 E 01 41/36 11,28/119,4E 33KM H=01 22 09,2 (U)
 11,26/119,4E 01 22 09 (M)

1977 OCT 12 FIJI ISLANDS REGION MB=5,0(5) D=148,7 DEG AZ=22
 I PKP1 05 37 43/UC 1,3 / 24 21,58/179,3W 620KM H=05 19 03,8 (U)
 E APKP 40 07

1977 OCT 12 UO 38 40

1977 OCT 12 CRETE MB=4,2(1) D=18,1 DEG AZ=150
 E P 20 41 40 39,0N/24,0E 33KM H=20 37 34,3 (U)
 39,0N/24,0E 39KM 20 37 39,1 (S)

1977 OCT 13 WEST OF MACQUARIE ISLAND MB=5,3(6) D=151,1 DEG AZ=116
 E (PKP) 00 59 27 54,56/144,7E 33KM H=00 39 36,3 (U)
 E 59 34 1,8 / 51
 LM 02 19

1977 OCT 13 FIJI ISLANDS REGION MB=5,1(40) D=145,7 DEG AZ=20
 E PKKP 01 04 20 18,28/178,4W 596KM H=00 45 56,0 (U)
 I PKP1 04 30/10 1,1 / 120 DISTANCE 146 DEG DEPTH 610 KM
 E APKP 06 49

1977 OCT 13 TRACES E 03 56 43

1977 OCT 13 NICOBAR ISLANDS REGION MB=5,0(30) D=77,0 DEG AZ=91
 E P 07 09 10 9,9N/93,9E 33KM H=06 57 27,5 (U)
 9,7N/93,6E 06 57 30 (M)

1977 OCT 13 NICOBAR ISLANDS REGION MB=4,0(7) D=77,0 DEG AZ=91
 E 08 02 40 9,9N/93,9E 33KM H=07 50 41,3 (U)
 12,2N/92,3E 07 51 06 (M)

1977 OCT 13 FIJI ISLANDS REGION MB=4,7(6) D=145,9 DEG AZ=18
 E (PKP) 09 22 00 16,28/178,0W 225KM H=09 02 53,5 (U)
 E 22 10

1977 OCT 13 BURMA-INDIA BORDER REGION MB=5,2(55) D=66,1 DEG AZ=82
 E P 11 42 51 23,9N/93,4E 61KM H=11 32 09,3 (U)
 I AP 43 08 C 1,8 / 90 23,9N/93,5E 60KM 11 32 08 (M)

1977 OCT 13 TAIWAN MB=4,7(7) D=82,8 DEG AZ=61
 E P 11 59 22 23,6N/121,7E 44KM H=11 47 00,7 (U)

1977 OCT 13 E 17 39 52

1977 OCT 13 TONGA ISLANDS MB=4,5(2) D=145,7 DEG AZ=14
 E PKP 20 05 22 17,35/175,1W 245KM H=19 46 08,5 (U)

1977 OCT 13 TADZHIK SSR MB=4,6(17) D=43,4 DEG AZ=85
 E P 20 46 40 37,3N/72,1E 140KM H=20 38 52,1 (U)
 E (PPP) 49 17 37,3N/71,9E 140KM 20 38 53 (M)

1977 OCT 13 NICOBAR ISLANDS REGION MB=5,1(30) D=76,9 DEG AZ=91
 E (P) 21 30 40 9,9N/93,8E 33KM H=21 18 56,9 (U)
 I 30 49/7 1,7 / 39 9,9N/93,6E 21 18 58 (M)
 E 30 57

1977 OCT 14 UO 17 09

1977 OCT 14 POLAND! UPPER SILESIA MB=5,9(52) D=144,2 DEG AZ=10
 E SG 01 22 54 19,78/173,0W 33KM H=04 55 34,8 (U)
 19,88/171,5W 04 55 33 (M)

1977 OCT 14 TONGA ISLANDS MB=5,4(52) D=144,2 DEG AZ=10
 E PKP 05 15 00 0,9 / 40 19,78/173,0W 33KM H=04 55 34,8 (U)
 I 15 13,8
 I 15 29,7
 I 17 40,4
 I 18 12,5
 E PP 18 25
 E 20 20
 L I 06 20 T 20 AN 2 AE 0,5 AV 1,5

INTERRUPTION OF SOME SHORTPERIODIC RECORDS FROM 05H 40M TO 07H 12M

1977 OCT 14 TONGA ISLANDS MB=5,2(18) D=147,2 DEG AZ=15
 I PKP1 11 11 34/5D 1,1 / 43 19,26/175,7W 250KM H=10 52 19,7 (U)
 E 11 43
 E APKP 12 41
 E SKP 14 47

1977 OCT 14 LUZON! PHILIPPINE ISLANDS MB=4,9(9) D=87,2 DEG AZ=67
 E (P) 12 00 20 16,5N/119,5E 59KM H=11 47 41,8 (U)
 I 00 35,5 16,1N/119,7E 11 47 44 (M)

1977 OCT 14 NEW HEBRIDES ISLANDS MB=5,7(25) D=138,7 DEG AZ=39
 E (PKKP) 12 48 10 19,58/167,4E 125KM H=12 29 13,8 (U)
 I PKIKP 48 20/4 1,1 / 40 19,58/167,4E 130KM 12 29 15 (M)
 E 48 40
 E 51 00
 E (SKP) 51 50



Date	Time	Location	Depth (km)	Magnitude	Latitude	Longitude	Distance (km)	Azimuth	Station	Time	Location	Depth (km)	Magnitude	Latitude	Longitude	Distance (km)	Azimuth	Station
1977 OCT 19	11 48 20	KURILE ISLANDS REGION	48.1	4.9	1154.3E	1.2 / 33	37.8	26	MB=4.9(9)	1977 OCT 20	12 35							
1977 OCT 19	12 56 00	GREECE							NO MB COMP	1977 OCT 20	12 38 22	0.9 / 27						
1977 OCT 19	13 47 08	SOUTH OF FIJI ISLANDS							MB=4.8(2)	1977 OCT 20	12 57 33.9	1.6 / 40						
1977 OCT 19	15 00 04.8	EXPLOSION FRU							DISTANCE 240 KM	1977 OCT 20	13 34 42							
1977 OCT 19	15 09 54									1977 OCT 20	13 31 42.8	1.2 / 18						
1977 OCT 19	17 38 47	SOUTHERN SINKIANG PROV, CHINA							MB=5.1(13)	1977 OCT 20	22 00 02							
1977 OCT 19	21 32 10.1	KURILE ISLANDS							MB=5.3(27)	1977 OCT 20	22 37 40							
1977 OCT 19	22 51 45.9	TAIWAN REGION							MB=5.3(26)	1977 OCT 20	23 02							
1977 OCT 20	02 22 00	HOKKAIDO, JAPAN REGION							MB=4.0(6)	1977 OCT 21	00 57 40.5	1.1 / 30						
1977 OCT 20	03 16 08	POLAND, UPPER SILESIA								1977 OCT 21	01 12 43.6	1.4 / 26						
1977 OCT 20	05 39 29									1977 OCT 21	07 34 48							
1977 OCT 20	05 51 51.5	KURILE ISLANDS							MB=5.5(28)	1977 OCT 21	08 19 18							
1977 OCT 20	07 34 40.3	KURILE ISLANDS REGION							MB=5.0(10)	1977 OCT 21	15 00 17.3							
1977 OCT 20	08 08 55.9	KURILE ISLANDS							MB=5.2(40)	1977 OCT 21	15 02 46							
1977 OCT 20	08 29 15.8	KOMANDORSKY ISLANDS REGION							MB=5.2(33)	1977 OCT 21	19 21 32							
1977 OCT 20	10 04 47									1977 OCT 21	22 33 53.6	1.0 / 17						
1977 OCT 20	10 29 37								MB=5.3(21)	1977 OCT 21	22 40 52							
1977 OCT 20	10 54 48.3	EXPLOSION OF 3.35 TONS GERMAN DEMOCRATIC REPUBLIC							MB=5.4(36)	1977 OCT 22	01 36 12.0	1.9 / 50						
1977 OCT 20	11 12 30									1977 OCT 22	07 00 47							
1977 OCT 20	11 26 00.5	KURILE ISLANDS							MB=4.9(16)	1977 OCT 22	08 25 35							
1977 OCT 20	12 18 06.4	TRACES, EXPLOSION OF 10.0 TONS CZECHOSLOVAKIA								1977 OCT 22	09 36 20							
										1977 OCT 22	10 06 16.4	1.1 / 58						
										1977 OCT 22	11 11 11							
										1977 OCT 22	13 13 20							
										1977 OCT 22	13 45							
										1977 OCT 22	18 08 50							
										1977 OCT 22	18 10 13.2	2.0 / 85						
										1977 OCT 22	18 35							



Year	Month	Day	Time	Location	Station	Magnitude	Depth (km)	Distance (km)	Depth (km)	Depth (km)	Depth (km)	Depth (km)	Depth (km)	Depth (km)	Depth (km)
1977	OCT	22	20 35 30												
1977	OCT	22	21 17 04.6	FIJI ISLANDS REGION	PKP	4.5	0.9	15							
1977	OCT	22	21 31 11												
1977	OCT	22	23 53 00.9	SOUTH OF FIJI ISLANDS	PKP1	5.0	0.6	17							
1977	OCT	23	03 04 43.9	FIJI ISLANDS REGION	PKP1	5.0	1.2	30							
1977	OCT	23	05 48 30	GREECE	EP	4.1		33							
1977	OCT	23	09 56 24	MID-INDIAN RISE	EP	5.0		4							
1977	OCT	23	10 51 21	LOYALTY ISLANDS REGION	PKP1	5.0	1.7	1000	1.5	230	1.1	42			
1977	OCT	23	11 33 56	TONGA ISLANDS	PKP1	5.0		4							
1977	OCT	23	12 57 20	TRACES! KERMADEC ISLANDS	PKP1	4.9		2							
1977	OCT	23	10 08 07	TRACES!	E										
1977	OCT	23	17 25 49		E										
1977	OCT	23	19 32 03.8	NORTH ATLANTIC RIDGE	EP	4.5		7							
1977	OCT	24	00 40 12	KERMADEC ISLANDS	PKP1	5.5		6							
1977	OCT	24	01 57 30	SOUTH OF HONSHU JAPAN	EP	5.0		11							
1977	OCT	24	05 42 51	CRETE	EP	4.4		9							
1977	OCT	24	00 04 10.3	NORTH ATLANTIC RIDGE	EP	4.9		32							
1977	OCT	24	07 20 47	TRACES! ALASKA PENINSULA	EP	4.7		13							
1977	OCT	24	07 21 30		EP										
1977	OCT	24	10 57 28	NORTHERN ITALY	EP										
1977	OCT	24	18 46 19.5	KURIL ISLANDS	EP	5.0		19							
1977	OCT	28	01 27 50	GERMAN DEMOCRATIC REPUBLIC	EP										
1977	OCT	28	02 37 55	TRACES!	EP										
1977	OCT	28	05 52 31.4		EP										
1977	OCT	28	06 47 03	MEXICO-GUATEMALA BORDER REGION	EP	4.8		29							
1977	OCT	28	07 09 44	SHIMAZU ISLAND REGION	EP	5.0		12							
1977	OCT	28	18 08 54	SOUTHERN SIKHANG PROV, CHINA	EP	4.7		5							
1977	OCT	28	18 24 07	PHILIPPINE ISLANDS REGION	EP	NO									
1977	OCT	28	22 07 23.8	NEAR EAST COAST OF HONSHU JAPAN	EP	5.1		10							
1977	OCT	28	22 17 13.5		EP										
1977	OCT	26	02 40 12	FIJI ISLANDS REGION	PKP	4.0		8							
1977	OCT	26	00 55 12	POLAND! UPPER SILESIA	EP										
1977	OCT	26	07 23 24		EP										
1977	OCT	26	07 27 32.6	SOUTH OF FIJI ISLANDS	PKP1	NO									
1977	OCT	26	11 39 57	FIJI ISLANDS REGION	PKP	5.0		8							
1977	OCT	26	14 10 44	OFF EAST COAST OF HONSHU JAPAN	EP	4.0		9							
1977	OCT	26	15 22 50.7	RAT ISLANDS, ALEUTIAN ISLANDS	EP	5.0		07							
1977	OCT	26	17 09 34	IRAN	EP	4.1		25							
1977	OCT	26	17 15 56	TRACES!	EP										
1977	OCT	27	00 29 15.0	SOUTHERN IRAN	EP	4.8		30							
1977	OCT	27	05 39 31	TRACES! TIBET	EP										
1977	OCT	27	07 03 45.5	DODECANESE ISLANDS	EP	4.9		39							
1977	OCT	27	03 55 15		EP										
1977	OCT	27	11 48 01.8	SOUTH OF FIJI ISLANDS	PKP1	5.0		5							
1977	OCT	27	12 26 02	FIJI ISLANDS REGION	PKP	5.1		15							

1977 OCT 27 SOUTH PACIFIC CORDILLERA E (PKIKP) 12 51 08 E 51 28	MB=5,1(5)	D=157,1 DEG AZ=245 58,35N 129,0W 33KM H=13 37 11,8 53,85N 129,3W	(CONT.)		
1977 OCT 27 DODECANESE ISLANDS E (P) 13 27 11	NO MB CUMP:	D=19,2 DEG AZ=141 39,5N 27,8E 33KM H=13 22 41,5 38,5N 27,9E 10KM 13 22 42,6		20 39 54 53 21 17 25	
1977 OCT 27 E 10 36 42				1977 OCT 29 PANAMA E (P) 21 26 03 1,2 / 13	MB=4,8(25)
1977 OCT 27 TRACES E 10 58 32				1977 OCT 30 ALBANIA E (89) 00 37 51 38 51	NO MB CUMP:
1977 OCT 27 FIJI ISLANDS REGION I PKP1 16 12 55 1,4D 1,1 / 23	MB=4,8(3)	D=148,2 DEG AZ=22 20,96N 179,2W 622KM H=17 54 15,9		1977 OCT 30 I P 01 22 00 1,0D 0,8 / 12	
1977 OCT 27 FIJI ISLANDS REGION E (PKP) 22 07 36	MB=4,0(3)	D=148,0 DEG AZ=17 20,16N 176,3W 241KM H=21 48 23,1		1977 OCT 30 FIJI ISLANDS REGION E PKIKP 01 23 45 I PKP1 23 49 2 0,9 / 39 I PKP2 23 53 8 0,9 / 42	MB=5,1(6) MC =4,9
1977 OCT 27 TRACES E 22 21 50				1977 OCT 30 SOUTH OF RUMBAWA ISLAND E (PP) 02 09 05 E LM 09 50 03 00	MB=5,7(18)
1977 OCT 27 WESTERN TURKEY E P 22 47 31 2,0 / 115 E S 47 41 E L 50 50 L 53 L 54	MB=4,7(44)	D=17,0 DEG AZ=136 38,0N 27,9E 24KM H=22 43 32,5 30,0N 28,0E 10KM 22 43 33,4 37,8N 27,8E 22 43 29 DISTANCE 16 DEG		1977 OCT 30 TRACES I PANAMA E P 02 30 33	MB=4,3(2)
1977 OCT 28 WESTERN TURKEY E P 00 45 13	MB=4,0(9)	D=17,0 DEG AZ=136 38,0N 28,0E 12KM H=00 41 11,7 38,0N 28,1E 10KM 00 41 13,9		1977 OCT 30 TONGA ISLANDS I (PKP) 05 37 55 1,7D 1,1 / 22	MB=4,0(5)
1977 OCT 28 TRACES I EXPLOSION (O.V TONS) CZECHOSLOVAKIA I P 00 21 19 I S 00 35 12		D=114 KM AZ=144 50,48N 13,90E		1977 OCT 30 FIJI ISLANDS REGION I PKIKP 00 44 05 1,3 / 23 I PKP1 44 09 3D 1,1 / 200 I PKP2 44 13 17 1,0 / 120 E APKP 46 27 E PKG 47 39	MB=5,0(30) MC =5,3
1977 OCT 28 TRACES E 11 19 43				1977 OCT 30 E 08 32 18	
1977 OCT 28 TAIWAN REGION E P 13 29 27 1,1 / 18	MB=5,1(4)	D=83,6 DEG AZ=62 22,4N 121,4E 25KM H=13 16 58,3 28,5N 121,3E 13 17 06		1977 OCT 30 NEW HEBRIDES ISLANDS E PKP 13 12 38 I APKP 13 05 14 E SKP 16 03	MB=5,0(30)
1977 OCT 28 E PKP 17 53 53 I 53 55 1,0D 1,0 / 23				1977 OCT 30 KERMADEC ISLANDS REGION I PKP1 10 45 55 1,8D 1,2 / 22 E PKP2 46 10	MB=5,1(9)
1977 OCT 28 TRACES E 21 39 55				1977 OCT 30 KERMADEC ISLANDS REGION E PKP1 17 28 10	14,5(3) /
1977 OCT 28 ALBANIA E 23 21 00	NO MB CUMP:	D=11,2 DEG AZ=151 41,3N 20,2E 10KM H=23 17 08,2 41,3N 20,2E 10KM 23 17 11,5		1977 OCT 30 TRACES I KERMADEC ISLANDS REGION E PKP1 17 39 28	MB=4,7(3)
1977 OCT 28 SOUTH OF FIJI ISLANDS I PKP1 23 33 27 1,0D 1,0 / 59 I PKP2 33 37 1,0 / 23 E APKP 35 35	MB=4,8(8) MC =4,9	D=150,7 DEG AZ=25 26,75N 179,8W 502KM H=23 14 33,6		1977 OCT 30 POLAND I UPPER SILESIA E SG 17 46 10	
1977 OCT 29 E 01 19 30				1977 OCT 30 PHILIPPINE ISLANDS REGION E P 21 05 50	MB=5,1(6)
1977 OCT 29 NORTHERN YUGOSLAVIA E (PG) 02 51 19 E (SN) 51 48 E SG 52 10	NO MB CUMP:	D=5,3 DEG AZ=167 40,1N 14,7E 10KM H=02 49 24,4 40,1N 14,8E 10KM 02 49 24,7		1977 OCT 30 KERMADEC ISLANDS REGION E PKP1 21 33 12 E PKP2 33 20	MB=4,0(4)
1977 OCT 29 TWO UNDERGROUND EXPLOSIONS I P(1) 03 14 30 1,9C 0,9 / 98 I P(2) 14 44 1,9C 1,3 / 140 E (PK) 16 17 E S 20 35 E 25 51	MB=5,5(49) MB=5,0(81)	D=40,2 DEG AZ=66 44,8N 79,2E 0KM H=03 06 57,7 50,1N 78,9E 0KM 03 07 02,9		1977 OCT 30 FIJI ISLANDS REGION I PKP 22 01 14 1,6C 0,6 / 16	MB=5,3(8)
1977 OCT 29 TRACES E P 04 29 32				1977 OCT 31 EL SALVADOR E P 01 05 56	MB=5,1(16)
1977 OCT 29 E 06 58 41				1977 OCT 31 NEAR EAST COAST OF KAMCHATKA E P 09 51 46	MB=4,3(3)
1977 OCT 29 NEW HEBRIDES ISLANDS I PKP 10 34 15 1,9D 1,1 / 30	MB=5,1(41)	D=157,8 DEG AZ=39 14,45N 167,3E 184KM H=10 15 12,1 14,55N 166,2E 10 14 51		1977 OCT 31 TONGA ISLANDS I PKP1 13 27 03 1,4C 1,9 / 140 E 27 15	MB=4,8(2)
1977 OCT 29 KURILE ISLANDS I P 10 45 30 1,4 1,1C / 19	MB=4,8(10)	D=76,2 DEG AZ=27 42,1N 153,2E 59KM H=10 33 56,7		1977 OCT 31 TRACES E 13 34 33	NO MB CUMP:
1977 OCT 29 FIJI ISLANDS REGION I PKP1 17 35 37 1,1 / 30 I PKP2 35 42 10	MB=4,8(5)	D=148,3 DEG AZ=20 20,78N 178,0W 538KM H=17 16 52,2		1977 OCT 31 SOUTH OF FIJI ISLANDS I PKP1 22 45 50 1,3 0,8 / 17	
1977 OCT 29 EAST PAPUA NEW GUINEA REGION E (PKP) 20 34 30 E APKP 34 50 E XPP 36 40 (CONT.)	MB=5,9(28)	D=120,9 DEG AZ=37 6,26N 146,6E 106KM H=20 15 45,1 0,05N 146,4E 90KM 20 15 44			

Date	Location	Time	Magnitude	D (DEG)	AZ (DEG)	H (KM)	Other Data
1977 NOV 01	EASTERN USSR	04 04 42.2	1.0	61.7	35	33KM	H=03 54 26.0
1977 NOV 01	TONGA ISLANDS REGION	08 45 14.10	1.0	150.9	15	33KM	H=08 25 22.1
1977 NOV 01	FIJI ISLANDS REGION	21 35 49.20	1.1	148.2	16	248KM	H=21 16 31.3
1977 NOV 01	FIJI ISLANDS REGION	23 01 32.5	1.1	147.1	19	575KM	H=22 42 22
1977 NOV 02	TONGA ISLANDS	01 39 08		143.8	10	30KM	H=01 19 27.9
1977 NOV 02	TRACES	02 09 08					
1977 NOV 02	OFF EAST COAST OF KAMCHATKA	06 42 10		73.5	21	33KM	H=06 30 40.3
1977 NOV 02	EXPLOSION	10 57 09.4					
1977 NOV 02	EASTERN ISLAND CORDILLERA	11 09 35		148.2	253	33KM	H=10 48 51.0
1977 NOV 02	FRG, CENTRAL REGION	14 43 52		4.0	267	25KM	H=14 42 38.8
1977 NOV 02	PERU	15 01 23		96.4	262	48KM	H=14 47 57.2
1977 NOV 02	FIJI ISLANDS REGION	23 55 38.20	1.3	144.7	20	555KM	H=23 37 03.3
1977 NOV 03	POLAND, UPPER SILESIA	01 34 34					
1977 NOV 03	BULGARIA	02 25 48		11.9	136	6KM	H=02 22 54.9
1977 NOV 03	ECUADOR	05 18 01		91.9	270	166KM	H=05 05 09.6
1977 NOV 03	POLAND, UPPER SILESIA	07 45 57					
1977 NOV 03	SOUTHERN YUGOSLAVIA	09 07 41		10.1	146	33KM	H=09 05 15.3
1977 NOV 03	POLAND	12 21 45					
1977 NOV 03	KURILE ISLANDS	12 39 52.90	1.4				
1977 NOV 03	KURILE ISLANDS	16 40 17	1.1				
1977 NOV 03	EASTERN TURKEY	19 51 30					
1977 NOV 04	TONGA ISLANDS REGION	00 28 56	1.1				
1977 NOV 04	POLAND, UPPER SILESIA	04 28 39					
1977 NOV 04	MARIANA ISLANDS	07 49 37		98.6	45	253KM	H=07 35 34.6
1977 NOV 04	ANDREANOF ISLANDS, ALEUTIAN IS.	10 04 46		77.1	6	33KM	H=09 52 55.7
1977 NOV 04	ANDREANOF ISLANDS, ALEUTIAN IS.	10 13 55.5	0.8				
1977 NOV 04	TRACES, EXPLOSION OF 3.0 TONS, CZECHOSLOVAKIA	10 16 43.5		127	170		
1977 NOV 04	NEAR COAST OF GUATEMALA	13 02 25		87.6	289	104KM	H=12 49 47.5
1977 NOV 04	EXPLOSION, CZECHOSLOVAKIA	13 04 23					
1977 NOV 04	EXPLOSION, GERMAN DEMOCRATIC REPUBLIC	13 15 24.8					
1977 NOV 04	ANDREANOF ISLANDS, ALEUTIAN IS.	18 19 23.6	1.1				
1977 NOV 04	BULGARIA	00 21 20		11.9	136	33KM	H=00 18 08.1
1977 NOV 05	MARIANA ISLANDS REGION	01 37 46		101.1	44	39KM	H=01 24 01.0
1977 NOV 05	SOLOMON ISLANDS	06 22 21		131.3	44	70KM	H=06 02 57.6

1977 NOV 05 POLAND, UPPER SILESIA
 E SG 06 33 42
 1977 NOV 05
 E 07 31 35
 1977 NOV 05
 E 08 34 48
 1977 NOV 05 CASPIAN SEA
 I P 13 46 05.10 0.8 / 14
 1977 NOV 05 ANDREANOF ISLANDS, ALEUTIAN IS.
 I P 14 55 54.9 1.0 / 27
 E (PP) 59 01
 E (PPPP) 01 40
 E (S) 08 08
 E SS 11 16
 L 26
 LM 29 T 24 AN 2.5 AE 2 AV 3
 T 20 AN 2.5 AE 2 AV 2.5 MLH =5.6 MLV =5.6
 NO HB COMP. D= 25.8 DEG AZ= 86
 (46.1N) 51.6E 33KM H=13 40 41
 HB=5.3(49) D= 77.3 DEG AZ= 5
 51.5N;175.5W 33KM H=14 44 03.3
 51.9N;175.9W 40KM 14 44 05
 DISTANCE 80 DEG
 1977 NOV 05
 E SG 22 56 30
 57 10
 1977 NOV 06 FRG, CENTRAL REGION
 I PN 01 23 51.3
 I PG 24 05.2
 E SG 24 54
 NO HB COMP. D= 4.0 DEG AZ=267
 50.9N; 6.7E 27KM H=01 22 51.4
 50.9N; 6.8E 1KM 01 22 52.2
 DISTANCE 3.6 DEG
 1977 NOV 06 FRG, CENTRAL REGION
 E SG 01 25 59
 1977 NOV 06 NEAR EAST COAST OF KAMCHATKA
 I P 02 50 52.50 1.3 / 39
 I AP 51 10.3
 E 54 10
 E 54 50
 E 55 32
 E S 56 40
 03 00 07
 HB=5.2(43) D= 71.8 DEG AZ= 20
 53.6N;159.8E 67KM H=02 39 35.4
 54.0N;159.4E 02 39 34
 1977 NOV 06 MID-INDIAN RISE
 E P 03 27 55 1.7 / 27
 HB=4.6(2) D= 80.8 DEG AZ=128
 14.9S; 66.8E 33KM H=03 15 42.0
 15.0S; 67.3E 03 15 36
 1977 NOV 06 ANDREANOF ISLANDS, ALEUTIAN IS.
 I P 07 46 16.80 0.7 / 17
 HB=5.0(36) D= 77.2 DEG AZ= 8
 51.3N;179.8W 33KM H=07 34 25.4
 51.5N;179.9W 07 34 27
 1977 NOV 06
 E 11 39 46
 1977 NOV 06 TRACES
 E 19 44 24
 1977 NOV 06
 E 20 06 16
 1977 NOV 07 FRG, SOUTHWESTERN REGION
 E PN 00 24 13
 I PG 24 23.6
 E SN 24 55
 I SG 25 15.5
 NO HB COMP. D= 4.1 DEG AZ=217
 48.0N; 9.3E 2KM H=00 23 07.2
 47.9N; 9.0E 33KM 00 23 09.5
 DISTANCE 4.0 DEG
 1977 NOV 07 POLAND, UPPER SILESIA
 E SG 02 02 21
 1977 NOV 07
 E 03 05 07
 1977 NOV 07 KURILE ISLANDS
 I P 08 31 20.7 0.9 / 34
 I 31 26.1
 E LM 09 11 54
 HB=4.9(21) D= 76.8 DEG AZ= 27
 46.4N;153.2E 33KM H=08 19 31.1
 47.2N;152.6E 08 19 32
 1977 NOV 07 MARIANA ISLANDS
 I P 08 37 56.40 3.9 / 12
 E 41 00
 E PP 42 03
 HB=5.4(36) D=101.6 DEG AZ= 47
 15.3N;145.0E 256KM H=08 24 32.5
 15.2N;145.4E 220KM 08 24 27
 1977 NOV 07 SOUTHERN NORWAY
 E L 11 53 31
 E 54 00
 D= 9.6 DEG AZ=343
 60.4N; 7.5E H=11 47 36
 1977 NOV 07 TONGA ISLANDS
 E (PKP) 13 41 18
 HB=4.8(4) D=144.5 DEG AZ= 13
 16.3S;174.7W 33KM H=13 21 36.7
 1977 NOV 07
 I P 16 30 12.9
 HB=5.1(2) D=147.8 DEG AZ= 10
 19.4S;172.8W 33KM H=17 35 09.2
 1977 NOV 07 TONGA ISLANDS REGION
 E PKP1 17 54 56
 E APPP 55 07

1977 NOV 07 TRACES
 19 00 44
 1977 NOV 07
 19 23 41
 24 17
 1977 NOV 07 / SOLOMON ISLANDS
 NOV 08 HB=5.7(24) D=126.5 DEG AZ= 48
 7.2S;156.1E 75KM H=22 57 15.8 (U)
 7.1S;156.3E 22 57 11 (M)
 PKP 23 16 11.80 0.8 / 40
 APYP 16 29.2
 PP 17 32
 LM 18 22
 00 18
 1977 NOV 08
 00 21 54
 1977 NOV 08 KERMADEC ISLANDS REGION
 PKP2 03 21 59.4 1.0 / 17
 HB=4.3(3) D=157.0 DEG AZ= 29
 30.3S;179.7W 346KM H=03 02 13.0 (U)
 1977 NOV 08
 03 33 26
 1977 NOV 08 LUZON, PHILIPPINE ISLANDS
 (P) 04 03 37
 HB=5.2(10) D= 93.2 DEG AZ= 66
 12.2N;123.9E 33KM H=03 47 20.3 (U)
 13.2N;123.5E 03 47 27 (M)
 PP 01 05
 PPF 04 25
 LM 06 33
 43 T 16 AN 3 AE 1.5 AV 2
 1977 NOV 08
 11 29 13 1.3 / 15
 1977 NOV 08 TONGA ISLANDS REGION
 PKP1 11 57 36.30 1.4 / 42
 HB=5.1(7) D=147.1 DEG AZ= 10
 18.7S;172.3W 33KM H=11 37 55.4 (U)
 1977 NOV 08 KURILE ISLANDS
 P 15 10 56.30 1.4 / 210
 11 11.7
 11 28.3
 HB=5.5(41) D= 76.2 DEG AZ= 25
 47.4N;154.3E 33KM H=14 50 10.4 (U)
 47.5N;154.2E 14 50 05 (M)
 LM 43
 1977 NOV 08
 20 10 51
 1977 NOV 08 MEDITERRANEAN SEA
 (P) 21 48 42.1 1.5 / 27
 HB=4.4(17) D= 16.6 DEG AZ=173
 34.8N; 15.5E 33KM H=21 44 47.7 (U)
 34.7N; 15.7E 21 44 45 (M)
 1977 NOV 09 KURILE ISLANDS
 P 00 50 57.60 1.3 / 23
 HB=4.7(7) D= 77.4 DEG AZ= 30
 44.5N;149.4E 48KM H=00 30 06.3 (U)
 43.9N;149.4E 00 30 55 (M)
 1977 NOV 09
 01 09 32
 1977 NOV 09 KURILE ISLANDS
 P 08 25 29.90 1.1 / 28
 HB=4.5(7) D= 75.1 DEG AZ= 26
 47.5N;154.3E 25KM H=08 17 43.5 (U)
 47.9N;154.2E 08 15 45 (M)
 1977 NOV 09 NEW HEBRIDES ISLANDS
 PKP 09 04 06 1.3 / 17
 HB=5.1(5) D=139.2 DEG AZ= 40
 15.2S;166.7E 27KM H=08 44 59.7 (U)
 1977 NOV 09 IRAN
 P 11 27 00.8 1.0 / 17
 29 11
 HB=4.9(2) D= 53.1 DEG AZ=100
 36.7N; 55.0E 33KM H=11 20 32.8 (U)
 36.7N; 54.9E 11 20 29 (M)
 1977 NOV 09 NORWEGIAN SEA
 (S) 14 17 59
 20 06
 HB=4.3(6) D= 13.2 DEG AZ=338
 62.2N; 2.3E 33KM H=14 14 45.6 (U)
 62.9N; 2.0E 10KM 14 14 44.4 (M)
 1977 NOV 09 NEW HEBRIDES ISLANDS
 PKP 16 10 27.20 1.0 / 25
 HB=4.9(4) D=144.2 DEG AZ= 39
 20.5S;169.7E 124KM H=15 51 28.0 (U)
 1977 NOV 09 KURILE ISLANDS
 P 21 26 17.30 1.3 / 60
 26 32.1
 HB=5.1(20) D= 76.1 DEG AZ= 25
 47.5N;154.3E 33KM H=21 14 32.0 (U)
 47.7N;154.4E 21 14 32 (M)
 1977 NOV 09 UNDERGROUND EXPLOSION
 >SANDREEP<
 P 22 12 18.20 1.3 / 105
 12 25.0
 15 20.0
 HB=5.7(53) D= 81.3 DEG AZ=321
 17.1N;116.1W 0KM H=22 00 00.1 (U)
 1977 NOV 10 WESTERN TURKEY
 (P) 04 16 28
 HB=4.8(7) D= 16.9 DEG AZ=135
 33.0N; 27.7E 33KM H=04 12 26.3 (U)
 33.0N; 27.9E 10KM 04 12 26.4 (M)
 1977 NOV 10 SOUTH OF FIJI ISLANDS
 PKIKP 09 19 16.9
 HB=5.1(13) D=152.9 DEG AZ= 26
 26.1S;179.9W 476KM H=09 00 21.7 (U)
 DISTANCE 153 DLG
 PKP1 10 25.1 1.8 / 33
 PKP2 21 42
 1977 NOV 10 IRAN
 P 13 59 50
 HB=4.7(11) D= 37.5 DEG AZ= 90
 34.0N; 59.4E 23KM H=13 52 35.3 (U)
 34.3N; 59.4E 10KM 13 52 38.0 (M)



1977 NOV 10 TRACES, EXPLOSION OF 6.2 TONS; CZECHOSLOVAKIA
 I PG 14 00 37.9
 I SG 00 55.4
 1977 NOV 10 TRACES
 E 15 32 44
 1977 NOV 10
 E 21 36 32
 1977 NOV 10 DODECANESE ISLANDS
 E(P) 23 18 22
 1977 NOV 11 TRACES; SOUTH OF FIJI ISLANDS
 E PKF2 00 44 15
 1977 NOV 11
 E 01 22 30
 1977 NOV 11 COSTA RICA
 E P 04 42 09
 1977 NOV 11 EXPLOSION OF 4.4 TONS; CZECHOSLOVAKIA
 E PG 09 29 25
 I SG 29 39.5
 1977 NOV 11 TRACES
 E 15 18 03
 1977 NOV 11 KERNADEC ISLANDS
 E PKF2 15 31 59
 1977 NOV 11 TONGA ISLANDS
 E PKF 18 13 11
 1977 NOV 11 PAPUA NEW GUINEA
 E PKF 22 13 10
 E PPF 17 12
 LM 23 09
 1977 NOV 12 FOX ISLANDS, ALEUTIAN ISLANDS
 E(P) 02 35 25
 1977 NOV 12 KURILE ISLANDS
 I P 03 20 33.6 1.0 / 39
 1977 NOV 12
 E 04 29 51
 1977 NOV 12 FIJI ISLANDS REGION
 I PKF 12 21 21.3 1.0 / 27
 1977 NOV 12
 E 19 19 43
 1977 NOV 12 FIJI ISLANDS REGION
 I PK1KP 19 23 32.8 0.8 / 20
 I PKF1 23 36.8 1.1 / 200
 I PKF2 23 41.2 1.1 / 70
 E APFP 25 36
 1977 NOV 12
 E 22 31 55
 1977 NOV 13 TRACES
 E 00 55 41
 1977 NOV 13 WESTERN POLAND
 E SG 07 08 37
 1977 NOV 13
 E 11 12 30
 1977 NOV 13 PHILIPPINE ISLANDS REGION
 E P 21 25 24
 E 25 42
 E SKS 35 28
 LM 22 09
 " 16 AN 2 AE 1.5 AV 2
 1977 NOV 13
 I P 22 22 37.0 1.2 / 18
 1977 NOV 14 BONIN ISLANDS REGION
 I P 00 49 16.0 1.7 / 37
 1977 NOV 14 FOX ISLANDS, ALEUTIAN ISLANDS
 I P 19 49 46.1 1.1 / 22
 1977 NOV 15 EXPLOSION OF 10.2 TONS; CZECHOSLOVAKIA
 I PG 06 43 23.8
 I SG 43 37.8

D=144 KM AZ=126
 50.54N; 14.65E

MB=4.1(4) D=18.6 DEG AZ=141
 35.8N; 27.4E 33KM H=23 13 57.2
 MB=4.1(2) D=154.5 DEG AZ= 21
 26.9S;176.8W 197KM H=00 24 20.0
 MB=4.5(5) D= 87.3 DEG AZ=282
 9.7N; 84.7W 52KM H=04 29 25.4
 D=116 KM AZ=149
 50.41N; 13.84E
 NO MB COMP. D=149.1 DEG AZ= 12
 20.7S;173.3W 33KM H=17 53 20.4
 MB=5.4(10) D=119.9 DEG AZ= 60
 6.9S;143.6E 33KM H=21 54 20.4
 6.7S;143.6E 21 54 16
 MB=4.2(2) D= 75.4 DEG AZ= 2
 53.6N;170.2W 33KM H=02 23 47.6
 MB=5.0(25) D= 77.5 DEG AZ= 31
 44.0N;148.3E 18KM H=03 16 38.5
 44.2N;148.4E 03 16 41
 MB=5.0(5) D=145.0 DEG AZ= 20
 17.5S;178.9W 561KM H=12 02 46.4
 MB=5.0(22) D=148.1 DEG AZ= 19
 20.5S;177.8W 507KM H=19 04 48.0
 20.4S;178.0W 450KM 19 04 43
 NC =5.3 DISTANCE 148 DEG DEPTH 500 KM
 MLH =5.7 MLV =5.6
 MB=4.8(17) D= 87.5 DEG AZ= 45
 28.7N;139.5E 412KM H=00 37 13.2
 28.8N;139.5E 430KM 00 37 15
 MB=4.9(22) D= 76.6 DEG AZ= 2
 52.4N;170.7W 69KM H=19 29 01.8
 51.7N;170.3W 19 28 54
 D=108 KM AZ=138
 50.58N; 14.02E

1977 NOV 15
 (P) 09 00 15 D 7.0 / 220
 1977 NOV 15 SOUTH OF FIJI ISLANDS
 E PKF1 21 12 34 C MB=4.1(1) D=153.9 DEG AZ= 19
 26.1S;176.2W 313KM H=20 52 57.6 (U)
 1977 NOV 16 EXPLOSION OF 6.95 TONS; GERMAN DEMOCRATIC REPUBLIC
 I PG 10 56 00.6 D= 10 KM AZ=311
 56 28.6 51.37N; 12.89E
 1977 NOV 16 NEAR EAST COAST OF HONSHU, JAPAN
 I P 15 10 45.9 1.3 / 30 MB=5.1(6) D= 81.5 DEG AZ= 41
 AP 11 07 35.7N;140.8E 106KM H=14 58 38.6 (U)
 14 58 28 (M)
 1977 NOV 16 TONGA ISLANDS
 I PKF1 16 21 51.5 MB=4.6(4) D=146.2 DEG AZ= 13
 18.0S;174.8W 255KM H=16 02 38.4 (U)
 1977 NOV 16 SOUTH OF FIJI ISLANDS
 E PKF1 16 46 55 MB=4.5(2) D=153.4 DEG AZ= 19
 25.7S;176.4W 108KM H=16 27 05.5 (U)
 1977 NOV 16 "OKKAIHO, JAPAN" REGION
 I P 19 48 01.9 0.9 / 23 MB=5.1(35) D= 77.2 DEG AZ= 36
 AP 48 21 41.9N;142.3E 69KM H=19 36 14.2 (U)
 48 38 42.4N;142.3E 100KM 19 36 19 (M)
 1977 NOV 16 FIJI ISLANDS REGION
 I PKF 22 00 04.3 0.8 / 19 MB=5.2(12) D=145.3 DEG AZ= 20
 17.8S;178.5W 581KM H=21 41 30.4 (U)
 1977 NOV 17 BULGARIA
 E SS 06 31 33 MB=4.7(3) D= 12.0 DEG AZ=136
 33 43 42.0N; 24.1E 12KM H=06 28 09.1 (U)
 35 05 42.0N; 24.1E 10KM 06 28 10.2 (d)
 1977 NOV 17 EXPLOSION OF 4.0 TONS; CZECHOSLOVAKIA
 I PG 09 00 33.2 D=113 KM AZ=133
 (SG) 00 49 50.61N; 14.17E (C)
 1977 NOV 17 EXPLOSION OF 7.0 TONS; GERMAN DEMOCRATIC REPUBLIC
 I PG 13 00 32.3 D= 25 KM AZ=250
 00 35.8 51.25N; 12.66E
 1977 NOV 17 SUNDIA STRAIT
 E P 17 31 50 MB=5.5(15) D= 95.8 DEG AZ= 92
 6.0S;104.8E 66KM H=17 18 29.0 (U)
 5.7S;104.7E 17 18 26 (M)
 1977 NOV 17 KURILE ISLANDS
 I P 17 32 48.3 1.6 / 150 MB=5.5(50) D= 83.4 DEG AZ= 42
 33.6N;139.9E 112KM H=17 20 32.6 (U)
 33.7N;139.9E 60KM 17 20 27 (M)
 I 32 53.6
 E PP 36 02
 E SKF 42 56
 E SS 48 28
 C 52 46
 LH 18 15
 1977 NOV 17
 I P 23 13 06.2 1.5 / 22
 E 13 20
 1977 NOV 18
 I 03 17 48
 1977 NOV 17 KERNADEC ISLANDS REGION
 I PK1KP 03 13 08 MB=4.9(6) D=155.8 DEG AZ= 21
 E PKF1 18 19 28.2S;176.9W 63KM H=02 58 21.6 (U)
 E PKF2 18 35
 1977 NOV 18
 E(P) 03 41 06
 E 42 36
 1977 NOV 18 TIRET
 I P 05 29 52.1 1.4 / 135 MB=5.7(37) D= 56.5 DEG AZ= 78
 I 29 58.0 2.0 / 540 32.7N; 88.4E 33KM H=05 20 11.3 (U)
 E PP 32 00 32.9N; 88.4E 05 20 08 (M)
 E S 37 47 * 12 AN 4.6 AE 4.5 AV 2.7 MSH =6.3 DISTANCE 56 DEG
 E PPF 30 12
 E 42 3
 (MLH =6.8 MLV =6.8)
 LH 58 * 13 AN 37 AE 40.5 AV 57
 1977 NOV 18 PAKISTAN
 E(P) 06 47 09 MB=4.9(19) D= 44.3 DEG AZ= 97
 E 40 16 30.3N; 66.3E 27KM H=06 39 02.1 (U)
 30.2N; 66.4E 06 38 58 (M)
 1977 NOV 18 SOUTHERN SUHATRA
 I P 10 30 52.0 1.3 / 33 MB=5.5(14) D= 92.7 DEG AZ= 93
 E PP 34 32 4.3S;102.0E 33KM H=10 17 41.0 (U)
 E SKF 35 08 4.1S;101.9E 40KM 10 17 43 (M)
 E S 41 52 DISTANCE 93 DEG
 E 42 12
 E PS 43 20
 LH 11 10 * 18 AN 5 AE 2 AV 2.5 MLH =5.0 MLV =5.8
 1977 NOV 18 EXPLOSION
 I PG 13 24 32.9
 I SG 24 39.0
 E LM 24 43



Date	Time	Region	Station	D (DEG)	AZ (DEG)	H (KM)	ML	MW	Distance (KM)	Other Data
1977 NOV 18	15 13 09.7	FRG. CENTRAL REGION	PKP2	50.7N; 9.4E	256	33KM				
1977 NOV 18	17 33 05	TIET	PKP	32.6N; 88.3E	78	33KM				
1977 NOV 18	21 30 21.80	MURILE ISLANDS	PKP	60.1N; 143.4E	26	33KM				
1977 NOV 18	22 05 07	EASTERN SIBERIA	PKP	32.7N; 88.4E	78	33KM				
1977 NOV 18	23 22 32	"TIE"	PKP	32.5N; 88.6E	78	33KM				
1977 NOV 18	23 27 17	POLAND, UPPER SILESIA	PKP	43.9N; 147.7E	32	70KM				
1977 NOV 19	00 30 05		PKP	62.0N; 143.4E	26	33KM				
1977 NOV 19	00 44 49		PKP	56.5N; 88.4E	78	33KM				
1977 NOV 19	06 22 36.2	FIJI ISLANDS REGION	PKP	145.3N; 178.7W	20	612KM				
1977 NOV 19	07 24 57	MURILE ISLANDS	PKP	43.6N; 147.7E	32	34KM				
1977 NOV 19	08 30 09.1	WESTERN AUSTRIA	PKP	3.9N; 12.9E	181	10KM				
1977 NOV 19	12 00 55	AFGHANISTAN-INDIA BORDER REGION	PKP	43.4N; 71.3E	86	97KM				
1977 NOV 19	17 41 46.3		PKP	36.5N; 71.3E	86	100KM				
1977 NOV 19	20 40 15		PKP	36.6N; 71.3E	86	100KM				
1977 NOV 19	20 41 06	NEW HERRINGS ISLANDS	PKP	141.9N; 168.6E	39	121KM				
1977 NOV 19	21 42 51.5	WESTERN AUSTRIA	PKP	3.7N; 12.7E	183	10KM				
1977 NOV 19	21 52 54	WESTERN AUSTRIA	PKP	47.5N; 12.8E	183	10KM				
1977 NOV 19	22 15 39	ANDROMOR ISLANDS, ALEUTIAN IS.	PKP	77.4N; 174.3W	5	47KM				
1977 NOV 19	23 45 25.5	WESTERN AUSTRIA	PKP	3.6N; 12.8E	182	10KM				
1977 NOV 20	04 10 01	TRACES, POLAND, UPPER SILESIA	PKP	47.7N; 12.8E	182	10KM				
1977 NOV 20	07 11 10		PKP	47.5N; 12.9E	182	6KM				
1977 NOV 20	12 07 05.2	FIJI ISLANDS REGION	PKP	147.6N; 177.8W	19	608KM				
1977 NOV 20	16 09 25.0	RYUKYU ISLANDS	PKP	82.7N; 126.3E	56	145KM				
1977 NOV 21	02 20 43.20	EASTERN SEA OF JAPAN	PKP	75.1N; 138.9E	38	228KM				
1977 NOV 21	03 02 48	GULF OF CALIFORNIA	PKP	42.9N; 138.9E	38	220KM				
1977 NOV 21	03 16		PKP	86.7N; 113.0W	315	33KM				
1977 NOV 21	10 12 31.30	KEPRADEC ISLANDS REGION	PKP	157.9N; 179.9E	31	324KM				
1977 NOV 21	11 52 10.90	MINDANAO, PHILIPPINE ISLANDS	PKP	97.3N; 123.6E	70	601KM				
1977 NOV 21	12 51 15	POLAND, UPPER SILESIA	PKP	72.4N; 160.1E	20	33KM				
1977 NOV 21	14 46 25.2	NEAR EAST COAST OF KAMCHATKA	PKP	5.1N; 8.3E	219	10KM				
1977 NOV 21	19 30 14	SWITZERLAND	PKP	156.2N; 179.0W	27	330KM				
1977 NOV 21	23 24 57.5	KEPRADEC ISLANDS REGION	PKP	146.9N; 177.0W	18	90KM				
1977 NOV 22	08 59 03	FIJI ISLANDS REGION	PKP	150.4N; 174.0W	13	33KM				
1977 NOV 22	11 23 09		PKP	131.4N; 161.1E	44	92KM				
1977 NOV 22	13 30 58	TONGA ISLANDS REGION	PKP	61.9N; 123.3W	327	5KM				
1977 NOV 22	16 15 47.3	SOLOMON ISLANDS	PKP	108.2N; 168.5W	243	13KM				
1977 NOV 22	17 14	NEAR COAST OF NORTHERN CALIF.	PKP	151.4N; 179.9E	26	523KM				
1977 NOV 23	00 10 26		PKP	108.2N; 168.5W	243	13KM				
1977 NOV 23	02 30 57.60	SOUTH OF FIJI ISLANDS	PKP	151.4N; 179.9E	26	523KM				
1977 NOV 23	09 40 51.4	SAN JUAN PROVINCE, ARGENTINA	PKP	108.2N; 168.5W	243	13KM				
1977 NOV 23	13 23 52	SAN JUAN PROVINCE, ARGENTINA	PKP	108.2N; 168.5W	243	13KM				
1977 NOV 23	15 20 21.4	TRACES, EXPLOSION	PKP	108.4N; 167.7W	243	13KM				
1977 NOV 23	16 54 58	SAN JUAN PROVINCE, ARGENTINA	PKP	108.4N; 167.7W	243	13KM				
1977 NOV 23	17 07 07.30	FOX ISLANDS, ALEUTIAN ISLANDS	PKP	76.8N; 171.5W	3	53KM				

1977 NOV 28 E PP 05 58 11	SAN JUAN PROVINCE, ARGENTINA	MD=5.4(17)	D=108.1 DEG 30.8S; 67.9W 31.4S; 68.5W	AZ=243 10KM H=05 39 22.0 05 39 21	1977 DEC 01 PKF1 04 00 20	TONGA ISLANDS REGION	NO MB COMP.	D=151.8 DEG 23.8S;179.3W	AZ= 10 33KM H=03 40 26 (U)
1977 NOV 28 E P LN 06 28 14 47					1977 DEC 01 SG 20 13 34 13 53				
1977 NOV 28 E PP 06 50 20 51 55 56 36 07 33	SAN JUAN PROVINCE, ARGENTINA 2.3 / 80 MLH =5.0 MLV =5.9	MB=5.7(25)	D=108.3 DEG 31.4S; 67.4W 31.8S; 68.1W	AZ=243 16KM H=06 31 29.3 06 31 32	1977 DEC 01 P PP 21 18 53.7C 1.2 / 24 20 33	SOUTHERN IRAN	MB=5.1(16)	D= 40.3 DEG 27.7N; 56.6E 27.9N; 56.5E 27.0N; 56.7E	AZ=109 33KM H=21 11 17.9 (U) 81KM 21 11 26.2 (M) 21 11 08 (M)
1977 NOV 28 E 11 16 25	TRACES				1977 DEC 01 P 23 35 56	SOUTHERN IRAN	MB=5.1(5)	D= 40.3 DEG 27.6N; 56.6E 28.1N; 56.2E 27.3N; 56.8E	AZ=109 33KM H=23 28 17.0 (U) 84KM 23 28 28.8 (M) 23 28 10 (M)
1977 NOV 28 I P 13 17 59.4	ANDRIFANOF ISLANDS, ALEUTIAN IS.	MB=4.6(23)	D= 75.8 DEG 53.0N;176.0W	AZ= 6 232KM H=13 06 37.8	1977 DEC 02 PKF APPP PP PKVP 45 31 LM 05 23	EAST PAPUA NEW GUINEA REGION	MB=5.7(10)	D=119.1 DEG 5.0S;149.0E 4.9S;144.9E	AZ= 98 86KM H=04 13 53.8 (U) 40KM 04 13 52 (M)
1977 NOV 28 E P 23 29 59	TRACES; TAIWAN REGION	MD=4.6(3)	D= 84.3 DEG 21.1N;120.9E	AZ= 63 28KM H=23 17 26.7	1977 DEC 02 PKKS LM 05 23				
1977 NOV 29 I P 00 09 32.2C 1.0 / 38	KURILE ISLANDS REGION	MB=4.9(22)	D= 77.6 DEG 43.8N;148.1E 43.8N;148.0E	AZ= 32 38KM H=23 57 38.7 23 57 38	1977 DEC 02 SG 06 51 25	POLAND, UPPER SILESIA			
1977 NOV 29 E SG 00 20 09	TRACES; POLAND, UPPER SILESIA				1977 DEC 02 P 08 10 53.3		NO MB COMP.	D= 76.8 DEG 44.2N;146.9E	AZ= 32 80KM H=07 59 09.2 (U)
1977 NOV 29 E 09 45 15					1977 DEC 02 P 13 08 37.7C 1.5 / 520 08 54.3 42	OFF EAST COAST OF KAMCHATKA	MB=5.1(5)	D= 72.4 DEG 52.9N;159.7E 53.0N;159.5E	AZ= 20 (15KM)H=12 57 10.7 (U) 70KM 12 57 17 (M)
1977 NOV 29 I SG 19 32 51.4	FRG, SOUTHWESTERN REGION	NO MB COMP.	D= 4.4 DEG 49.5N; 6.8E	AZ=248 0KM H(19 31 12)	1977 DEC 02 AP LM 42				
1977 NOV 29 E PP 20 20 53	GREECE	MD=3.9(5)	D= 14.7 DEG 38.0N; 21.8E	AZ=152 44KM H=20 17 12.3	1977 DEC 02 14 55 36				
1977 NOV 30 E 00 35 41					1977 DEC 02 PKF 23 03 12	LOYALTY ISLANDS REGION	NO MB COMP.	D=145.3 DEG 21.6S;170.0E	AZ= 40 63KM H=22 43 41.3 (U)
1977 NOV 30 E SG 00 59 03 59 11	POLAND, UPPER SILESIA				1977 DEC 03 PKF1 04 29 24.1	TRACES; FIJI ISLANDS REGION	NO MB COMP.	D=148.1 DEG 20.4S;177.3W	AZ= 19 640KM H=04 10 36.8 (U)
1977 NOV 30 I P I PH E 04 14 39.9C 0.6 / 290 16 14.5C 28 49	UNDERGROUND EXPLOSION	MB=5.9(66)	D= 40.5 DEG 50.0N; 78.9E	AZ= 65 0KM H=04 06 57.5	1977 DEC 03 P AP 21 09	SOUTH OF HONSHU, JAPAN	MB=5.2(31)	D= 85.6 DEG 30.3N;138.4E 30.4N;138.4E	AZ= 45 419KM H=05 07 32.1 (U) 430KM 05 07 34 (M)
1977 NOV 30 E P 05 53 49	KURILE ISLANDS	MB=4.8(5)	D= 77.2 DEG 44.5N;148.7E	AZ= 31 77KM H=05 42 01.5	1977 DEC 03 CPP SSCS 45 17 45 39	ALBANIA	MB=5.1(15)	D= 12.1 DEG 40.2N; 19.9E 40.3N; 19.9E 40.0N; 19.7E	AZ=154 27KM H=05 39 29.5 (U) 48KM 05 39 32.7 (M) 05 39 23 (M)
1977 NOV 30 E PK1KP I PKF1 I PKF2 I APVP E 10 34 23 34 27.8 34 33.0 36 40.4 37 30	FIJI ISLANDS REGION	MB=5.5(25) HC =5.5	D=148.1 DEG 20.6S;178.4W 20.5S;178.7W DISTANCE 147.5 DEG DEPTH 570 KM	AZ= 21 550KM H=10 15 43.4 550KM 10 15 45 (M)	1977 DEC 03 P 12 36 50.4D 1.9 / 69 36 56	COSTA RICA	MB=4.8(23)	D= 87.6 DEG 9.3N; 84.7W	AZ=282 59KM H=12 24 06.7 (U)
1977 NOV 30 E P L 12 21 58 13 11	SOUTH OF MARIAIA ISLANDS	MB=5.4(23)	D=102.4 DEG 12.5N;141.5E 12.5N;141.6E	AZ= 51 32KM H=12 08 04.9 12 08 05 (M)	1977 DEC 03 AP 53 55 54 04 54 30.5 14 03 56 04 42 04 30 04 56 17.5 33 37	DOMINICAN REPUBLIC REGION	MB=5.0(10)	D= 70.8 DEG 19.1N; 69.6W	AZ=277 81KM H=12 35 38.2 (U)
1977 NOV 30 E 13 10 48					1977 DEC 03 SKE SCS PS L L LH 14 03 56 04 42 04 30 04 56 17.5 33 37	OFF W. COAST OF NORTH. SUMATERA	MB=5.8(35)	D= 82.8 DEG 3.5N; 95.9E 3.4N; 95.9E	AZ= 93 41KM H=13 41 20.9 (U) 68KM 13 41 22 (M) DISTANCE 80 DEG
1977 NOV 30 I PKF E APVP 22 07 54.8C 1.5 / 100 10 00	FIJI ISLANDS REGION	MB=5.2(3)	D=145.1 DEG 17.7S;179.0W	AZ= 20 539KM H=21 49 18.0	1977 DEC 03 P 12 46 48				
					1977 DEC 03 P 13 53 42.0D 1.5 / 175 53 55 54 04 54 30.5 14 03 56 04 42 04 30 04 56 17.5 33 37	SEA OF JAPAN	MB=4.5(7)	D= 72.7 DEG 41.9N;131.1E	AZ= 44 540KM H=17 06 21.9 (U)
					1977 DEC 03 PKF1 18 19 19.7C 1.1 / 25	TONGA ISLANDS REGION	MB=5.3(4)	D=150.1 DEG 22.0S;174.9W	AZ= 15 33KM H=17 59 31.3 (U)
					1977 DEC 03 P 19 06 38	TRACES			
					1977 DEC 03 P 20 10 21	KURILE ISLANDS	NO MB COMP.	D= 76.8 DEG 46.5N;153.9E	AZ= 27 33KM H=19 58 30 (U)
					1977 DEC 04 03 29 32				
					1977 DEC 04 PKF 04 53 36.7 0.7 / 10	LOYALTY ISLANDS REGION	NO MB COMP.	D=145.1 DEG 21.4S;169.9E	AZ= 40 33KM H=04 34 04.5 (U)
					1977 DEC 04 PK1KP PKF1 06 10 22 10 25.3C 1.5 / 115 14 43 29.3 33.7	SOUTH OF FIJI ISLANDS	MB=5.6(17)	D=151.7 DEG 23.9S;176.1W 23.7S;176.4W	AZ= 18 56KM H=05 50 35.6 (U) 05 50 29 (M)



Date	Time	Region	Station	Depth (km)	Latitude	Longitude	Magnitude	Distance (km)	Azimuth (deg)	Station Azimuth (deg)	Station Distance (km)	Station Depth (km)	Station Magnitude
1977 DEC 04	06 19 54.8	SEA OF OKHOTSK	PKF1	1.0	19 54.8	146.6E	5.1(32)	73.1	30	30	479	11 39 02.1	5.2(18)
1977 DEC 04	11 49 44.40	SEA OF OKHOTSK	PKF1	1.2	11 49 44.40	146.6E	5.2(18)	143.2	11	11	272	11 39 02.1	5.1(2)
1977 DEC 04	11 51 46	SAMOA ISLANDS REGION	PKF1	1.3	11 51 46	174.0W	5.2(18)	146.2	16	16	272	11 32 09.3	5.1(2)
1977 DEC 04	14 42 33.70	FIJI ISLANDS REGION	PKF1	0.9	14 42 33.70	176.5W	5.1(2)	144.2	40	40	102	14 22 49	4.8(2)
1977 DEC 04	15 29 41.5	NEW HEBRIDES ISLANDS	PKF1	1.5	15 29 41.5	169.3E	4.8(2)	64.3	52	52	41	18 39 31.4	4.5(1)
1977 DEC 04	18 52 01	TRACES; RYUKYU ISLANDS REGION	PKF1	1.3	18 52 01	131.2E	4.5(1)	44.5	140	140	33	10 02 57.1	4.9(6)
1977 DEC 05	10 11 10	ETHIOPIA	PKF1	1.0	10 11 10	40.5E	4.9(6)	46.3	139	139	33	10 06 09	4.8(3)
1977 DEC 05	10 14 44	ETHIOPIA	PKF1	1.0	10 14 44	42.1E	4.8(3)	152.0	17	17	33	14 10 16.8	5.5(17)
1977 DEC 05	14 30 09.20	SOUTH OF TONGA ISLANDS	PKF1	1.2	14 30 09.20	175.6W	5.5(17)	151.8	18	18	33	14 13 52.0	5.4(24)
1977 DEC 05	14 33 40	SOUTH OF FIJI ISLANDS	PKF1	1.7	14 33 40	176.0W	5.4(24)	108.2	243	243	32	15 43 27.9	5.4(24)
1977 DEC 05	15 54	SOUTH OF FIJI ISLANDS	PKF1	1.7	15 54	176.5W	5.4(24)	108.2	243	243	32	15 43 25	5.4(24)
1977 DEC 05	16 02 10	SAN JUAN PROVINCE, ARGENTINA	PKF1	1.0	16 02 10	67.7W	5.4(24)	108.2	243	243	32	15 43 25	5.4(24)
1977 DEC 05	22 16 17	SOUTH OF TONGA ISLANDS	PKF1	1.7	22 16 17	175.3W	5.4(24)	152.3	16	16	42	21 56 20	5.4(24)
1977 DEC 06	05 02 52	TRACES	PKF1	1.0	05 02 52	169.9E	5.4(24)	145.6	40	40	33	09 06 54	5.4(24)
1977 DEC 06	06 31 24	TAIWAN	PKF1	1.0	06 31 24	121.7E	4.9(7)	83.2	61	61	45	06 18 59.4	4.9(7)
1977 DEC 06	06 39 50	LOYALTY ISLANDS REGION	PKF1	1.0	06 39 50	121.9E	4.9(7)	83.2	61	61	45	06 19 01	4.9(7)
1977 DEC 06	09 26 30	LOYALTY ISLANDS REGION	PKF1	1.0	09 26 30	169.7E	4.9(7)	145.2	40	40	33	06 20 09	4.9(7)
1977 DEC 06	09 45	LOYALTY ISLANDS REGION	PKF1	1.0	09 45	169.9E	4.9(7)	145.6	40	40	33	09 06 54	4.9(7)
1977 DEC 06	09 59 47	EASTERN TURKEY	PKF1	1.0	09 59 47	169.9E	4.9(7)	145.6	40	40	33	09 06 54	4.9(7)
1977 DEC 06	11 00 22.10	KIRGIZ SSR	PKF1	1.2	11 00 22.10	43.6E	5.2(39)	39.5	82	82	33	10 52 53.5	5.2(39)
1977 DEC 06	13 27 18	SOUTH OF TONGA ISLANDS	PKF1	1.0	13 27 18	175.8W	5.2(39)	152.7	18	18	33	13 07 23.7	5.2(39)
1977 DEC 06	13 42 22	FIJI ISLANDS REGION	PKF1	1.3	13 42 22	178.1W	5.2(39)	145.6	19	19	627	13 23 54.9	5.2(39)
1977 DEC 06	17 23 34	SAN JUAN PROVINCE, ARGENTINA	PKF1	1.0	17 23 34	67.7W	5.2(39)	108.3	243	243	19	17 05 06.4	5.2(39)
1977 DEC 06	18 05	SAN JUAN PROVINCE, ARGENTINA	PKF1	1.0	18 05	67.7W	5.2(39)	108.3	243	243	19	17 05 09	5.2(39)
1977 DEC 06	17 25 43.8	EXPLOSION; CZECHOSLOVAKIA	PKF1	1.0	17 25 43.8	68.1W	5.2(39)	108.3	243	243	19	17 05 09	5.2(39)
1977 DEC 06	18 11 36	POLAND, UPPER SILESIA	PKF1	1.0	18 11 36	68.1W	5.2(39)	108.3	243	243	19	17 05 09	5.2(39)
1977 DEC 06	19 42 50.2	POLAND, UPPER SILESIA	PKF1	1.0	19 42 50.2	68.1W	5.2(39)	108.3	243	243	19	17 05 09	5.2(39)
1977 DEC 07	01 33 52	TONGA ISLANDS REGION	PKF1	1.0	01 33 52	175.2W	5.2(39)	151.6	16	16	33	01 13 56	5.2(39)
1977 DEC 07	06 19 37.50	SOUTH OF TONGA ISLANDS	PKF1	1.4	06 19 37.50	175.3W	5.2(39)	152.0	17	17	33	05 59 44.3	5.2(39)
1977 DEC 07	09 15 54	HARIANA ISLANDS	PKF1	1.0	09 15 54	144.6E	5.4(27)	162.9	48	48	136	08 58 06.7	5.4(27)
1977 DEC 07	13 40 23.0	EXPLOSION OF 7.75 TONS; GERMAN DEMOCRATIC REPUBLIC	PKF1	1.0	13 40 23.0	144.8E	5.4(27)	162.9	48	48	136	08 58 06.7	5.4(27)
1977 DEC 07	19 22 20	NORTHERN ITALY	PKF1	1.0	19 22 20	13.4E	5.0(27)	5.0	177	177	10	19 21 06.6	5.0(27)
1977 DEC 07	22 45 09	SOUTH OF TONGA ISLANDS	PKF1	1.0	22 45 09	175.3W	5.0(27)	152.1	16	16	33	19 24 11.8	5.0(27)
1977 DEC 08	00 44 47.8	CRETE	PKF1	1.9	00 44 47.8	23.4E	4.5(7)	17.8	151	151	62	00 40 43.6	4.5(7)
1977 DEC 08	02 37 47.9	FIJI ISLANDS REGION	PKF1	1.1	02 37 47.9	176.0W	4.4(2)	144.2	15	15	336	02 18 51.2	4.4(2)
1977 DEC 08	03 07 10	SOUTH OF TONGA ISLANDS	PKF1	1.6	03 07 10	175.8W	4.2(1)	152.6	18	18	33	02 47 15.5	4.2(1)
1977 DEC 08	05 13 36.20	SOUTH OF FIJI ISLANDS	PKF1	1.3	05 13 36.20	176.3W	4.3(2)	151.2	19	19	33	04 53 56.1	4.3(2)
1977 DEC 08	06 35 03	SOUTH OF TONGA ISLANDS	PKF1	1.3	06 35 03	175.6W	5.5(15)	152.1	17	17	33	06 15 16.2	5.5(15)
1977 DEC 08	07 50	GREENLAND SEA	PKF1	1.5	07 50	176.3W	5.0(7)	152.1	17	17	33	06 15 13	5.0(7)
1977 DEC 08	09 10 39.30	TONGA ISLANDS	PKF1	1.0	09 10 39.30	173.7W	5.1(10)	146.1	12	12	33	12 14 06.5	5.1(10)
1977 DEC 08	14 07 36.3	SEA OF OKHOTSK	PKF1	1.2	14 07 36.3	150.6E	4.5(10)	72.2	27	27	502	13 57 04.4	4.5(10)
1977 DEC 08	20 08 50	TONGA ISLANDS	PKF1	1.4	20 08 50	175.8W	5.1(10)	146.1	12	12	33	12 14 06.5	5.1(10)
1977 DEC 09	00 35 50	TONGA ISLANDS	PKF1	1.0	00 35 50	173.7W	5.1(10)	146.1	12	12	33	12 14 06.5	5.1(10)
1977 DEC 09	15 21 29.90	SOUTH OF FIJI ISLANDS	PKF1	1.7	15 21 29.90	179.0W	5.1(6)	151.4	17	17	33	05 01 38.1	5.1(6)
1977 DEC 09	11 57 15	EXPLOSION OF 4.2 TONS; GERMAN DEMOCRATIC REPUBLIC	PKF1	1.0	11 57 15	12.6E	4.9(20)	77.5	37	37	70	15 03 14.3	4.9(20)
1977 DEC 09	12 57 18.8	EXPLOSION OF 4.2 TONS; GERMAN DEMOCRATIC REPUBLIC	PKF1	1.0	12 57 18.8	141.9E	4.9(20)	77.5	37	37	70	15 03 15	4.9(20)
1977 DEC 09	15 15 03	HOKKAIDO, JAPAN, REGION	PKF1	1.0	15 15 03	141.9E	4.9(20)	77.5	37	37	70	15 03 15	4.9(20)
1977 DEC 09	15 57 26	WESTERN TURKEY	PKF1	1.2	15 57 26	27.2E	4.6(36)	16.4	137	137	19	15 53 36.7	4.6(36)



Date	Time	Location	Depth (km)	Magnitude	Other Data
1977 DEC 09	17 06 47.70	SOUTH OF FIJI ISLANDS	0.8 / 15	1.0	
1977 DEC 09	21 50 27.13	SOUTH OF TONGA ISLANDS	0.9 / 21	1.0	
1977 DEC 10	00 49 07.14	FIJI ISLANDS REGION	1.2 / 24	1.0	
1977 DEC 10	02 11 34	SOUTH OF TONGA ISLANDS		1.0	
1977 DEC 10	05 53 57.12	SOUTHERN IRAN	1.7 / 76	1.0	
1977 DEC 10	07 54 54			1.0	
1977 DEC 10	12 52 10			1.0	
1977 DEC 10	13 24 00			1.0	
1977 DEC 10	13 29 47.10	FIJI ISLANDS REGION	0.8 / 23	1.0	
1977 DEC 10	15 31 50	SOUTH OF HONSHU, JAPAN	1.3 / 23	1.0	
1977 DEC 10	20 10 39.15	KURILE ISLANDS	1.1 / 20	1.0	
1977 DEC 10	23 23 00.14	KURILE ISLANDS	1.1 / 61	1.0	
1977 DEC 11	14 33 43	NORTHERN ITALY		1.0	
1977 DEC 11	10 34 07.14	VEJIZUELA	1.7 / 130	1.0	
1977 DEC 12	01 08 50.10		0.9 / 20	1.0	
1977 DEC 12	02 50 27.12	TAI-AN	1.4 / 49	1.0	
1977 DEC 12	00 06 39	LOYALTY ISLANDS REGION	1.7 / 105	1.0	
1977 DEC 12	00 57 17.11	TONGA ISLANDS	1.5 / 225	1.0	
1977 DEC 12	14 30 19.19	EXPLOSION OF 413 TONS GERMAN DEMOCRATIC REPUBLIC	30 23.15	1.0	
1977 DEC 12	21 46	SOUTH PACIFIC COROILLERA		1.0	
1977 DEC 13	01 24 40.10	NORTH ATLANTIC OCEAN	2.0 / 500	1.0	
1977 DEC 13	01 41 03	SOUTH OF FIJI ISLANDS	1.0 / 14	1.0	
1977 DEC 13	02 07 20	NORTHERN ITALY		1.0	
1977 DEC 13	03 26 25.13	FIJI ISLANDS REGION	1.3 / 140	1.0	
1977 DEC 13	03 33 29			1.0	
1977 DEC 13	05 18 34.5	KURILE ISLANDS	2.1 / 10	1.0	
1977 DEC 13	06 47 16	TONGA ISLANDS	1.2 / 34	1.0	
1977 DEC 13	09 56	WEST CAROLINE ISLANDS		1.0	
1977 DEC 13	13 23 29.2			1.0	
1977 DEC 13	13 40 55		1.3 / 17	1.0	
1977 DEC 13	14 24 44	CENTRAL ITALY		1.0	
1977 DEC 13	22 13 36	POLAND, UPPER SILESIA		1.0	
1977 DEC 14	00 58 16	KERMADEC ISLANDS REGION		1.0	
1977 DEC 14	01 49 54	NORTHERN ITALY		1.0	
1977 DEC 14	03 13 28.10	SOUTH INDIAN OCEAN	1.2 / 23	1.0	
1977 DEC 14	05 01 19	KERMADEC ISLANDS REGION	2.5 / 80	1.0	
1977 DEC 14	08 13 55			1.0	
1977 DEC 14	09 00 54.00	LEYTE, PHILIPPINE ISLANDS	1.3 / 25	1.0	
1977 DEC 14	09 07 46.1	OFF COAST OF HOKKAIDO, JAPAN	1.1 / 30	1.0	
1977 DEC 14	10 38 06	TRACES, TONGA ISLANDS		1.0	
1977 DEC 14	13 42 18.5	UNDERGROUND EXPLOSION	1.5 / 95	1.0	
1977 DEC 14	19 11 05.50	FIJI ISLANDS REGION	1.3 / 44	1.0	
1977 DEC 14	20 37 29	NORTHERN ITALY		1.0	
1977 DEC 14	21 08 39	NORTHERN ITALY		1.0	
1977 DEC 14	23 38 00.60	KURILE ISLANDS	2.1 / 33	1.0	
1977 DEC 15	00 05 22	POLAND, UPPER SILESIA		1.0	
1977 DEC 15	08 10 17	CRETE		1.0	

1977 DEC 15 TONGA ISLANDS E PKP1 08 55 51 1.9 / 55 E APKP 56 03	MB=4.9(1)	D=850.0 IDEB AZ=13 2177S1273.0W 33KM M=00 30 57.1	1977 DEC 17 FOX ISLANDS, ALEUTIAN ISLANDS E P 11 44 12 E AP 44 23 E 44 54:0 E 45 16	MB=5.0(50)	D=76.8 IDEB AZ=2 5212N1170.1W 44KM M=11 32 24.4 (U) 5179N1170.0W 11 32 15 (M)
1977 DEC 15 KURILE ISLANDS E P 09 14 04 1.3 / 25	MB=4.6(7)	D=76.4 IDEB AZ=26 4710N1153.7E 50KM M=00 08 10.1 4744N1153.3E 80 08 20	1977 DEC 17 TRACES E P 15 05 05		
1977 DEC 15 TONGA ISLANDS E PKP1 11 04 05 C 1.4 / 23 E 04 16	MB=4.2(1)	D=849.0 IDEB AZ=12 2077S1273.7W 135KM M=10 40 20.1	1977 DEC 17 FIJI ISLANDS REGION E PKIKP 16 21 36 2.0 / 45 I PKP1 21 40:9D 1.7 / 185 I PKP2 21 46:4C 1.3 / 75 E APKP 23 59	MB=5.1(15) MC 5.2	D=148.4 IDEB AZ=21 210S1178.8W 602KM M=16 08 00.3 (U) DISTANCE 148 DEG DEPTH 608 KM
1977 DEC 15 CZECHOSLOVAKIA NW OF OLCMOUC E 12 40 32 I PG 40 53:9 I SQ 41 11:2 E 41 14	MB=4.9(18)	D=13.0 IDEB AZ=127 4974N136.7E 0KM M=12 30 40 DISTANCE 330 KM	1977 DEC 17 TONGA ISLANDS REGION I PKP1 16 27 33:4D 1.6 / 38 I APKP 27 59:9	MB=5.1(3)	D=151.6 IDEB AZ=17 2375S1175.8W 115KM M=16 07 50.0 (U)
1977 DEC 15 EASTERN CAUCASUS I P 15 12 57.3 I 13 01:7 1.8 / 79 E L 20 32	MB=4.6(5)	D=23.2 IDEB AZ=98 4322N149.8E 33KM M=15 08 51.1 4355N149.8E 30KM 15 09 52.3 4355N149.3E 15 09 40	1977 DEC 17 FOX ISLANDS, ALEUTIAN ISLANDS I P 17 39 16:0 1.2 / 35 LM 18 14	MB=5.3(50)	D=76.8 IDEB AZ=2 5212N1170.0W 40KM M=17 27 27.5 (U) 5210N1170.1W 17 27 20 (M)
1977 DEC 15 EASTERN CAUCASUS I P 15 28 35.8	MB=5.0(5)	D=23.1 IDEB AZ=97 4316N149.4E 33KM M=15 28 30.7 4305N149.4E 15 28 01	1977 DEC 17 NEAR COAST OF VENEZUELA I P 23 36 49:1C 1.6 / 32 E AP 36 57	MB=4.7(13)	D=74.4 IDEB AZ=268 1078N165.4W 30KM M=23 25 11.9 (U)
1977 DEC 15 SOUTH INDIAN OCEAN E P 16 03 30	MB=4.9(3)	D=81.2 IDEB AZ=105 2955S189.7E 33KM M=15 52 85.3	1977 DEC 18 EASTERN GULF OF ADEN I P 00 06 39:2C E 06 46 2.1 / 69 LM 30	MB=5.0(32)	D=48.9 IDEB AZ=127 1311N150.9E 33KM M=23 57 54.9 (U) 1312N151.8E 23 57 51 (M)
1977 DEC 15 TONGA ISLANDS REGION I PKP1 16 10 53:2C 1.5 / 54 E APKP 11 39	MB=4.8(20)	D=59.0 IDEB AZ=154 4785S134.9E 33KM M=23 20 93.6 4775S135.4E 23 20 55	1977 DEC 18 TRACES, SOUTHERN GREECE E P 00 57 12	NO MB COMP:	D=15.4 IDEB AZ=147 3718N123.4E 120KM M=00 58 46.7 (U) 3817N123.6E 10KM 00 58 42.0 (M)
1977 DEC 15 TANZANIA E(P) 23 30 55 E 33 23 E 35 23	NO MB COMP:	D=9.6 IDEB AZ=159 4610N159.0E 33KM M=00 40 43.4 4579N156.2E 5KM 00 40 40.0	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	MB=5.1(20)	D=70.4 IDEB AZ=19 5513N1160.6E 118KM M=06 59 33.3 (U) 5514N1160.3E 100KM 06 59 33 (M)
1977 DEC 16 NORTHERN YUGOSLAVIA E PN 00 42 08 E PG 42 35 E SB1 43 29 E 43 43 E SQ 43 48	NO MB COMP:	D=77.7 IDEB AZ=33 4312N1146.8E 38KM M=07 18 41.6 4316N1146.7E 07 18 42	1977 DEC 18 SOUTHERN SINKIANG PROV., CHINA I P 16 55 31:0 1.4 / 62 E 55 56 E 57 34 E PPS 17 02 27 E 03 12 E(SS) 05.7 L 12.4 T 18 AN 9 LM 15 T 16 AN 10 AE 7.5 AV 13 MLH 09.9 MLV 26.1 FINAL 18	MB=5.3(52)	D=45.0 IDEB AZ=78 3919N177.3E 33KM M=16 47 17.1 (U) 4010N177.3E 16 47 13 (M) DISTANCE 48 DEG
1977 DEC 16 E 02 58 30	MB=5.4(44)	D=77.7 IDEB AZ=33 4312N1146.8E 38KM M=07 18 41.6 4316N1146.7E 07 18 42	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 16 KURILE ISLANDS I P 07 23 34:8C 2.1 / 80 I AP 23 45:7D	MB=5.3(16)	D=16.3 IDEB AZ=137 3814N127.8E 34KM M=07 37 30.1 3815N127.8E 36KM 07 37 32.3 3816N127.8E 07 37 30	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 16 WESTERN TURKEY E P 07 41 17 1.3 / 37 I 41 21:9 2.1 / 290 E(S) 44 32 L 46.8 T 16 AN 5 AE 7 LM 47.4 T 10 AN 4.5 AE 6.5 AV 3	MLH 5.2 MLV 25.0	D=73.6 IDEB AZ=21 5116N1199.9E 33KM M=09 08 59.7 5117N1199.9E 09-08-55	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 16 OFF EAST COAST OF KAMCHATKA E P 09 20 30 1.7 / 33	MB=4.7(14)	D=827 KM AZ=170 50118N113:30E	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 16 TRACES, EXPLOSION OF 3.5 TONS, CZECHOSLOVAKIA I PG 10 00 09:6 E SQ 00 26 E L 00 44	MB=4.9(4)	D=61.6 IDEB AZ=71 3313N197.8E 33KM M=10 15 27.5 3314N197.7E 10 15 25	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 16 TRACES, TSINGHAI PROVINCE, CHINA E P 10 25 45	NO MB COMP:	D=4.9 IDEB AZ=178 4614N153.8E 10KM M=10 38 21.4 4617N153.8E 10KM 10 38 24.1	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 16 NORTHERN ITALY E SQ 10 36 56 FRIULI	NO MB COMP:	D=81.3 IDEB AZ=40 3616N1141.8E 46KM M=15 18 20.0 3710N1140.8E 40KM 15 18 29	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 16 NEAR EAST COAST OF HONSHU, JAPAN I P 15 22 40:3C 1.3 / 230 I AP 22 51.4 E PP 25 42 E(S) 32 32 LM 16 01	MB=5.6(56)	D=4.5 IDEB AZ=234 4815N17.8E 7KM M=20 28 06.3 4815N17.8E 35KM 20 28 06.3	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 16 FRANCE ALSACE E 20 29 32 E SQ 30 26 E 30 36 E 30 38	NO MB COMP:	D=4.5 IDEB AZ=234 4815N17.8E 7KM M=20 28 06.3 4815N17.8E 35KM 20 28 06.3	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 17 NEW HEBRIDES ISLANDS E PKP 00 12 55	MB=4.4(4)	D=130.1 IDEB AZ=39 1477S1167.4E 167KM M=23 58 47.1 DISTANCE 170 KM	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
1977 DEC 17 GERMAN DEMOCRATIC REPUBLIC I PG 02 35 29:8 I SQ 35 50:7 E L 36 17	NO MB COMP:	D=130.1 IDEB AZ=39 1477S1167.4E 167KM M=23 58 47.1 DISTANCE 170 KM	1977 DEC 18 KAMCHATKA I P 07 08 35:6C 1.5 / 73	NO MB COMP:	
			1977 DEC 19 ANDREANOF ISLANDS, ALEUTIAN IS. E P 11 04 30	MB=5.1(41)	D=77.6 IDEB AZ=6 5112N1176.4W 53KM M=10 52 38.9 (U) 5114N1176.5W 10 52 32 (M)
			1977 DEC 19 EXPLOSION OF 6:15 TONS, GERMAN DEMOCRATIC REPUBLIC I PG 12 58 33:0 I SQ 98 36:2	MB=4.9(9)	D=25 KM AZ=255 51125N112.66E
			1977 DEC 19 OFF EAST COAST OF HONSHU, JAPAN E P 21 02 12	MB=5.4(53)	D=80.0 IDEB AZ=37 3912N1143.9E 33KM M=20 50 03.4 (U) 3615N1148.8E 20-50-06 (M)
			1977 DEC 19 IRAN I P 23 41 50:1C 2.3 / 630 E 42 10 E PP 43 19 E S 47 42 E(SS) 49 49 E SSS 50 46 LM 59 T 16 AN 7 AE 5.5 AV 4.5 MLH 5.7 MLV 25.5	NO MB COMP:	D=4.4 IDEB AZ=184 4619N122.8E 33KM M=01 54 51.8 (U) (A)
			1977 DEC 20 NORTHERN ITALY E SQ 01 57 19 FRIULI	NO MB COMP:	
			1977 DEC 20 NORTHERN ITALY E SQ 01 58 48 FRIULI	NO MB COMP:	
			1977 DEC 20 TADZHIK SSR E P 07 35 15 E PP 36 48	MB=4.9(13)	D=40.1 IDEB AZ=84 3918N109.3E 20KM M=07 27 38.9 (U) 4010N109.3E 07 27 37 (M)
			1977 DEC 20 KURILE ISLANDS I P 09 02 03:0E I 02 04:1C 1.4 / 640 I 02 09	MB=5.8(52)	D=74.7 IDEB AZ=26 4816N1153.8E 140KM M=08 50 38.2 (U) 4910N1152.8E (150KM) 08 50 40 (M)
			1977 DEC 20 SOUTHERN SUMATRA E AP 10 06 56	MB=5.1(10)	D=93.1 IDEB AZ=93 4145S1102.5E 105KM M=09 58 35.6 (U) 4725S1102.5E 09 58 28 (M)
			1977 DEC 20 KERMADEC ISLANDS E PKP2 15 30 31	MB=4.4(1)	D=157.1 IDEB AZ=25 2919S1177.8W 28KM M=15 10 04.2 (U)
			1977 DEC 20 SICILY TYRRHENIAN SEA E P 20 07 15	MB=4.7(23)	D=12.8 IDEB AZ=171 3816N119.8E 193KM M=20 04 16.3 (U) 3816N119.7E 196KM 20 04 18.6 (M)



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1977 DEC 21 VOLCANO ISLANDS REGION 13 34:00 13 54 17 10 24 00 24 39 25 42 30 06 30 50 31 30 39 05 39 22 54 59 FINAL 04 33	2.1 / 500 T 13 AN 2.0 AE 1.8 AV 4.9 3.2 AE 2.2 AV 5.6 4.0 AE 7.8 T 10 AN 36 AE 28 T 10 AN 36 AE 23.5 AV (40)	D=91.8 DEG 25.5N1143.1E 29.7N1142.9E DISTANCE 92 DEG	AZ=44 33KM 50KM	M=6.2(33) MPH =6.17 MPV =6.17 MPPH =6.19 MPPV =6.19 MSH =6.17 MLH =7.11 (MLV =7.11) MB=5.1(5) MB=5.7(45) MB=5.2(16) MB=4.9(3) MB=4.7(5) 11 22 00 13 54 20 54 23:0 54 25 55 25 10 50 57:20 1.3 / 19J 17 22 20 25 04 26 50 27 04 20 51 34 1.1 / 14 21 33 33 04 20 15 20 32 04 52 40 04 57 20:2 1.6 / 53 05 00 47 07 37 13:10 17:12 33	1977 DEC 21 KASHMIR-INDIA BORDER REGION 02 10 50	1977 DEC 21 SAN JUAN PROVINCE, ARGENTINA 04 05 27 06 22	1977 DEC 21 SOUTHEAST OF SHIKOKU, JAPAN 05 06 50 07 01:5	1977 DEC 21 FIJI ISLANDS REGION 05 27 24:50 1.1 / 78 27 30:12	1977 DEC 21 EASTERN CHOCORUS 08 30 14:00 1.3 / 22	1977 DEC 21 EXPLOSION OF 7.5 TONS GERMAN DEMOCRATIC REPUBLIC 13 54 20 54 23:0 54 25 55 25	1977 DEC 21 OFF EAST COAST OF KAMCHATKA 10 50 57:20 1.3 / 19J 17 22	1977 DEC 21 HINDU MOUNTAIN REGION 20 25 04 26 50 27 04	1977 DEC 21 OFF EAST COAST OF KAMCHATKA 20 51 34 1.1 / 14	1977 DEC 21 MOLUCCAN SEA 21 33 33	1977 DEC 22 KERMADEC ISLANDS REGION 04 20 15 20 32	1977 DEC 22 TRACEW BURNIA 04 52 40	1977 DEC 22 EAST CHINA SEA 04 57 20:2 1.6 / 53 05 00 47 07 37 13:10 17:12 33	1977 DEC 22 POLANDI UPPER SILESIA 10 41 34	1977 DEC 22 SOUTH PACIFIC CURJILLANA 11 15 13 15 30	1977 DEC 22 ATLANTIC-INDIAN RISE 13 43 00:10 1.8 / 75 46 33 14 30	1977 DEC 22 NEAR EAST COAST OF KAMCHATKA 14 17 09:40 1.3 / 52	D=49.1 DEG 32.8N1 76.6E 33.7N1 76.2E	AZ=86 33KM	H=02 08 10:10 02 08 17	D=108.5 DEG 31.36N 67.6W 31.95N 67.6W	AZ=243 33KM	H=03 47 32:15 03 47 33	D=82.4 DEG 30.8N132.3E 31.2N131.6E	AZ=49 33KM	H=04 54 31:13 04 54 34	D=145.7 DEG 18.25N178.6W	AZ=20 606KM	H=05 08 34:14	D=25.5 DEG 42.0N1 47.9E 42.0N1 47.7E	AZ=98 33KM	H=06 30 46:13 08 30 49	D=43 KM 51.44N1 12.75E	AZ=310	D=72.5 DEG 52.9N1159.8E 53.0N1159.6E	AZ=20 33KM 50KM	H=16 39 33:10 16 39 35	D=41.9 DEG 30.2N1 68.7E 30.5N1 68.6E	AZ=89 53KM	H=20 17 13:16 20 17 08	D=72.4 DEG 53.0N1160.0E	AZ=20 33KM	H=20 40 10:18	D=105.4 DEG 1.05N126.7E 1.05N126.9E	AZ=72 33KM	H=21 15 01:17 21 14 56	D=154.6 DEG 27.55N179.8W	AZ=25 253KM	H=02 00 41:18	D=06.2 DEG 20.4N1 97.0E 20.9N1 97.1E	AZ=77 27KM	H=04 42 01 04 41 58	D=81.2 DEG 29.6N1127.8E 29.3N1127.7E	AZ=53 33KM	H=04 65 14:17 04 65 11	DISTANCE 81 DEG	D=72.4 DEG 53.0N1159.9E 52.8N1159.8E	AZ=20 33KM 60KM	H=14 05 45:11 14 05 47
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1977 DEC 22 OFF EAST COAST OF KAMCHATKA 19 45 51	1977 DEC 22 TRACEW NORTHERN ITALY 20 49 08	1977 DEC 22 OFF EAST COAST OF HONSHU, JAPAN 22 30 07:8 1.5 / 78 30 17:9 32 35 23 09	1977 DEC 22 FIJI ISLANDS REGION 23 15 00:10 0.9 / 18	1977 DEC 23 TRACEW BLACK SEA 07 35 19	1977 DEC 23 JAN MAYEN ISLAND REGION 11 20 34 20 39:3 1.8 / 109 24 40 29	1977 DEC 23 FIJI ISLANDS REGION 14 10 21	1977 DEC 23 TONGA ISLANDS REGION 18 25 44:6D 1.2 / 26	1977 DEC 23 OFF EAST COAST OF HONSHU, JAPAN 21 14 14:5 14 16:9C 1.2 / 148 14 34 15 21 17 18 19 16 24 20 33	1977 DEC 23 OFF EAST COAST OF HONSHU, JAPAN 21 21 30:20 1.0 / 78 24 22 24 44	1977 DEC 23 OFF EAST COAST OF HONSHU, JAPAN 21 26 52:8D 1.4 / 90 26 49:3C 29 30 32 18 36 30	1977 DEC 23 MARIANA ISLANDS 22 14 47 18 04 18 48	1977 DEC 23 OFF EAST COAST OF HONSHU, JAPAN 22 22 44:00 1.2 / 47 22 53.5 23 14	1977 DEC 23 OFF EAST COAST OF HONSHU, JAPAN 23 19 53:3D 1.2 / 32 53	1977 DEC 24 TRACEW FIJI ISLANDS REGION 03 27 48	1977 DEC 24 TRACEW 07 29 18	1977 DEC 24 07 37 41:8	1977 DEC 24 SOUTH OF FIJI ISLANDS 16 08 27:4 1.3 / 25	1977 DEC 24 17 26 03	1977 DEC 25 TYRRHENIAN SEA 02 13 40:5D 0.9 / 23	1977 DEC 25 LOYALTY ISLANDS REGION 04 44 58:7C 1.9 / 130 45 26	1977 DEC 25 BANDA SEA 08 41 46 42 27
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NO MB COMP. D=73.2 DEG AZ=18 32:9N1163.1E 33KM M=19 34 02:2 (1)	NO MB COMP. D=5.0 DEG AZ=201 46:6N1 10.4E 33KM M=20 46 28:8 (U) 46:6N1 10.9E 10KM 20 46 28:1 (B)	MB=5.3(30) D=80.0 DEG AZ=37 39:1N1143.2E 23KM M=22 17 59:9 (U) 39:5N1143.1E 22 18 02 (M)	NO MB COMP. D=147.5 DEG AZ=18 19:85N1177.3W 374KM M=22 58 16:1 (1)	MB=4.4(3) D=14.7 DEG AZ=109 44:8N1 32.8E 10KM M=07 31 44:2 (U) 44:8N1 32.8E 07 31 42 (M)	MB=4.8(26) D=21.6 DEG AZ=349 72:0N1 0.5W 10KM M=11 15 44:0 (U) 72:2N1 0.1W 10KM 11 15 44:8 (B) 72:0N1 0.2E 11 15 47 (M)	MB=4.4(2) D=146.7 DEG AZ=18 19:05N1177.6W 585KM M=13 51 44:6 (U)	NO MB COMP. D=150.6 DEG AZ=17 22:7S1175.9W 186KM M=18 06 13 (1)	MB=5.6(43) D=80.0 DEG AZ=37 39:1N1143.2E 19KM M=21 02 07:5 (U) 39:6N1142.9E 21 02 12 (M) DISTANCE 80 DEG	MB=5.4(27) D=80.0 DEG AZ=37 39:1N1143.1E 23KM M=21 09 21:7 (U) 39:9N1142.9E 21 09 27 (M)	MB=5.4(32) D=79.9 DEG AZ=37 39:1N1143.0E 41KM M=21 14 26:7 (U) 39:5N1143.0E 21 14 27 (M) DISTANCE 78 DEG	MB=5.3(34) D=99.3 DEG AZ=45 18:2N1145.6E 604KM M=22 02 06:1 (U) 18:3N1145.7E 600KM 22 02 06 (M)	MB=5.1(26) D=80.2 DEG AZ=37 39:0N1143.4E 32KM M=22 10 36:4 (U) 39:0N1143.1E 22 10 37 (M)	MB=5.0(14) D=80.1 DEG AZ=37 39:1N1143.5E 14KM M=23 07 22:8 (U) 39:5N1143.1E 23 07 27 (M)	NO MB COMP. D=148.8 DEG AZ=23 21:6S1175.6W 616KM M=03 09 11 (1)	MB=5.2(3) D=152.7 DEG AZ=18 24:9S1176.8W 33KM M=15 48 32:2 (U) 24:3S1175.8W 15 48 35 (M)	MB=4.5(21) D=10.9 DEG AZ=180 40:4N1 12.9E 482KM M=02 11 11:3 (U) 40:4N1 13.9E 489KM 02 11 12:5 (B)	MB=5.0(5) D=146.1 DEG AZ=39 22:0S1170.9E 76KM M=04 25 27:7 (U)	MB=5.4(14) D=11.6 DEG AZ=74 7:3S1128.7E 106KM M=08 28 22:8 (U) 7:0S1128.7E 120KM 08 28 26 (M)
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1977 DEC 25 AFGHANISTAN-USSR BORDER REGION
 I P 16 26 42:30 2.1 / 30
 E PP 28 23 T 16 AN 0.5 AE 1.5 AV 1.5
 LM 47

1977 DEC 25 OFF EAST COAST OF HONSHU, JAPAN
 I P 18 32 31:0 1.1 / 27
 E 33 10

1977 DEC 25 TAIWAN
 E P 22 46 06
 LM 23 26

1977 DEC 26 SOUTH OF TONGA ISLANDS
 E PKP1 01 17 01 1.1 / 28
 E 17 22

1977 DEC 26 UNDERGROUND EXPLOSION
 I P 04 10 37:50 0.8 / 20

1977 DEC 26 MOLUCCA PASSAGE
 E (AP) 06 59 12
 E PP 07 03 03

1977 DEC 26 TRACES I NEAR ST. COAST OF HONSHU, JAPAN
 E P 09 05 16

1977 DEC 26 LUZON, PHILIPPINE ISLANDS
 E P 09 52 29 1.6 / 28
 E 52 37
 E PP 56 00
 LM 10 44

1977 DEC 27 KERMADEC ISLANDS REGION
 E PKP1 01 48 12
 I PKP2 48 29:60 1.5 / 20
 E APKP1 48 43

1977 DEC 27 SOUTH OF HONSHU, JAPAN
 I P 06 54 42:00 0.8 / 19
 E AP 56 39
 E 57 51

1977 DEC 27
 E 07 17 49

1977 DEC 27 FIJI ISLANDS REGION
 I PKP 11 56 57:20 0.9 / 260
 E 57 14
 E APKP 59 09
 E SKP 12 00 12

1977 DEC 27 NEAR EAST COAST OF KAMCHATKA
 E P 12 42 20 1.3 / 17

1977 DEC 27 SOUTHERN ALASKA
 I P 13 20 33:14 1.6 / 41
 I AP 21 15:20 1.6 / 67

1977 DEC 27
 E 15 49 34

1977 DEC 27 FIJI ISLANDS REGION
 I PKP1 13-03 43:00 1.2 / 29

1977 DEC 27 TRACES
 E 17 28 47

1977 DEC 27
 E 19 20 51

1977 DEC 28 RED SEA
 I P(1) 02 53 15:00 2.2 / 410
 I P(2) 53 21 1.6 / 1000
 I 53 33
 E PP(1) 54 51
 E PP(2) 54 58 T 16 AN 10.0 AE 8.0 AV 12.6
 E 55 11
 E S(1) 59 14
 E S(2) 59 28 T 16 AN 36 AE 22 AV 12
 E SSS 03 02.6 T 15 AN 27 AE 19 AV 20
 L 14 T 16 AN 34 AE 18.5 AV 14
 LM 18
 FINAL 06

1977 DEC 28
 E 03 19 18

1977 DEC 28
 E 03 22 04

1977 DEC 28
 E 03 44 51

1977 DEC 28 NORWEGIAN SEA
 E P 11 18 29 1.8 / 46

MB=2.3(22) D= 41.8 IDEG AZ= 04
 3899N 78.0E 33KM M=16 18 30:7
 3908N 78.7E 16 18 30

MB=2.0(22) D= 80.1 IDEG AZ= 37
 3921N 124.3E 38KM M=20 28 21:4
 3906N 124.0E 18 28 27

MB=2.2(20) D= 82.8 IDEG AZ= 61
 2492N 122.9E 40KM M=22 38 40:1
 2495N 122.8E 22 38 49

MB=4.6(3) D= 132.9 IDEG AZ= 18
 2468N 125.0W 33KM M=00 50 07:4

MB=4.9(34) D= 40.1 IDEG AZ= 66
 4999N 78.1E 0KM M=04 08 57:7

MB=2.5(12) D= 102.7 IDEG AZ= 70
 215N 126.0E 36KM M=06 49 32:4
 200N 126.0E 50KM 06 49 35

MB=4.7(8) D= 82.4 IDEG AZ= 44
 3309N 127.2E 344KM M=08 58 31:1

MB=2.3(10) D= 91.8 IDEG AZ= 65
 1477N 123.8E 33KM M=09 30 26:1
 1478N 123.8E 09 30 26

MB=4.4(1) D= 156.8 IDEG AZ= 21
 2915N 126.2W 95KM M=01 20 24:7

MB=4.9(17) D= 84.8 IDEG AZ= 46
 3077N 127.3E 471KM M=06 42 59:2
 3095N 127.0E 450KM 06 42 56
 DEPTH 820 KM

MB=2.3(25) D= 145.5 IDEG AZ= 20
 1808N 128.0W 955KM M=11 38 21:3
 1778N 127.1W 11 38 22

74.6(3) D= 71.3 IDEG AZ= 19
 5476N 126.8E 33KM M=12 38 03:5

MB=2.1(34) D= 68.1 IDEG AZ= 353
 0074N 153.7W 175KM M=15 08 51:0
 9979N 153.4W 140KM 15 08 54

MB=4.5(3) D= 144.6 IDEG AZ= 19
 0000N 170.4W 800KM M=16 45 06:7

MB=2.9(135) D= 40.8 IDEG AZ= 138
 3677N 40.3E 33KM M=02 45 36:7
 3674N 40.3E 30KM 02 45 33:7
 3676N 40.3E 02 45 36
 DISTANCE 40 DEG

MPV =6.3
 MPPH =6.5 MPPV =6.4
 MSH =9.0
 MLH =8.4 MLV =6.3

1977 DEC 28 TONGA ISLANDS REGION
 I PKP1 11 39 04:50 1.1 / 32
 E PKP2 39 18

1977 DEC 28 ICELAND
 I P 20 37 21:70 1.6 / 265
 T 8 AN 1.9 AE 1.9 AV 2.7
 37 28
 37 38
 37 46 T 7 AN 6.0 AE 3.7 AV(2)
 41 18 T 16 AN 5.5 AE 5 AV 6
 46

1977 DEC 28
 E 20 54 44

1977 DEC 28
 E 20 57 16

1977 DEC 29 POLAND, UPPER SILESIA
 E 01 01 45

1977 DEC 29 MINDANAO, PHILIPPINE ISLANDS
 E P 01 50 23

1977 DEC 29
 E 07 47 32

1977 DEC 29 POLAND, UPPER SILESIA
 E SG 16 11 41

1977 DEC 29 GREECE
 E (P) 16 56 29 1.4 / 40
 E S 17 01 04
 E 01 12
 E LM 02 24 T 9 AN 2.5 AE 2.5 AV 4
 MLH =4.9

1977 DEC 29
 E 18 33 40

1977 DEC 29 RONIN ISLANDS REGION
 I P 19 57 17:00 1.2 / 33
 E AP 59 14
 E (PP) 20 01 05
 E SKS 06 52
 E S 07 06
 E 07 31
 E 07 56

1977 DEC 29
 E 22 28 31

1977 DEC 29 TRACES
 E 22 40 16

1977 DEC 30 FOX ISLANDS, ALEUTIAN ISLANDS
 E P 09 14 34

1977 DEC 30 WESTERN POLAND
 I PN 13 08 11.2
 I PQ 08 13.9
 E SG 08 40
 I 08 44.6

1977 DEC 30
 E 17 31 57

1977 DEC 30 SOUTHERN ITALY TYRRHENIAN SEA
 I P 17 37 47:00 1.3 / 1800 1.9 / 1600 1.6 / 310
 T 5 AN 6.8 AE 1.7 AV 7.7
 I 37 51.3
 E YP 37 54
 E 38 40
 T 39 07
 E S 39 15
 I 39 52
 E SS 40 01.3
 E 40 15
 E PDP 42 27
 E (SCP) 43 20
 E SCS 45 57
 49 52

1977 DEC 30
 E 17 51 02
 E 54 06

1977 DEC 30 SOUTHERN ITALY TYRRHENIAN SEA
 I P 18 11 29:40 1.4 / 40

MB=4.5(3) D= 151.8 IDEG AZ= 16
 2378S 175.4W 50KM M=11 19 14:0 (U)

MB=2.0(29) D= 20.6 IDEG AZ= 322
 6476N 17.3W 30KM M=20 32 40:0 (U)
 6477N 18.1W 30KM 20 32 40:1 (B)
 6478N 18.9W 40KM 20 32 46 (M)
 DISTANCE 22 DEG

MPH =9.7 MPV =5.6
 MSH =9.9
 MLH =8.0 MLV =5.2

MB=2.5(8) D= 97.4 IDEG AZ= 67
 875N 126.0E 52KM M=01 36 54:0 (U)
 877N 126.1E 01 36 47 (M)

MB=4.7(34) D= 14.5 IDEG AZ= 149
 38:4N 22.3E 18KM M=16 52 56:7 (U)
 38:6N 22.4E 10KM 16 52 59:9 (B)
 38:1N 22.5E 16 52 53 (M)

MLH =4.9

MB=2.2(55) D= 87.2 IDEG AZ= 46
 28:5N 138.4E 529KM M=19 45 27:4 (U)
 28:7N 138.4E 930KM 19 45 28 (M)

NO MB COMP. D= 1.9 IDEG AZ= 104
 (5078N) 15.9E 0KM M=13 07 38 (1)
 DISTANCE 220 KM

MB=2.0(26) D= 76.9 IDEG AZ= 2
 52:1N 169.6W 38KM M=09 02 44:1 (U)
 51:6N 169.5W 09 02 36 (M)

MB=2.6(69) D= 11.4 IDEG AZ= 171
 40:0N 15.4E 283KM M=17 35 08:9 (U)
 40:0N 15.4E 288KM 17 35 10:5 (B)
 39:6N 15.1E (270KM) 17 35 03 (M)
 DISTANCE 115 DEG INTERMEDIATE QUAKE

MB=4.4(35) D= 11.4 IDEG AZ= 171
 40:0N 15.4E 295KM M=18 00 51:3 (U)
 40:1N 15.4E 294KM 18 00 53:5 (B)

1977 DEC 30	FIJI ISLANDS REGION	Mb=2.0(13)	D=145.7 DEG AZ= 19 1871S 178.3W 628KM H=20 08 32.2 (U) 1871S 178.0W 20 07 29 (M)
I PKIP	20 27 02		
I PKP1	27 04.2E 0.9 / 68		
1977 DEC 30	PAKISTAN	Mb=4.0(16)	D= 47.2 DEG AZ= 96 29:0N 69.5E 17KM H=23 22 39.3 (U) 29:3N 69.4E 23 22 43 (M)
E AP	23 31 34		
1977 DEC 31	TRACES		
F	02 40 09		
1977 DEC 31	SOUTHERN SINKIANG PROV., CHINA	Mb=4.9(18)	D= 53.8 DEG AZ= 70 39:2N 91.1E 3KM H=03 24 38.6 (U) 38:9N 91.1E 03 24 41 (M)
E P	03 34 05		
E	34 33		
1977 DEC 31	SOUTHERN PERU	Mb=5.9(56)	D= 98.5 DEG AZ=256 15:35S 71.7W 158KM H=07 58 18.0 (U) 15:55S 71.6W (85KM) 07 58 08 (M) DE-T-100 KM
I P	08 06 40.2 2.0 / 200		
E AP	07 19		
E	09 52		
E PP	10 39		
E SKS	17 08		
E(SKS)	18 20		
E SS	24 53		
L	49 T 17 AE 2 AV 2		
1977 DEC 31	TRACES: ROMIN ISLANDS REGION	Mb=4.0(14)	D= 88.2 DEG AZ= 45 28:0N 135.7E 424KM H=08 17 25.5 (U)
E P	08 29 30		
1977 DEC 31	LOYALTY ISLANDS REGION	Mb=4.1(1)	D=145.8 DEG AZ= 40 22:1S 105.9E 33KM H=09 50 30.2 (U)
E PKP	10 10 07		
1977 DEC 31	LOYALTY ISLANDS REGION	Mb=4.4(1)	D=145.8 DEG AZ= 40 22:1S 105.9E 45KM H=10 58 20.9 (U)
I PKP	11 12 56.6C 1.6 / 76		
1977 DEC 31	MINDANAU, PHILIPPINE ISLANDS	Mb=2.5(14)	D= 97.3 DEG AZ= 67 8:6N 126.0E 47KM H=11 40 40.5 (U) 8:7N 126.0E 11 40 40 (M)
I P	11 54 10.0C		
1977 DEC 31	POLAND, UPPER SILESIA	NO MB COMPUT	D= 4.5 DEG AZ= 78 (52:0N) 20.2E 81KM H=12 09 35.3 (U)
E PJ	12 11 09		
E SJ	11 57		

April 1980

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