SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT. UNIMAK ISLAND REGION, 16 MAY 1975

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Teledyne Geotech

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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Unimak Island Region, 16 May 1975

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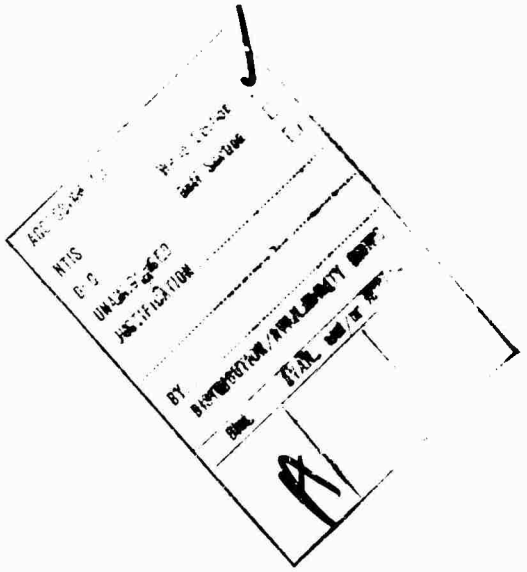

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SDCS EVENT REPORT NO. 46

Unimak Island Region, 16 May 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	m_b	M_s
NORSAR	08:08:29.8	07:57:58	55 N	162 W	5.3	N/A
LASA	08:04:51.4	07:57:53	54.3N	163.7W	5.0	N/A
Hagfors	08:08:35.2	07:57:11	48 N	171 W	6.2	5.3

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

07:57:44.2	53.7N	163.7W	4.8	4.6

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at WH2YK, RK-ON, FN-WV, HN-ME, LASA and NORSAR. CPSO short-period data were not recoverable from the analog tape. Horizontal SP channels at WH2YK, RK-ON and HN-ME were rotated. Horizontal SP channels at FN-WV were not rotated due to unknown instrument orientation.*

Long-period signals were recorded at WH2YK, RK-ON, FN-WV, HN-ME, ALPA, LASA and NORSAR. CPSO long-period data were not recoverable from the analog tape. The operating gains of the LP vertical channels at HN-ME and RK-ON were questionable because the instruments were not responding properly. Horizontal LP channels at RK-ON were rotated. Horizontal LP channels at HN-ME were not rotated because of unknown gain of the LP radial channel. Signal clipping at WH2YK prevented rotation of the horizontal LP channels. Horizontal LP channels at FN-WV were not rotated due to unknown instrument orientation.* Validity of the ALPA, LASA and NORSAR vertical beams is questionable and horizontal beams were not included because of program recovery problems.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.

* Due to operational problems the instrument hole lock was repositioned and the known orientation lost. Situation corrected 24 May 75 when the instrument was moved to a new borehole.

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION SHORT PERIOD	LONG-PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

HYPOCENTER DETERMINATION

INPUT FOR EVENT 16 MAY 75
07:57:53.0 54.300N 163.700W 0KM.

STA.	ARRIVAL	RESIDUALS CALC	RESIDUALS REST	DIST. REST	AZ. REST
WH2YK	08 01 41.2	-0.1	-0.0	17.0	54.0
IAC	08 04 51.4	0.3	0.6	36.6	77.0
BK-CN	08 05 31.2	0.5	0.2	41.4	64.3
FN-WV	08 07 29.3	-0.6	-0.6	56.9	68.6
HN-HE	08 07 33.7	-0.1	-0.5	57.5	55.0
NAC	08 08 29.8	0.1	0.3	65.8	2.9

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
07:57:57.2	54.115N	163.115W	77. CALC	0.4	4	6
07:57:44.2	53.656N	163.697W	0. REST	0.5	3	6

CALC

```
    0 . 1
  0   .   1
0    0. 1   3
. . . . . . .
0    0. 0   0
  0   .   0
    0 . 0
```

REST

```
    0 . 1
  0   .   1
0    0. 1   3
. . . . . . .
0    0. 0   0
  0   .   0
    0 . 0
```

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.39
MAJOR 80.2KM. MINOR 49.8KM. AZ= 11 AREA= 12563 SQ.KM. REST

DATA SUMMARY

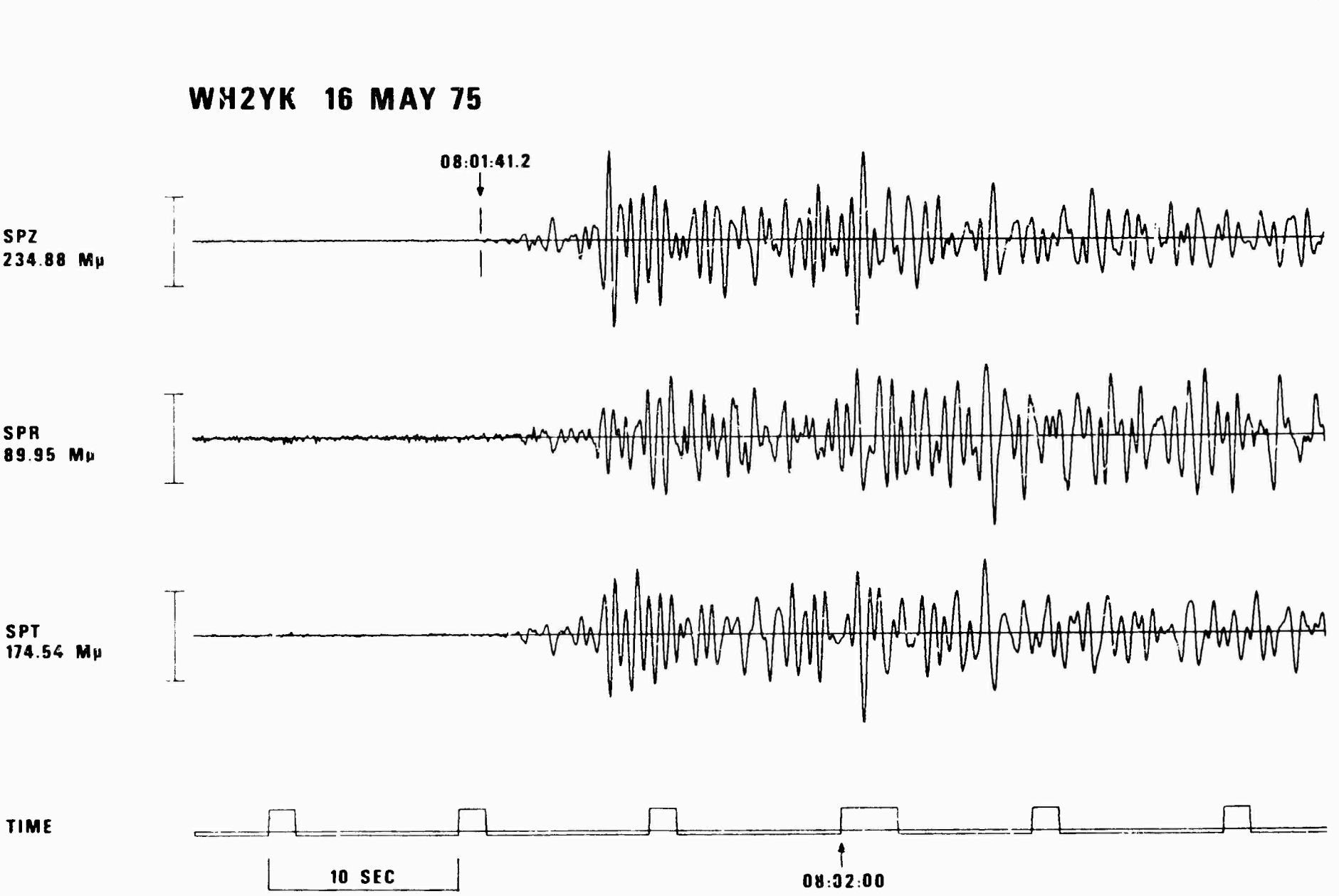
INPUT FOR EVENT 16 MAY 75
07:57:53.0 54.300N 163.700W 0KM.

STA.	PHASE	ARRIVAL TIME	INST	PER	A/T	MAGNITUDE MB	MS	DIP	DIST
AIPA	LR	08 08 54.0	LPZ	20.0	39.		3.86		14.1
WH2YKM	EP	08 04 41.2	SPZ	0.6	279.	5.05			17.0
LAC	EP	08 04 51.4	AB	0.9	35.	4.79			36.6
LAC	LR	08 17 57.0	LPZ	23.0	148.		4.85		36.6
RK-ON	EP	08 05 31.2	SPZ	0.5	19.	4.48			41.4
RK-CN	E	08 17 00.0	LPR	24.0	303.				
FN-WV	EP	08 07 29.3	SPZ	0.8	19.	4.78			56.9
FN-WV	LQ	08 28 54.0	LPI	20.0	181.				
FN-WV	LR	08 33 03.0	LPZ	22.0	143.		5.03		56.9
HN-ME	EP	08 07 33.7	SPZ	1.0	12.	4.58			57.5
HN-ME	E	08 27 07.0	LPT	26.0	39.				
NAC	EP	08 08 29.8	AB	0.6	44.	5.34			65.8
NAC	LR	08 36 22.0	LPZ	22.0	54.		4.67		65.8

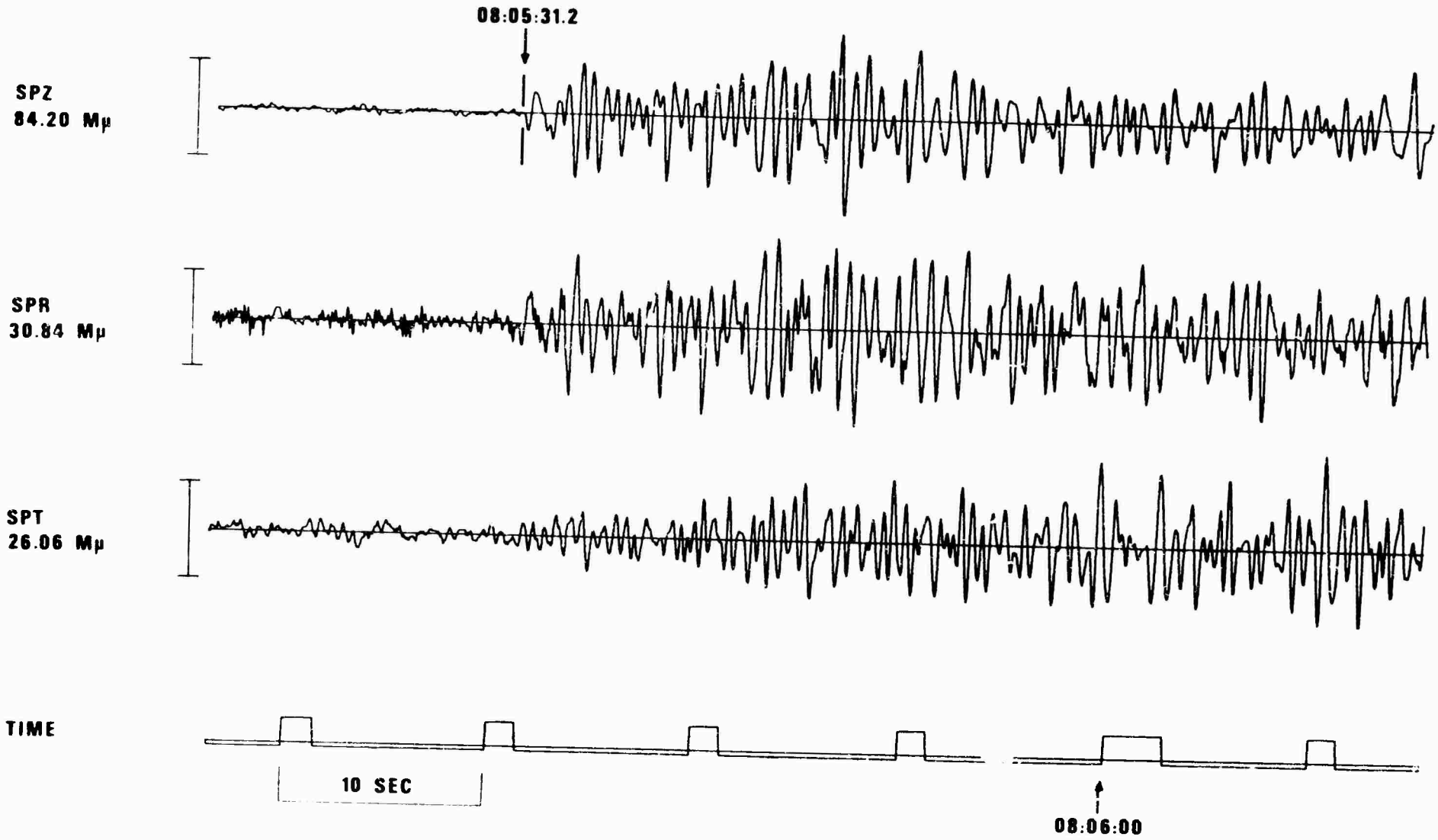
ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPMAG	LPSDV	LPSTA
07:57:57.2	54.115N	163.115W	77. CALC	4.79	0.24	5	4.60	0.5	4
07:57:44.2	53.656N	163.697W	0. REST	4.79	0.33	5	4.60	0.5	4

WH2YK NOT USED IN CALC RUN SP AVG. MAG.
WH2YK NOT USED IN REST RUN SP AVG. MAG.

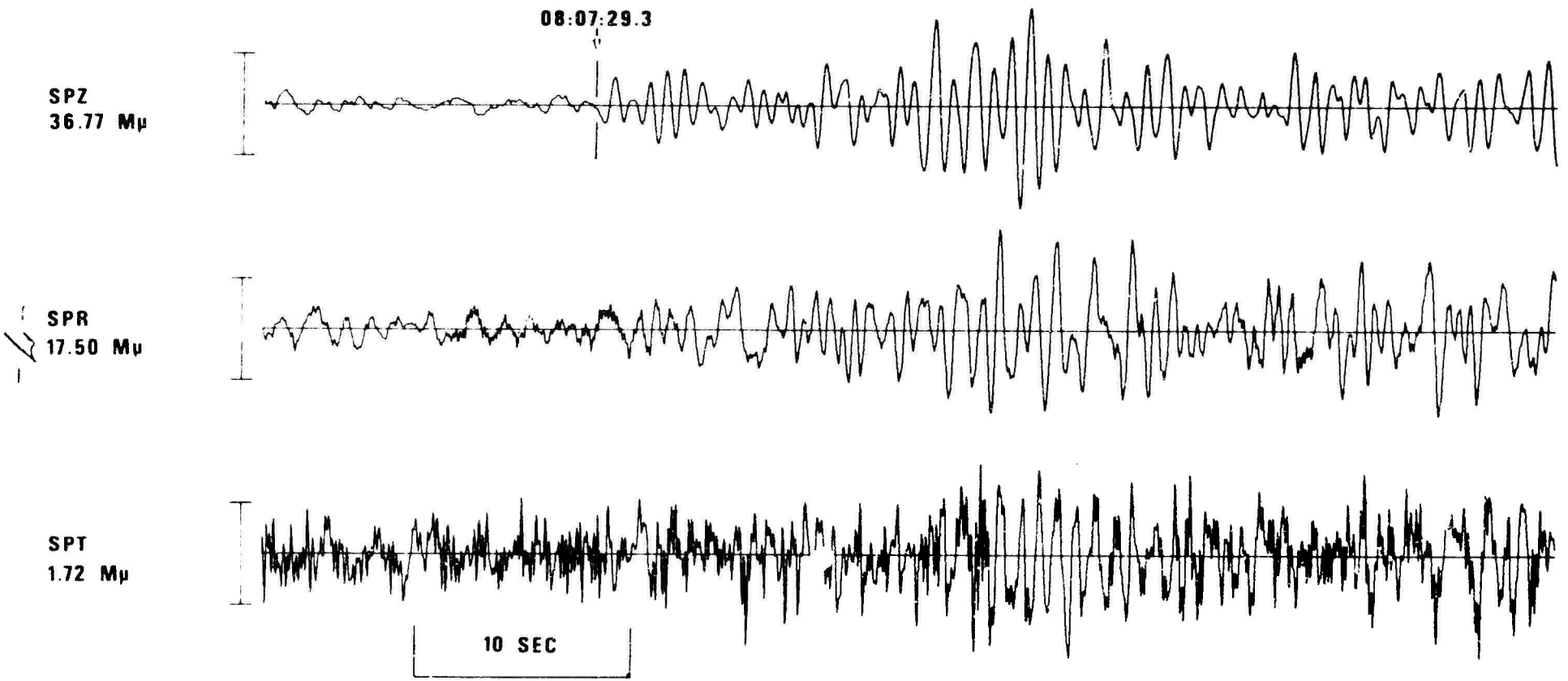
Short-period magnitudes (m_b) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.


WH2YK 16 MAY 75
08:01:41.2
SPZ
234.88 Mμ
SPR
89.95 Mμ
SPT
174.54 Mμ
TIME
10 SEC
08:02:00

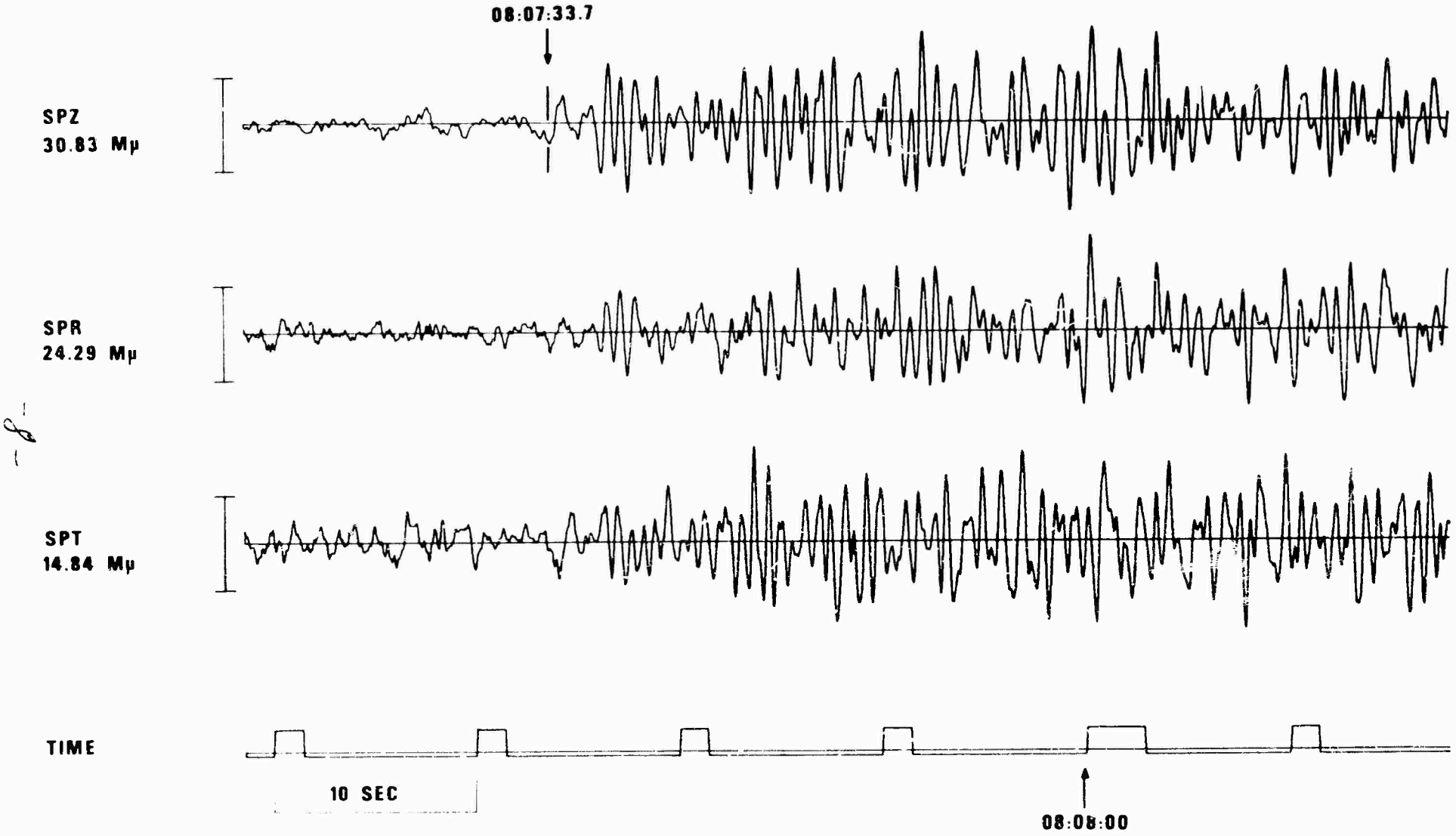
HK-ON 16 MAY 75



FN-WV 16 MAY 75

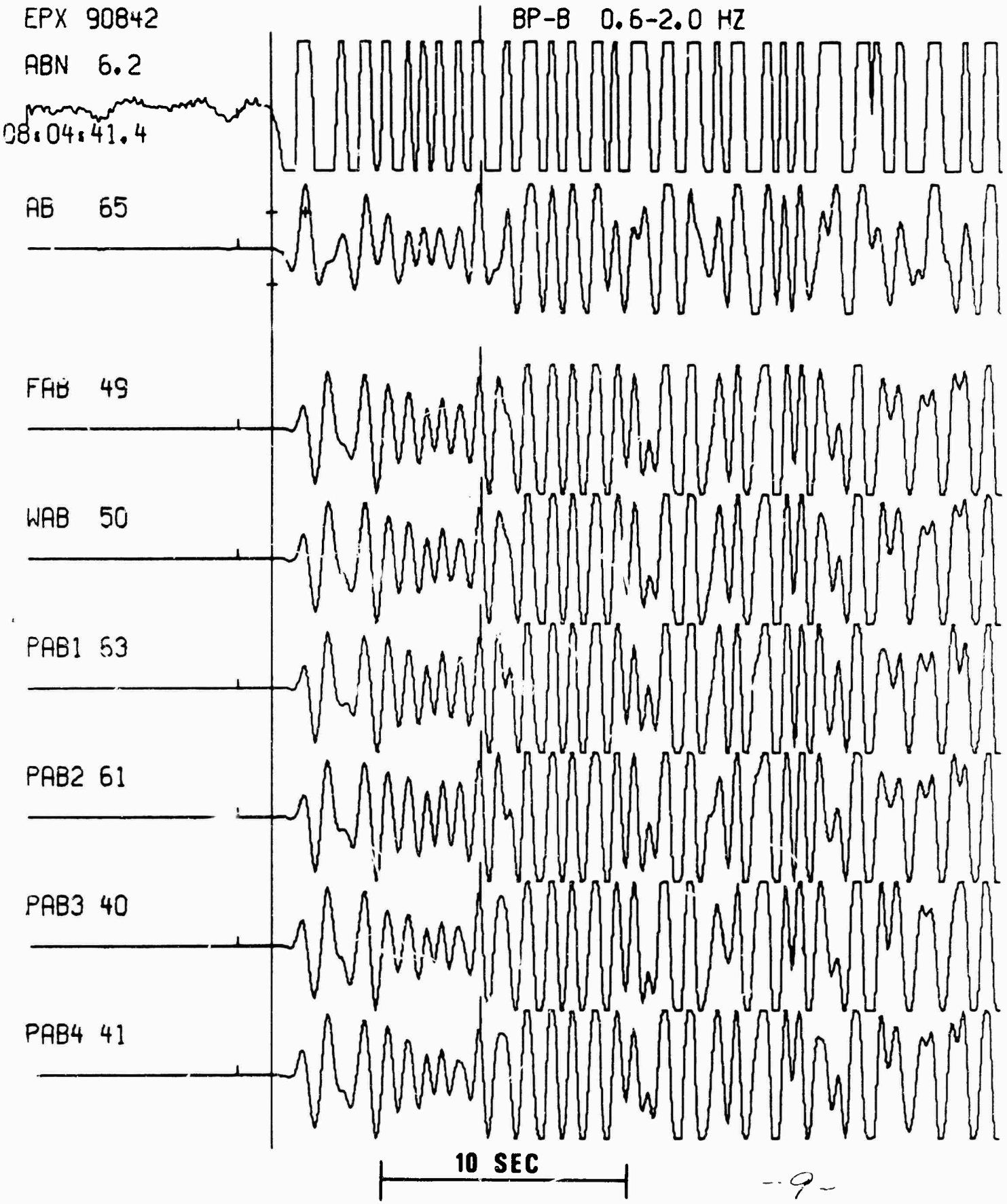


HN-ME 16 MAY 75



LASA

I 16 MAY 1975
2 7 57 53 54.3N 163.7W 60G C 5.0 10 UNIMAK ISLAND REGION
3 8 4 51.4 LAO P 37.6 1.4 13.1 36.5 303.8

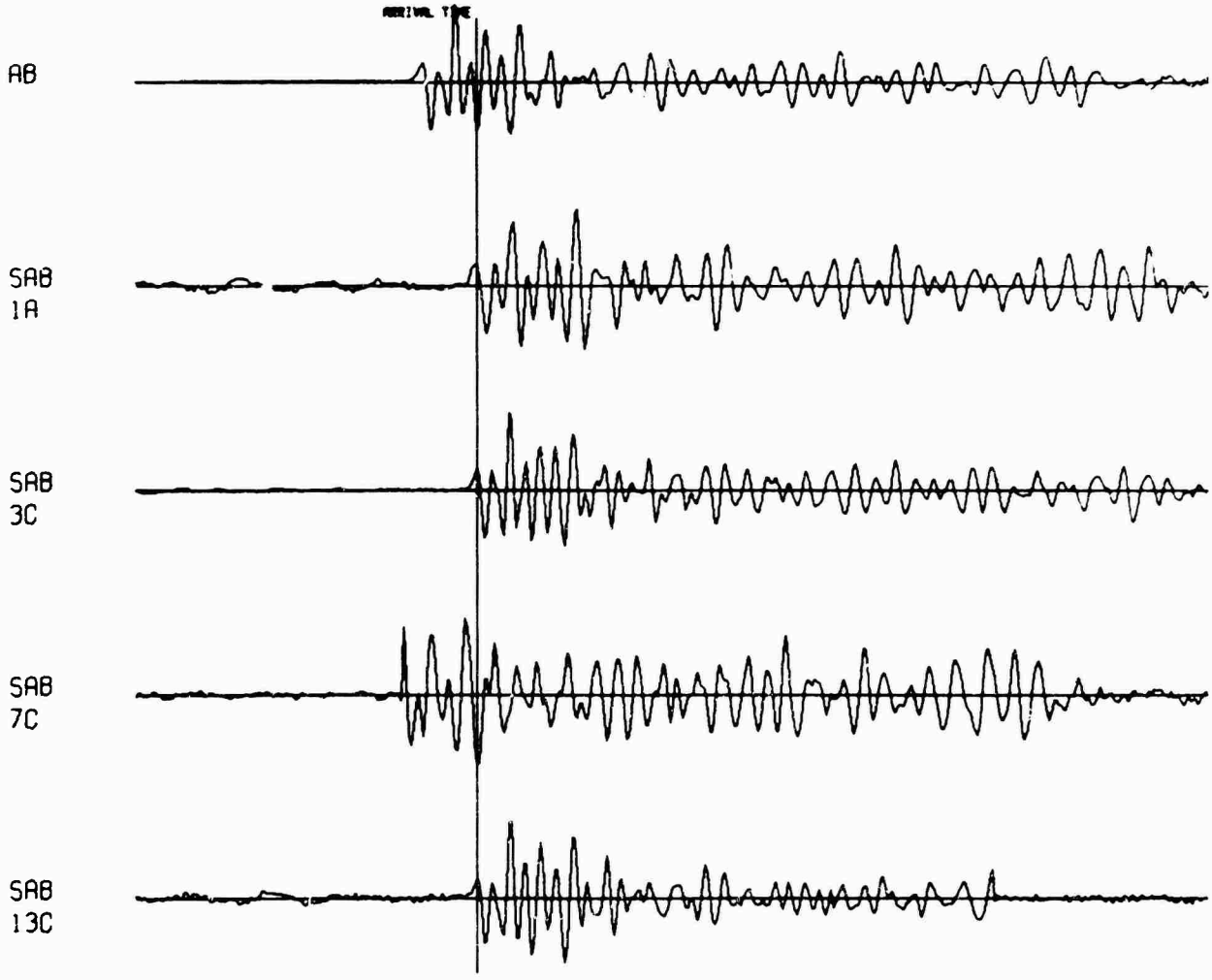


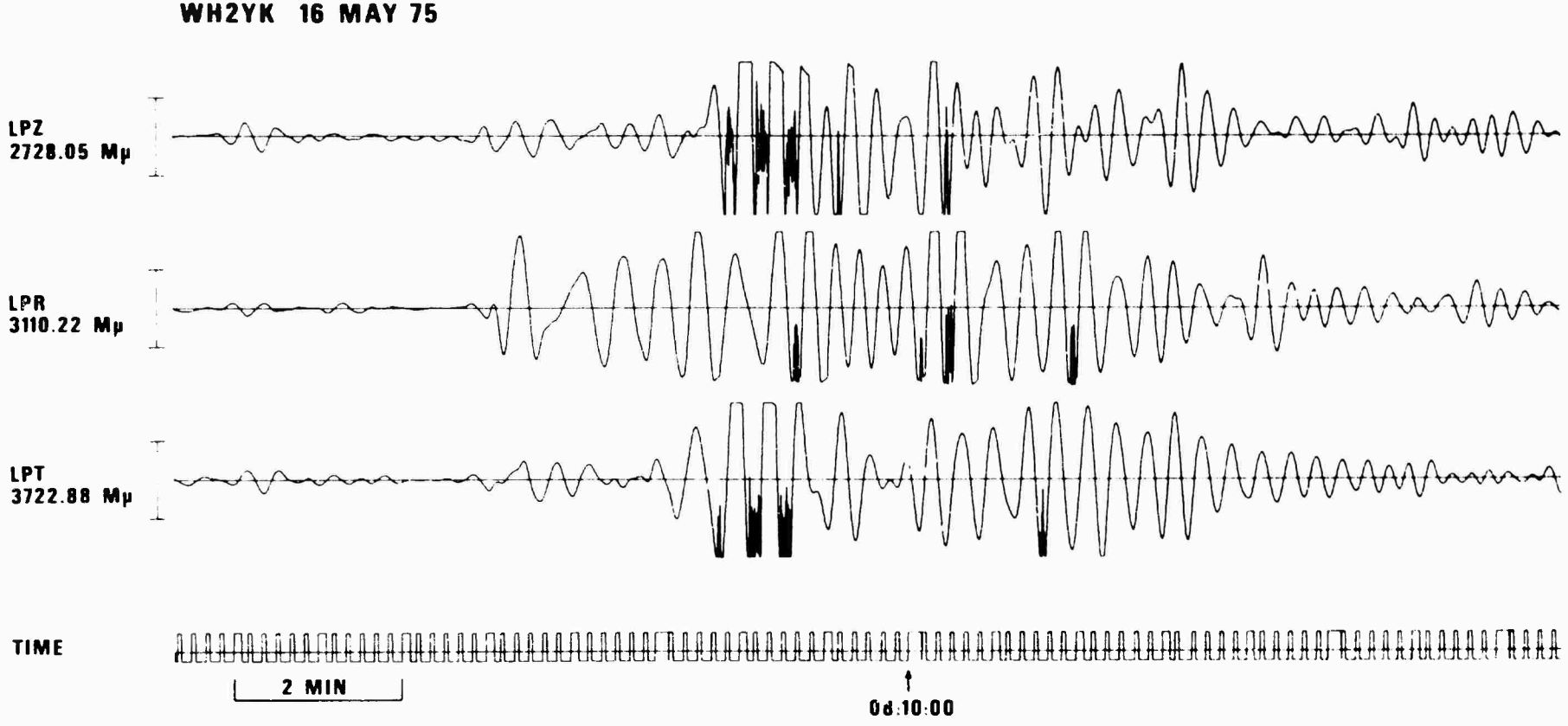
NORSAR EVENT FILE 16 MAY 75

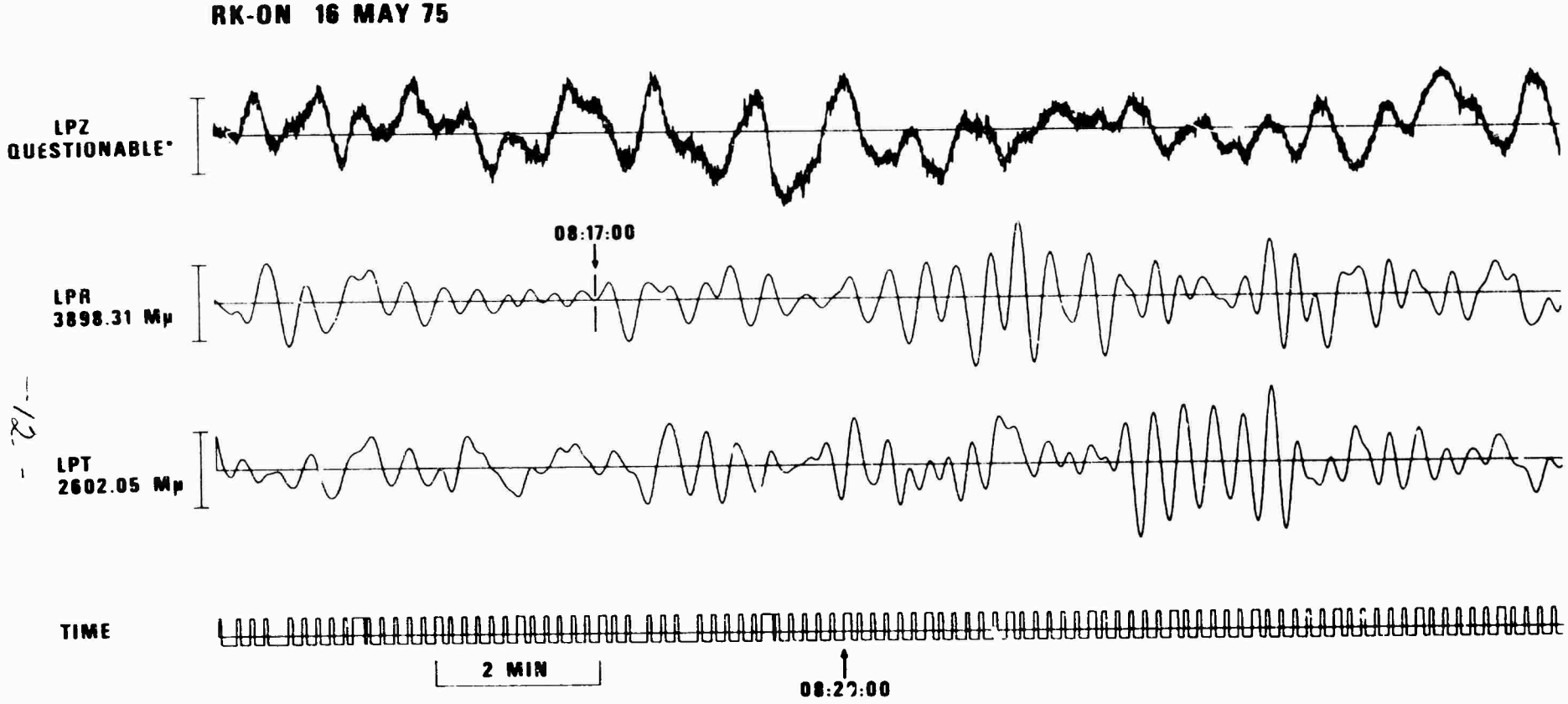
EPX NO. 46810 ARR. 8.8.30.8 55.0N 162.4W 5.4MB 33KM

DIST = 64.4 AZI = 355.7 AMP = 28.5 PER = 0.6 UMETH 2

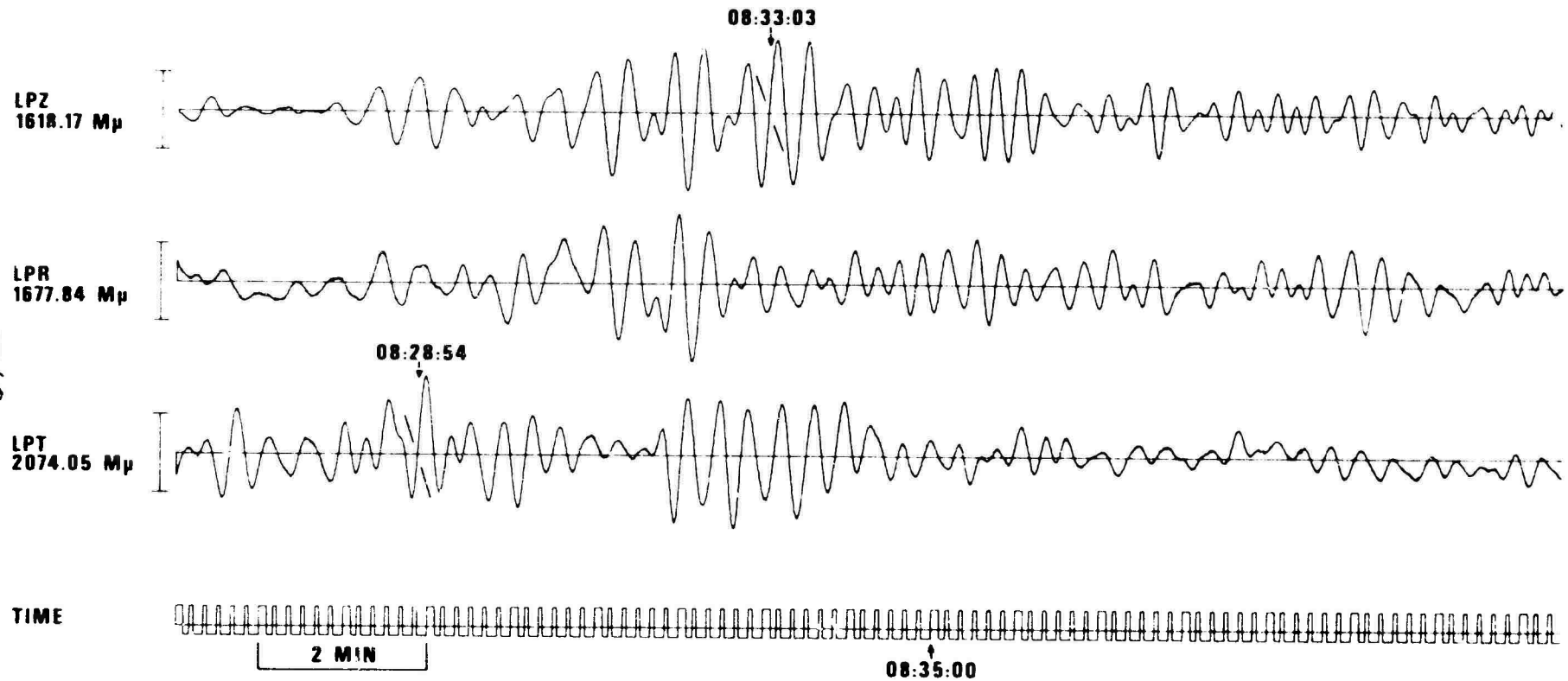
SCALE|_____|= 5 SECONDS



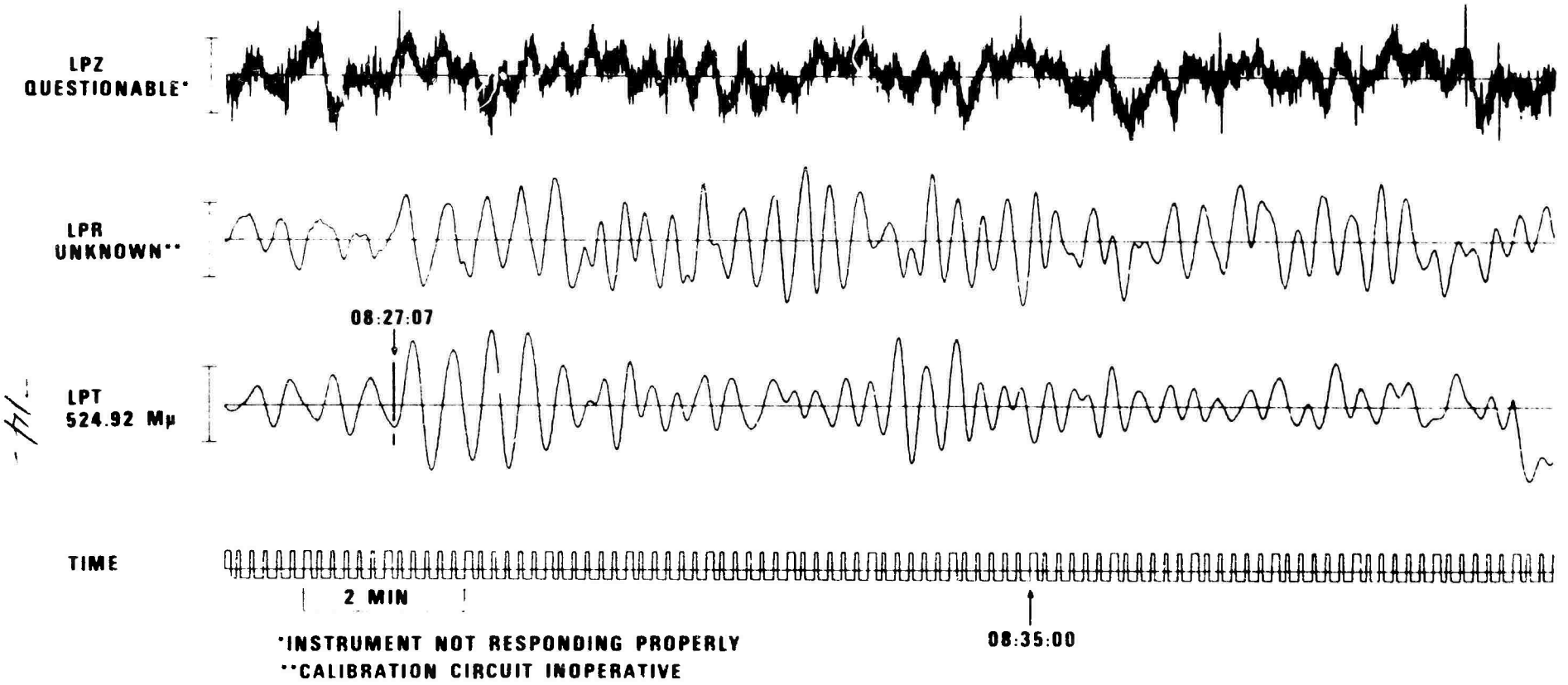

WH2YK 16 MAY 75
LPZ
2728.05 Mμ
LPR
3110.22 Mμ
LPT
3722.88 Mμ
TIME
2 MIN
0d:10:00



*INSTRUMENT NOT RESPONDING PROPERLY


FN-WV 16 MAY 75
08:33:03
LPZ
1618.17 Mμ
LPR
1677.84 Mμ
08:28:54
LPT
2074.05 Mμ
TIME
2 MIN
08:35:00

-13-


HN-ME 16 MAY 75
LPZ
QUESTIONABLE*
LPR
UNKNOWN**
08:27:07
LPT
524.92 Mμ
TIME
2 MIN
08:35:00
*INSTRUMENT NOT RESPONDING PROPERLY
**CALIBRATION CIRCUIT INOPERATIVE

ARRAY LONG PERIOD VERTICAL BEAMS 16 MAY 75