SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT, KURILE ISLANDS, 23 MARCH 1975

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Teledyne Geotech

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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Kurile Islands, 23 March 1975

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

SDCS Event Report No. 23

Kurile Islands, 23 March 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:

	Origin Time	Latitude	Longitude	m_b	M_s
NORSAR	19:48:03	45.9N	153.2E	5.8	N/A
LASA	19:48:18	47.5N	153.6E	5.7	N/A
PDE	19:47:58	46.7N	152.5E	5.5	4.4
Hagfors Array, Sweden	19:47:58	46 N	153 E	6.6	5.0

Using SDCS stations, LASA and NORSAR, the epicenter location becomes

SDCS & Arrays	19:48:08	46.2N	152.2E	5.5	4.5

FN-WV was not operational for this event.

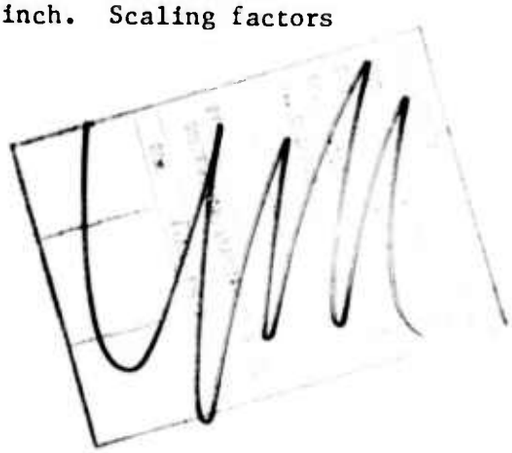
Short-period signals associated with this event were recorded at all operational SDCS stations, LASA and NORSAR. Unknown magnifications at RK-ON and CPSO prevented magnitude determinations for those stations.

Long-period signals were recorded at WH2YK, HN-ME, and CPSO. High background noise prevented a definite amplitude determination at RK-ON. NORSAR and ALPA did not record the signal. LASA long-period array data was unrecoverable.

SDCS horizontal channels except WH2YK LP, CPSO SP and LP, and RK-ON SP have been rotated to orientations radial and transverse to this location.

Details of the program used to obtain beamed vertical, radial and transverse long-period data at ALPA and NORSAR are in the process of being reviewed. Vertical beams are probably valid, horizontal beams questionable.

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.



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 23 MAR 75
19:48:08.0 46.700N 152.500E 0KM.

STA.	ARRIVAL	RESIDUALS CALC	RESIDUALS REST	DIST. REST	AZ. REST
WR2YK	19 56 05.2	0.1	0.3	43.4	43.2
LAO	19 58 42.3	0.4	0.8	64.8	48.2
RK-ON	19 59 00.0	-0.8	-1.3	67.9	38.6
NAO	19 59 07.0	-0.1	0.2	68.8	340.8
HN-ME	20 00 20.0	0.6	-0.1	81.5	27.0
CPO	20 00 30.5	-0.3	-0.0	83.4	43.9

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
19:48:40.7	47.823N	152.758E	266. CALC	0.5	5	6
19:48:02.1	46.215N	152.171E	0. REST	0.7	3	6

CALC

```
    1 . 1
  0   .   4
0    0. 0   0
. . . . . . .
0    0. 0   0
  0   .   0
    0 . 0
```

REST

```
    1 . 1
  0   .   4
0    0. 0   0
. . . . . . .
0    0. 0   0
  0   .   0
    0 . 0
```

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 0.96
MAJOR 144.7KM. MINOR 42.6KM. AZ= 7 AREA= 19350 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 23 MAR 75
19:48:08.0 46.700N 152.500E 0KM.

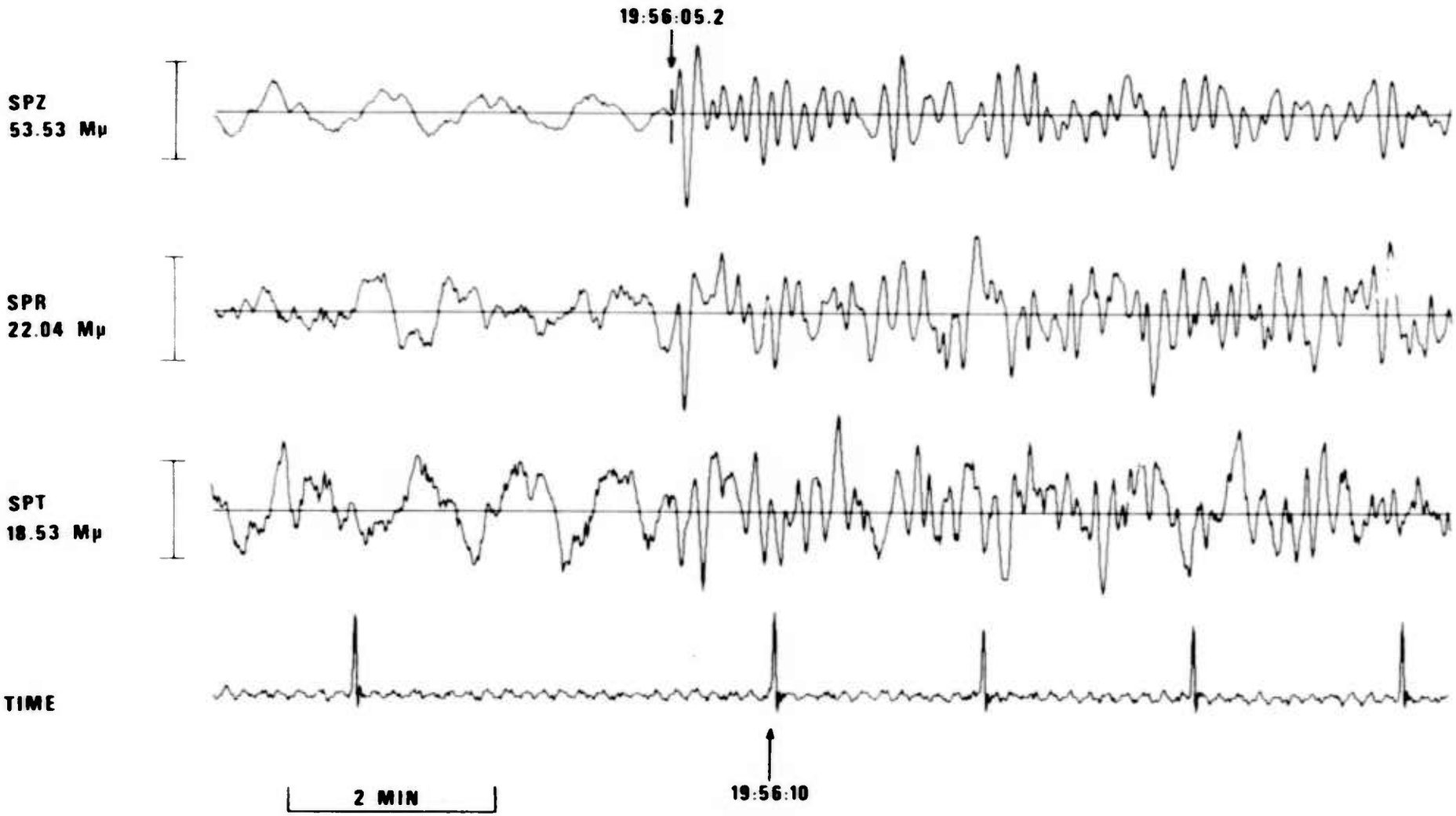
STA.	PHASE	ARRIVAL TIME	INST	PER	A/T	MAGNITUDE MB	MS	DIR	DIST
WH2YK	EP	19 56 05.2	SPZ	0.9	76.	5.08			43.4
WH2YK	LR	20 13 00.0	LPZ	22.0	57.		4.51		43.4
LAC	EP	19 58 42.3	AB	1.0	88.	5.64			64.8
RK-ON	EP	19 59 00.0	SPZ	0.8	??				
NAO	EP	19 59 07.0	AB	0.6	132.	5.82			68.8
HN-ME	EP	20 00 20.0	SPZ	0.8	70.	5.39			81.5
HN-ME	LQ	20 25 18.0	LPT	26.0	72.				
HN-ME	LR	20 33 57.0	LPZ	29.0	32.		4.54		81.5
CPO	EP	20 00 30.5	SPZ	0.8	??				
CPO	LR	20 35 08.0	LPZ	24.0	71.		4.89		83.4

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPMAG	LPSDV	LPSTA
19:48:40.7	47.823N	152.758E	266. CALC	5.06	0.27	4	4.50******		1
19:48:02.1	46.215N	152.171E	0. REST	5.48	0.32	4	4.51******		1

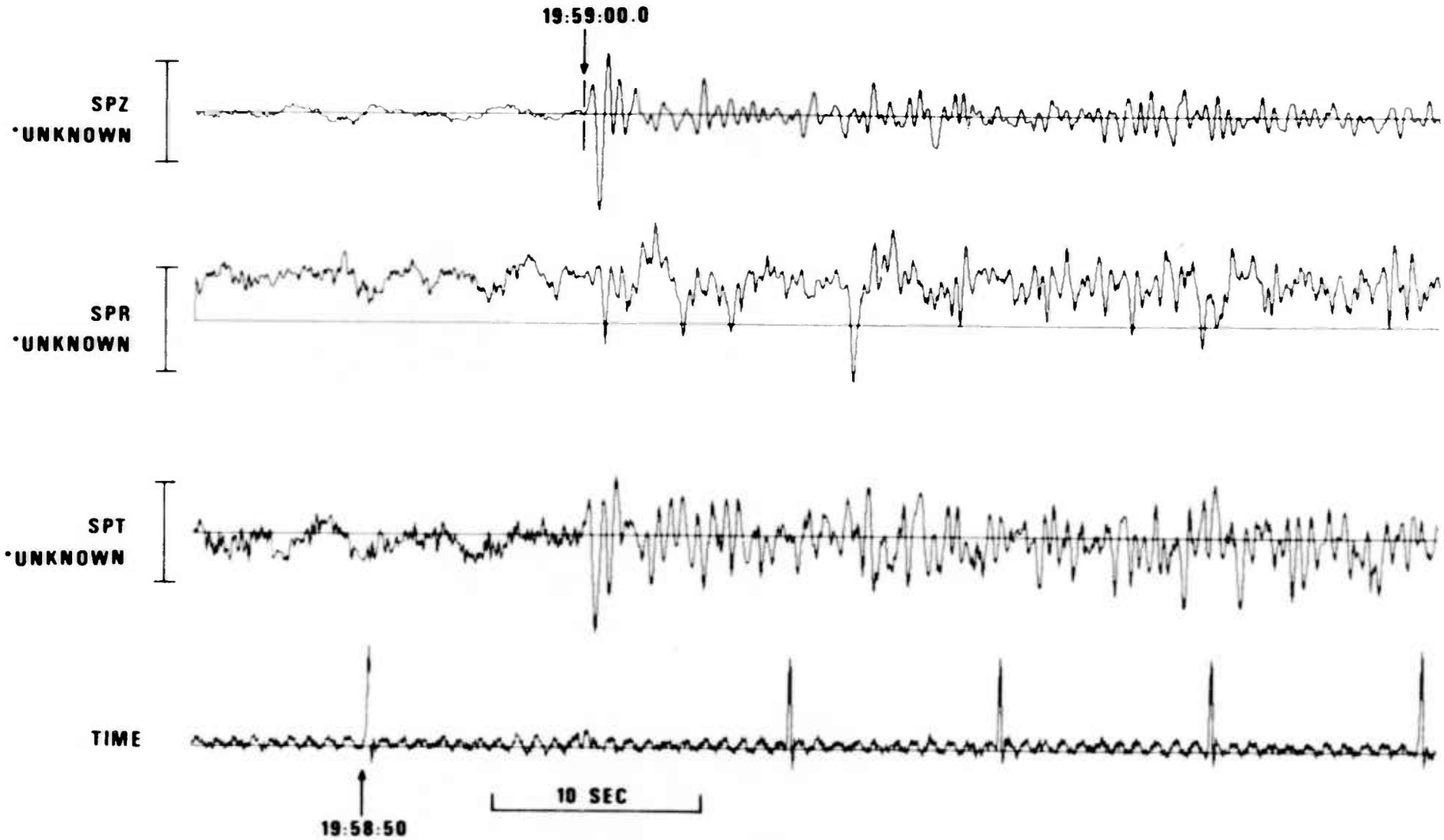
Short-period magnitudes (m_b) used in averaging are restricted to those recorded at distances between 20 and 110 degrees from the epicenter.

Average long-period magnitude (M_S) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

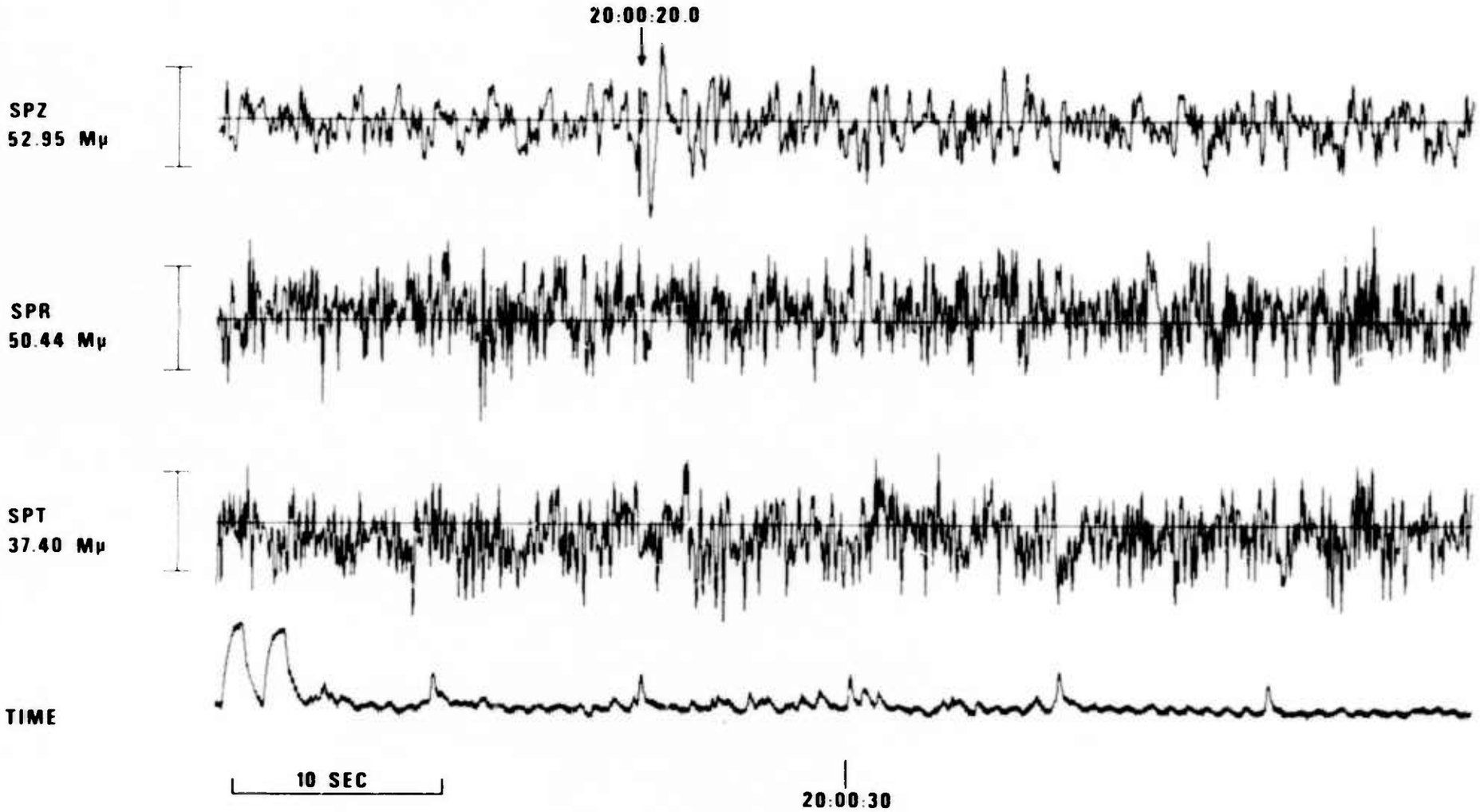
WH2YK 23 MAR 75



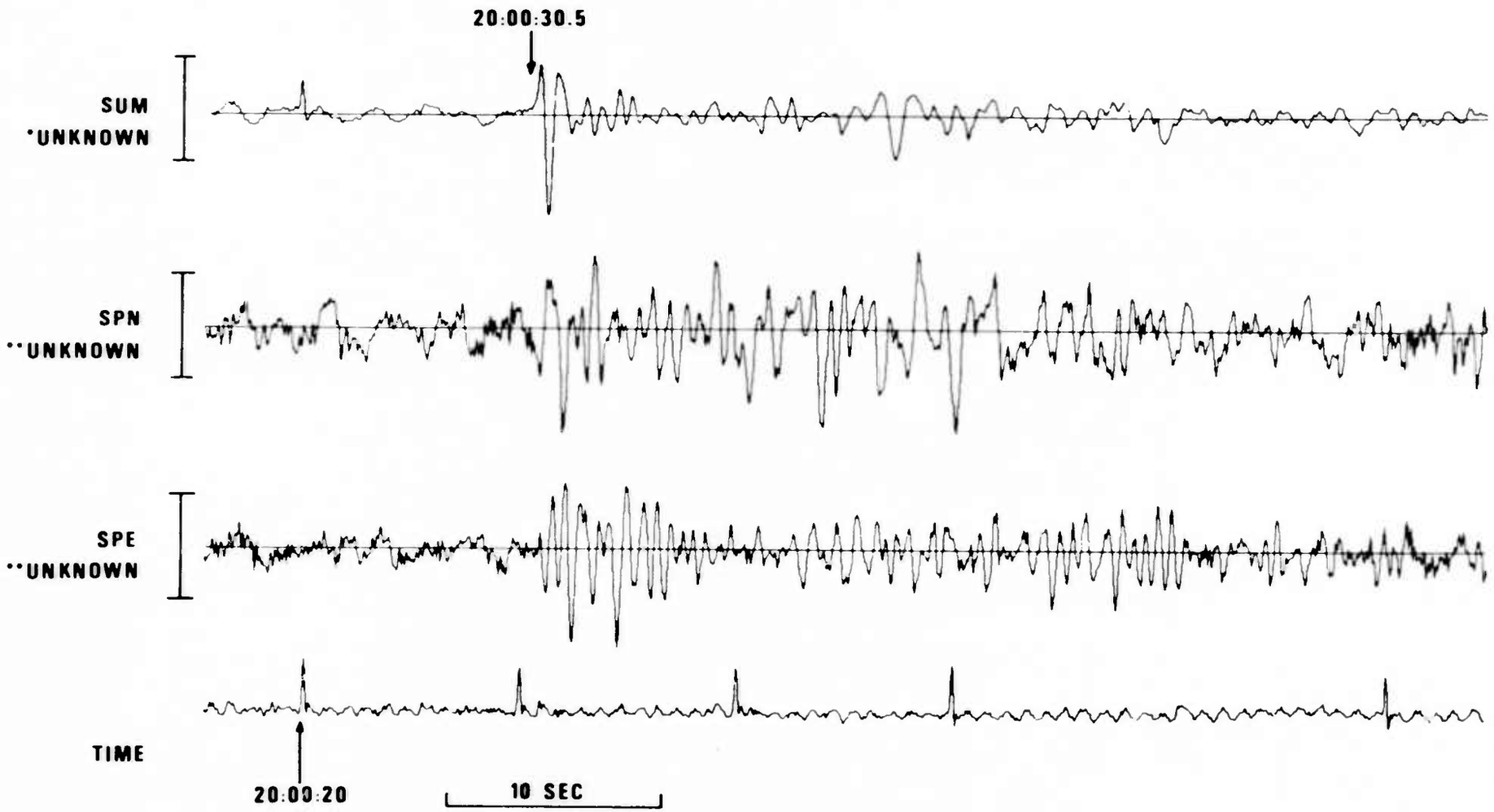
RK-ON 23 MAR 75



*GAINS UNKNOWN;CALIBRATIONS INVALID DUE TO ERRATIC CALIBRATOR OPERATION


HN-ME 23 MAR 75
20:00:20.0
SPZ
52.95 Mμ
SPR
50.44 Mμ
SPT
37.40 Mμ
TIME
10 SEC
20:00:30

CPSO 23 MAR 75

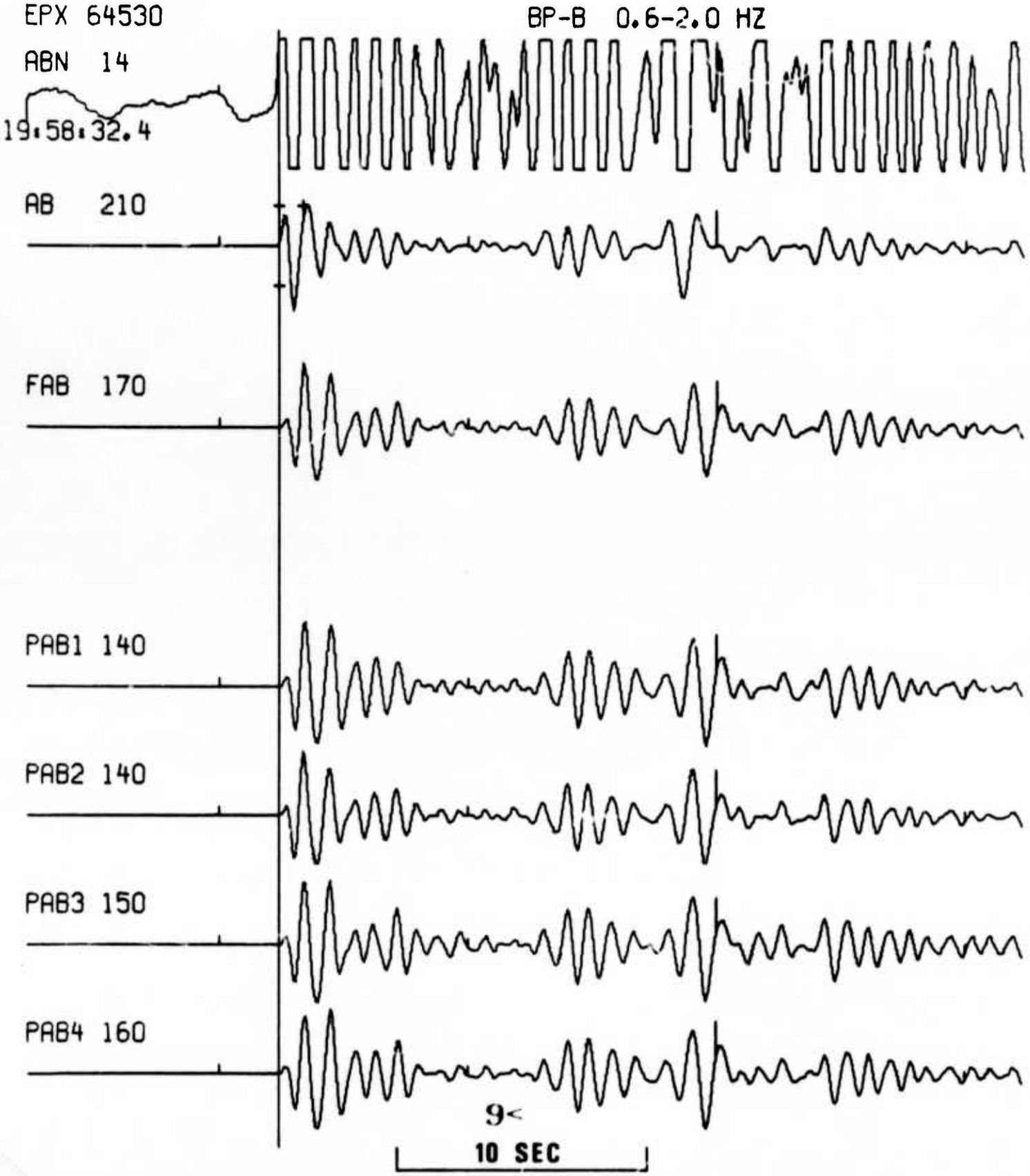


*NUMBER OF INSTRUMENTS CONTRIBUTING TO SUMMATION UNKNOWN

**HORIZONTAL INSTRUMENTS NOT ROTATED

LASA

1 23 MAR 1975
2 19 48 18 47.5N 153.6E 35G B 5.5 221 KURILE ISLANDS
3 19 58 42.4 LAO P 69.9 1.0 16.7 63.3 311.6

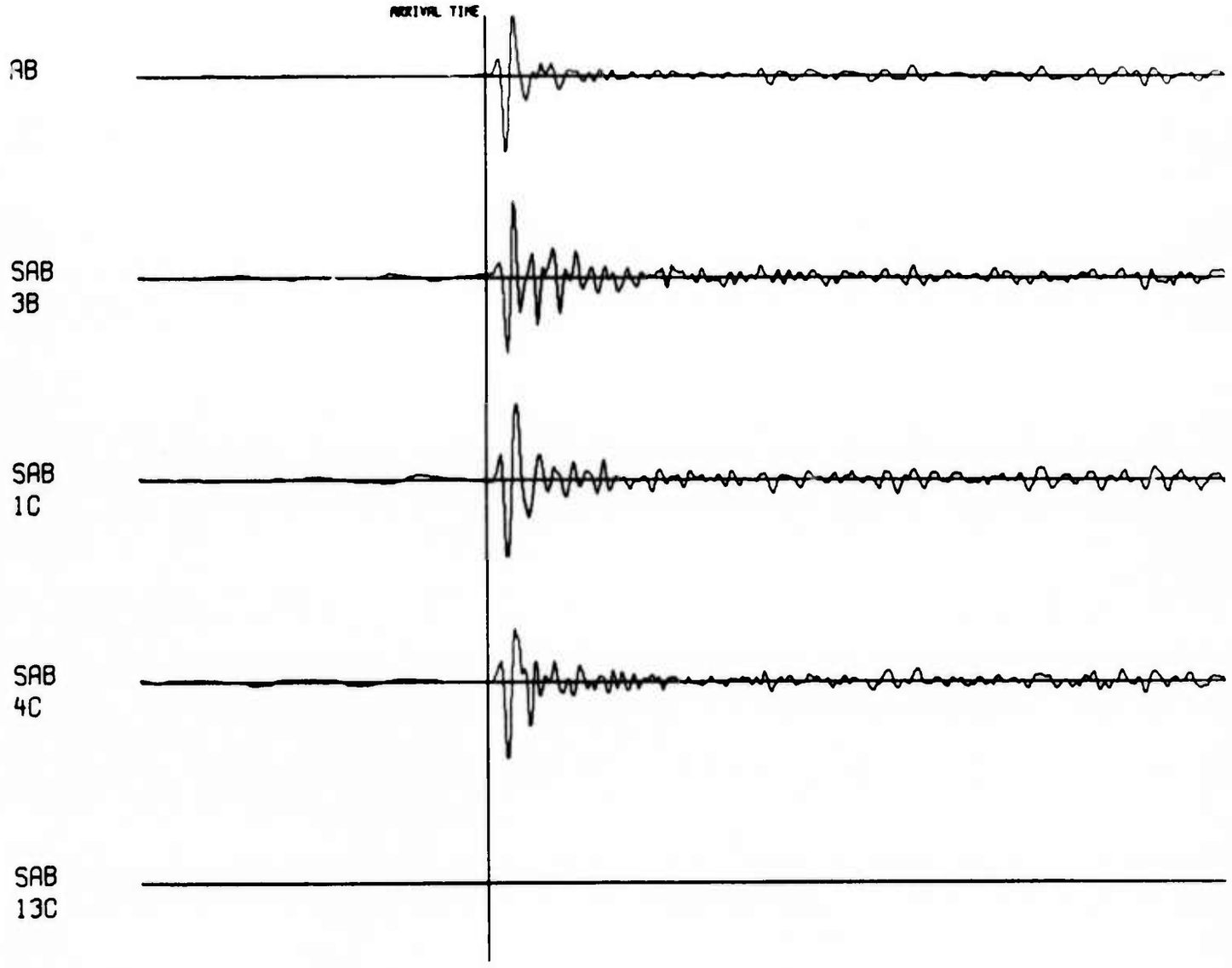


NORSAR EVENT FILE 1975 MAR 23

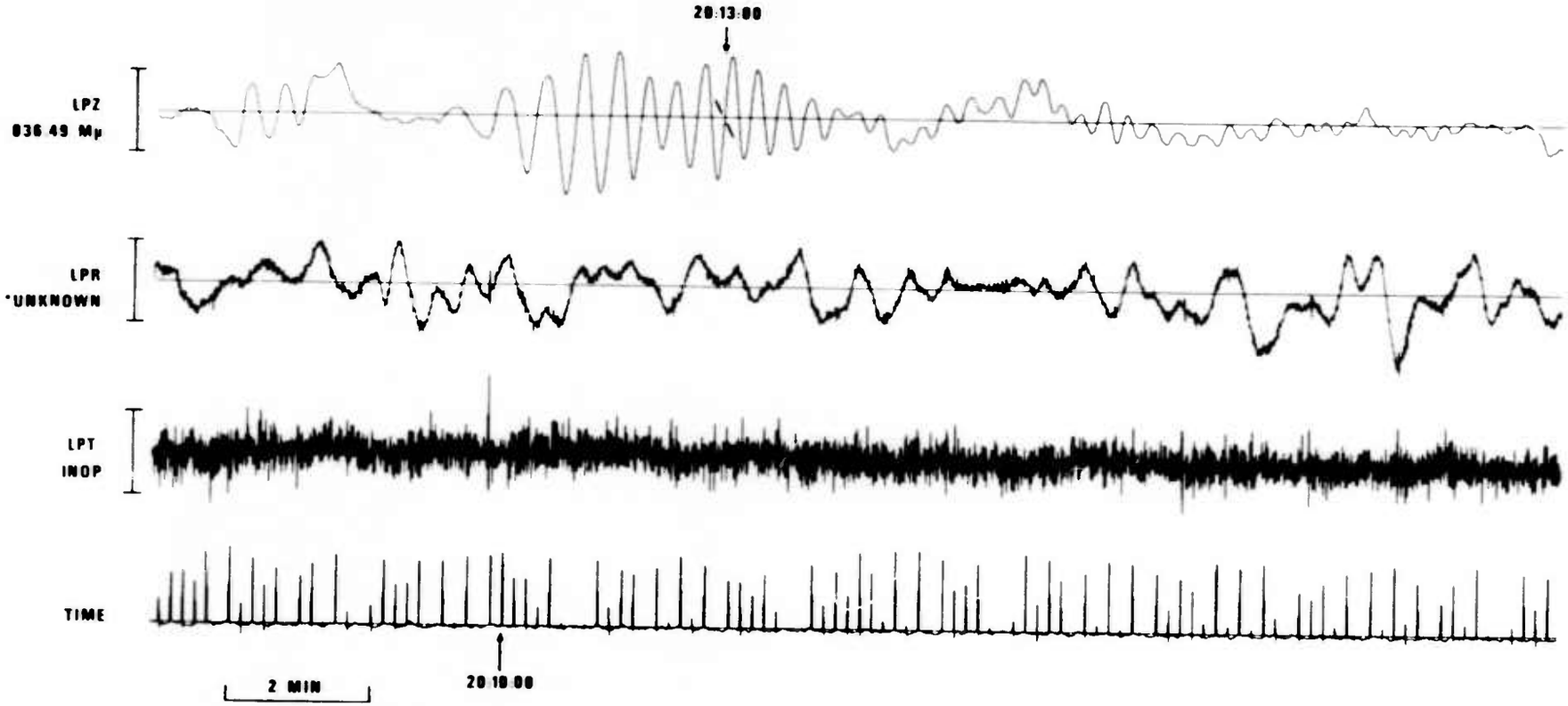
EPX NO. 57350 ARR. 19.59.6.8 45.9N 153.2E 5.8MB 33KM

DIST = 69.3 AZI = 27.1 AMP = 103.3 PER = 0.9 UMETH 2

SCALE[——]= 5 SECONDS

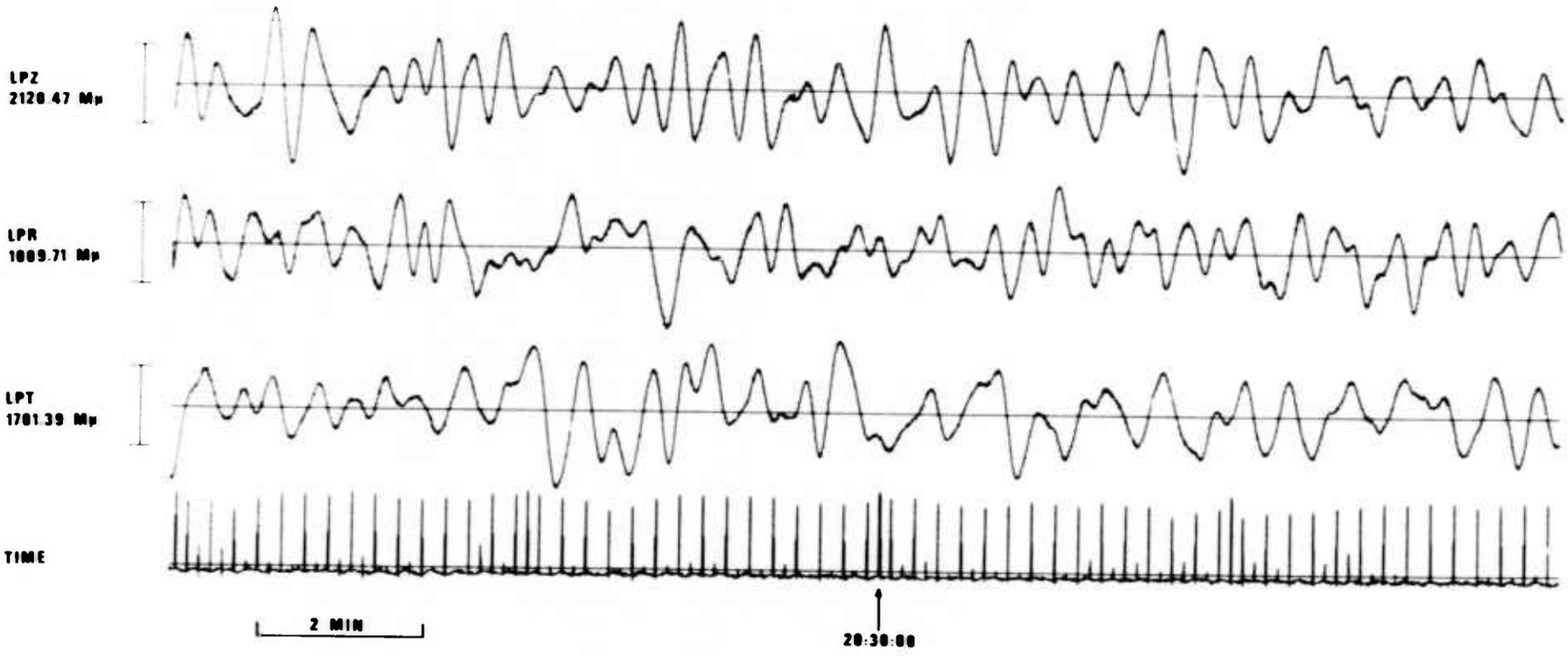


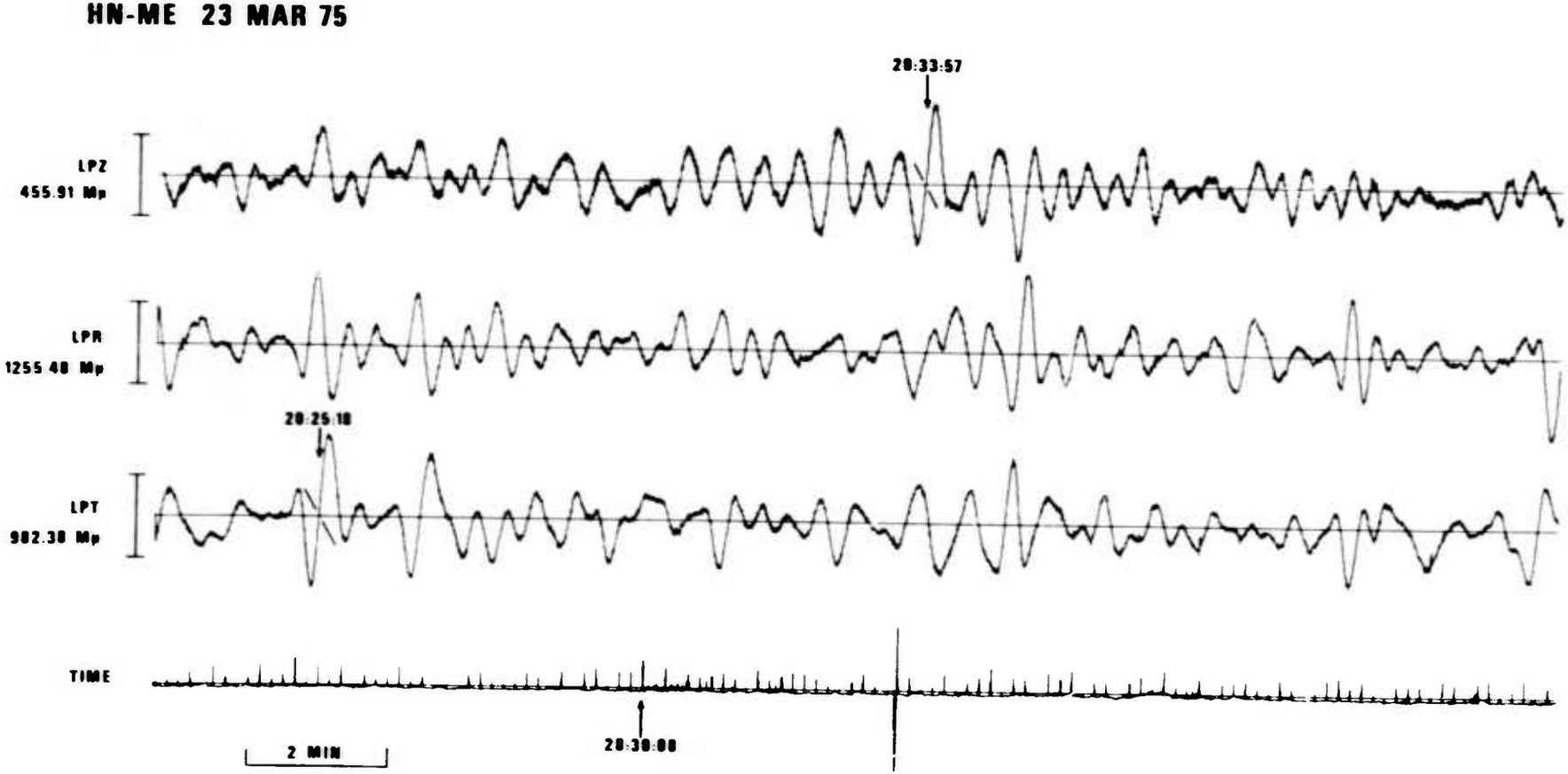
WH2YK 23 MAR 75



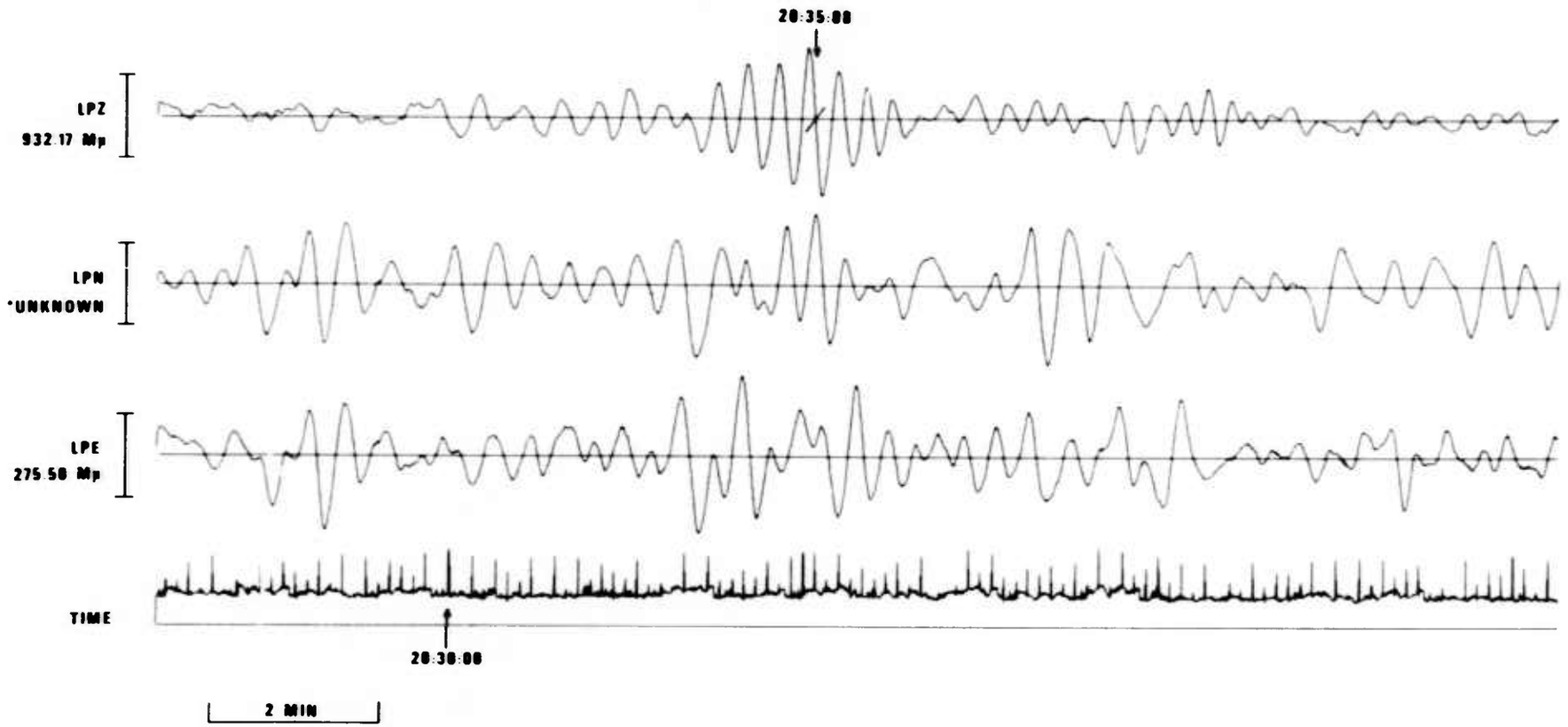
*LPR INSTRUMENTS NOT RESPONSIVE TO CALIBRATION

RK-ON 23 MAR 75



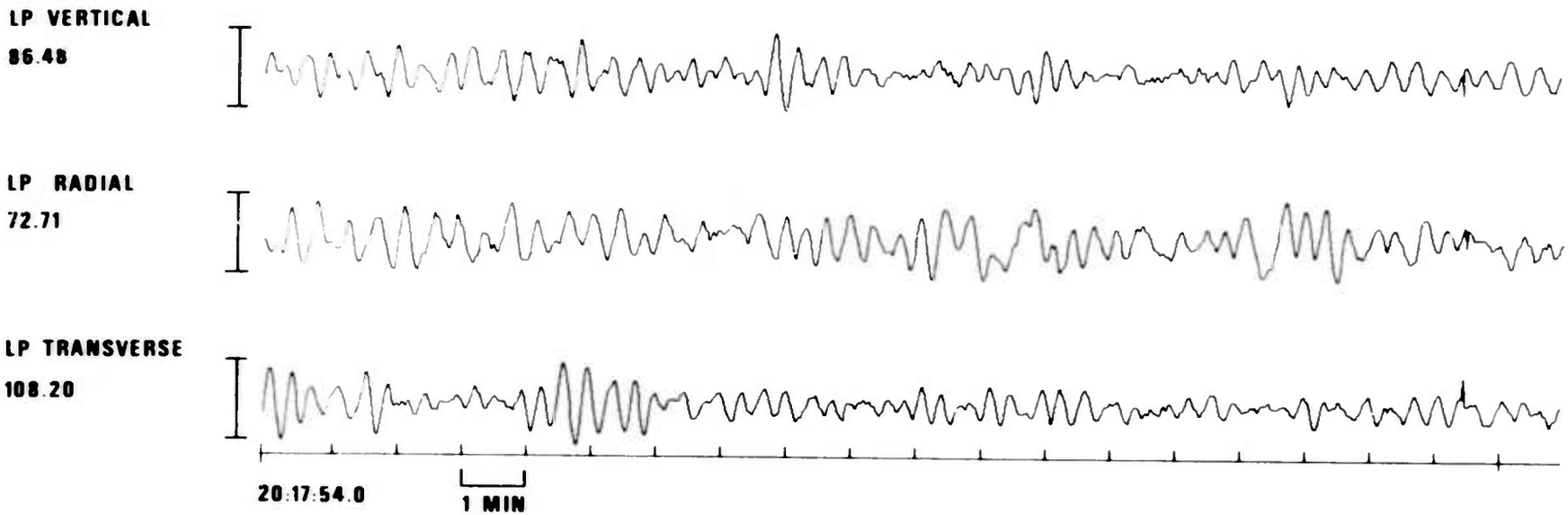

HN-ME 23 MAR 75
20:33:57
LPZ
455.91 Mp
LPR
1255.48 Mp
20:25:18
LPT
982.38 Mp
TIME
2 MIN
20:30:08

CPSO 23 MAR 75



*LPR CALIBRATION ERRATIC ; GAIN UNRESOLVED

ALPA LONG-PERIOD BEAMS 23 MAR 75



NORSAR LONG-PERIOD BEAMS 23 MAR 75