SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT, GREECE, 21 DECEMBER 1975

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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Greece, 21 December 1975

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March 1976

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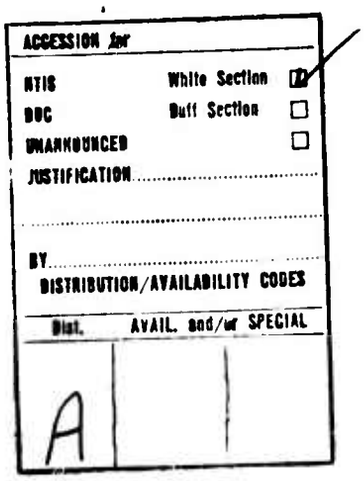

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SDCS EVENT REPORT NO. 78

Greece, 21 December 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	16:13:00.8	16:08:24	41 N	021 E	5.2	N/A

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

16:07:54.2	38.7N	021.6E	5.1	4.9

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. Horizontal SP channels at all SDCS stations were rotated.

Long-period signals were recorded at all SDCS stations, ALPA and NORSAR. Polarity of the LP radial channel at RK-ON was reversed; to correct this, a mathematical inversion of the LP radial data was performed before the horizontal channels were rotated. Horizontal LP channels at all SDCS stations were rotated. Validity of ALPA and NORSAR long-period vertical beams is questionable and horizontal beams were not included because of program recovery problems. LASA long-period data were not included because of complicated recovery procedures.

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	KS36000	KS36000
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

Note: The orientation of the radial instruments at FN-WV is assumed to be 16° ± 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 21 DEC 75
16:08:08.0 40.000N 21.000E 0KM.

STA.	ARRIVAL	RESIDUALS CALC	RESIDUALS REST	DIST. REST	AZ. REST
NAC	16 18 00.8	-0.1	-0.1	23.2	346.6
HN-ME	16 18 23.3	0.4	0.5	63.2	308.8
HK-CN	16 19 32.5	-0.5	-0.4	74.4	323.5
FN-WV	16 19 33.7	0.0	-0.0	74.5	307.0
WH2YK	16 19 59.8	0.2	0.1	79.1	348.5
CESO	16 20 04.8	-0.4	-0.5	80.1	307.8
IAC	16 20 21.1	0.3	0.3	83.0	326.8

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	ICNG.	DEPTH (KM)	SDV	IT	STA
16:07:37.0	38.332N	21.844E	-95. CALC	0.3	11	7
16:07:54.2	38.673N	21.591E	0. REST	0.4	3	7

CALC

```
    1 . 0
  5   .   0
0    1. 0   0
. . . . . . .
0    0. 0   0
  0   .   0
    0 . 0
```

REST

```
    1 . 0
  5   .   0
0    1. 0   0
. . . . . . .
0    0. 0   0
  0   .   0
    0 . 0
```

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.01
MAJOR 102.7KM. MINOR 47.8KM. AZ= 117 AREA= 15432 SQ.KM. REST

95 PERCENT CONFIDENCE ON DEPTH CHISQUARE WITH DISTANC

DATA SUMMARY

INPUT FOR EVENT 21 DEC 75
16:08:08.0 40.000N 21.000E 0KM.

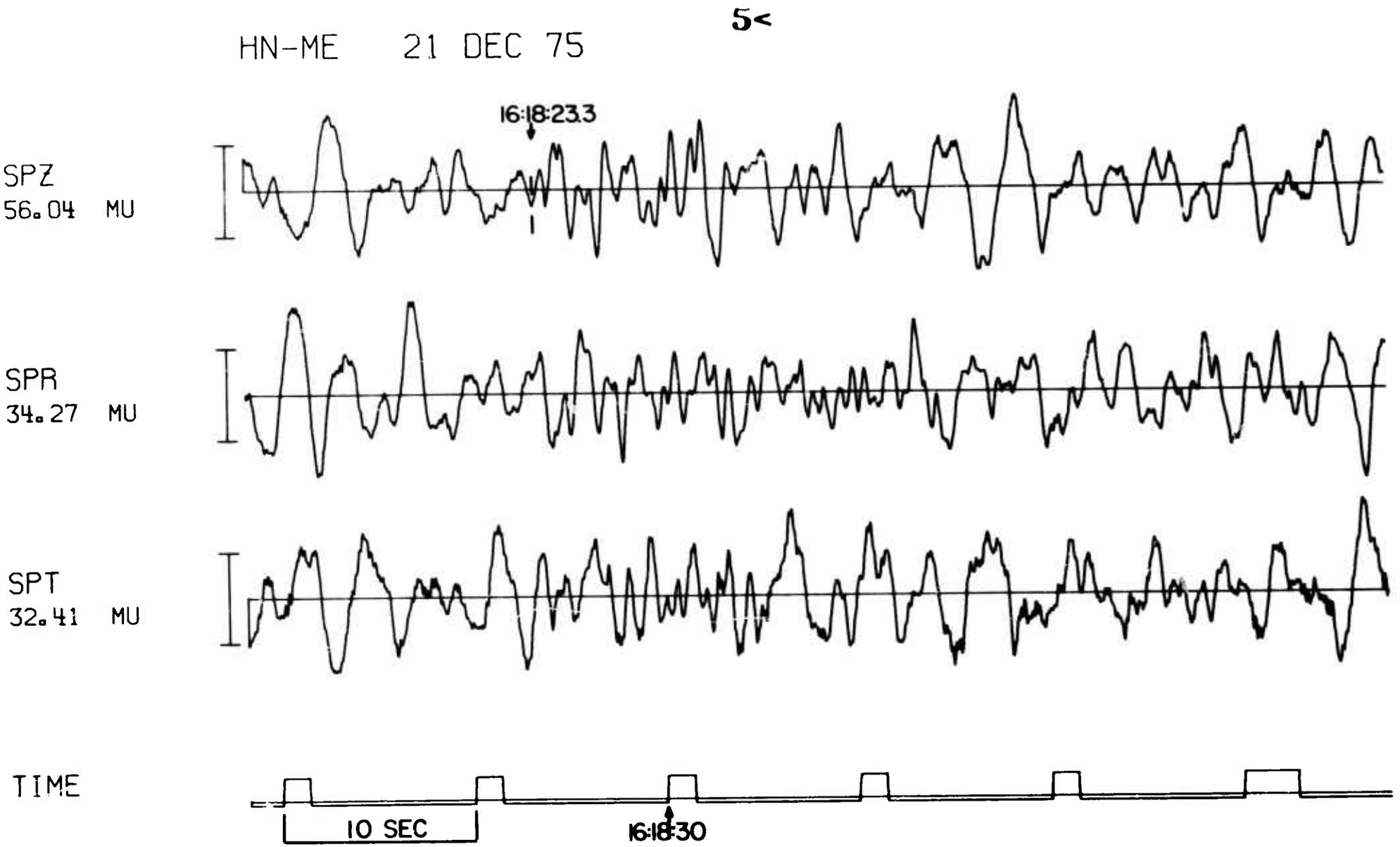
STA.	PHASE	ARRIVAL TIME	INST	PER	A/T	MAGNITUDE MB	MS	DIR	DIST
NAC	EP	16 13 00.8	AE	1.4	335.	5.53			23.2
NAC	LR	16 22 11.0	LPZ	23.0	349.		5.03		23.2
HN-ME	EP	16 18 23.3	SPZ	0.8	50.	5.32			63.2
HN-ME	LQ	16 40 25.0	LPT	27.0	30.				
HN-ME	LR	16 45 37.0	LPZ	19.0	12.		4.00		63.2
HK-CN	EP	16 19 32.5	SPZ	0.9	25.	4.90			74.4
HK-CN	LQ	16 45 27.0	LPT	29.0	121.				
HK-CN	LR	16 52 03.0	LPZ	23.0	338.		5.52		74.4
HN-WV	EP	16 19 33.7	SPZ	0.9	35.	5.04			74.5
HN-WV	LQ	16 45 13.0	LPT	30.0	45.				
HN-WV	LR	16 52 43.0	LPZ	21.0	97.		4.98		74.5
ALEA	LR	16 52 56.0	LPZ	22.0	20.		4.30		76.1
WH2YK	EP	16 19 59.8	SPZ	1.0	14.	4.63			79.1
WH2YK	LQ	16 47 02.0	LPT	28.0	49.				
WH2YK	LR	16 55 21.0	LPZ	23.0	75.		4.89		79.1
CPSC M	EP	16 20 04.8	SPZ	0.9	788.	6.30			80.1
CPSC	LQ	16 49 26.0	LPT	26.0	130.				
CPSO	LR	16 56 50.0	LPZ	19.0	175.		5.27		80.1
LAC M	EP	16 20 21.1	SAE	1.6	504.	6.40			83.0

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPMAG	LPSDV	LPSTA
16:07:37.0	38.332N	21.844E	0. CALC	5.08	0.37	5	4.86	0.5	7
16:07:54.2	38.673N	21.591E	0. REST	5.08	0.35	5	4.86	0.5	7

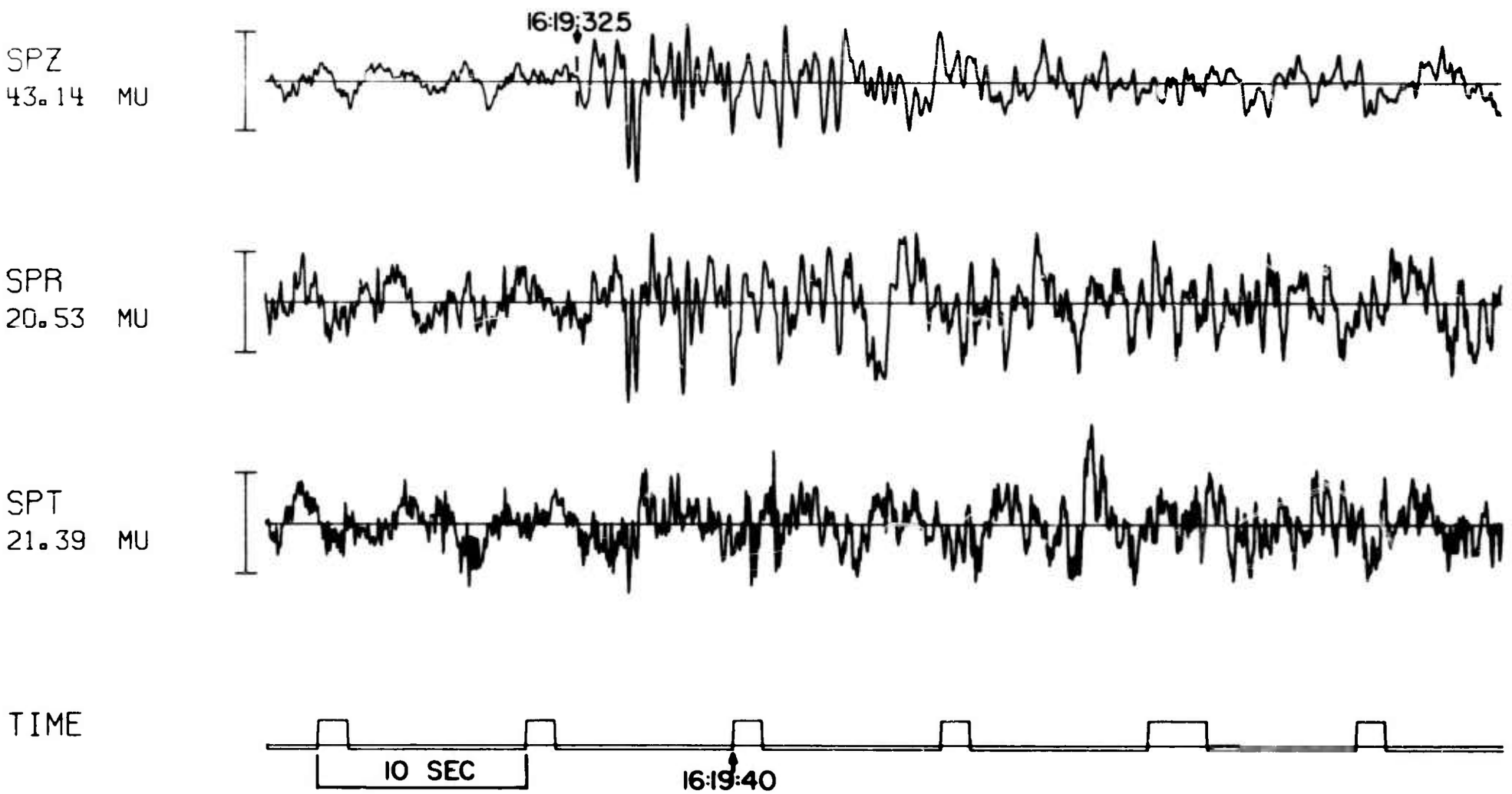
CPSC NOT USED IN CALC RUN SP AVG. MAG.
LAC NOT USED IN CALC RUN SP AVG. MAG.
CPSC NOT USED IN REST RUN SP AVG. MAG.
LAC NOT USED IN REST RUN SP AVG. MAG.

CPSO and LASA not used in either calculated or restrained SP average magnitude calculations because their magnitudes exceed the SDV parameters of the hypocenter program.

5<


HN-ME 21 DEC 75
16:18:23.3
SPZ
56.04 MU
SPR
34.27 MU
SPT
32.41 MU
TIME
10 SEC
16:18:30

RK-ON 21 DEC 75



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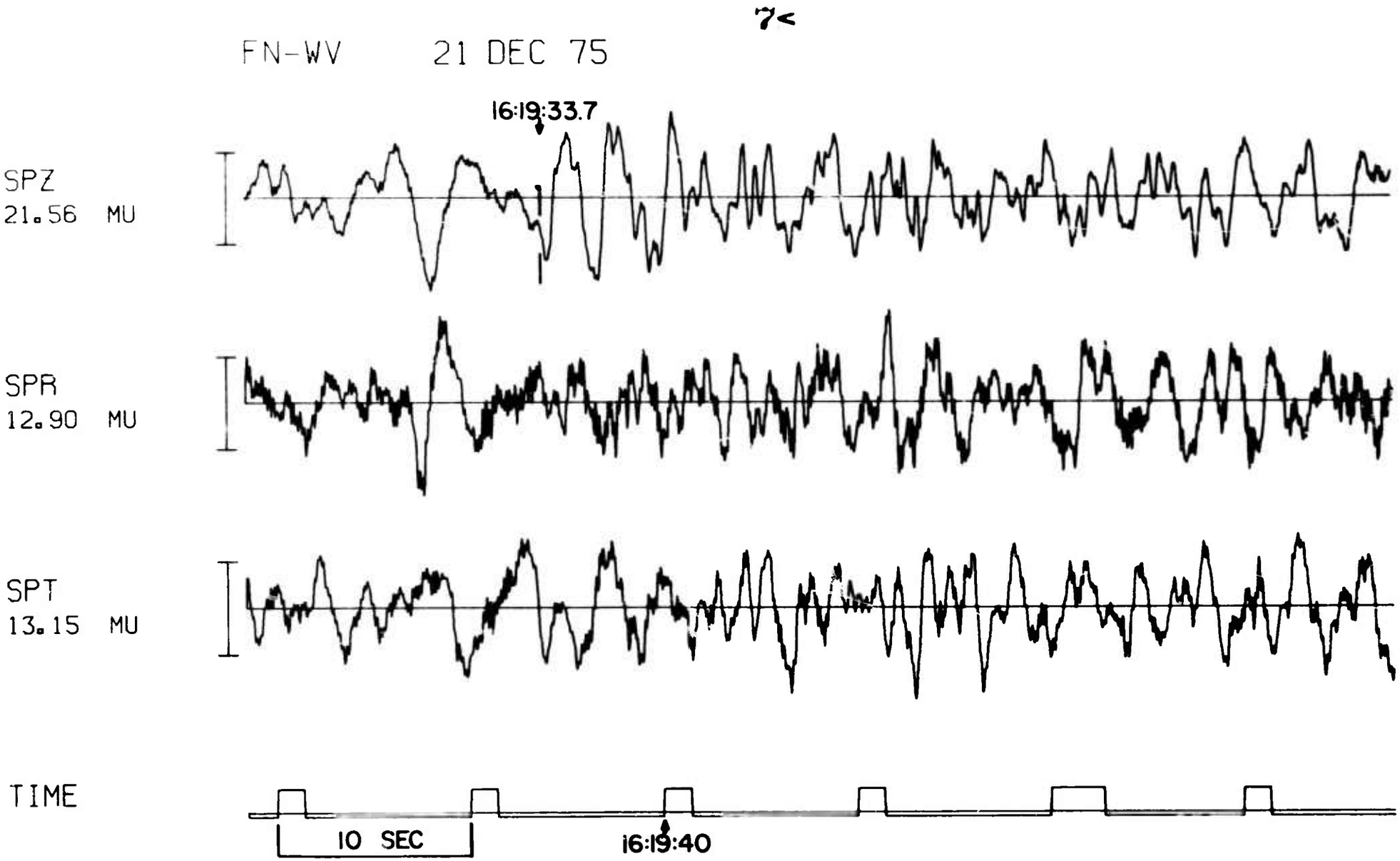
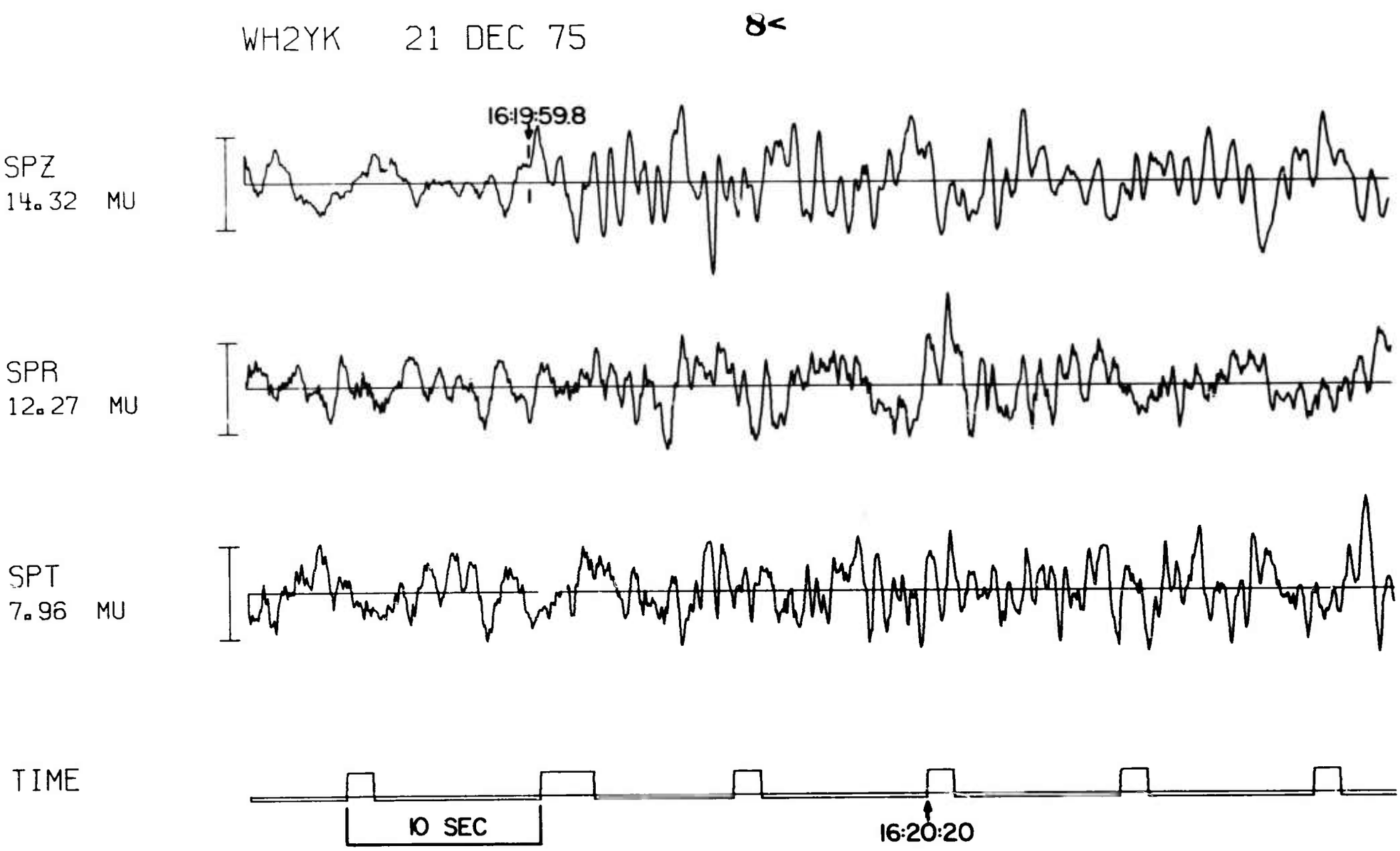
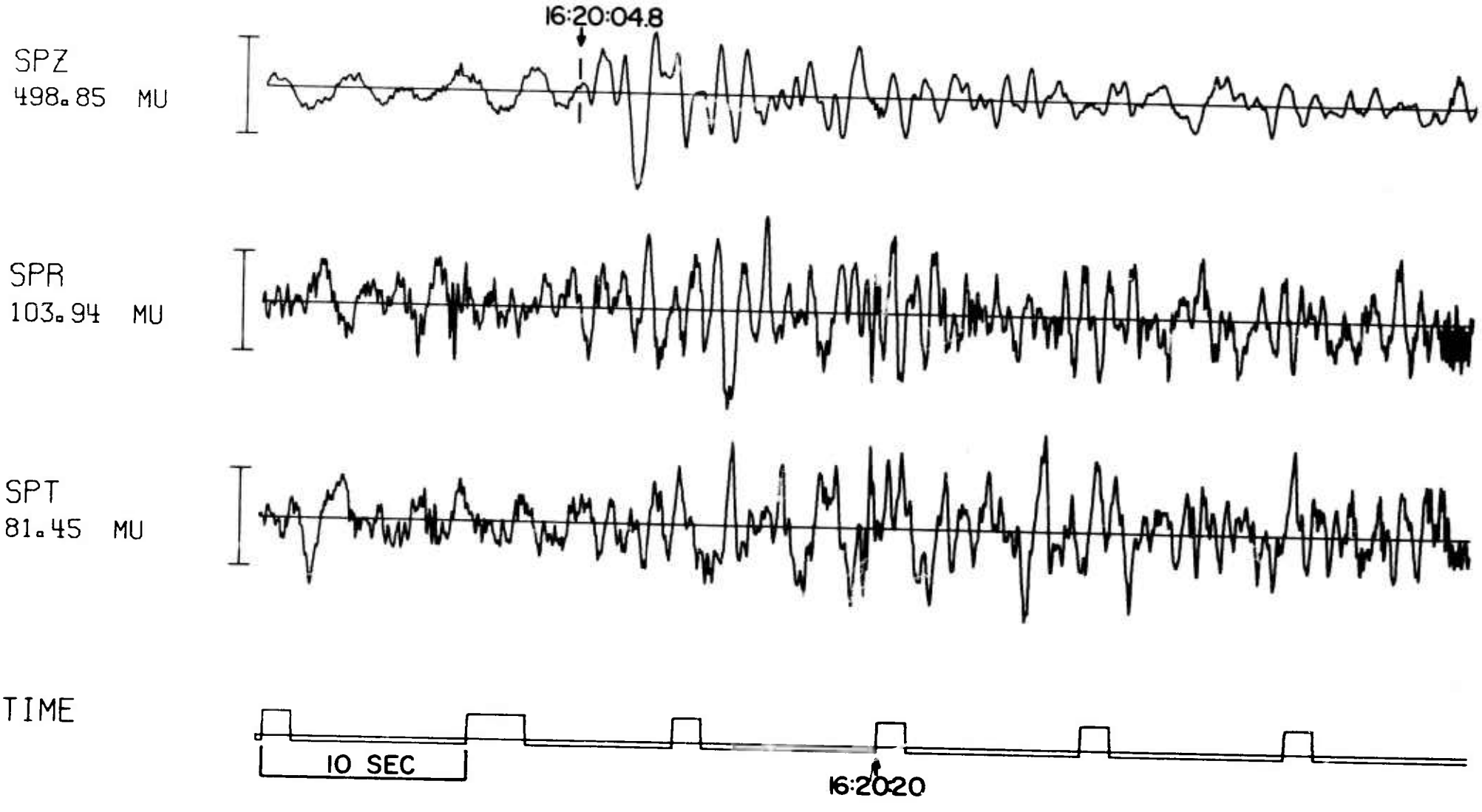

FN-WV 21 DEC 75
16:19:33.7
SPZ
21.56 MU
SPR
12.90 MU
SPT
13.15 MU
TIME
10 SEC
16:19:40

WH2YK 21 DEC 75



CPSO 21 DEC 75

9<

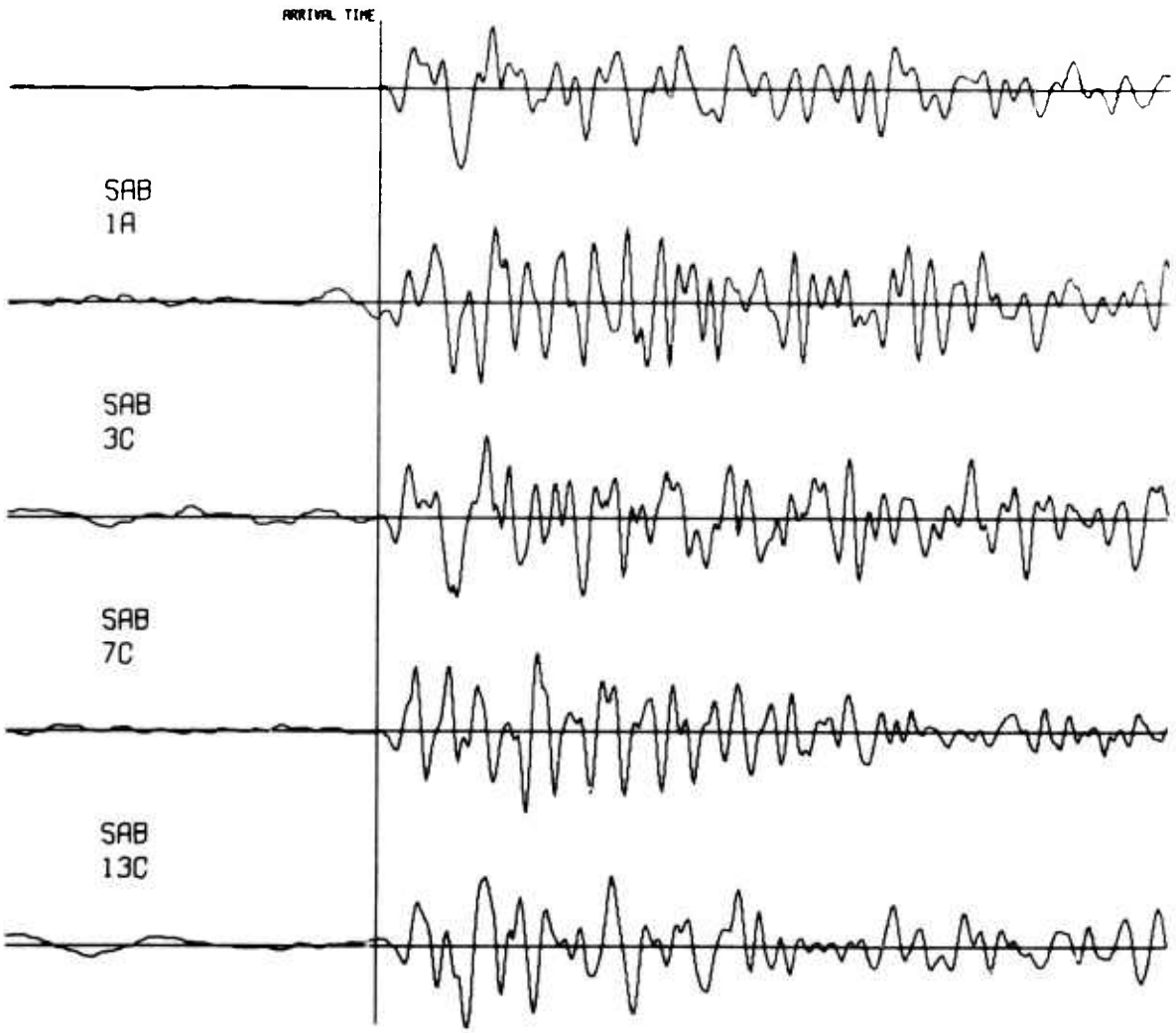


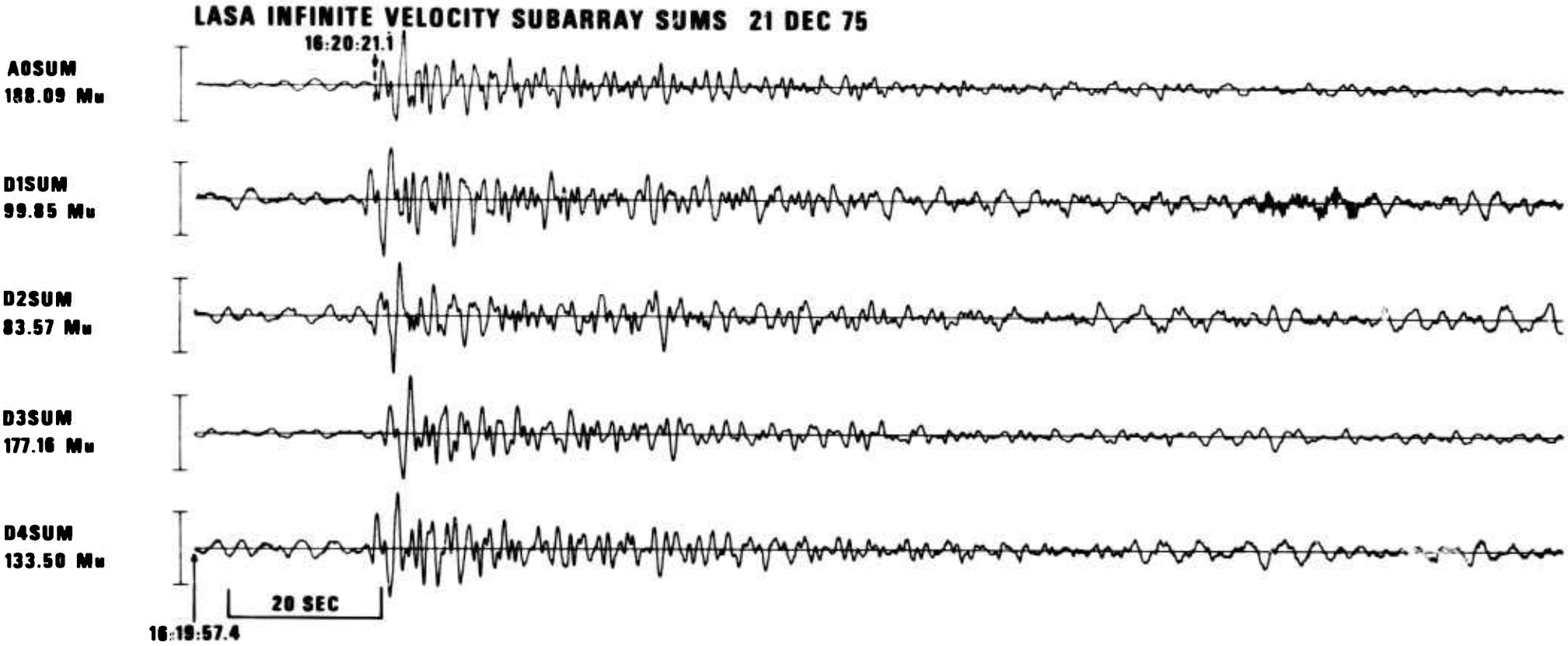
NORSAR EVENT FILE 1975 DEC 21

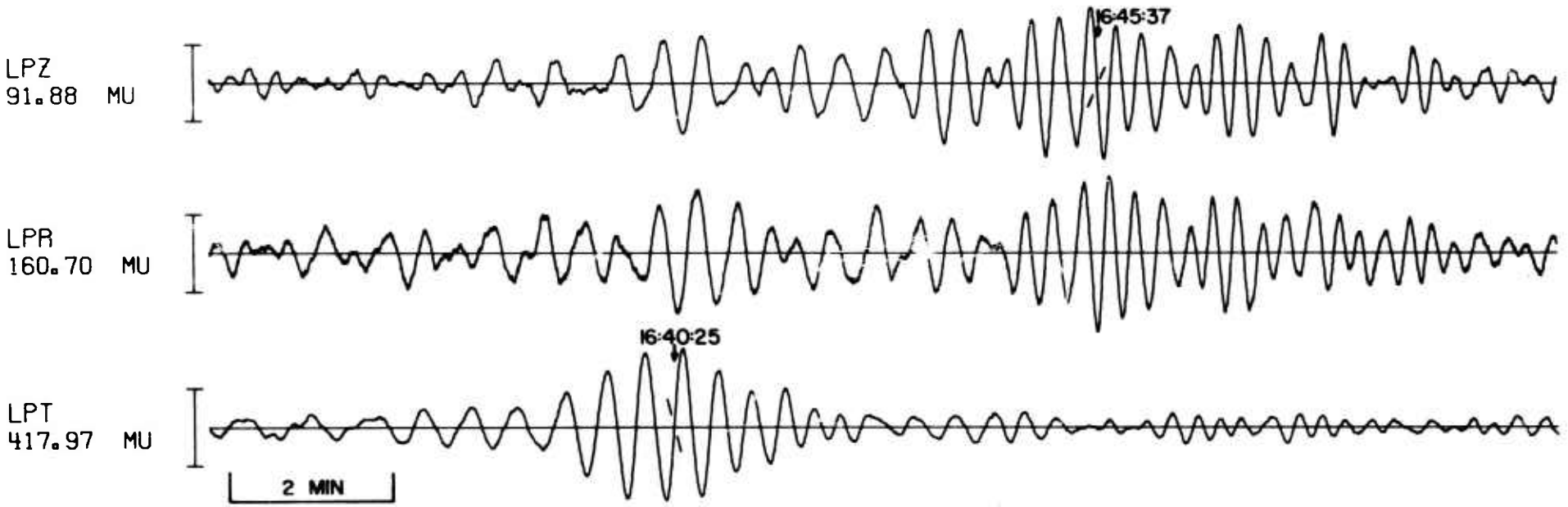
EPX NO. 64590 ARR. 16.13.0.7 41.0N 20.5E 4.6MB 33KM

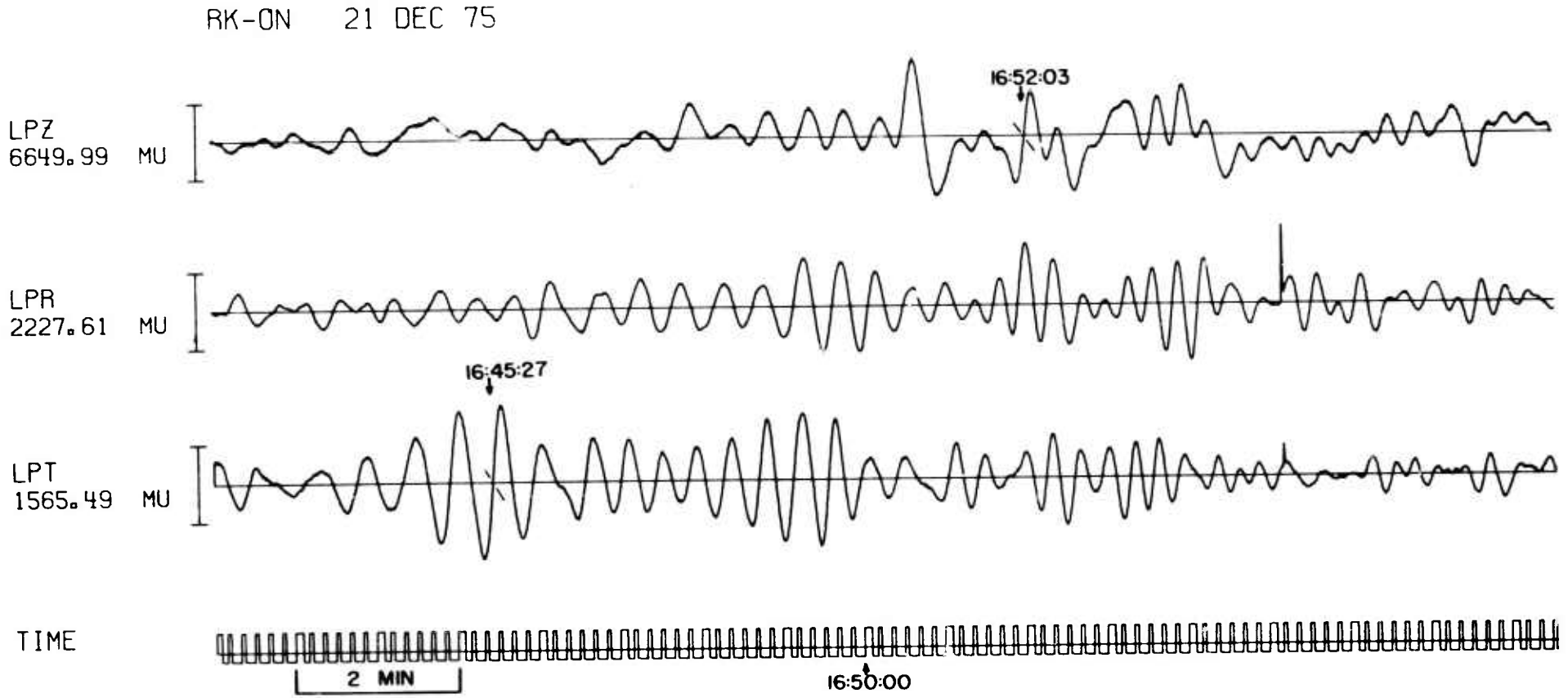
DIST = 20.7 AZI = 158.9 AMP = 39.2 PER = 1.2

= 5 SECONDS

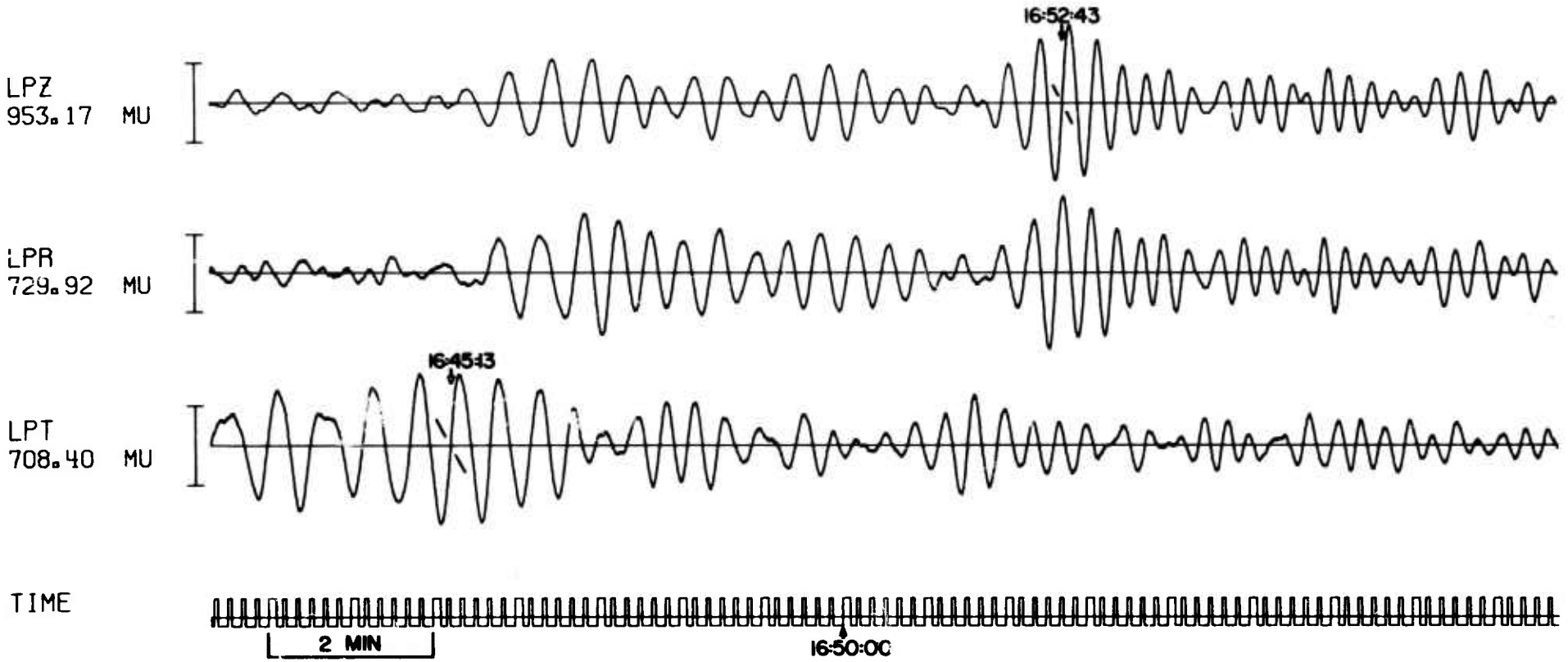


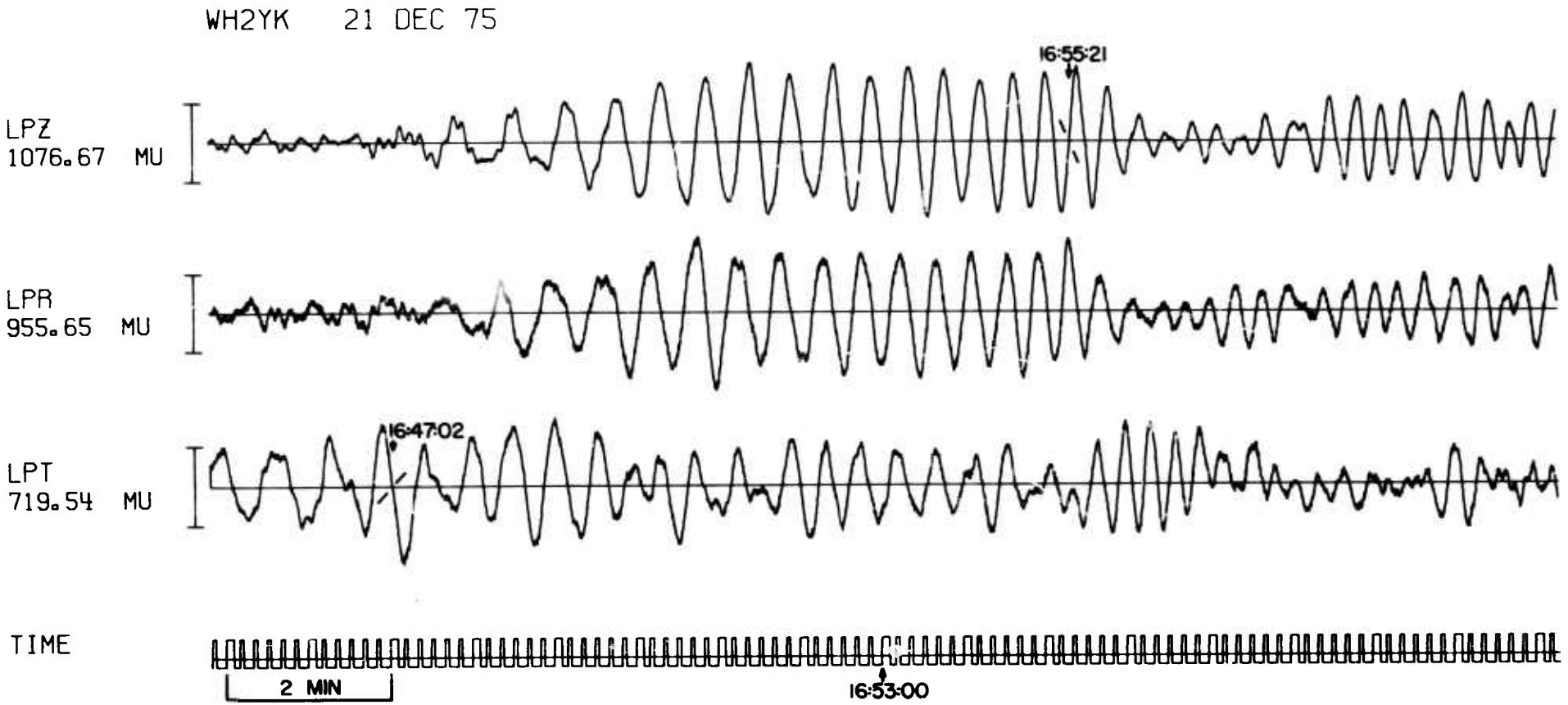

LASA INFINITE VELOCITY SUBARRAY SUMS 21 DEC 75
16:20:21.1
A0SUM
188.09 Mu
D1SUM
99.85 Mu
D2SUM
83.57 Mu
D3SUM
177.16 Mu
D4SUM
133.50 Mu
20 SEC
16:19:57.4

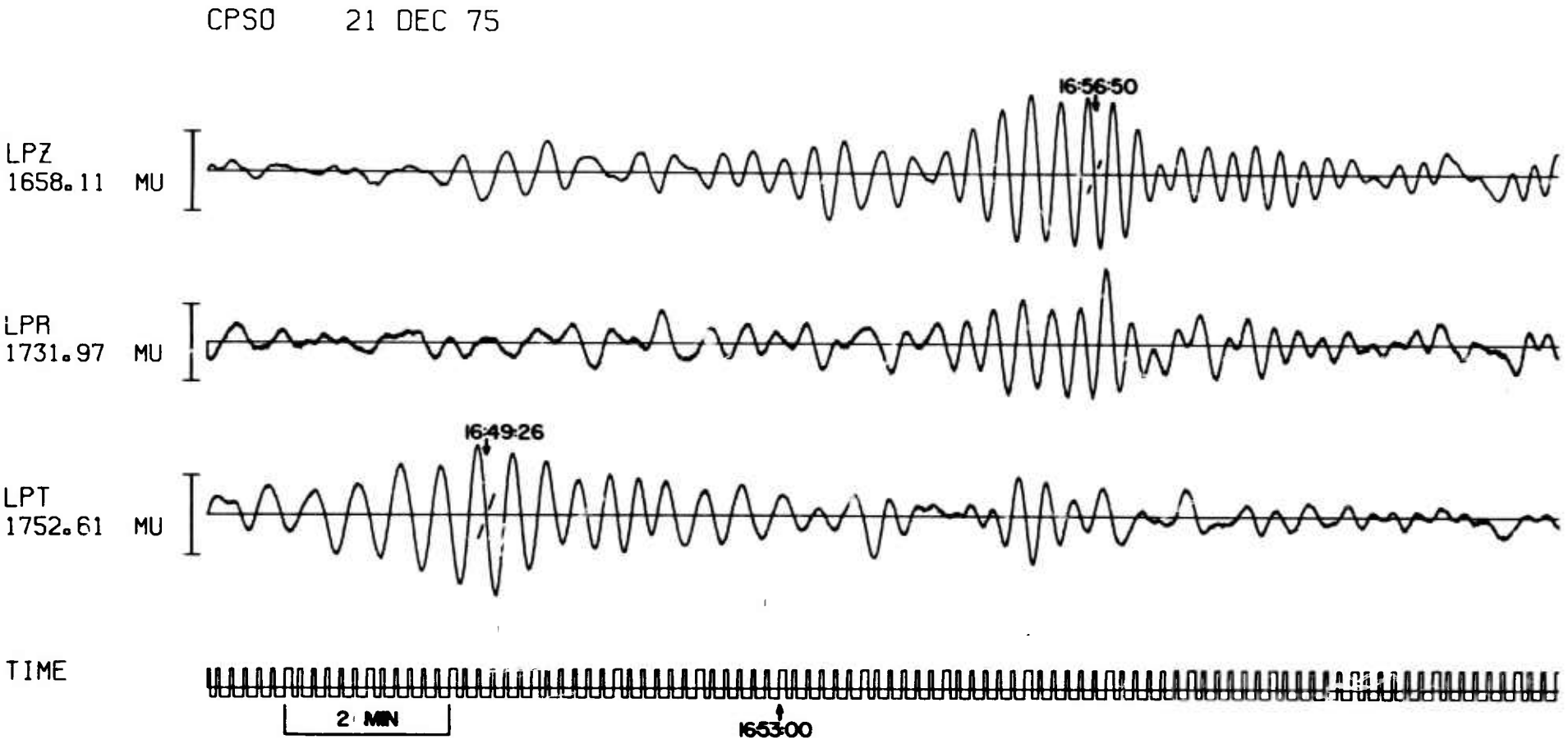

HN-ME 21 DEC 75
LPZ
91.88 MU
16:45:37
LPR
160.70 MU
LPT
417.97 MU
16:40:25
2 MIN


RK-ON 21 DEC 75
LPZ
6649.99 MU
16:52:03
LPR
2227.61 MU
LPT
1565.49 MU
16:45:27
TIME
2 MIN
16:50:00

FN-WV 21 DEC 75




WH2YK 21 DEC 75
16:55:21
LPZ
1076.67 MU
LPR
955.65 MU
16:47:02
LPT
719.54 MU
TIME
2 MIN
16:53:00


CPSO 21 DEC 75
16:56:50
LPZ
1658.11 MU
LPR
1731.97 MU
16:49:26
LPT
1752.61 MU
TIME
2 MIN
16:53:00

ARRAY LONG PERIOD VERTICAL BEAMS 21 DEC 75