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(SDCS)

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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
NTS Event 'CHESHIRE', 14 February 1976.

10
K.J. Hill, M.S. Dawkins, and M.D. Gillispie
Alexandria Laboratories

Teledyne Geotech, 314 Montgomery Street, Alexandria, Virginia 22314

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June 1976

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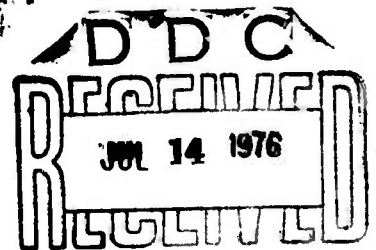
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SDCS EVENT REPORT NO. 87

NTS Event "CHESHIRE", 14 February 1976

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	11:41:32.2	11:30:04	38 N	115 W	5.6	N/A

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

11:30:00.8	37.2N	116.4W	5.6	5.5
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The programs used for LASA, NORSAR and ALPA data recovery are presently undergoing modifications. Information for LASA short-period is reported from their Teleseism Event Report; NORSAR short-period data is obtained from their bulletin. The long-period array beam recovery for these stations will be resumed upon completion of these modifications.

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. Short-period data for HN-ME and WH2YK were retrieved from the field station digital tapes. All SP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal SP channels at all SDCS stations were rotated.

Long-period signals were recorded at all SDCS stations. Long-period data for HN-ME and WH2YK were retrieved from the field station digital tapes. All LP channels at HN-ME and the LP radial channel at RK-ON had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal LP channels at all SDCS stations were rotated.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

- a -

STATION DESCRIPTION

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

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

HYPOCENTER DETERMINATION

INPUT FOR EVENT 14 FEB 76
 11:30:00.0 37.000N 116.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST	REST	REST
LAO	11 32 54.3	0.0	0.1	12.1	35.2
RK-ON	11 34 46.6	-0.4	-0.5	21.2	42.6
CPSO	11 35 22.9	-0.7	-0.5	24.8	84.3
WH2YK	11 35 37.8	0.2	0.4	26.3	339.3
FN-WV	11 36 02.4	0.7	0.7	29.0	75.9
HN-ME	11 37 09.7	0.7	0.6	36.8	60.3
NAO	11 41 32.2	-0.5	-0.8	73.3	24.0

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
11:30:05.2	37.260N	116.300W	26. CALC	0.6	3	7
11:30:00.8	37.159N	116.376W	0. REST	0.6	3	7

CALC				REST			
1	.	1		1	.	1	
0	.	0		0	.	0	
0	0.	3	2	0	0.	3	2
.	.	.	.	.	.	.	.
0	0.	0	0	0	0.	0	0
0	.	0		0	.	0	
0	.	0		0	.	0	

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.68
 MAJOR 61.8KM. MINOR 38.0KM. AZ= 31 AREA= 7368 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 14 FEB 76
11:30:00.0 37.000N 116.000W 0KM.

STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST.
		TIME					MB	MS		
LAO	EP	11 32 54.3		SAB	99.9	9999.				
RK-CN	EP	11 34 46.6		SPZ	0.9	243.	5.20			21.2
RK-ON	LQ	11 42 19.0		LPT	15.0	213.				
RK-ON	LR	11 43 41.0		LPZ	13.0	1144.		5.50		21.2
CPSO	EP	11 35 22.9		SPZ	0.9	1204.	6.24			24.8
CPSO	LQ	11 43 43.0		LPT	17.0	616.				
CPSO	LR	11 45 26.0		LPZ	13.0	2761.		5.96		24.8
WH2YK	EP	11 35 37.8		SPZ	1.0	116.	5.20			26.3
WH2YK	LQ	11 44 47.0		LPT	20.0	477.				
WH2YK	LR	11 46 47.0		LPZ	17.0	848.		5.47		26.3
FN-WV	EP	11 36 02.4		SPZ	0.6	65.	5.11			29.0
FN-WV	LQ	11 45 56.0		LPT	19.0	698.				
FN-WV	LR	11 48 01.0		LPZ	15.0	1419.		5.73		29.0
HN-ME	EP	11 37 09.7		SPZ	1.0	642.	6.03			36.8
HN-ME	LQ	11 49 58.0		LPT	18.0	392.				
HN-ME	LR	11 52 56.0		LPZ	16.0	229.		5.05		36.8
NAO	EP	11 41 32.2		AB	0.8	120.	5.65			73.3

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LP MAG	LP SDV	LP STA
11:30:05.2	37.260N	116.300W	26. CALC	5.54	0.49	6	5.47*****		1
11:30:00.8	37.159N	116.376W	0. REST	5.57	0.48	6	5.47*****		1

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

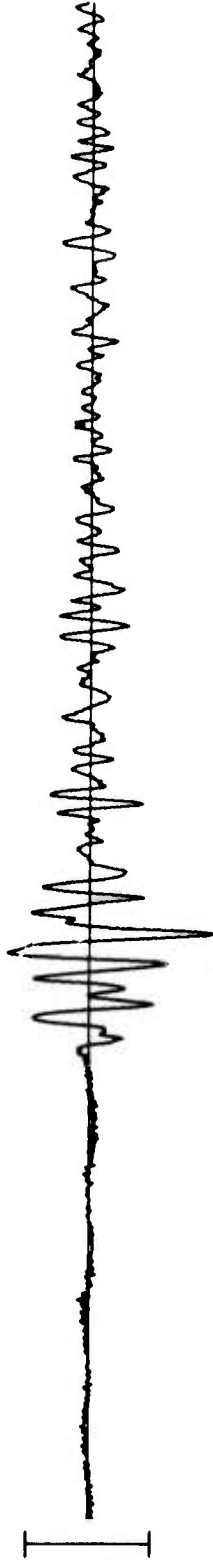
RK-ON 14 FEB 76

SPZ
204.66 MU

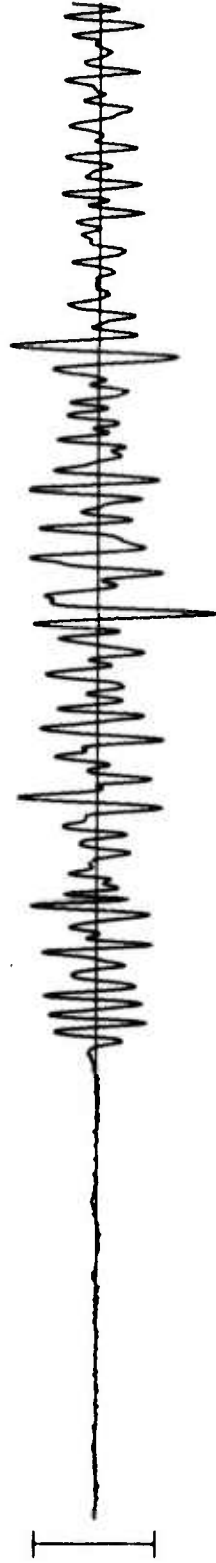
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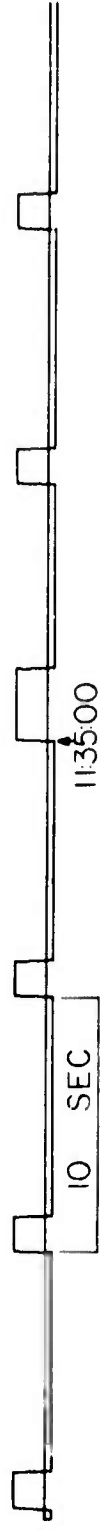
SPR
151.47 MU



SPT
36.75 MU



TIME



TIME CORRECTION -1.0 SECOND

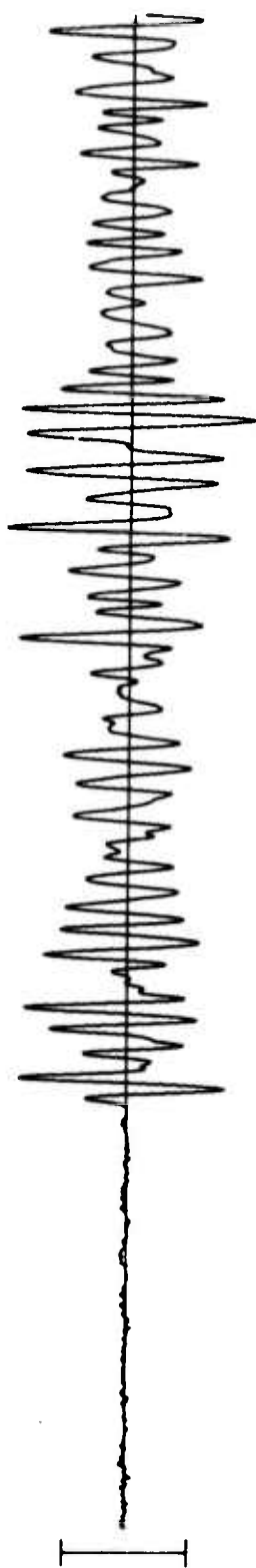
CPS0 14 FEB 76

SPZ
691.20 MU

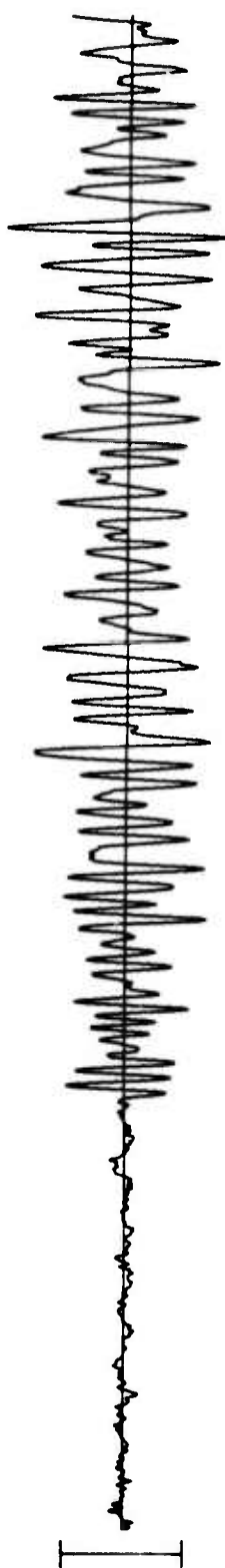
11:35:22.9



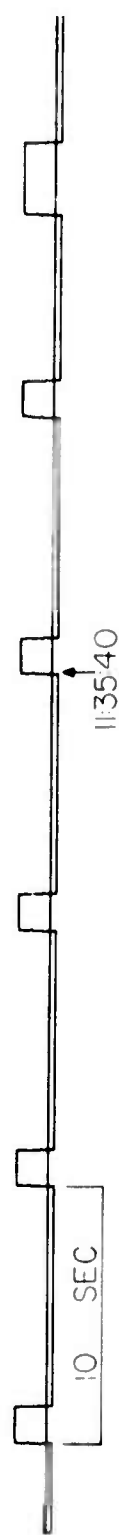
SPR
166.70 MU



SPT
103.86 MU



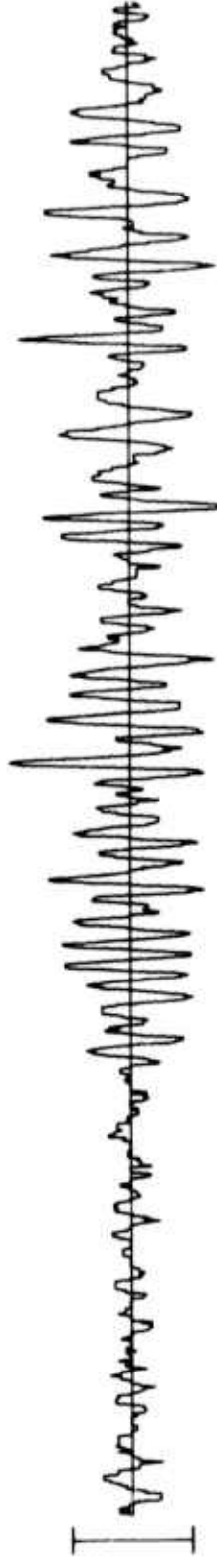
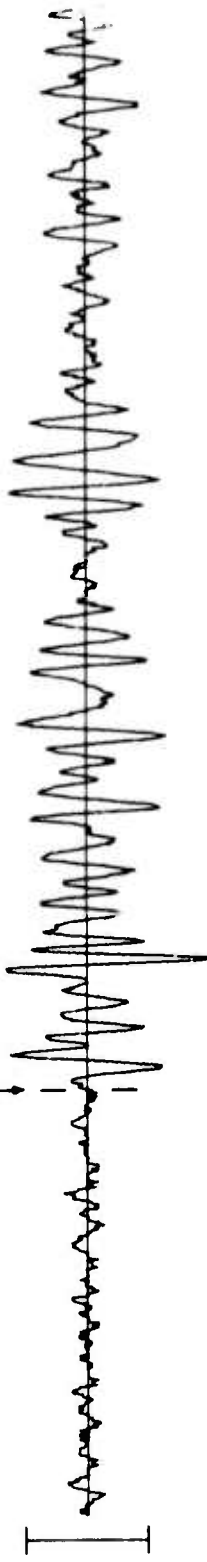
TIME



11:35:40

WH2YK 14 FEB 76

1135:37.8



10 SEC

FN-WV 14 FEB 76

11:36:02.4

SPZ
70.79 MU



SPR
8.01 MU



SPT
48.60 MU



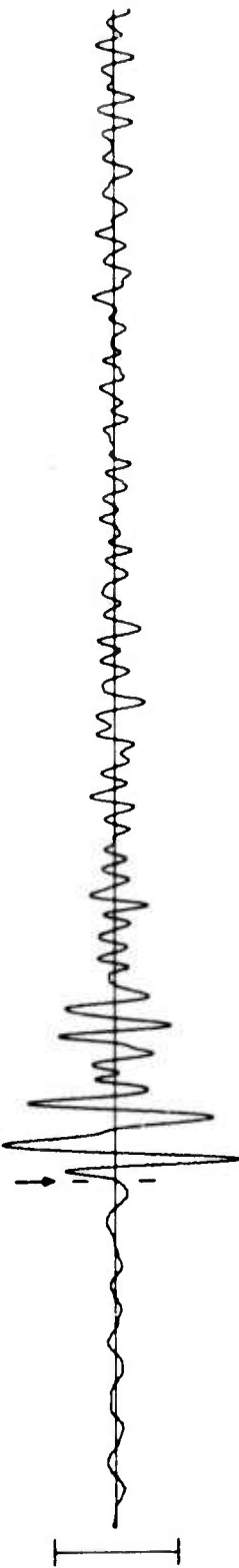
TIME



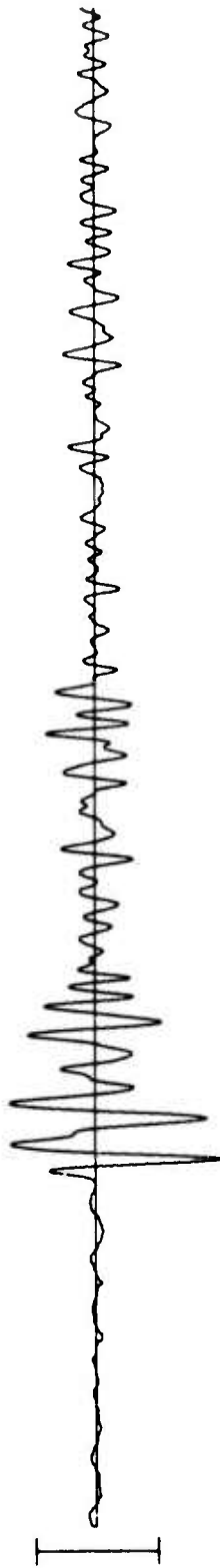
HN-ME 14 FEB 76

SPZ
336.00 MU

11:37:09.7

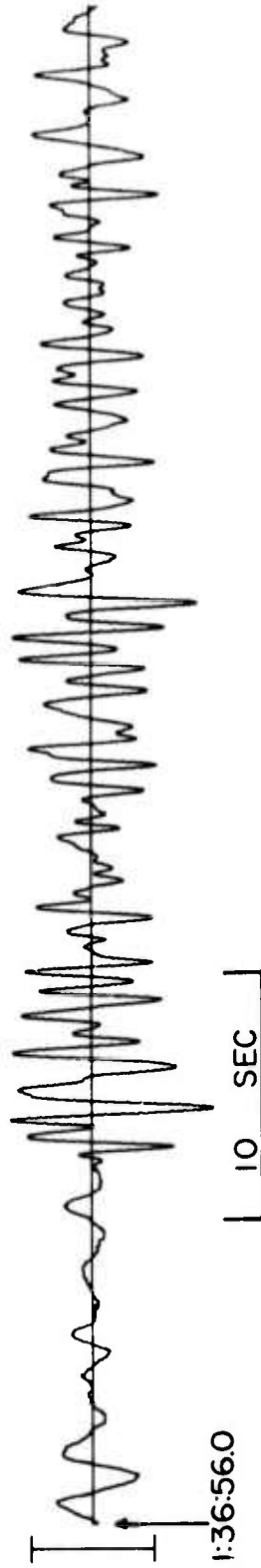


SPR
229.00 MU



SPT
91.00 MU

11:36:56.0



RK-QN 14 FEB 76

LPZ
3176.66 MU

11:43:42 • (UNCORRECTED)

LPR
2365.85 MU

• (UNCORRECTED) 11:42:20

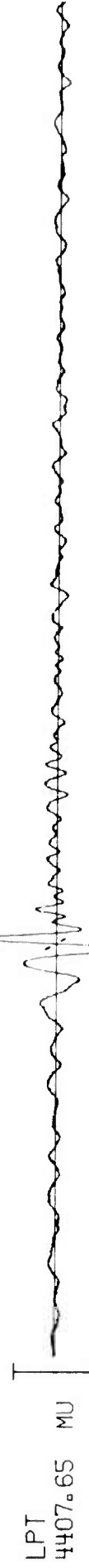
LPT
1382.30 MU

TIME

2 MIN

11:40:00 • TIME CORRECTION -1.0 SECOND

CPSU 11 FEB 76

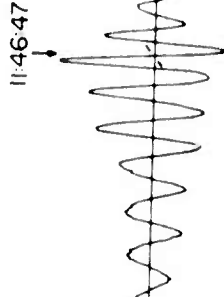


TIME

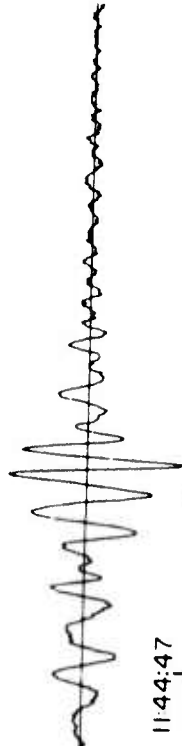


WH2YK 14 FEB 76

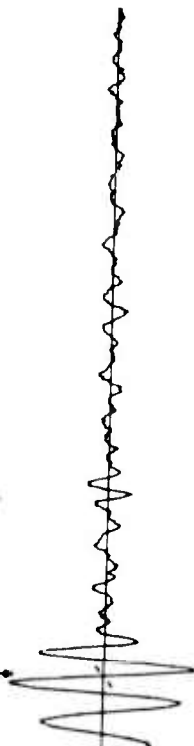
LPZ
6612.00 MU



LPR
5143.00 MU



LPT
4847.00 MU



2 MIN

FN-WV 14 FEB 76

LPZ
7043.30 MU

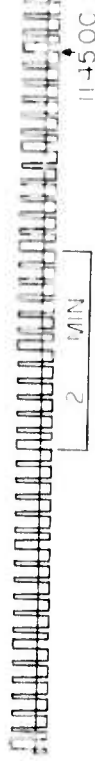
11:48:01

LPR
5385.27 MU

11:45:56

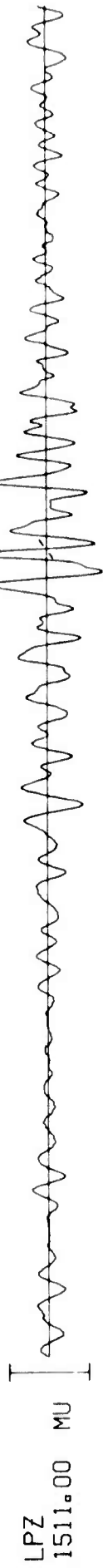
LPT
5509.14 MU

TIME

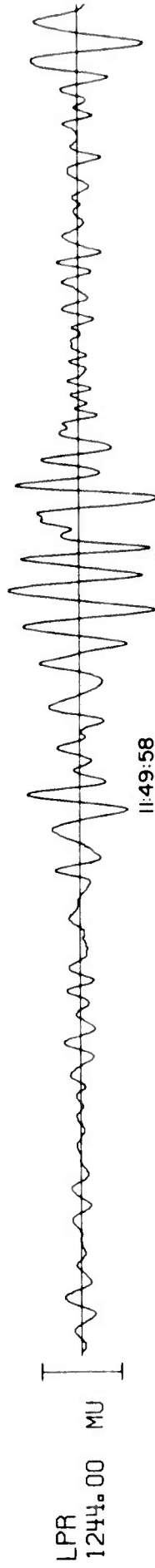


HN-ME 14 FEB 76

11:52:56



11:49:58



2 MIN