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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT,
NTS EVENT 'TOPGALLANT', 28 FEBRUARY 1975

J. R. Woolson, et al

Teledyne Geotech

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NTS Event "TOPGALLANT", 28 February 1975

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September 1975

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SDCS Event Report No. 9

NTS Event "TOPGALLANT", 28 February 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	15:14:57	36 N	115 W	5.7	N/A
LASA	N/A	N/A	N/A	N/A	N/A
PDE	15:15:00	37.1N	116.1W	5.7	N/A
Hagfors Array, Sweden	15:14:54	36 N	118 W	5.9	4.3

Using WH2YK, HN-ME, TFO, LASA and NORSAR, the epicenter location becomes

SDCS & Arrays	15:15:01	37.1N	116.0W	5.5	4.4
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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.

RK-ON and FN-WV were not operational for this event. Data recorded at CPSO was unusable and the long-period vertical at HN-ME was effectively inoperative. The data for LASA and TFSO were obtained from individual sensors due to the proximity of those stations to the hypocenter. Long-period data for the arrays was unrecoverable.

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES		ELEVATION METERS	INSTRUMENTATION	
		DEG	MN SECS		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 52	58.0 N 079 50 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

Notes:

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

FN-WV, RK-ON, WH2YK and HN-ME horizontal instruments are oriented radial and transverse to the Nevada Test Site. CPSO is oriented N-S and E-W. LASA, NORSAR and ALPA beams have been rotated to radial and transverse with respect to the event location.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 28 FEB 75
 15:15:00.0 37.000N 116.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.	
		CALC	REST		REST	REST
TFO	15 16 14.8	-0.0	-0.0	4.8	124.8	
LAC	15 17 52.9	-0.1	-0.1	12.0	34.3	
WH2YK	15 20 39.3	0.2	0.2	26.5	339.0	
HN-ME	15 22 08.1	0.4	0.4	36.6	60.2	
NAO	15 26 32.4	-0.5	-0.5	73.2	24.2	

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
15:15:01.7	37.115N	116.033W	3. CALC	0.3	2	5
15:15:01.2	37.114N	116.044W	0. REST	0.3	2	5

CALC

1	.	1
0	.	0
0	0.	1
.	.	.
0	0.	1
0	.	0
0	.	0

REST

1	.	1
0	.	0
0	0.	1
.	.	.
0	0.	1
0	.	0
0	.	0

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF. LEVEL, SDV= 1.90
 MAJOR 64.2KM. MINOR 31.3KM. AZ= 57 AREA= 6313 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 28 FEB 75
 15:15:00.0 37.000N 116.000W OKM.

STA.	PHASE	ARRIVAL			INST	PER	A/T	MAGNITUDE		DIP	DIST
		TIME						MB	MS		
TFO	M EP	15	16	14.8	Z6CL	0.4	627.	5.84			4.8
LAO	EP	15	17	52.9	SPZ	0.6	9999.				
WH2YK	EP	15	20	39.3	SPZ	1.2	104.	5.16			26.5
WH2YK	LQ	15	29	53.0	LPT	18.0	126.				
WH2YK	LR	15	32	10.0	LPZ	18.0	71.		4.39		26.5
HN-ME	EP	15	22	08.1	SPZ	1.0	168.	5.47			36.6
HN-ME	E	15	34	53.0	LPT	20.0	11.				
HN-ME	E	15	37	29.0	LPR	23.0	20.				
NAO	EP	15	26	32.4	AB	1.3	187.	5.85			73.2

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPMAG	LPSDV	LPSTA
15:15:01.7	37.115N	116.033W	3. CALC	5.49	0.34	3	4.39*****		1
15:15:01.2	37.114N	116.044W	0. REST	5.50	0.34	3	4.39*****		1
TFO	NOT USED IN CALC RUN SP AVG. MAG.								
TFO	NOT USED IN REST RUN SP AVG. MAG.								

WH2YK 28 Feb 75



SPZ
62.4 m μ



SPR
73.2 m μ



SPT
91.1 m μ

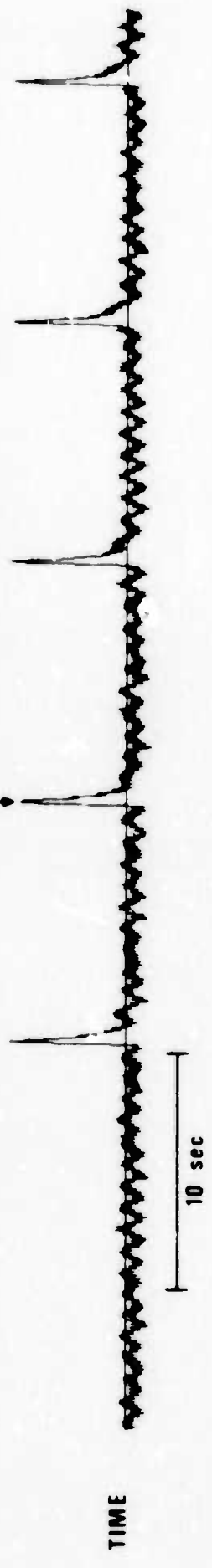
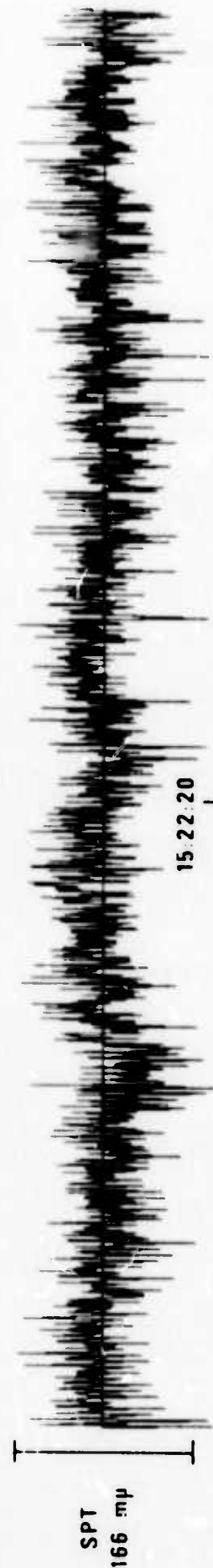
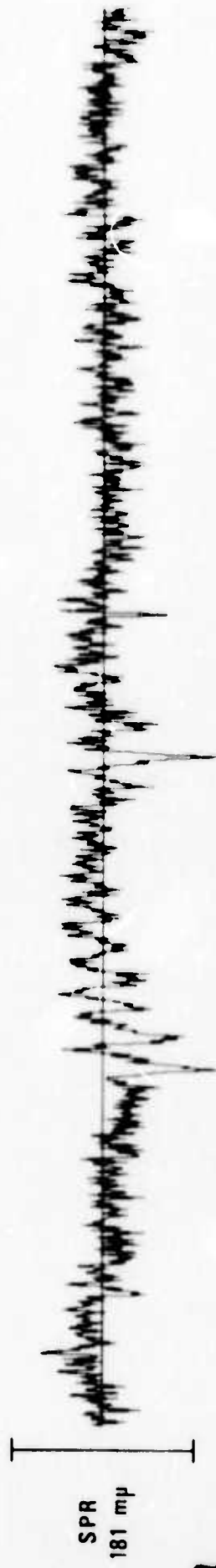
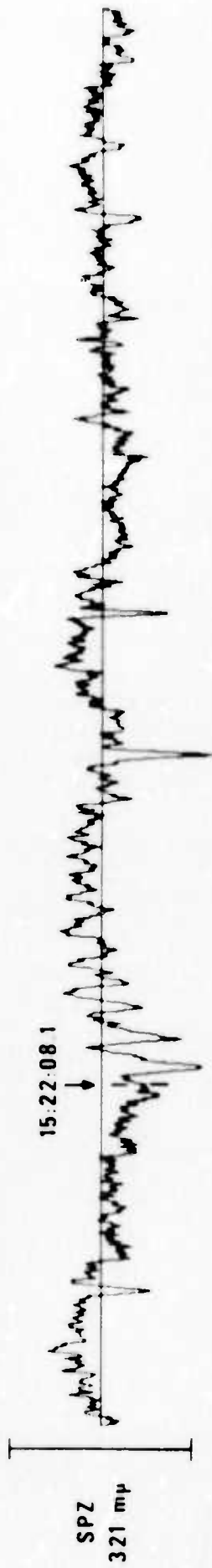


TIME

10 sec

6.

HN-ME 28 FEB 75



7.

LASA

1 28 FEB 1975

2 15 15 22 38.6N 115.9W

3 15 17 55.0 LAO P

OG 8 5.5 37 NEVADA

115.8 1.1 8.2 10.7 225.3

EPX 1

BP-8 0.6-2.0 HZ

ABN 78

15.17.45.0

AB 140

FAB 130

PAB1 120

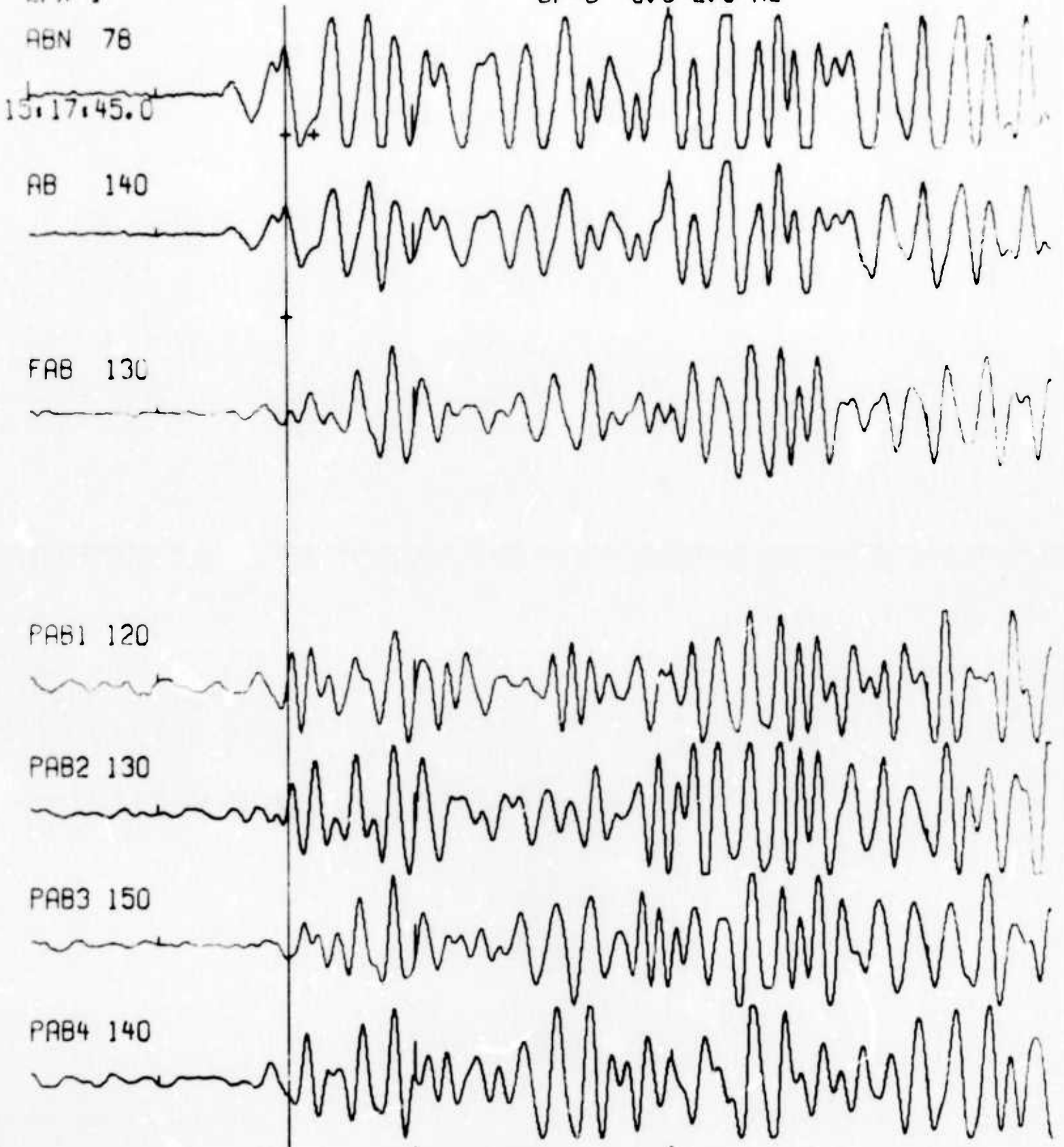
PAB2 130

PAB3 150

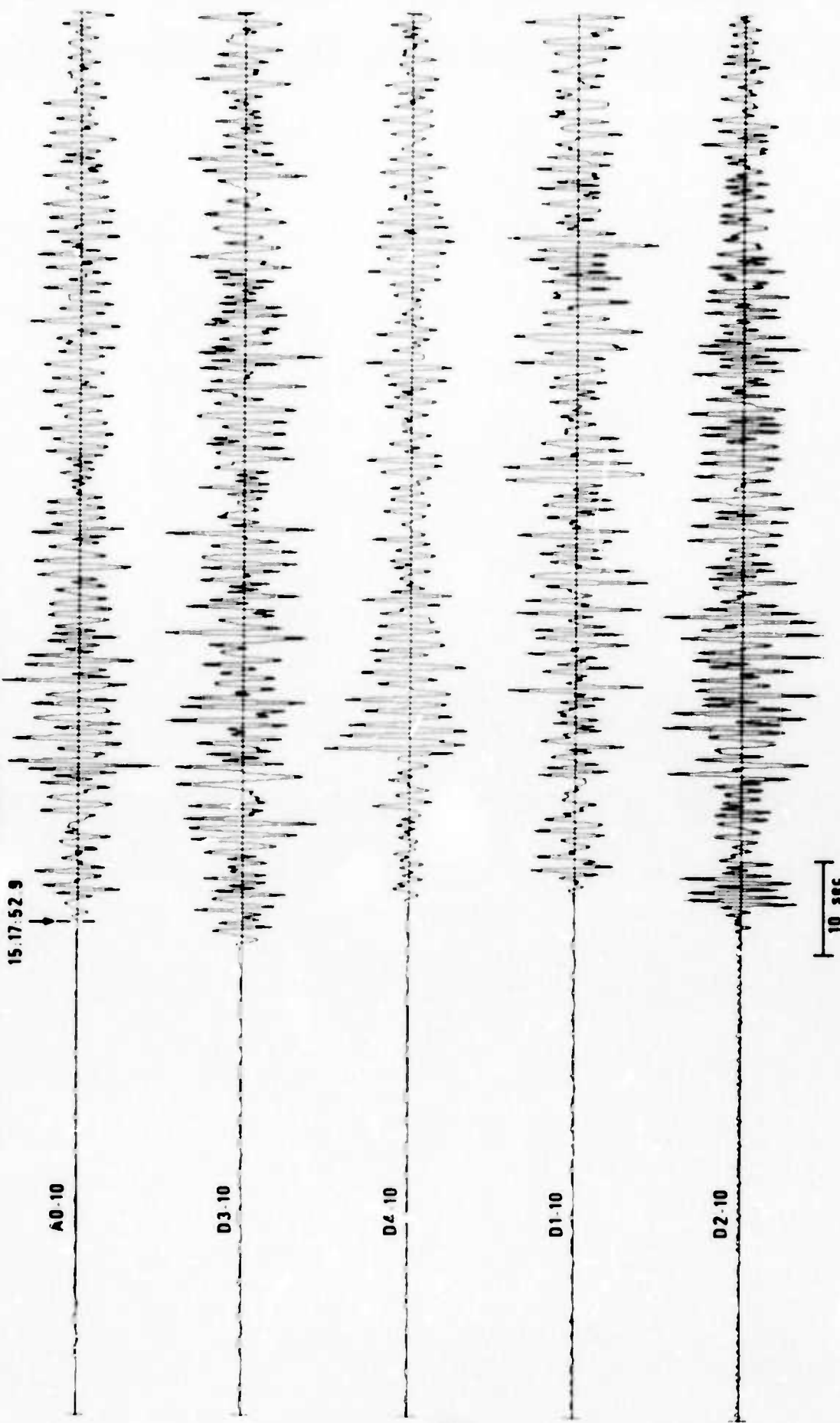
PAB4 140

10 sec

8.



LASA (INDIVIDUAL SHORT PERIOD INSTRUMENTS) 28 FEBRUARY 75



(NO AMPLITUDE DETERMINATIONS MADE DUE TO UNRESOLVED SCALING PROBLEMS)

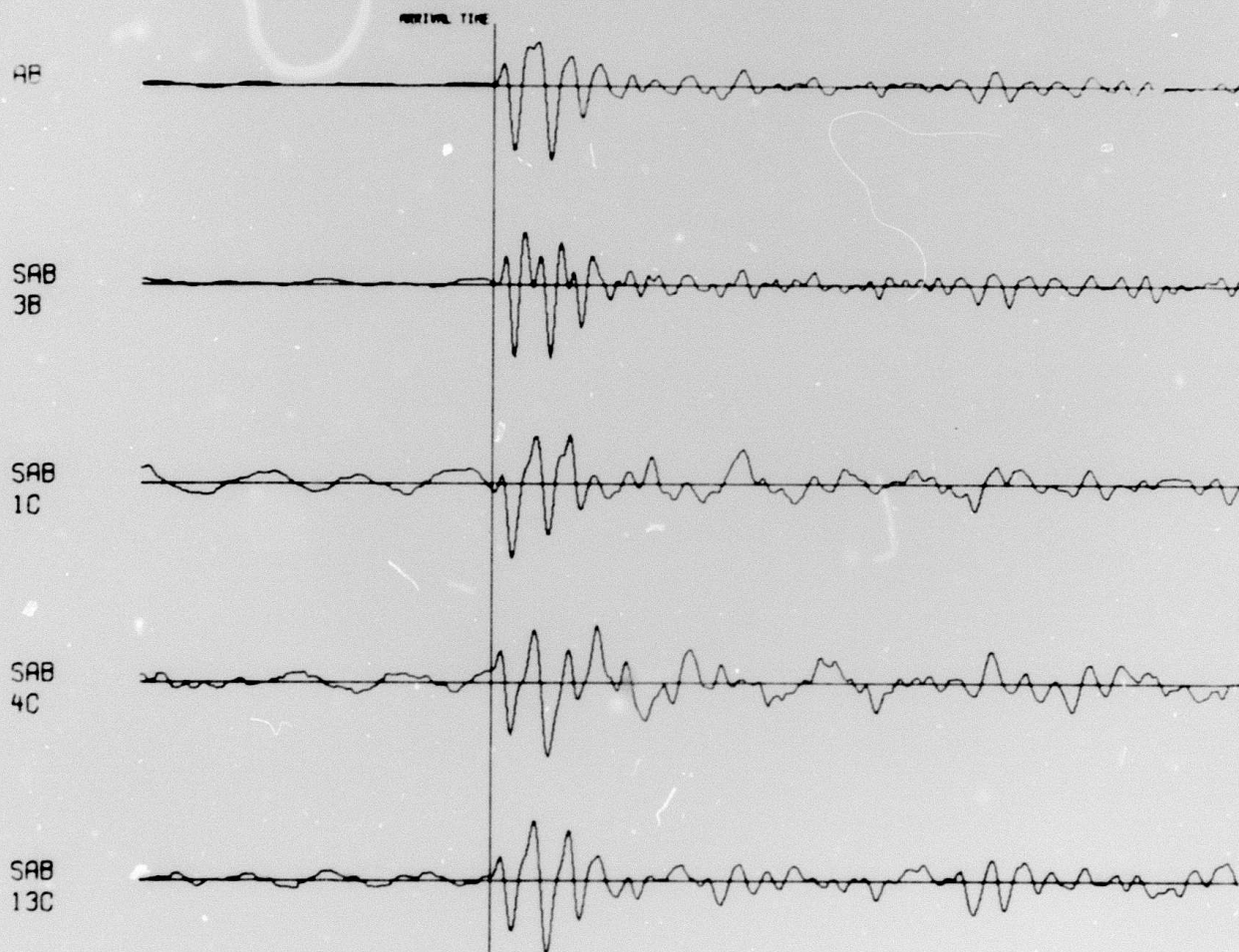
NORSAR EVENT FILE

1975 FEB 28

EPX NO. 68290 ARR. 15.26.32.4 36.3N 115.3W 5.4MB 33KM

LIST = 72.7 AZI = 317.1 AMP = 56.0 PER = 1.3 UMETH 2

— = 5 SECONDS



TFSO SHORT PERIOD 28 FEBRUARY 75

15:16:00

TCDMG

MS

BFU 2.7 K

Z60SP 960 K

N60SP 960 K

E60SP 800 K

Z60LL 5 K

N60LL 7 K

E60LL 5 K

Z60SL 160 K

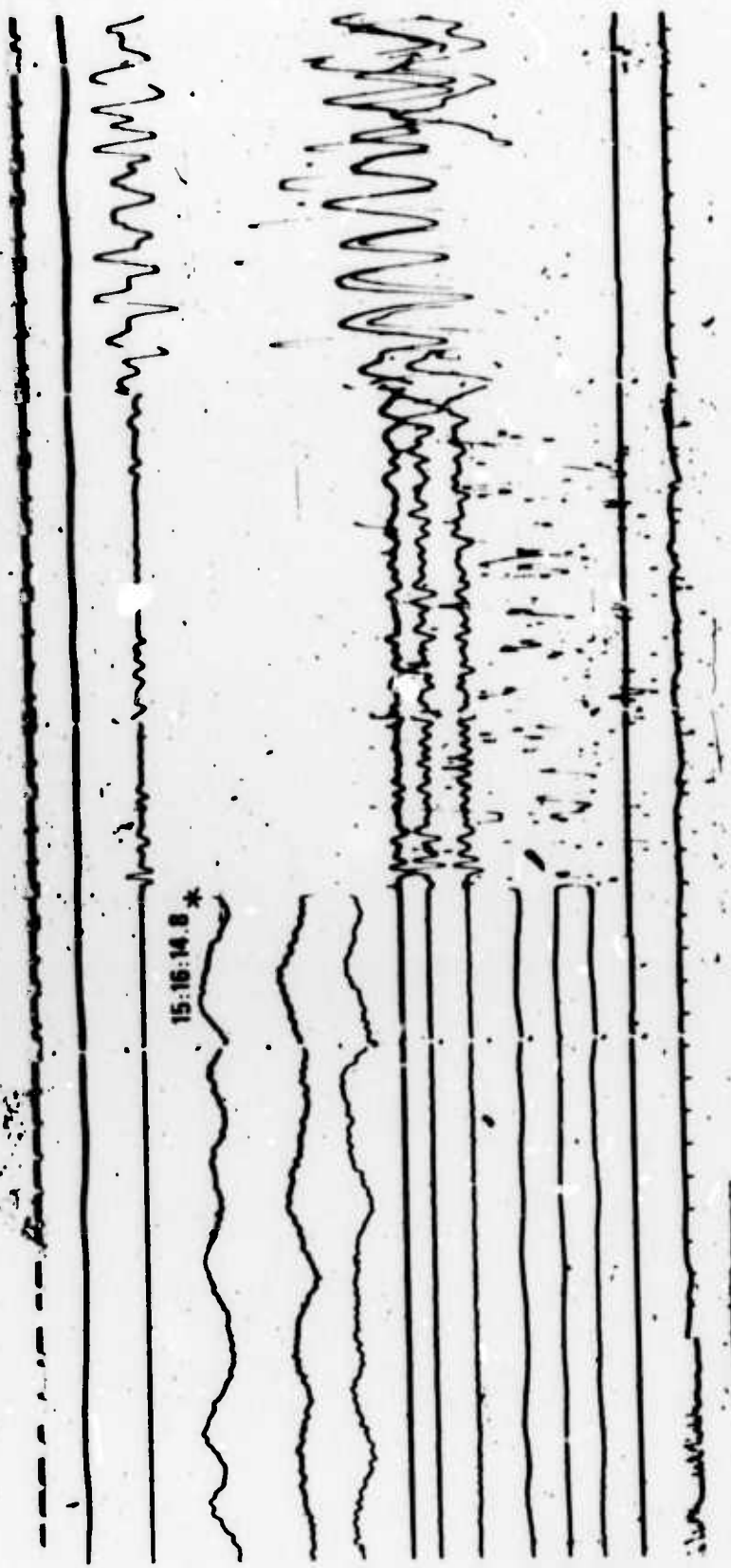
N60SL 120 K

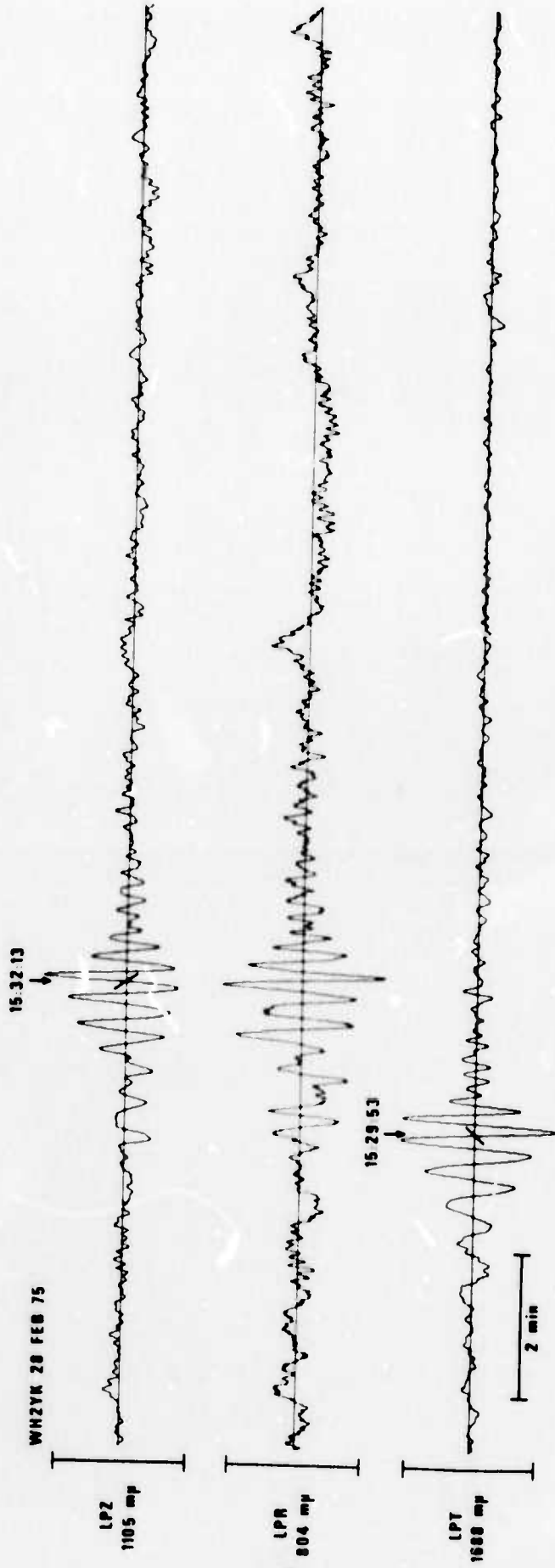
E60SL 120 K

WI

WWV

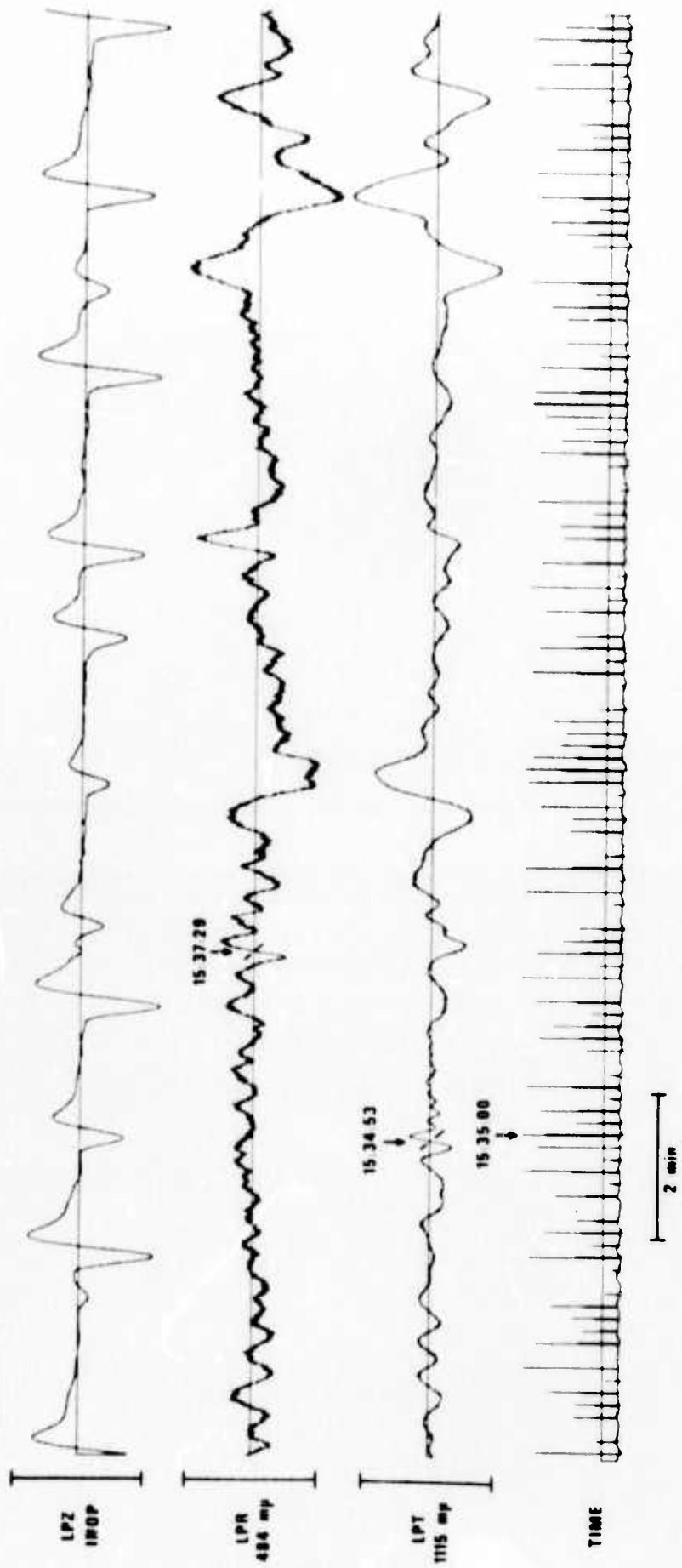
15:16:14.8 *





12.

HW-ME 28 FEB 75



13.

TFSO LONG PERIOD 28 FEBRUARY 75

