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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT.
NOVAYA ZEMLYA, 23 AUGUST 1975

J. R. Woolson, et al

Teledyne Geotech

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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Novaya Zemlya, 23 August 1975

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December 1975

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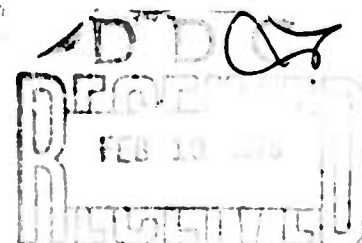
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SDCS Event Report No. 34

Novaya Zemlya, 23 August 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	Latitude	Longitude	m _b	M _s
NORSAR	09:04:36.4	08:59:55	73 N	056 E	5.8	N/A
Hagfors	09:04:34.0	09:00:21	74 N	046 E	5.4	N/A

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

08:59:58.6 73.1N 054.7E 6.3 4.5

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. The NORSAR short-period waveforms were not recoverable, P arrival obtained from weekly summary.

Long-period signals were recorded at WH2YK, HN-ME, FN-WV, CPSO, ALPA and NORSAR. Horizontal LP channels at all SDCS stations, except HN-ME, were rotated. Horizontal LP channels at HN-ME were not rotated due to unknown operating gains. The long-period system at RK-ON was inoperative due to maintenance. LASA long-period array data were not recoverable.

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

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

ADDITIONAL INFO

HTB	DATE	BY
CC	TIME	
REMARKS		
107		
BY		

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 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

Note: The orientation of the radial instruments at FN-WV is assumed to be 316° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 23 AUG 75
09:00:00.0 73.001N 54.000E 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CAIC	REST	REST	REST
NAC	09 04 36.4	0.0	-0.0	20.4	256.4
WH2YK	09 08 24.7	-0.2	-0.2	46.4	6.6
RK-CN	09 09 25.5	-0.7	-0.8	54.5	335.9
HN-ME	09 09 28.4	0.2	0.2	54.7	314.2
LAC	09 10 05.2	1.1	1.1	59.8	344.9
FN-WV	09 10 35.2	0.5	0.6	64.3	321.4
CPO	09 10 59.2	-0.9	-0.7	68.3	325.9

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LCNG.	DEPTH (KM)	SDV	IT	STA
08:59:54.1	73.218N	54.403E	-37. CAIC	0.7	4	7
08:59:58.6	73.062N	54.697E	0. REST	0.7	2	7

CAIC			REST		
2	.	1	2	.	1
3	.	0	3	.	0
0	0.	0	0	0.	0
.
0	1.	0	0	1.	0
0	.	0	0	.	0
0	.	0	0	.	0

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.16
MAJOR 169.9KM. MINOR 26.3KM. AZ= 136 AREA= 14030 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 23 AUG 75
 09:00:00.0 73.001N 54.000E OKM.

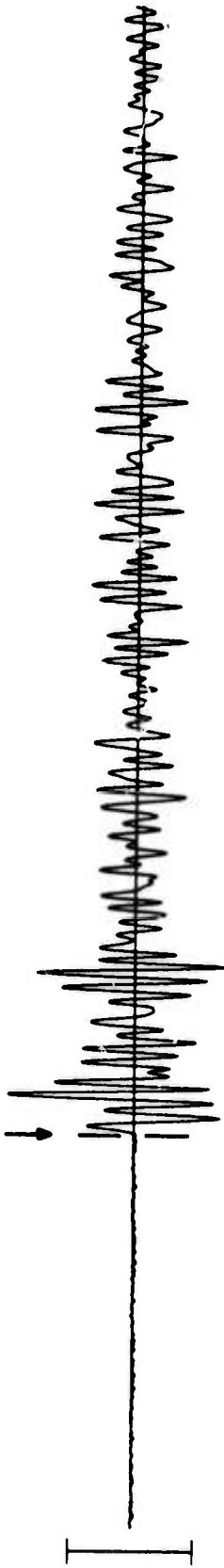
STA.	PHASE	ARRIVAL		INST	FER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
NAC	EP	09 04	36.4	AB	0.8	896.	5.70			20.4
NAC	LR	09 15	04.0	LAB	15.0	1705.		5.66		20.4
AIPA	LQ	09 20	38.0	IAB	24.0	19.				
AIPA	LR	09 26	05.0	LAB	18.0	26.		4.15		41.2
WH2YK	EP	09 08	24.7	SPZ	0.5	287.	5.99			46.4
WH2YK	LQ	09 23	55.0	IPT	27.0	21.				
WH2YK	LR	09 31	30.0	LPZ	18.0	27.		4.25		46.4
FK-CN	EP	09 09	25.5	SPZ	0.7	CLIPPED				
HN-ME	EP	09 09	28.4	SPZ	0.9	1123.	6.55			54.7
HN-ME	LR	09 35	18.0	LPZ	17.0	93.		4.83		54.7
IAC	EP	09 10	05.2	SPZ	1.1	1089.	6.54			59.8
FN-NV	EP	09 10	35.2	SPZ	0.9	629.	6.50			64.3
FN-WV	LQ	09 33	57.0	LPT	27.0	31.				
FN-WV	LR	09 39	45.0	LPZ	18.0	59.		4.70		64.3
CFC	EP	09 10	59.2	SPZ	0.8	CLIPPED				
CFC	LQ	09 38	41.0	IPT	20.0	27.				
CFC	LR	09 42	29.0	LPZ	20.0	58.		4.72		68.3

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPHAG	LPSDV	LPSTA
08:59:54.1	73.218N	54.403E	0. CAIC	6.25	0.39	5	4.53	0.3	5
08:59:58.6	73.062N	54.697E	0. REST	6.26	0.39	5	4.53	0.3	5

WH2YK 23 AUG 75

08:08:24.7

**SPZ
303.40 MHz**



**SPR
182.88 MHz**



**SPT
131.13 MHz**



TIME



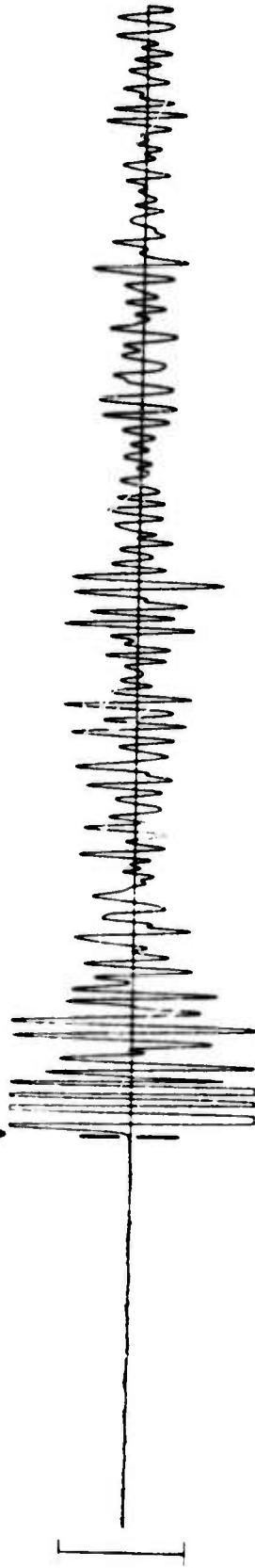
10 SEC

08:08:00

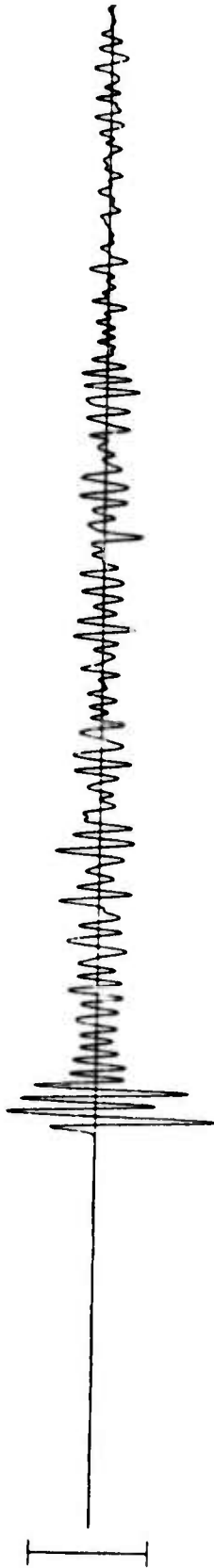
RK- ON 23 AUG 75

09:09:25.5

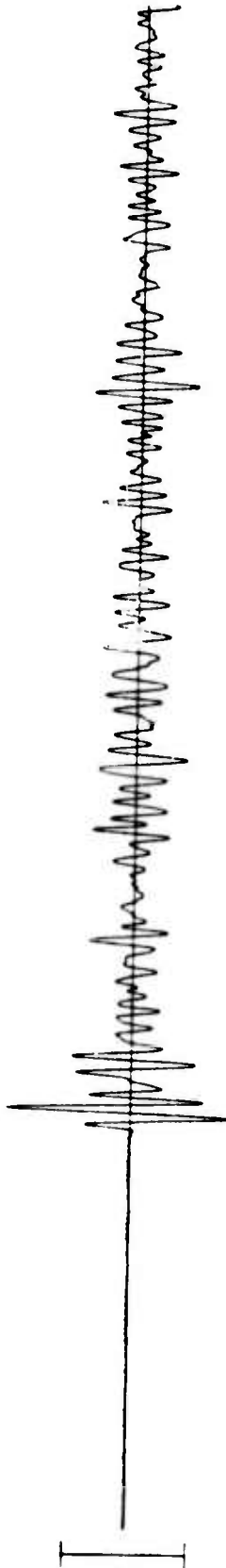
**SPZ
581.24 MHz**



**SPR
828.55 MHz**



**SPT
654.03 MHz**



TIME

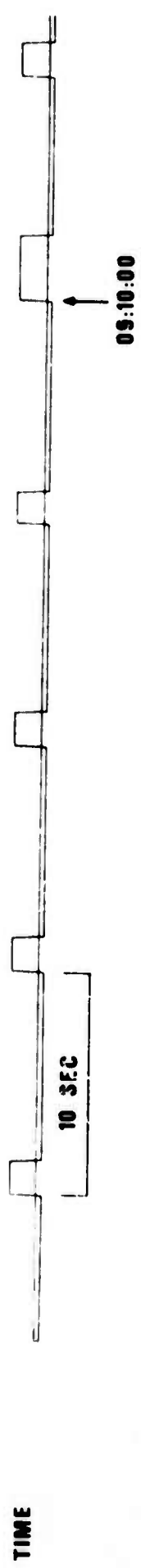
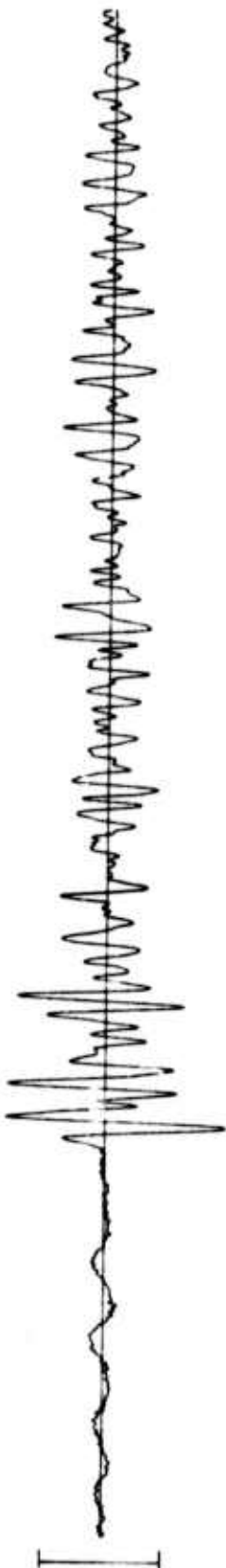
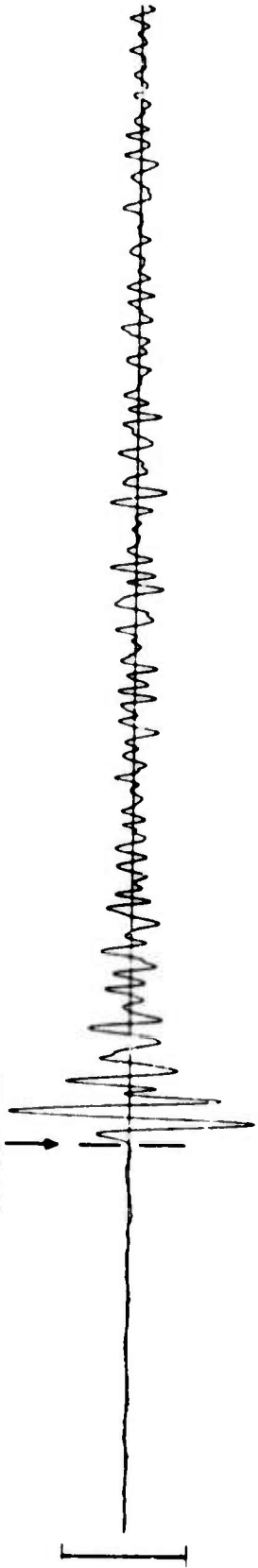


09:10:00

1
6

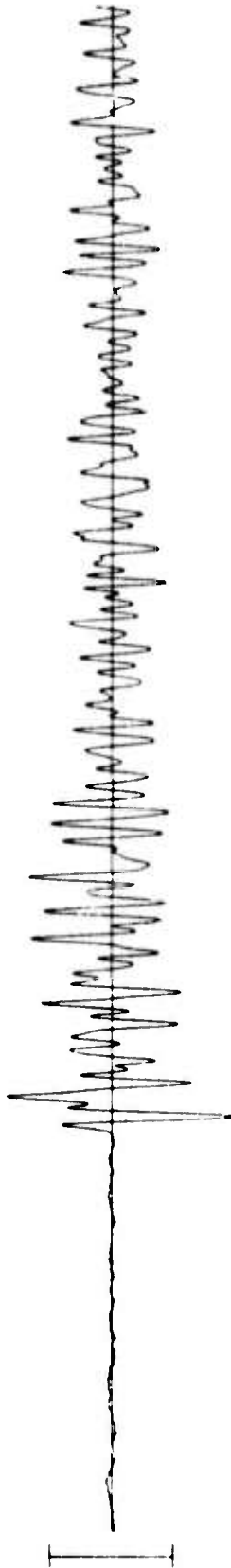
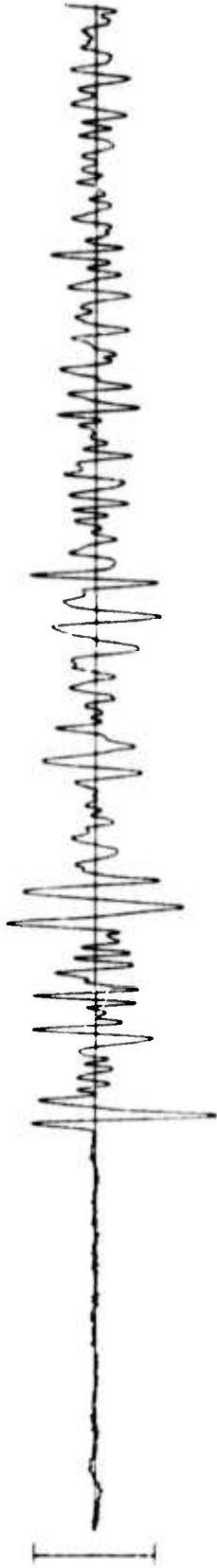
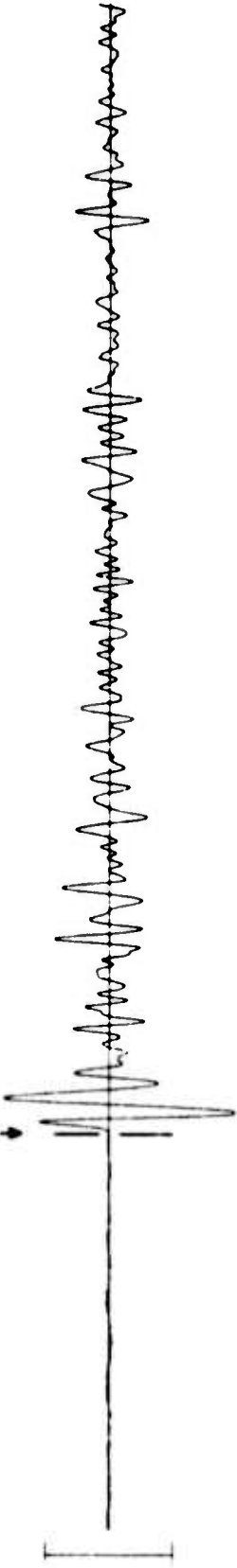
HN-ME 23 AUG 75

09:09:28.4



FN-WV 23 AUG 75

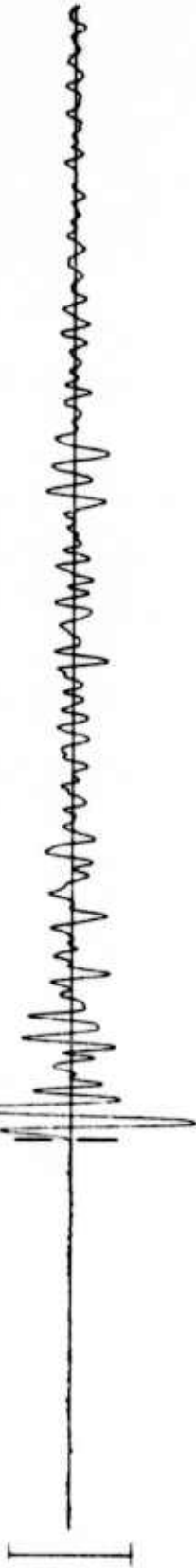
09:10:35.2



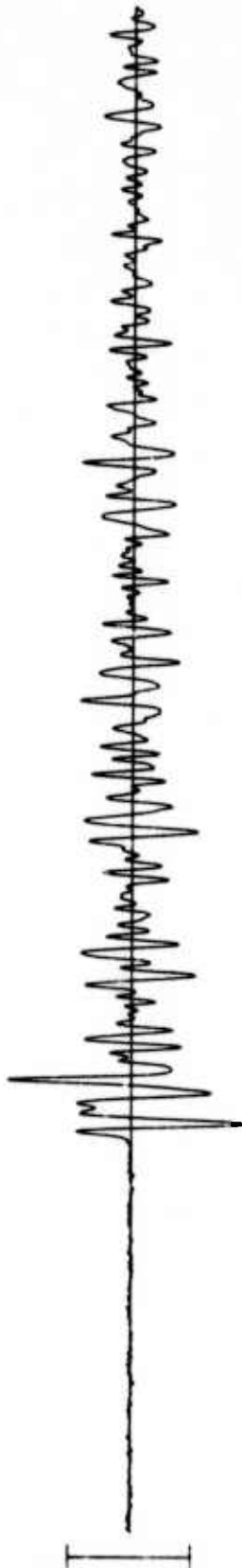
CP-SO 23 AUG 75

09:10:59.2

**SPZ
848.11 MHz**



**SPR
247.38 MHz**



**SPT
113.30 MHz**



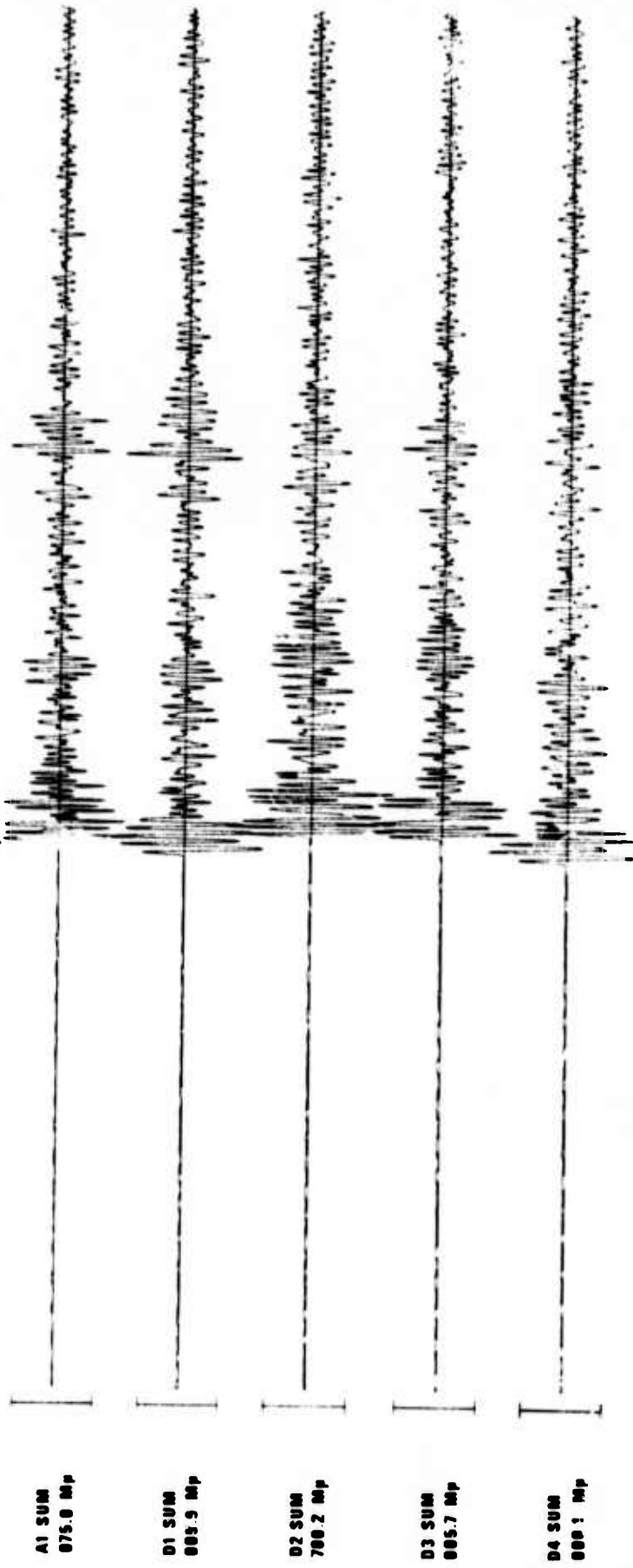
TIME



09:11:20

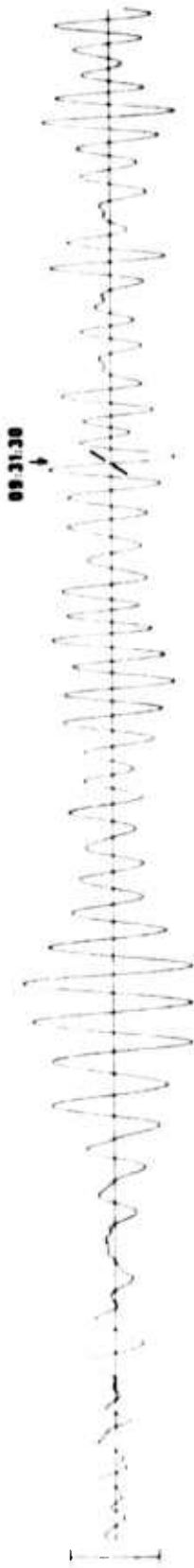
LASA INFINITE VELOCITY SUBARRAY SUMS 23 AUG 75

00:10:05.2



WH2YK 23 AUG 75

LPT
320.82 MHz



LPT
102.85 MHz



LPT
200.75 MHz



TIME

2 MIN

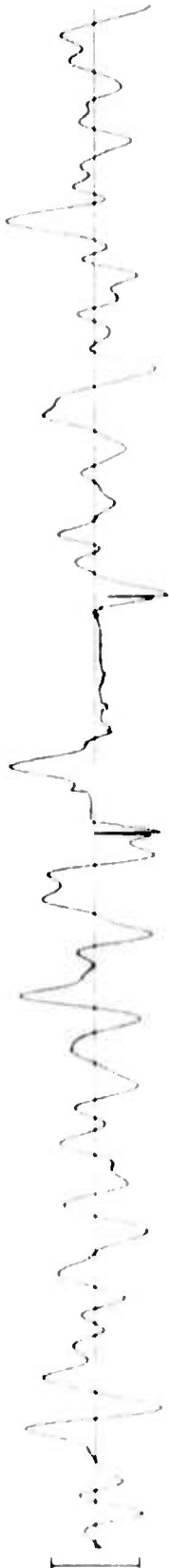
-11-

HN-ME 23 AUG 75

09:35:10



LPZ
092.22 MF



LPR
UNKNOWN



LPT
UNKNOWN



TIME

2 MIN

CALIBRATIONS UNRELIABLE

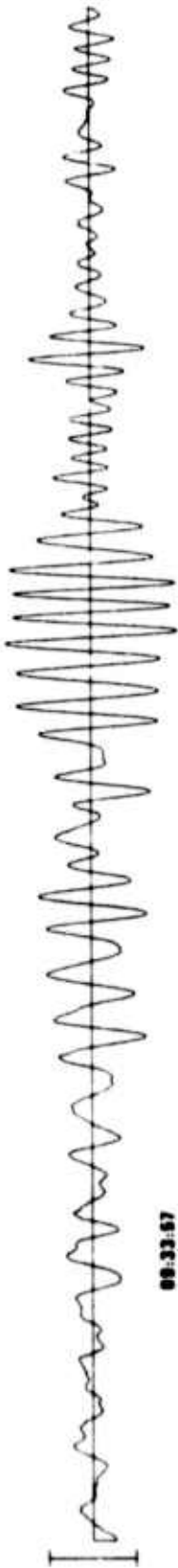
09:35:00

FN-WV 23 AUG 75



LPZ
511.29 MP

00:33:45



LPR
288.84 MP

00:33:57



LPT
433.53 MP



TIME

2 MIN

00:40:00

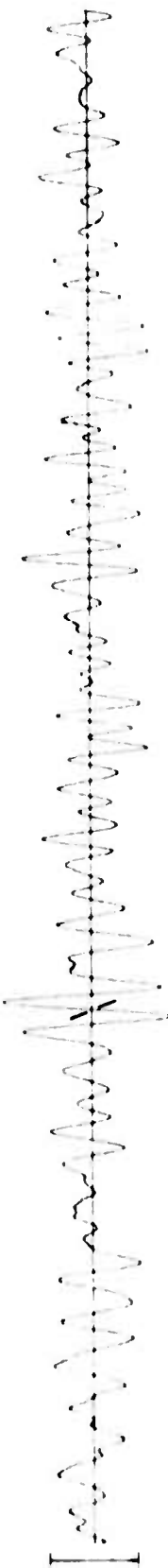
CP-S0 23 AUG 75



LPZ
707.30 MP



LPR
407.90 MP



LPT
201.75 MP



TIME

00:40:00

NORSAR LONG-PERIOD VERTICAL BEAM 23 AUG 75

LP VERTICAL
20220.07 MP

09:15:04

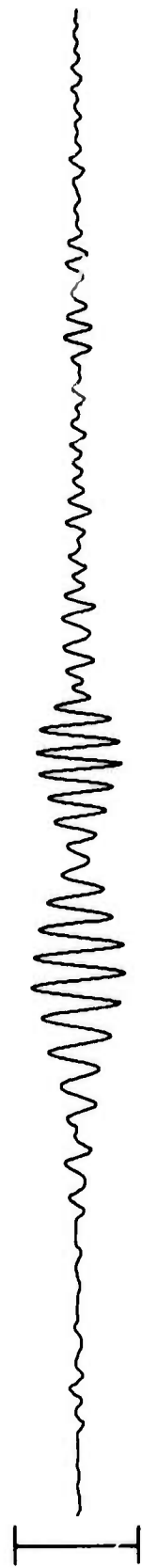
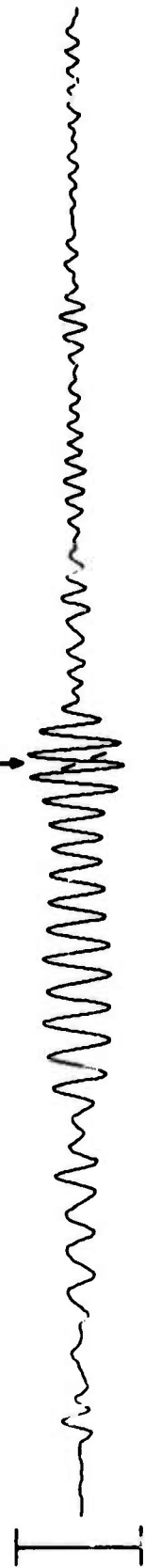
09:05:30

1 MIN

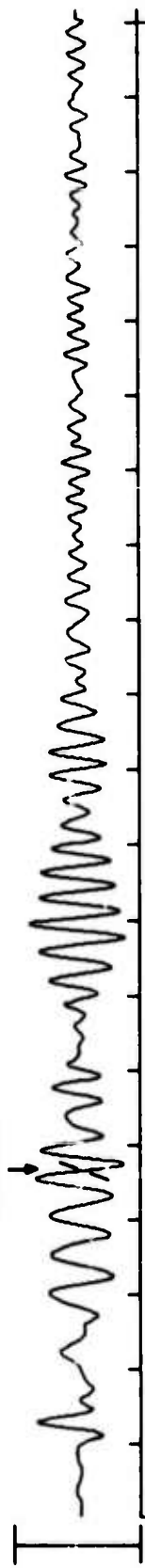


ALPHA LONG-PERIOD BEAMS 23 AUG 75

09:28:35



09:20:38



↑
09:16:02

1 MIN