UNIVERSITY OF ROORKEE
DEPARTMENT OF EARTHQUAKE ENGINEERING

STRONG EARTHQUAKE GROUND MOTION DATA IN EQINFOS FOR INDIA: PART 1B

by

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PREFACE

This report is one of the series of EQINFOS reports containing Volume II and III plots of corrected strong motion accelerograms, of computed response spectra, and cross-reference tables of uniformly processed data for various seismically active regions in the world. The first report of this type was published for the Western United States, up to 1986 (Lee and Trifunac, 1987). It was followed by a report for Yugoslavia (Jordanovski et al., 1987), for Bulgaria (Nenov et al., 1990), and for the Koyna earthquakes in India (Part 1A, Gupta et al., 1993). This is part B of the first volume for India. It contains 99 three component records from 6 earthquakes in northern India, recorded by the Shillong Array (N-E India, Assam and Meghalaya), Kangra Array (N-W India, Himachal Pradesh), and by the Uttar Pradesh Array (N-C India, Uttar Pradesh) in the period between 1986 and 1992. Part 1A presented 49 accelerograms from 40 earthquakes, recorded at Koyna Dam (Maharashtra) between 1967 and 1982.

The editors

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CHAPTER I
INTRODUCTION

The records in this report have been recorded by three strong motion arrays in northern India: the Kangra Array in the state of Himachal Pradesh (N-W India), the Shillong Array in the states of Meghalaya and Assam (N-E India), and the Uttar Pradesh Array (N-C India). The N-E region of India has experienced some of the largest earthquakes in the world. Earthquakes of magnitude 8.7 have occurred in the Shillong area in 1987, and in Mishmi region in 1950. There are six earthquakes contributing data for this report, one of which has been recorded by the Kangra Array (M = 5.7), four by the Shillong Array (M = 5.5 to 7.2, Chandrasekaran and Das, 1987, 1989a,b; Chandrasekaran et al., 1988), and one by the Uttar Pradesh Array (M = 6.5). The Kangra Array has 50 analog strong motion accelerographs (SMA-1), the Shillong Array 45, and the Uttar Pradesh Array 40 analog SMA-1 accelerographs. The geologic settings, the instrument locations and other details about the arrays can be found in Chandrasekaran and Das (1992).

In Chapter II, tables are presented with information on the records in this database, the contributing earthquakes and the recording stations, histograms of the distribution of the recorded earthquakes versus magnitude, Modified Mercalli Intensity (estimated using empirical equations for California), and depth, and distributions of the records versus hypocentral distance, azimuth and of the recorded peak accelerations, velocities and displacements for each recorded component of motion. The Appendix A contains plots of the recorded accelerations (all on a same scale) and of response spectra of these records.

CHAPTER II
DATA RECORDED IN NORTHERN INDIA BETWEEN 1986 and 1991

II.1 The Data

The Volume 1B of the EQINFOS data base for India contains 99 uniformly processed records of 6 earthquakes in northern India between 1986 and 1991, with magnitudes $5.5 \leq M \leq 7.2$ and with depths $7 \leq H \leq 91$ km. In Table II.I, the contributing earthquakes are listed in chronological order. The columns from left to right contain the earthquake number, the date, the time (hour and minutes), the epicentral latitude and longitude (degrees, minutes and seconds), the depth of the focus (km), the magnitude, the epicentral MMI, and the earthquake name. The intensity is Modified Mercalli Intensity (MMI) estimated (Lee and Trifunac, 1985) from

$$MMI = 1.5M - A - B\ln(\Delta) - C\Delta/100 - Ds, \tag{1}$$

where M is the magnitude, and s is the geological site condition at the epicenter ($s = 0$ for sites on alluvium, $s = 2$ for sites on basement rock, and $s = 1$ for sites which are not clearly either on alluvial or on rock). The estimates in Table II.I are for $s = 1$ (assumed). Δ is the hypocentral distance evaluated as

$$\Delta = (R^2 + H^2 + S^2)^{1/2} \tag{2}$$

where R is the epicentral distance (taken as 1 km for the estimates in Table II.I), and S is the size of the source. For magnitudes $M \geq 3$, S is related to the magnitude M by

$$S = -25.34 + 8.51M. \tag{3}$$

Four of the earthquakes are in N-E India (recorded by the Shillong array), one is in N-W India (recorded by the Kangra Array) and one is in the central Himalayan region (recorded by the Uttar Pradesh Array).

To each record, a unique pair of a Log.# and a Ref.# is assigned. The Log.# is made of six digits and two periods. The first two digits represent the year when the recording took place. The next three digits represent the order of the record in the list of records for that particular earthquake (in alphabetical order of the recording station). The last digit is 1 or 2, depending whether this is the first or the second of the contributing earthquakes that year. The first five digits are same as in the originally processed data before inclusion into the EQINFOS database. The addition of the last digit makes the Log.# unique. The Ref.# is a unique number of the record in the EQINFOS database. It is made up of two letters and three digits. The letters are N-E, N-W or N-C, for records in N-E, N-W and N-C (Uttar Pradesh Array) India respectively. The three digit number is the order of the record in the list of records for that region (ordered in chronological order of the contributing earthquakes and in alphabetical order of the recording station).

Table II.II is another list of earthquakes, in chronological order, which also contains the Ref.#'s of the records of that earthquake. The columns from left to right in this

TABLE II.I
LIST OF CONTRIBUTING EARTHQUAKES

EQ#	DATE	TIME	LATITUDE	LONGTITUDE	DEPTH	MAG	MMI	EQ NAME
41	4/26/86	1305GMT	32 10 30	76 17 13	7.0	5.7	7	HIMACHAL PRADESH EARTHQUAKE, N-W INDIA
42	9/10/86	1320GMT	25 25 41	92 04 59	28.0	5.5	6	MEGHALAYA EARTHQUAKE, N-E INDIA
43	5/18/87	0153GMT	25 16 16	94 12 07	50.0	5.7	5	N-E INDIA EARTHQUAKE
44	2/06/88	1450GMT	24 38 49	91 31 01	15.0	5.8	7	N-E INDIA EARTHQUAKE
45	8/06/88	0036GMT	25 08 56	95 07 37	91.0	7.2	7	N-E INDIA EARTHQUAKE
46	10/19/91	2123GMT	30 44 17	78 47 31	19.0	6.5	7	UTTARKASHI EARTHQUAKE, N-E INDIA

MMI calculated by Eq. (1) assuming s=1

TABLE II.II

CROSS-INDEX OF EARTHQUAKES AND RECORD DATA FILES

EQ#	YEAR	TIME	EQ NAME	MAG	MMI	DATA REPORT REF #
41	1986	1305GMT	HIMACHAL PRADESH EQ, N-W	5.7	7	NW001-NW009
42	1986	1320GMT	MEGHALAYA EQ, N-E	5.5	6	NE001-NE012
43	1987	0153GMT	N-E INDIA EARTHQUAKE	5.7	5	NE013-NE026
44	1988	1450GMT	N-E INDIA EARTHQUAKE	5.8	7	NE027-NE044
45	1988	0036GMT	N-E INDIA EARTHQUAKE	7.2	7	NE045-NE077
46	1991	2123GMT	UTTARKASHI EQ, N-C	6.5	7	NC001-NC013

MMI calculated by Eq. (1) assuming s=1

TABLE II.III

GEOGRAPHICAL INDEX OF ACCELEROGRAPH SITES AND RECORD DATA FILES

ARRAY ADDRESS	REF.# LOG.#	REC.#
KANGRA ARRAY, HIMACHAL PRADESH, INDIA (N-W)		
STATION: BANDLAKHAS		
32 8 ON 76 32 OE	NW001 86.001.1	50
STATION: BAROH		
32 0 ON 76 19 OE	NW002 86.002.1	51
STATION: BHAWARNA		
32 3 ON 76 30 OE	NW003 86.003.1	52
STATION: DHARMSALA		
32 13 ON 76 19 OE	NW004 86.004.1	53
STATION: JAWALI		
32 9 ON 76 1 OE	NW005 86.005.1	54
STATION: KANGRA		
32 6 ON 76 16 OE	NW006 86.006.1	55
STATION: NAGROTA BAGWAN		
32 6 ON 76 23 OE	NW007 86.007.1	56
STATION: SHAHPUR		
32 13 ON 76 11 OE	NW008 86.008.1	57
STATION: SIHUNTA		
32 18 ON 76 5 OE	NW009 86.009.1	58
SHILLONG ARRAY, MEGHALAYA - ASSAM, INDIA (N-E)		
STATION: BAIGAO		
25 24 ON 92 52 OE	NE027 88.001.1	85
	NE045 88.001.2	103
STATION: BAITHALANGSO		
25 58 ON 92 36 OE	NE001 86.001.2	59
	NE013 87.001.1	71
	NE028 88.002.1	86
	NE046 88.002.2	104
STATION: BAMUNGAO		
25 54 ON 93 1 OE	NE014 87.002.1	72
	NE029 88.003.1	87
	NE047 88.003.2	105
STATION: BERLONGFER		
25 46 ON 93 15 OE	NE015 87.003.1	73
	NE048 88.004.2	106
STATION: BOKAJAN		
26 1 ON 93 46 OE	NE016 87.004.1	74
NE049 88.005.2 107		
STATION: CHERRAPUNJI		
25 16 ON 91 44 OE	NE050 88.006.2	108
STATION: DAUKI		
25 12 ON 92 2 OE	NE002 86.002.2	60
	NE030 88.004.1	88
	NE051 88.007.2	109
STATION: DIPHU		
25 55 ON 93 26 OE	NE017 87.005.1	75
	NE052 88.008.2	110
STATION: DOLOO		
24 55 ON 92 47 OE	NE053 88.009.2	111

STATION: GUNJUNG
25 19 ON 93 1 OE

STATION: HAFLONG
25 10 ON 93 1 OE

STATION: HAJADISA
25 23 ON 93 18 OE

STATION: HARENGAJAO
25 7 ON 92 52 OE

STATION: HATIKHALI
25 39 ON 93 7 OE

STATION: HOJAI
26 0 ON 92 51 OE

STATION: JELLALPUR
25 0 ON 92 28 OE

STATION: JHIRIGHAT
24 48 ON 93 7 OE

STATION: KALAIN
24 59 ON 92 35 OE

STATION: KATAKHAL
24 50 ON 92 38 OE

STATION: KHLIEHRIAT
25 21 ON 92 22 OE

STATION: KOOMBER
24 57 ON 93 1 OE

STATION: LAISONG
25 12 ON 93 19 OE

STATION: LOHARGHAT
25 59 ON 91 29 OE

STATION: MAWKYRWAT
25 22 ON 91 28 OE

STATION: MAWSYNRAM
25 18 ON 91 35 OE

STATION: NONGKHLAW
25 41 ON 91 38 OE

STATION: NONGPOH
25 55 ON 91 53 OE

STATION: NONGSTOIN
25 31 ON 91 16 OE

STATION: PANIMUR
25 40 ON 92 48 OE

NE018 87.006.1 76
NE031 88.005.1 89
NE054 88.010.2 112

NE019 87.007.1 77
NE032 88.006.1 90

NE020 87.008.1 78
NE055 88.011.2 113

NE056 88.012.2 114

NE021 87.009.1 79
NE033 88.007.1 91

NE057 88.013.2 115

NE058 88.014.2 116

NE059 88.015.2 117

NE060 88.016.2 118

NE034 88.008.1 92
NE061 88.017.2 119

NE003 86.003.2 61
NE035 88.009.1 93
NE062 88.018.2 120

NE063 88.019.2 121

NE022 87.010.1 80

NE064 88.020.2 122

NE065 88.021.2 123

NE036 88.010.1 94
NE066 88.022.2 124
NE067 88.023.2 125

NE004 86.004.2 62
NE037 88.011.1 95
NE068 88.024.2 126

NE005 86.005.2 63
NE023 87.011.1 81
NE038 88.012.1 96

NE006 86.006.2 64
NE069 88.025.2 127

NE007 86.007.2 65
NE024 87.012.1 82
NE070 88.026.2 128

STATION: PYNURSLA
25 18 ON 91 55 OE — NE008 86.008.2 66; NE039 88.013.1 97; NE071 88.027.2 129

STATION: SAITSAMA
25 43 ON 92 23 OE — NE009 86.009.2 67; NE025 87.013.1 83; NE040 88.014.1 98; NE072 88.028.2 130

STATION: SHILLONG
25 34 ON 91 54 OE — NE041 88.015.1 99; NE073 88.029.2 131

STATION: SILCHAR
24 50 ON 92 48 OE — NE074 88.030.2 132

STATION: UMMULONG
25 31 ON 92 10 OE — NE010 86.010.2 68; NE042 88.016.1 100; NE075 88.031.2 133

STATION: UMRONGSO
25 31 ON 92 38 OE — NE011 86.011.2 69; NE026 87.014.1 84; NE043 88.017.1 101; NE076 88.032.2 134

STATION: UMSNING
25 44 ON 91 53 OE — NE012 86.012.2 70; NE044 88.018.1 102; NE077 88.033.2 135

U.P. ARRAY, UTTAR PRADESH, INDIA (N-C)

STATION: ALMORA
29 35 ON 79 39 OE — NC001 91.001.1 136

STATION: BARKOT
30 48 ON 78 13 OE — NC002 91.002.1 137

STATION: BHATWARI
30 48 ON 78 36 OE — NC003 91.003.1 138

STATION: GHANSIALI
30 25 ON 78 39 OE — NC004 91.004.1 139

STATION: KARNPRAYAG
30 15 ON 79 14 OE — NC005 91.005.1 140

STATION: KOSANI
29 41 ON 79 43 OE — NC006 91.006.1 141

STATION: KOTESHWAR
30 14 ON 78 34 OE — NC007 91.007.1 142

STATION: KOTI
30 35 ON 77 47 OE — NC008 91.008.1 143

STATION: PUROLA
30 52 ON 78 5 OE — NC009 91.009.1 144

STATION: RUDRAPRAYAG
30 16 ON 78 59 OE — NC010 91.010.1 145

STATION: SRINAGAR
30 13 ON 78 46 OE — NC011 91.011.1 146

STATION: TEHRI
30 22 ON 78 30 OE — NC012 91.012.1 147

STATION: UTTARKASHI
30 44 ON 78 27 OE — NC013 91.013.1 148

TABLE II.IV

CROSS-INDEX OF RECORD DATA FILES AND STATION ADDRESS

REF.#	LOG.#	ADDRESS	
NW001	86.001.1	STAT. BANDLAKHAS,	KANGRA ARRAY, N-W INDIA
NW002	86.002.1	STAT. BAROH,	KANGRA ARRAY, N-W INDIA
NW003	86.003.1	STAT. BHAWARNA,	KANGRA ARRAY, N-W INDIA
NW004	86.004.1	STAT. DHARMSALA,	KANGRA ARRAY, N-W INDIA
NW005	86.005.1	STAT. JAWALI,	KANGRA ARRAY, N-W INDIA
NW006	86.006.1	STAT. KANGRA,	KANGRA ARRAY, N-W INDIA
NW007	86.007.1	STAT. NAGROTA BAGWAN,	KANGRA ARRAY, N-W INDIA
NW008	86.008.1	STAT. SHAHPUR,	KANGRA ARRAY, N-W INDIA
NW009	86.009.1	STAT. SIHUNTA,	KANGRA ARRAY, N-W INDIA
NE001	86.001.2	STAT. BAITHALANGSO,	SHILLONG ARRAY, N-E INDIA
NE002	86.002.2	STAT. DAUKI,	SHILLONG ARRAY, N-E INDIA
NE003	86.003.2	STAT. KHLIEHRIAT,	SHILLONG ARRAY, N-E INDIA
NE004	86.004.2	STAT. NONGKHLAW,	SHILLONG ARRAY, N-E INDIA
NE005	86.005.2	STAT. NONGPOH,	SHILLONG ARRAY, N-E INDIA
NE006	86.006.2	STAT. NONGSTOIN,	SHILLONG ARRAY, N-E INDIA
NE007	86.007.2	STAT. PANIMUR,	SHILLONG ARRAY, N-E INDIA
NE008	86.008.2	STAT. PYNURSLA,	SHILLONG ARRAY, N-E INDIA
NE009	86.009.2	STAT. SAITSAMA,	SHILLONG ARRAY, N-E INDIA
NE010	86.010.2	STAT. UMMULONG,	SHILLONG ARRAY, N-E INDIA
NE011	86.011.2	STAT. UMRONGSO,	SHILLONG ARRAY, N-E INDIA
NE012	86.012.2	STAT. UMSNING,	SHILLONG ARRAY, N-E INDIA
NE013	87.001.1	STAT. BAITHALANGSO,	SHILLONG ARRAY, N-E INDIA
NE014	87.002.1	STAT. BAMUNGAO,	SHILLONG ARRAY, N-E INDIA
NE015	87.003.1	STAT. BERLONGFER,	SHILLONG ARRAY, N-E INDIA
NE016	87.004.1	STAT. BOKAJAN,	SHILLONG ARRAY, N-E INDIA
NE017	87.005.1	STAT. DIPHU,	SHILLONG ARRAY, N-E INDIA
NE018	87.006.1	STAT. GUNJUNG,	SHILLONG ARRAY, N-E INDIA
NE019	87.007.1	STAT. HAFLONG,	SHILLONG ARRAY, N-E INDIA
NE020	87.008.1	STAT. HAJADISA,	SHILLONG ARRAY, N-E INDIA
NE021	87.009.1	STAT. HATIKHALI,	SHILLONG ARRAY, N-E INDIA
NE022	87.010.1	STAT. LAISONG,	SHILLONG ARRAY, N-E INDIA
NE023	87.011.1	STAT. NONGPOH,	SHILLONG ARRAY, N-E INDIA
NE024	87.012.1	STAT. PANIMUR,	SHILLONG ARRAY, N-E INDIA
NE025	87.013.1	STAT. SAITSAMA,	SHILLONG ARRAY, N-E INDIA
NE026	87.014.1	STAT. UMRONGSO,	SHILLONG ARRAY, N-E INDIA
NE027	88.001.1	STAT. BAIGAO,	SHILLONG ARRAY, N-E INDIA
NE028	88.002.1	STAT. BAITHALANGSO,	SHILLONG ARRAY, N-E INDIA
NE029	88.003.1	STAT. BAMUNGAO,	SHILLONG ARRAY, N-E INDIA
NE030	88.004.1	STAT. DAUKI,	SHILLONG ARRAY, N-E INDIA
NE031	88.005.1	STAT. GUNJUNG,	SHILLONG ARRAY, N-E INDIA
NE032	88.006.1	STAT. HAFLONG,	SHILLONG ARRAY, N-E INDIA
NE033	88.007.1	STAT. HATIKHALI,	SHILLONG ARRAY, N-E INDIA
NE034	88.008.1	STAT. KATAKHAL,	SHILLONG ARRAY, N-E INDIA
NE035	88.009.1	STAT. KHLIEHRIAT,	SHILLONG ARRAY, N-E INDIA
NE036	88.010.1	STAT. MAWPHLANG,	SHILLONG ARRAY, N-E INDIA
NE037	88.011.1	STAT. NONGKHLAW,	SHILLONG ARRAY, N-E INDIA
NE038	88.012.1	STAT. NONGPOH,	SHILLONG ARRAY, N-E INDIA
NE039	88.013.1	STAT. PYNURSLA,	SHILLONG ARRAY, N-E INDIA
NE040	88.014.1	STAT. SAITSAMA,	SHILLONG ARRAY, N-E INDIA
NE041	88.015.1	STAT. SHILLONG,	SHILLONG ARRAY, N-E INDIA
NE042	88.016.1	STAT. UMMULONG,	SHILLONG ARRAY, N-E INDIA

NE043	88.017.1	STAT. UMRONGSO,	SHILLONG ARRAY, N-E INDIA
NE044	88.018.1	STAT. UMSNING,	SHILLONG ARRAY, N-E INDIA
NE045	88.001.2	STAT. BAIGAO,	SHILLONG ARRAY, N-E INDIA
NE046	88.002.2	STAT. BAITHALANGSO,	SHILLONG ARRAY, N-E INDIA
NE047	88.003.2	STAT. BAMUNGAO,	SHILLONG ARRAY, N-E INDIA
NE048	88.004.2	STAT. BERLONGFER,	SHILLONG ARRAY, N-E INDIA
NE049	88.005.2	STAT. BOKAJAN,	SHILLONG ARRAY, N-E INDIA
NE050	88.006.2	STAT. CHERRAPUNJI,	SHILLONG ARRAY, N-E INDIA
NE051	88.007.2	STAT. DAUKI,	SHILLONG ARRAY, N-E INDIA
NE052	88.008.2	STAT. DIPHU,	SHILLONG ARRAY, N-E INDIA
NE053	88.009.2	STAT. DOLOO,	SHILLONG ARRAY, N-E INDIA
NE054	88.010.2	STAT. GUNJUNG,	SHILLONG ARRAY, N-E INDIA
NE055	88.011.2	STAT. HAJADISA,	SHILLONG ARRAY, N-E INDIA
NE056	88.012.2	STAT. HARENGAJAO,	SHILLONG ARRAY, N-E INDIA
NE057	88.013.2	STAT. HOJAI,	SHILLONG ARRAY, N-E INDIA
NE058	88.014.2	STAT. JELLALPUR,	SHILLONG ARRAY, N-E INDIA
NE059	88.015.2	STAT. JHIRIGHAT,	SHILLONG ARRAY, N-E INDIA
NE060	88.016.2	STAT. KALAIN,	SHILLONG ARRAY, N-E INDIA
NE061	88.017.2	STAT. KATAKHAL,	SHILLONG ARRAY, N-E INDIA
NE062	88.018.2	STAT. KHLIEHRIAT,	SHILLONG ARRAY, N-E INDIA
NE063	88.019.2	STAT. KOOMBER,	SHILLONG ARRAY, N-E INDIA
NE064	88.020.2	STAT. LOHARGHAT,	SHILLONG ARRAY, N-E INDIA
NE065	88.021.2	STAT. MAWKYRWAT,	SHILLONG ARRAY, N-E INDIA
NE066	88.022.2	STAT. MAWPHLANG,	SHILLONG ARRAY, N-E INDIA
NE067	88.023.2	STAT. MAWSYNRAM,	SHILLONG ARRAY, N-E INDIA
NE068	88.024.2	STAT. NONGKHLAW,	SHILLONG ARRAY, N-E INDIA
NE069	88.025.2	STAT. NONGSTOIN,	SHILLONG ARRAY, N-E INDIA
NE070	88.026.2	STAT. PANIMUR,	SHILLONG ARRAY, N-E INDIA
NE071	88.027.2	STAT. PYNURSLA,	SHILLONG ARRAY, N-E INDIA
NE072	88.028.2	STAT. SAITSAMA,	SHILLONG ARRAY, N-E INDIA
NE073	88.029.2	STAT. SHILLONG,	SHILLONG ARRAY, N-E INDIA
NE074	88.030.2	STAT. SILCHAR,	SHILLONG ARRAY, N-E INDIA
NE075	88.031.2	STAT. UMMULONG,	SHILLONG ARRAY, N-E INDIA
NE076	88.032.2	STAT. UMRONGSO,	SHILLONG ARRAY, N-E INDIA
NE077	88.033.2	STAT. UMSNING,	SHILLONG ARRAY, N-E INDIA
NC001	91.001.1	STAT. ALMORA,	U.P. ARRAY, N-C INDIA
NC002	91.002.1	STAT. BARKOT,	U.P. ARRAY, N-C INDIA
NC003	91.003.1	STAT. BHATWARI,	U.P. ARRAY, N-C INDIA
NC004	91.004.1	STAT. GHANSIALI,	U.P. ARRAY, N-C INDIA
NC005	91.005.1	STAT. KARNPRAYAG,	U.P. ARRAY, N-C INDIA
NC006	91.006.1	STAT. KOSANI,	U.P. ARRAY, N-C INDIA
NC007	91.007.1	STAT. KOTESHWAR,	U.P. ARRAY, N-C INDIA
NC008	91.008.1	STAT. KOTI,	U.P. ARRAY, N-C INDIA
NC009	91.009.1	STAT. PUROLA,	U.P. ARRAY, N-C INDIA
NC010	91.010.1	STAT. RUDRAPRAYAG,	U.P. ARRAY, N-C INDIA
NC011	91.011.1	STAT. SRINAGAR,	U.P. ARRAY, N-C INDIA
NC012	91.012.1	STAT. TEHRI,	U.P. ARRAY, N-C INDIA
NC013	91.013.1	STAT. UTTARKASHI,	U.P. ARRAY, N-C INDIA

TABLE II.V

CROSS-INDEX OF RECORD DATA FILES WITH COMPONENT DIRECTION & FILE #

REF.#	LOG.#	COMP	FILE#	COMP	FILE#	COMP	FILE#	REC.#
IINW001	86.001.1	S27E	148	VERT	149	S63W	150	50
IINW002	86.002.1	N25W	151	VERT	152	S65W	153	51
IINW003	86.003.1	N82E	154	VERT	155	S08E	156	52
IINW004	86.004.1	N76W	157	VERT	158	S14W	159	53
IINW005	86.005.1	S86W	160	VERT	161	N04W	162	54
IINW006	86.006.1	N43W	163	VERT	164	S47W	165	55
IINW007	86.007.1	S85W	166	VERT	167	N05W	168	56
IINW008	86.008.1	N75E	169	VERT	170	S15E	171	57
IINW009	86.009.1	N25W	172	VERT	173	S65W	174	58
IINE001	86.001.2	S02W	175	VERT	176	N88W	177	59
IINE002	86.002.2	S72E	178	VERT	179	S18W	180	60
IINE003	86.003.2	S45E	181	VERT	182	S45W	183	61
IINE004	86.004.2	N80E	184	VERT	185	S10E	186	62
IINE005	86.005.2	N40E	187	VERT	188	S50E	189	63
IINE006	86.006.2	N65E	190	VERT	191	S25E	192	64
IINE007	86.007.2	N65E	193	VERT	194	S25E	195	65
IINE008	86.008.2	N59E	196	VERT	197	S31E	198	66
IINE009	86.009.2	N85E	199	VERT	200	S05E	201	67
IINE010	86.010.2	N87E	202	VERT	203	S03E	204	68
IINE011	86.011.2	S27W	205	VERT	206	N63W	207	69
IINE012	86.012.2	N45E	208	VERT	209	S45E	210	70
IINE013	87.001.1	S02W	211	VERT	212	N88W	213	71
IINE014	87.002.1	N19W	214	VERT	215	S71W	216	72
IINE015	87.003.1	S76W	217	VERT	218	N14W	219	73
IINE016	87.004.1	N34E	220	VERT	221	S56E	222	74
IINE017	87.005.1	N90E	223	VERT	224	S00W	225	75
IINE018	87.006.1	N15E	226	VERT	227	S75E	228	76
IINE019	87.007.1	N10W	229	VERT	230	S80W	231	77
IINE020	87.008.1	S20W	232	VERT	233	N70W	234	78
IINE021	87.009.1	N40E	235	VERT	236	S50E	237	79
IINE022	87.010.1	S45E	238	VERT	239	S45W	240	80
IINE023	87.011.1	N40E	241	VERT	242	S50E	243	81
IINE024	87.012.1	N65E	244	VERT	245	S25E	246	82
IINE025	87.013.1	N85E	247	VERT	248	S05E	249	83
IINE026	87.014.1	S27W	250	VERT	251	N63W	252	84
IINE027	88.001.1	S28W	253	VERT	254	N62W	255	85
IINE028	88.002.1	S02W	256	VERT	257	N88W	258	86
IINE029	88.003.1	N19W	259	VERT	260	S71W	261	87
IINE030	88.004.1	S72E	262	VERT	263	S08W	264	88
IINE031	88.005.1	N15E	265	VERT	266	S75E	267	89
IINE032	88.006.1	N10W	268	VERT	269	S80W	270	90
IINE033	88.007.1	N40E	271	VERT	272	S50E	273	91
IINE034	88.008.1	S89E	274	VERT	275	S01W	276	92
IINE035	88.009.1	S45E	277	VERT	278	S45W	279	93
IINE036	88.010.1	S35W	280	VERT	281	N55W	282	94
IINE037	88.011.1	N80E	283	VERT	284	S10E	285	95
IINE038	88.012.1	N40E	286	VERT	287	S50E	288	96
IINE039	88.013.1	N59E	289	VERT	290	S31E	291	97
IINE040	88.014.1	N85E	292	VERT	293	S05E	294	98
IINE041	88.015.1	N40E	295	VERT	296	S50E	297	99
IINE042	88.016.1	N87E	298	VERT	299	S03E	300	100

IINE043	88.017.1	S27W	301	VERT	302	N63W	303	101
IINE044	88.018.1	N45E	304	VERT	305	S45E	306	102
IINE045	88.001.2	S28W	307	VERT	308	N62W	309	103
IINE046	88.002.2	S02W	310	VERT	311	N88W	312	104
IINE047	88.003.2	N19W	313	VERT	314	S71W	315	105
IINE048	88.004.2	S76W	316	VERT	317	N14W	318	106
IINE049	88.005.2	N34E	319	VERT	320	S56E	321	107
IINE050	88.006.2	S55E	322	VERT	323	S35W	324	108
IINE051	88.007.2	S72E	325	VERT	326	S18W	327	109
IINE052	88.008.2	N90E	328	VERT	329	S00W	330	110
IINE053	88.009.2	S41E	331	VERT	332	S49W	333	111
IINE054	88.010.2	N15E	334	VERT	335	S75E	336	112
IINE055	88.011.2	S20W	337	VERT	338	N70W	339	113
IINE056	88.012.2	S60E	340	VERT	341	S30W	342	114
IINE057	88.013.2	S82W	343	VERT	344	N08W	345	115
IINE058	88.014.2	N88W	346	VERT	347	S02W	348	116
IINE059	88.015.2	N47W	349	VERT	350	S43W	351	117
IINE060	88.016.2	S64E	352	VERT	353	S26W	354	118
IINE061	88.017.2	S89E	355	VERT	356	S01W	357	119
IINE062	88.018.2	S45E	358	VERT	359	S45W	360	120
IINE063	88.019.2	S72E	361	VERT	362	S18W	363	121
IINE064	88.020.2	N54E	364	VERT	365	S36E	366	122
IINE065	88.021.2	N20E	367	VERT	368	S70E	369	123
IINE066	88.022.2	S35W	370	VERT	371	N55W	372	124
IINE067	88.023.2	S58W	373	VERT	374	N32W	375	125
IINE068	88.024.2	N80E	376	VERT	377	S10E	378	126
IINE069	88.025.2	N65E	379	VERT	380	S25E	381	127
IINE070	88.026.2	N65E	382	VERT	383	S25E	384	128
IINE071	88.027.2	N59E	385	VERT	386	S31E	387	129
IINE072	88.028.2	N85E	388	VERT	389	S05E	390	130
IINE073	88.029.2	N40E	391	VERT	392	S50E	393	131
IINE074	88.030.2	N60E	394	VERT	395	S30E	396	132
IINE075	88.031.2	N87E	397	VERT	398	S03E	399	133
IINE076	88.032.2	S27W	400	VERT	401	N63W	402	134
IINE077	88.033.2	N45E	403	VERT	404	S45E	405	135
IINC001	91.001.1	N53W	406	VERT	407	N37E	408	136
IINC002	91.002.1	N10E	409	VERT	410	N80W	411	137
IINC003	91.003.1	N85E	412	VERT	413	N05W	414	138
IINC004	91.004.1	N00E	415	VERT	416	N90E	417	139
IINC005	91.005.1	LONG	418	VERT	419	TRAN	420	140
IINC006	91.006.1	N25W	421	VERT	422	N65E	423	141
IINC007	91.007.1	N30W	424	VERT	425	N60E	426	142
IINC008	91.008.1	N10E	427	VERT	428	N80W	429	143
IINC009	91.009.1	N65W	430	VERT	431	N25E	432	144
IINC010	91.010.1	LONG	433	VERT	434	TRAN	435	145
IINC011	91.011.1	LONG	436	VERT	437	TRAN	438	146
IINC012	91.012.1	N63W	439	VERT	440	N27E	441	147
IINC013	91.013.1	N15W	442	VERT	443	N75E	444	148

TABLE II.VI

CROSS-INDEX OF DATA RECORD FILES WITH
PEAK ACCELERATION, PA, PEAK VELOCITY, PV, PEAK DISPLACEMENT, PD, AND
LEFT, f1, AND RIGHT, f2, BAND PASS FREQUENCIES (HZ)

REF.# LOG.# COMP	PA	PV	PD	f1-f2
IINW001 86.001.1				
S27E	146.944	8.03	.53	.525-25.0
VERT	22.398	1.03	.12	.550-25.0
S63W	119.541	7.14	.21	1.100-25.0
IINW003 86.003.1				
N82E	31.583	1.09	.05	1.800-25.0
VERT	36.555	1.18	.05	1.300-25.0
S08E	35.430	1.32	.17	.550-25.0
IINW005 86.005.1				
S86W	16.372	.78	.08	1.000-25.0
VERT	11.425	.55	.05	1.100-25.0
N04W	14.913	.67	.04	2.000-25.0
IINW007 86.007.1				
S85W	143.466	8.94	.92	.525-25.0
VERT	48.828	1.39	.15	.750-25.0
N05W	80.866	2.46	.15	.550-25.0
IINW009 86.009.1				
N25W	49.131	2.48	.23	.700-25.0
VERT	35.559	1.99	.16	1.000-25.0
S65W	35.925	3.03	.19	1.000-25.0
IINE002 86.002.2				
S72E	87.256	4.37	.12	1.400-25.0
VERT	31.650	.82	.03	1.800-25.0
S18W	91.242	3.86	.15	1.100-25.0
IINE004 86.004.2				
N80E	56.265	2.44	.13	1.100-25.0
VERT	33.883	1.20	.04	2.000-25.0
S10E	90.262	4.28	.19	1.000-25.0
IINE006 86.006.2				
N65E	15.119	.48	.02	2.000-25.0
VERT	8.150	.21	.02	1.200-25.0
S25E	13.957	.45	.02	1.600-22.5
IINE008 86.008.2				
N59E	92.209	2.51	.12	1.100-25.0
VERT	29.676	.56	.03	2.000-25.0
S31E	72.817	2.83	.09	1.400-25.0
IINE010 86.010.2				
N87E	107.789	2.26	.08	1.300-25.0
VERT	48.229	.66	.02	1.500-25.0
S03E	64.062	1.93	.05	2.000-25.0
IINE012 86.012.2				
N45E	101.627	3.38	.09	1.100-25.0
VERT	47.990	1.32	.03	2.000-25.0
S45E	76.559	2.70	.16	.700-25.0

REF.# LOG.# COMP	PA	PV	PD	f1-f2
IINW002 86.002.1				
N25W	57.223	3.15	.33	.625-25.0
VERT	21.092	.78	.04	1.600-23.5
S65W	53.541	2.59	.20	.800-25.0
IINW004 86.004.1				
N76W	169.874	7.05	.44	.750-25.0
VERT	80.413	3.07	.11	.700-25.0
S14W	182.815	9.63	2.46	.200-25.0
IINW006 86.006.1				
N43W	144.758	5.20	.48	.375-25.0
VERT	67.554	2.55	.19	.625-25.0
S47W	109.934	9.37	.71	.500-25.0
IINW008 86.008.1				
N75E	199.576	6.55	.79	.300-25.0
VERT	69.729	2.66	.17	1.000-25.0
S15E	244.439	14.71	.96	.400-25.0
IINE001 86.001.2				
S02W	44.948	2.34	.10	1.000-25.0
VERT	24.820	1.06	.06	1.250-25.0
N88W	42.064	1.35	.08	.800-25.0
IINE003 86.003.2				
S45E	29.853	1.16	.04	1.800-25.0
VERT	16.041	.44	.02	1.500-25.0
S45W	46.104	2.16	.08	1.100-25.0
IINE005 86.005.2				
N40E	54.237	2.84	.07	1.250-25.0
VERT	32.895	.60	.02	1.800-25.0
S50E	54.464	.90	.05	.700-25.0
IINE007 86.007.2				
N65E	37.608	1.15	.06	2.500-25.0
VERT	21.807	.57	.02	1.300-25.0
S25E	50.556	2.24	.06	2.000-25.0
IINE009 86.009.2				
N85E	103.312	4.64	.16	1.250-25.0
VERT	60.745	2.02	.10	.800-25.0
S05E	136.947	6.67	.19	1.500-25.0
IINE011 86.011.2				
S27W	27.145	.77	.05	1.000-25.0
VERT	13.072	.41	.03	1.100-25.0
N63W	30.364	1.13	.03	3.000-25.0
IINE013 87.001.1				
S02W	34.034	1.44	.13	.550-25.0
VERT	18.223	.76	.04	1.600-25.0
N88W	26.725	.98	.09	1.000-25.0

IINE014 87.002.1

N19W	19.123	1.10	.14	.375-25.0
VERT	17.330	.69	.02	2.000-25.0
S71W	18.287	.92	.09	.625-25.0

IINE016 87.004.1

N34E	29.381	1.63	.22	.525-25.0
VERT	18.058	.69	.05	1.100-25.0
S56E	64.132	3.29	.33	.525-25.0

IINE018 87.006.1

N15E	37.583	1.98	.12	.900-25.0
VERT	18.015	.66	.05	1.250-25.0
S75E	47.757	2.57	.27	.500-25.0

IINE020 87.008.1

S20W	74.746	3.48	.27	.750-25.0
VERT	27.571	1.04	.05	1.250-25.0
N70W	82.336	3.04	.29	.550-25.0

IINE022 87.010.1

S45E	41.474	2.62	.30	.525-25.0
VERT	17.944	.90	.07	1.100-25.0
S45W	59.821	2.19	.37	.525-21.5

IINE024 87.012.1

N65E	39.927	1.69	.05	1.100-25.0
VERT	16.591	.54	.03	1.500-25.0
S25E	44.161	1.75	.07	1.000-25.0

IINE026 87.014.1

S27W	19.683	1.38	.13	.550-25.0
VERT	15.569	.64	.04	1.100-25.0
N63W	24.600	1.04	.07	.900-25.0

IINE028 88.002.1

S02W	30.942	1.22	.09	.800-25.0
VERT	14.189	.56	.03	1.600-25.0
N88W	21.625	1.17	.15	.700-25.0

IINE030 88.004.1

S72E	26.872	1.28	.10	.800-25.0
VERT	8.618	.33	.02	1.500-25.0
S08W	37.976	1.44	.17	.650-25.0

IINE032 88.006.1

N10W	33.888	2.12	.29	.275-25.0
VERT	7.918	.35	.03	1.000-25.0
S80W	24.935	.90	.04	1.600-25.0

IINE034 88.008.1

S89E	9.222	1.13	.21	.350-25.0
VERT	9.084	.44	.01	2.000-25.0
S01W	6.978	.45	.02	2.000-18.0

IINE036 88.010.1

S35W	80.832	3.08	.14	1.000-25.0
VERT	35.269	.67	.02	2.000-25.0
N55W	62.979	2.87	.15	1.100-25.0

IINE038 88.012.1

N40E	28.986	1.18	.04	1.500-25.0
VERT	36.816	.78	.11	.450-25.0
S50E	83.291	3.89	.13	1.800-25.0

IINE040 88.014.1

N85E	66.076	2.19	.17	.700-25.0
VERT	30.897	.87	.03	2.000-25.0
S05E	53.701	2.52	.10	1.600-25.0

IINE015 87.003.1

S76W	71.406	4.04	.33	.400-25.0
VERT	43.599	1.94	.09	.800-25.0
N14W	87.455	3.77	.29	.700-25.0

IINE017 87.005.1

N90E	82.347	3.23	.12	1.000-25.0
VERT	54.209	1.64	.11	.750-25.0
S00W	71.015	2.27	.17	.550-25.0

IINE019 87.007.1

N10W	52.593	3.03	.34	.500-25.0
VERT	14.563	1.12	.08	1.100-25.0
S80W	34.893	2.02	.39	.280-25.0

IINE021 87.009.1

N40E	30.331	1.39	.10	.750-25.0
VERT	25.909	1.40	.13	.750-25.0
S50E	36.906	1.53	.16	.750-25.0

IINE023 87.011.1

N40E	17.882	.89	.03	2.000-25.0
VERT	12.738	.43	.02	2.000-25.0
S50E	17.360	1.02	.13	.525-25.0

IINE025 87.013.1

N85E	36.807	1.62	.05	2.000-25.0
VERT	17.960	.62	.03	1.300-25.0
S05E	48.859	2.34	.10	1.300-25.0

IINE027 88.001.1

S28W	21.488	.88	.06	1.000-25.0
VERT	7.151	.33	.01	2.000-25.0
N62W	24.597	.67	.03	1.500-25.0

IINE029 88.003.1

N19W	14.432	.43	.01	2.000-25.0
VERT	10.343	.39	.01	2.500-25.0
S71W	10.945	.46	.01	2.500-22.5

IINE031 88.005.1

N15E	36.317	2.35	.20	.650-25.0
VERT	18.612	.69	.04	1.100-25.0
S75E	37.589	2.40	.15	.750-25.0

IINE033 88.007.1

N40E	23.129	.55	.02	2.000-25.0
VERT	20.978	.37	.03	2.000-25.0
S50E	24.402	.75	.02	2.000-25.0

IINE035 88.009.1

S45E	79.923	4.44	.34	.750-25.0
VERT	27.833	.93	.05	1.400-25.0
S45W	65.232	2.82	.17	.800-25.0

IINE037 88.011.1

N80E	104.885	4.37	.15	.700-25.0
VERT	101.221	5.03	.19	.700-25.0
S10E	120.572	5.99	.21	1.000-25.0

IINE039 88.013.1

N59E	49.820	1.90	.04	1.800-25.0
VERT	14.229	.43	.03	1.400-25.0
S31E	29.932	1.17	.03	2.000-25.0

IINE041 88.015.1

N40E	45.387	1.49	.08	1.100-25.0
VERT	13.020	.57	.04	1.400-22.5
S50E	35.203	1.10	.15	.650-25.0

IINE042 88.016.1

N87E	54.719	1.97	.07	1.400-25.0
VERT	20.970	.53	.02	2.000-25.0
S03E	52.965	2.17	.11	1.000-25.0

IINE043 88.017.1

S27W	44.376	2.56	.20	.525-25.0
VERT	21.820	.84	.06	1.100-25.0
N63W	39.121	1.57	.14	.700-25.0

IINE044 88.018.1

N45E	38.723	1.73	.10	.625-25.0
VERT	17.538	.64	.03	1.600-25.0
S45E	59.229	3.36	.25	.525-25.0

IINE045 88.001.2

S28W	214.059	6.84	.54	.350-25.0
VERT	51.482	2.04	.31	.325-25.0
N62W	140.297	5.67	.51	.550-25.0

IINE046 88.002.2

S02W	149.301	7.63	.70	.400-25.0
VERT	80.280	3.53	.40	.525-25.0
N88W	161.326	12.27	1.43	.525-25.0

IINE047 88.003.2

N19W	92.344	5.99	.78	.350-25.0
VERT	69.232	1.75	.12	1.100-25.0
S71W	69.706	4.82	.93	.250-25.0

IINE048 88.004.2

S76W	295.464	21.50	3.54	.300-25.0
VERT	169.660	8.06	1.06	.350-25.0
N14W	336.586	21.82	2.99	.325-25.0

IINE049 88.005.2

N34E	147.560	7.97	1.24	.280-25.0
VERT	142.872	3.35	.14	1.100-25.0
S56E	219.711	12.18	1.96	.200-25.0

IINE050 88.006.2

S55E	50.498	2.25	.37	.275-25.0
VERT	21.881	.58	.04	1.500-25.0
S35W	53.124	2.34	.29	.550-25.0

IINE051 88.007.2

S72E	106.332	3.58	.54	.500-25.0
VERT	28.037	1.59	.16	.650-25.0
S18W	71.747	4.08	.40	.625-25.0

IINE052 88.008.2

N90E	278.999	18.23	2.13	.280-25.0
VERT	176.214	5.53	.90	.250-25.0
S00W	331.379	20.30	2.42	.200-25.0

IINE053 88.009.2

S41E	63.210	5.76	1.22	.300-25.0
VERT	37.630	3.33	.71	.325-25.0
S49W	61.909	5.37	.90	.375-25.0

IINE054 88.010.2

N15E	92.717	4.89	.59	.300-25.0
VERT	60.857	2.51	.49	.275-25.0
S75E	130.058	5.16	.86	.200-25.0

IINE055 88.011.2

S20W	90.543	4.25	.61	.375-25.0
VERT	44.949	2.03	.48	.300-25.0
N70W	96.966	4.16	.53	.375-25.0

IINE056 88.012.2

S60E	63.901	4.06	.71	.225-25.0
VERT	31.162	1.89	.39	.300-25.0
S30W	76.263	4.37	.65	.275-25.0

IINE057 88.013.2

S82W	105.806	5.24	1.49	.200-25.0
VERT	58.815	2.02	.37	.550-25.0
N08W	131.044	6.55	1.16	.200-25.0

IINE058 88.014.2

N88W	28.965	3.02	.58	.200-25.0
VERT	15.070	1.63	.35	.300-25.0
S02W	22.770	1.76	.37	.350-25.0

IINE059 88.015.2

N47W	104.951	9.22	1.22	.375-25.0
VERT	30.317	3.05	.82	.200-25.0
S43W	87.244	6.79	1.11	.250-25.0

IINE060 88.016.2

S64E	55.769	7.76	1.54	.200-25.0
VERT	27.581	4.06	.83	.325-25.0
S26W	50.238	5.15	1.57	.200-25.0

IINE061 88.017.2

S89E	65.589	10.98	2.32	.200-25.0
VERT	17.721	3.24	.99	.250-25.0
S01W	58.378	9.32	2.58	.200-25.0

IINE062 88.018.2

S45E	68.905	2.77	.35	.350-25.0
VERT	32.290	1.29	.08	1.100-25.0
S45W	70.291	3.23	.19	1.000-25.0

IINE063 88.019.2

S72E	47.573	4.45	.60	.350-25.0
VERT	26.225	2.24	.26	.625-25.0
S18W	34.500	4.07	.51	.500-25.0

IINE064 88.020.2

N54E	57.211	3.91	.77	.325-25.0
VERT	21.783	1.94	.35	.400-25.0
S36E	53.183	4.63	.93	.225-25.0

IINE065 88.021.2

N20E	45.041	2.46	.27	.375-25.0
VERT	29.637	.56	.02	2.000-25.0
S70E	44.012	1.12	.04	1.500-25.0

IINE066 88.022.2

S35W	116.547	5.51	.17	1.100-25.0
VERT	35.744	1.38	.08	1.100-25.0
N55W	104.627	3.47	.29	.350-25.0

IINE067 88.023.2

S58W	83.798	3.47	.69	.250-25.0
VERT	35.419	1.16	.09	1.000-25.0
N32W	63.355	2.88	.51	.200-25.0

IINE068 88.024.2

N80E	135.780	6.60	.45	.550-25.0
VERT	80.126	2.54	.18	.700-25.0
S10E	142.632	6.00	.75	.350-25.0

IINE069 88.025.2

N65E	56.920	2.44	.08	1.400-25.0
VERT	38.915	.94	.04	1.600-25.0
S25E	51.374	2.59	.09	1.400-25.0

IINE070 88.026.2

N65E	164.641	6.02	.40	.525-25.0
VERT	72.129	1.83	.21	.375-25.0
S25E	117.709	5.11	.26	.700-25.0

IINE072 88.028.2

N85E	207.172	8.75	.69	.250-25.0
VERT	96.050	3.25	.49	.325-25.0
S05E	228.540	11.24	.69	.550-25.0

IINE074 88.030.2

N60E	63.973	5.76	1.05	.375-22.5
VERT	25.140	2.91	.65	.375-25.0
S30E	89.112	9.76	2.05	.200-25.0

IINE076 88.032.2

S27W	77.960	5.67	.62	.500-25.0
VERT	42.439	1.42	.10	.800-25.0
N63W	78.117	4.09	.48	.650-25.0

IINC001 91.001.1

N53W	17.037	.95	.07	1.100-25.0
VERT	19.575	.95	.05	1.250-25.0
N37E	20.731	1.25	.14	.525-25.0

IINC003 91.003.1

N85E	248.472	17.86	3.64	.200-25.0
VERT	288.866	13.36	2.39	.200-25.0
N05W	241.898	29.79	5.33	.200-25.0

IINC005 91.005.1

LONG	59.014	3.62	.26	.650-25.0
VERT	25.896	1.45	.18	.500-25.0
TRAN	76.149	3.70	.24	1.000-25.0

IINC007 91.007.1

N30W	100.833	5.32	.60	.550-25.0
VERT	74.365	8.55	2.06	.200-25.0
N60E	65.749	3.92	.61	.275-25.0

IINC009 91.009.1

N65W	72.378	4.72	.45	.500-22.5
VERT	51.721	2.99	.19	.550-25.0
N25E	91.398	4.40	.69	.250-25.0

IINC011 91.011.1

LONG	65.729	1.66	.06	1.400-25.0
VERT	34.150	3.09	.62	.550-25.0
TRAN	48.461	1.64	.19	.800-25.0

IINC013 91.013.1

N15W	237.678	16.73	1.67	.500-25.0
VERT	192.565	14.41	2.07	.250-25.0
N75E	303.864	19.31	1.96	.200-25.0

IINE071 88.027.2

N59E	48.471	4.17	.53	.225-25.0
VERT	34.690	2.88	.41	.550-25.0
S31E	50.985	3.03	.35	.550-25.0

IINE073 88.029.2

N40E	72.980	1.87	.11	1.500-25.0
VERT	34.851	.88	.18	.275-25.0
S50E	57.127	1.51	.09	1.250-25.0

IINE075 88.031.2

N87E	98.681	2.81	.20	.525-25.0
VERT	59.488	1.48	.10	1.100-25.0
S03E	146.851	3.01	.34	.400-25.0

IINE077 88.033.2

N45E	120.377	4.89	.34	.400-25.0
VERT	84.358	1.88	.19	.375-25.0
S45E	134.045	6.96	.38	.550-25.0

IINC002 91.002.1

N10E	92.694	5.85	.88	.325-25.0
VERT	43.832	2.77	.62	.280-25.0
N80W	80.352	4.66	.33	.900-25.0

IINC004 91.004.1

N00E	115.439	7.92	1.35	.225-25.0
VERT	99.172	9.49	2.57	.200-25.0
N90E	113.791	8.34	1.18	.500-25.0

IINC006 91.006.1

N25W	27.794	1.40	.09	.625-25.0
VERT	11.172	.34	.02	2.000-25.0
N65E	31.796	1.30	.11	.700-25.0

IINC008 91.008.1

N10E	21.142	2.11	.26	.450-25.0
VERT	14.407	1.58	.29	.280-25.0
N80W	41.981	3.19	.29	.500-25.0

IINC010 91.010.1

LONG	53.274	1.73	.14	1.000-25.0
VERT	44.836	1.49	.19	.550-25.0
TRAN	50.510	2.52	.23	.625-25.0

IINC012 91.012.1

N63W	71.567	3.85	.62	.300-25.0
VERT	57.811	8.90	2.43	.200-25.0
N27E	61.087	9.27	1.97	.200-25.0

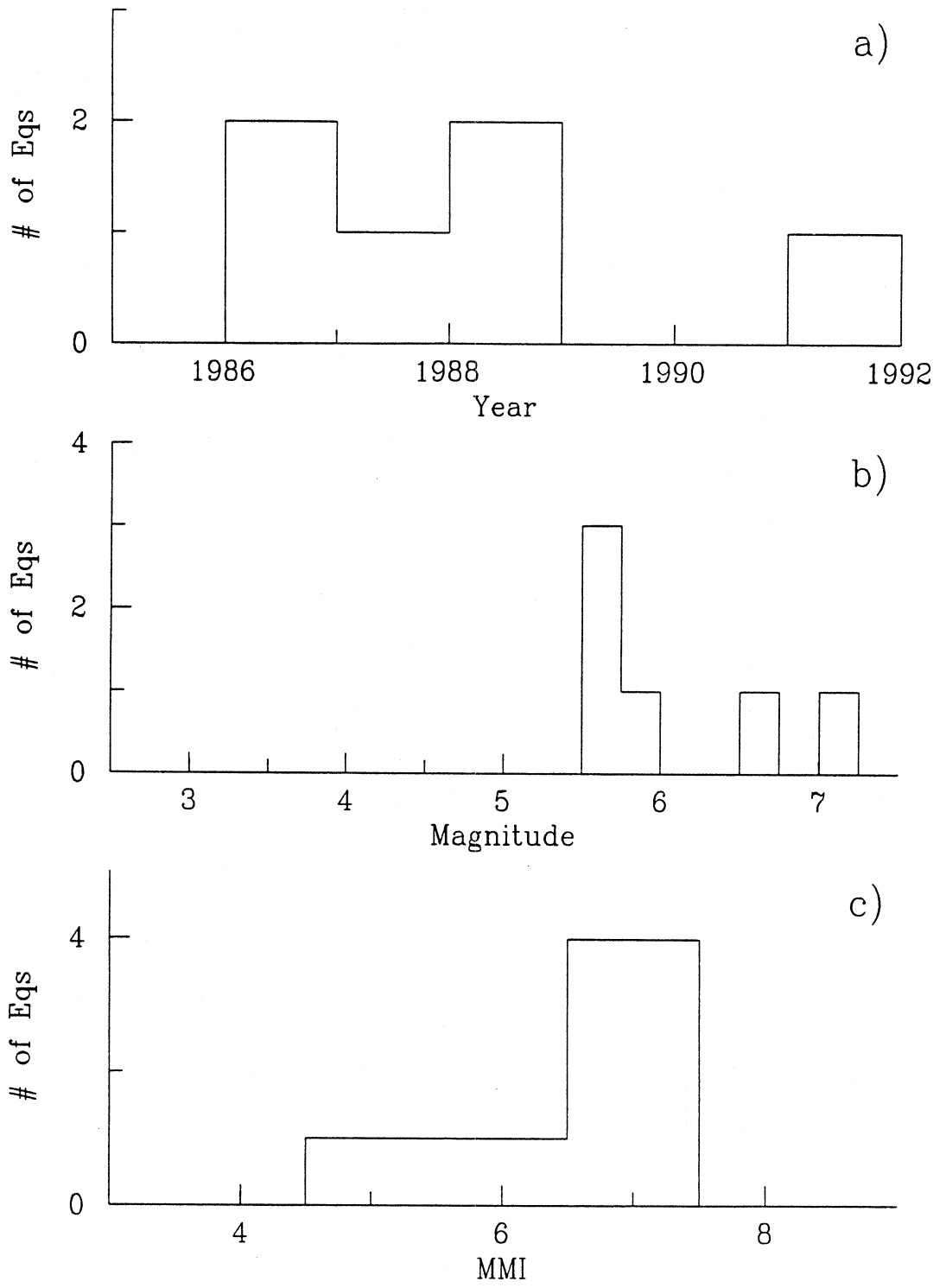

Fig. II.1 Distribution of the number of recorded earthquakes with: (a) time, (b) magnitude, and (c) Modified Mercalli intensity.

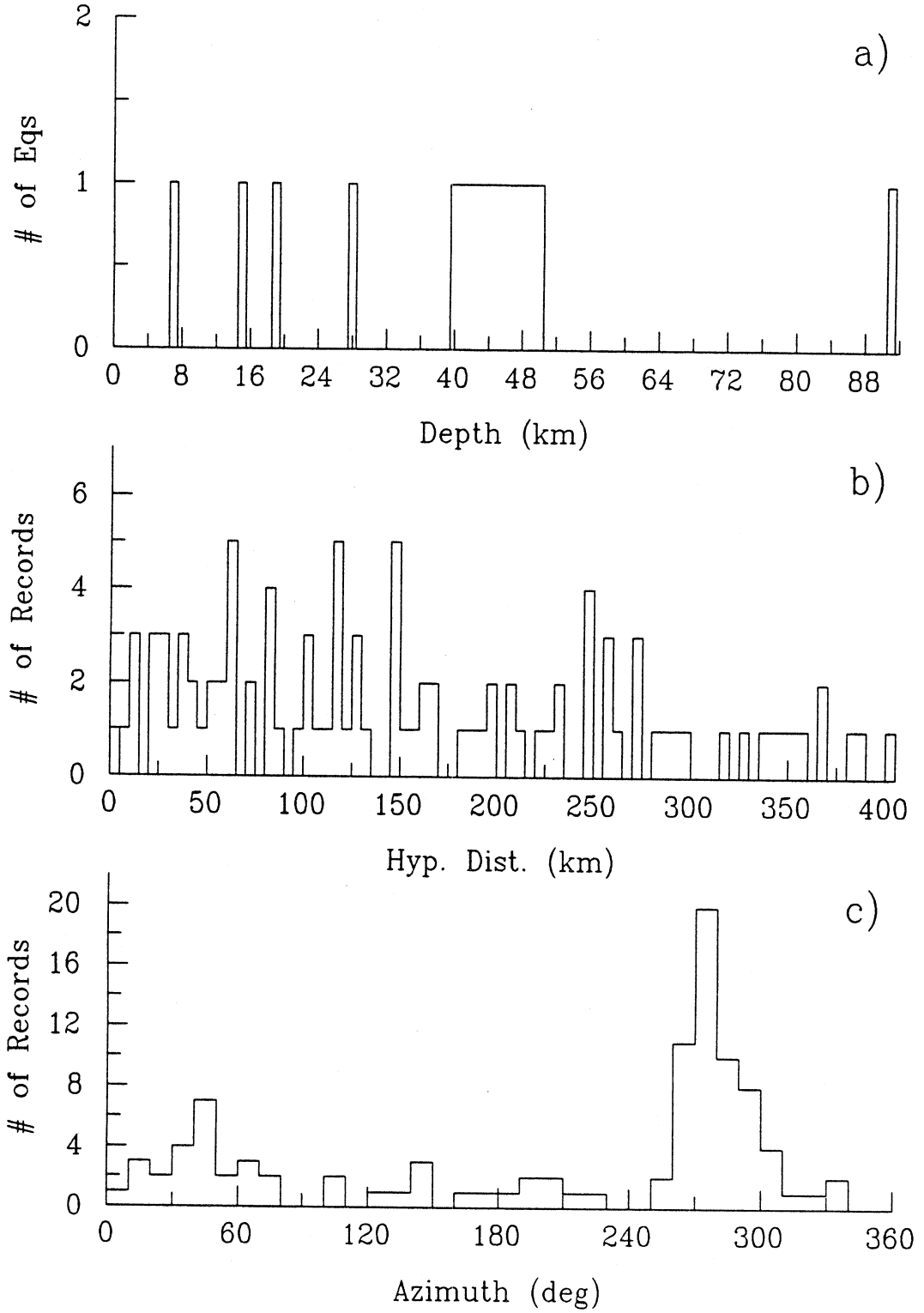

Fig. II.2 (a) Distribution of the number of recorded earthquakes with depth, (b) distribution of the number of records with hypocentral distance, and (c) distribution of the number of records with azimuth.

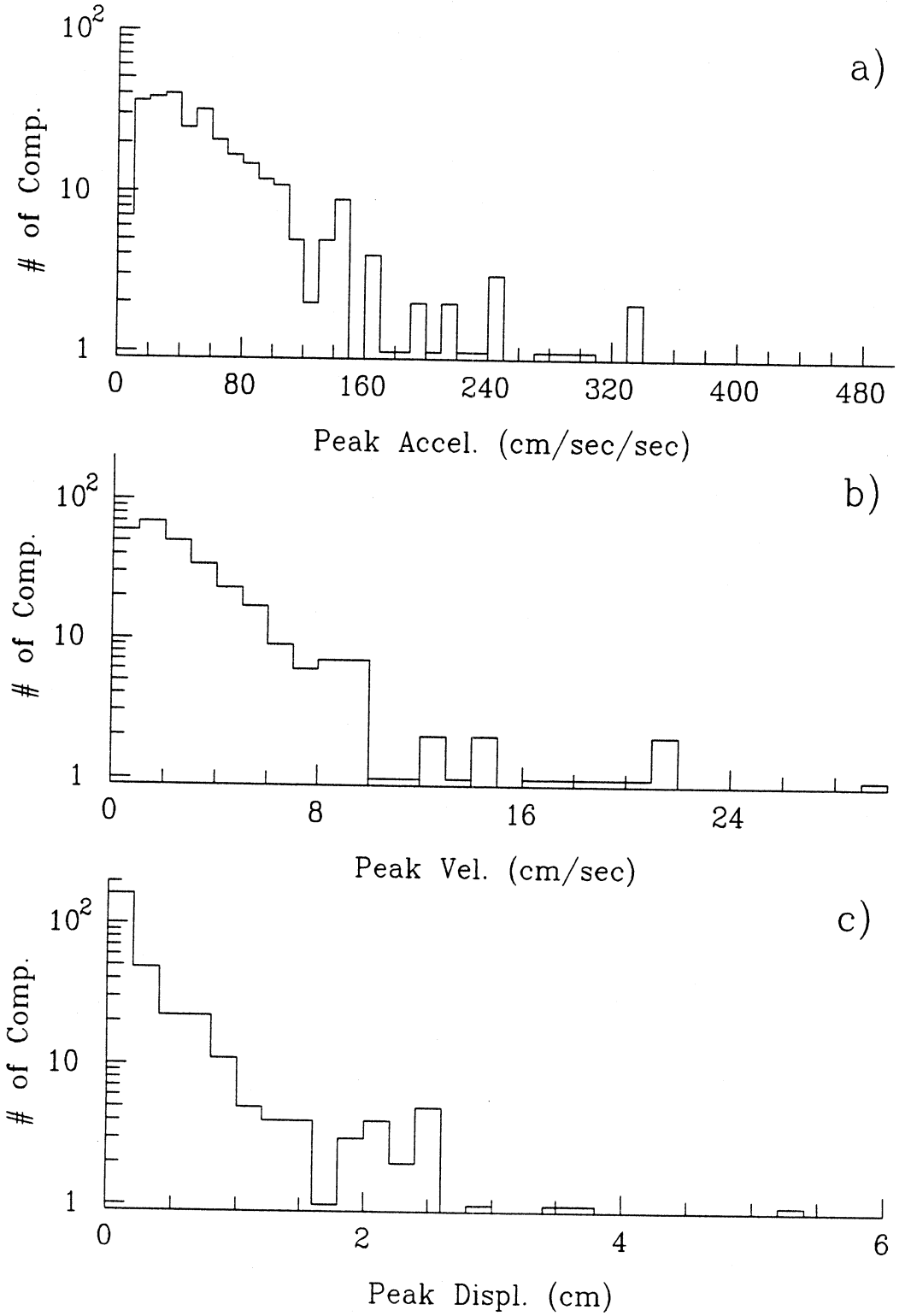

Fig. II.3 Distribution of the number of recorded components of motion with: (a) peak acceleration, (b) peak velocity, and (c) peak displacement.

table correspond to the earthquake number, year, time, name, magnitude, estimated MMI, and the Ref.#'s of the corresponding records of the data base. Table II.III is a list of recording stations that contributed to this database, grouped by the array to which these belong, and in alphabetical order for each array. Table II.IV is a list of records by Ref.#. From left to right, the columns of this table correspond to the record Ref.#, the Log.#, and the location of the station.

Table II.V is a list of components for each record ordered, in increasing Ref.#, and the file number where that components is stored. Table II.VI has a list of all the recorded peak ground acceleration (sm/sec/sec), velocity (cm/sec) and displacement (cm). The Ref.# and the Log.# and the names of the components are given for each record. The records are ordered with increasing Ref.#. The component orientation in degrees is available for most of the records. For these stations, the horizontal components are named, for example, N23W meaning positive motion is in direction 23° from North towards West, and for the others, as LONG or TRAN (standing for longitudinal and transverse transducer of the recording accelerograph).

For visualization of the distribution of data, histograms are presented of the distribution of recorded earthquakes versus time (Fig.II.1a), magnitude (Fig.II.1b), Modified Mercalli Intensity (Fig.II.1c), and depth (Fig.II.2a), the distribution of records versus hypocentral distance (Fig.II.2b) and azimuth (Fig.II.2c), and the distribution of recorded components versus peak ground acceleration (Fig.II.3a), velocity (Fig.II.3b) and displacement (Fig.II.3c). In the sample for the histograms in Figs. II.3abc, the multiple arrivals were considered as separate records.

The Volume II and Volume III plots (corrected accelerations and Fourier and response spectra) are in Appendix A, arranged in chronological order (as in Tables II.I and II.II).

II.2 Processing of the Accelerograms

The records have been digitized and processed by the Department of Earthquake Engineering at the Univ. of Roorkee, India. The records have been baseline corrected and filtered for digitization and processing noise, as described in (Trifunac and Lee, 1979; 1984; 1990). The higher cut-off frequency is 25 Hz or lower, and the lower cutt-off frequency is about 1 Hz, depending on the length of the record.

ACKNOWLEDGEMENTS

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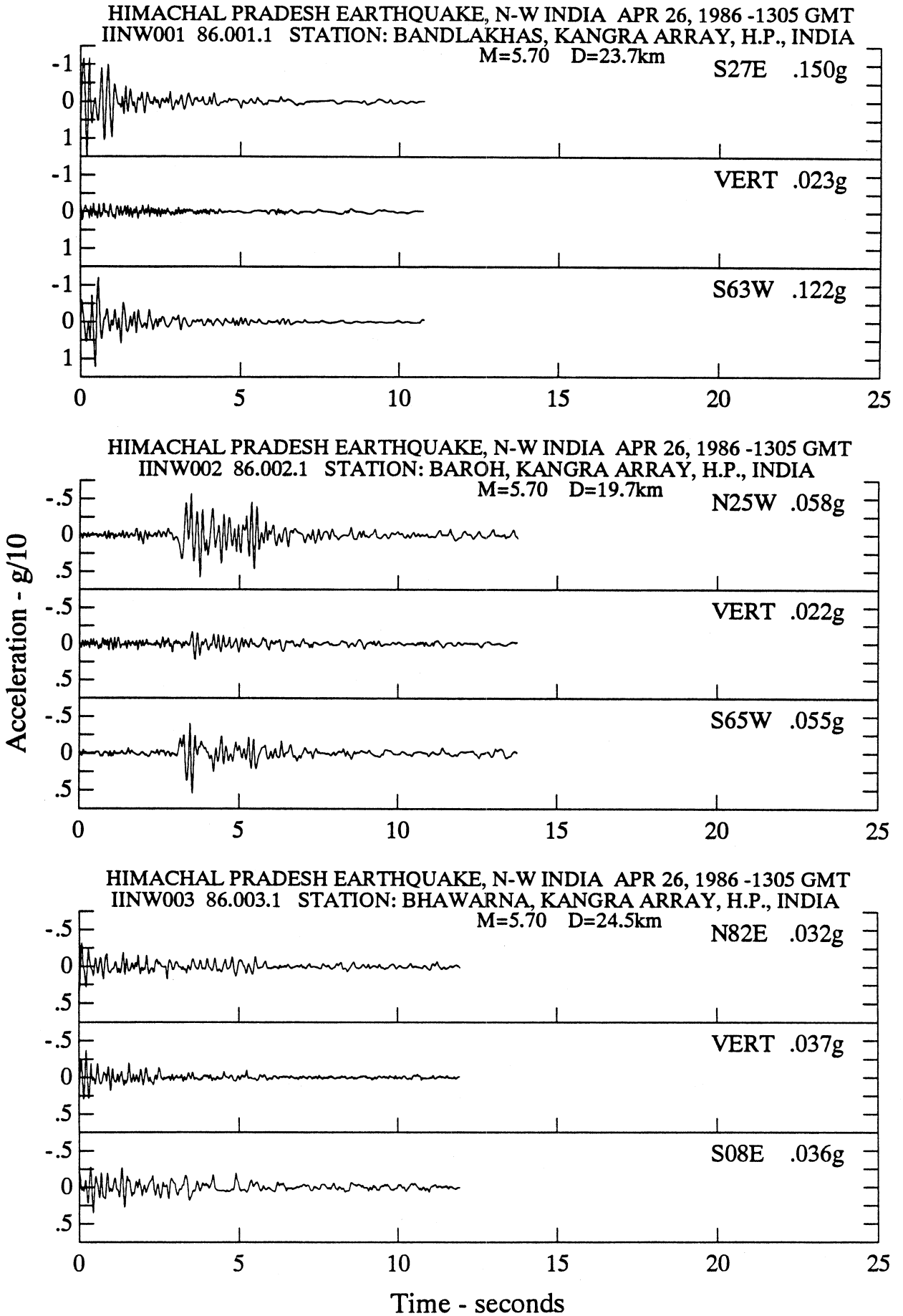
APPENDIX A

This appendix contains plots of corrected accelerations (Volume II), and of Fourier and response spectra (Volume III) for all the records, arranged in chronological order (as in Tables II.I and II.II).

Each of the Volume II plots presents acceleration (as a fraction of G/10, G is the acceleration due to gravity) plotted versus time in [sec]. The text above each plot contains information about the earthquake name, date, time and magnitude (M), the station location and the epicentral distance (D) in [km]. Also, for each recorded component of motion, the orientation and the absolute value of the peak ground acceleration (as a fraction of G) are shown.

Each of the Volume III plots contains Fourier (the dashed line) and response spectra (the solid lines) for five values of the damping ratio (0, 2, 5, 10 and 20% of critical), for a recorded component of motion. On the x-axis is the period in [sec], and on the y-axis are the PSV spectral amplitudes in [in/sec]. On the axes at 45° and 135°, the displacement spectral amplitudes (SD) in [in] and the pseudo acceleration spectral amplitudes, expressed as a fraction of G, can be read.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S27E .150g
VERT .023g
S63W .122g
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IINW002 86.002.1 STATION: BAROH, KANGRA ARRAY, H.P., INDIA
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N25W .058g
VERT .022g
S65W .055g
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IINW003 86.003.1 STATION: BHAWARNA, KANGRA ARRAY, H.P., INDIA
M=5.70 D=24.5km
N82E .032g
VERT .037g
S08E .036g
Acceleration - g/10
Time - seconds

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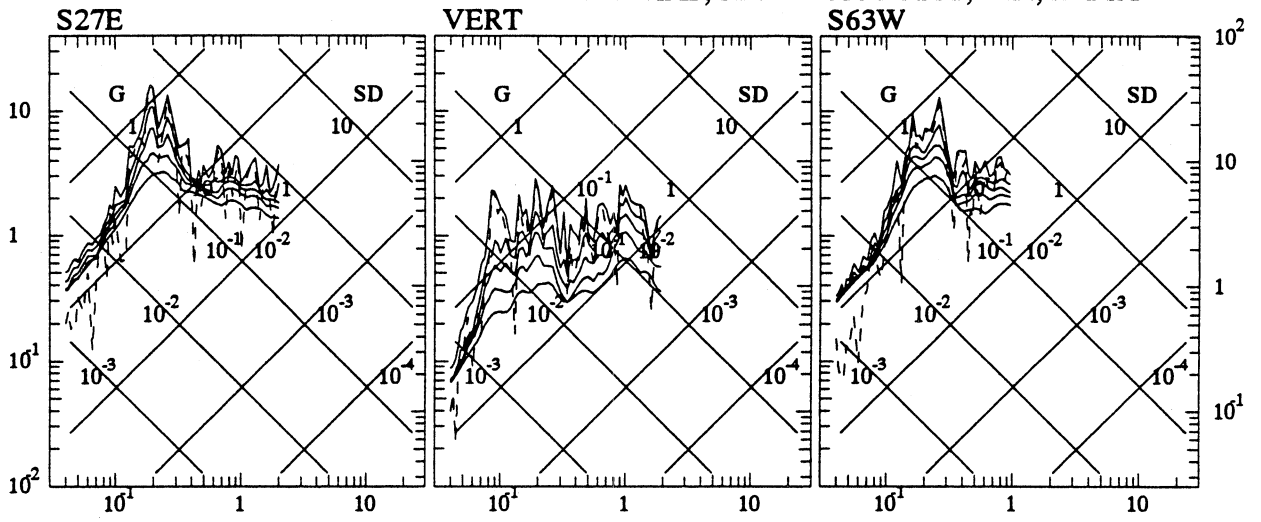

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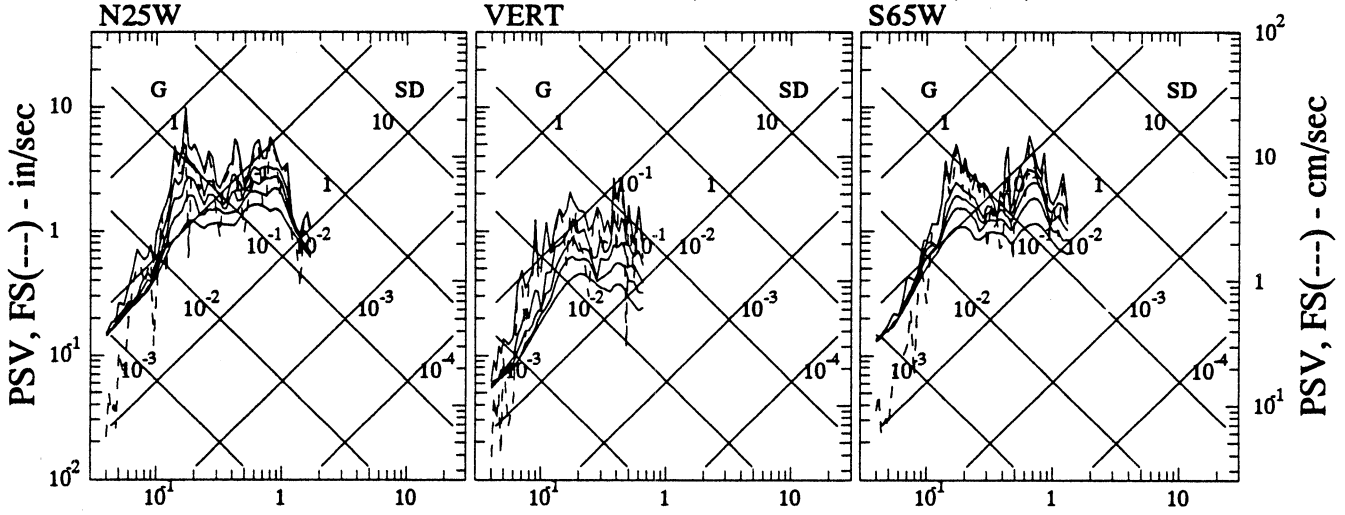

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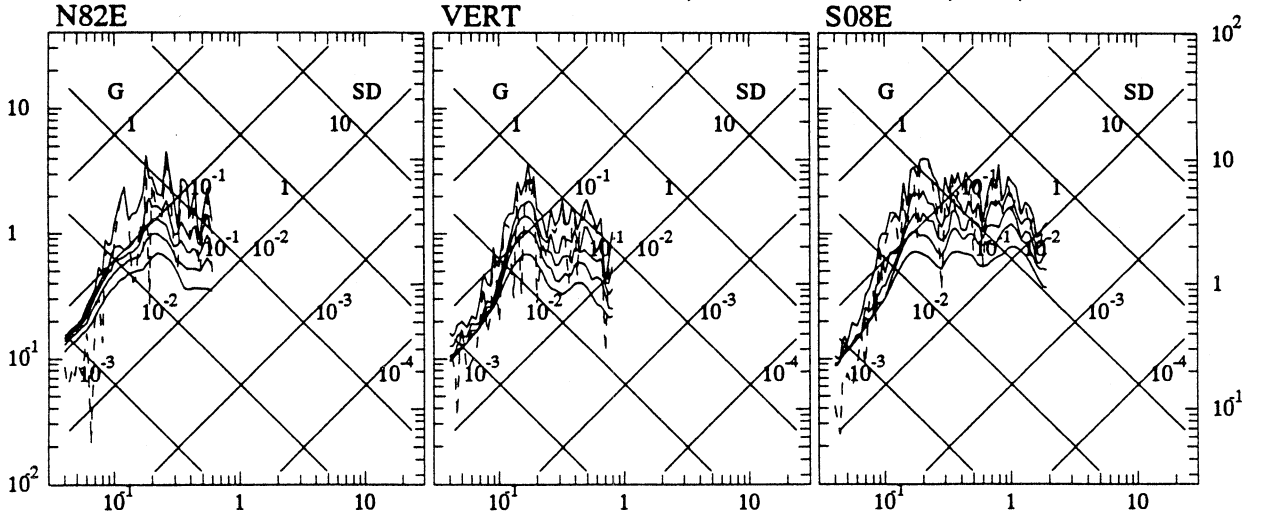

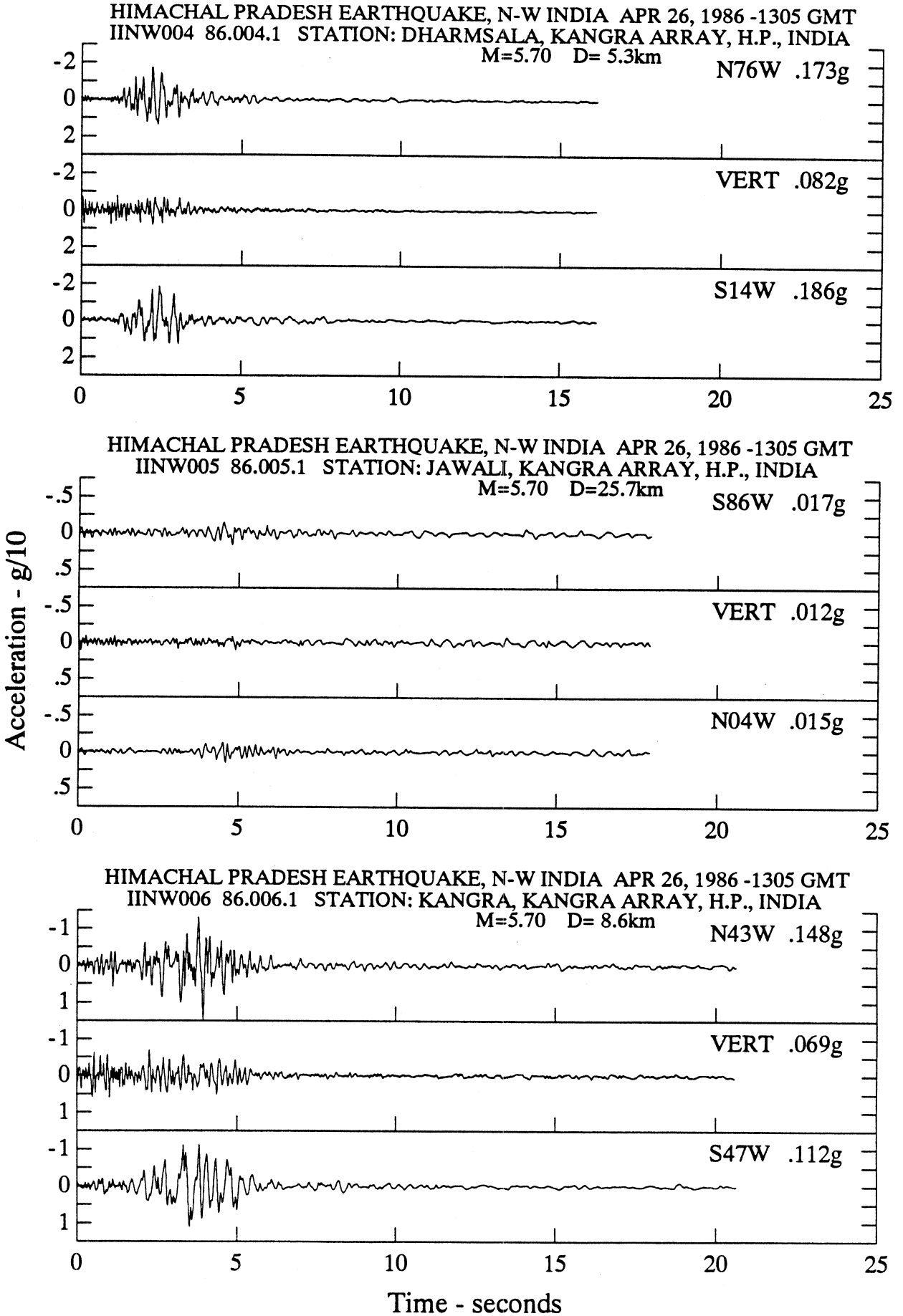
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VERT .082g
S14W .186g
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S86W .017g
VERT .012g
N04W .015g
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VERT .069g
S47W .112g
Acceleration - g/10
Time - seconds

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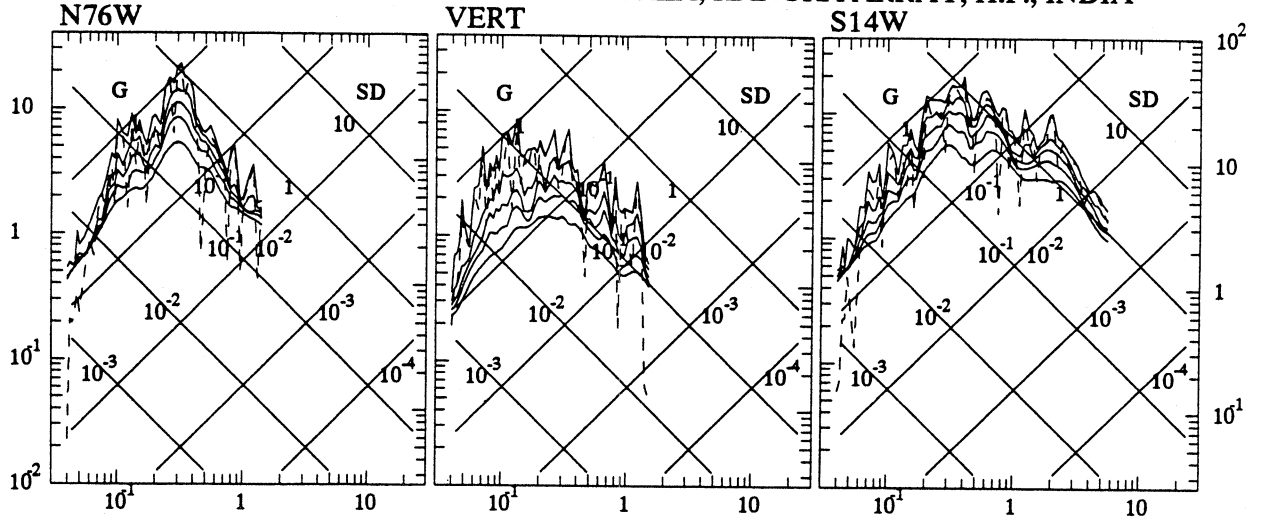

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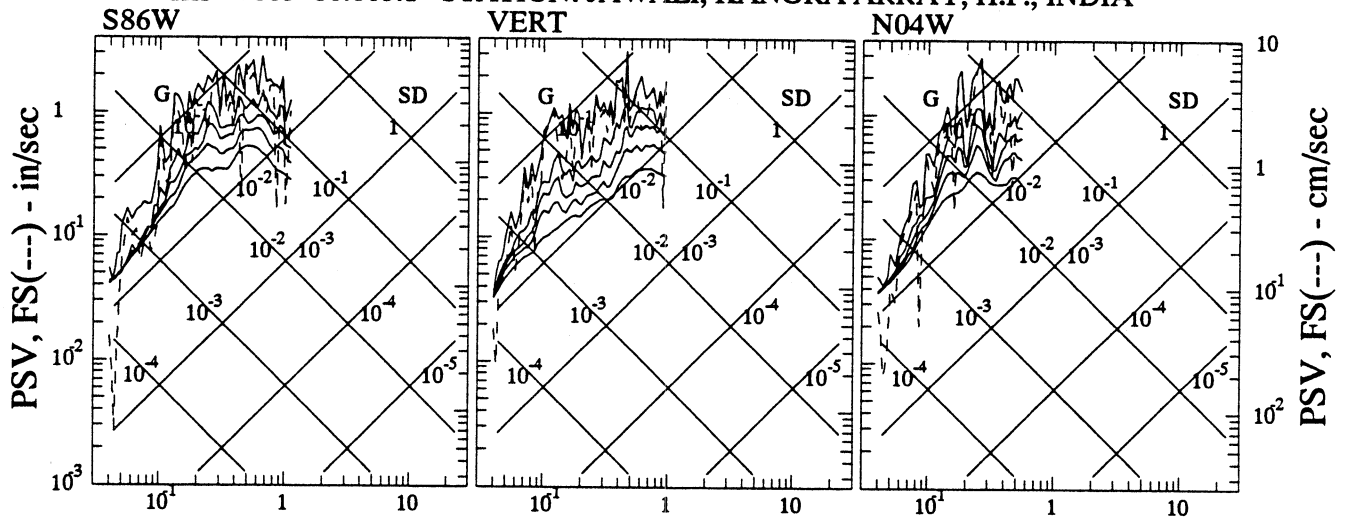

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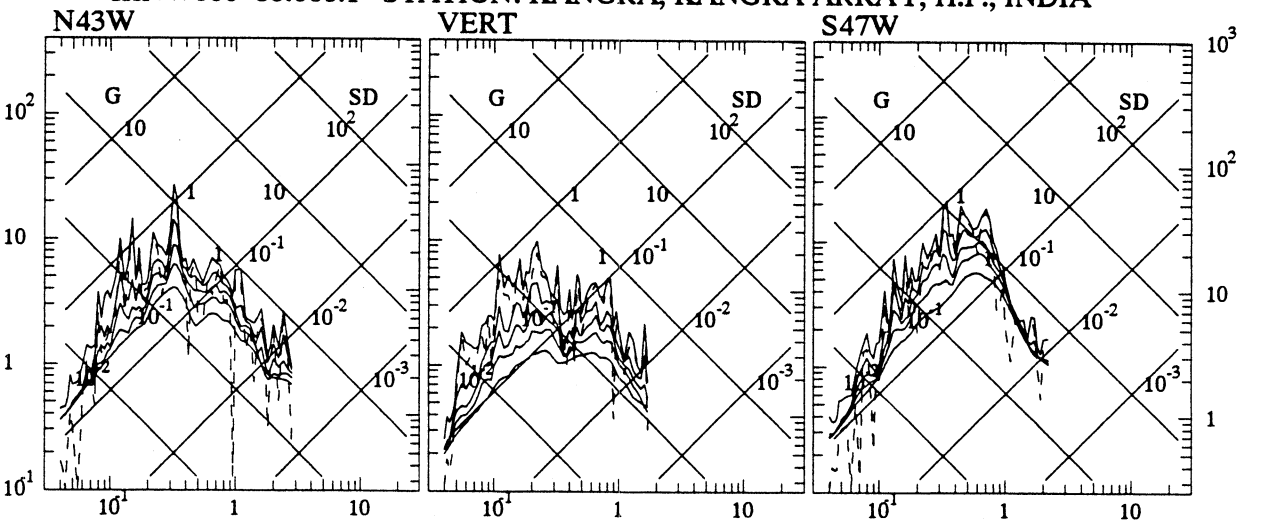

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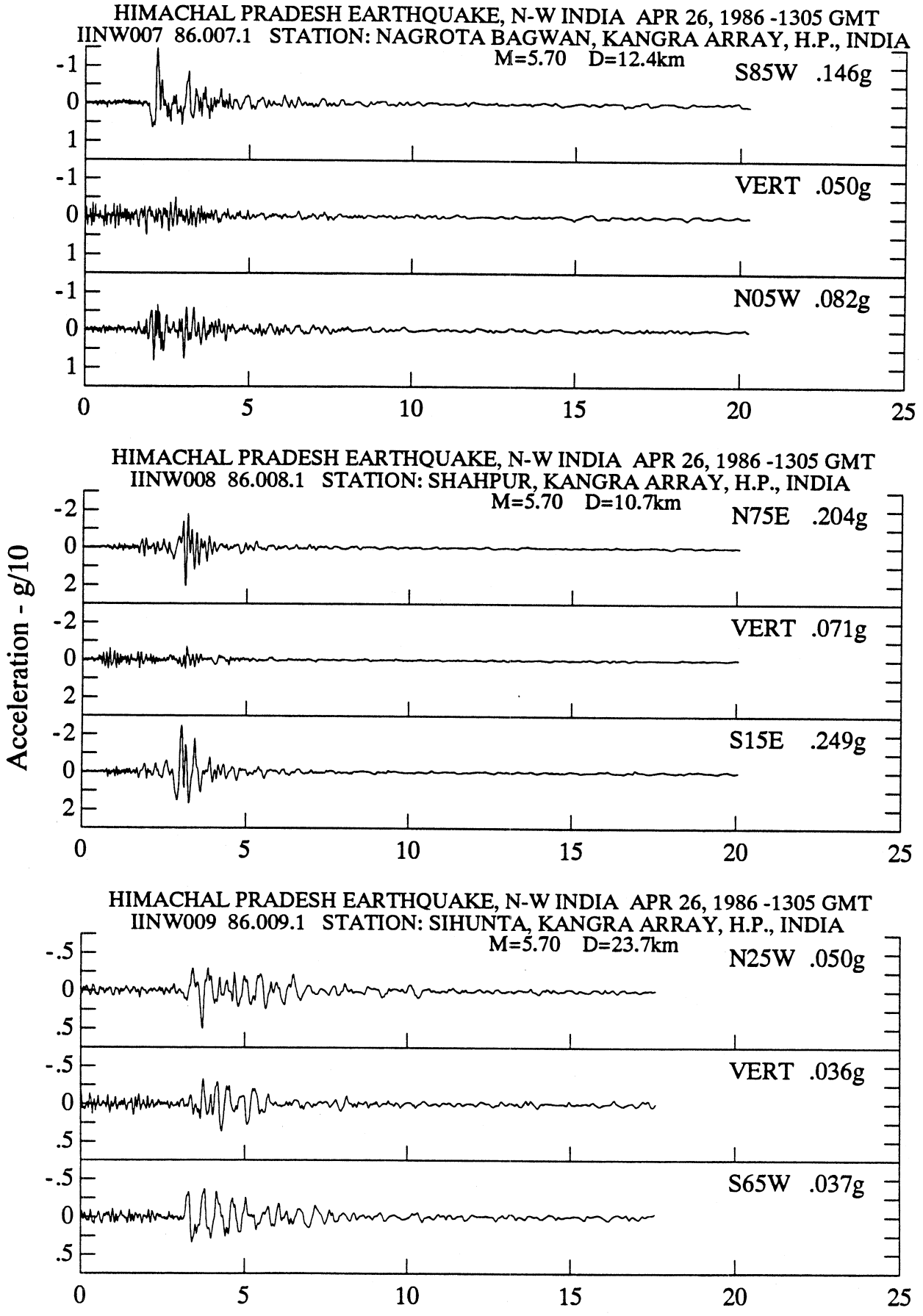
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VERT .050g
N05W .082g
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N75E .204g
VERT .071g
S15E .249g
HIMACHAL PRADESH EARTHQUAKE, N-W INDIA APR 26, 1986 -1305 GMT
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M=5.70 D=23.7km
N25W .050g
VERT .036g
S65W .037g
Acceleration - g/10
Time - seconds

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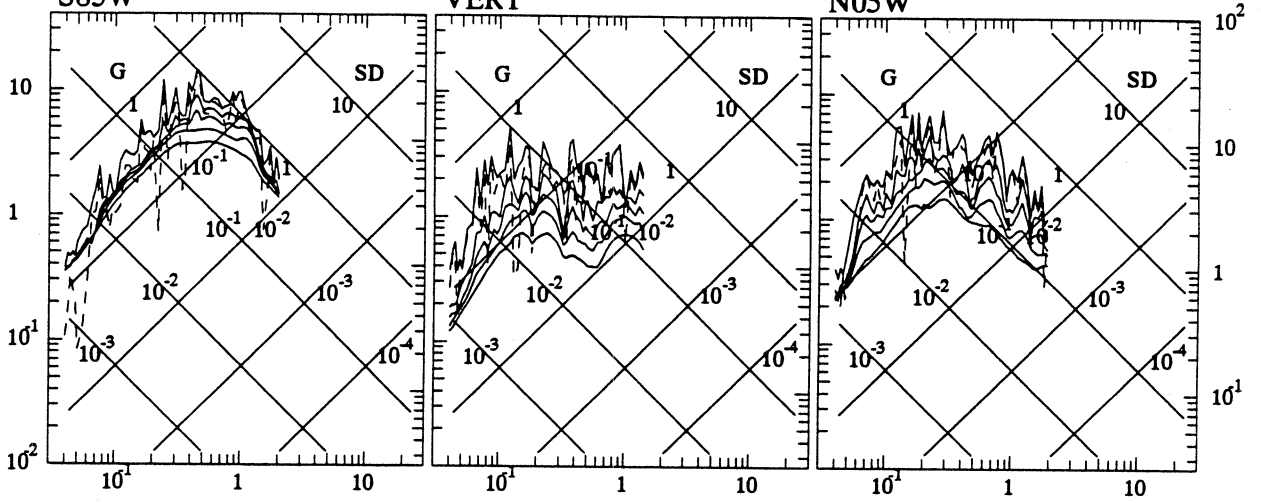

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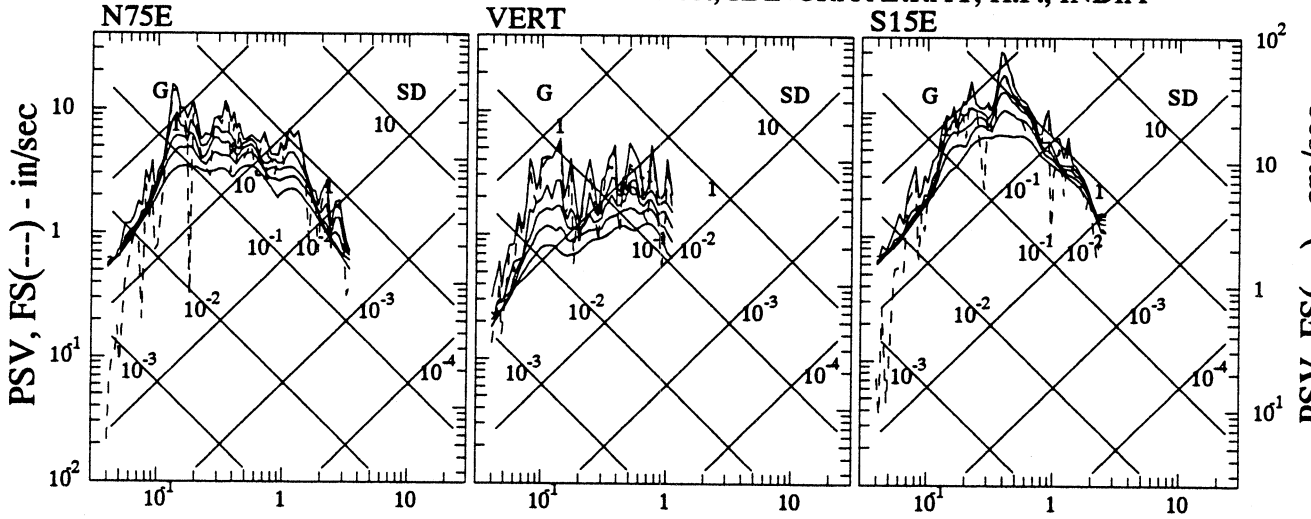

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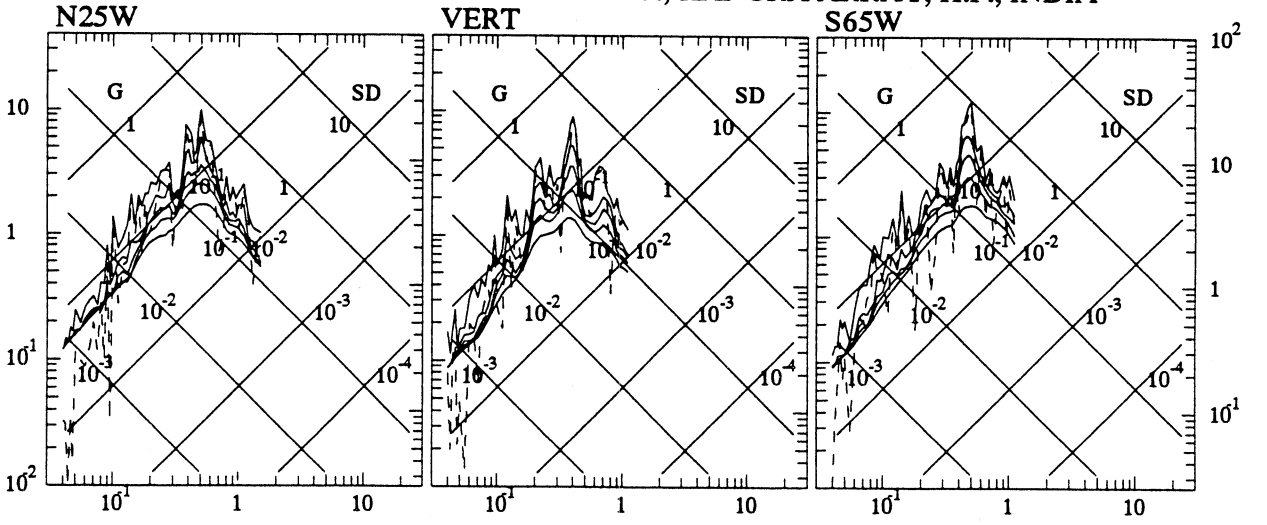

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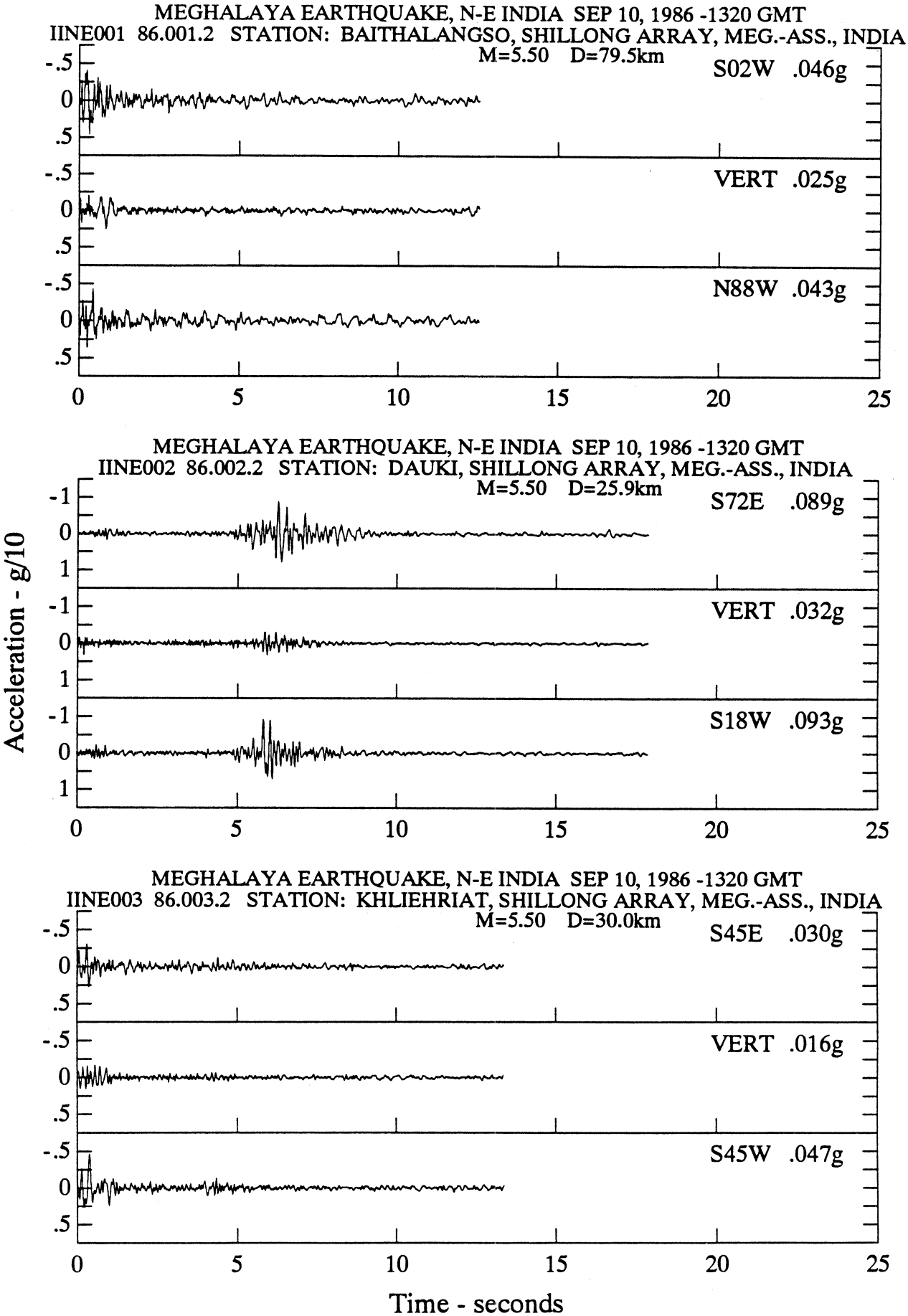
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VERT .025g
N88W .043g
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M=5.50 D=30.0km
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VERT .016g
S45W .047g
Acceleration - g/10
Time - seconds

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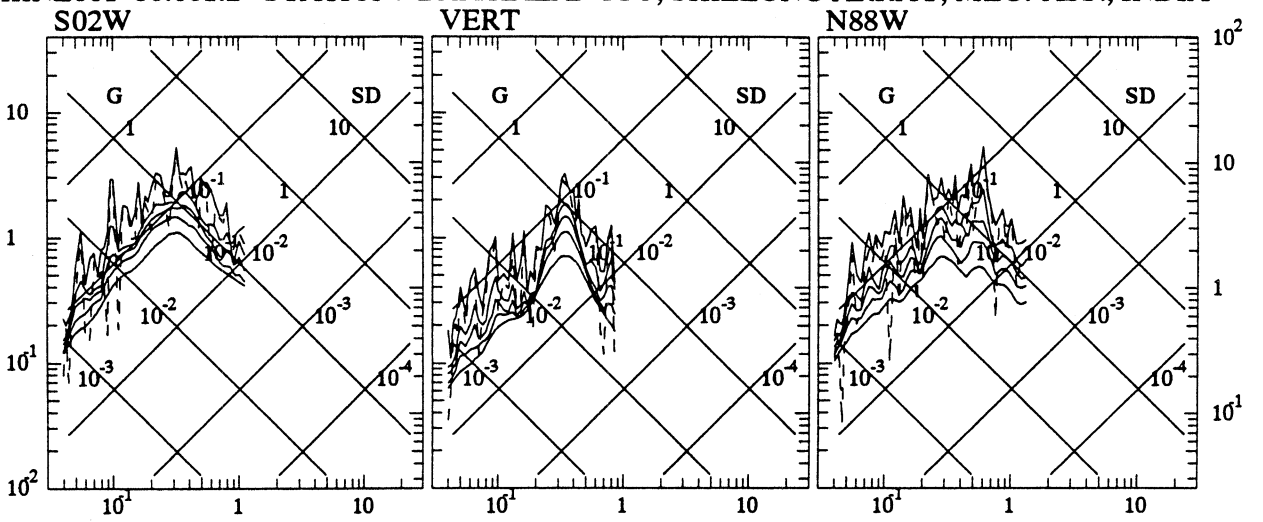
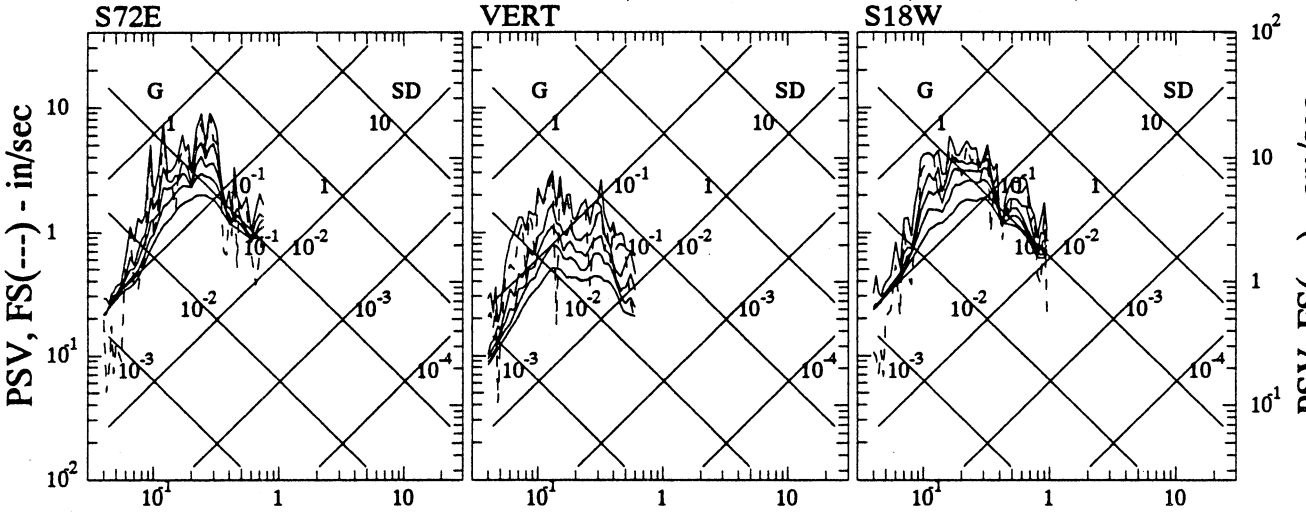
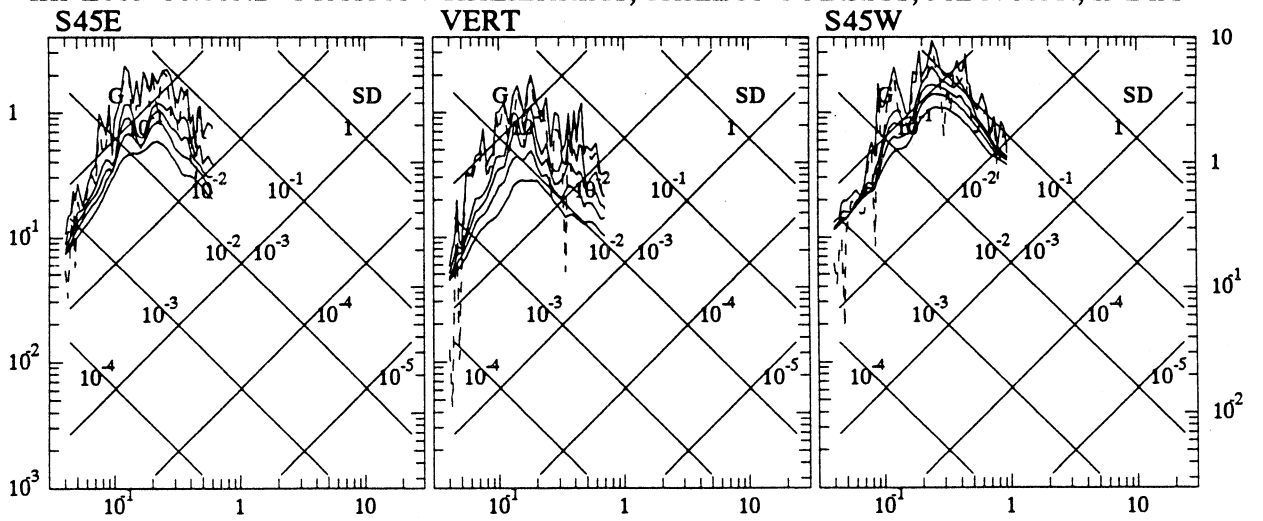


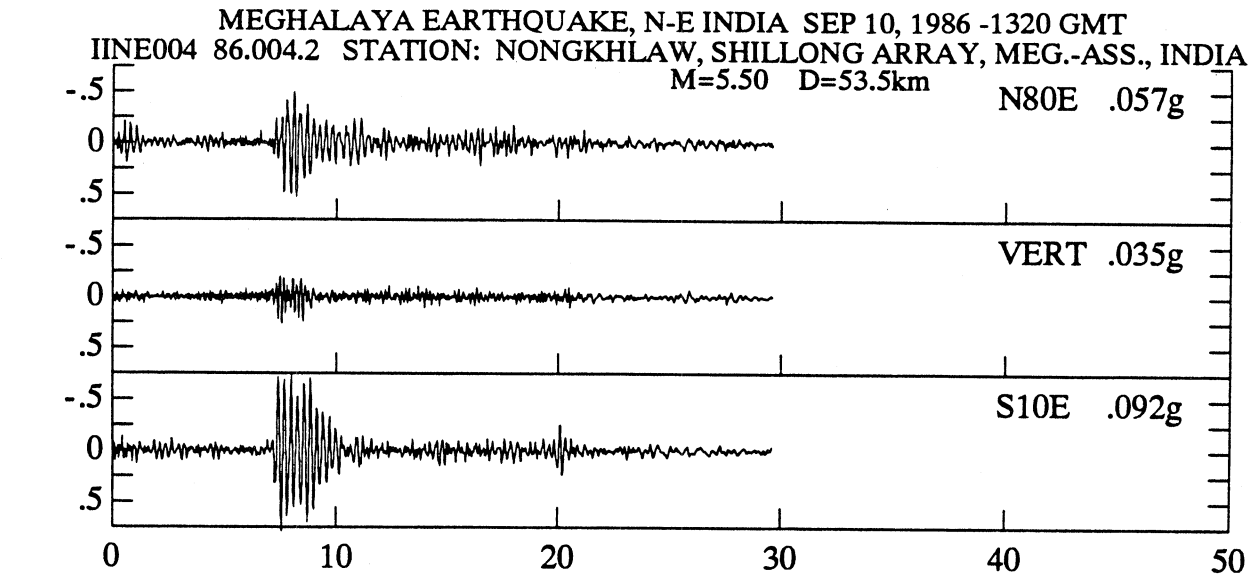
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE002 86.002.2 STATION: DAUKI, SHILLONG ARRAY, MEG.-ASS., INDIA

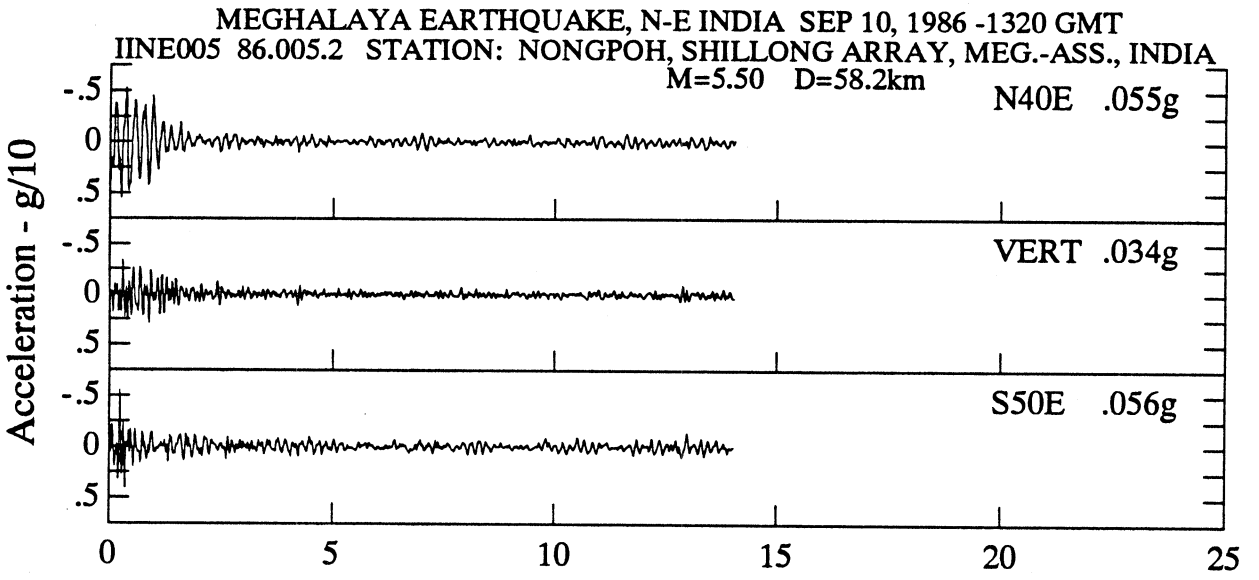


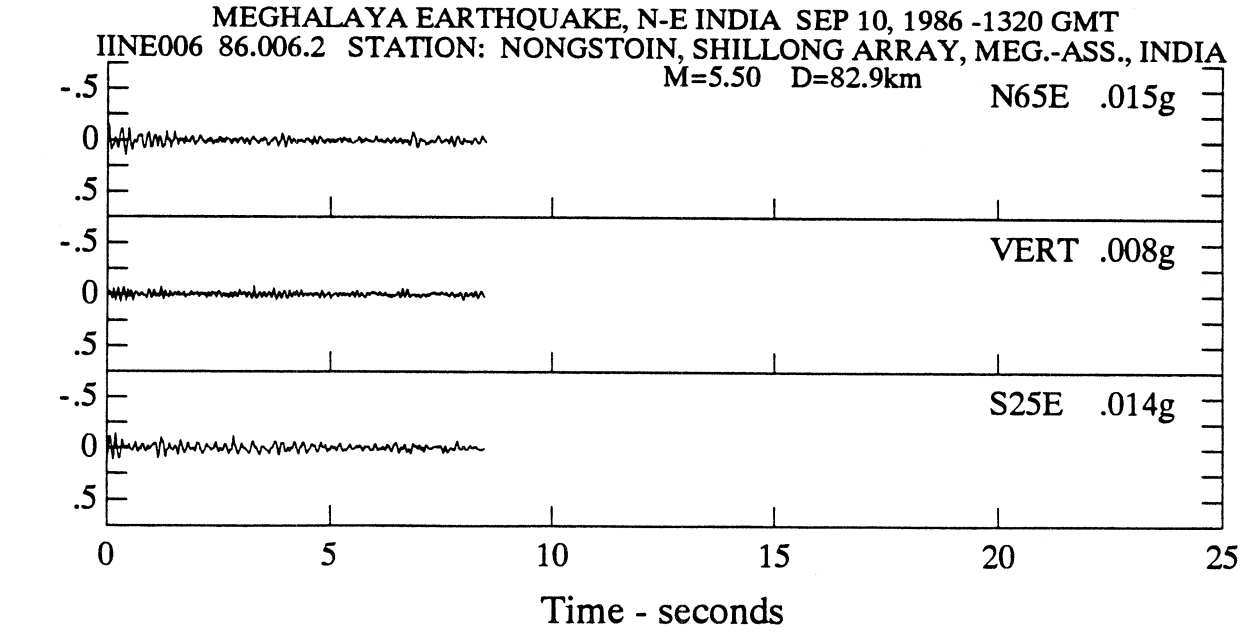
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE003 86.003.2 STATION: KHLIEHRIAT, SHILLONG ARRAY, MEG.-ASS., INDIA



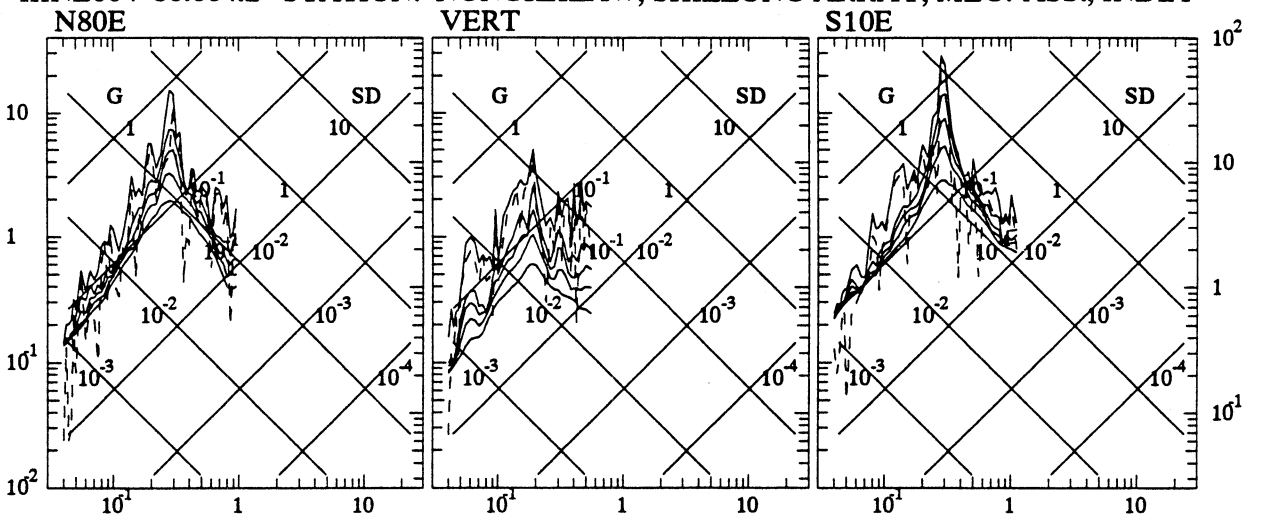
Period - sec


MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IINE004 86.004.2 STATION: NONGKHLAW, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.50 D=53.5km
N80E .057g
VERT .035g
S10E .092g
-.5
0
.5
0
10
20
30
40
50

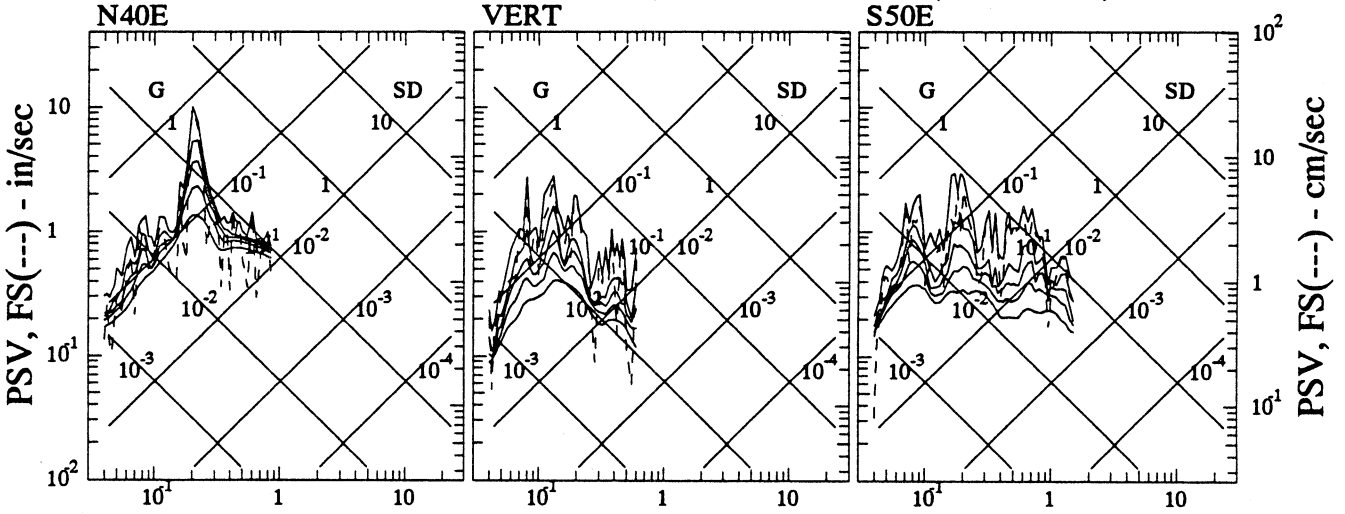

MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IINE005 86.005.2 STATION: NONGPOH, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.50 D=58.2km
N40E .055g
VERT .034g
S50E .056g
Acceleration - g/10
-.5
0
.5
0
5
10
15
20
25


MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IINE006 86.006.2 STATION: NONGSTOIN, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.50 D=82.9km
N65E .015g
VERT .008g
S25E .014g
-.5
0
.5
0
5
10
15
20
25
Time - seconds

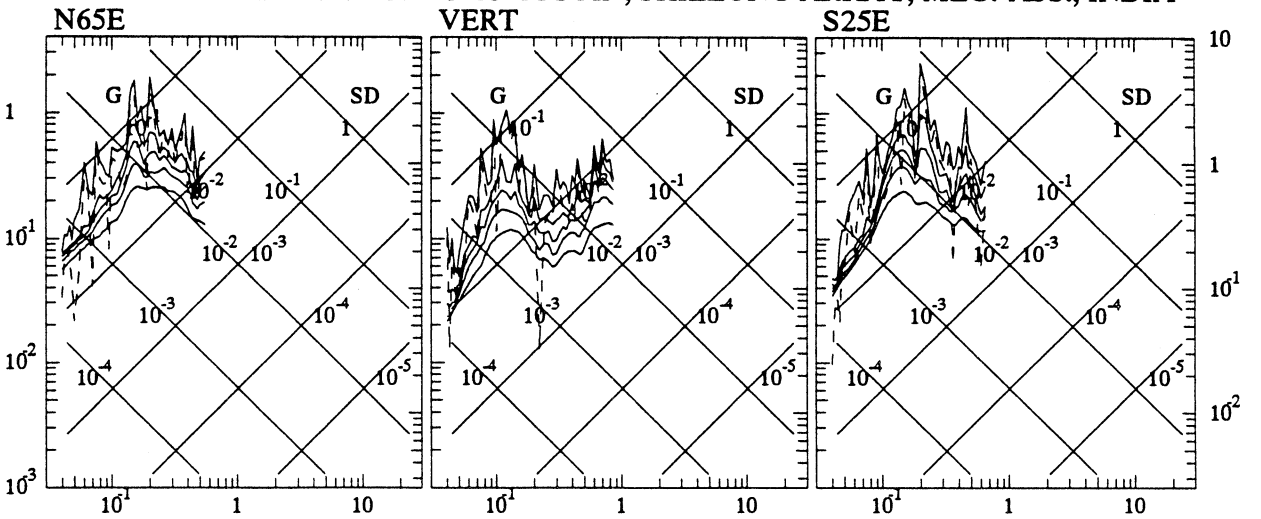
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE004 86.004.2 STATION: NONGKHLAW, SHILLONG ARRAY, MEG.-ASS., INDIA



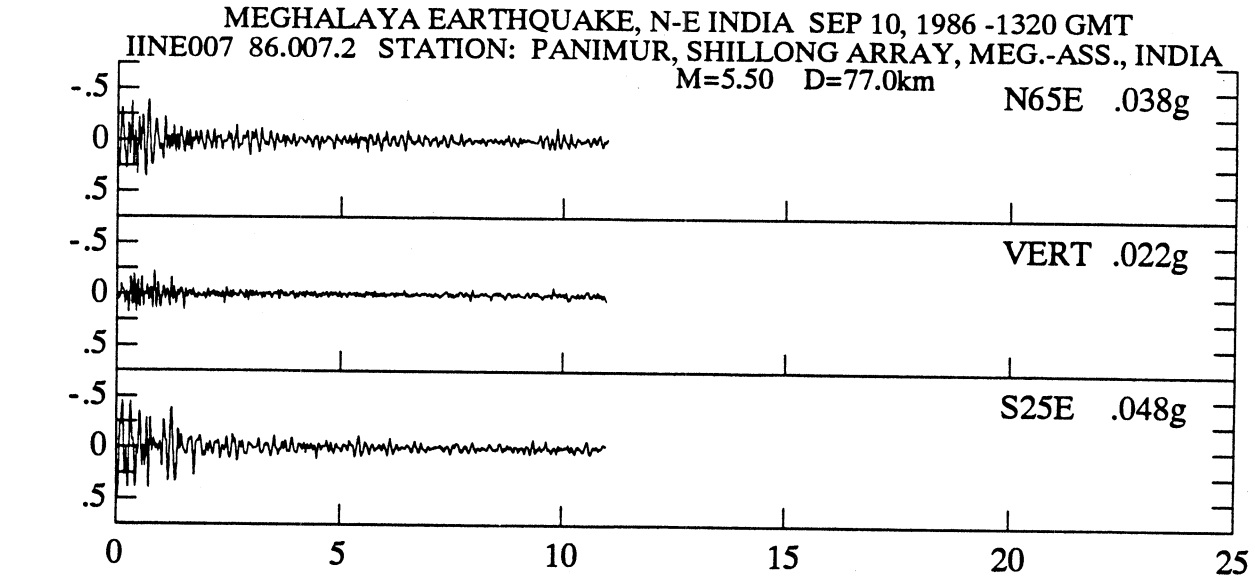
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE005 86.005.2 STATION: NONGPOH, SHILLONG ARRAY, MEG.-ASS., INDIA

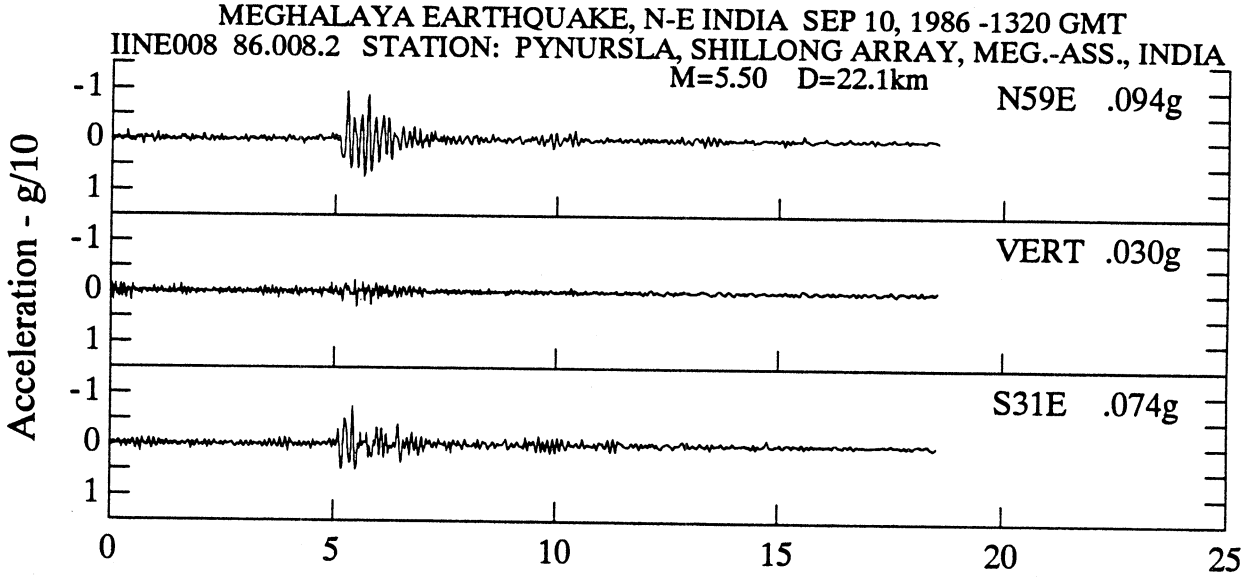


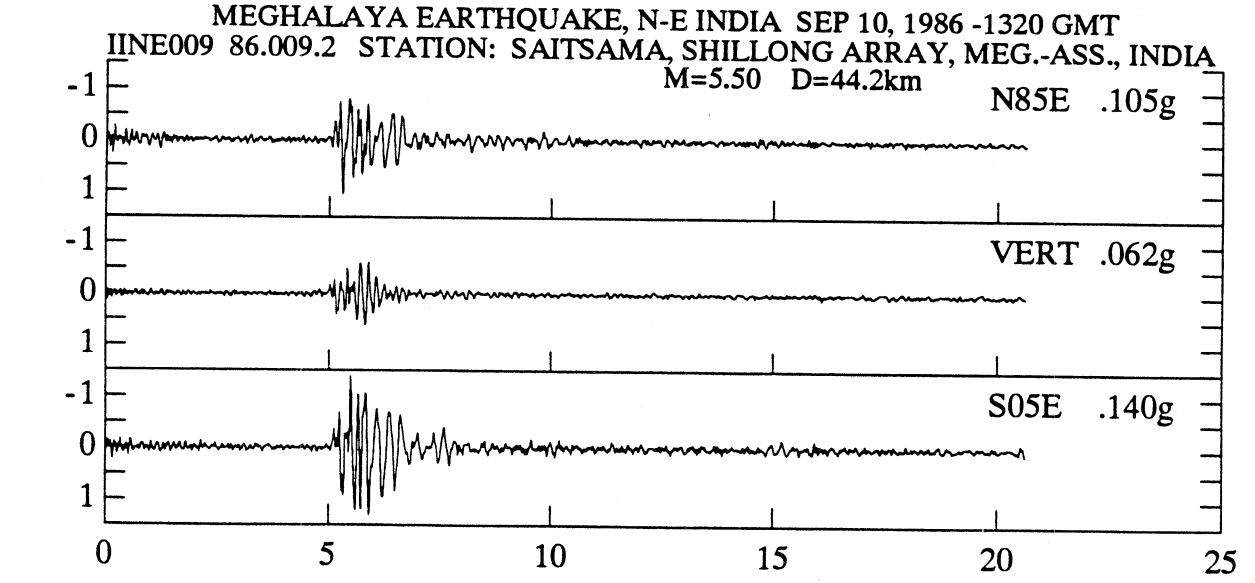
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE006 86.006.2 STATION: NONGSTOIN, SHILLONG ARRAY, MEG.-ASS., INDIA



Period - sec



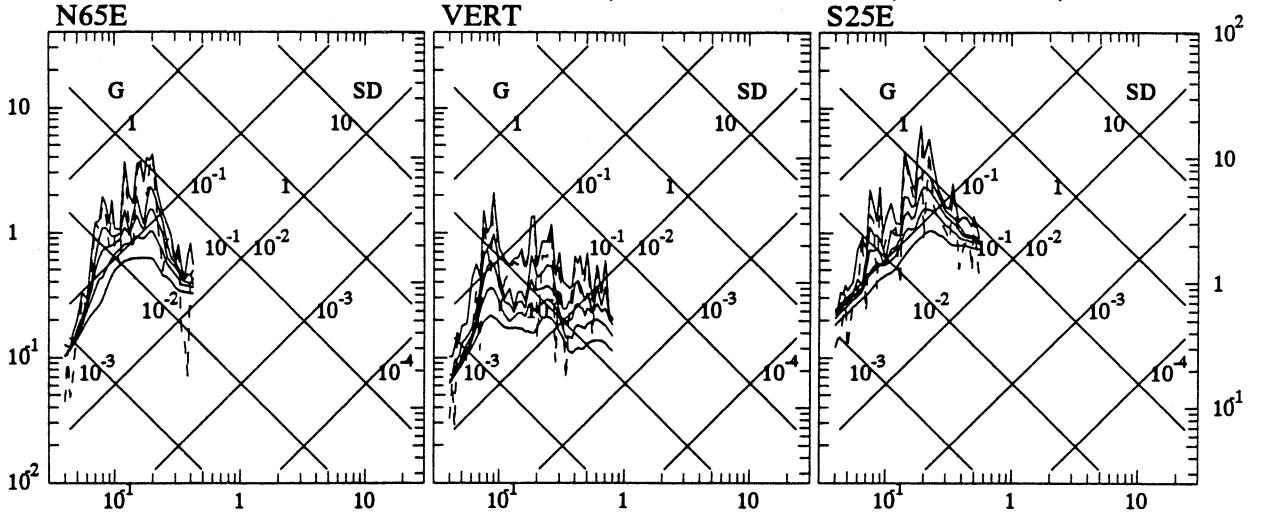




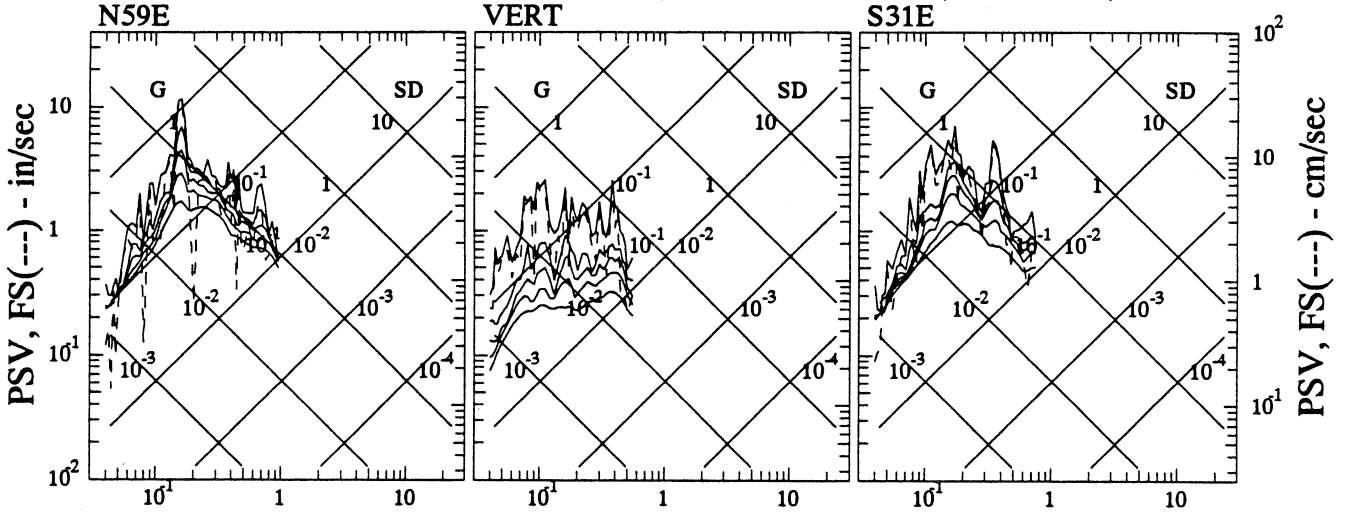
Acceleration - g/10

Time - seconds

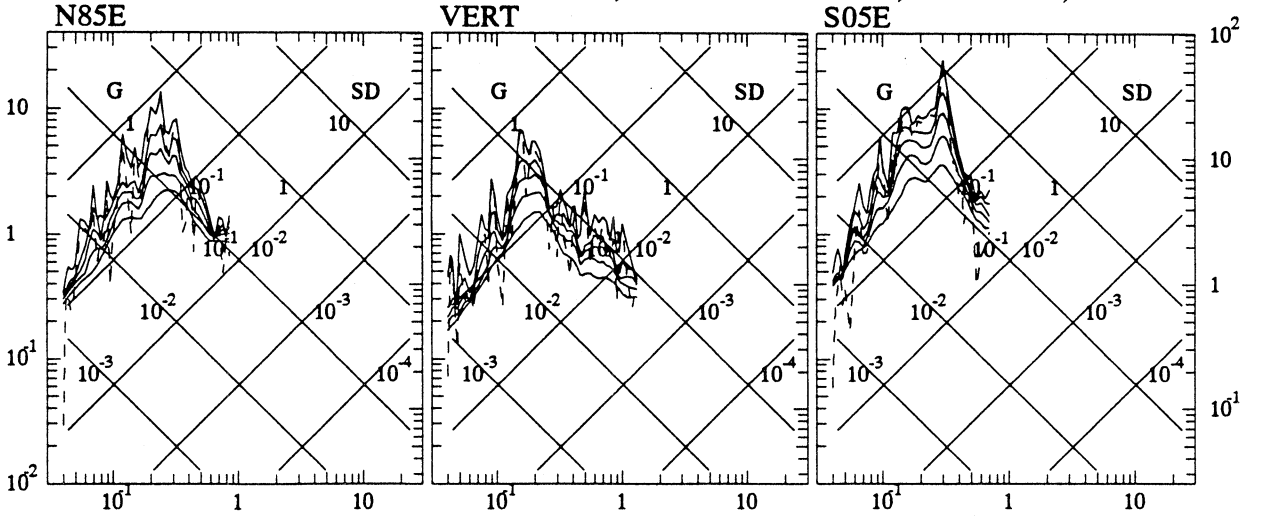
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE007 86.007.2 STATION: PANIMUR, SHILLONG ARRAY, MEG.-ASS., INDIA



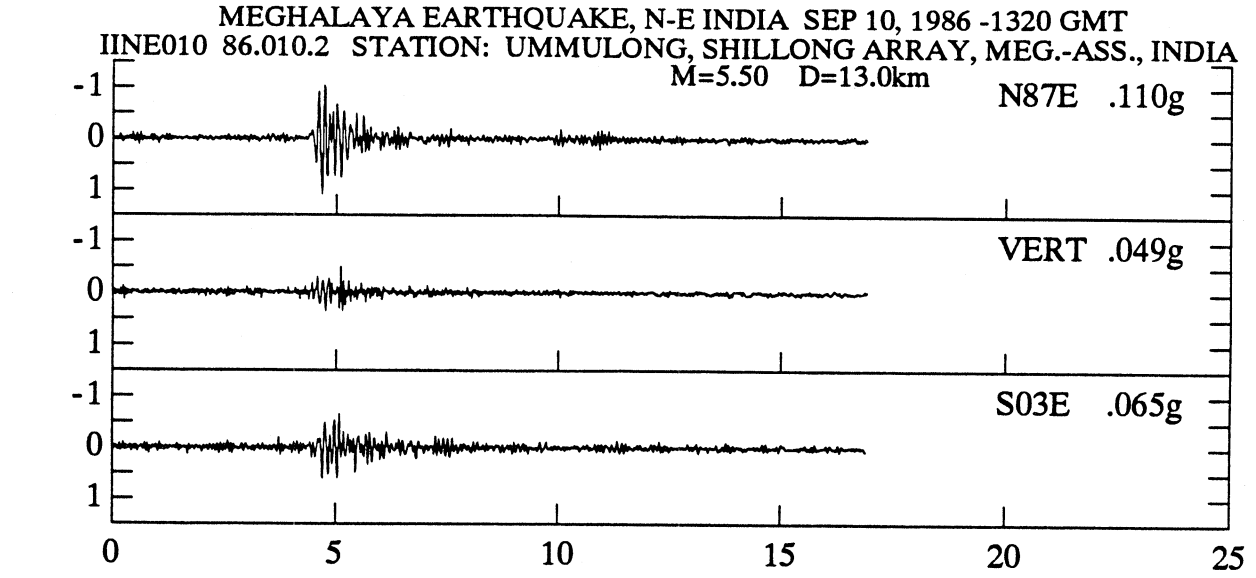
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE008 86.008.2 STATION: PYNURSLA, SHILLONG ARRAY, MEG.-ASS., INDIA

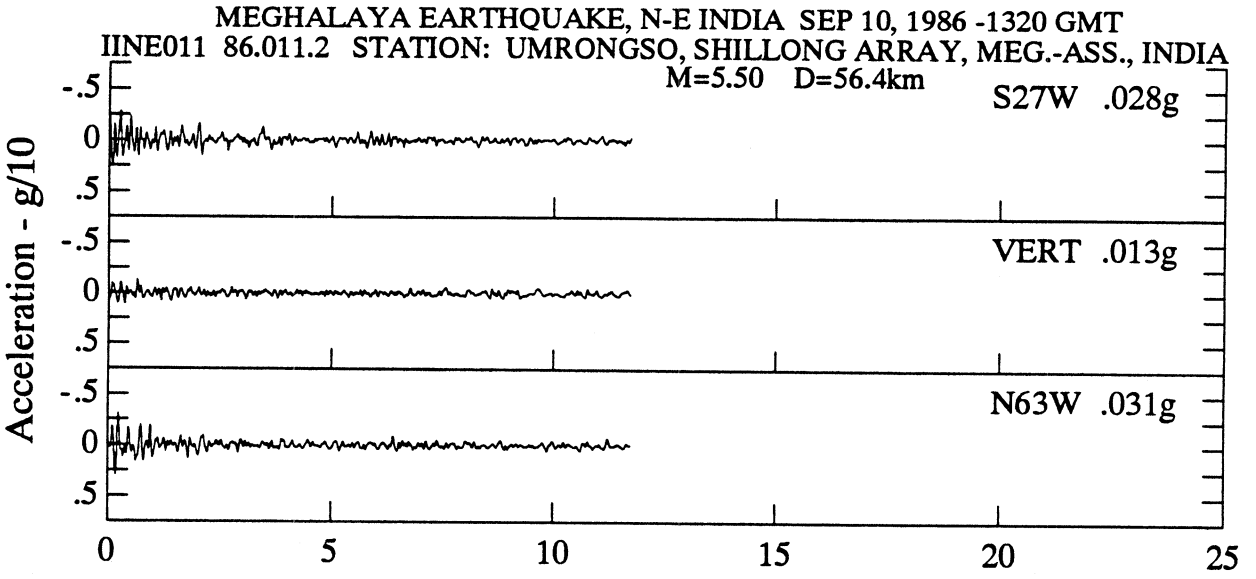


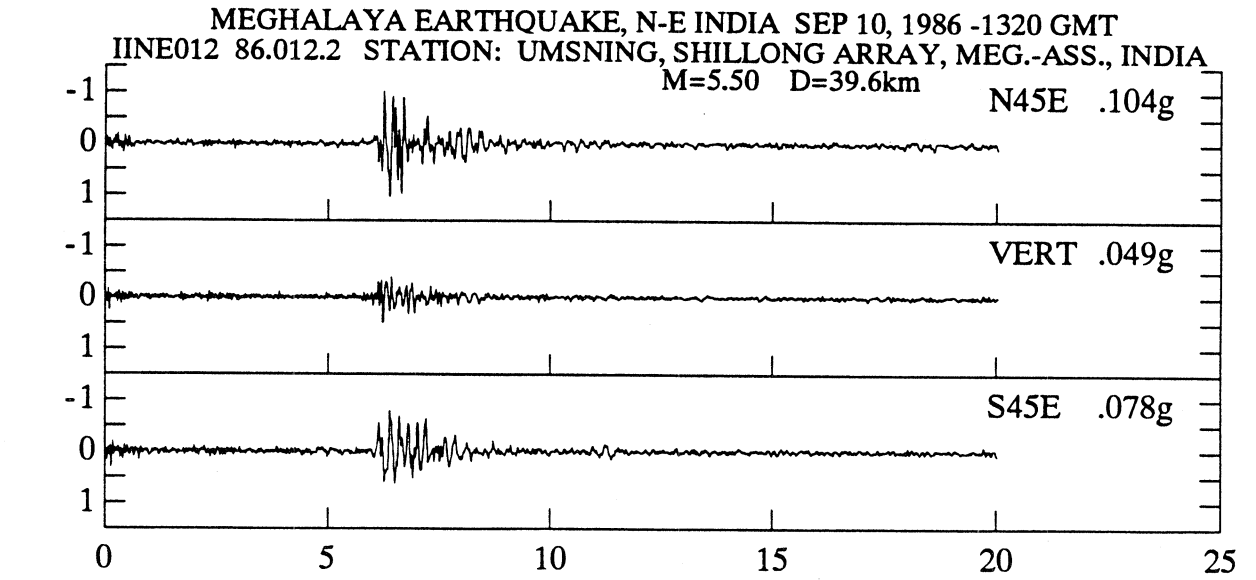
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE009 86.009.2 STATION: SAITSAMA, SHILLONG ARRAY, MEG.-ASS., INDIA



Period - sec



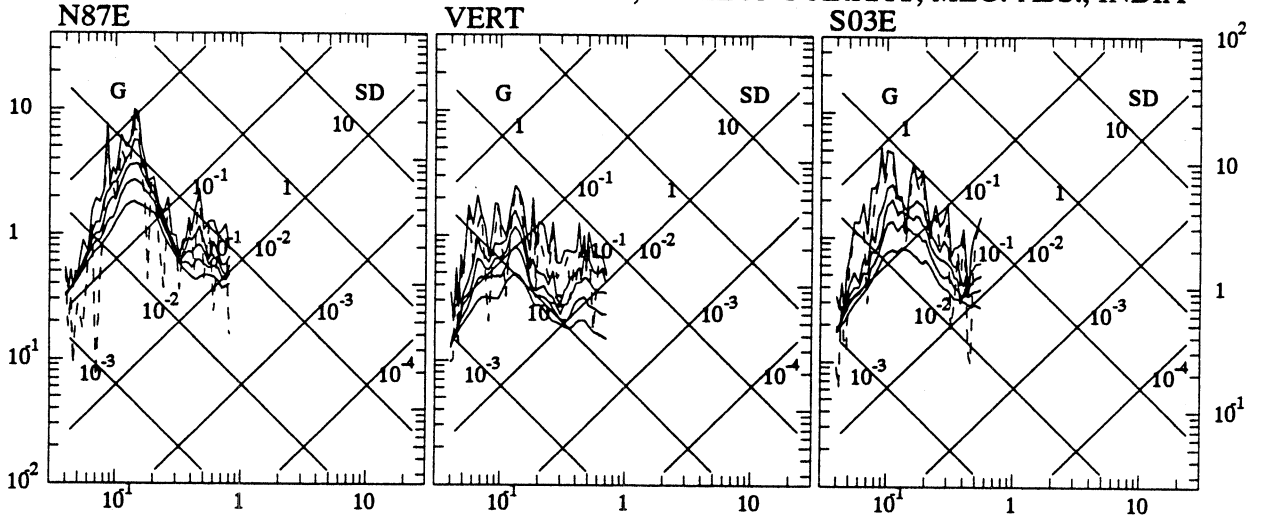




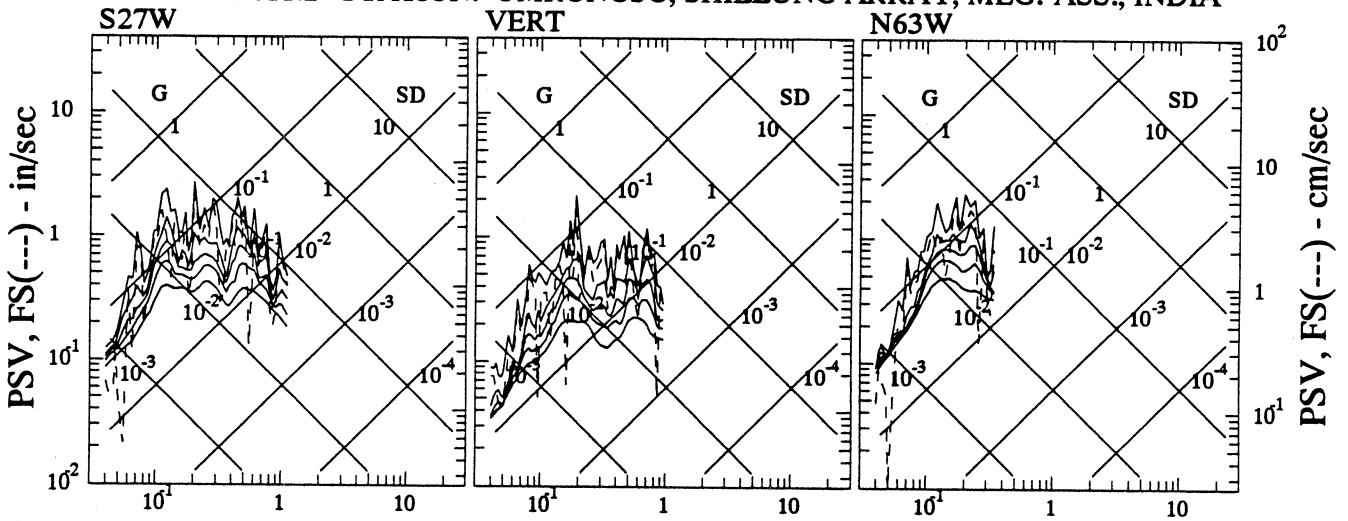
Acceleration - g/10

Time - seconds

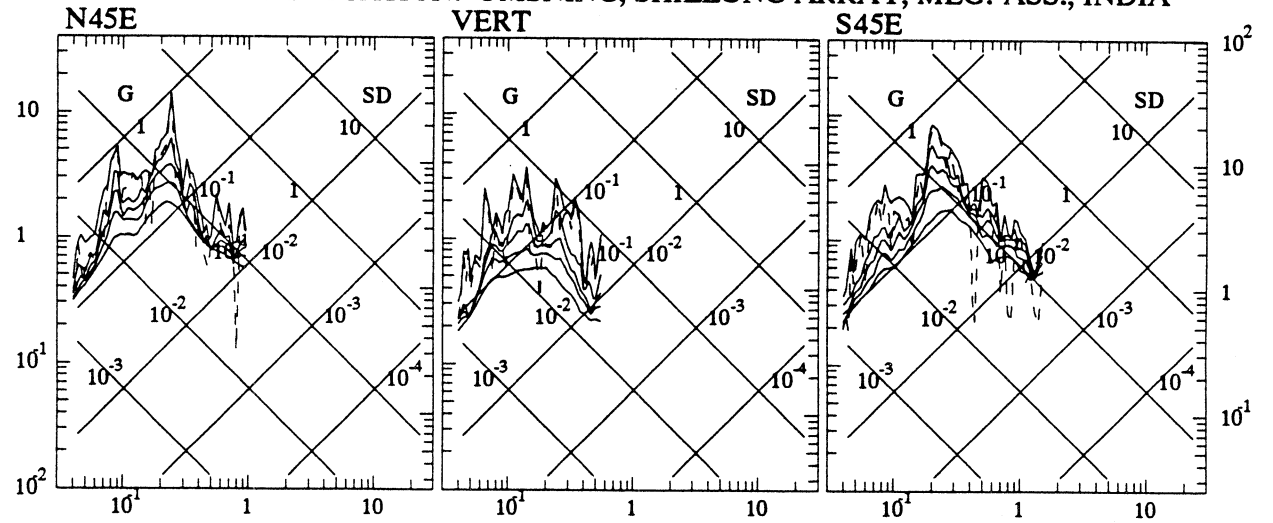
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE010 86.010.2 STATION: UMMULONG, SHILLONG ARRAY, MEG.-ASS., INDIA

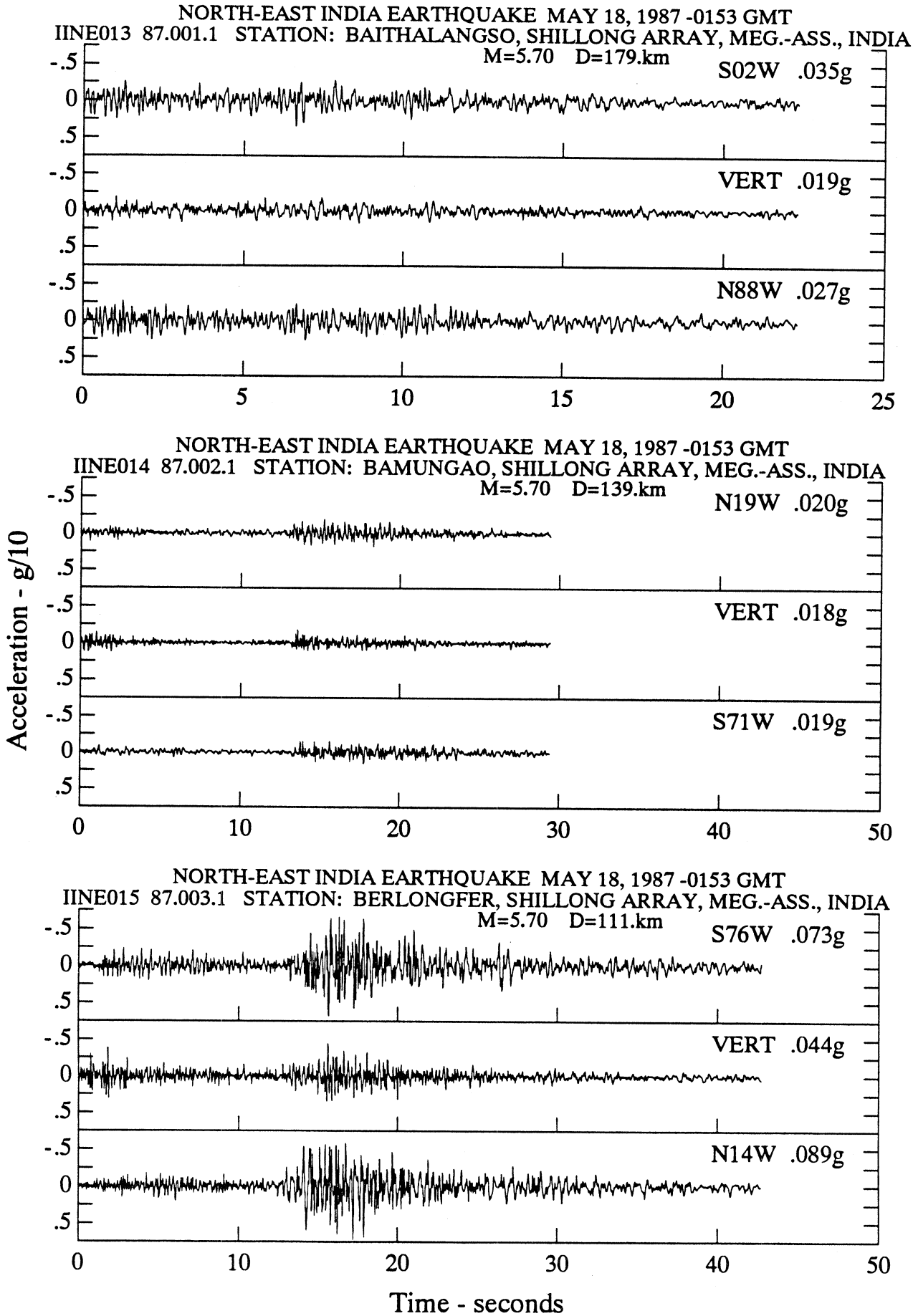


MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE011 86.011.2 STATION: UMRONGSO, SHILLONG ARRAY, MEG.-ASS., INDIA



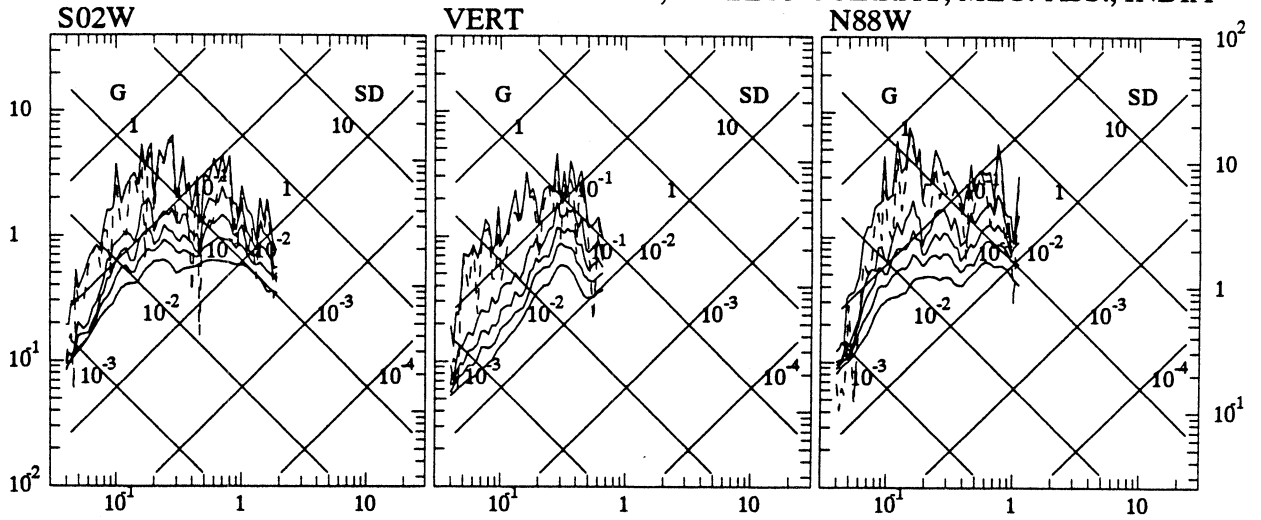
MEGHALAYA EARTHQUAKE, N-E INDIA SEP 10, 1986 -1320 GMT
IIINE012 86.012.2 STATION: UMSNING, SHILLONG ARRAY, MEG.-ASS., INDIA




NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IINE013 87.001.1 STATION: BAITHALANGSO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.70 D=179.km
S02W .035g
VERT .019g
N88W .027g
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IINE014 87.002.1 STATION: BAMUNGAO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.70 D=139.km
N19W .020g
VERT .018g
S71W .019g
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IINE015 87.003.1 STATION: BERLONGFER, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.70 D=111.km
S76W .073g
VERT .044g
N14W .089g
Acceleration - g/10
Time - seconds

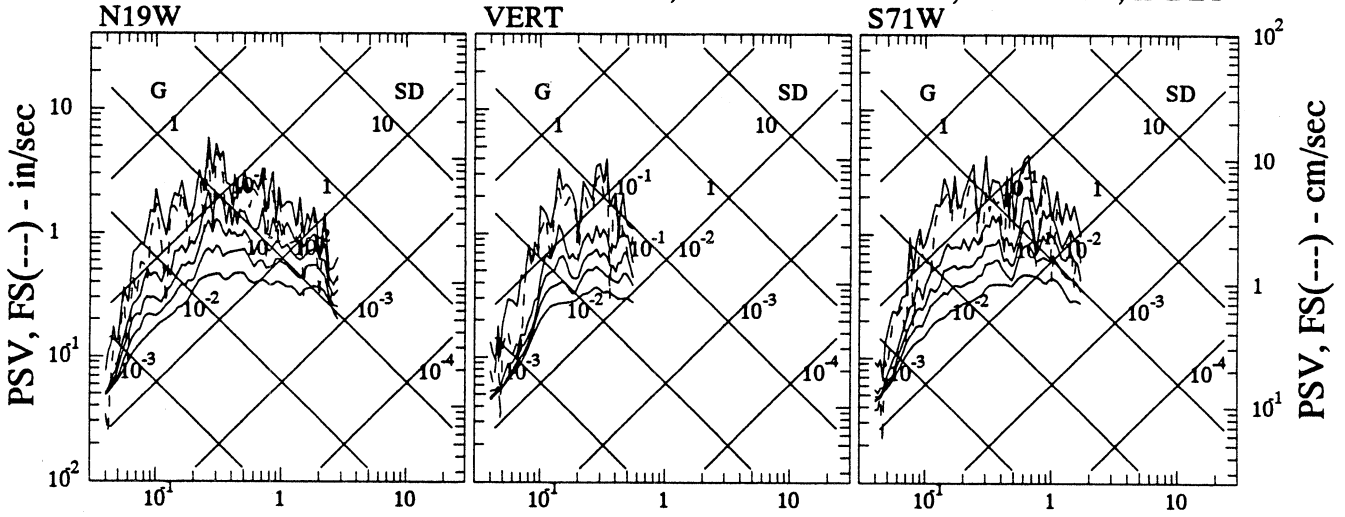
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT

IIINE013 87.001.1 STATION: BAITHALANGSO, SHILLONG ARRAY, MEG.-ASS., INDIA



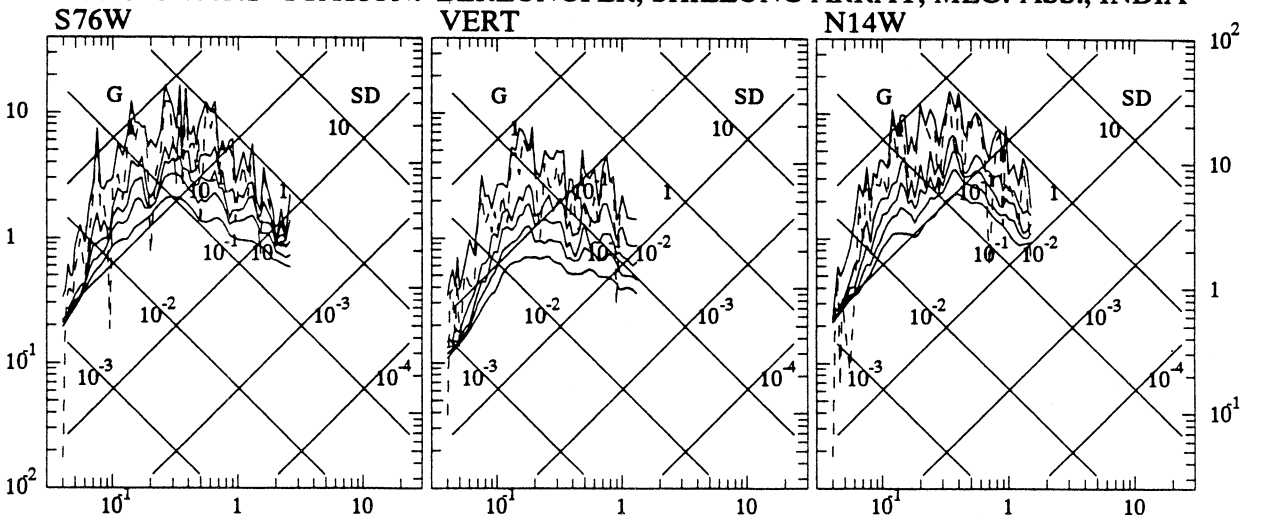
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT

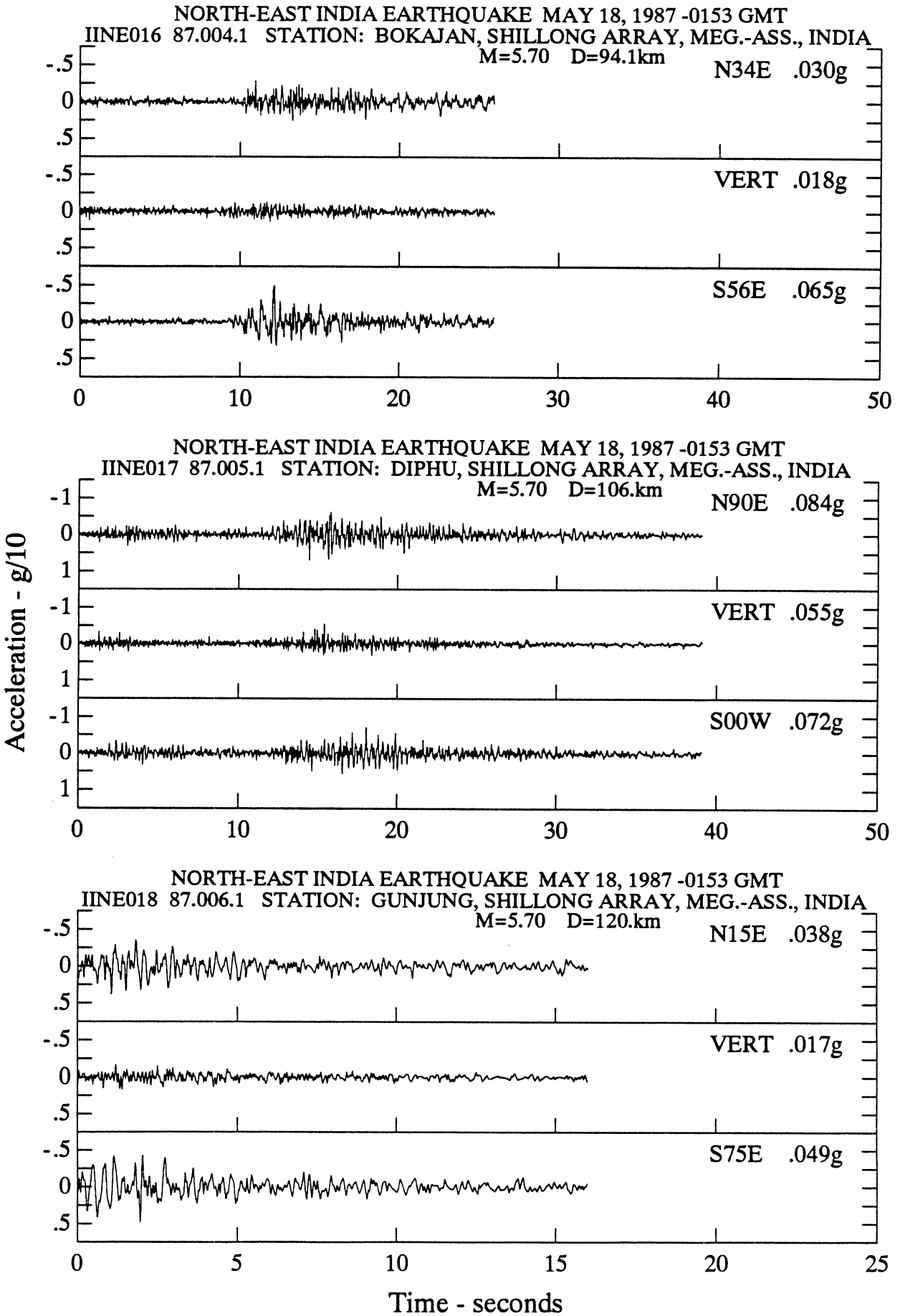
IIINE014 87.002.1 STATION: BAMUNGAO, SHILLONG ARRAY, MEG.-ASS., INDIA

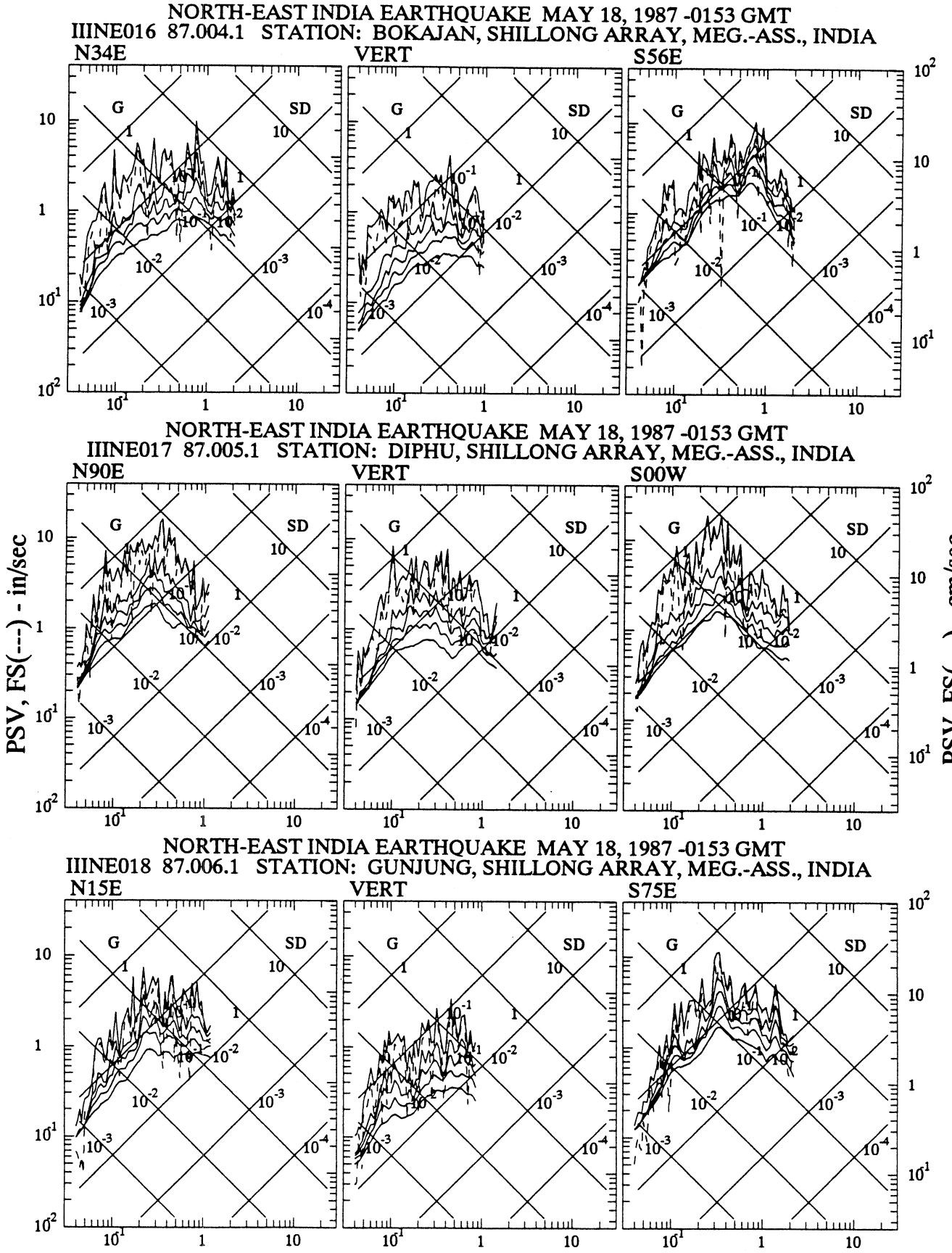


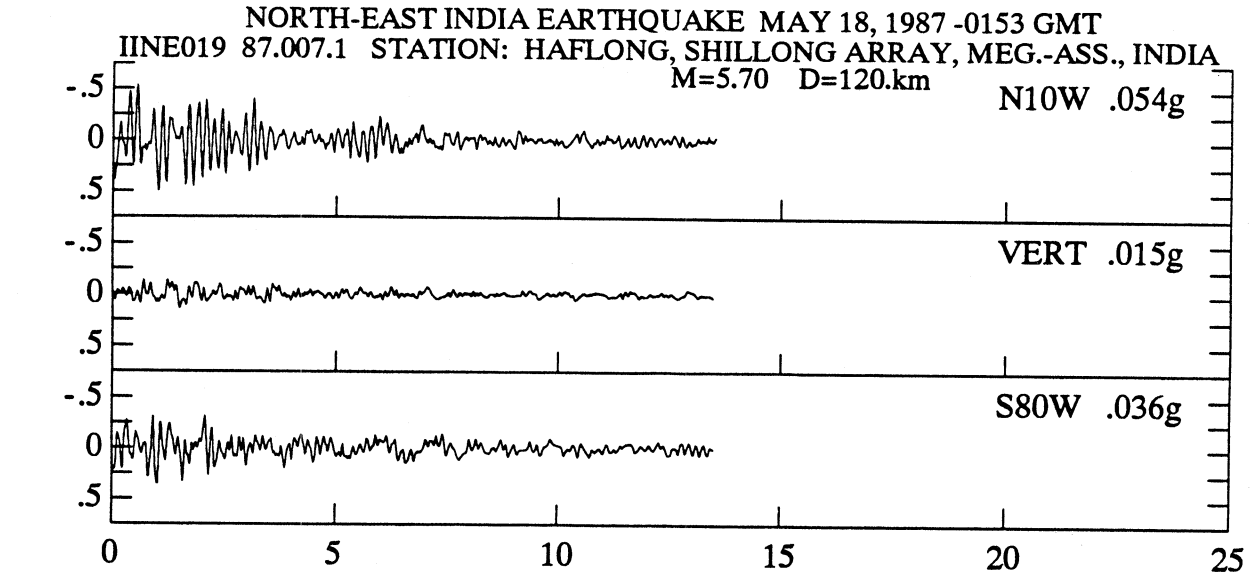
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT

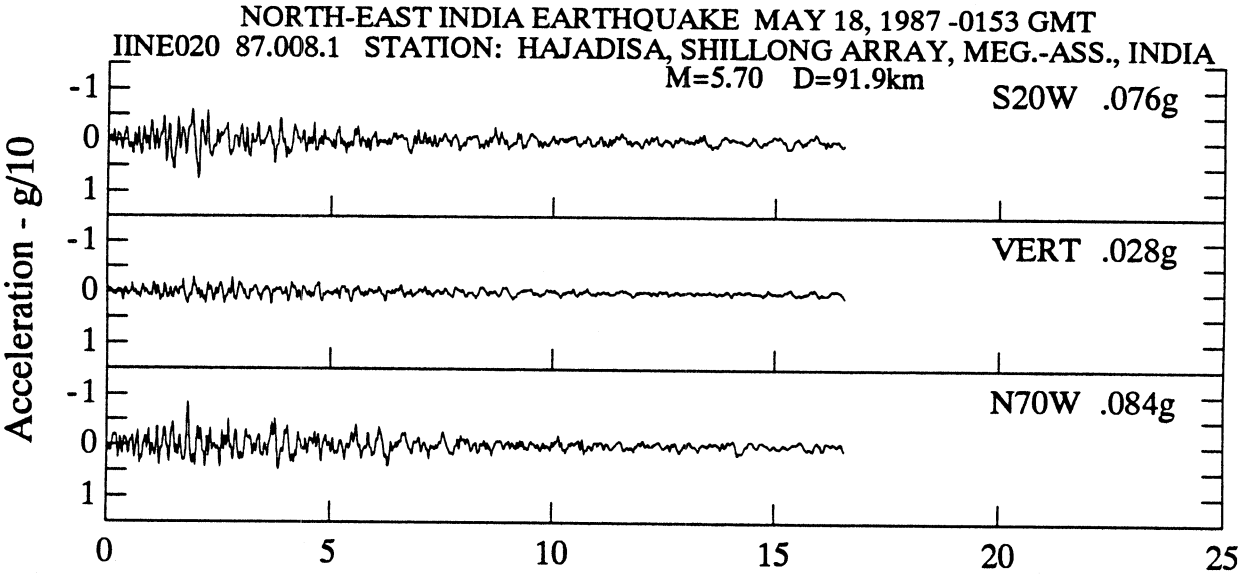
IIINE015 87.003.1 STATION: BERLONGFER, SHILLONG ARRAY, MEG.-ASS., INDIA

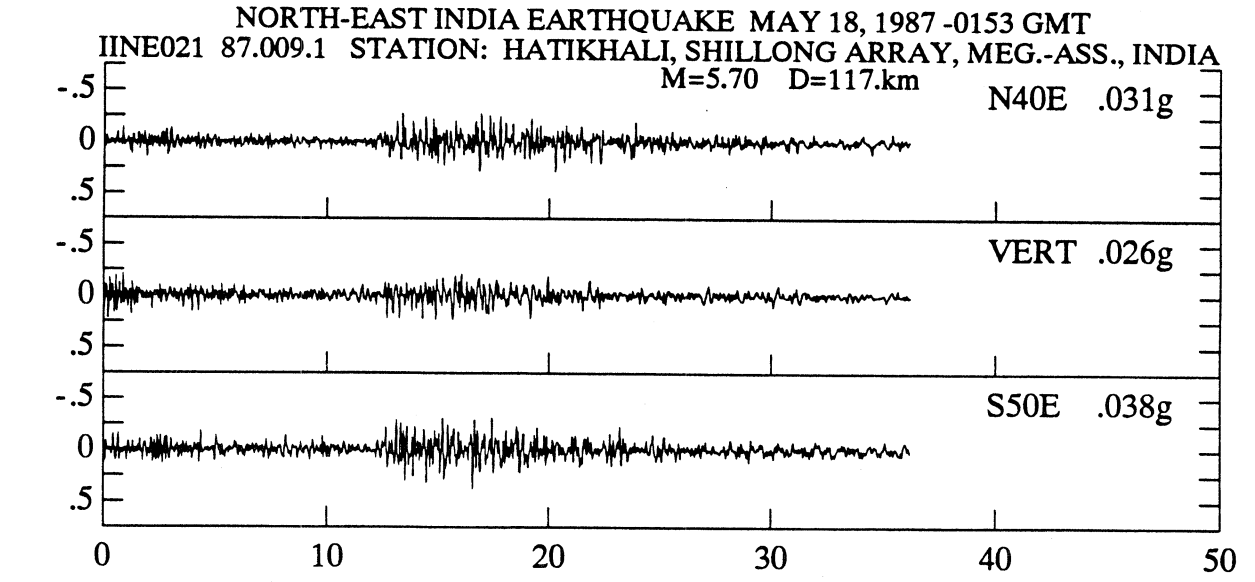



NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IINE016 87.004.1 STATION: BOKAJAN, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.70 D=94.1km
N34E .030g
VERT .018g
S56E .065g
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IINE017 87.005.1 STATION: DIPHU, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.70 D=106.km
N90E .084g
VERT .055g
S00W .072g
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IINE018 87.006.1 STATION: GUNJUNG, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.70 D=120.km
N15E .038g
VERT .017g
S75E .049g
Acceleration - g/10
Time - seconds


NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE016 87.004.1 STATION: BOKAJAN, SHILLONG ARRAY, MEG.-ASS., INDIA
N34E
VERT
S56E
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE017 87.005.1 STATION: DIPHU, SHILLONG ARRAY, MEG.-ASS., INDIA
N90E
VERT
S00W
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE018 87.006.1 STATION: GUNJUNG, SHILLONG ARRAY, MEG.-ASS., INDIA
N15E
VERT
S75E
G
SD
PSV, FS(---) - in/sec
PSV, FS(---) - cm/sec
Period - sec



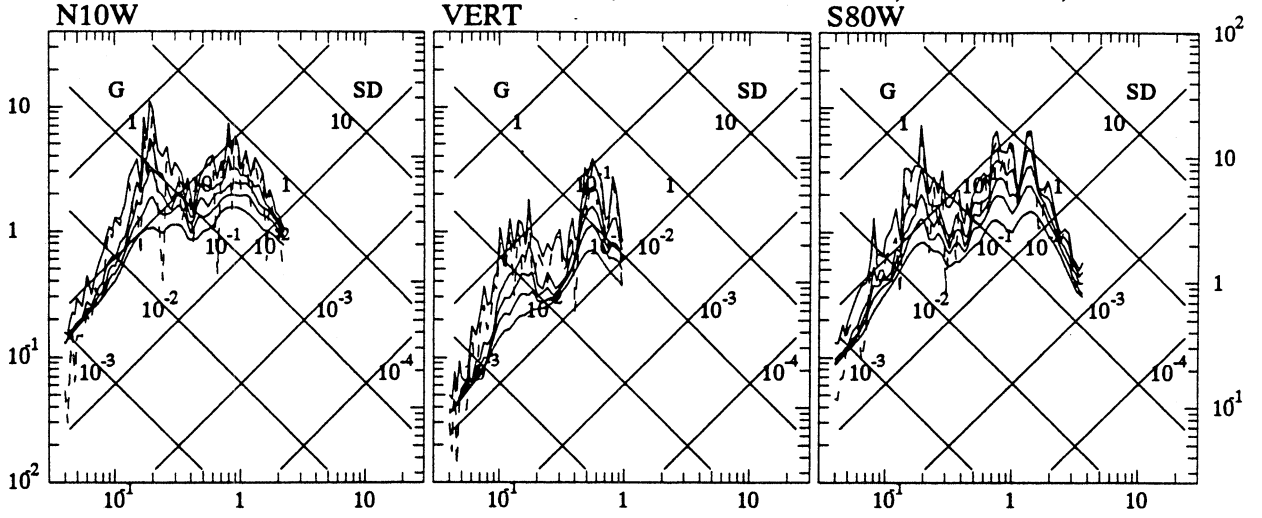




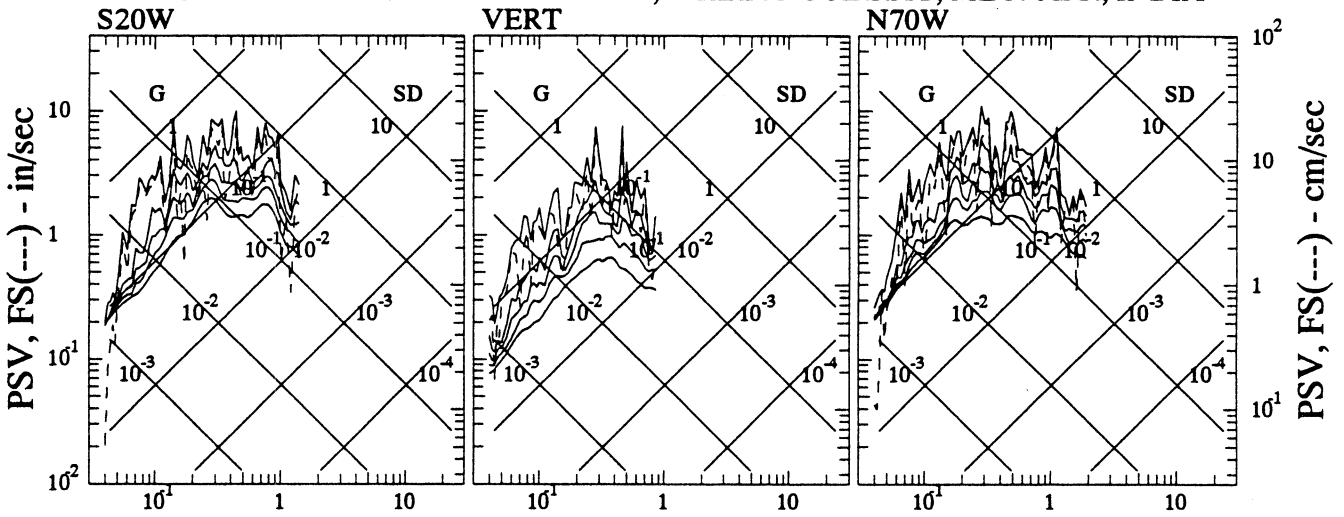
Acceleration - g/10

Time - seconds

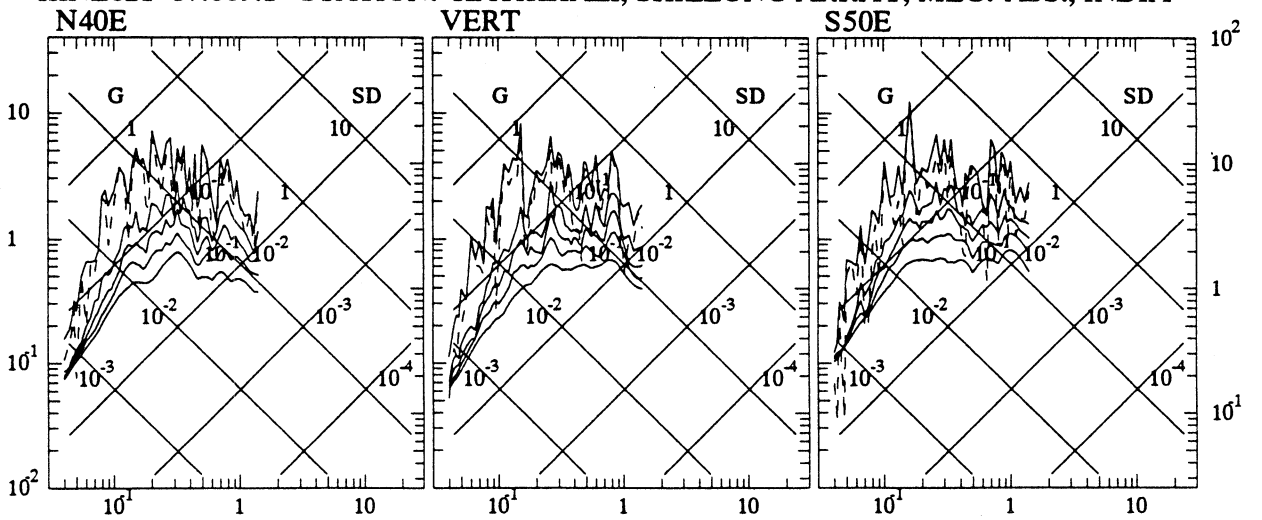
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE019 87.007.1 STATION: HAFLONG, SHILLONG ARRAY, MEG.-ASS., INDIA



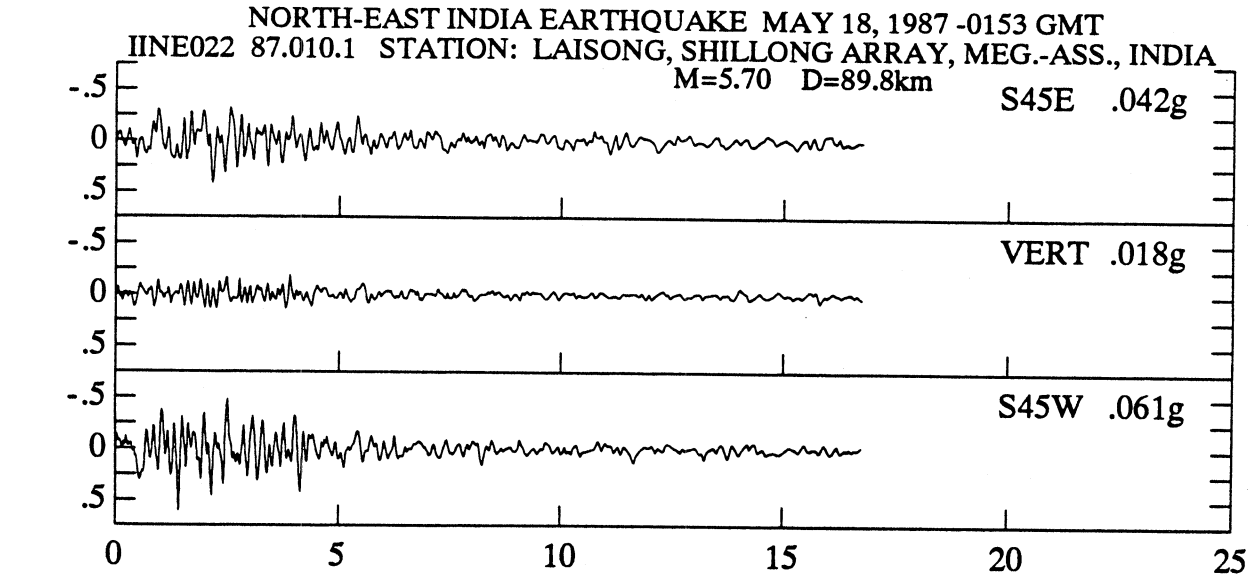
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE020 87.008.1 STATION: HAJADISA, SHILLONG ARRAY, MEG.-ASS., INDIA

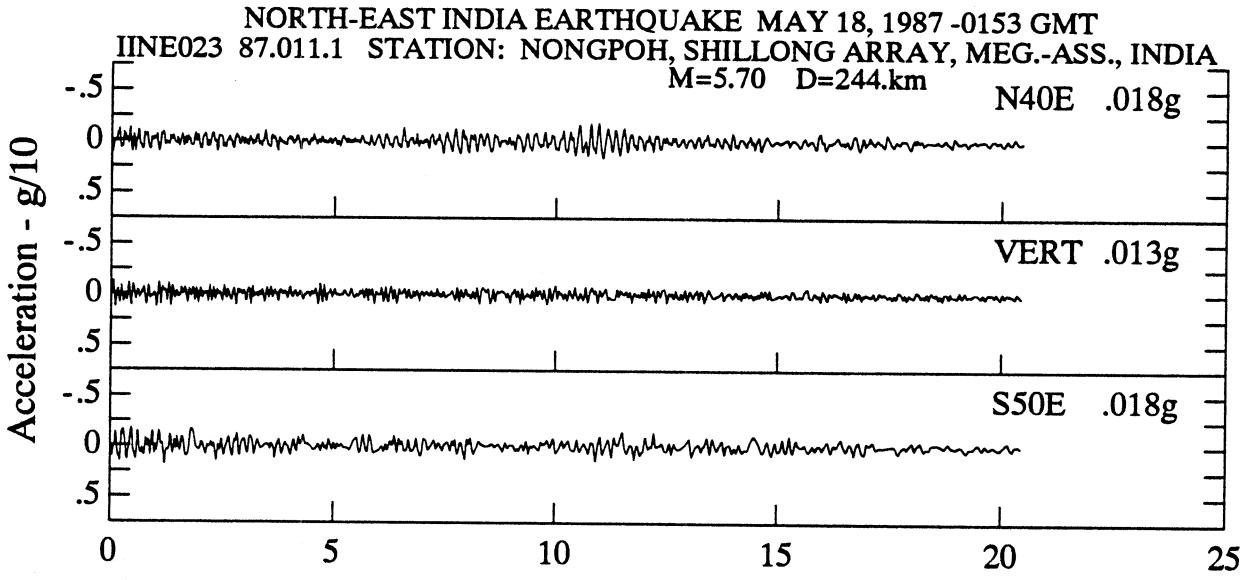


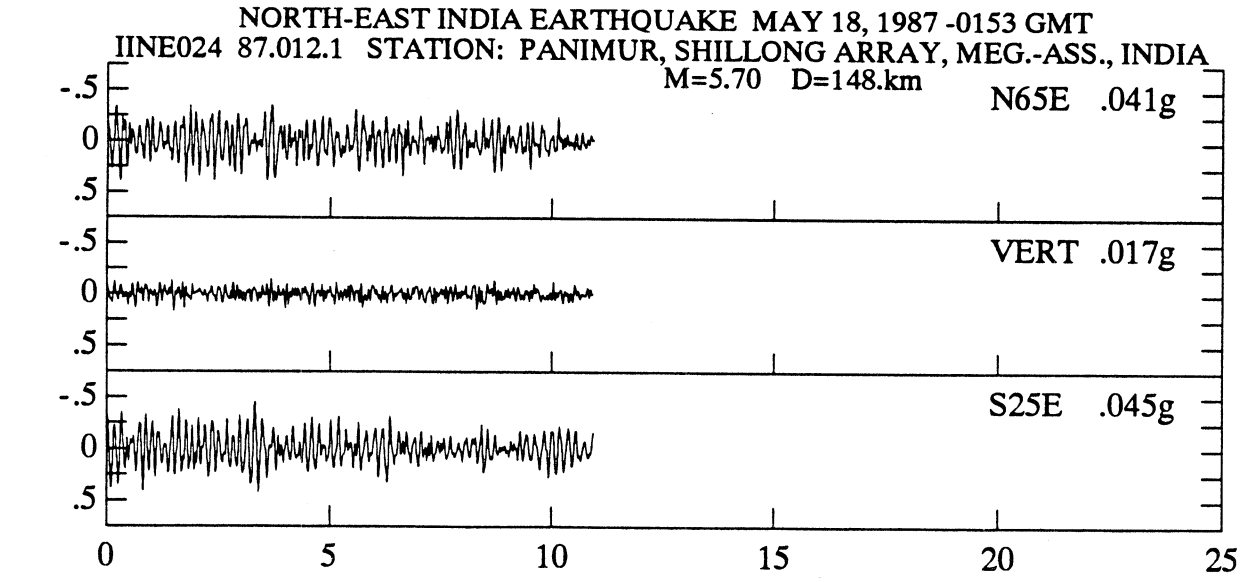
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE021 87.009.1 STATION: HATIKHALI, SHILLONG ARRAY, MEG.-ASS., INDIA



Period - sec



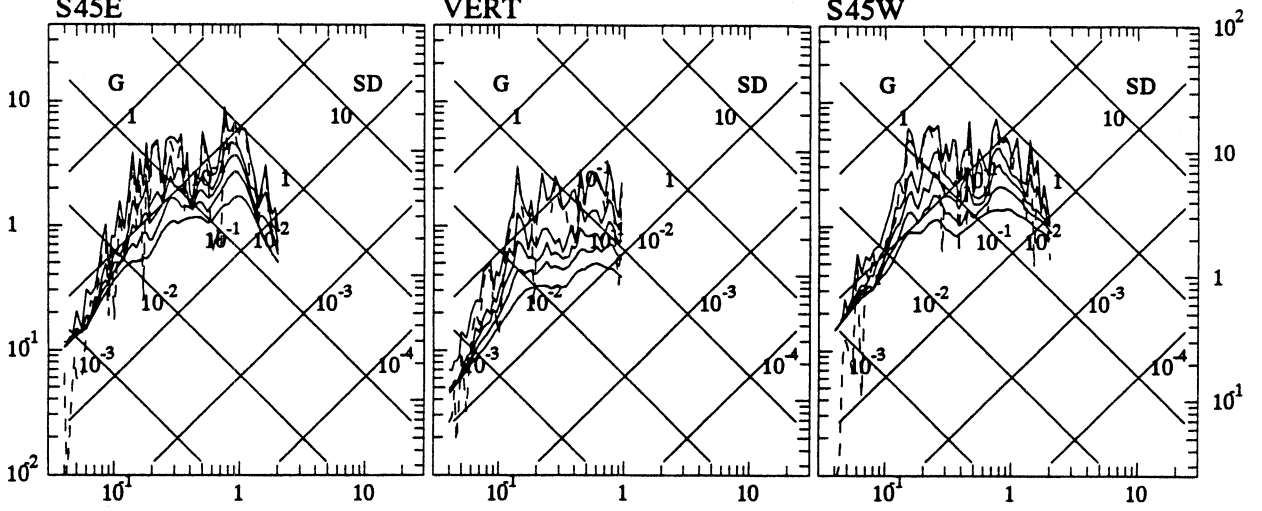




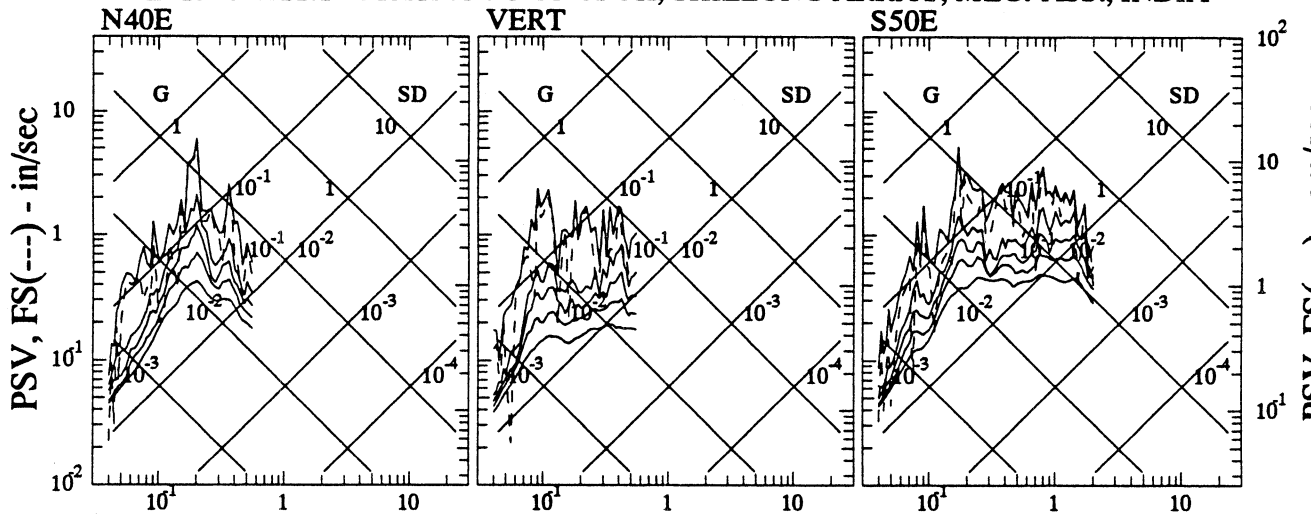
Acceleration - g/10

Time - seconds

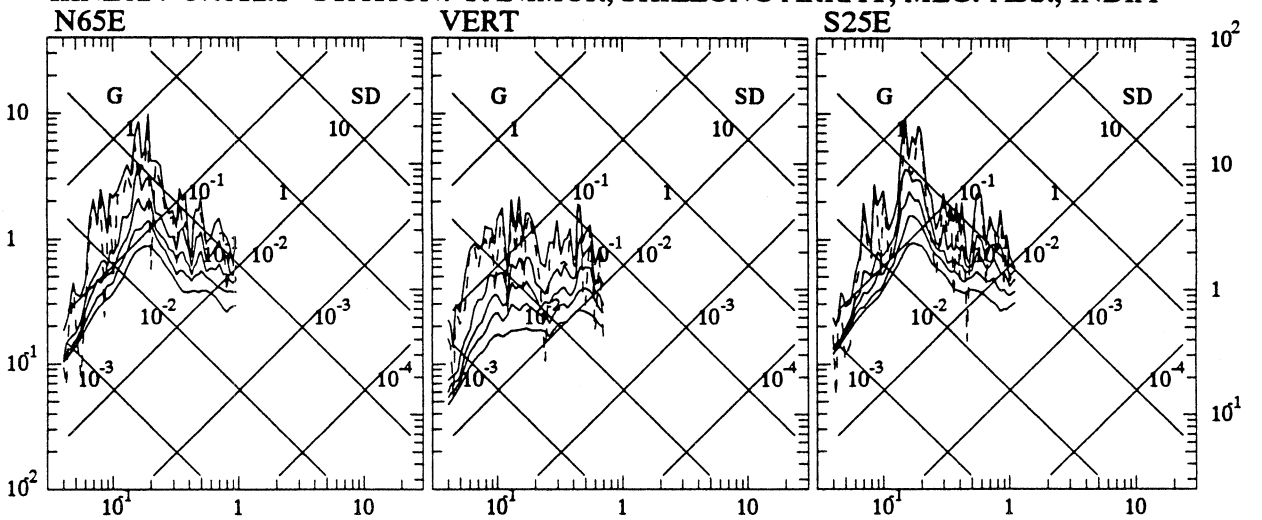
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE022 87.010.1 STATION: LAISONG, SHILLONG ARRAY, MEG.-ASS., INDIA

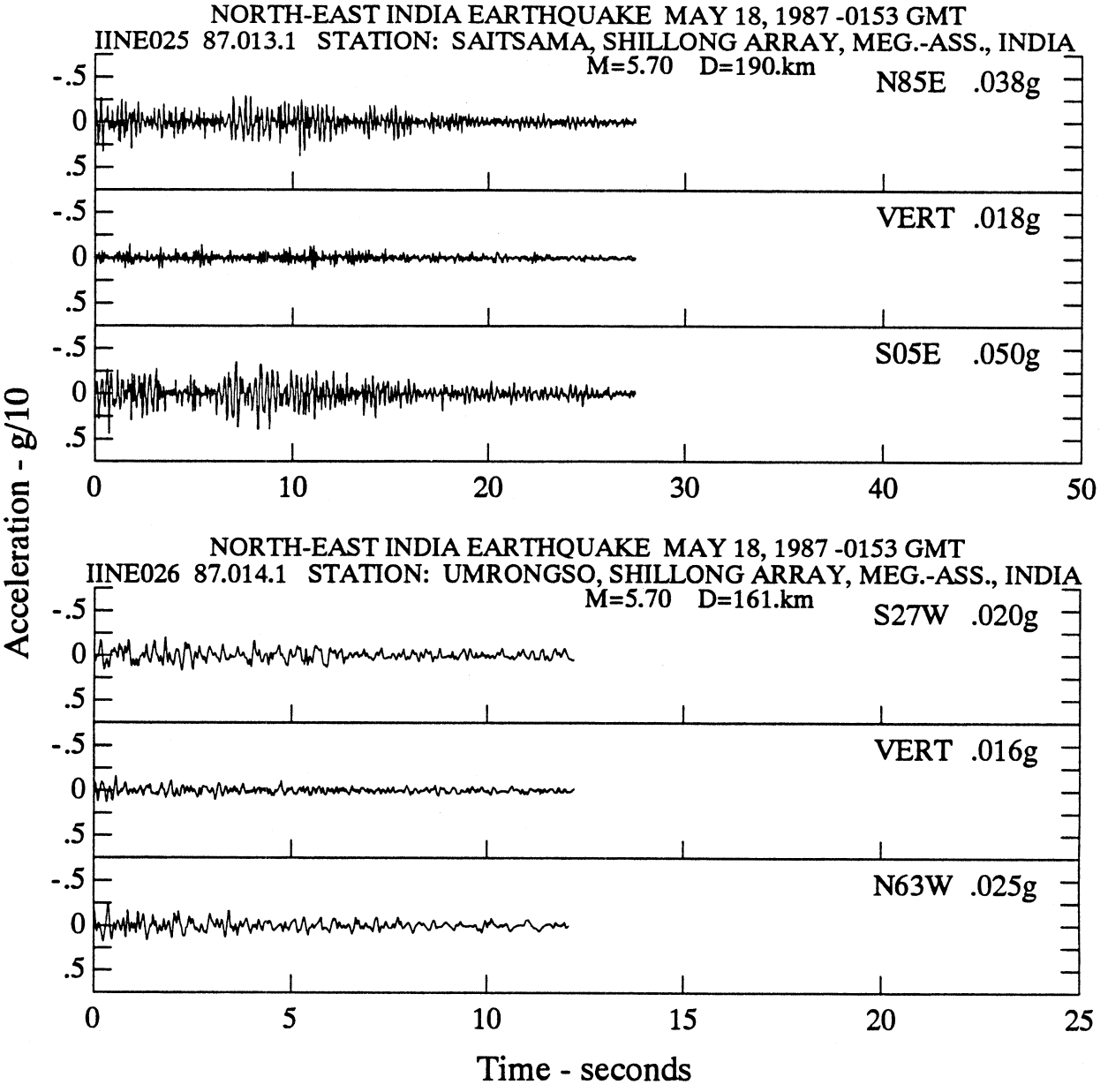


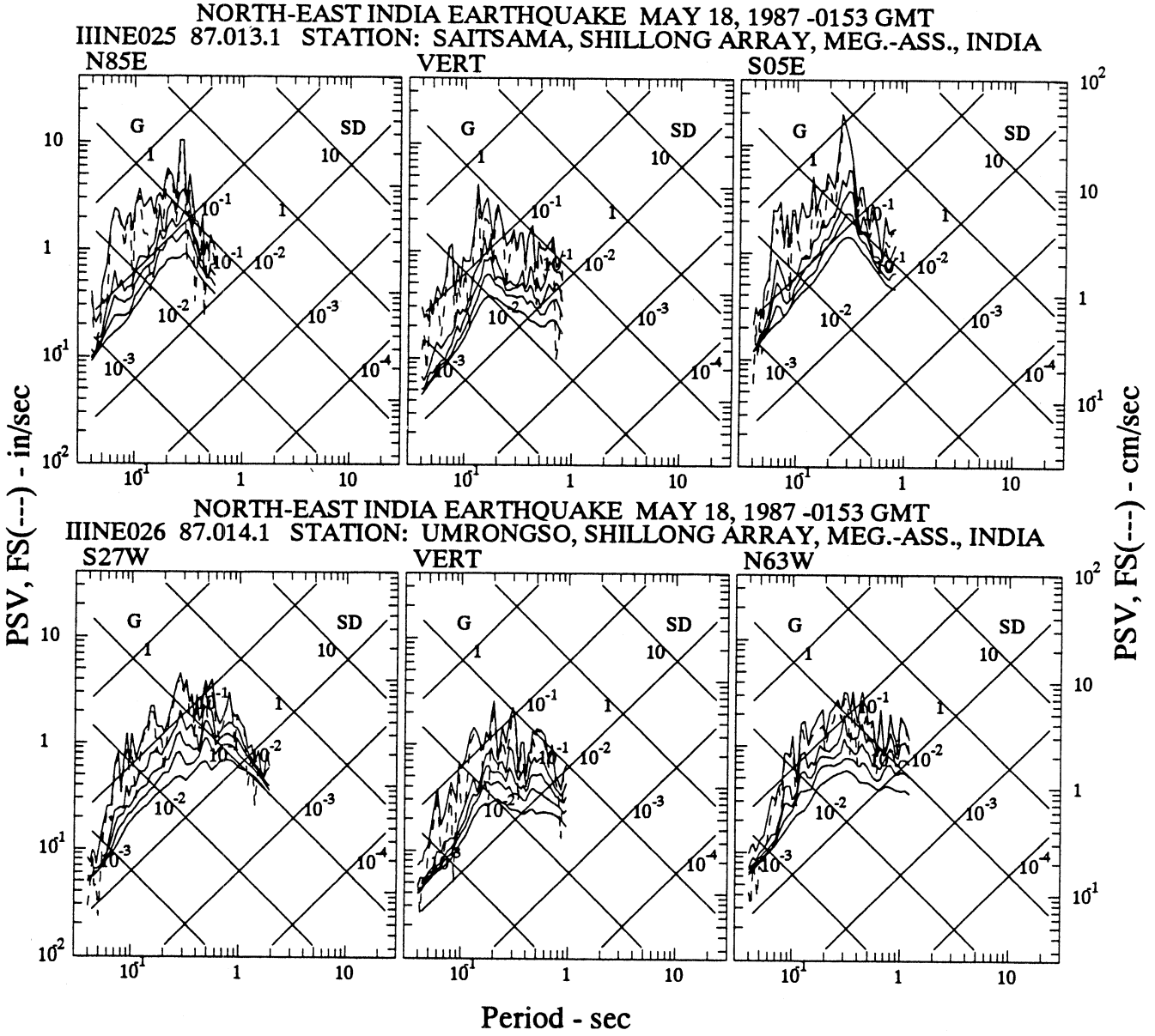
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE023 87.011.1 STATION: NONGPOH, SHILLONG ARRAY, MEG.-ASS., INDIA

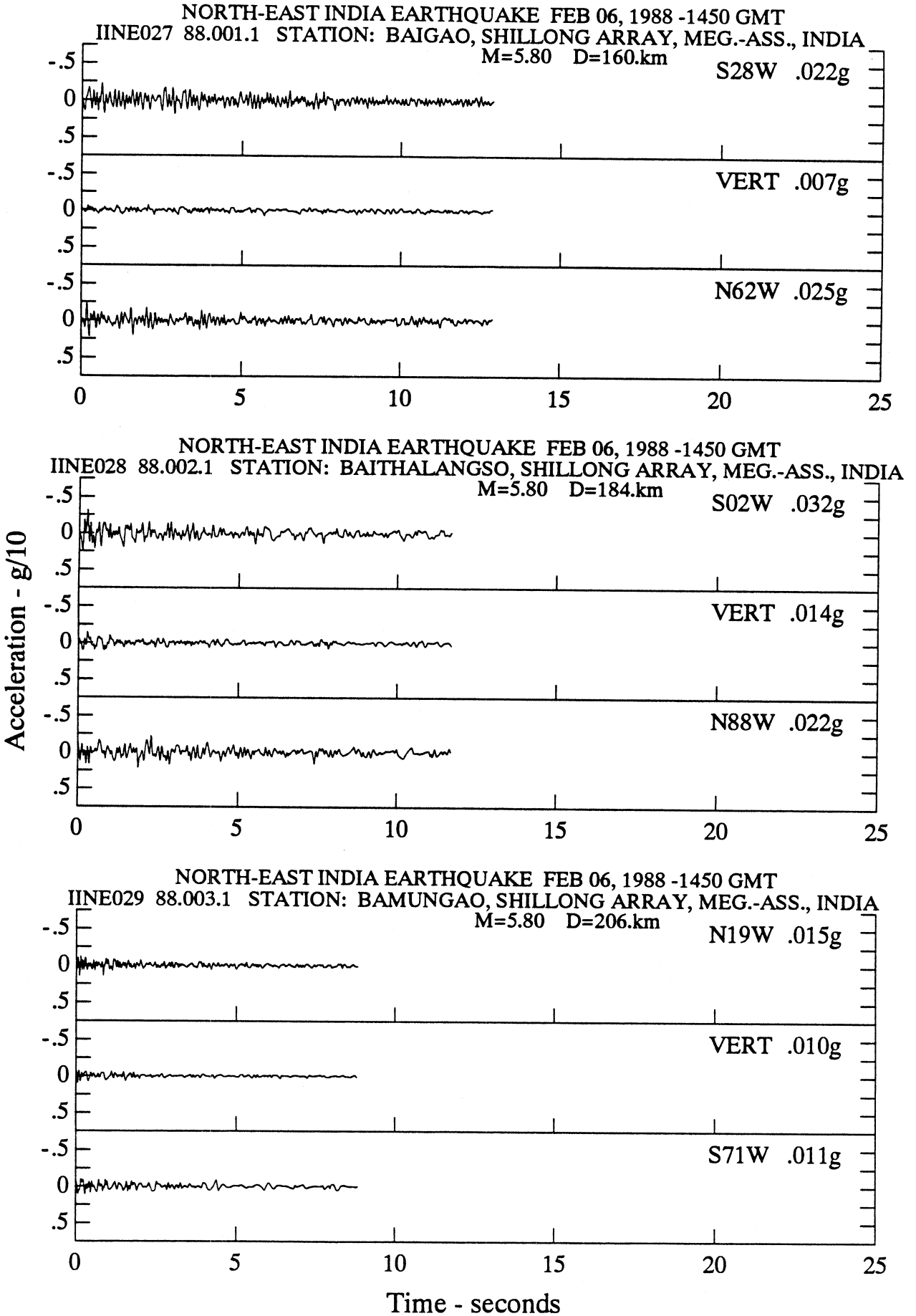


NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE024 87.012.1 STATION: PANIMUR, SHILLONG ARRAY, MEG.-ASS., INDIA

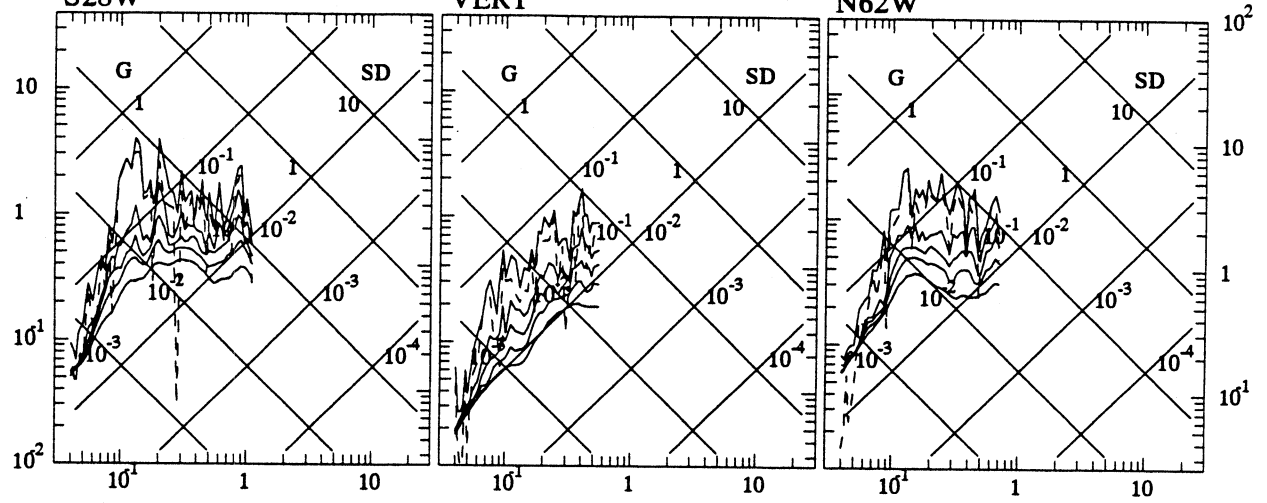



NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IINE025 87.013.1 STATION: SAITSAMA, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.70 D=190.km
N85E .038g
VERT .018g
S05E .050g
-.5
0
.5
0
10
20
30
40
50
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IINE026 87.014.1 STATION: UMRONGSO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.70 D=161.km
S27W .020g
VERT .016g
N63W .025g
0
5
10
15
20
25
Acceleration - g/10
Time - seconds

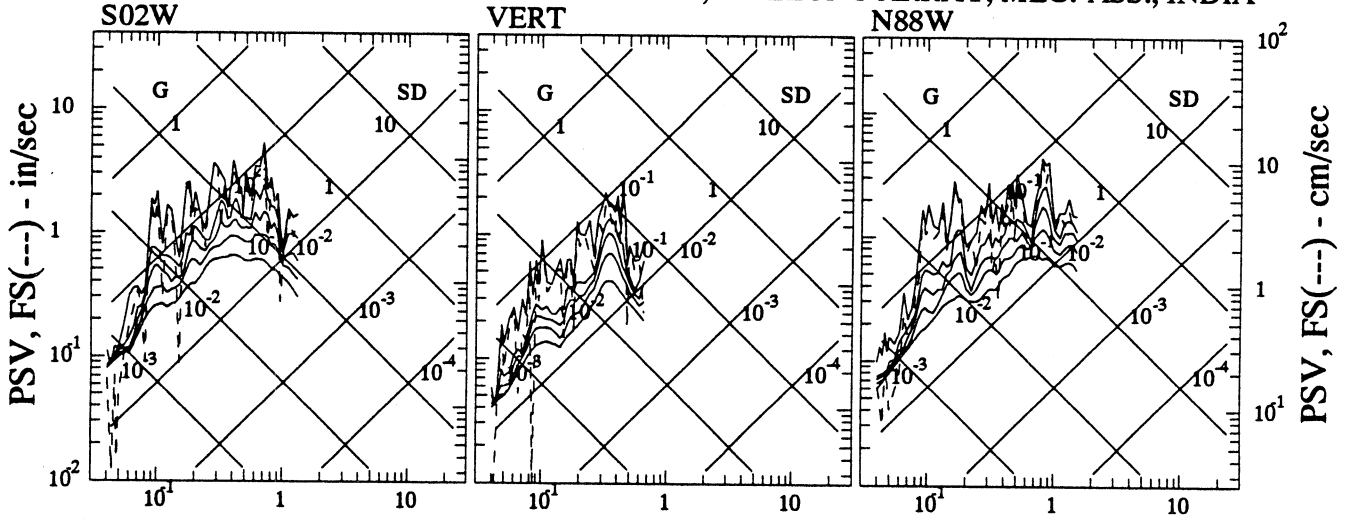

NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE025 87.013.1 STATION: SAITSAMA, SHILLONG ARRAY, MEG.-ASS., INDIA
N85E
VERT
S05E
NORTH-EAST INDIA EARTHQUAKE MAY 18, 1987 -0153 GMT
IIINE026 87.014.1 STATION: UMRONGSO, SHILLONG ARRAY, MEG.-ASS., INDIA
S27W
VERT
N63W
G
SD
PSV, FS(---) - in/sec
PSV, FS(---) - cm/sec
Period - sec


NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE027 88.001.1 STATION: BAIGAO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=160.km
S28W .022g
VERT .007g
N62W .025g
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE028 88.002.1 STATION: BAITHALANGSO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=184.km
S02W .032g
VERT .014g
N88W .022g
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE029 88.003.1 STATION: BAMUNGAO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=206.km
N19W .015g
VERT .010g
S71W .011g
-.5
0
.5
0
5
10
15
20
25
Acceleration - g/10
Time - seconds

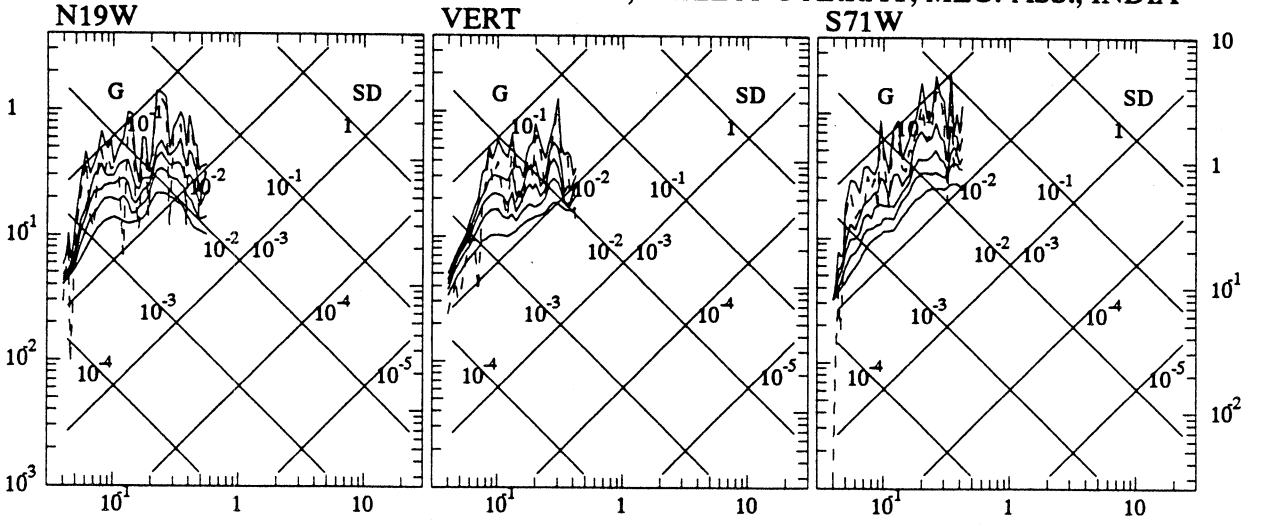
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE027 88.001.1 STATION: BAIGAO, SHILLONG ARRAY, MEG.-ASS., INDIA



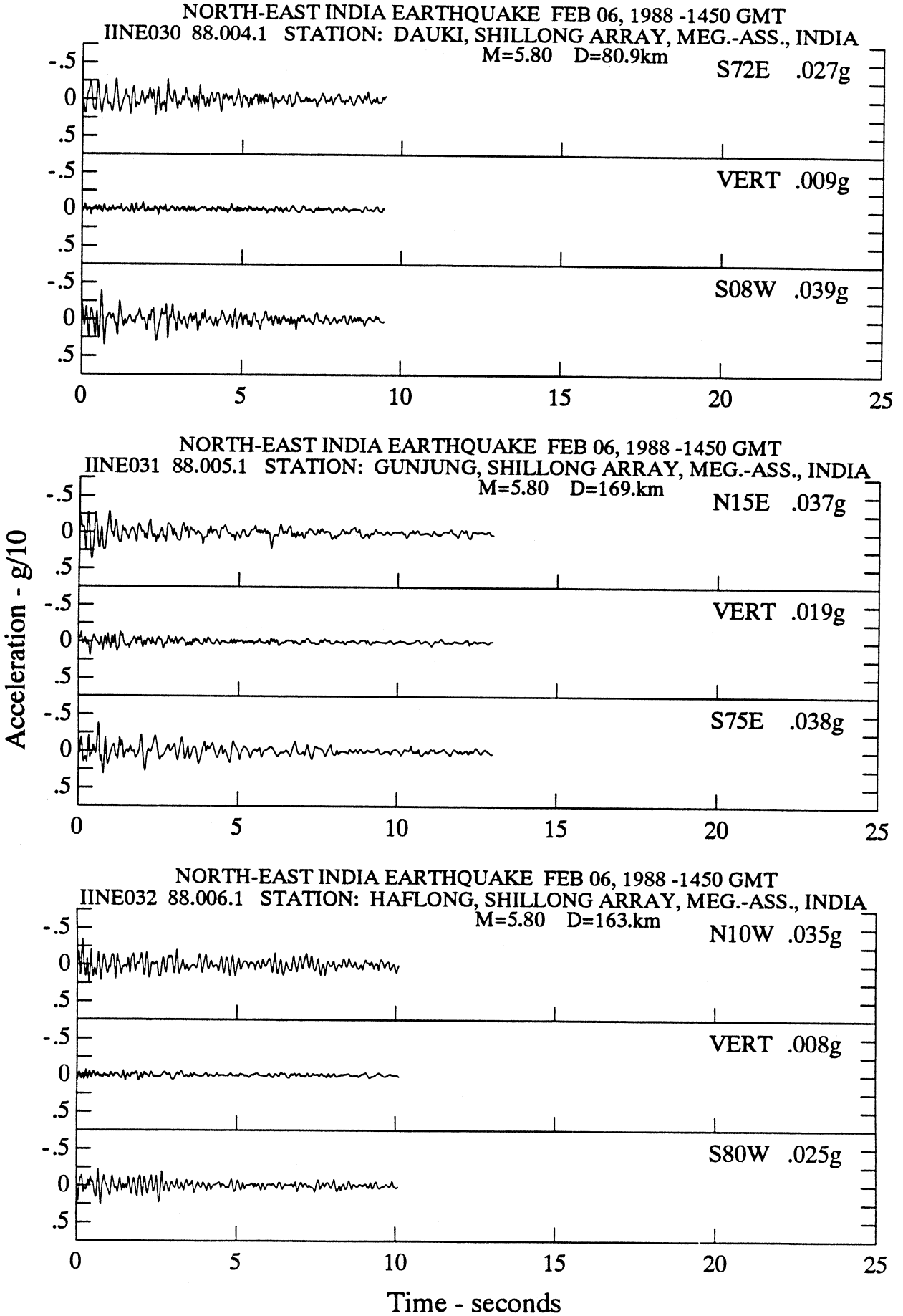
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE028 88.002.1 STATION: BAITHALANGSO, SHILLONG ARRAY, MEG.-ASS., INDIA



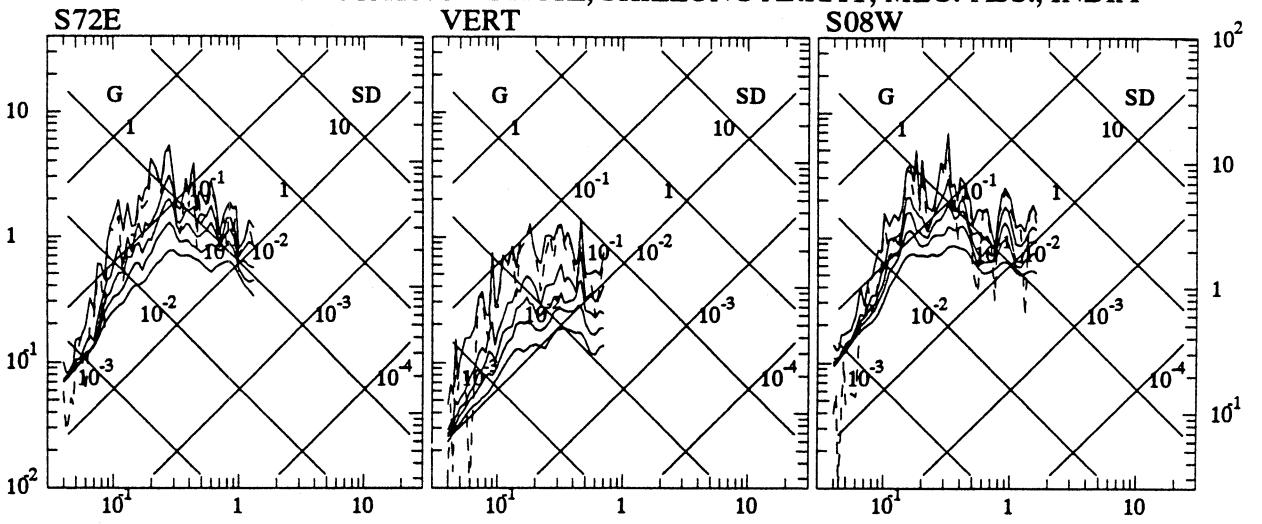
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE029 88.003.1 STATION: BAMUNGAO, SHILLONG ARRAY, MEG.-ASS., INDIA



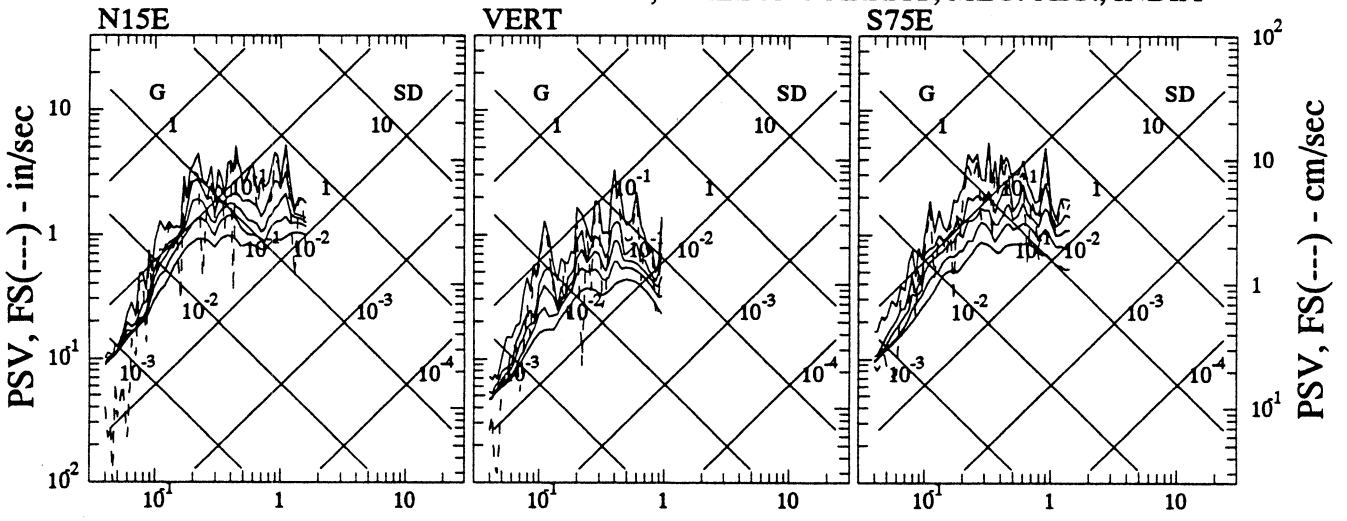
Period - sec


NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE030 88.004.1 STATION: DAUKI, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=80.9km
S72E .027g
VERT .009g
S08W .039g
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE031 88.005.1 STATION: GUNJUNG, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=169.km
N15E .037g
VERT .019g
S75E .038g
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE032 88.006.1 STATION: HAFLONG, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=163.km
N10W .035g
VERT .008g
S80W .025g
-.5
0
.5
0
5
10
15
20
25
Acceleration - g/10
Time - seconds

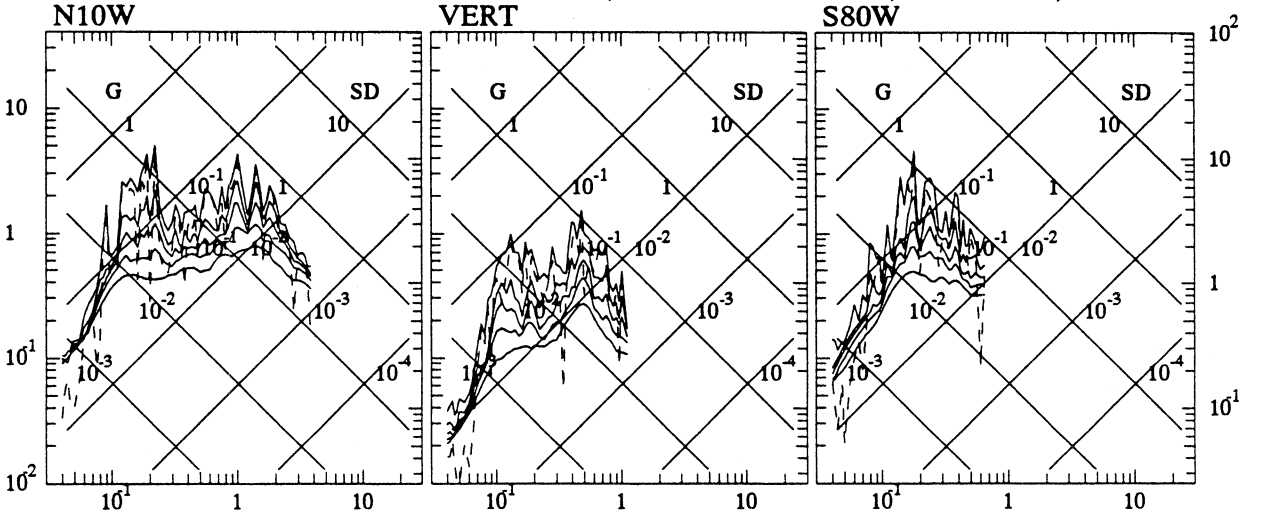
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE030 88.004.1 STATION: DAUKI, SHILLONG ARRAY, MEG.-ASS., INDIA

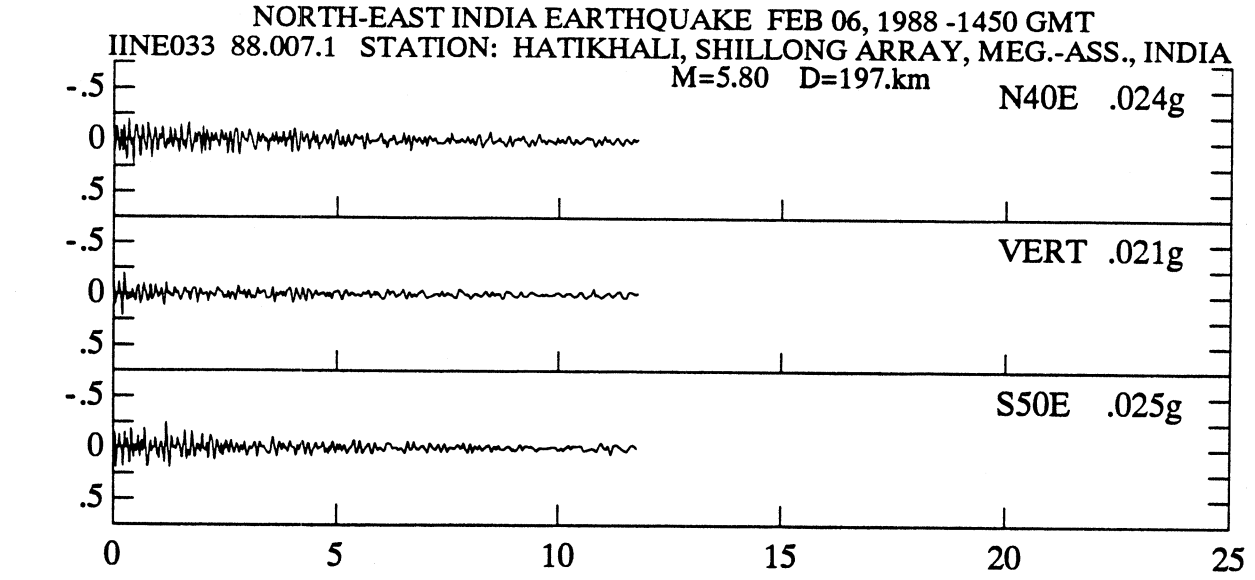


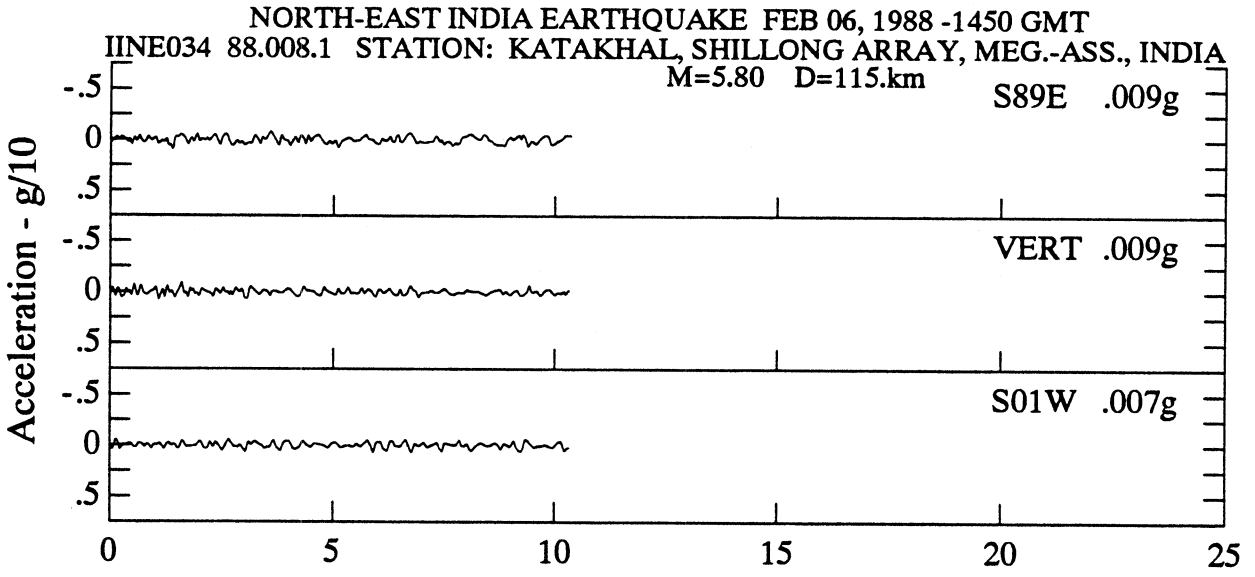
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE031 88.005.1 STATION: GUNJUNG, SHILLONG ARRAY, MEG.-ASS., INDIA

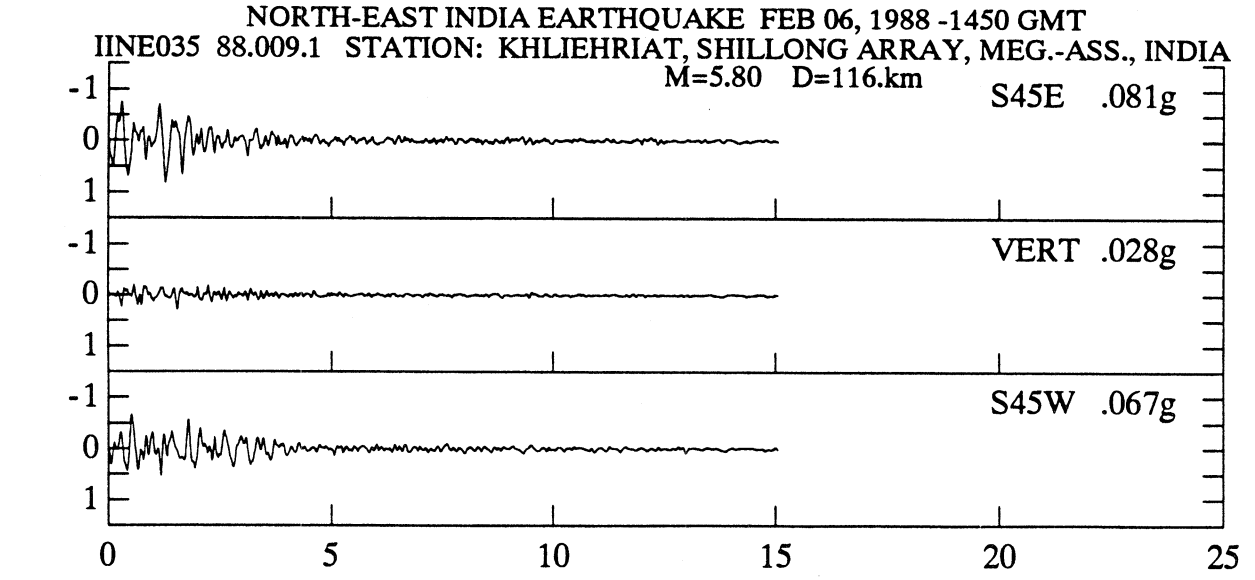


NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE032 88.006.1 STATION: HAFLONG, SHILLONG ARRAY, MEG.-ASS., INDIA

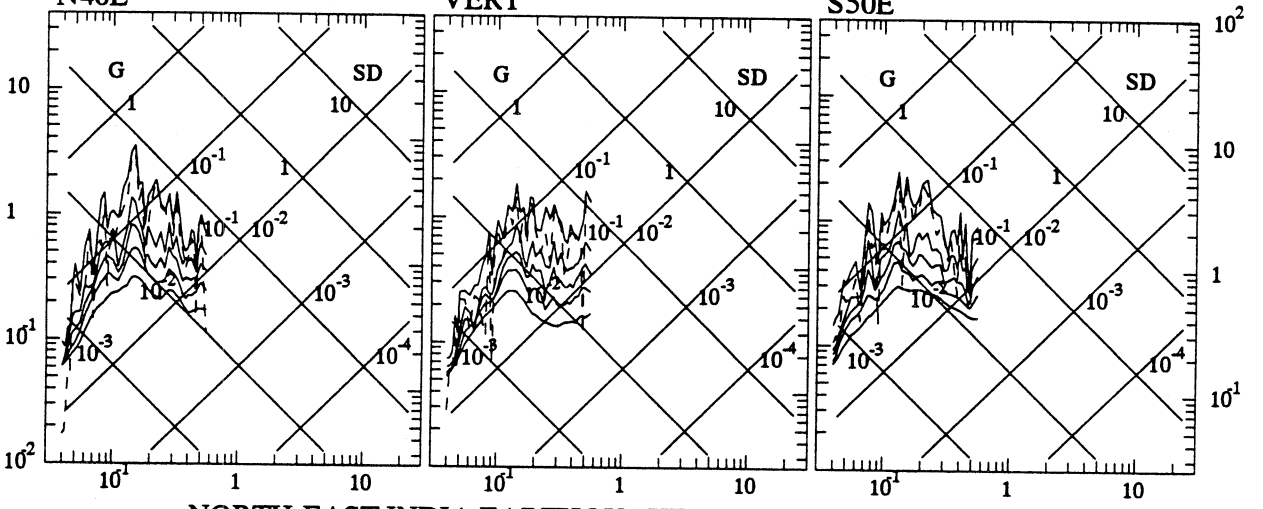



NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE033 88.007.1 STATION: HATIKHALI, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=197.km
N40E .024g
VERT .021g
S50E .025g
-.5
0
.5
0
5
10
15
20
25

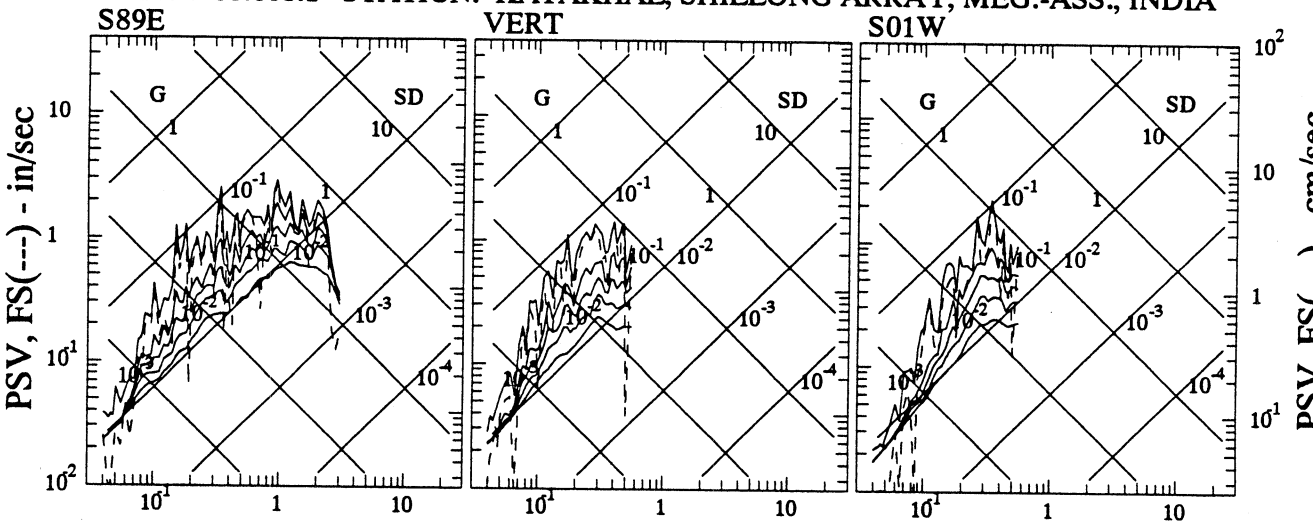

NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE034 88.008.1 STATION: KATAKHAL, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=115.km
S89E .009g
VERT .009g
S01W .007g
Acceleration - g/10
-.5
0
.5
0
5
10
15
20
25


NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE035 88.009.1 STATION: KHLIEHRIAT, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=116.km
S45E .081g
VERT .028g
S45W .067g
-1
0
1
0
5
10
15
20
25
Time - seconds

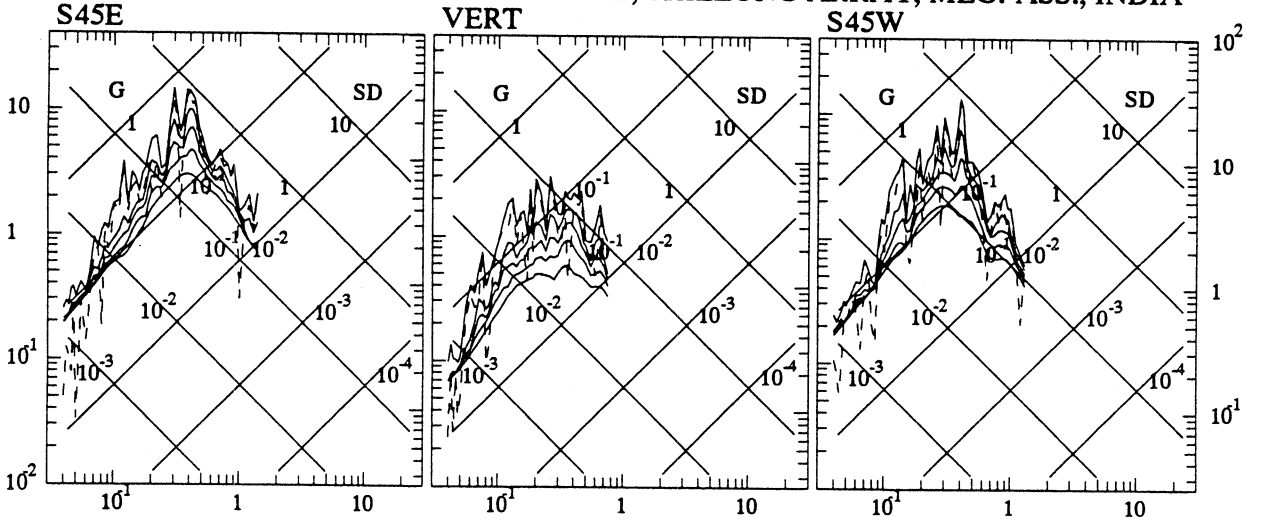
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE033 88.007.1 STATION: HATIKHALI, SHILLONG ARRAY, MEG.-ASS., INDIA



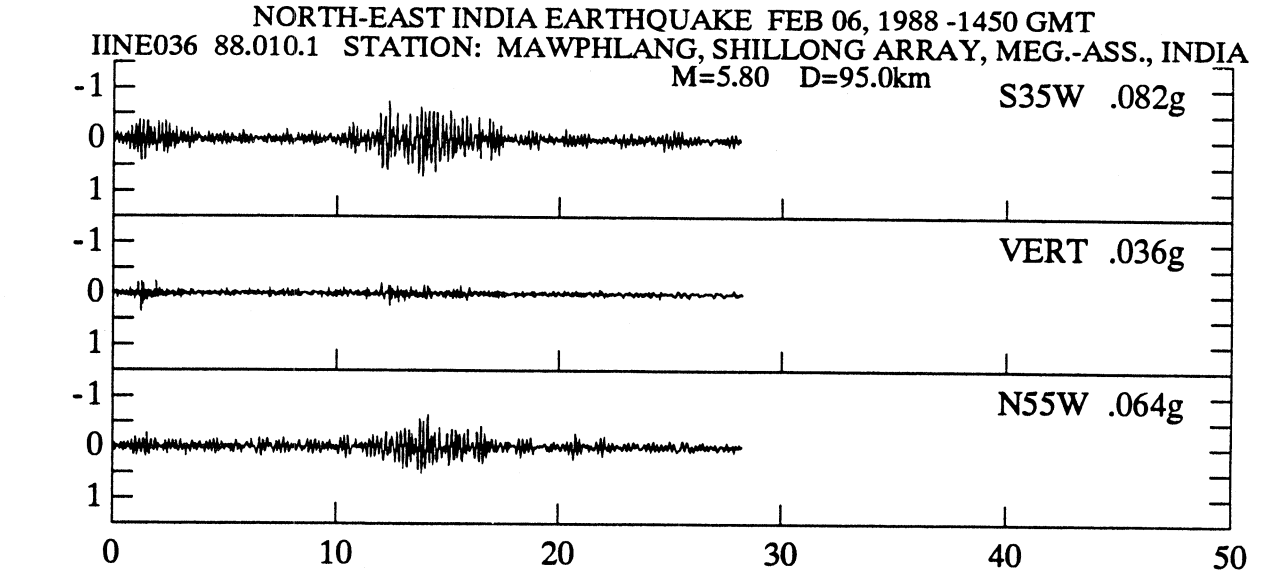
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE034 88.008.1 STATION: KATAKHAL, SHILLONG ARRAY, MEG.-ASS., INDIA

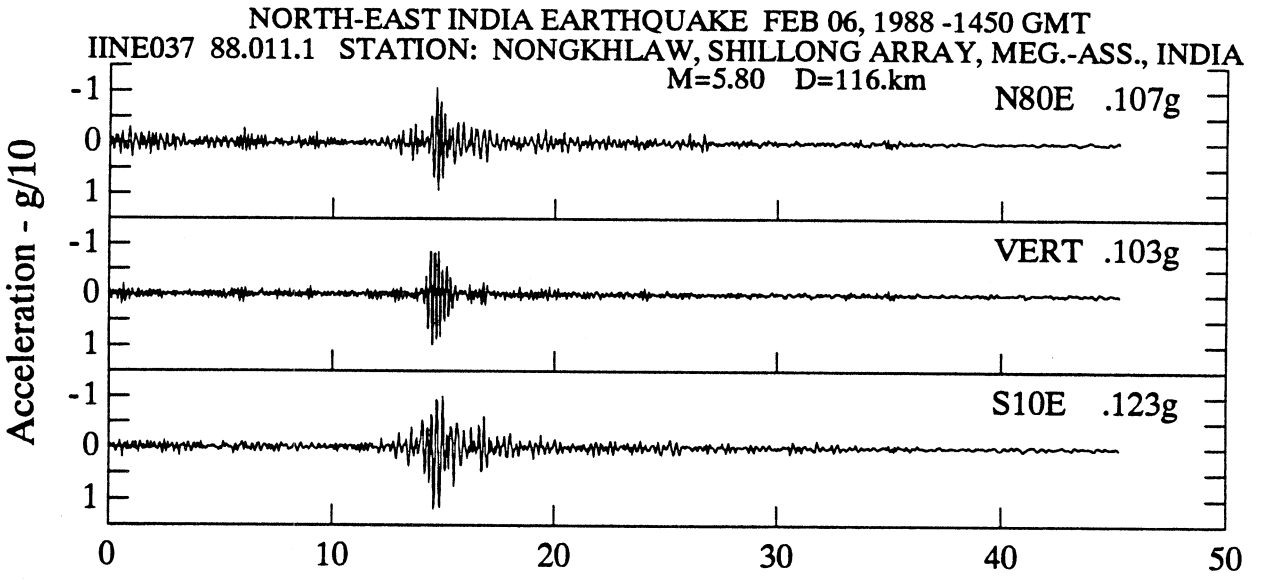


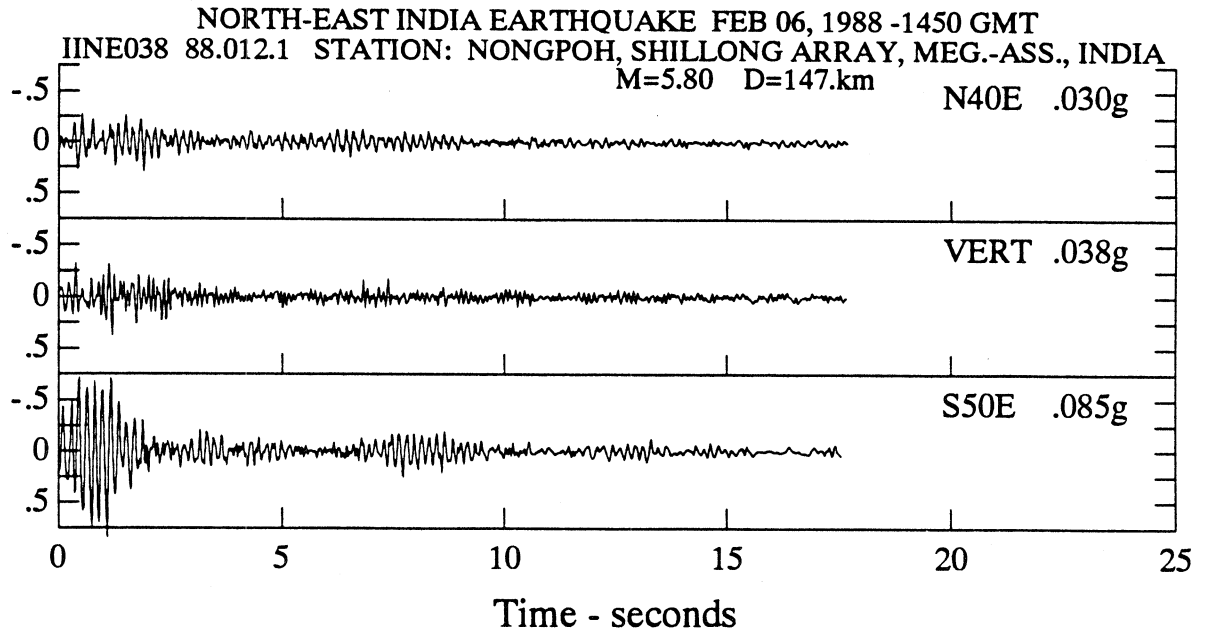
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE035 88.009.1 STATION: KHLIEHRIAT, SHILLONG ARRAY, MEG.-ASS., INDIA



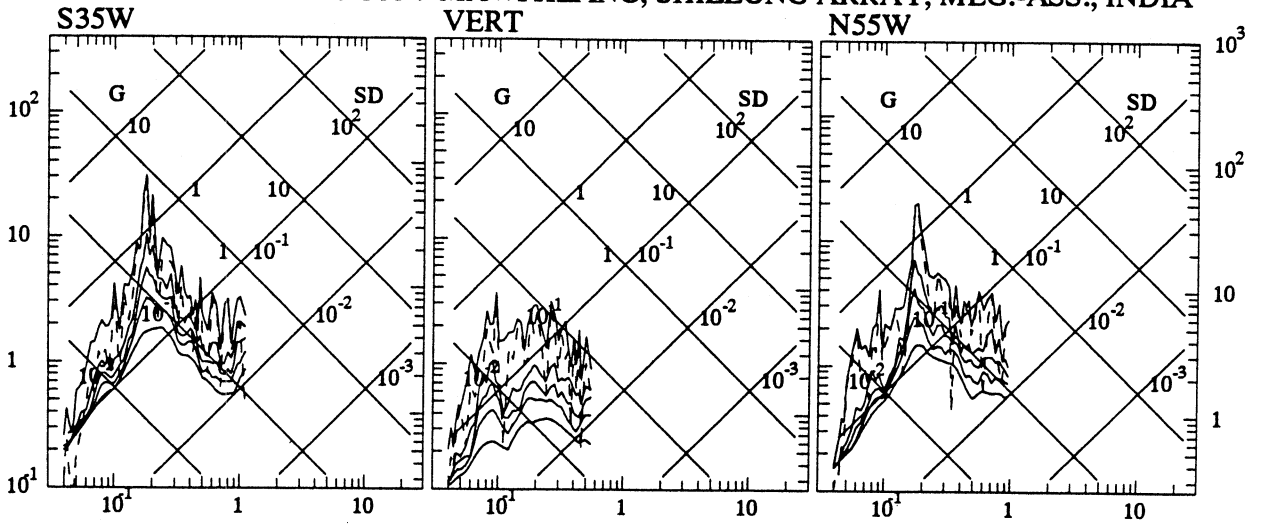
Period - sec


NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE036 88.010.1 STATION: MAWPHLANG, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=95.0km
S35W .082g
VERT .036g
N55W .064g
-1
0
1
0
10
20
30
40
50

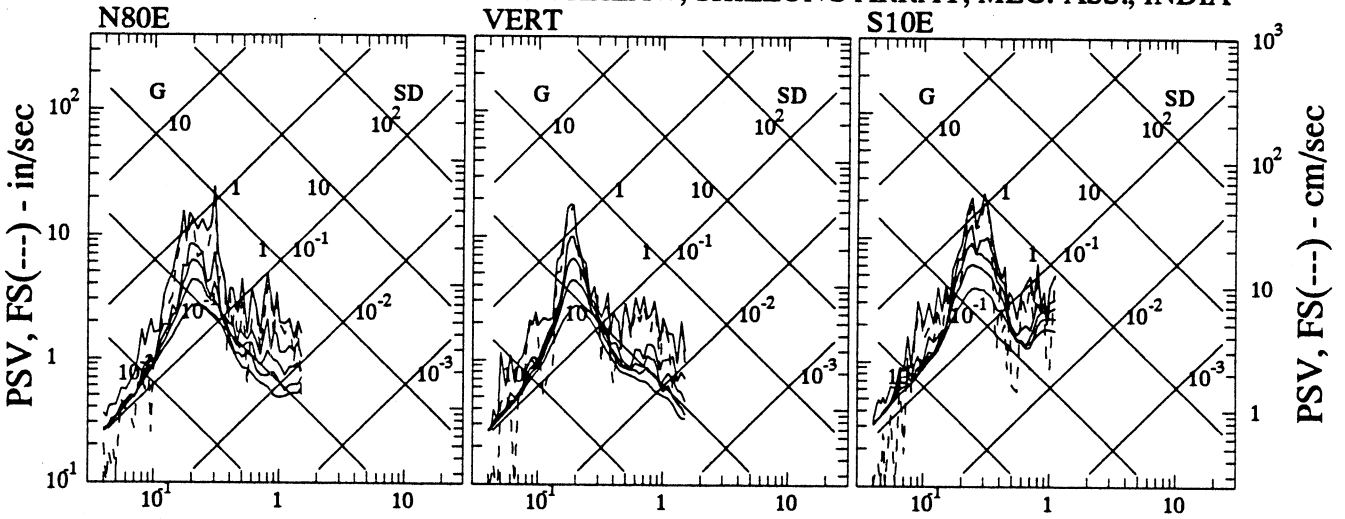

NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE037 88.011.1 STATION: NONGKHLAW, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=116.km
N80E .107g
VERT .103g
S10E .123g
Acceleration - g/10
-1
0
1
0
10
20
30
40
50


NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE038 88.012.1 STATION: NONGPOH, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=147.km
N40E .030g
VERT .038g
S50E .085g
-.5
0
.5
0
5
10
15
20
25
Time - seconds

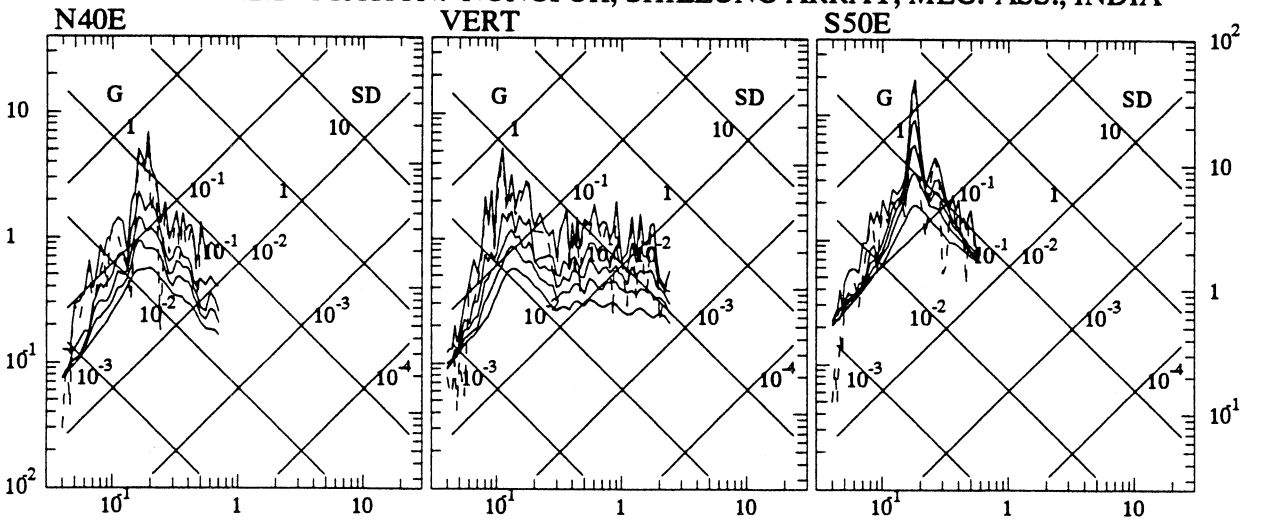
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE036 88.010.1 STATION: MAWPHLANG, SHILLONG ARRAY, MEG.-ASS., INDIA



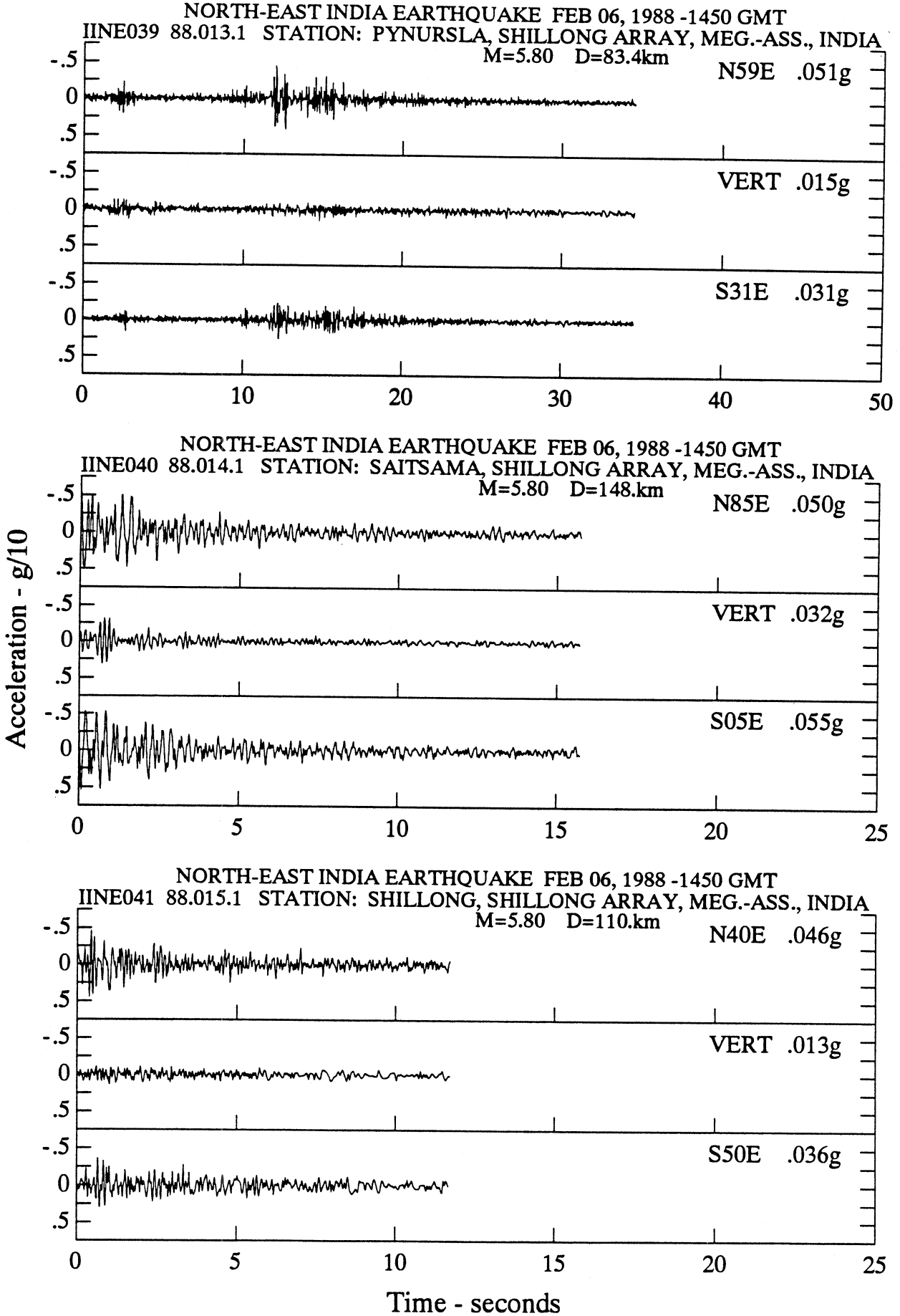
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE037 88.011.1 STATION: NONGKHLAW, SHILLONG ARRAY, MEG.-ASS., INDIA



NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE038 88.012.1 STATION: NONGPOH, SHILLONG ARRAY, MEG.-ASS., INDIA

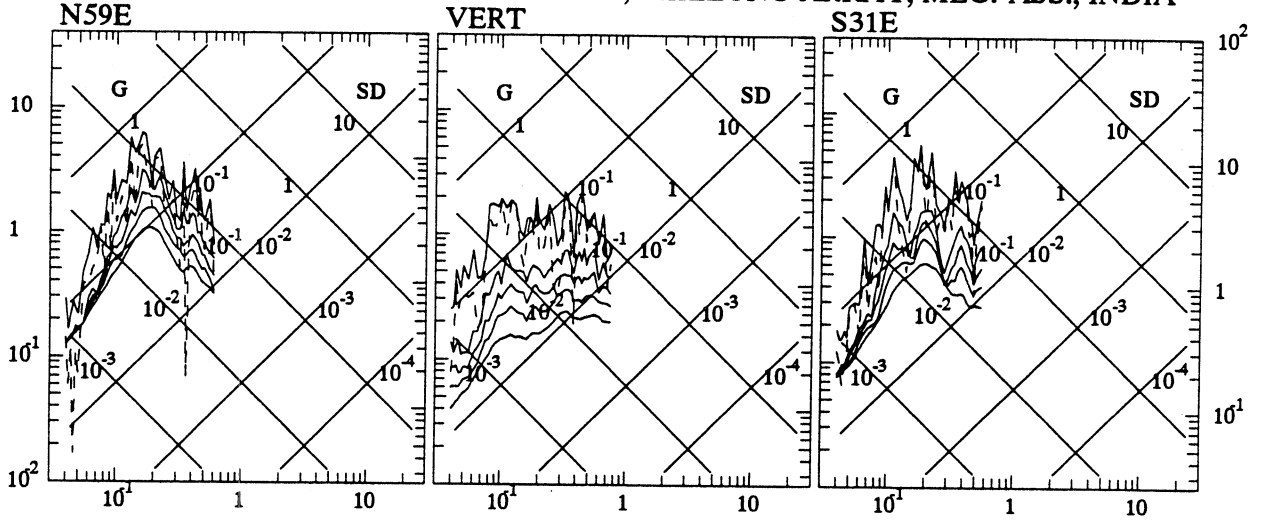


Period - sec


NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE039 88.013.1 STATION: PYNURSLA, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=83.4km
N59E .051g
VERT .015g
S31E .031g
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE040 88.014.1 STATION: SAITSAMA, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=148.km
N85E .050g
VERT .032g
S05E .055g
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE041 88.015.1 STATION: SHILLONG, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=110.km
N40E .046g
VERT .013g
S50E .036g
Acceleration - g/10
Time - seconds

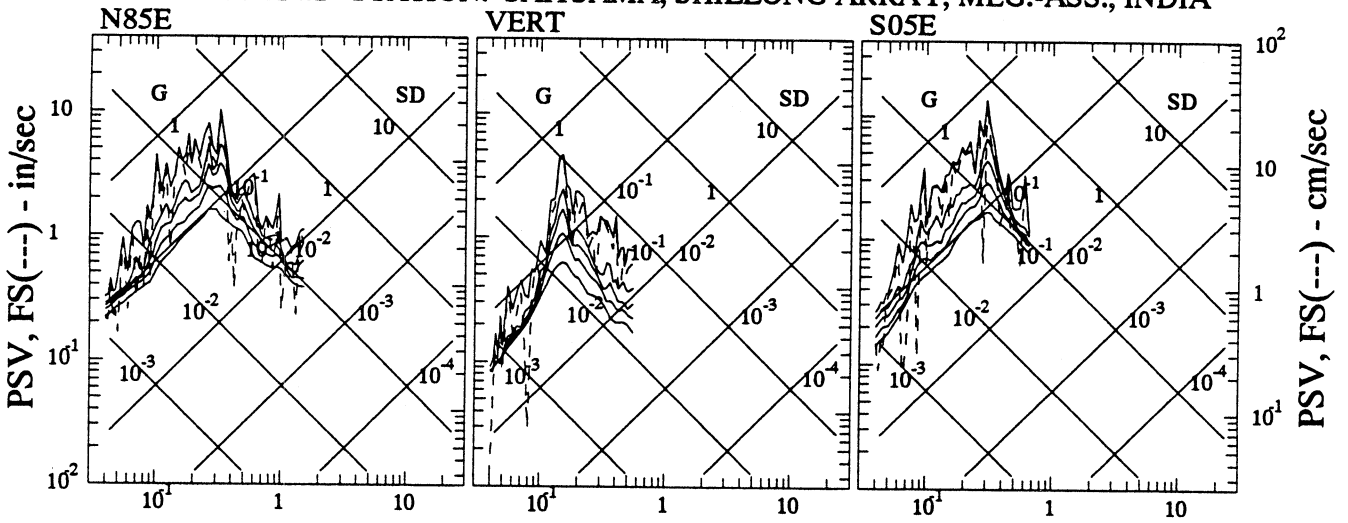
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT

IIINE039 88.013.1 STATION: PYNURSLA, SHILLONG ARRAY, MEG.-ASS., INDIA



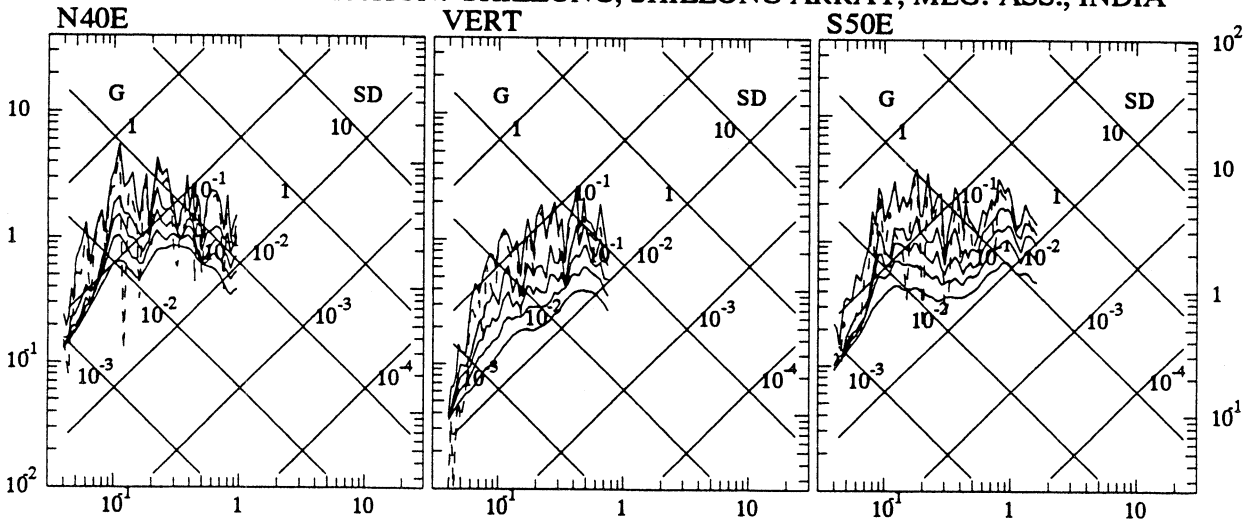
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT

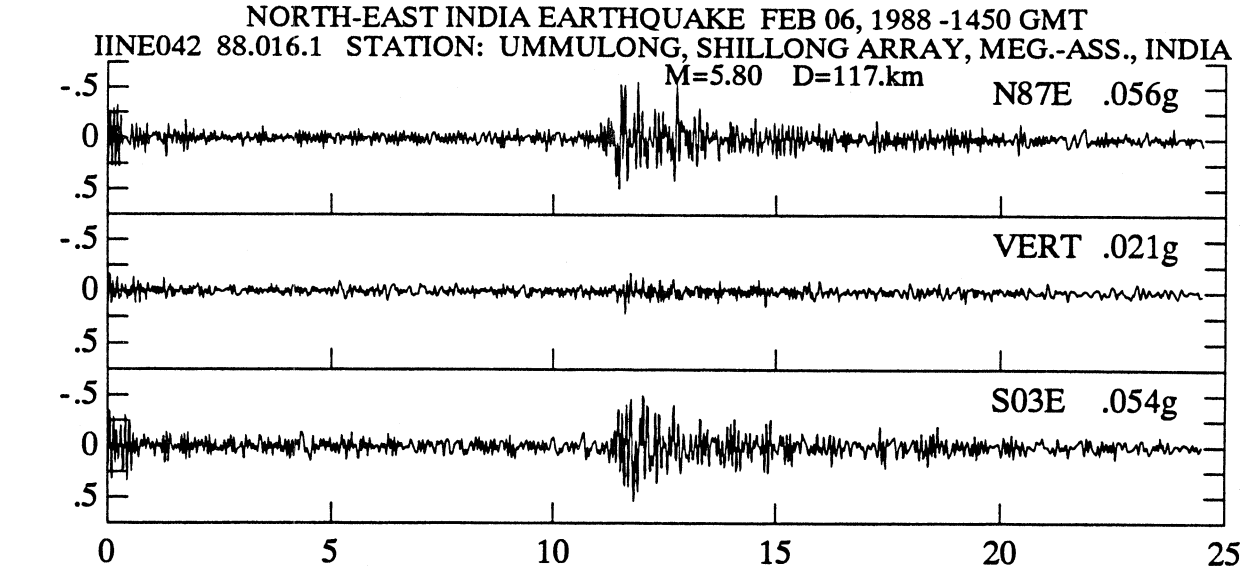
IIINE040 88.014.1 STATION: SAITSAMA, SHILLONG ARRAY, MEG.-ASS., INDIA

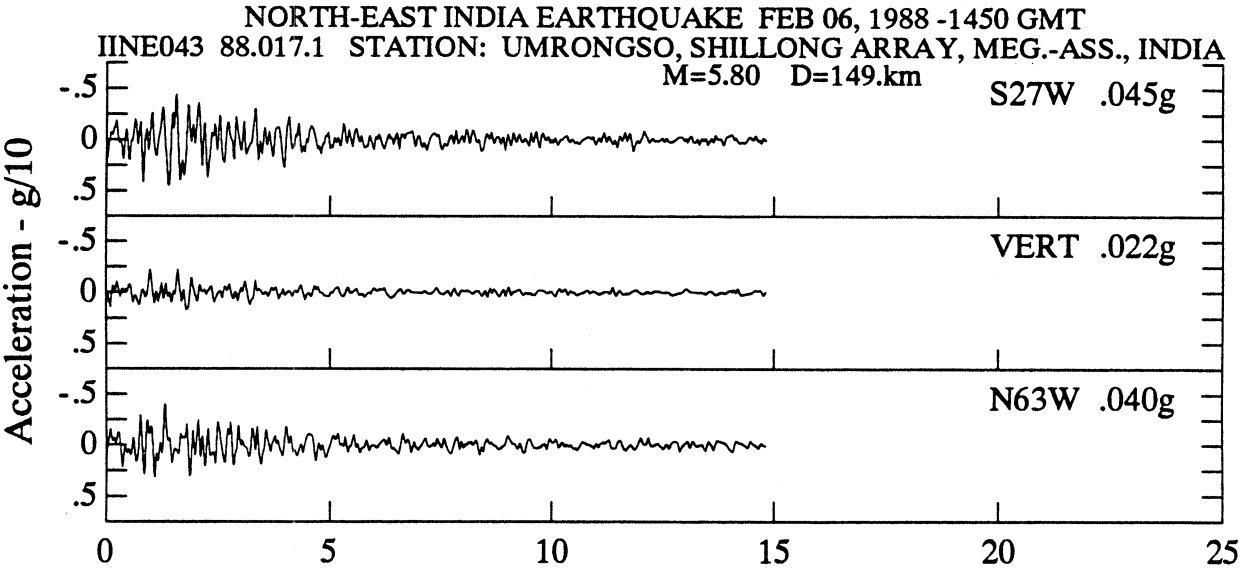


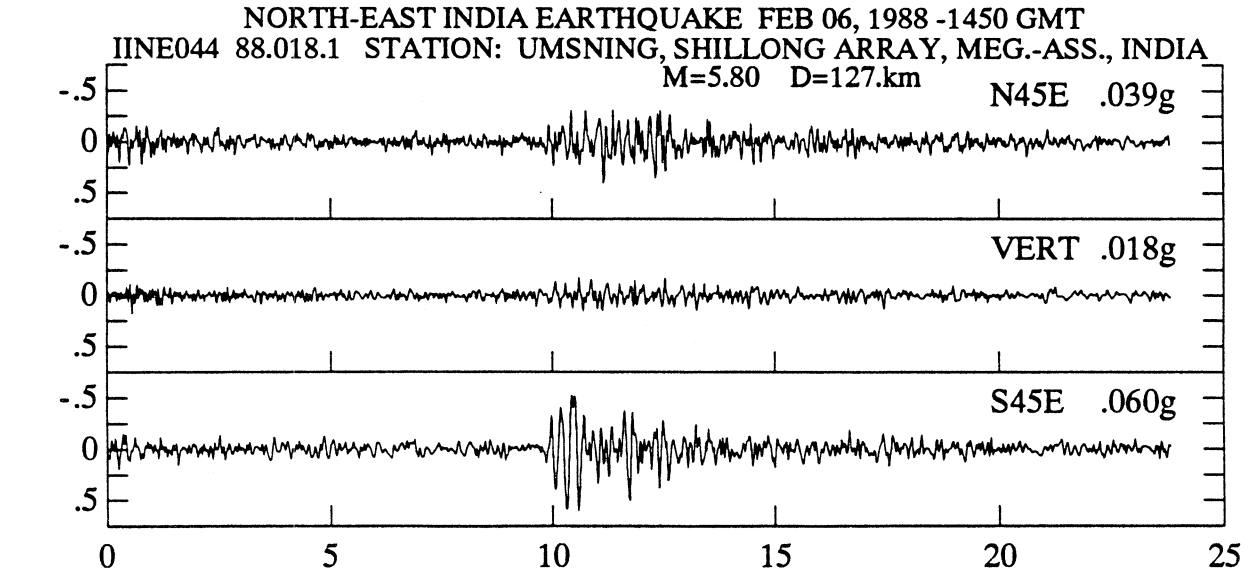
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT

IIINE041 88.015.1 STATION: SHILLONG, SHILLONG ARRAY, MEG.-ASS., INDIA

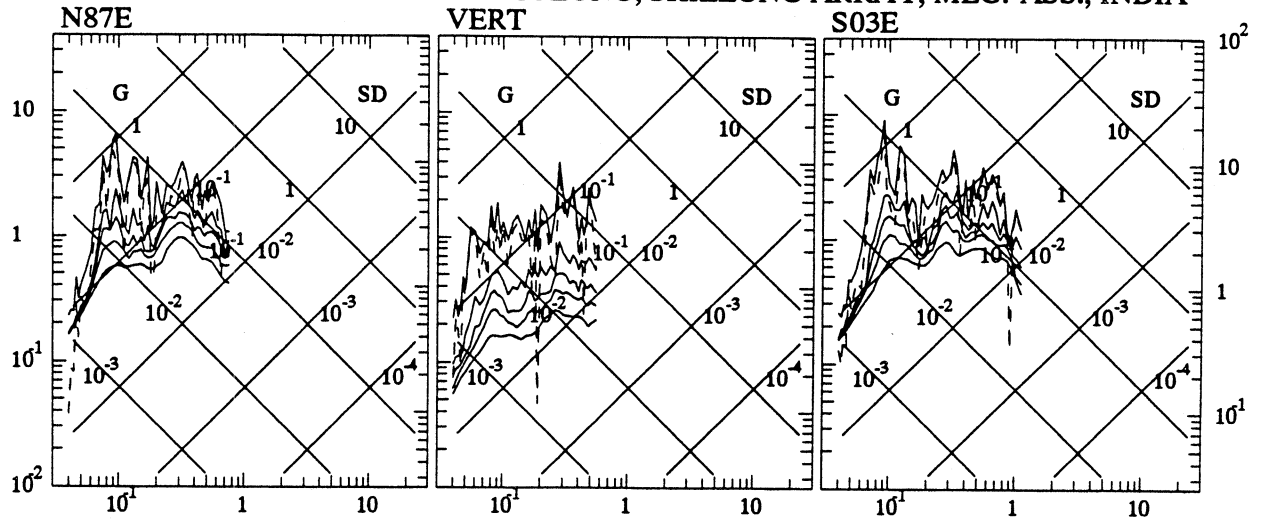



NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE042 88.016.1 STATION: UMMULONG, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=117.km
N87E .056g
VERT .021g
S03E .054g
-.5
0
.5
0
5
10
15
20
25

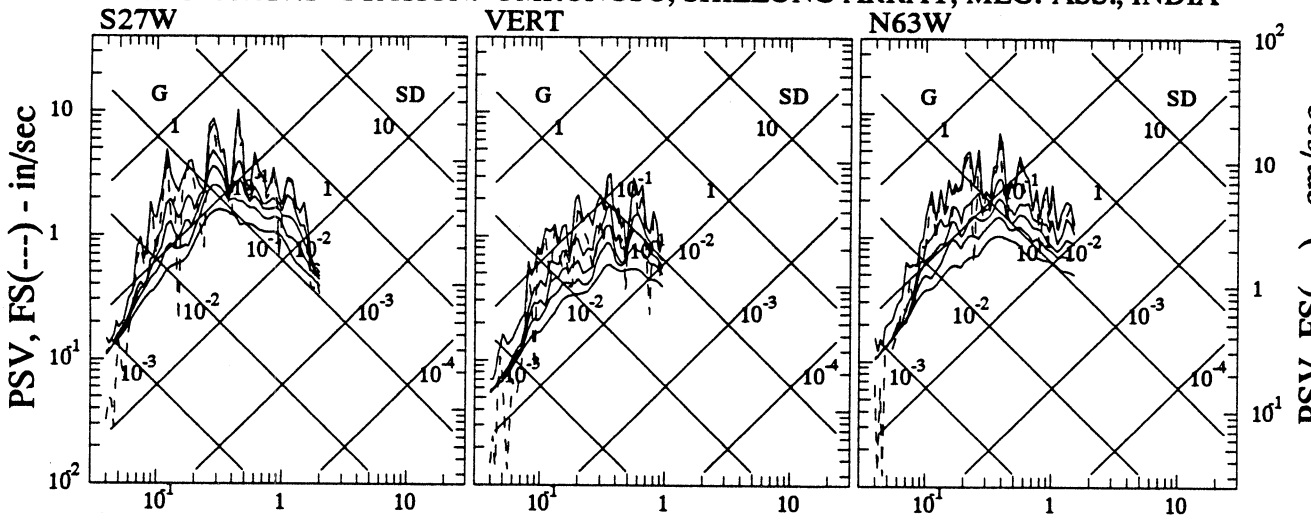

NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE043 88.017.1 STATION: UMRONGSO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=149.km
S27W .045g
VERT .022g
N63W .040g
Acceleration - g/10
-.5
0
.5
0
5
10
15
20
25


NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IINE044 88.018.1 STATION: UMSNING, SHILLONG ARRAY, MEG.-ASS., INDIA
M=5.80 D=127.km
N45E .039g
VERT .018g
S45E .060g
-.5
0
.5
0
5
10
15
20
25
Time - seconds

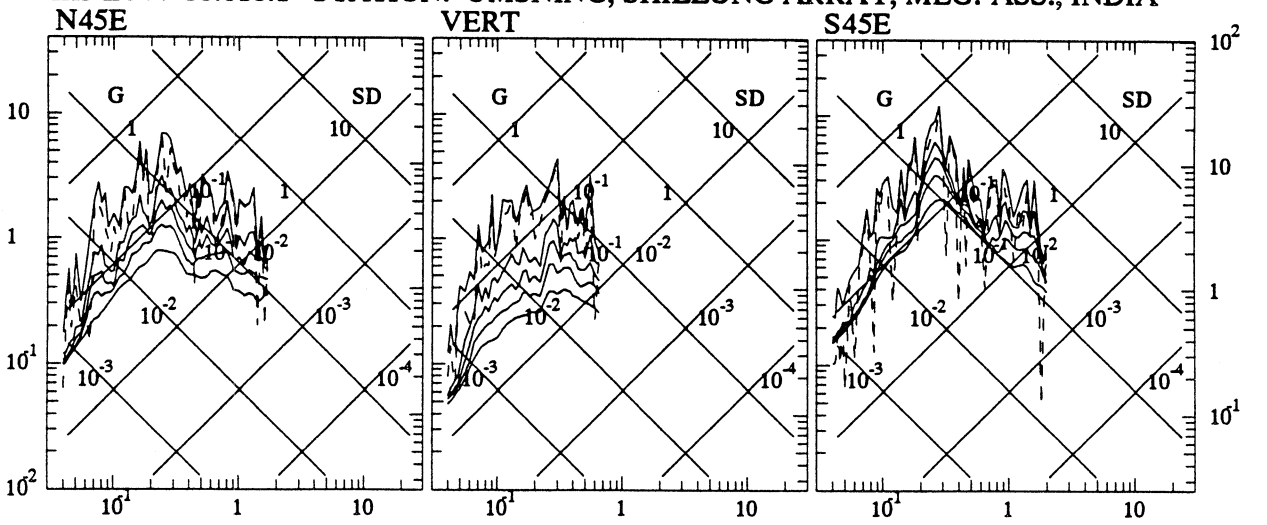
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE042 88.016.1 STATION: UMMULONG, SHILLONG ARRAY, MEG.-ASS., INDIA



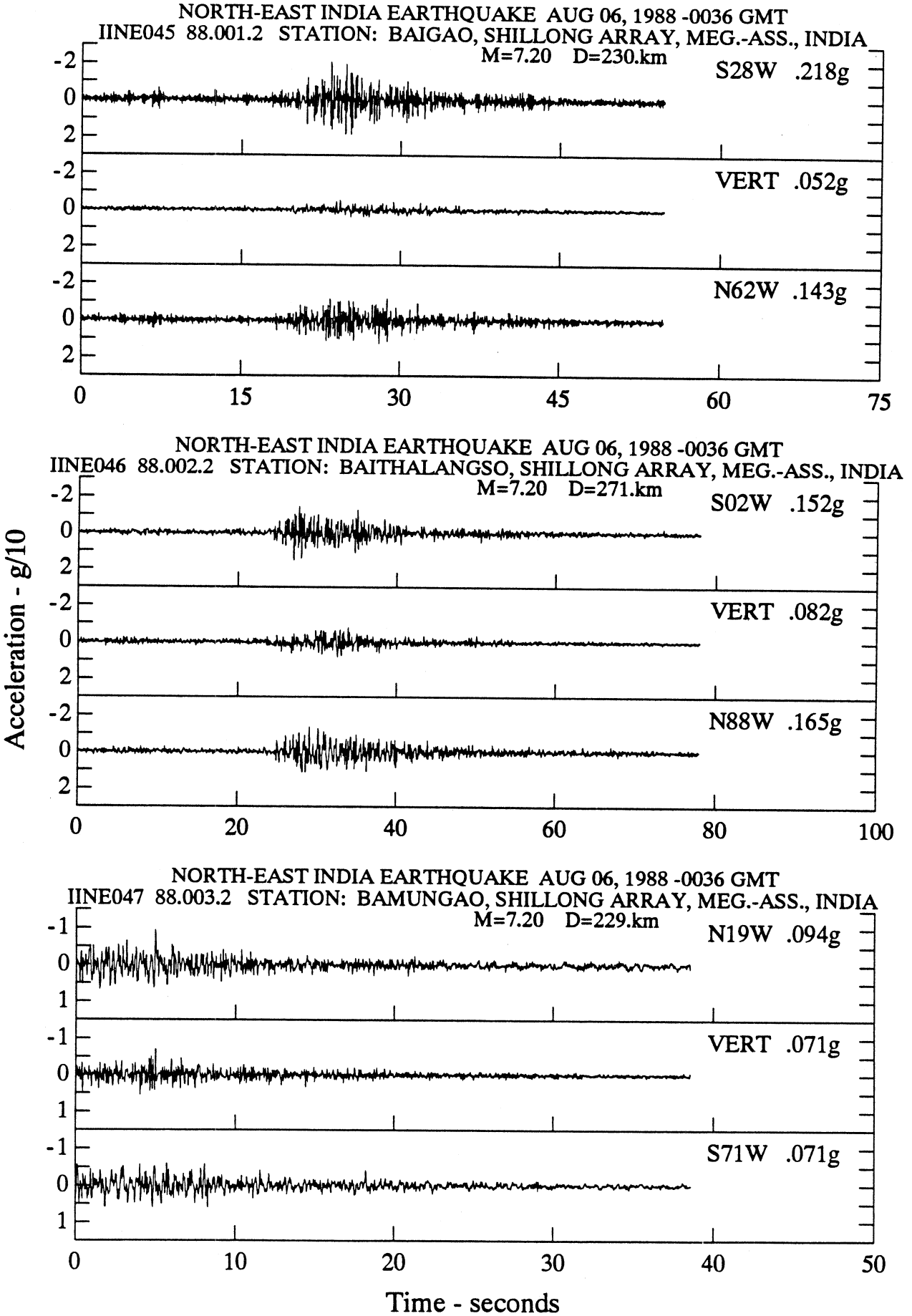
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE043 88.017.1 STATION: UMRONGSO, SHILLONG ARRAY, MEG.-ASS., INDIA

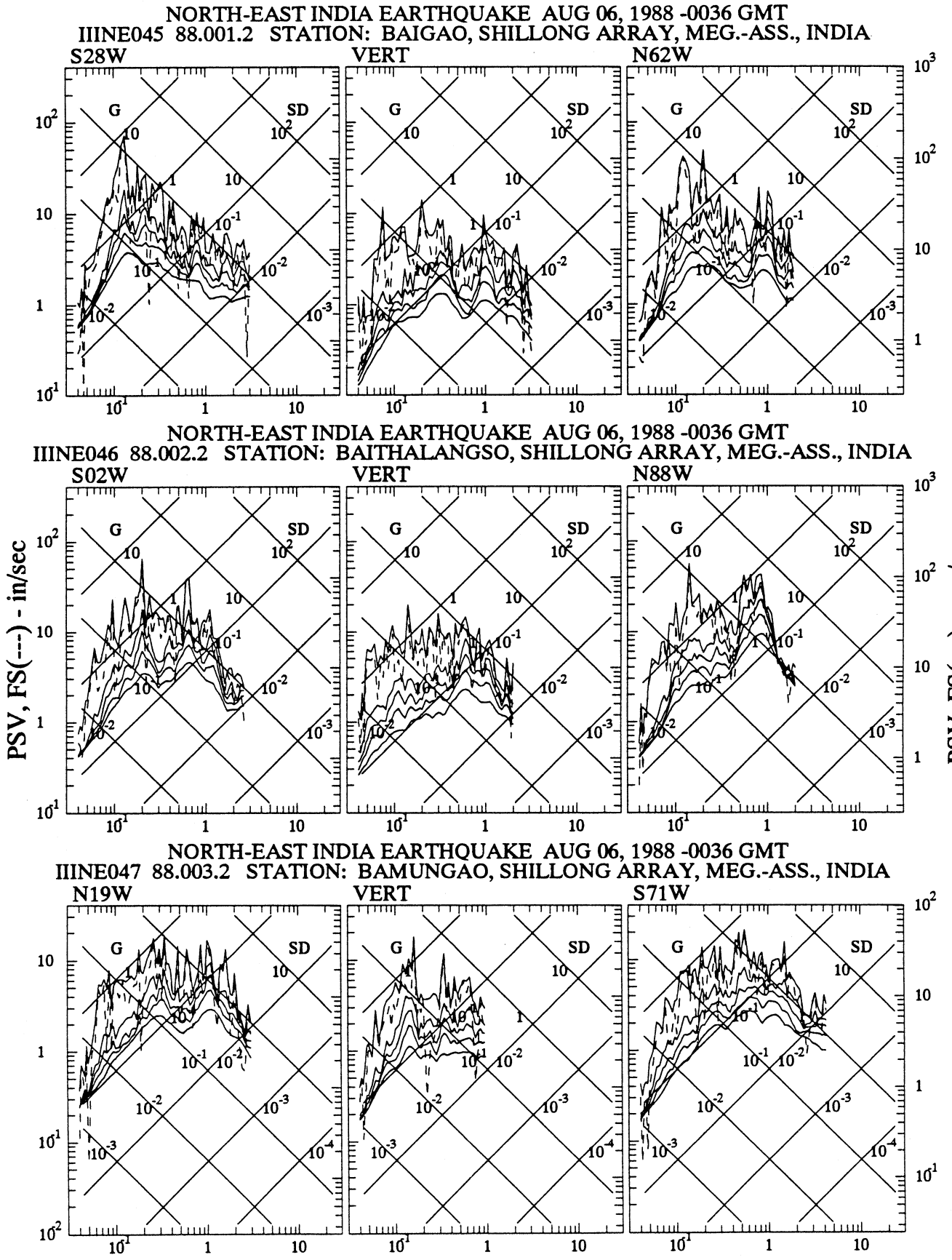


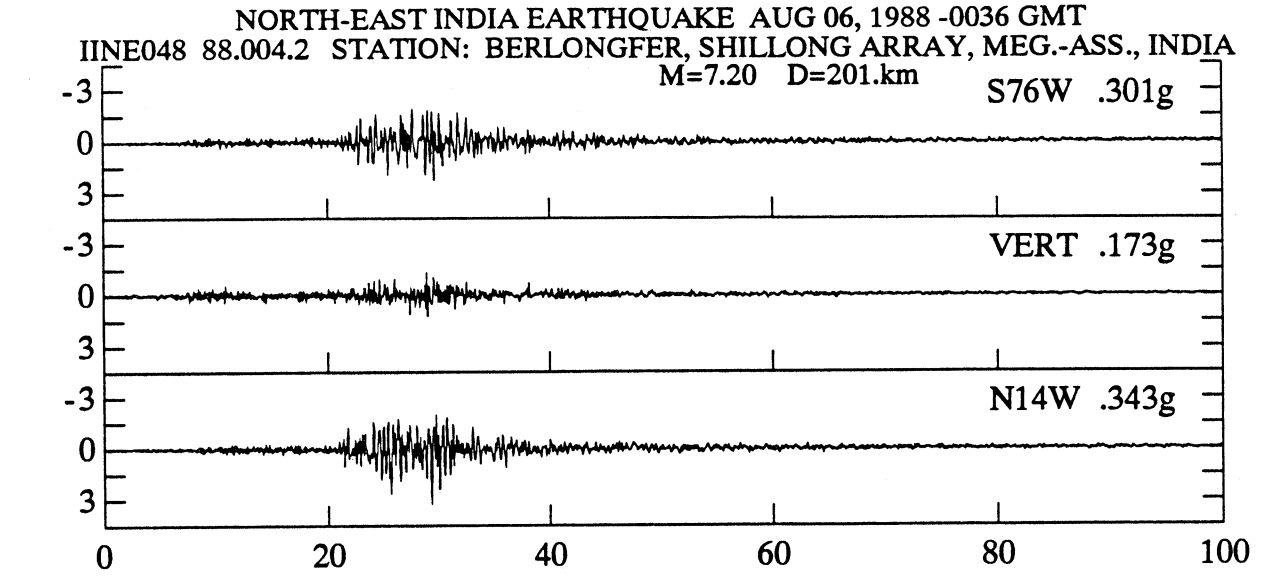
NORTH-EAST INDIA EARTHQUAKE FEB 06, 1988 -1450 GMT
IIINE044 88.018.1 STATION: UMSNING, SHILLONG ARRAY, MEG.-ASS., INDIA

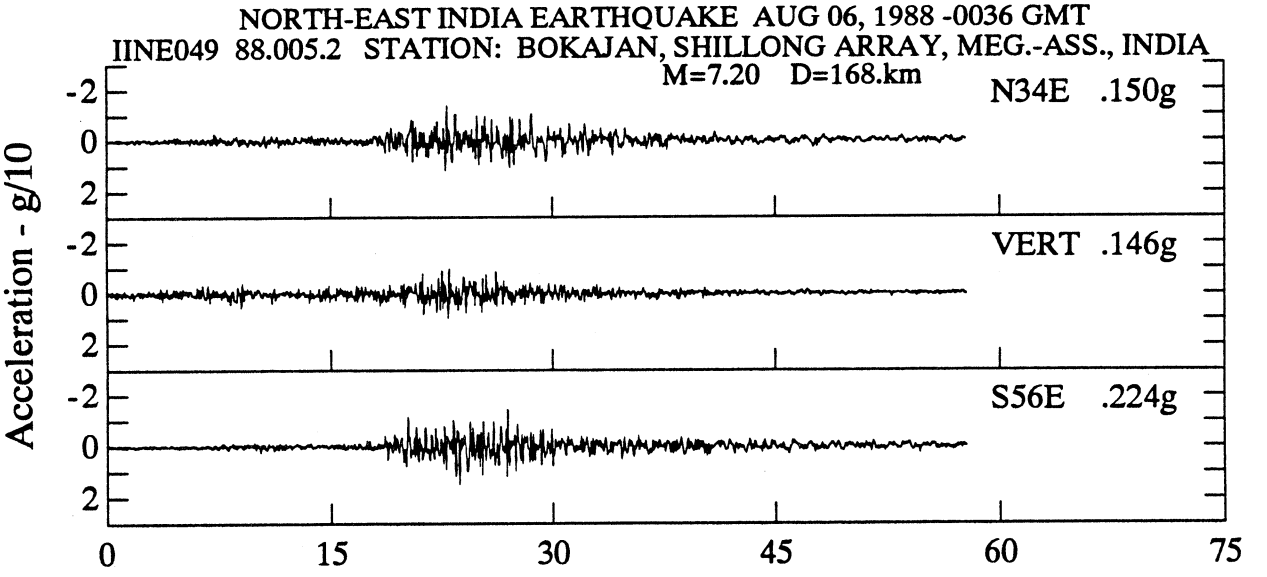


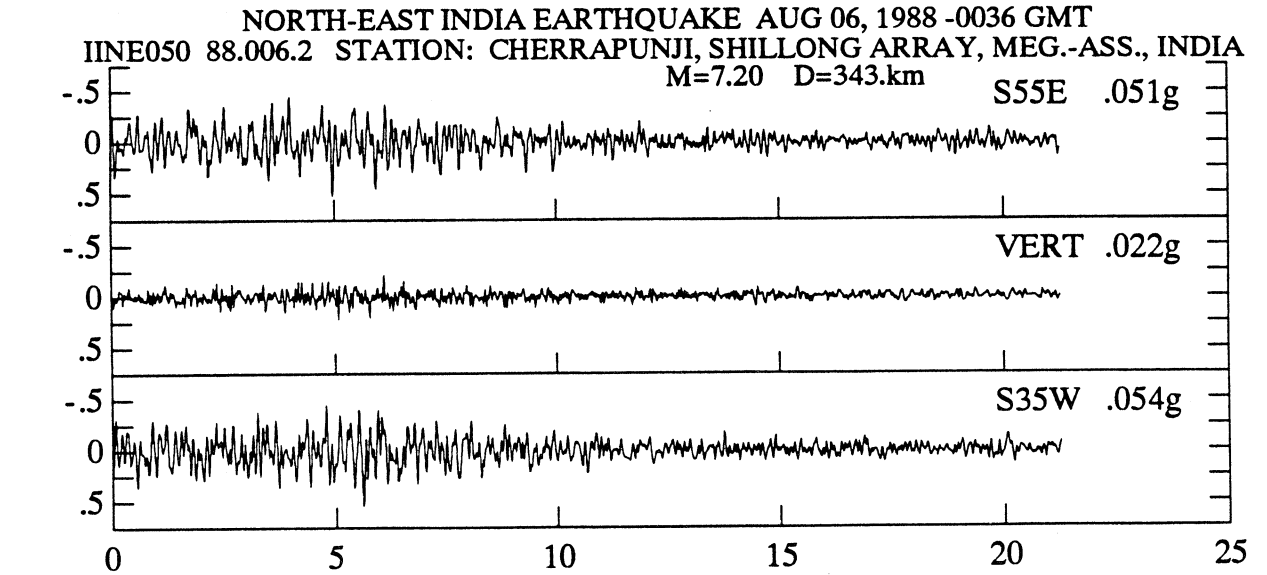
Period - sec


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE045 88.001.2 STATION: BAIGAO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=230.km
S28W .218g
VERT .052g
N62W .143g
0 15 30 45 60 75
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE046 88.002.2 STATION: BAITHALANGSO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=271.km
S02W .152g
VERT .082g
N88W .165g
0 20 40 60 80 100
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE047 88.003.2 STATION: BAMUNGAO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=229.km
N19W .094g
VERT .071g
S71W .071g
0 10 20 30 40 50
Acceleration - g/10
Time - seconds


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE045 88.001.2 STATION: BAIGAO, SHILLONG ARRAY, MEG.-ASS., INDIA
S28W
VERT
N62W
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE046 88.002.2 STATION: BAITHALANGSO, SHILLONG ARRAY, MEG.-ASS., INDIA
S02W
VERT
N88W
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE047 88.003.2 STATION: BAMUNGAO, SHILLONG ARRAY, MEG.-ASS., INDIA
N19W
VERT
S71W
G
SD
PSV, FS(---) - in/sec
PSV, FS(---) - cm/sec
Period - sec



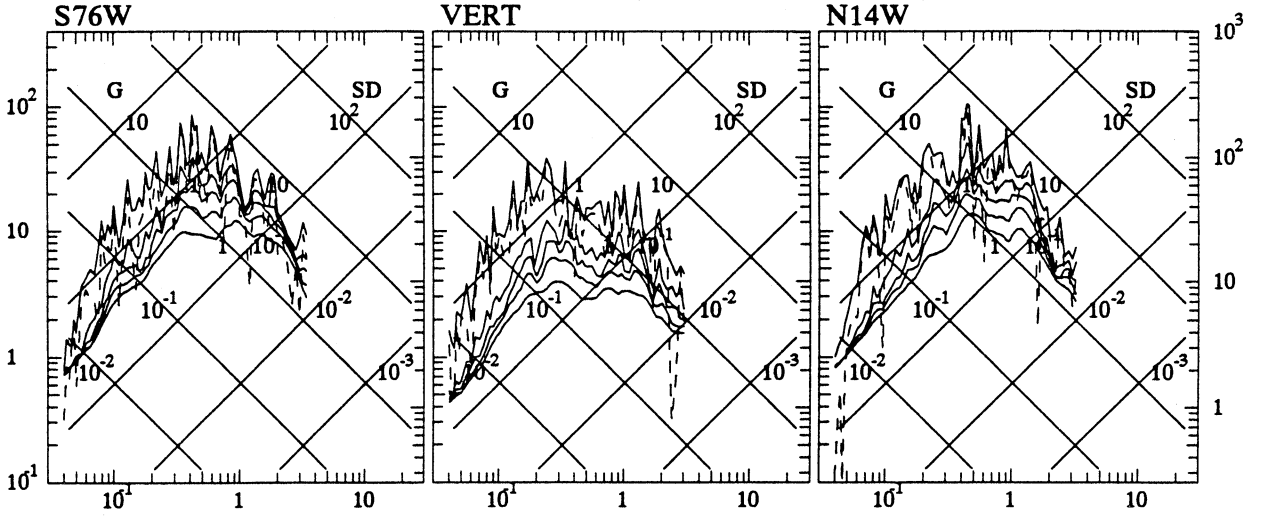




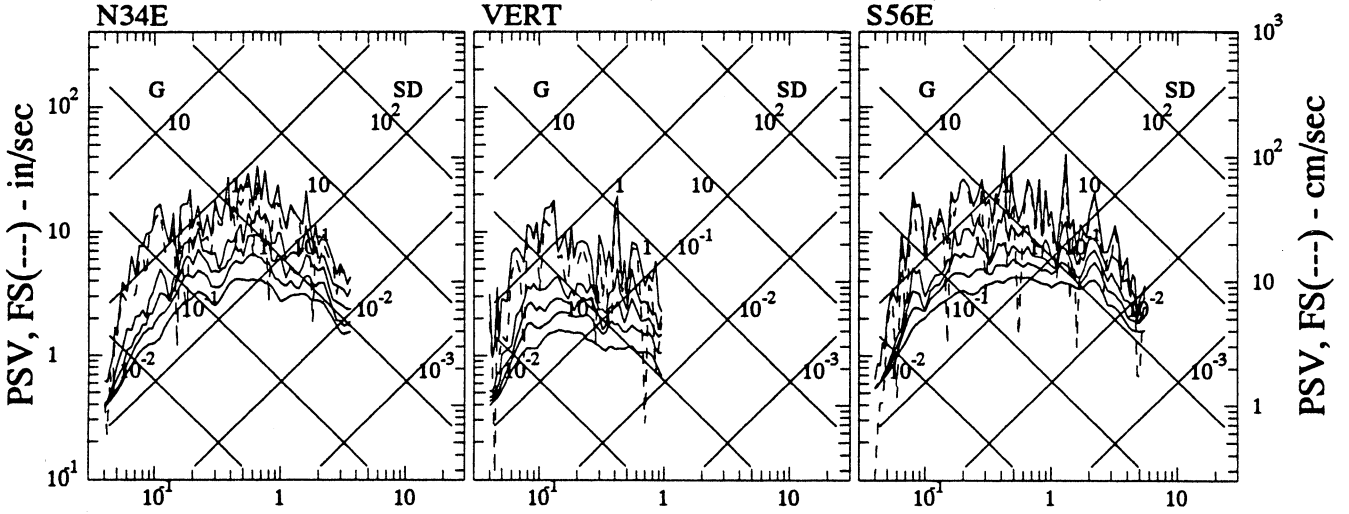
Acceleration - g/10

Time - seconds

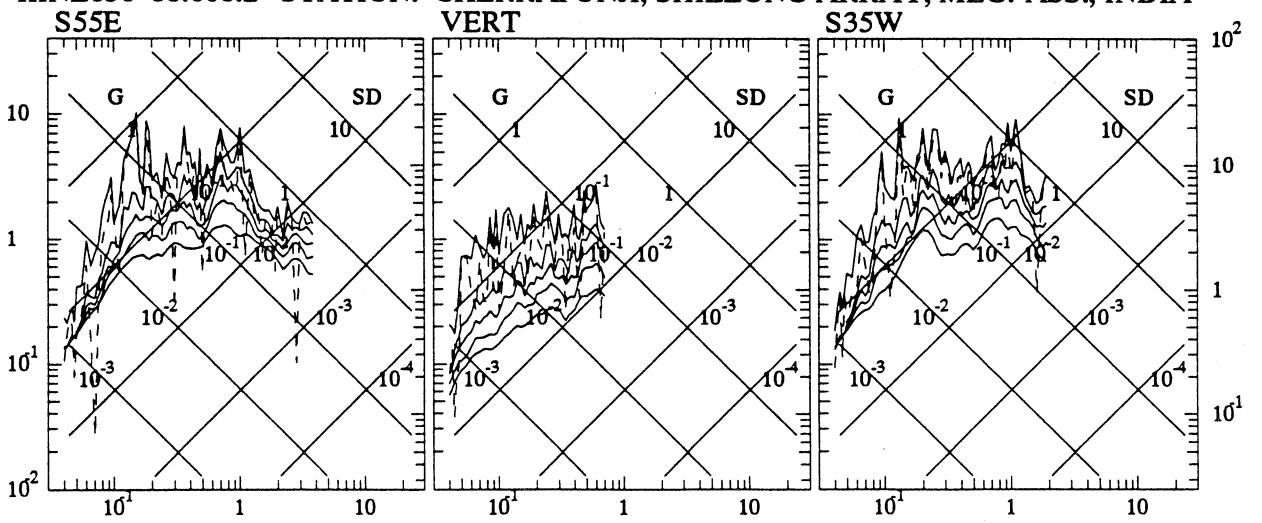
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE048 88.004.2 STATION: BERLONGFER, SHILLONG ARRAY, MEG.-ASS., INDIA

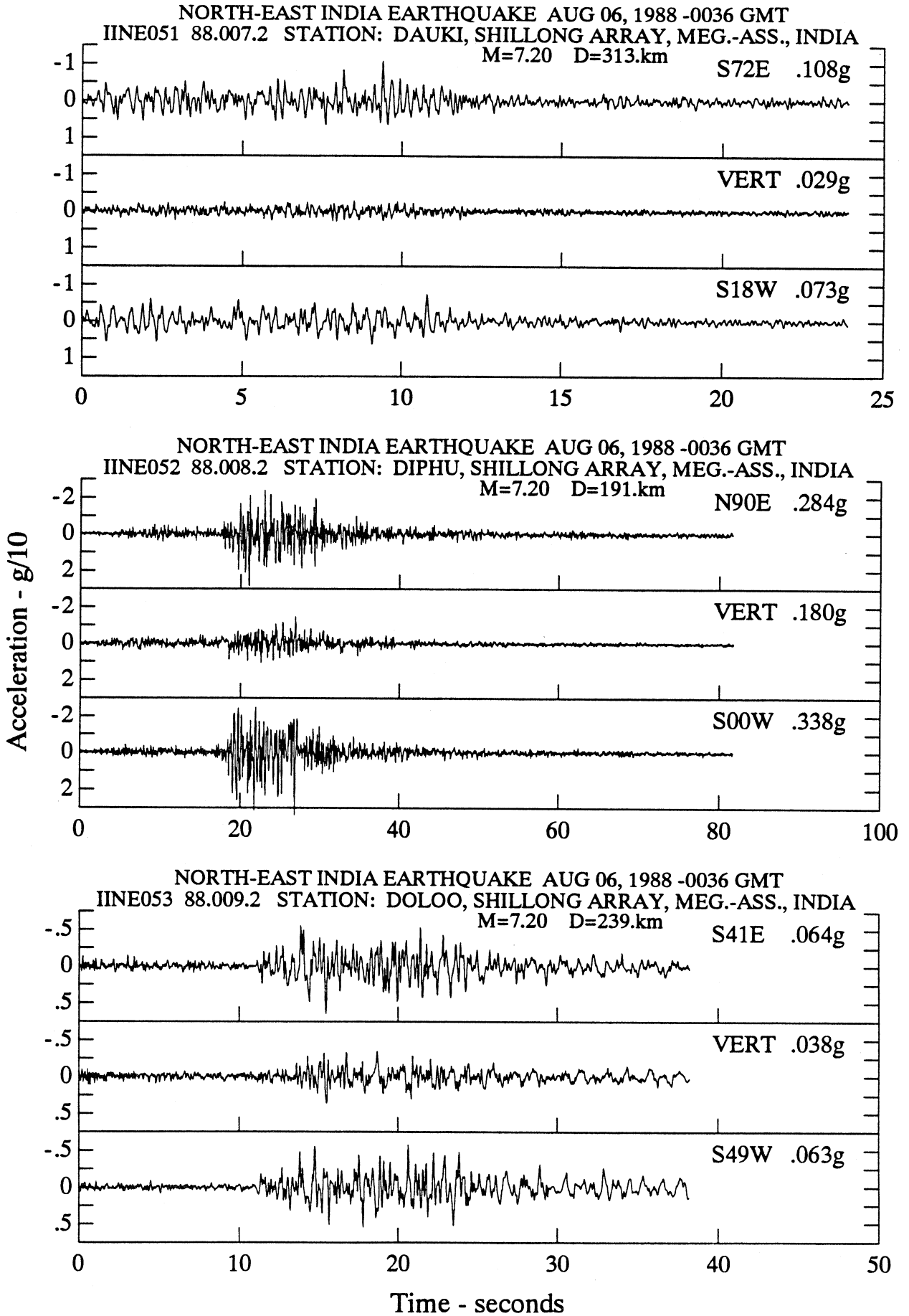


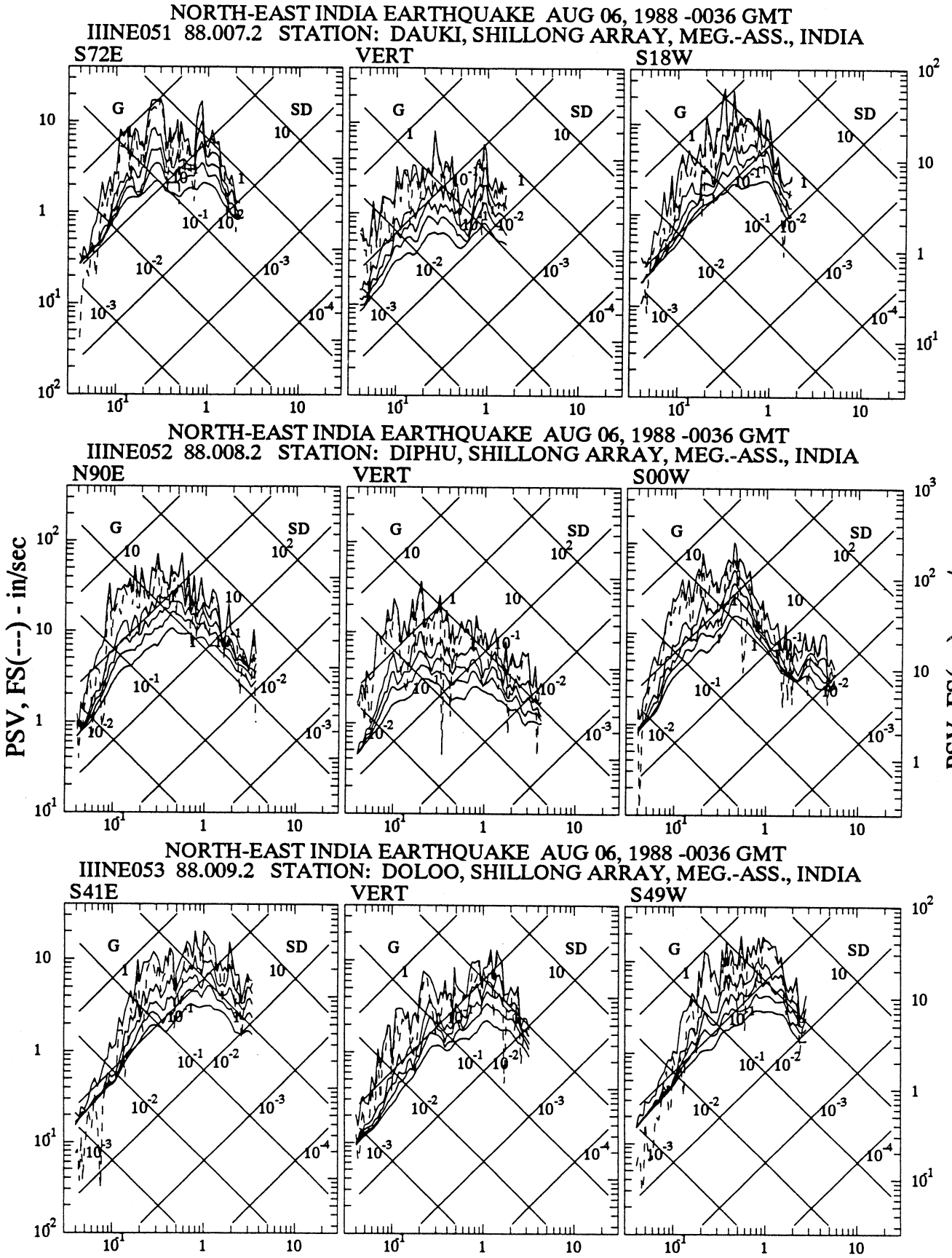
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE049 88.005.2 STATION: BOKAJAN, SHILLONG ARRAY, MEG.-ASS., INDIA

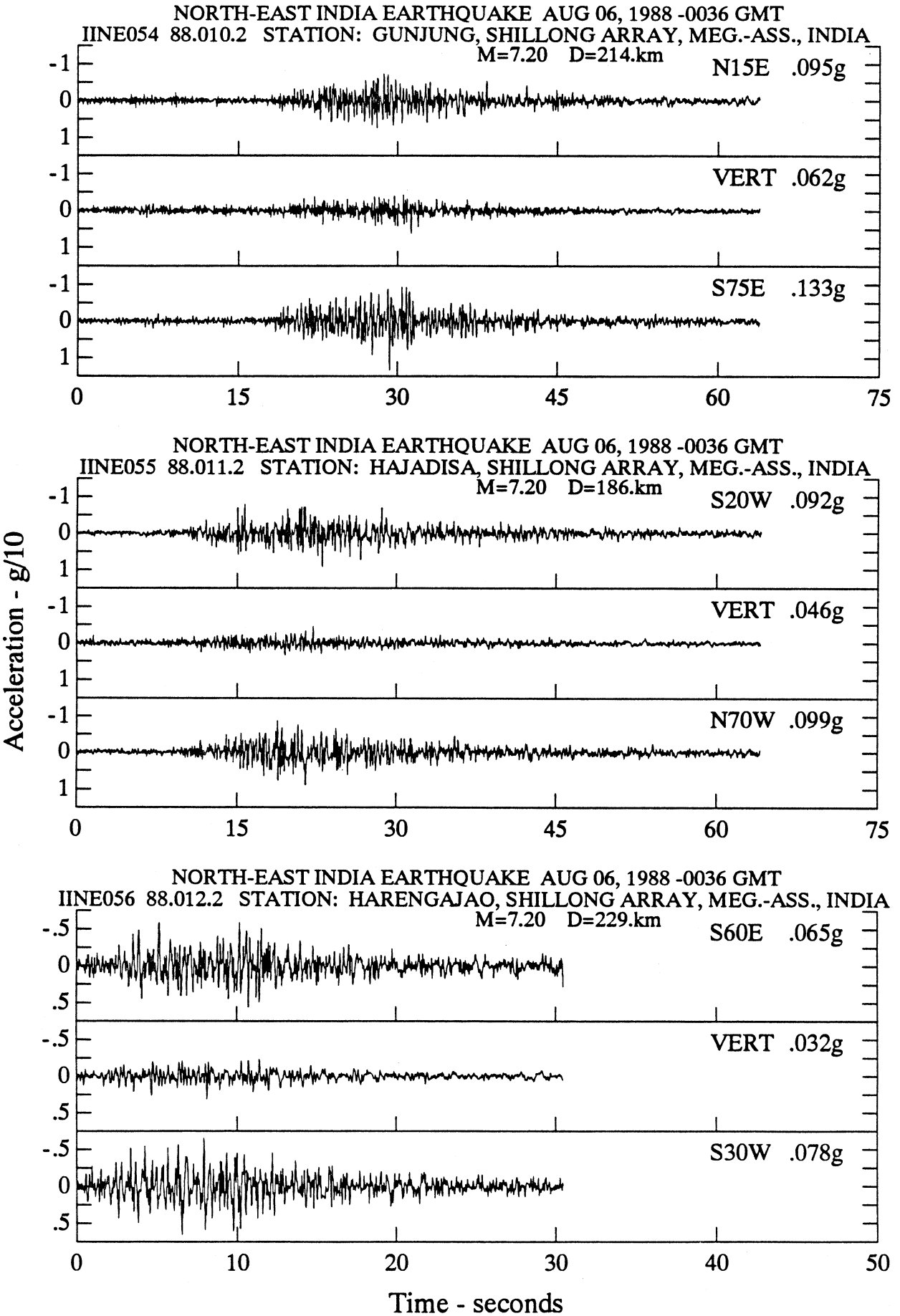


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE050 88.006.2 STATION: CHERRAPUNJI, SHILLONG ARRAY, MEG.-ASS., INDIA

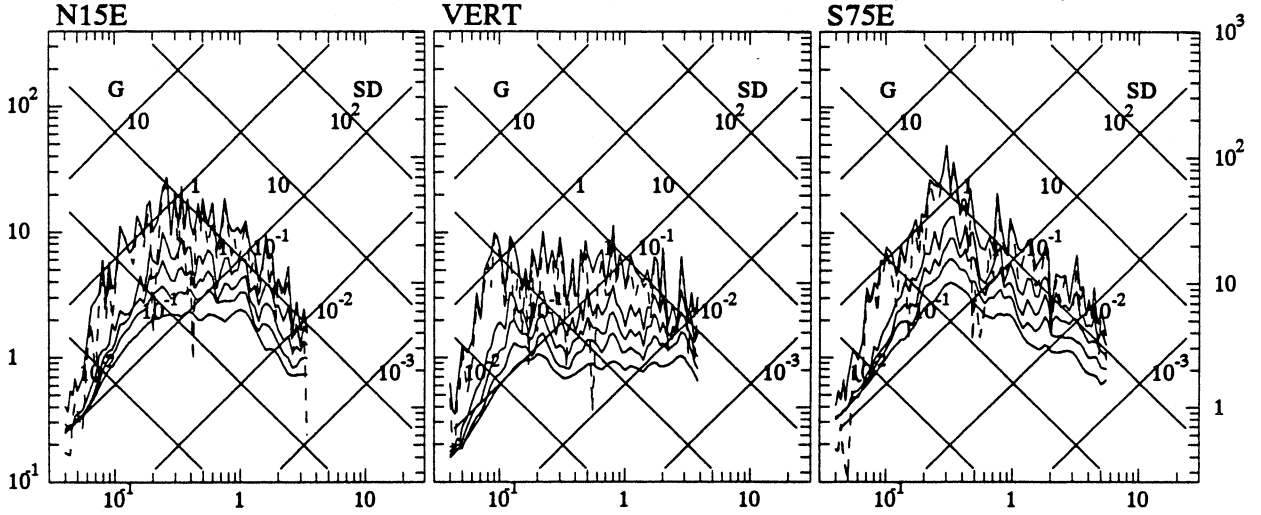



NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE051 88.007.2 STATION: DAUKI, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=313.km
S72E .108g
VERT .029g
S18W .073g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE052 88.008.2 STATION: DIPHU, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=191.km
N90E .284g
VERT .180g
S00W .338g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE053 88.009.2 STATION: DOLOO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=239.km
S41E .064g
VERT .038g
S49W .063g
Acceleration - g/10
Time - seconds

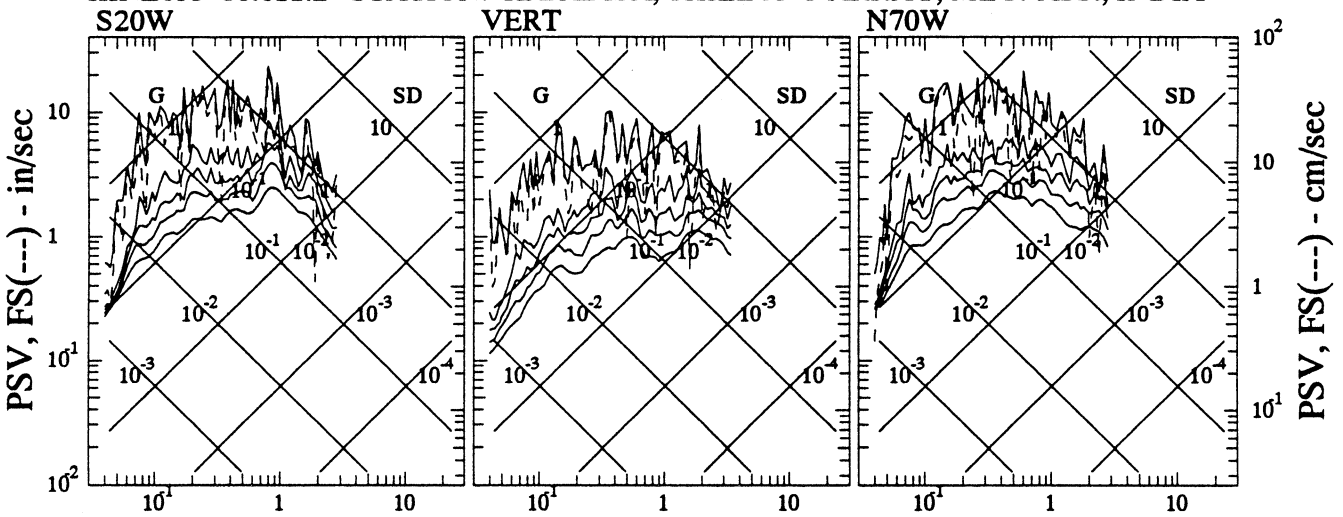

NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE051 88.007.2 STATION: DAUKI, SHILLONG ARRAY, MEG.-ASS., INDIA
S72E
VERT
S18W
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE052 88.008.2 STATION: DIPHU, SHILLONG ARRAY, MEG.-ASS., INDIA
N90E
VERT
S00W
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE053 88.009.2 STATION: DOLOO, SHILLONG ARRAY, MEG.-ASS., INDIA
S41E
VERT
S49W
G
SD
PSV, FS(---) - in/sec
PSV, FS(---) - cm/sec
Period - sec


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE054 88.010.2 STATION: GUNJUNG, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=214.km
N15E .095g
VERT .062g
S75E .133g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE055 88.011.2 STATION: HAJADISA, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=186.km
S20W .092g
VERT .046g
N70W .099g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE056 88.012.2 STATION: HARENGAJAO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=229.km
S60E .065g
VERT .032g
S30W .078g
Acceleration - g/10
Time - seconds

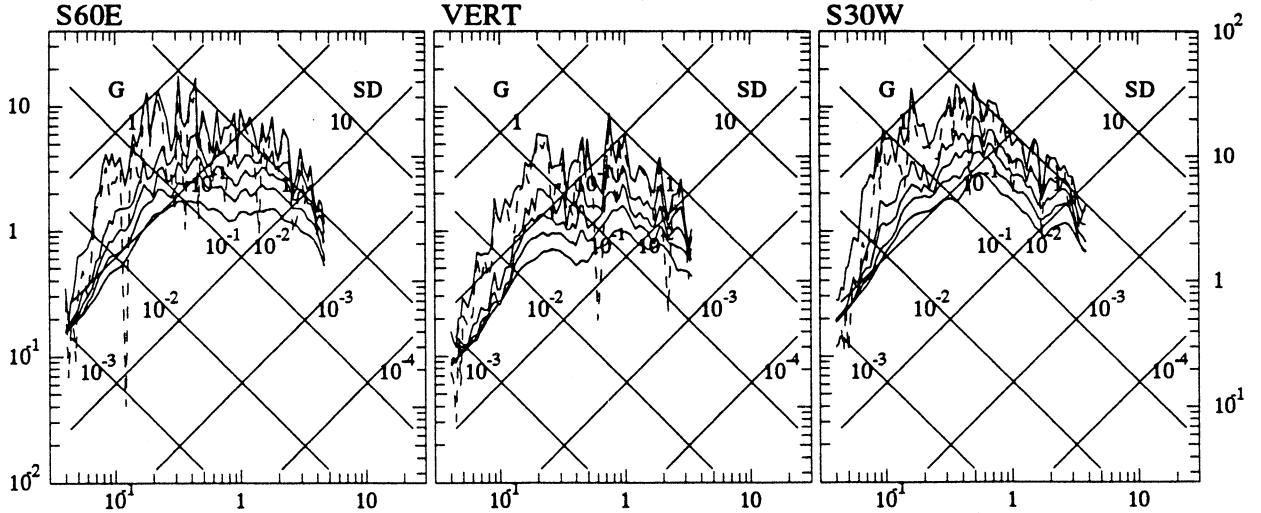
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE054 88.010.2 STATION: GUNJUNG, SHILLONG ARRAY, MEG.-ASS., INDIA

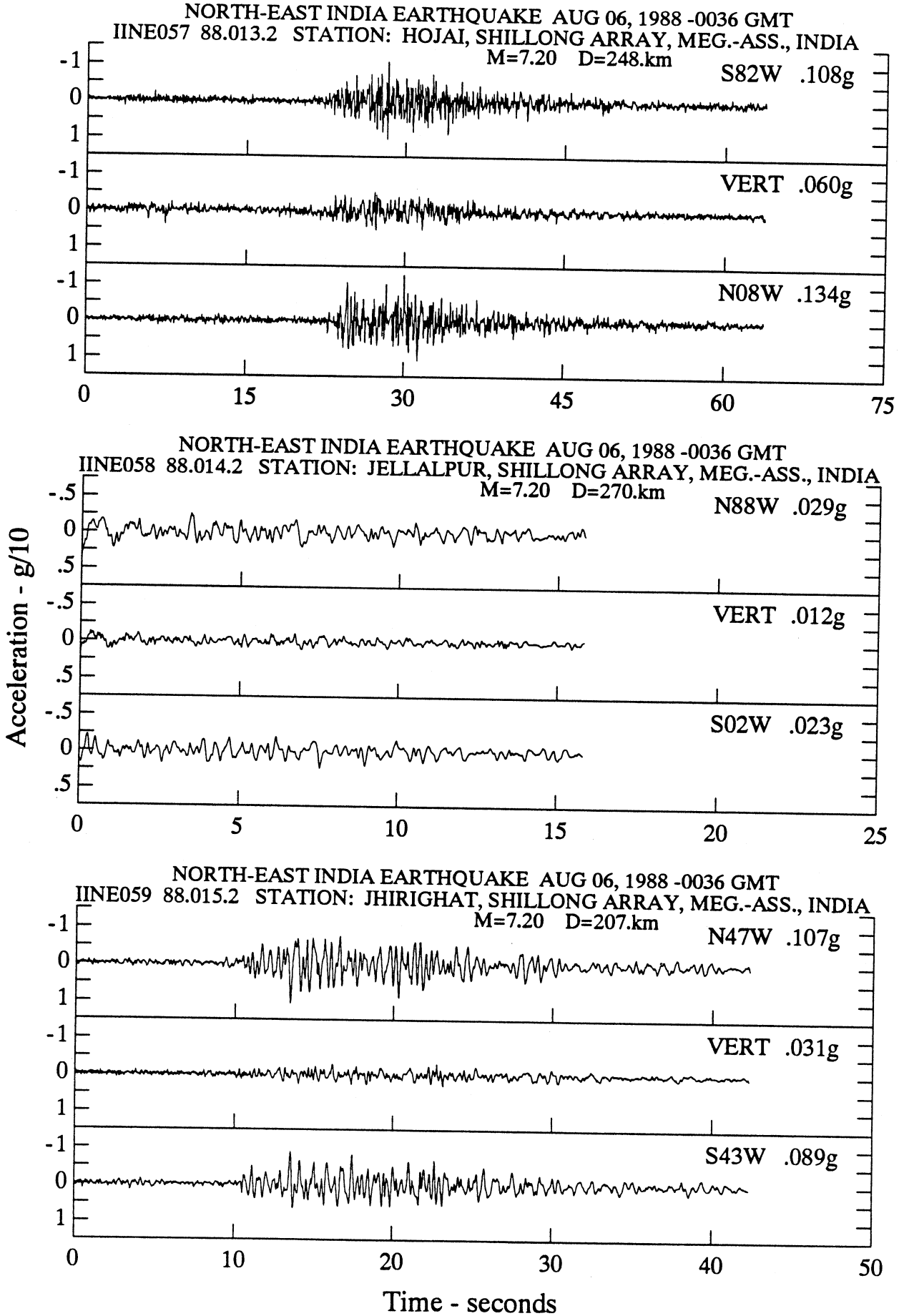


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE055 88.011.2 STATION: HAJADISA, SHILLONG ARRAY, MEG.-ASS., INDIA

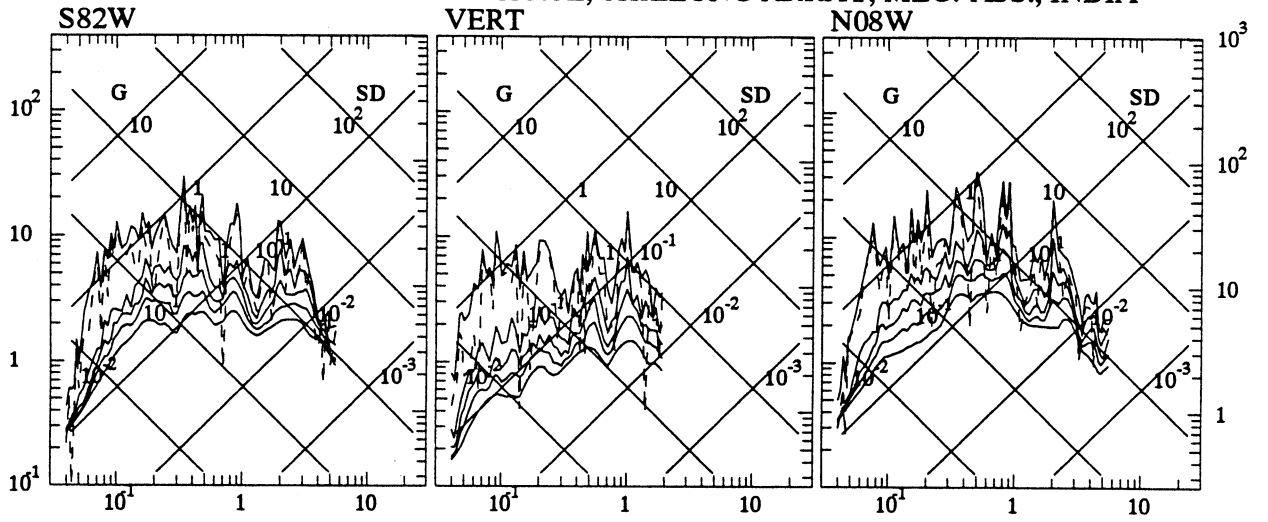


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE056 88.012.2 STATION: HARENGAJAO, SHILLONG ARRAY, MEG.-ASS., INDIA

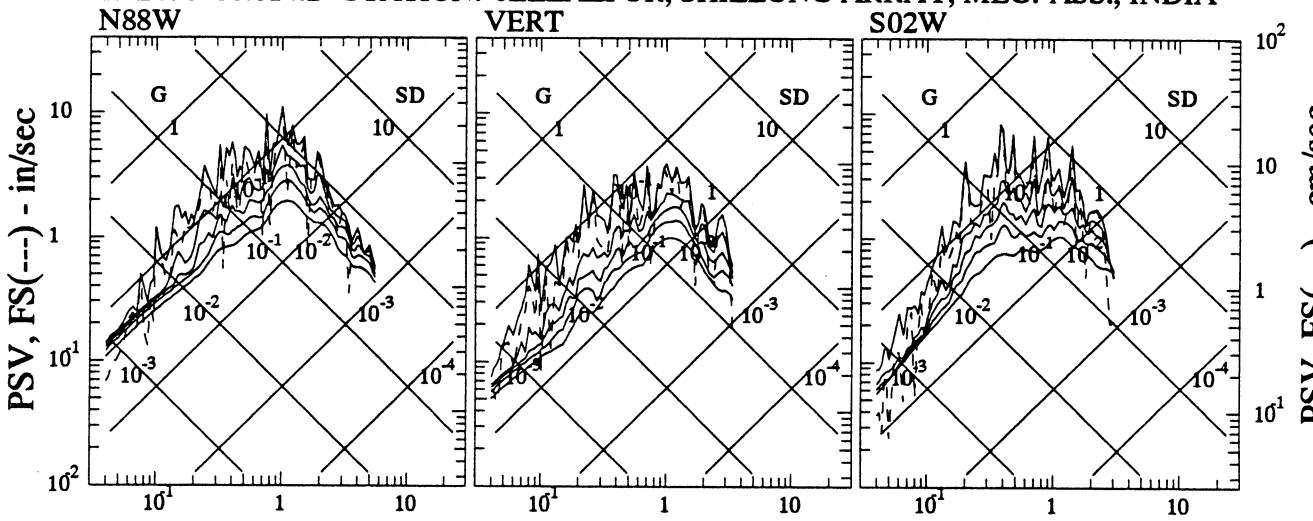



NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE057 88.013.2 STATION: HOJAI, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=248.km
S82W .108g
VERT .060g
N08W .134g
0 15 30 45 60 75
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE058 88.014.2 STATION: JELLALPUR, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=270.km
N88W .029g
VERT .012g
S02W .023g
Acceleration - g/10
0 5 10 15 20 25
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE059 88.015.2 STATION: JHIRIGHAT, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=207.km
N47W .107g
VERT .031g
S43W .089g
0 10 20 30 40 50
Time - seconds

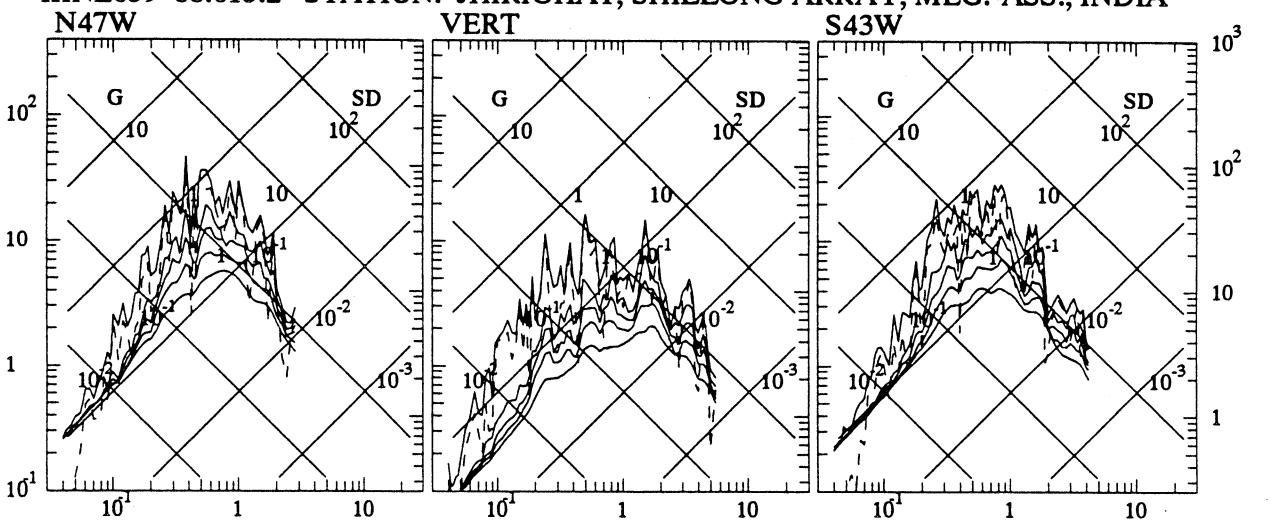
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE057 88.013.2 STATION: HOJAI, SHILLONG ARRAY, MEG.-ASS., INDIA



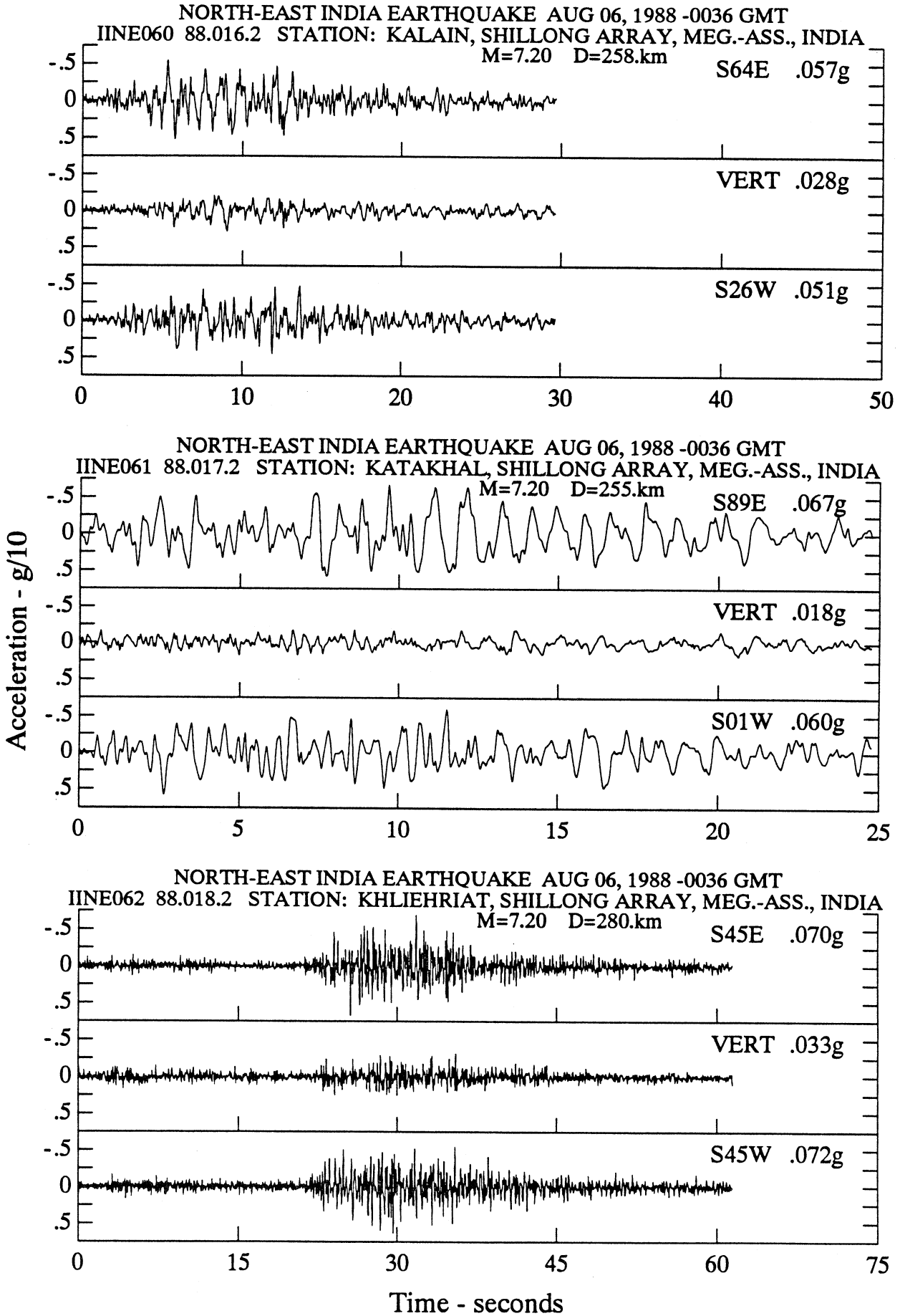
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE058 88.014.2 STATION: JELLALPUR, SHILLONG ARRAY, MEG.-ASS., INDIA



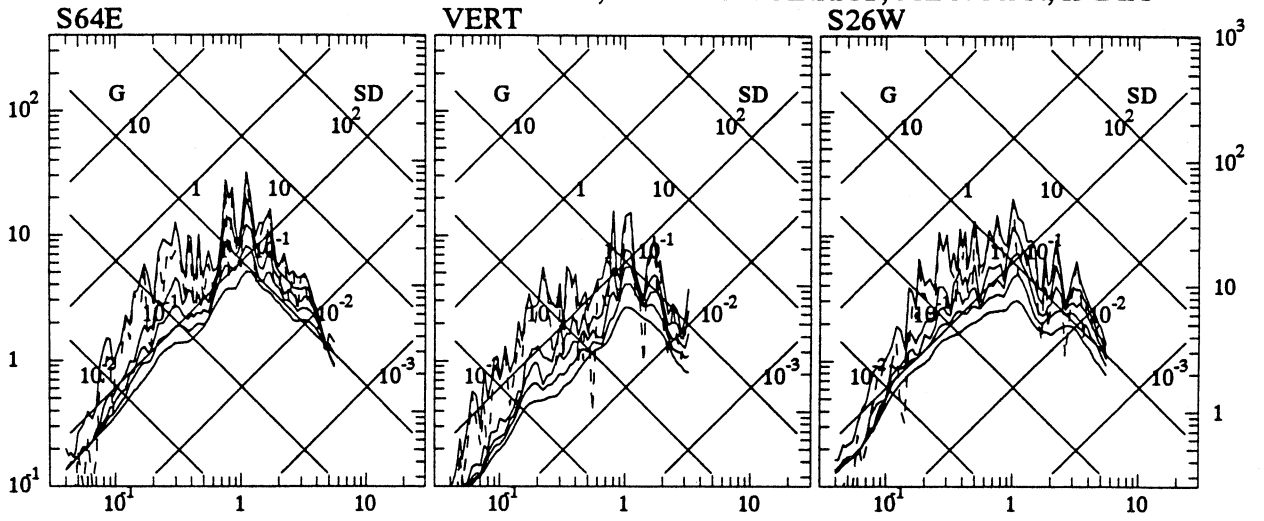
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE059 88.015.2 STATION: JHIRIGHAT, SHILLONG ARRAY, MEG.-ASS., INDIA



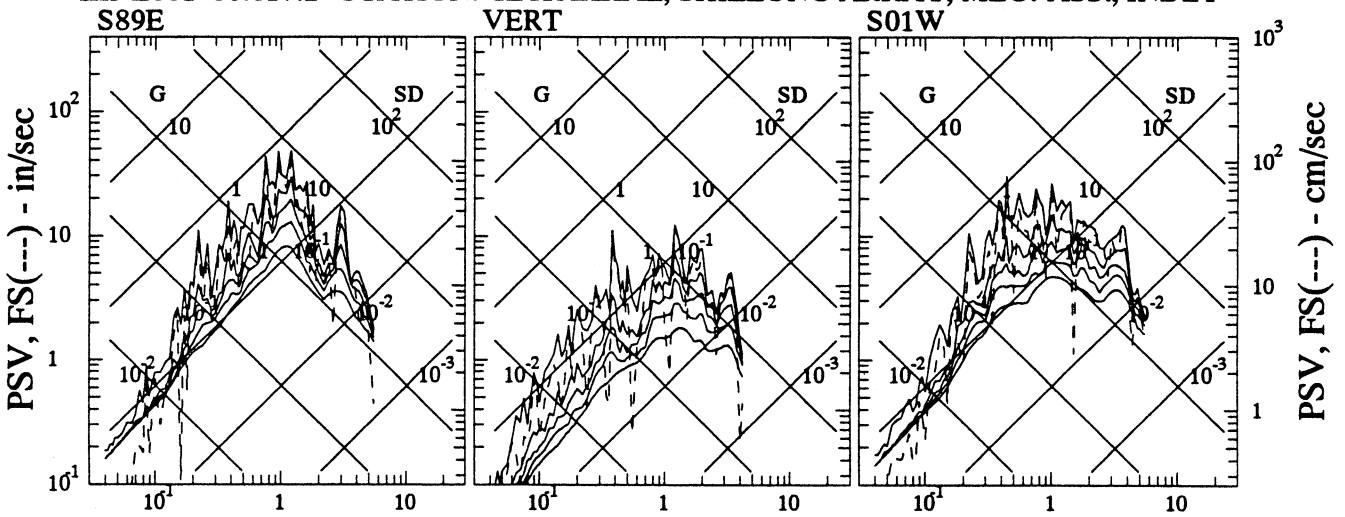
Period - sec


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE060 88.016.2 STATION: KALAIN, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=258.km
S64E .057g
VERT .028g
S26W .051g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE061 88.017.2 STATION: KATAKHAL, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=255.km
S89E .067g
VERT .018g
S01W .060g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE062 88.018.2 STATION: KHLIEHRIAT, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=280.km
S45E .070g
VERT .033g
S45W .072g
Acceleration - g/10
Time - seconds

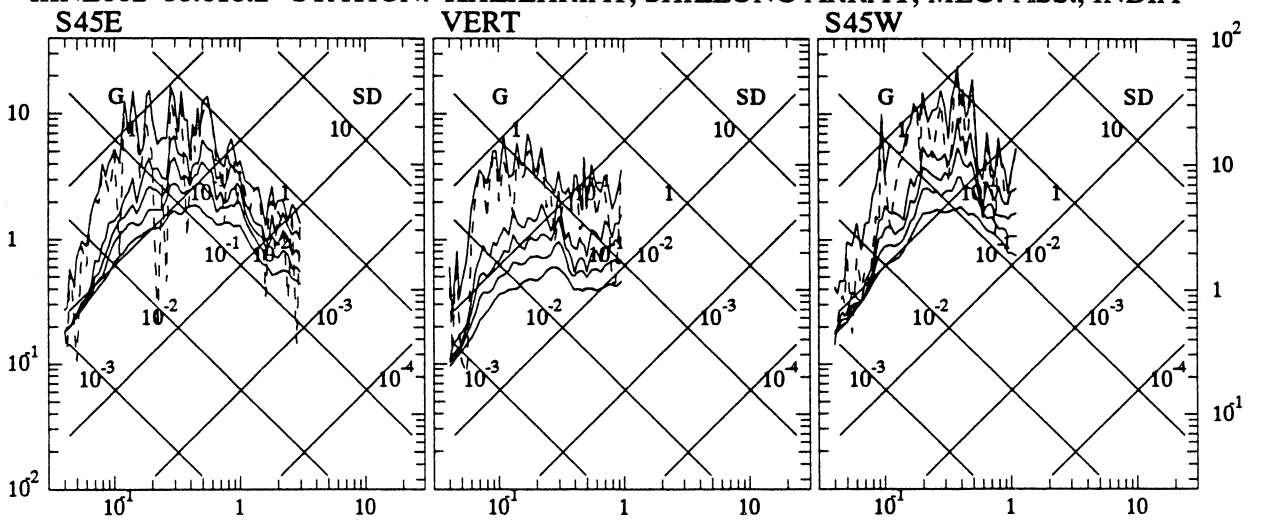
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE060 88.016.2 STATION: KALAIN, SHILLONG ARRAY, MEG.-ASS., INDIA

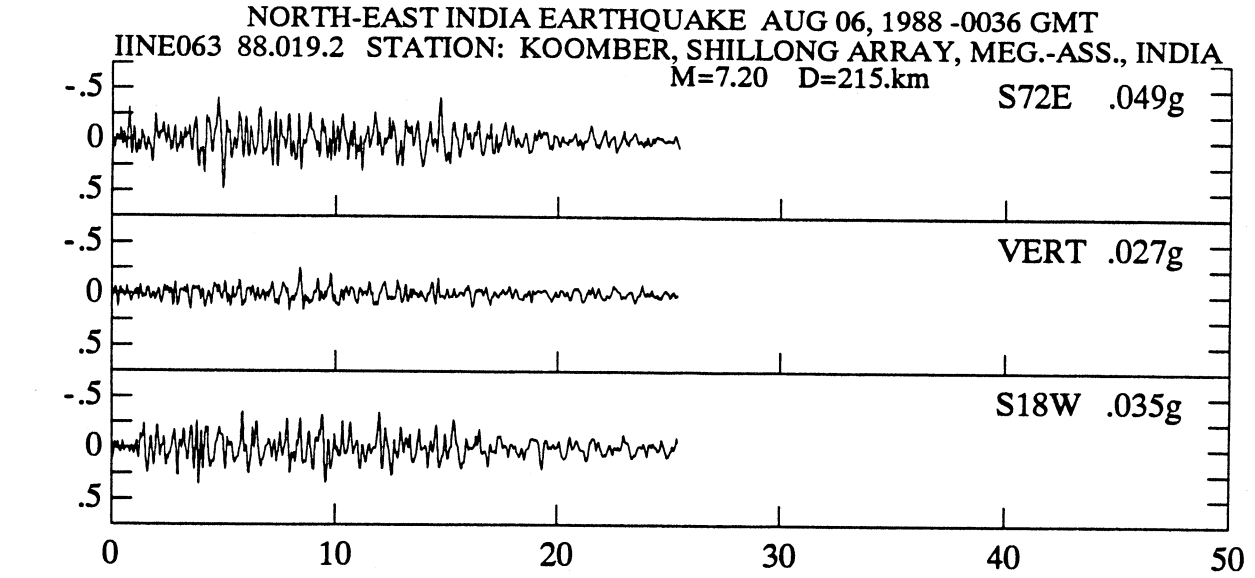


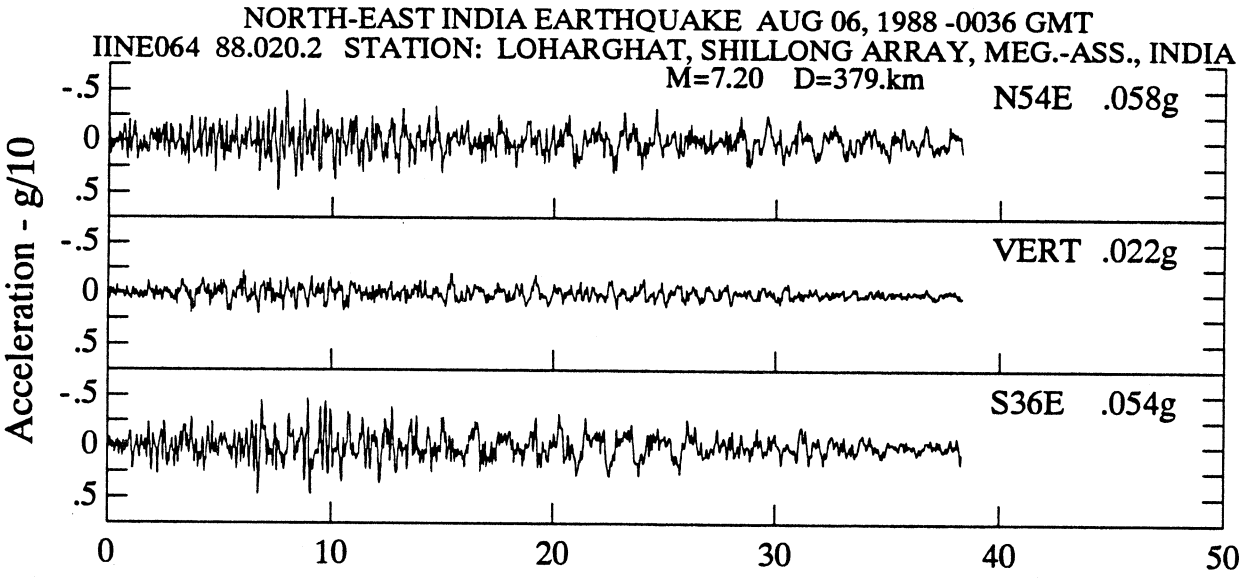
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE061 88.017.2 STATION: KATAKHAL, SHILLONG ARRAY, MEG.-ASS., INDIA

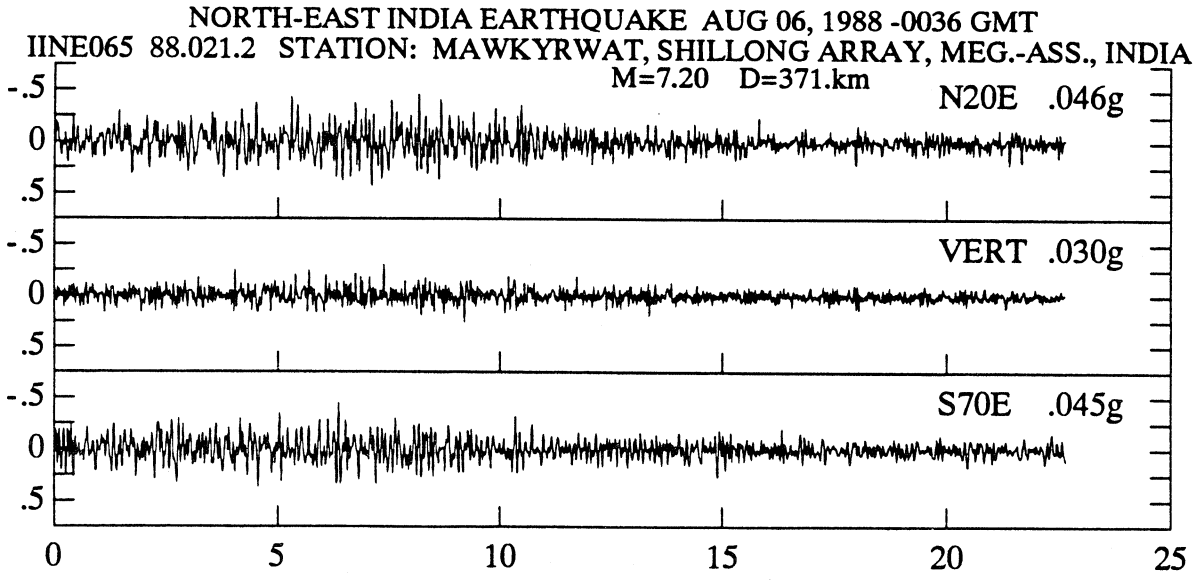


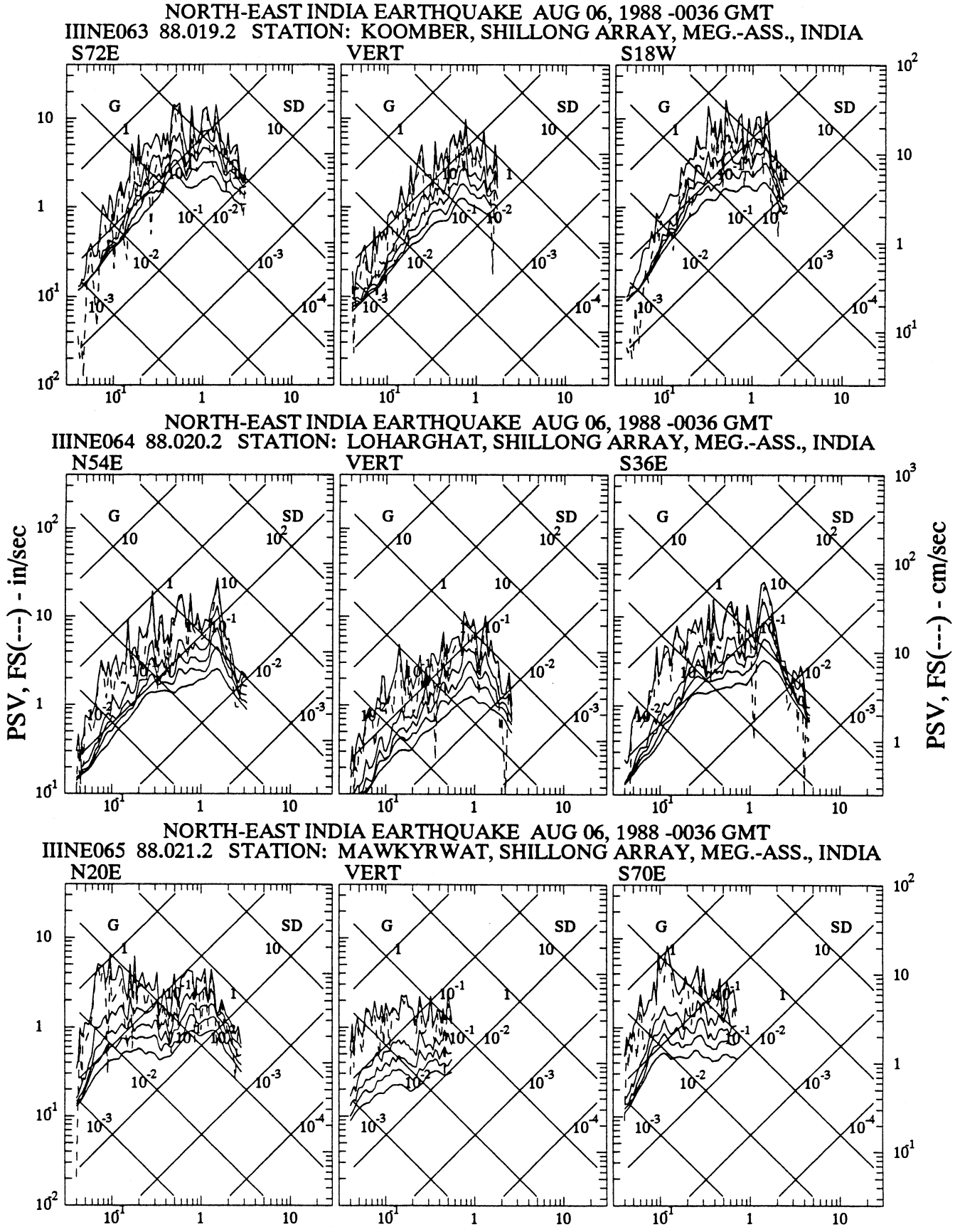
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE062 88.018.2 STATION: KHLIEHRIAT, SHILLONG ARRAY, MEG.-ASS., INDIA

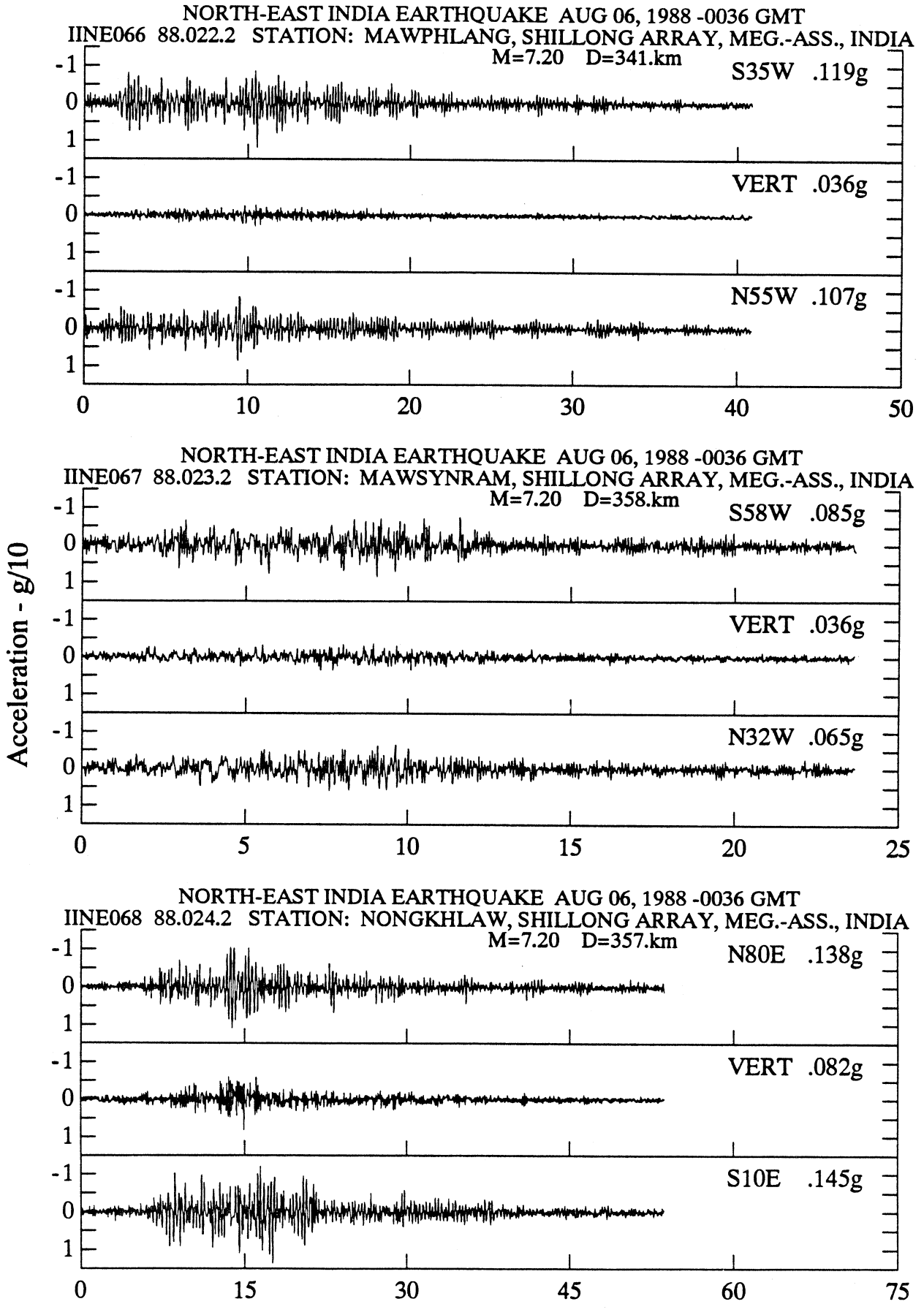



NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE063 88.019.2 STATION: KOOMBER, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=215.km
S72E .049g
VERT .027g
S18W .035g
-.5
0
.5
0
10
20
30
40
50


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE064 88.020.2 STATION: LOHARGHAT, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=379.km
N54E .058g
VERT .022g
S36E .054g
Acceleration - g/10
-.5
0
.5
0
10
20
30
40
50

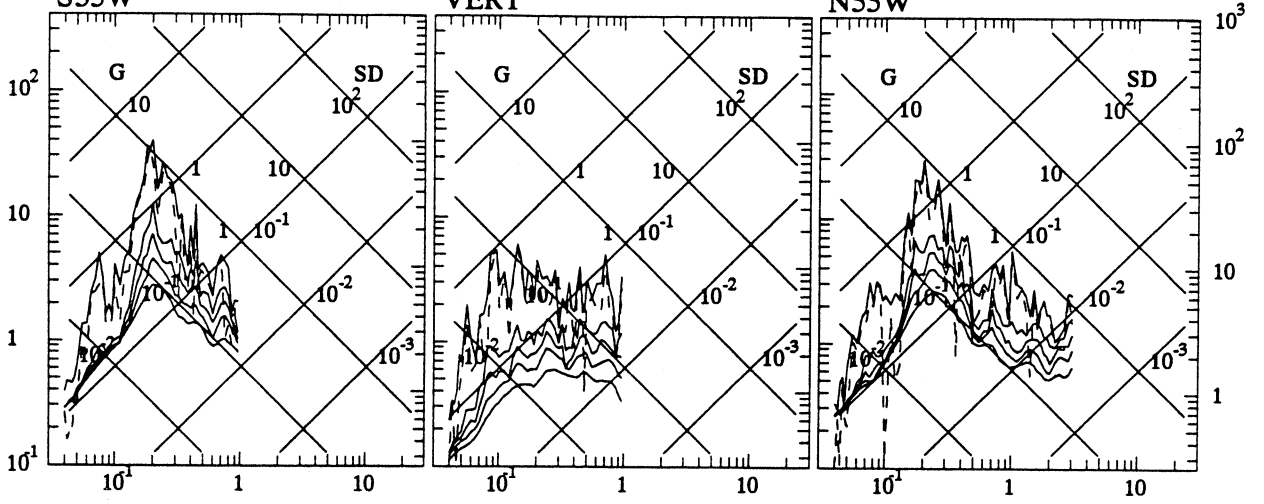

NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE065 88.021.2 STATION: MAWKYRWAT, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=371.km
N20E .046g
VERT .030g
S70E .045g
-.5
0
.5
0
5
10
15
20
25
Time - seconds


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE063 88.019.2 STATION: KOOMBER, SHILLONG ARRAY, MEG.-ASS., INDIA
S72E
VERT
S18W
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE064 88.020.2 STATION: LOHARGHAT, SHILLONG ARRAY, MEG.-ASS., INDIA
N54E
VERT
S36E
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE065 88.021.2 STATION: MAWKYRWAT, SHILLONG ARRAY, MEG.-ASS., INDIA
N20E
VERT
S70E
G
SD
PSV, FS(---) - in/sec
PSV, FS(---) - cm/sec
Period - sec


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE066 88.022.2 STATION: MAWPHLANG, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=341.km
S35W .119g
VERT .036g
N55W .107g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE067 88.023.2 STATION: MAWSYNRAM, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=358.km
S58W .085g
VERT .036g
N32W .065g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE068 88.024.2 STATION: NONGKHLAW, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=357.km
N80E .138g
VERT .082g
S10E .145g
Acceleration - g/10
Time - seconds

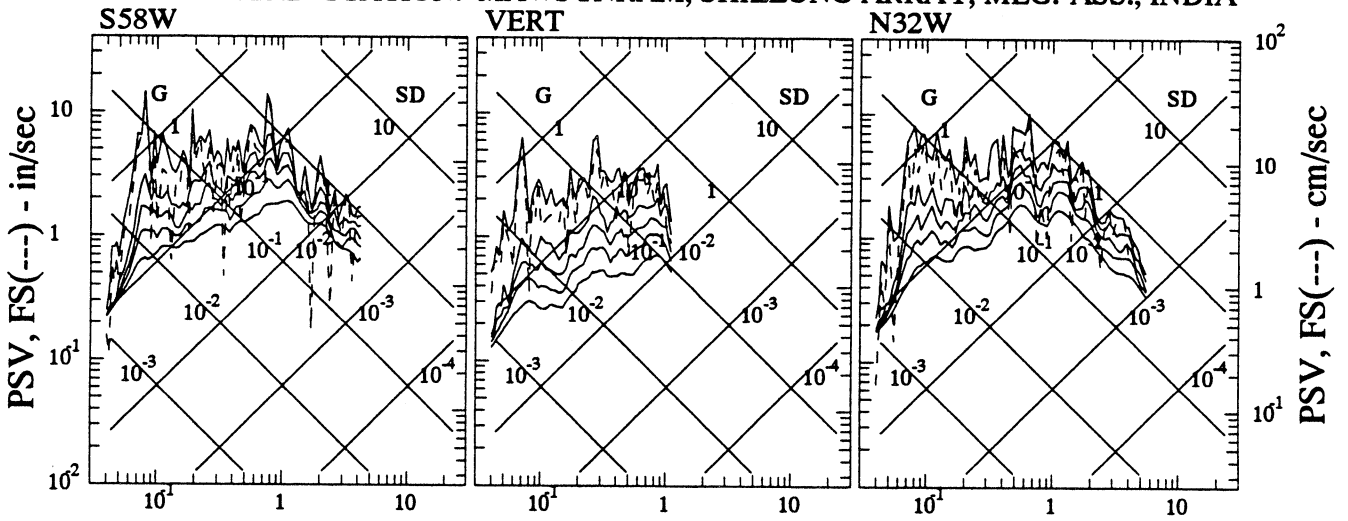
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT

IIINE066 88.022.2 STATION: MAWPHLANG, SHILLONG ARRAY, MEG.-ASS., INDIA



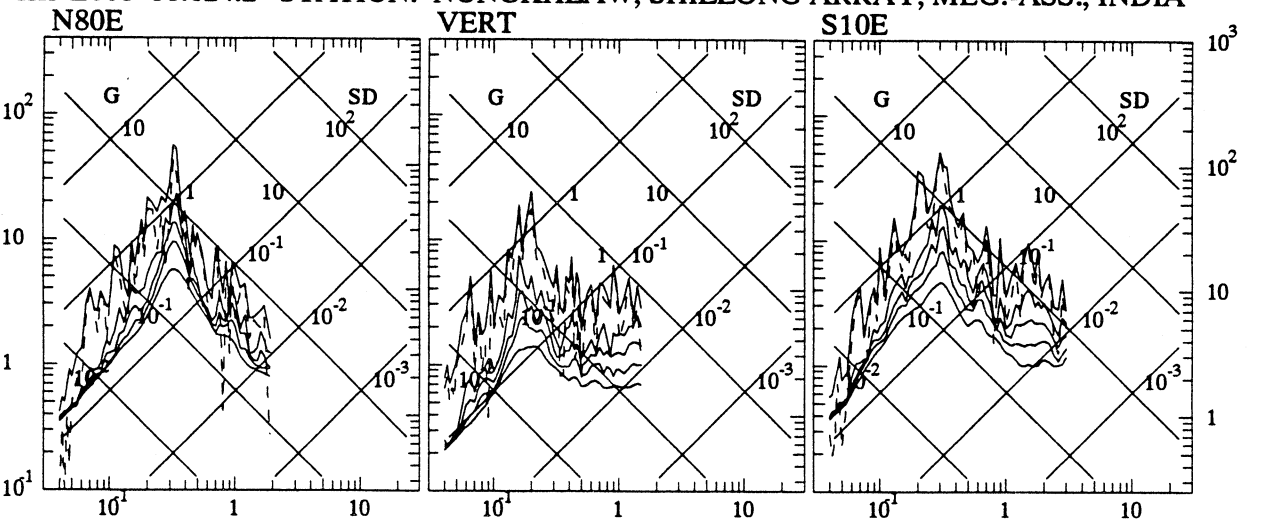
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT

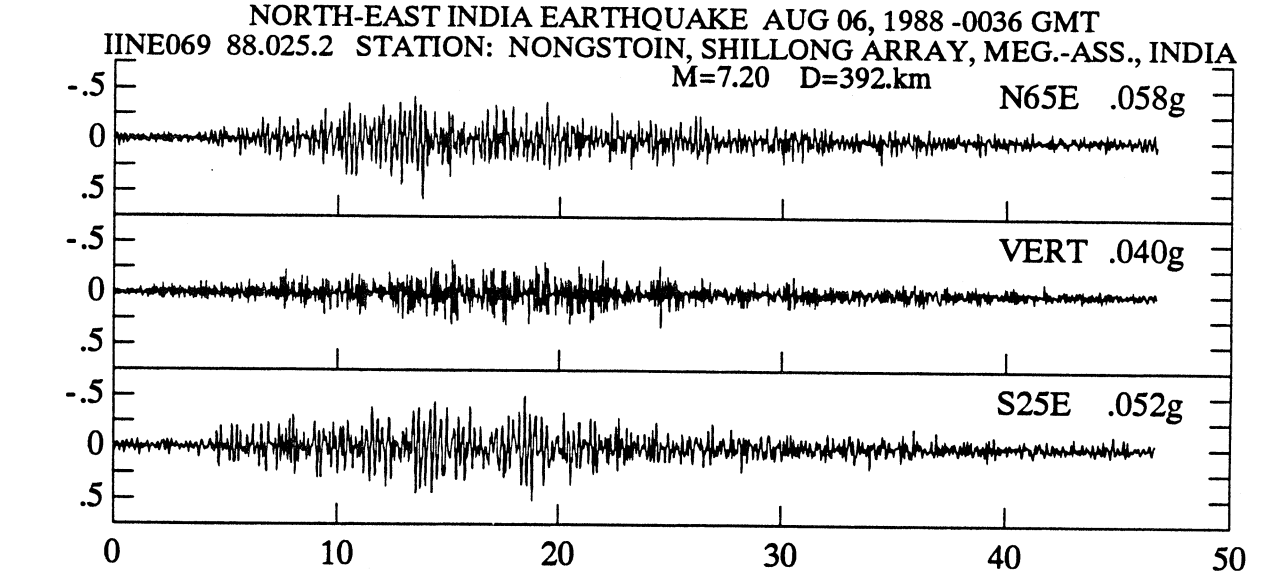
IIINE067 88.023.2 STATION: MAWSYNRAM, SHILLONG ARRAY, MEG.-ASS., INDIA

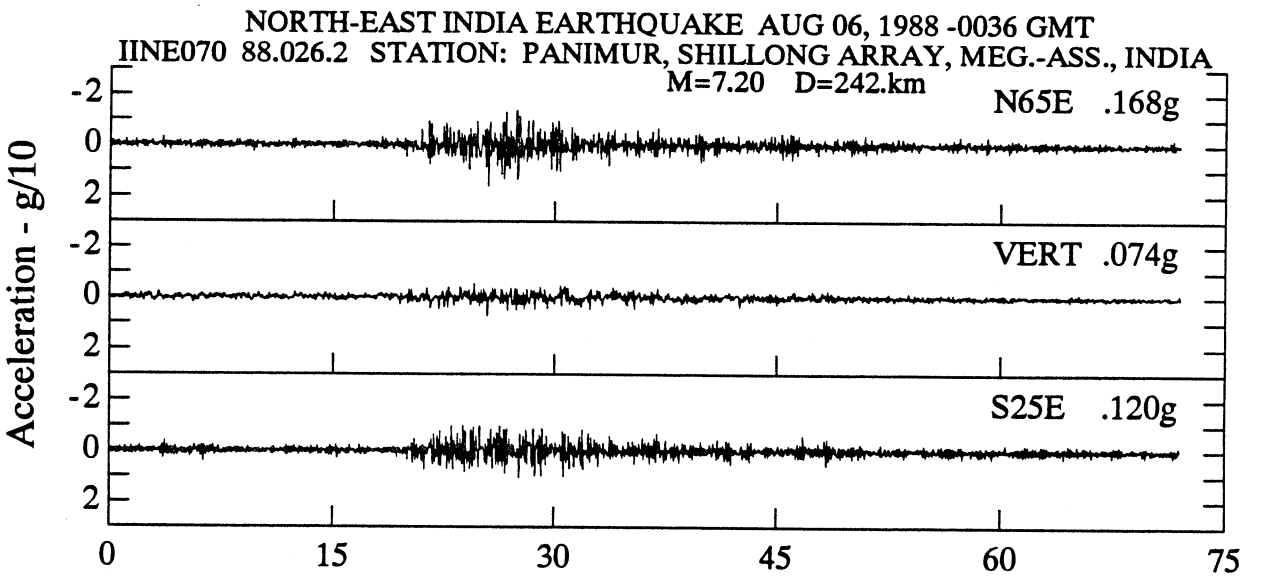


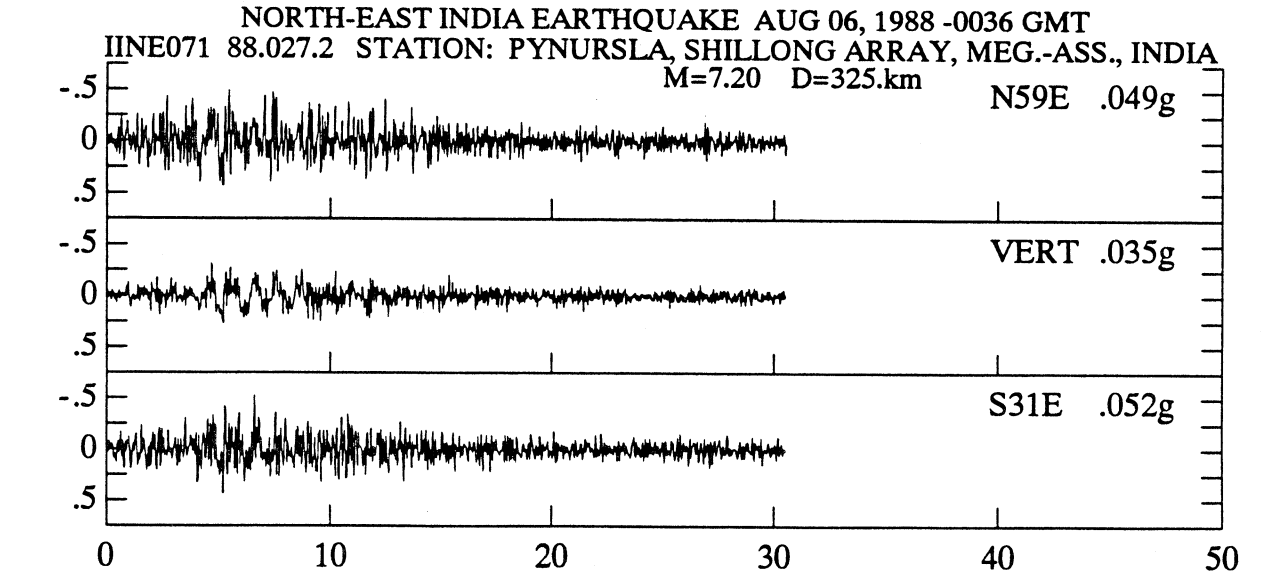
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT

IIINE068 88.024.2 STATION: NONGKHLAW, SHILLONG ARRAY, MEG.-ASS., INDIA





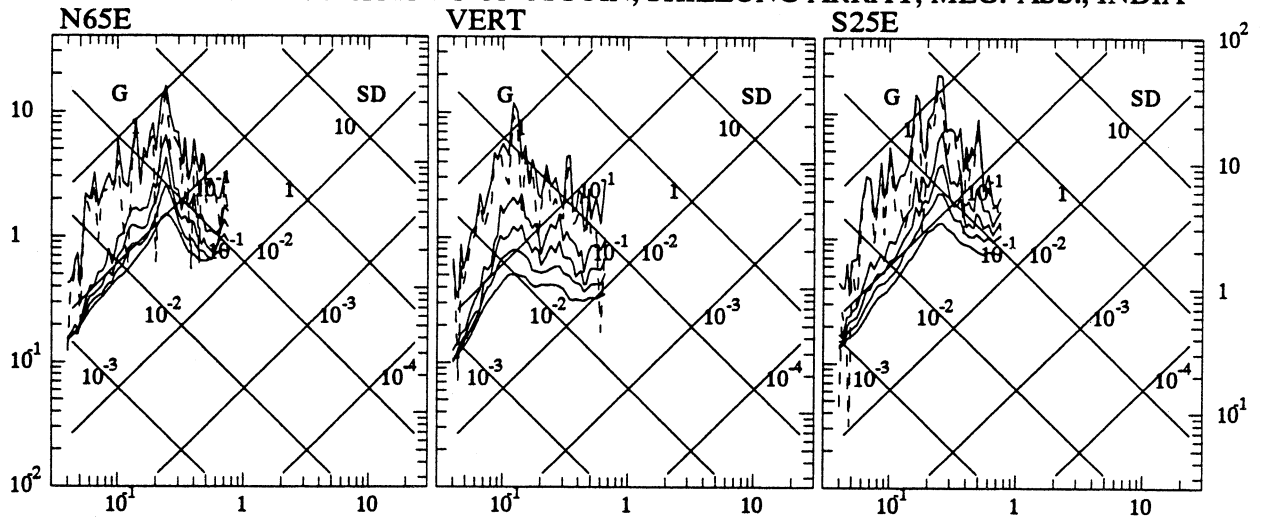




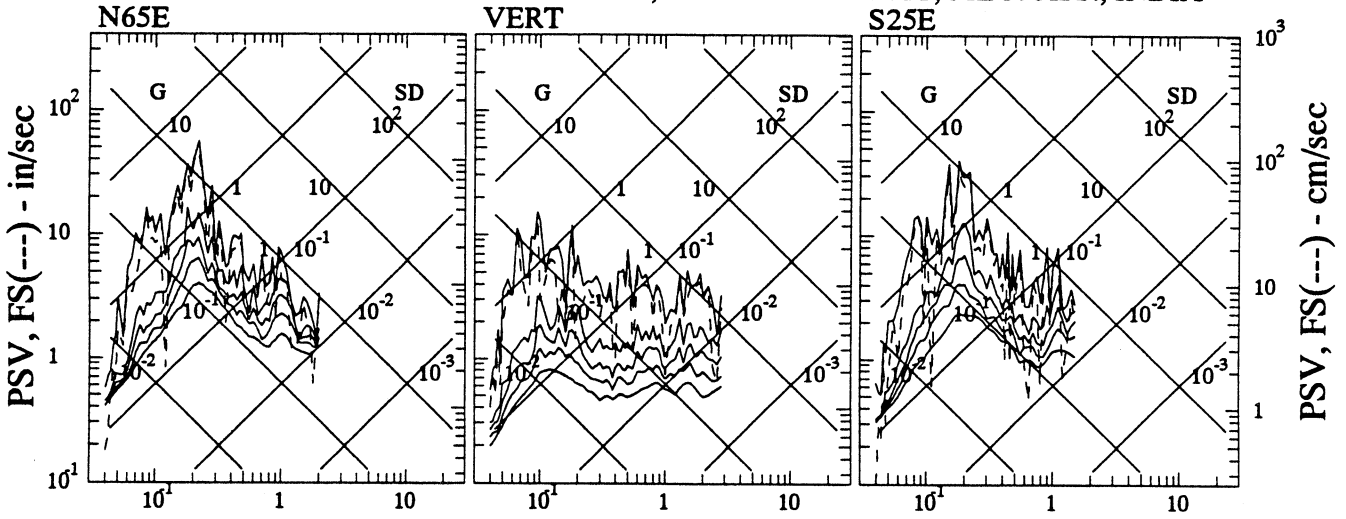
Acceleration - g/10

Time - seconds

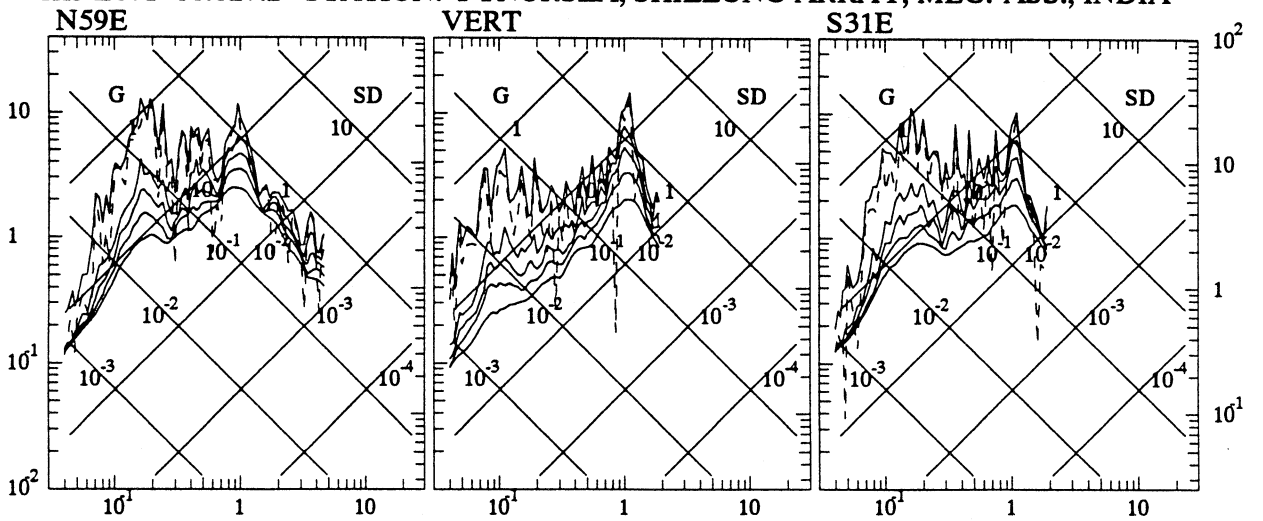
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE069 88.025.2 STATION: NONGSTOIN, SHILLONG ARRAY, MEG.-ASS., INDIA



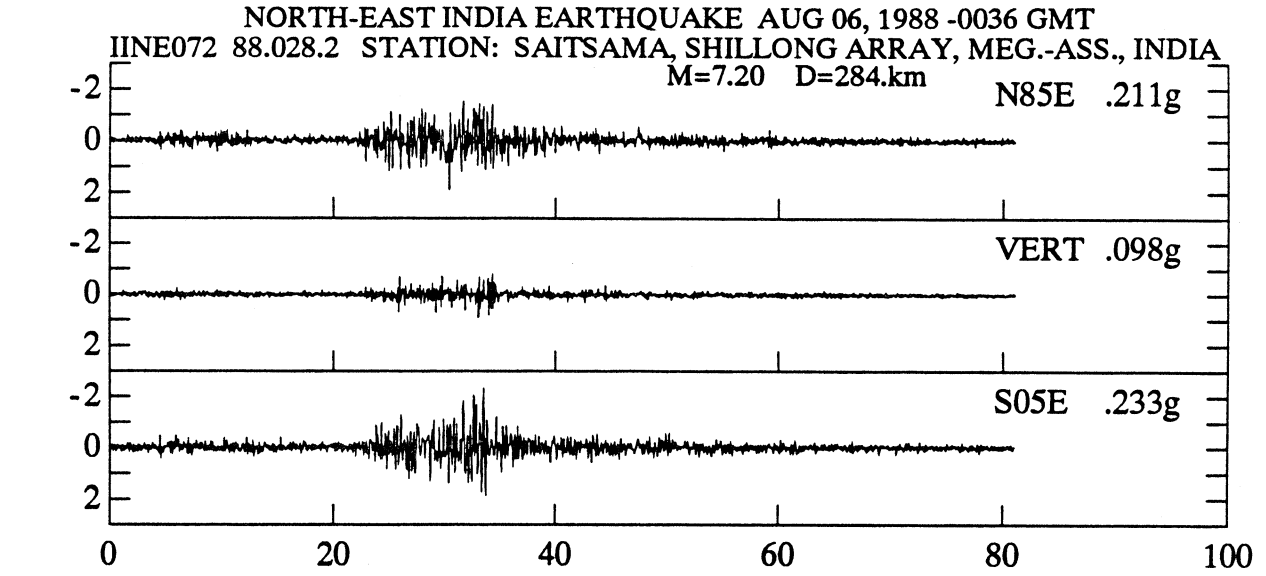
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE070 88.026.2 STATION: PANIMUR, SHILLONG ARRAY, MEG.-ASS., INDIA

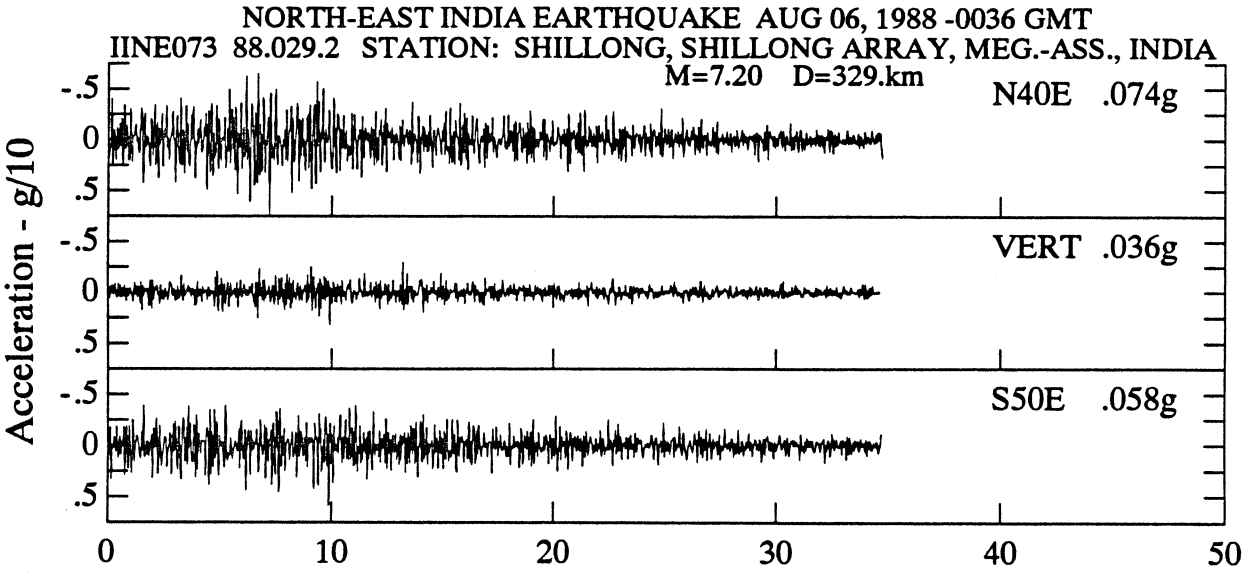


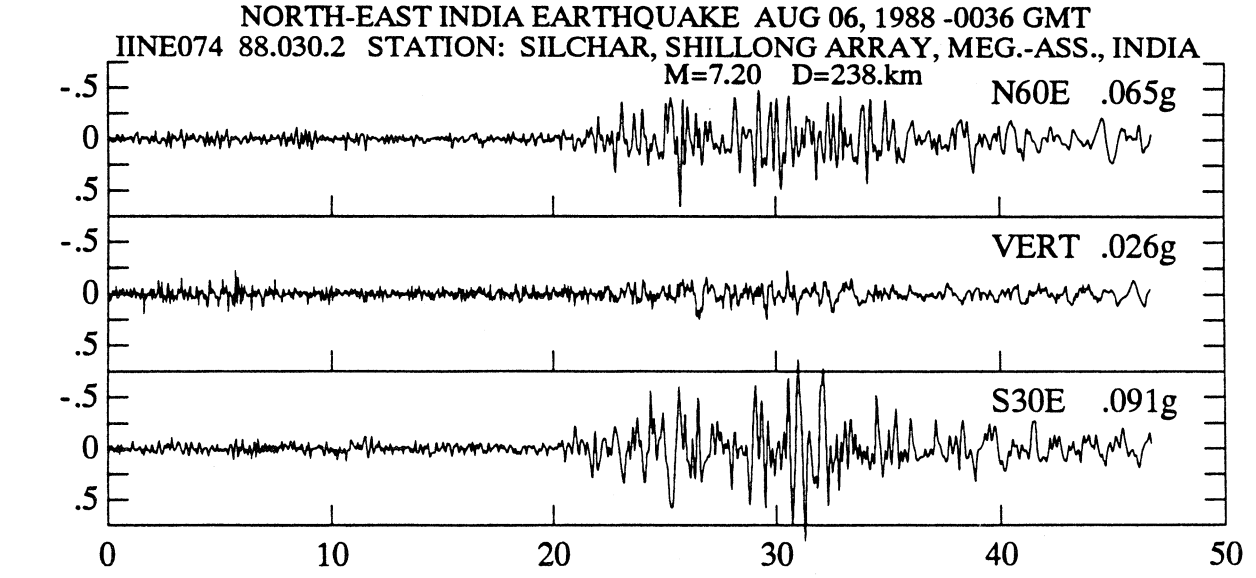
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE071 88.027.2 STATION: PYNURSLA, SHILLONG ARRAY, MEG.-ASS., INDIA



Period - sec

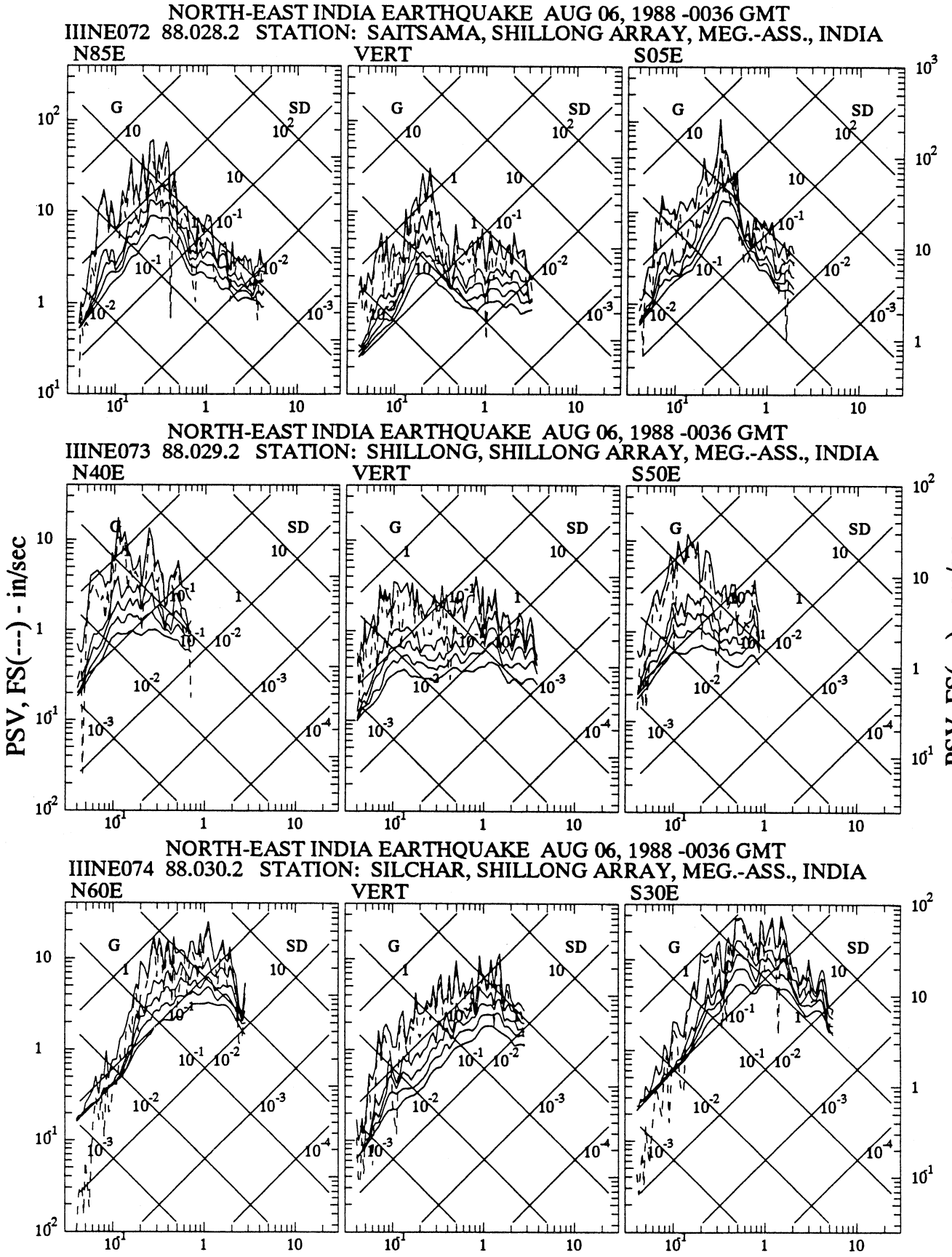


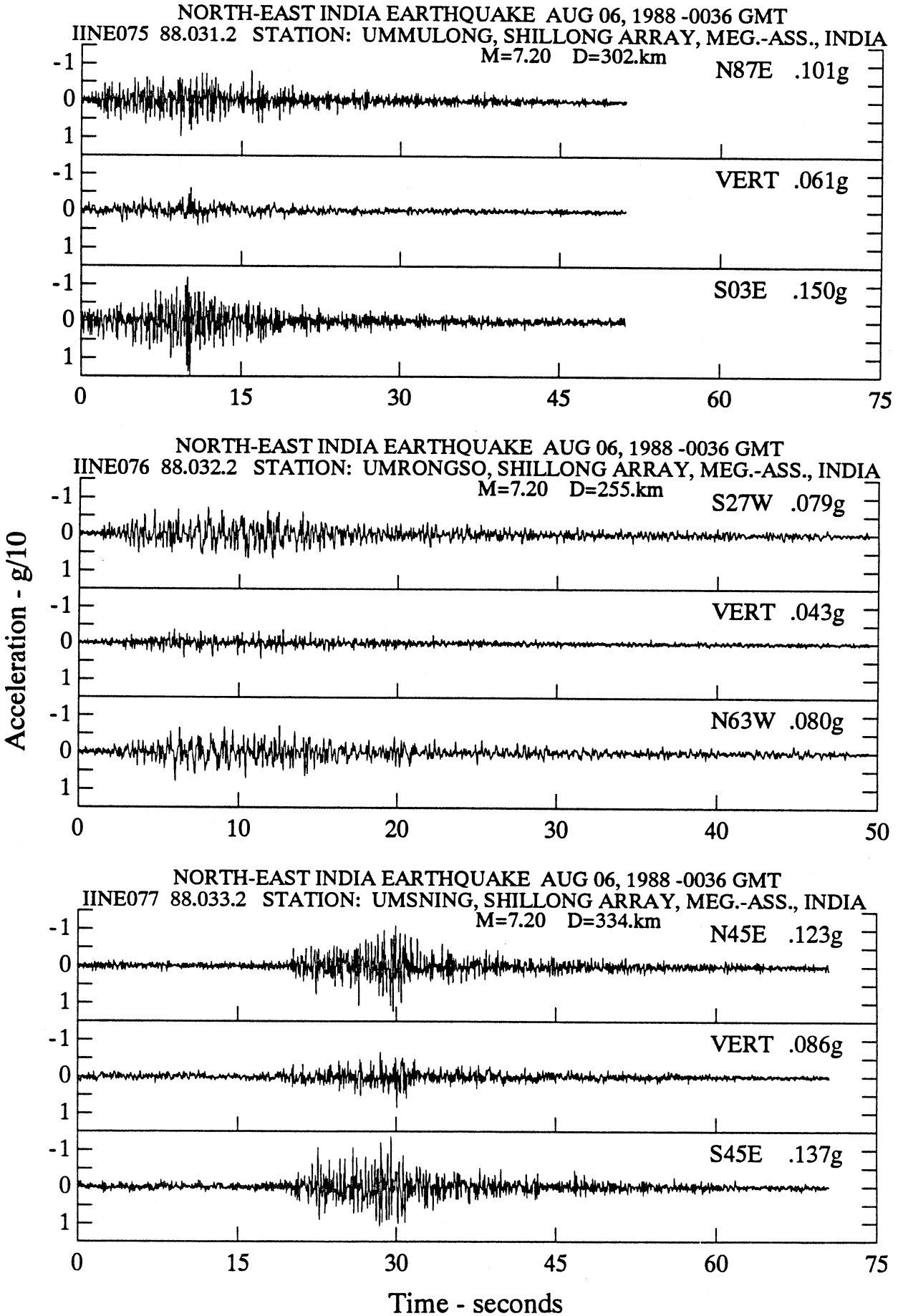




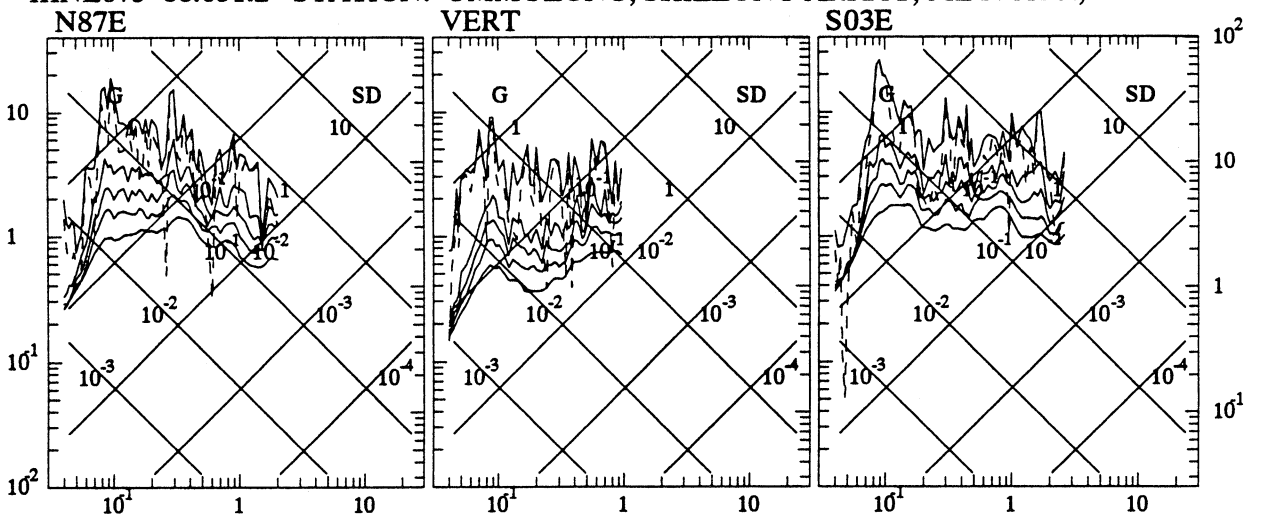
Acceleration - g/10

Time - seconds

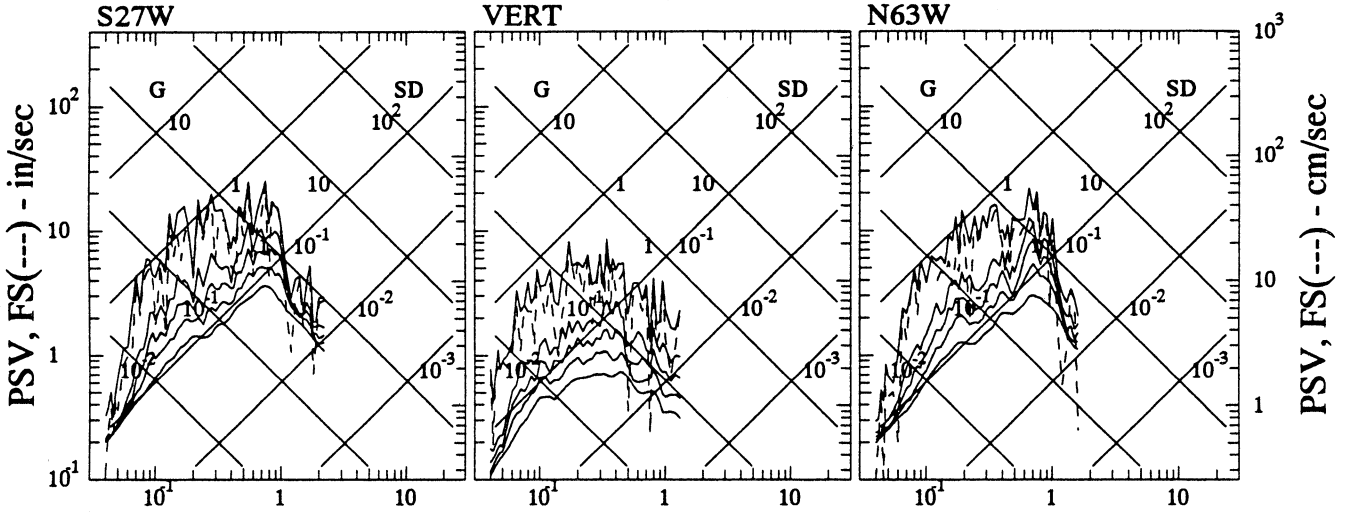

NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE072 88.028.2 STATION: SAITSAMA, SHILLONG ARRAY, MEG.-ASS., INDIA
N85E
VERT
S05E
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE073 88.029.2 STATION: SHILLONG, SHILLONG ARRAY, MEG.-ASS., INDIA
N40E
VERT
S50E
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE074 88.030.2 STATION: SILCHAR, SHILLONG ARRAY, MEG.-ASS., INDIA
N60E
VERT
S30E
G
SD
PSV, FS(---) - in/sec
PSV, FS(---) - cm/sec
Period - sec


NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE075 88.031.2 STATION: UMMULONG, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=302.km
N87E .101g
VERT .061g
S03E .150g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE076 88.032.2 STATION: UMRONGSO, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=255.km
S27W .079g
VERT .043g
N63W .080g
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IINE077 88.033.2 STATION: UMSNING, SHILLONG ARRAY, MEG.-ASS., INDIA
M=7.20 D=334.km
N45E .123g
VERT .086g
S45E .137g
Acceleration - g/10
Time - seconds

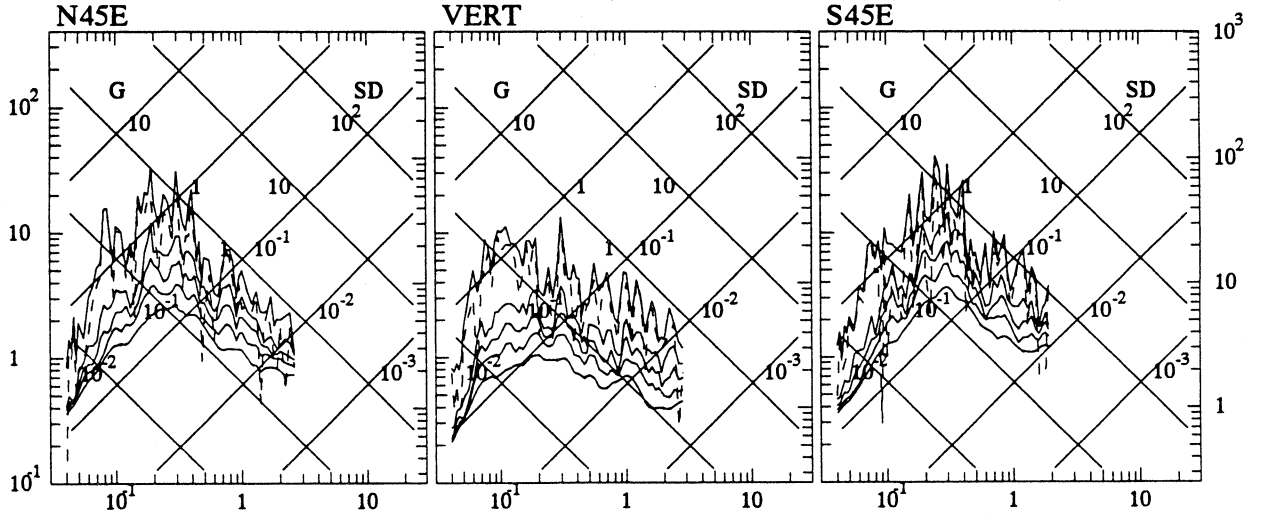
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE075 88.031.2 STATION: UMMULONG, SHILLONG ARRAY, MEG.-ASS., INDIA



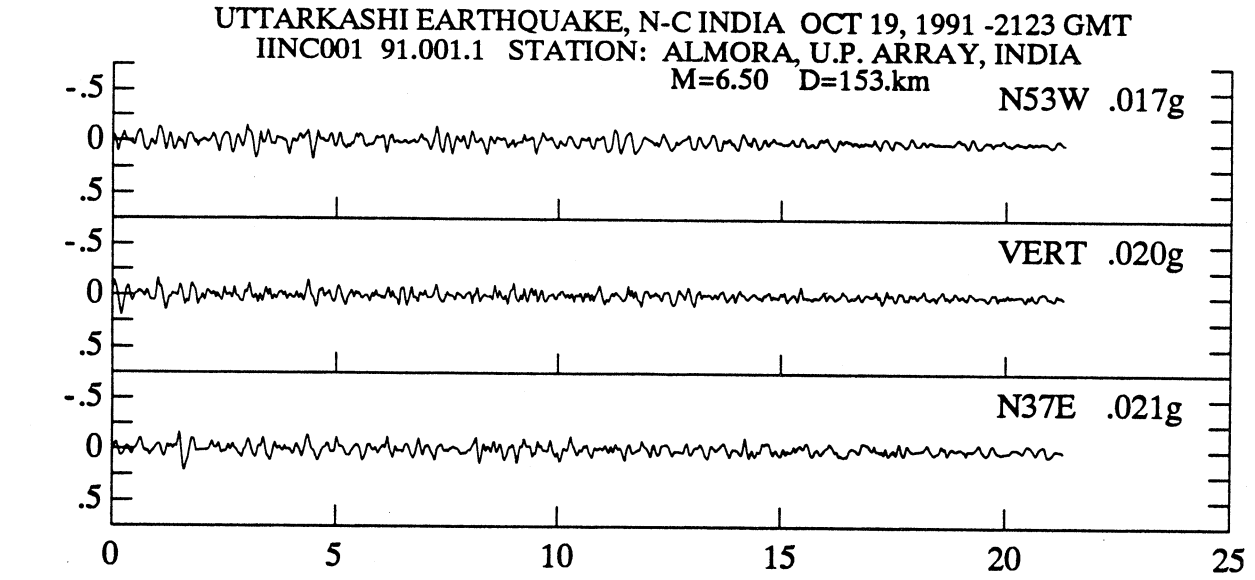
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE076 88.032.2 STATION: UMRONGSO, SHILLONG ARRAY, MEG.-ASS., INDIA

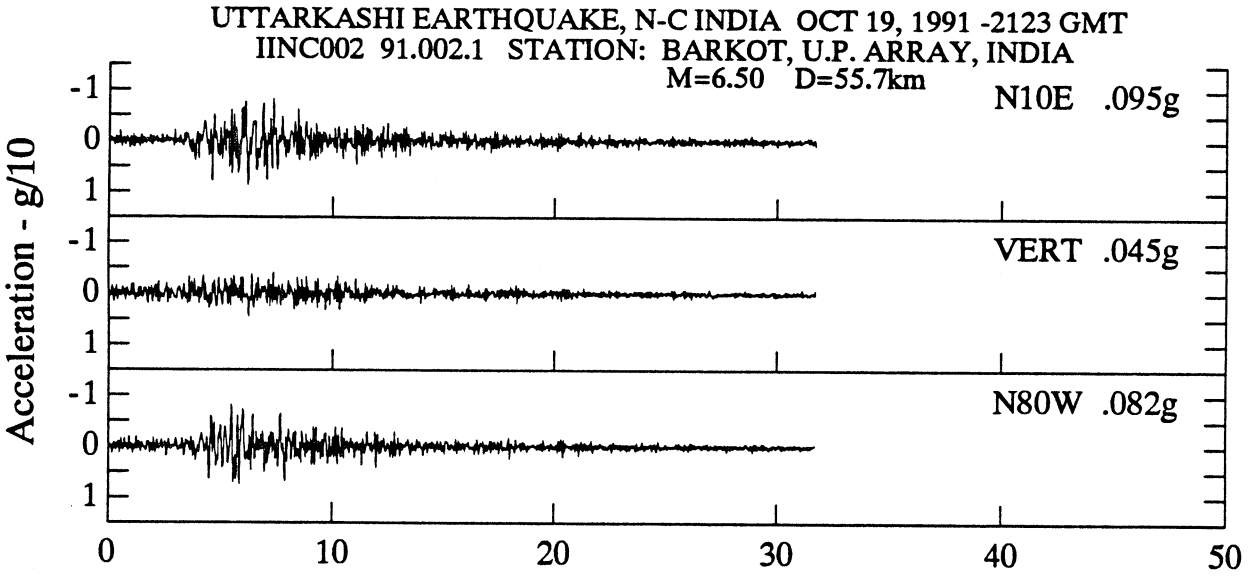


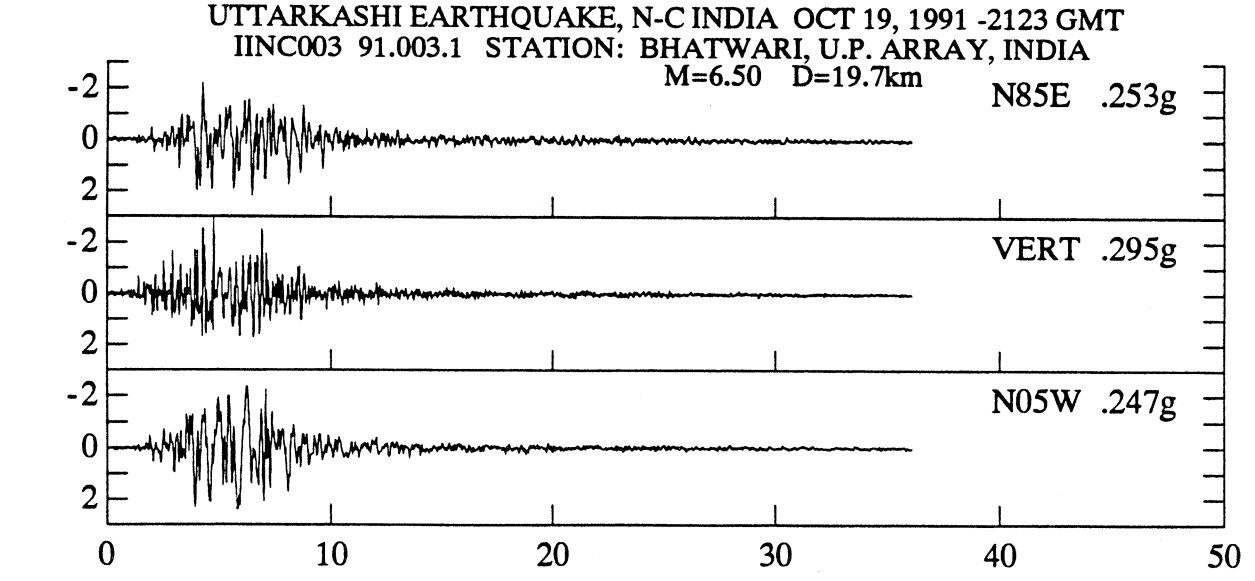
NORTH-EAST INDIA EARTHQUAKE AUG 06, 1988 -0036 GMT
IIINE077 88.033.2 STATION: UMSNING, SHILLONG ARRAY, MEG.-ASS., INDIA



Period - sec



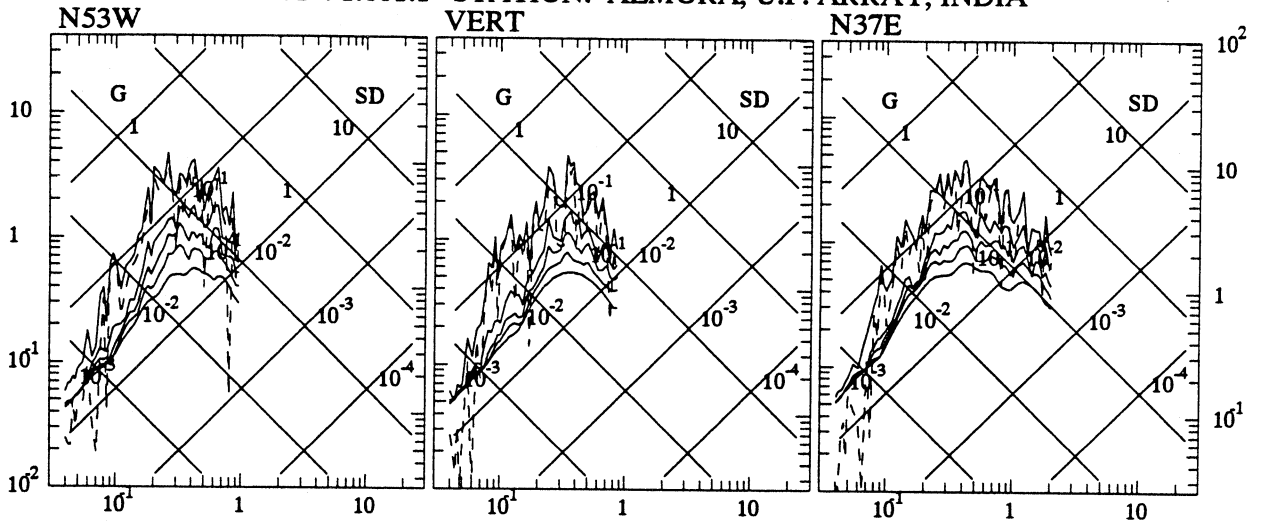




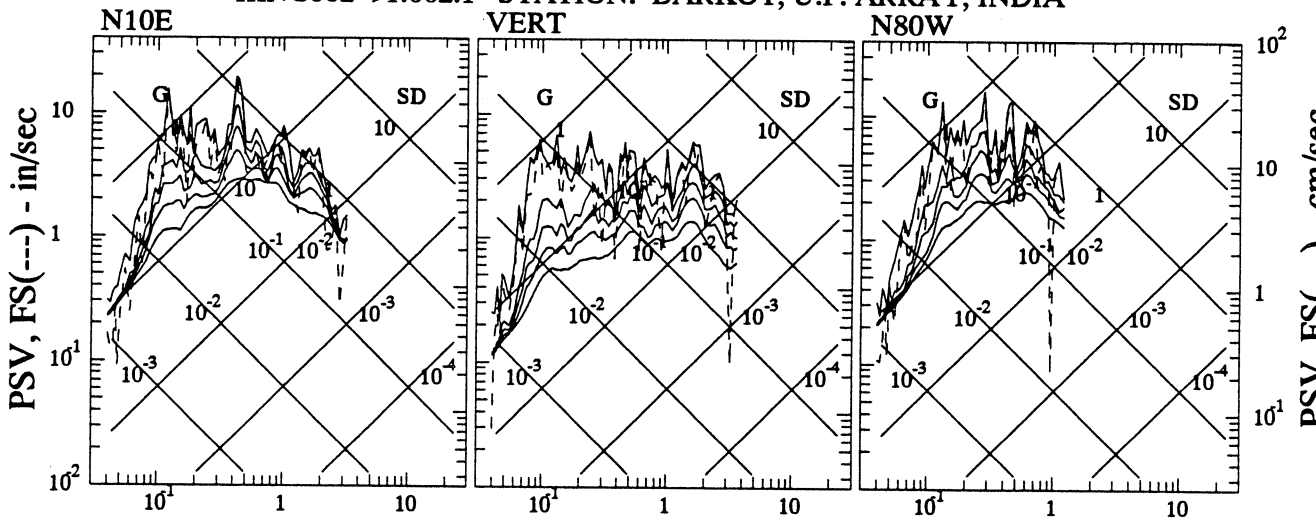
Acceleration - g/10

Time - seconds

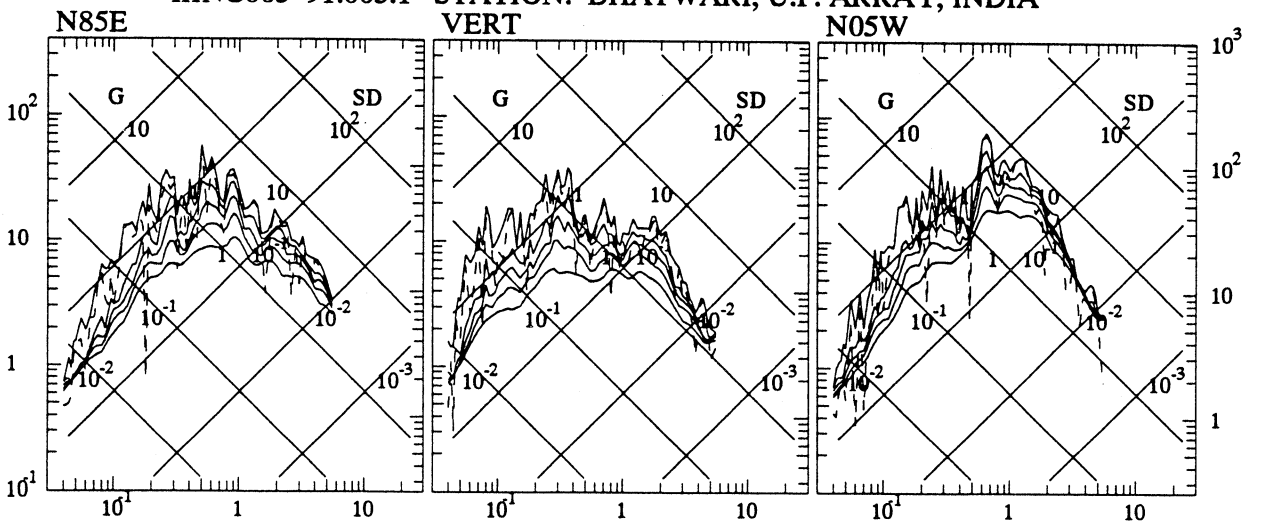
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC001 91.001.1 STATION: ALMORA, U.P. ARRAY, INDIA

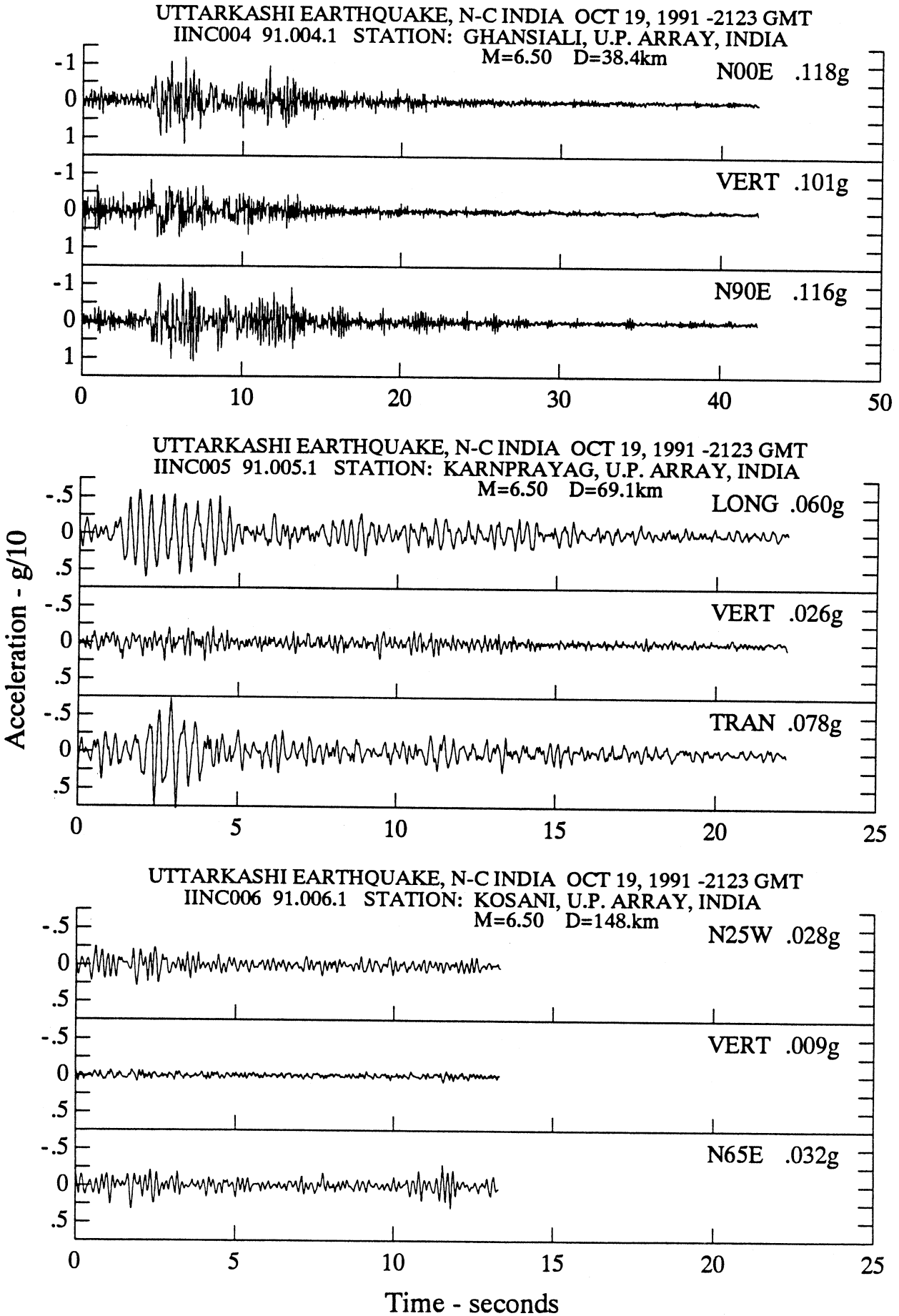


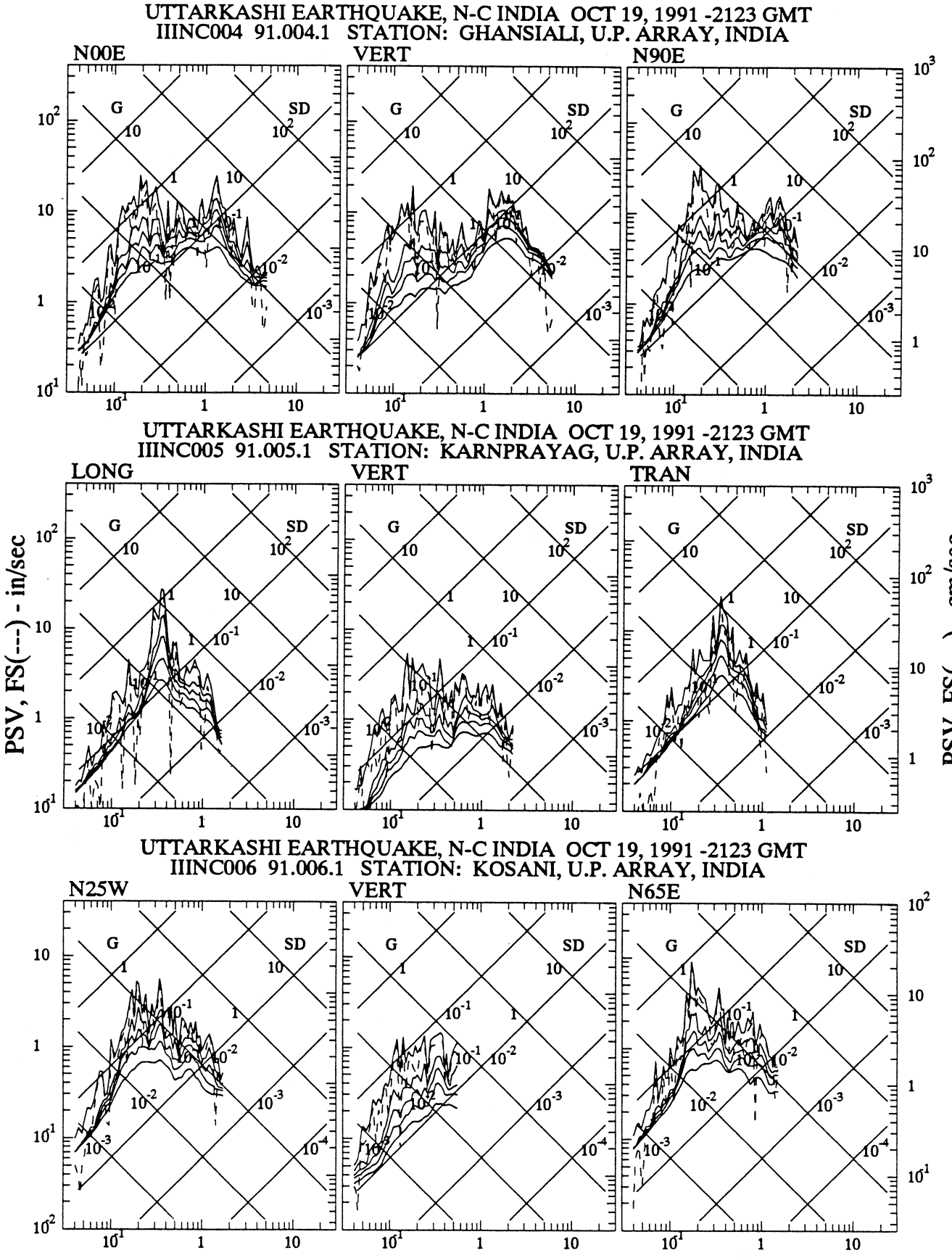
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC002 91.002.1 STATION: BARKOT, U.P. ARRAY, INDIA

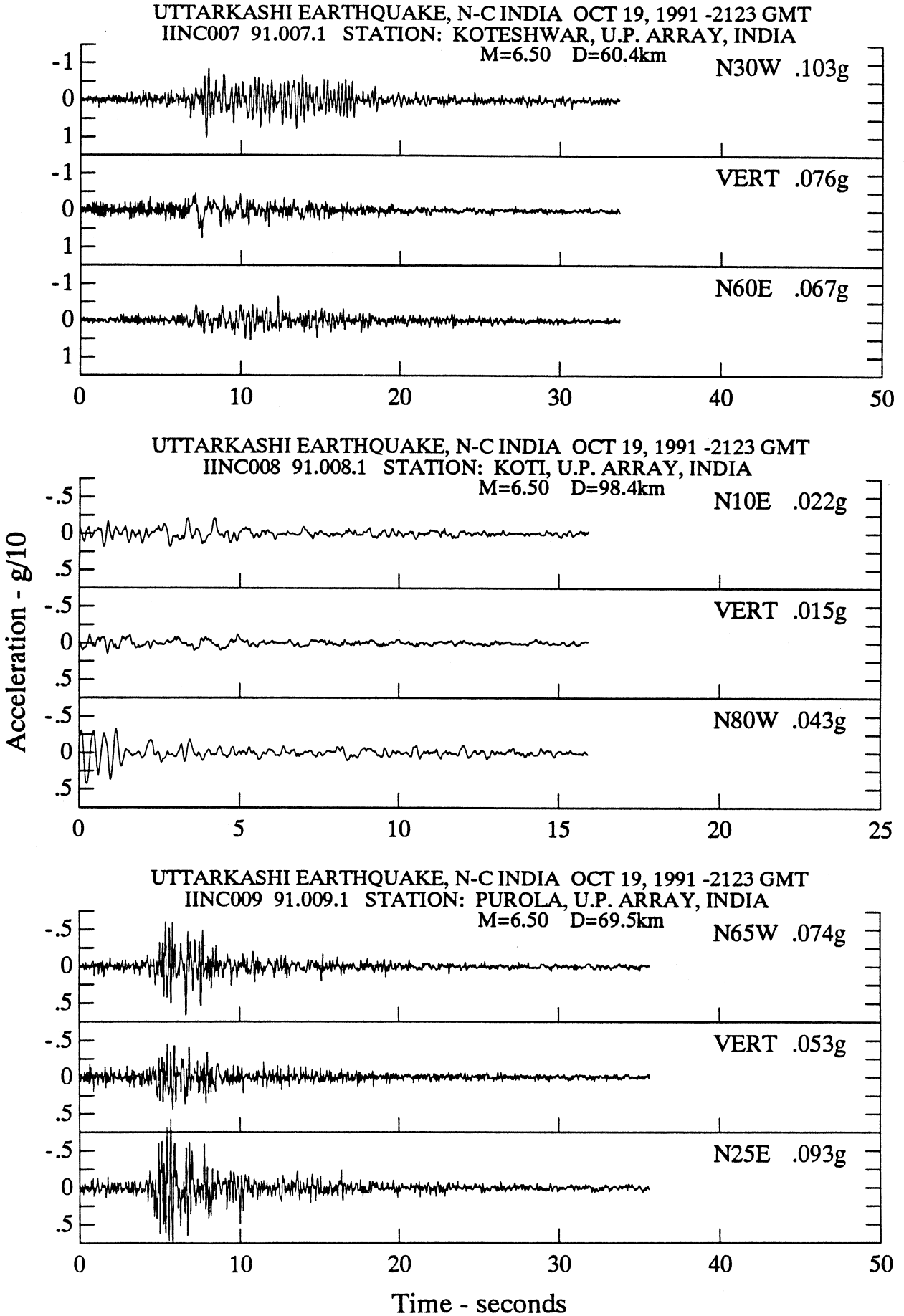


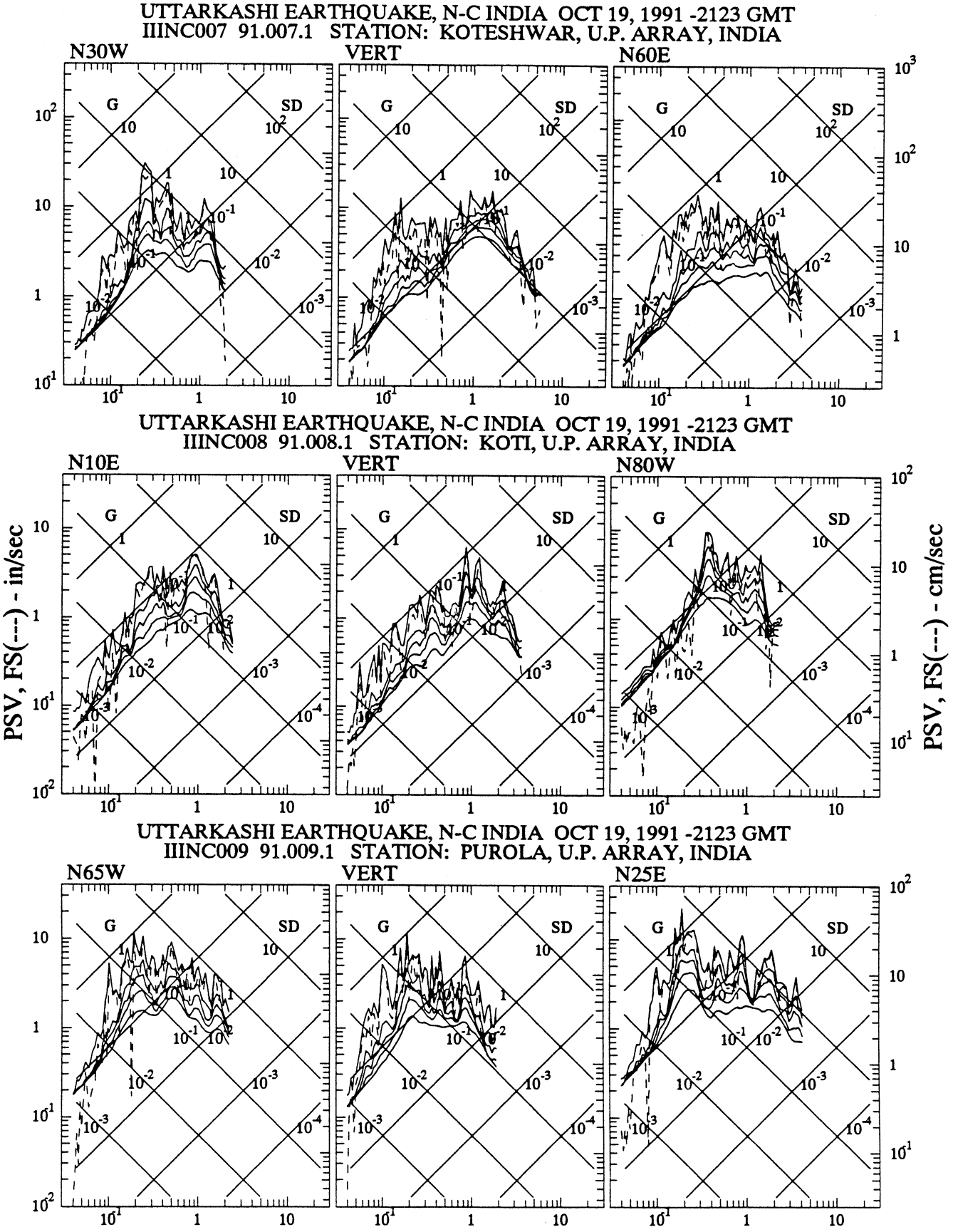
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC003 91.003.1 STATION: BHATWARI, U.P. ARRAY, INDIA

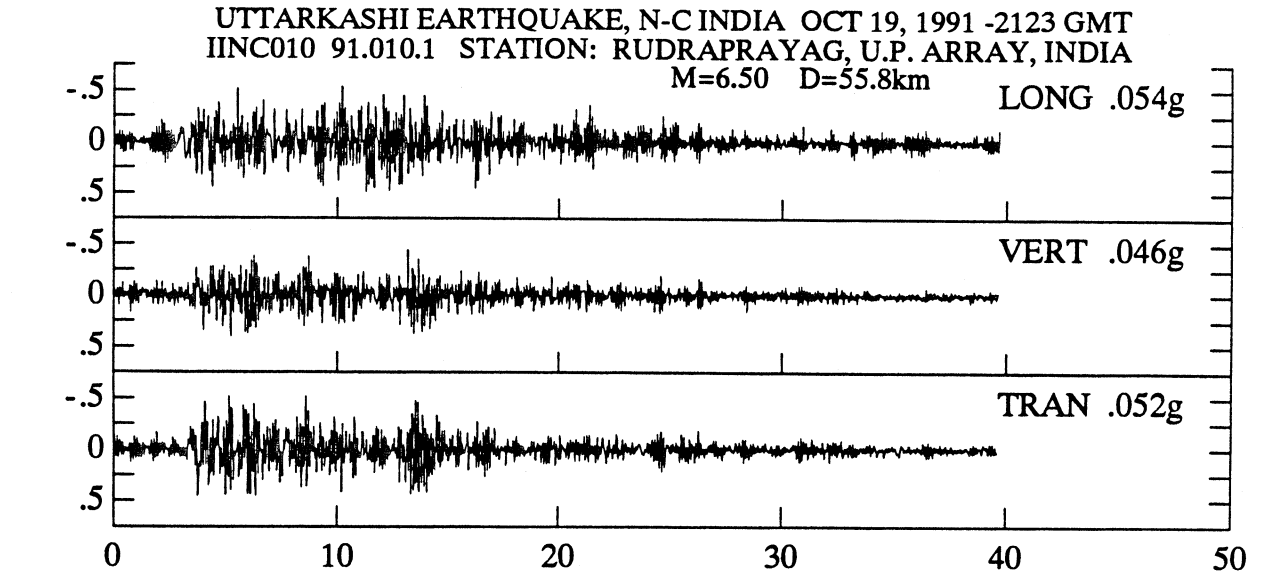


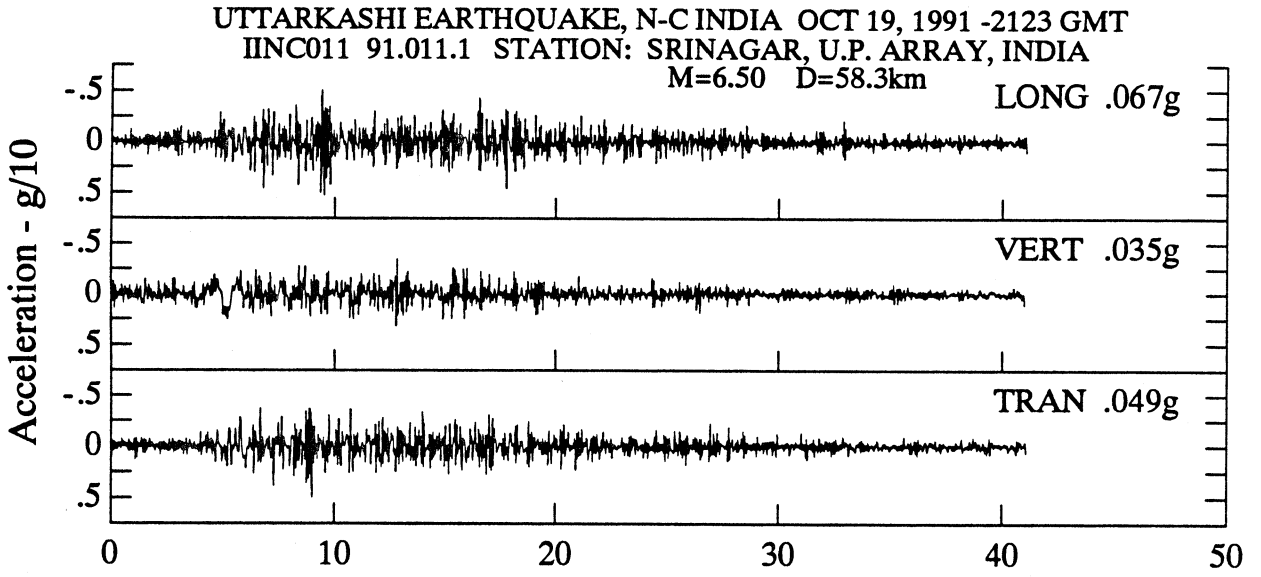

UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IINC004 91.004.1 STATION: GHANSIALI, U.P. ARRAY, INDIA
M=6.50 D=38.4km
N00E .118g
VERT .101g
N90E .116g
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IINC005 91.005.1 STATION: KARNPRAYAG, U.P. ARRAY, INDIA
M=6.50 D=69.1km
LONG .060g
VERT .026g
TRAN .078g
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IINC006 91.006.1 STATION: KOSANI, U.P. ARRAY, INDIA
M=6.50 D=148.km
N25W .028g
VERT .009g
N65E .032g
Acceleration - g/10
Time - seconds

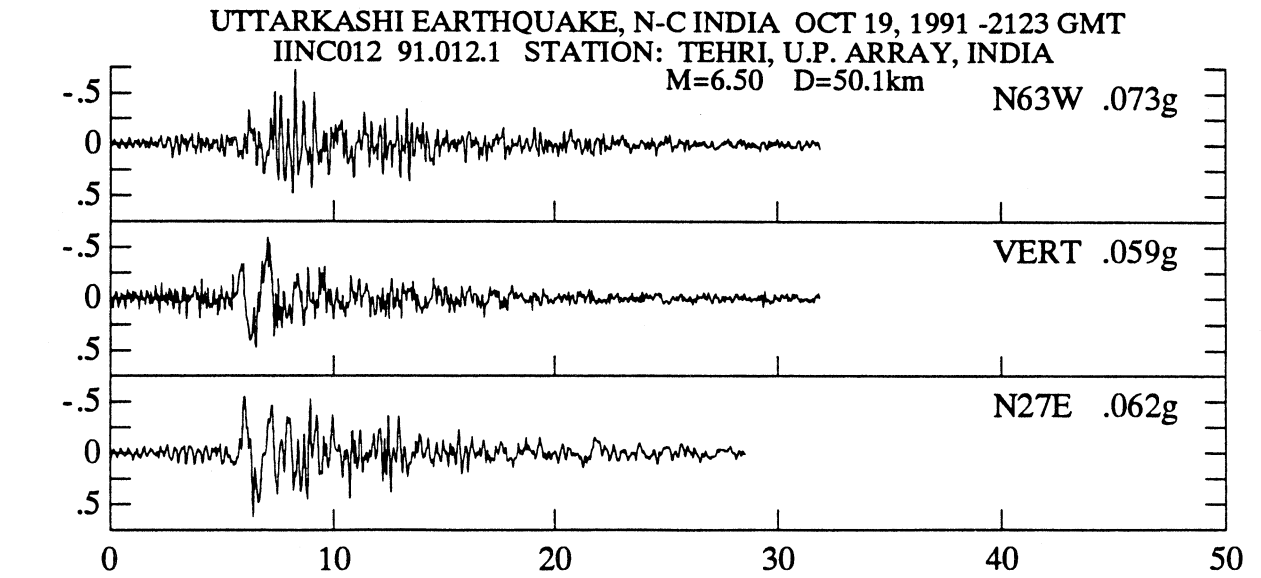

UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC004 91.004.1 STATION: GHANSIALI, U.P. ARRAY, INDIA
N00E
VERT
N90E
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC005 91.005.1 STATION: KARNPRAYAG, U.P. ARRAY, INDIA
LONG
VERT
TRAN
PSV, FS(---) - in/sec
PSV, FS(---) - cm/sec
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC006 91.006.1 STATION: KOSANI, U.P. ARRAY, INDIA
N25W
VERT
N65E
G
SD
Period - sec


UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IINC007 91.007.1 STATION: KOTESHWAR, U.P. ARRAY, INDIA
M=6.50 D=60.4km
N30W .103g
VERT .076g
N60E .067g
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IINC008 91.008.1 STATION: KOTI, U.P. ARRAY, INDIA
M=6.50 D=98.4km
N10E .022g
VERT .015g
N80W .043g
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IINC009 91.009.1 STATION: PUROLA, U.P. ARRAY, INDIA
M=6.50 D=69.5km
N65W .074g
VERT .053g
N25E .093g
Acceleration - g/10
Time - seconds


UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC007 91.007.1 STATION: KOTESHWAR, U.P. ARRAY, INDIA
N30W
VERT
N60E
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC008 91.008.1 STATION: KOTI, U.P. ARRAY, INDIA
N10E
VERT
N80W
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC009 91.009.1 STATION: PUROLA, U.P. ARRAY, INDIA
N65W
VERT
N25E
G
SD
PSV, FS(---) - in/sec
PSV, FS(---) - cm/sec
Period - sec



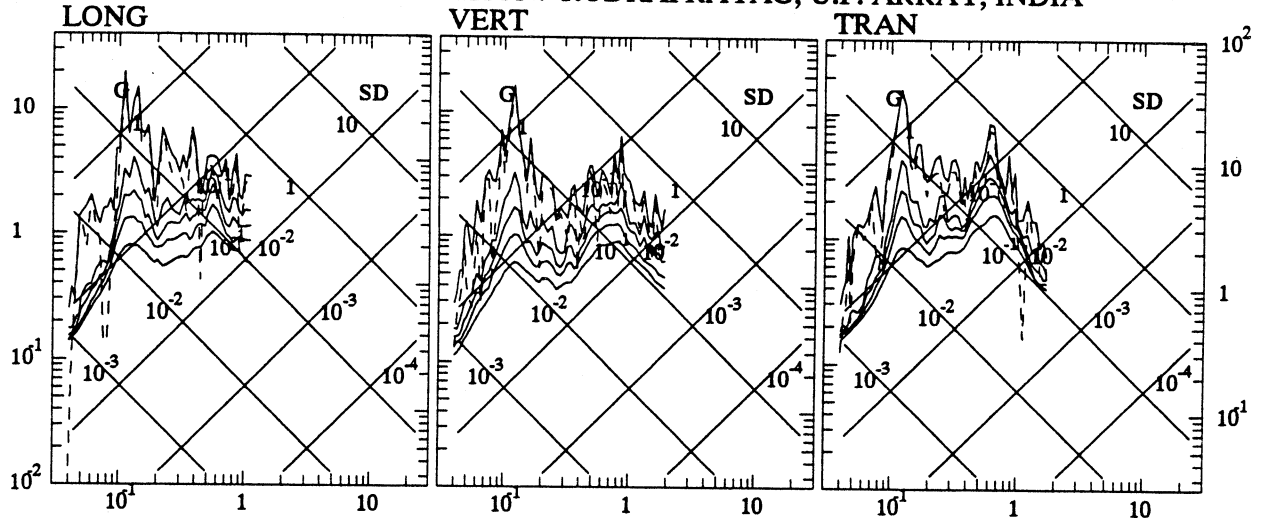




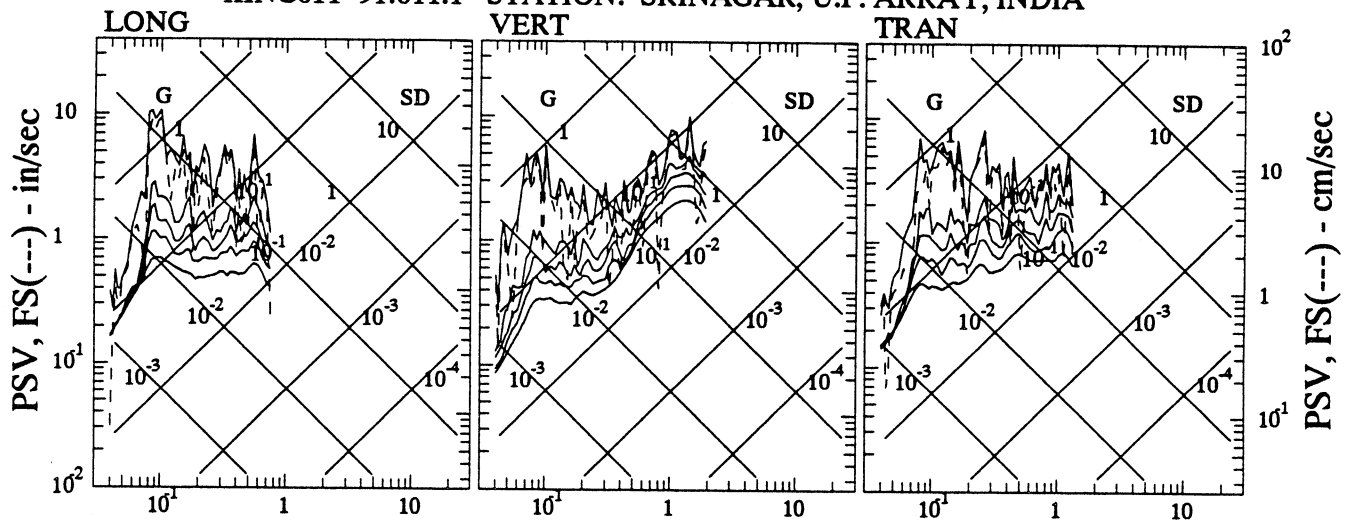
Acceleration - g/10

Time - seconds

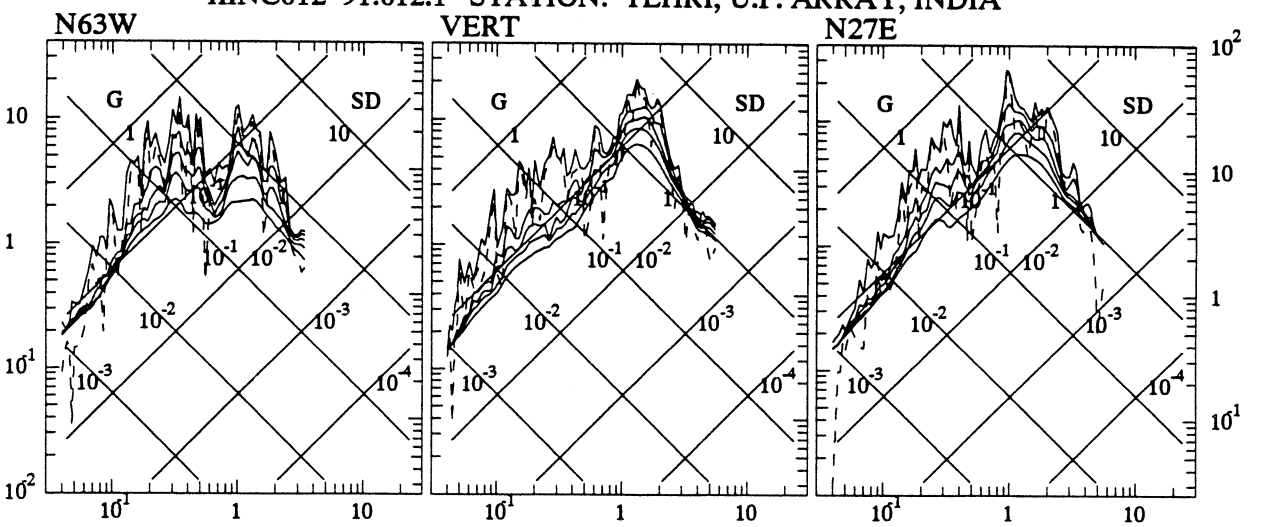
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC010 91.010.1 STATION: RUDRAPRAYAG, U.P. ARRAY, INDIA

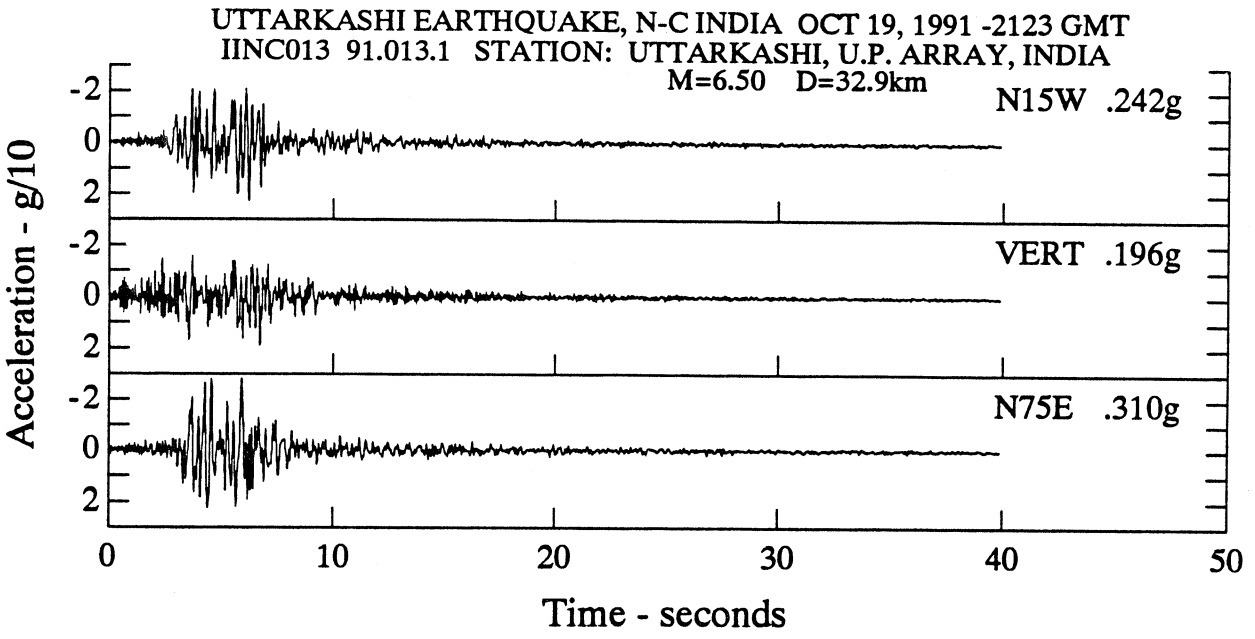


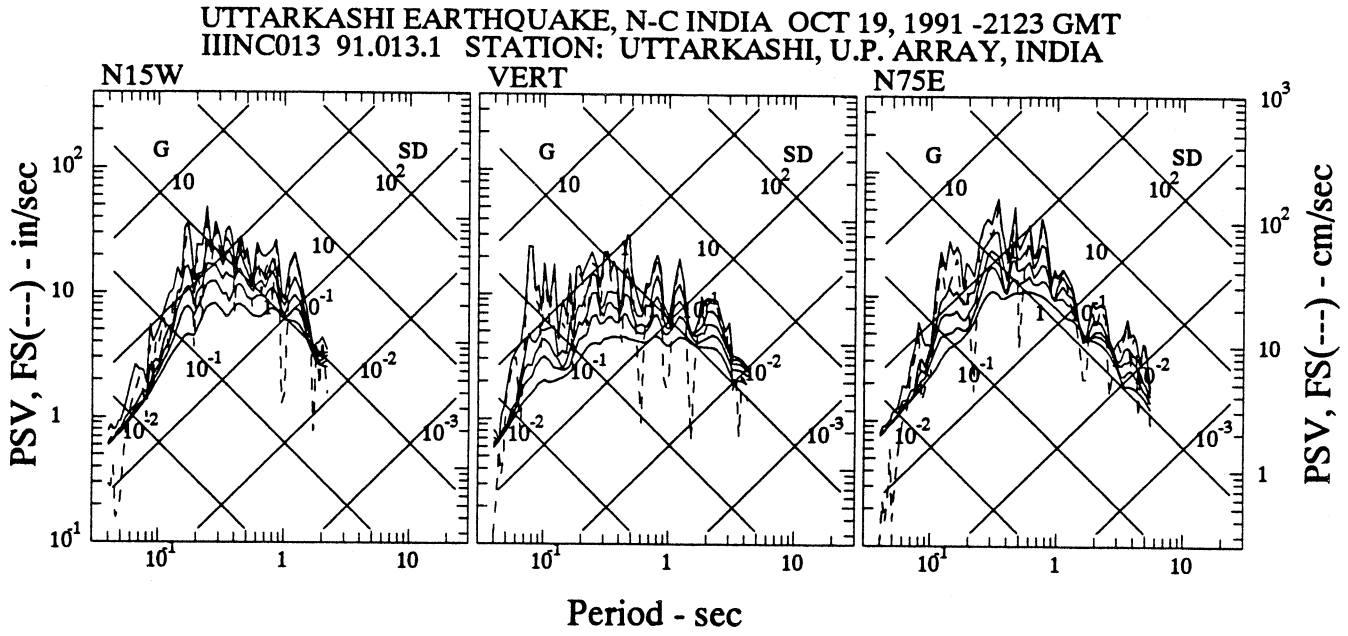
UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC011 91.011.1 STATION: SRINAGAR, U.P. ARRAY, INDIA



UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC012 91.012.1 STATION: TEHRI, U.P. ARRAY, INDIA




UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IINC013 91.013.1 STATION: UTTARKASHI, U.P. ARRAY, INDIA
M=6.50 D=32.9km
N15W .242g
VERT .196g
N75E .310g
Acceleration - g/10
-2
0
2
0
10
20
30
40
50
Time - seconds


UTTARKASHI EARTHQUAKE, N-C INDIA OCT 19, 1991 -2123 GMT
IIINC013 91.013.1 STATION: UTTARKASHI, U.P. ARRAY, INDIA
N15W
VERT
N75E
G
SD
PSV, FS(---) - in/sec
PSV, FS(---) - cm/sec
Period - sec