

Prompt report on 2021/02/13 23:07 Off Fukushima Pref. Earthquake

Event

Table 1 Event¹

Origin time	Epicenter	Latitude	Longitude	Magnitude	Depth
2021/02/13 23:07	Off Fukushima Pref.	37°43.7'N	141°41.9'E	$M_J7.3$	55 km

Strong motion data

Table 2.1 List of strong motion records (1/3)

Code	Station	Δ (km)	I_{JMA}	Azim.	Loc.	Max. acc. (cm/s ²)			Notes
						H1	H2	V	
SND	Sendai Government Office Bldg. #2	94	4.7	074°	B2F*	116.9	173.1	96.3	Fig. 2.1
					15F	265.0	145.6	238.8	Fig. 2.2
TRO	Tsuruoka Government Office Bldg.	200	3.4	182°	01F*	17.8	16.8	8.9	
					04F	18.4	22.1	9.1	
MYK C	Miyako City Hall	214	4.0	165°	GL*	64.4	81.6	30.5	
					01F	42.4	46.4	26.6	Fig. 3.1
					06F	97.8	83.5	48.2	Fig. 3.2
HRT	High Rise 2x4 Experimental House	229	4.2	000°	01F*	80.5	87.9	39.4	Fig. 4.1
					06F	253.8	235.4	100.5	Fig. 4.2
ANX	Annex and Main Bldg., Building Research Institute	229	4.0	180°	A01*	54.4	64.5	48.7	
					A89	38.6	33.2	19.5	
					BFE	44.6	38.1	30.9	
					8FE	106.7	124.0	68.8	
					MBC	47.3	40.2	30.8	
M8C	130.6	107.5	62.6						
JAXA	Headquarters Building, JAXA Tsukuba Space Center	231	3.8	335°	B1F*	46.3	53.6	35.5	
					01F	43.9	49.7	47.3	
					11F	75.4	85.6	65.2	
NIG	Annex, Niigata City Hall	235	3.7	061°	B1F*	22.4	22.5	10.2	
					06F	37.1	41.2	11.3	
NIT	Nippon Institute of Technology	259	4.1	288°	GL*	69.9	65.6	20.3	
					01F	32.6	38.1	13.1	
					06F	81.3	113.0	35.8	
AKT	Akita Prefectural Office	261	3.3	087°	B1F*	15.9	14.9	9.0	
					08F	60.4	60.4	10.5	
KSG	Koshigaya Branch, Saitama Legal Affairs Bureau	264	3.7	150°	1F*	34.4	26.8	11.0	
YCY	Yachiyo City Hall	265	4.1	302°	GL*	73.1	94.7	39.9	
					B1F	30.8	24.7	13.7	
					07F	95.2	72.1	23.7	
MST	Misato City Hall	266	3.5	258°	GL*	33.3	9.7	23.8	
					01F	20.3	25.5	10.3	
					07F	54.9	34.6	17.4	

¹ Japan Meteorological Agency

Table 2.2 List of strong motion records (2/3)

Code	Station	Δ (km)	I_{JMA}	Azim.	Loc.	Max. acc. (cm/s ²)			Notes
						H1	H2	V	
CHB	Chiba Government Office Bldg. #2	275	2.9	346°	GL*	16.3	2.0	0.1	
					B1F	23.3	30.7	14.2	
					08F	75.4	83.8	23.0	
CHPM	Chiba Government Office Bldg. #2	275	2.9	346°	B1F*	14.8	13.9	8.0	
					08F	34.1	29.1	15.5	
					19F	37.3	42.6	29.2	
SIT2	Saitama Shintoshin Government Office Building #2	275	3.3	340°	B3F*	15.6	18.6	9.4	
					10FS	26.3	48.9	16.0	
					10FN	30.3	45.3	13.6	
					27FS	58.3	161.3	47.2	
					27FC	55.3	110.4	22.4	
SITA	Saitama Shintoshin Government Office Building (Arena)	275	3.4	313°	01F*	22.3	21.6	14.6	
ICK	Gyotoku Library, Ichikawa City	277	3.7	321°	01F*	33.8	37.2	18.9	
					02F	45.8	43.3	19.9	
					05F	66.3	65.7	21.9	
AKB	Akabane Hall, Kita Ward	279	3.3	354°	B1F*	23.1	26.5	11.0	
					06F	41.8	66.3	18.3	
SMD	Sumida Ward Office	281	2.9	000°	B1F*	14.3	15.3	8.0	
					08F	50.5	45.7	11.9	
					20F	69.0	62.1	24.0	
NMW	Main Building, National Museum of Western Art	282	3.6	218°	GL*	63.8	50.6	31.8	
					B1FW	22.1	18.0	14.4	
					B1FE	26.4	-	22.1	
					01FW	22.8	25.7	15.4	
					01FE	22.0	21.5	24.1	
					04F	36.8	24.0	19.4	
UTK	University of Tokyo	283	3.5	348°	GL*	45.8	45.4	19.9	
					01F	18.0	28.8	10.8	
					7FN	47.6	55.8	11.7	
					7FS	49.2	92.0	32.5	
MNM	Minamisuna Apartment #3	283	3.6	180°	01F*	28.0	25.8	10.3	
					15F	127.1	99.1	19.1	
TKD	Kosha Tower Tsukuda	286	3.2	180°	01F*	23.4	22.8	13.9	
					18F	39.8	37.3	20.2	
					37F	57.8	31.5	32.8	
SNN	Shinonome National Public Officers Apartment House	287	3.8	039°	GL*	40.3	41.6	27.9	
					01F	25.3	22.2	10.9	
					M4F	30.5	28.4	12.0	
					04F	32.0	37.7	12.2	
					36F	36.5	51.5	25.2	
CG2	Central Government Office Bldg. #2	287	2.9	208°	B4F*	17.6	16.0	9.4	
					13F	24.1	38.4	18.1	
					21F	27.1	35.5	28.2	
CG3	Central Government Office Bldg. #3	287	3.2	208°	B3F*	26.1	27.7	10.5	
					B2F	15.4	15.1	14.2	
					12F	28.6	30.9	22.8	
NKN	Nakano Branch, Tokyo Legal Affairs Bureau	289	3.6	359°	01F*	33.5	31.7	10.2	
					06F	52.5	70.3	15.0	

Table 2.3 List of strong motion records (3/3)

Code	Station	Δ (km)	I_{JMA}	Azim.	Loc.	Max. acc. (cm/s ²)			Notes
						H1	H2	V	
YYG	Building C, National Olympics Memorial Youth Center	290	3.7	355°	GL*	46.7	51.1	19.7	
					B1F	57.8	68.4	17.6	
					04F	63.3	133.0	17.3	
TUF	Tokyo University of Marine Science and Technology	291	3.9	000°	GL*	93.4	52.2	17.1	
					01F	46.4	50.5	15.2	
					07F	113.8	75.1	17.1	
KDI	College of Land, Infrastructure and Transport	298	3.2	090°	GL*	28.4	29.4	10.6	
					01F	27.8	26.7	10.1	
					03F	35.0	54.1	12.6	
KWS	Kawasaki-minami Office, Labour Standards Bureau	302	3.1	045°	01F*	19.5	17.5	8.1	
					02F	26.3	19.3	7.7	
					07F	65.6	66.3	12.1	
HCN3	Annex, Hachinohe City Hall	310	3.6	164°	B1F*	24.4	28.8	20.2	
					01F	39.7	42.1	20.3	
					10F	67.8	58.3	42.2	
HRH	Hirosaki Legal Affairs Office	337	2.5	195°	01F*	6.7	6.9	5.0	
YMN	Yamanashi Prefectural Office	361	2.6	006°	GL	-	-	-	
					B1F*	13.4	9.6	5.8	
					01F	10.4	14.6	6.5	
					08F	18.0	16.6	9.0	
HKD	Hakodate Development and Construction Department	460	2.9	000°	GL*	10.5	8.8	-	
NGY	Nagoya Government Office Bldg. #1	514	1.6	174°	GL*	2.2	2.3	1.7	
					B2F	2.3	2.2	1.6	
					12F	8.2	12.1	1.4	
KGC	Kushiro Government Office Bldg.	627	1.7	167°	GL*	-	5.6	2.0	
					G10	3.3	4.1	1.6	
					G34	1.8	1.7	0.9	
					B1F	3.1	3.8	1.4	
					01F	3.2	4.7	2.4	
					09F	8.5	7.6	4.8	
SKS	Sakishima Office, Osaka Prefecture	660	1.6	229°	01F*	2.4	1.9	0.7	
					18F	4.7	3.6	0.8	
					38F	5.5	5.2	1.2	
					52FN	6.5	7.9	1.5	
					52FS	6.6	8.1	1.3	

注) Δ : epicentral distance, I_{JMA} : JMA seismic intensity (using sensor with *), Azim.: azimuth from North clockwise, H1, H2 and V: horizontal#1, horizontal#2 and vertical directions

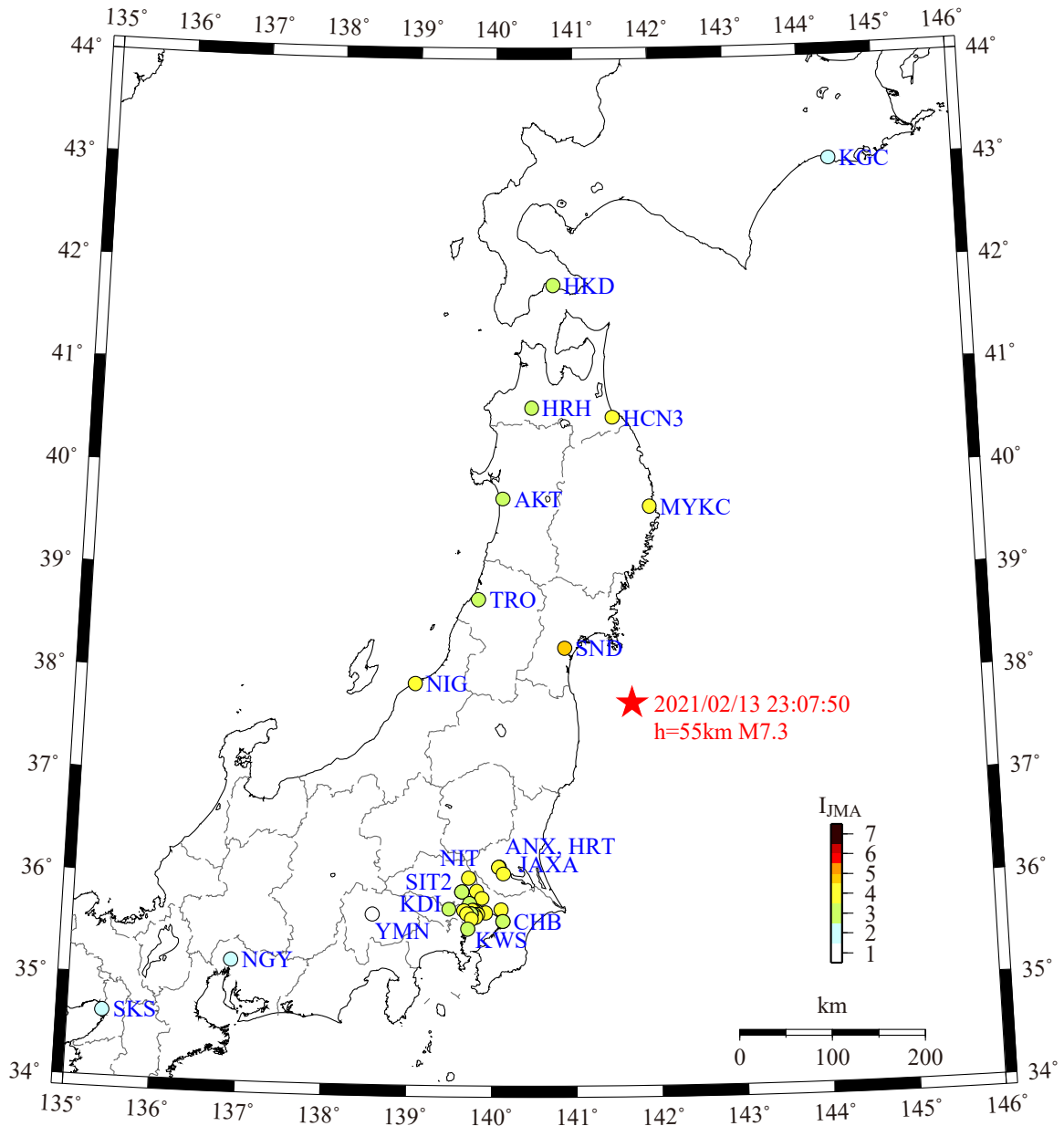


Fig. 1.1 Locations of epicenter (★) and strong motion stations

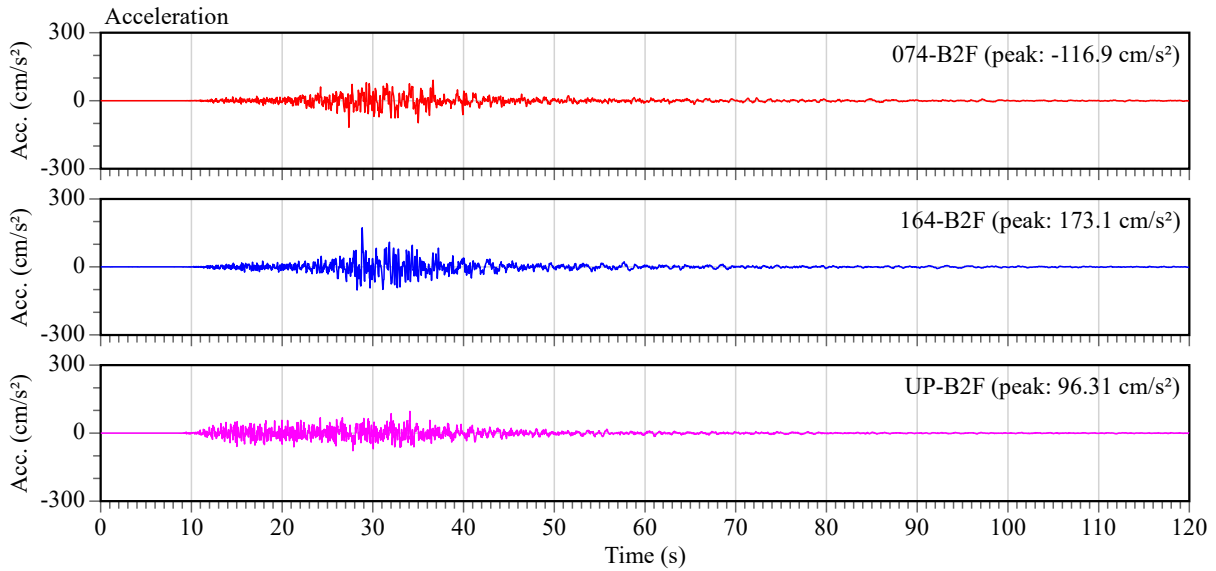


Fig. 2.1 Acceleration waveforms of B2F at the station SND

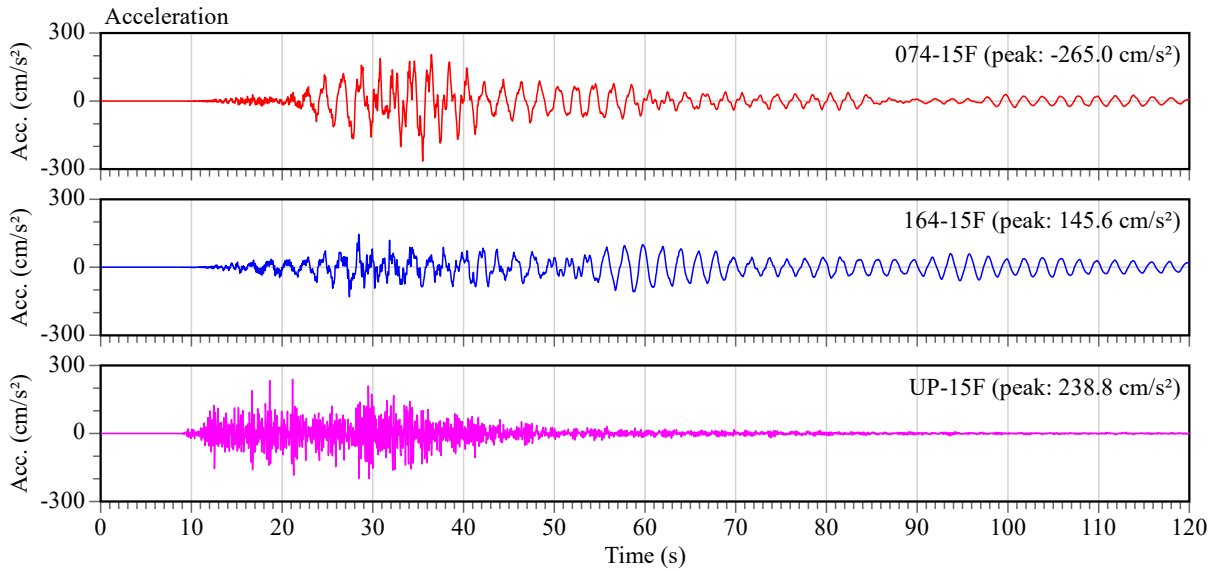


Fig. 2.2 Acceleration waveforms of 15F at the station SND

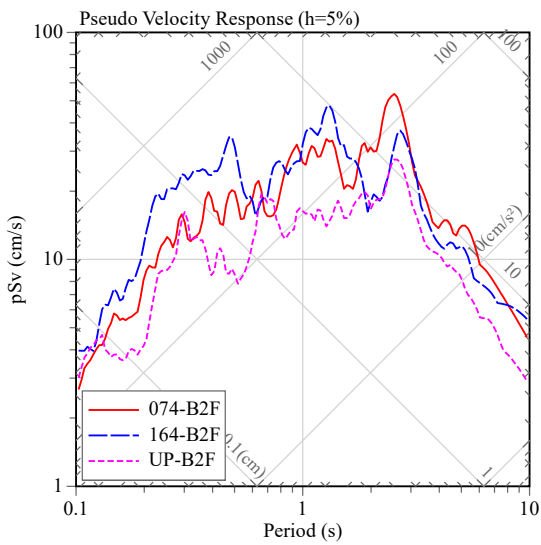


Fig. 2.3 Pseudo response spectra of B2F at the station SND ($h=5\%$)

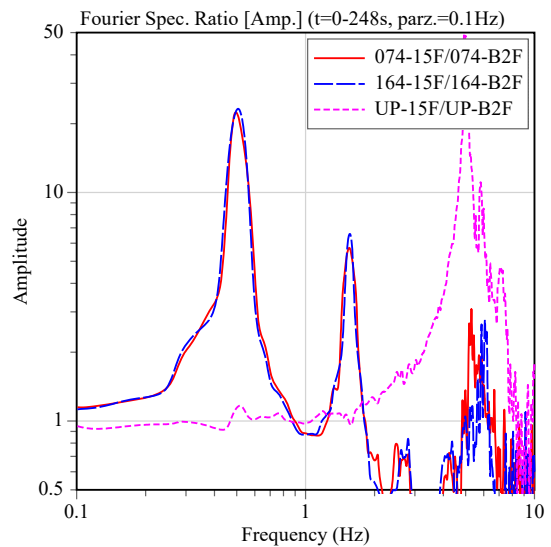


Fig. 2.4 Fourier spectral ratio of 15F/B2F at the station SND

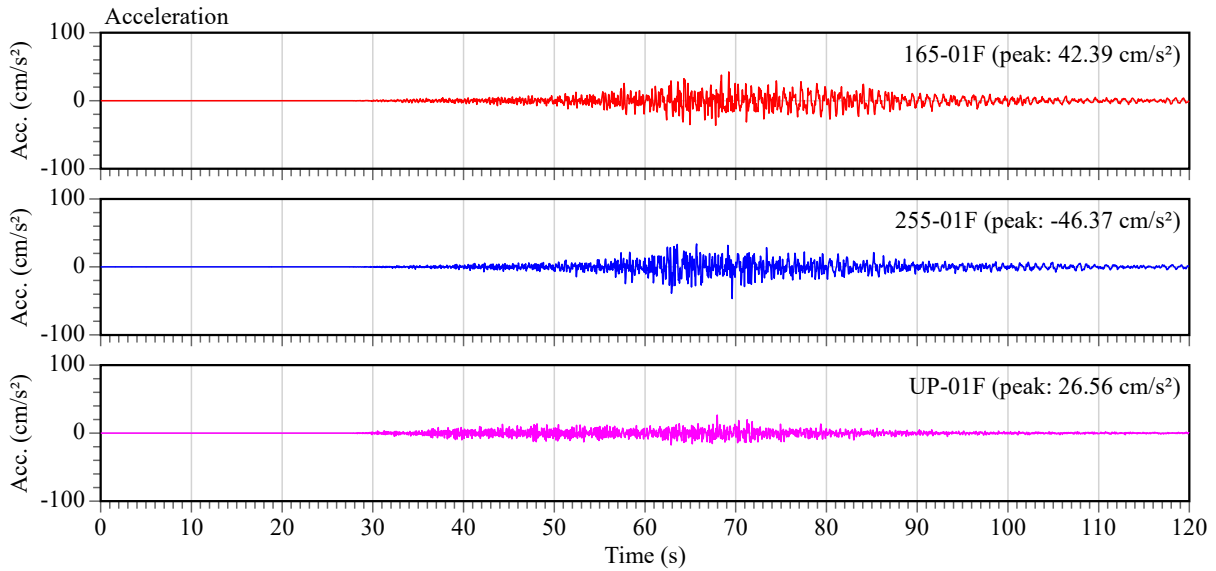


Fig. 3.1 Acceleration waveforms of 01F at the station MYKC

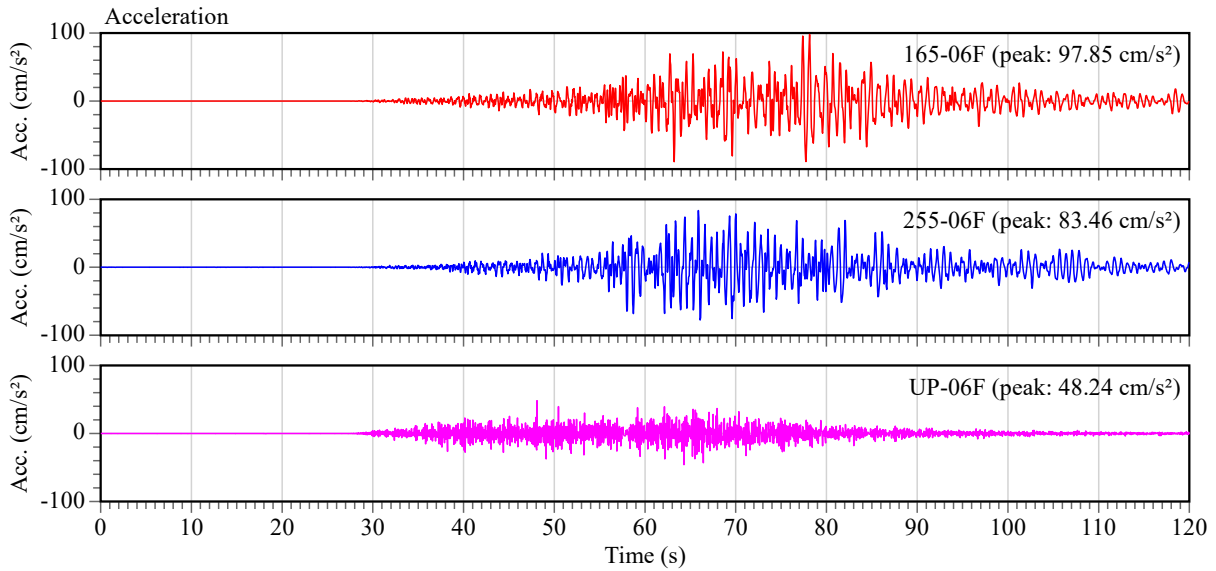


Fig. 3.2 Acceleration waveforms of 06F at the station MYKC

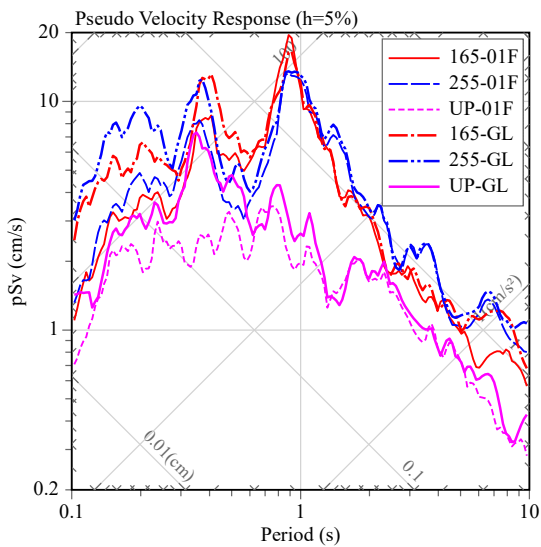


Fig. 3.3 Pseudo response spectra of 01F, GL at the station MYKC ($h=5\%$)

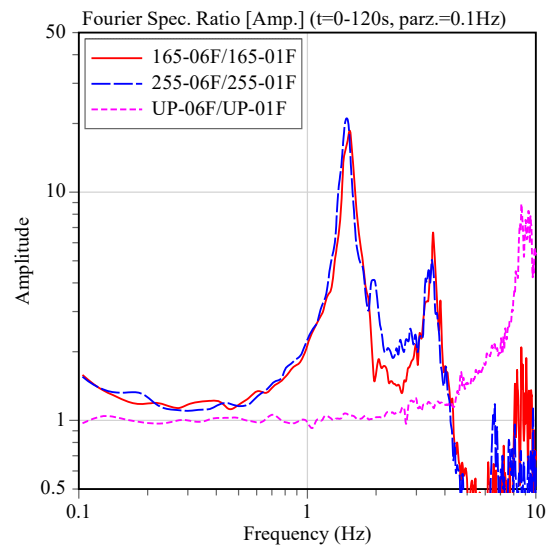


Fig. 3.4 Fourier spectral ratio of 06F/01F at the station MYKC

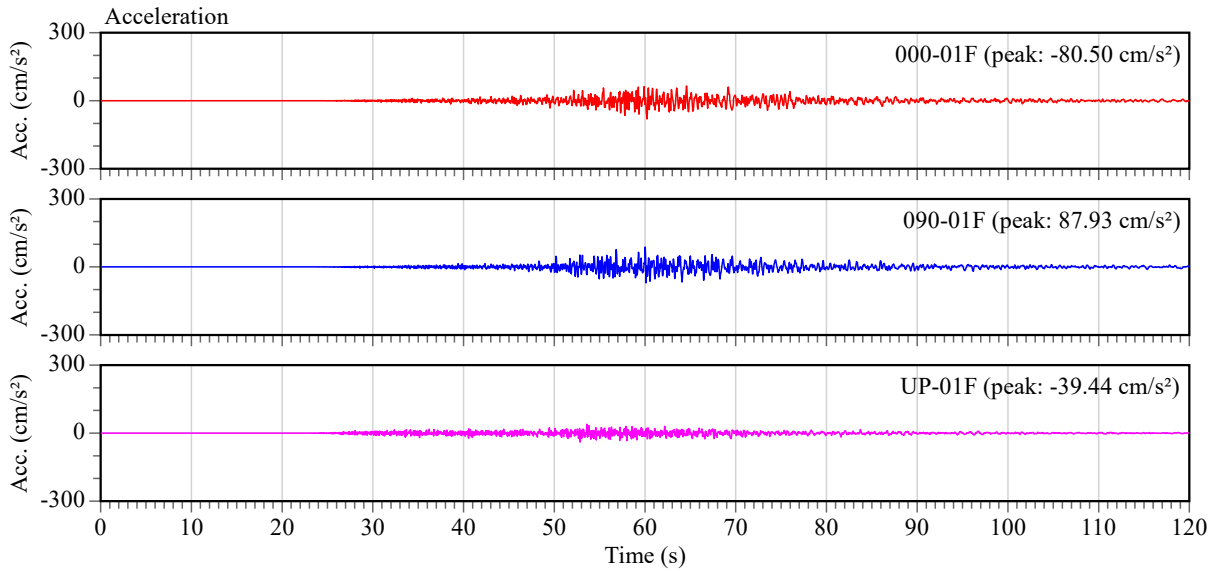


Fig. 4.1 Acceleration waveforms of 01F at the station HRT

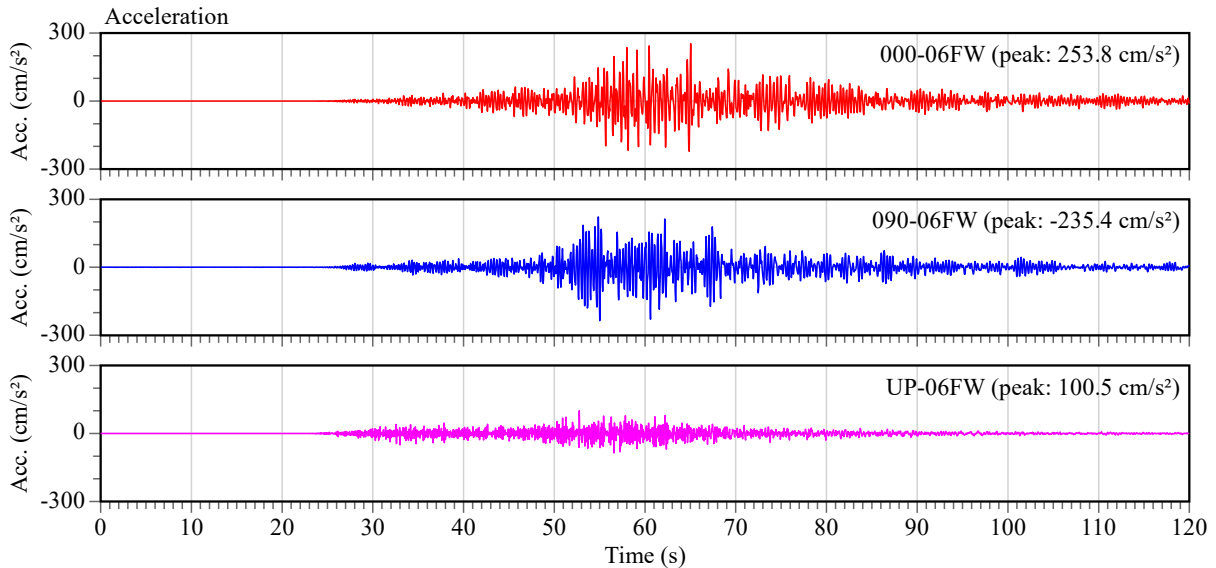


Fig. 4.2 Acceleration waveforms of 06F at the station HRT

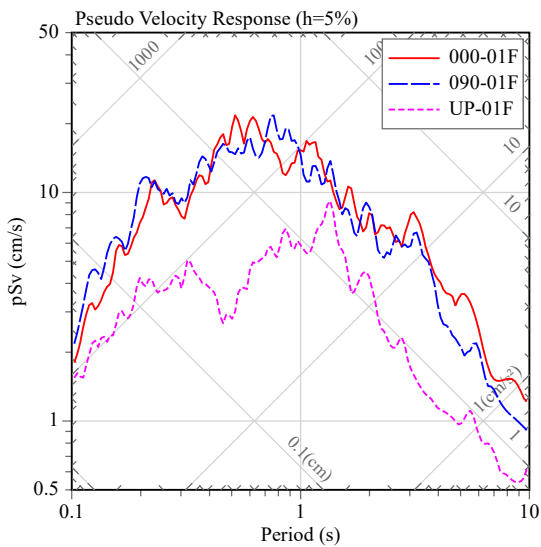


Fig. 4.3 Pseudo response spectra of 01F at the station HRT ($h=5\%$)

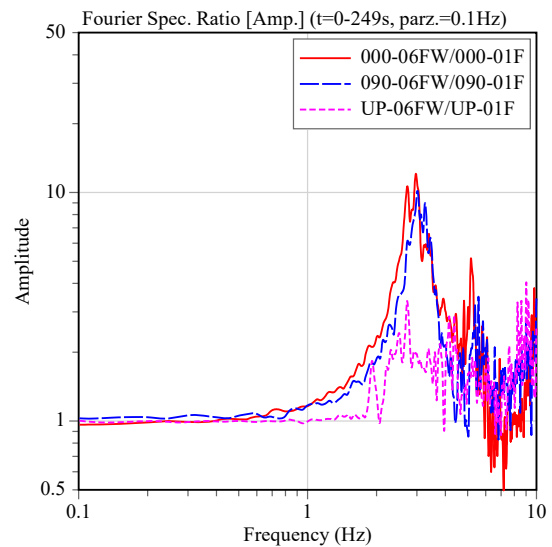


Fig. 4.4 Fourier spectral ratio of 06F/01F at the station HRT

