2021/03/22
Building Research Institute

Prompt report on 2021/03/20 18:09 Off Miyagi Pref. Earthquake

Event

Table 1 Event[1]

Origin time	Epicenter	Latitude	Longitude	Magnitude	Depth
2021/03/20 18:09	Off Miyagi Pref.	38°28.0'N	141°37.6'E	M_J6.9	59 km

Strong motion data

Table 2.1 List of strong motion records (1/2)

Code	Station	Δ (km)	I_{JMA}	Azim.	Loc.	Max. acc. (cm/s^2)			Notes
						H1	H2	V	
SND	Sendai Government Office Bldg. #2	69	4.1	074°	B2F*	61.0	61.8	45.0	Fig. 2.1
					15F	84.5	97.0	115.3	Fig. 2.2
MYKC	Miyako City Hall	133	4.0	165°	GL*	64.9	87.1	41.1	
					01F	45.8	43.9	22.8	Fig. 3.1
					06F	146.3	104.6	53.4	Fig. 3.2
TRO	Tsuruoka Government Office Bldg.	161	2.7	182°	01F*	9.2	8.8	4.2	
					04F	10.1	11.6	4.3	
AKT	Akita Prefectural Office	192	2.9	087°	B1F*	9.3	10.4	5.9	
					08F	29.9	51.6	9.0	
HCN3	Annex, Hachinohe City Hall	228	3.1	164°	B1F*	27.0	17.4	13.6	
					01F	29.9	28.6	14.1	
					10F	42.3	43.0	32.1	
HRH	Hirosaki Legal Affairs Office	258	2.0	195°	01F*	4.2	4.2	2.4	
ANX	Annex and Main Bldg., Building Research Institute	294	3.4	180°	A01*	29.2	27.2	11.8	
					A89	12.7	12.9	6.3	
					BFE	18.3	18.9	9.3	
					8FE	48.1	156.1	19.5	
					MBC	17.5	18.5	10.6	
					M8C	53.9	54.4	20.8	
JAXA	Headquarters Building, JAXA Tsukuba Space Center	298	3.2	335°	B1F*	20.0	19.1	10.4	
					01F	29.2	22.9	11.5	
					11F	40.7	47.2	16.8	
NIT	Nippon Institute of Technology	320	3.1	288°	GL*	23.7	27.2	6.4	
					01F	18.8	14.9	5.5	
					06F	64.0	45.0	12.0	
KSG	Koshigaya Branch, Saitama Legal Affairs Bureau	328	3.2	150°	1F*	19.2	15.3	5.9	
CHPM	Main Building, Chiba Prefectural Office	345	2.5	333°	B1F*	8.7	7.1	3.4	
					08F	18.8	17.8	5.0	
					19F	21.4	14.5	7.8	

[1] Japan Meteorological Agency

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

Code	Station	Δ (km)	I_{JMA}	Azim.	Loc.	Max. acc. (cm/s^2)			Notes
						H1	H2	V	
NMW	Main Building, National Museum of Western Art	347	2.9	218°	GL*	16.8	17.7	9.1	
					B1FW	10.3	8.7	5.1	
					B1FE	10.3	9.9	6.5	
					01FW	16.4	21.0	5.3	
					01FE	16.2	16.7	6.6	
					04F	21.5	18.6	6.1	
MNM	Minamisuna Apartment #3	349	3.1	180°	01F*	12.5	11.0	4.4	
					15F	64.6	53.7	5.6	
TKD	Kosha Tower Tsukuda	351	2.7	180°	01F*	10.0	11.2	4.1	
					18F	13.0	19.0	7.3	
					37F	20.0	19.4	10.1	
CG2	Central Government Office Bldg. #2	352	2.4	208°	B4F*	9.2	6.3	4.9	
					13F	21.7	15.7	7.7	
					21F	20.3	15.6	10.5	
CG3	Central Government Office Bldg. #3	352	2.6	208°	B3F*	12.0	9.6	5.7	
					B2F	12.7	11.1	6.1	
					12F	20.8	19.9	7.7	
SNN	Shinonome National Public Officers Apartment House	353	3.2	039°	GL*	20.0	17.9	8.9	
					01F	14.9	10.0	3.7	
					M4F	13.1	11.1	4.3	
					04F	12.0	14.0	4.9	
					36F	20.8	19.2	7.2	
HKD	Hakodate Development and Construction Department	378	2.2	000°	GL*	4.8	5.5	2.6	
KGC	Kushiro Government Office Bldg.	553	1.0	167°	GL*	-	2.8	1.3	
					G10	1.8	1.8	1.1	
					G34	0.8	0.8	0.5	
					B1F	1.3	1.5	0.7	
					01F	2.2	1.9	1.0	
					09F	3.1	3.0	1.9	

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

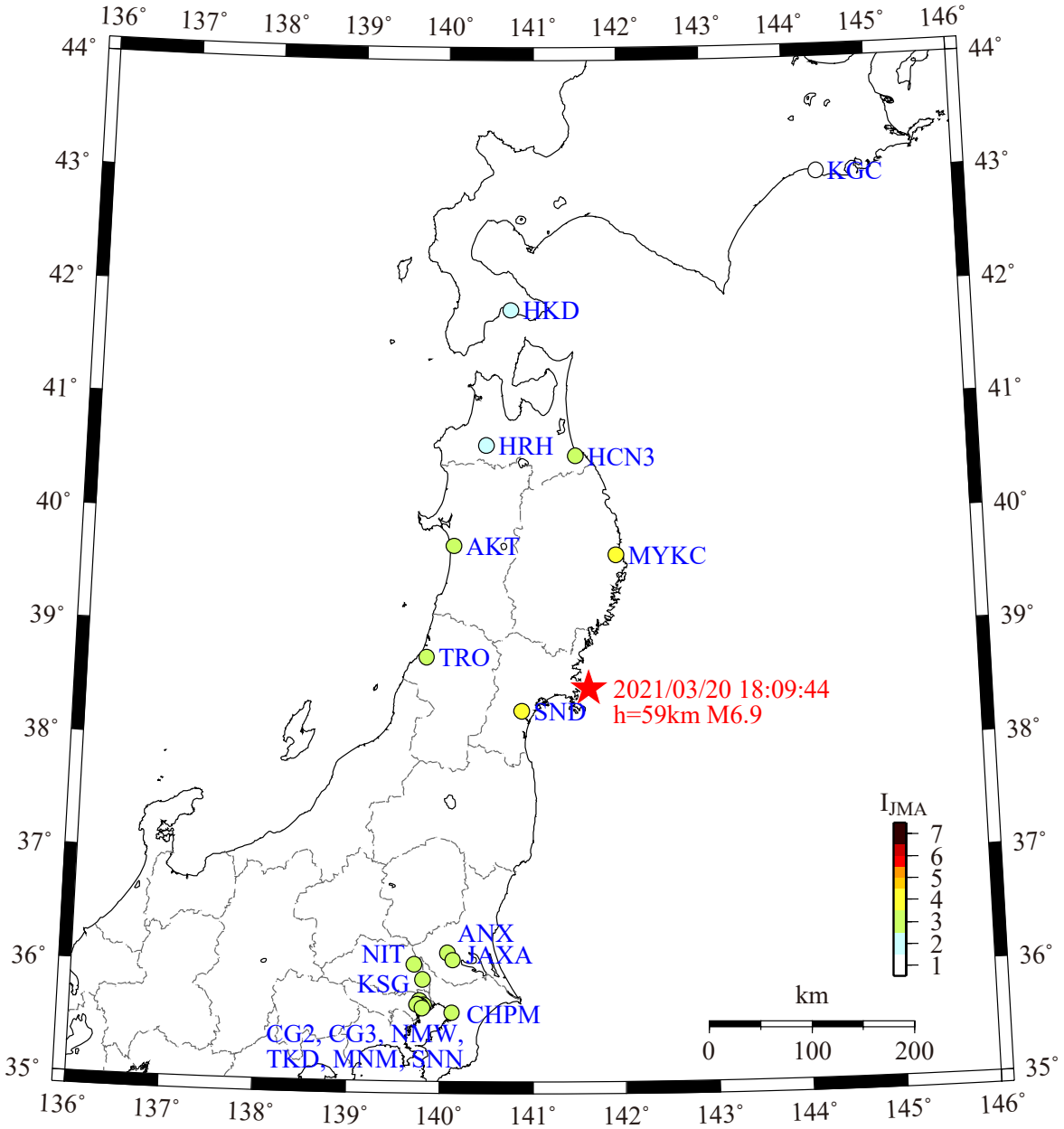

Fig. 1.1 Locations of epicenter (★) and strong motion stations

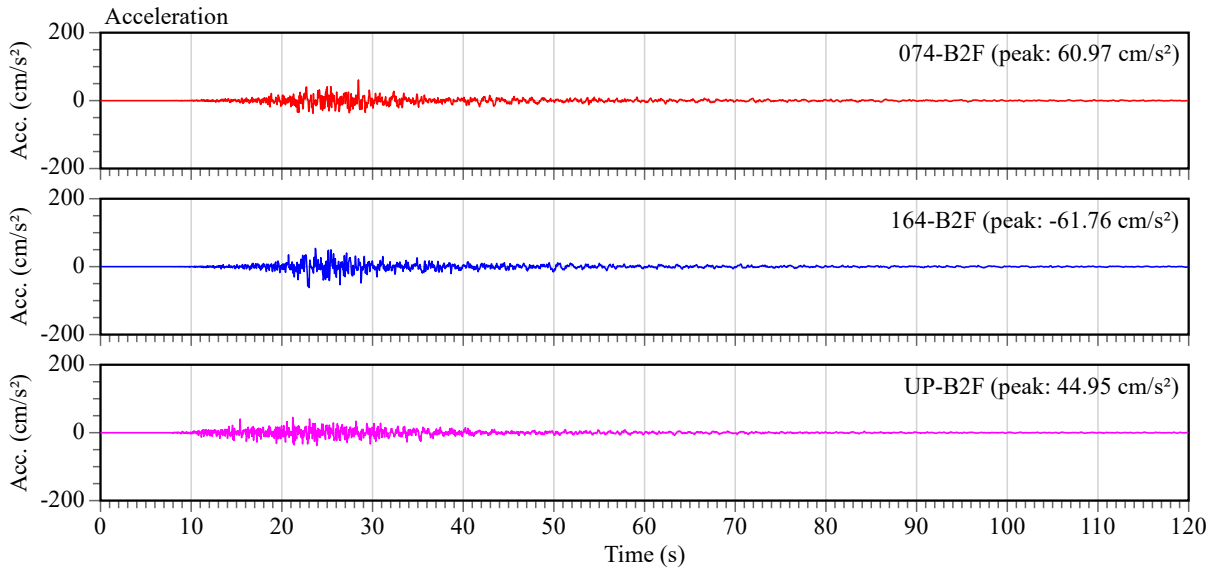

Fig. 2.1 Acceleration waveforms of B2F at the station SND

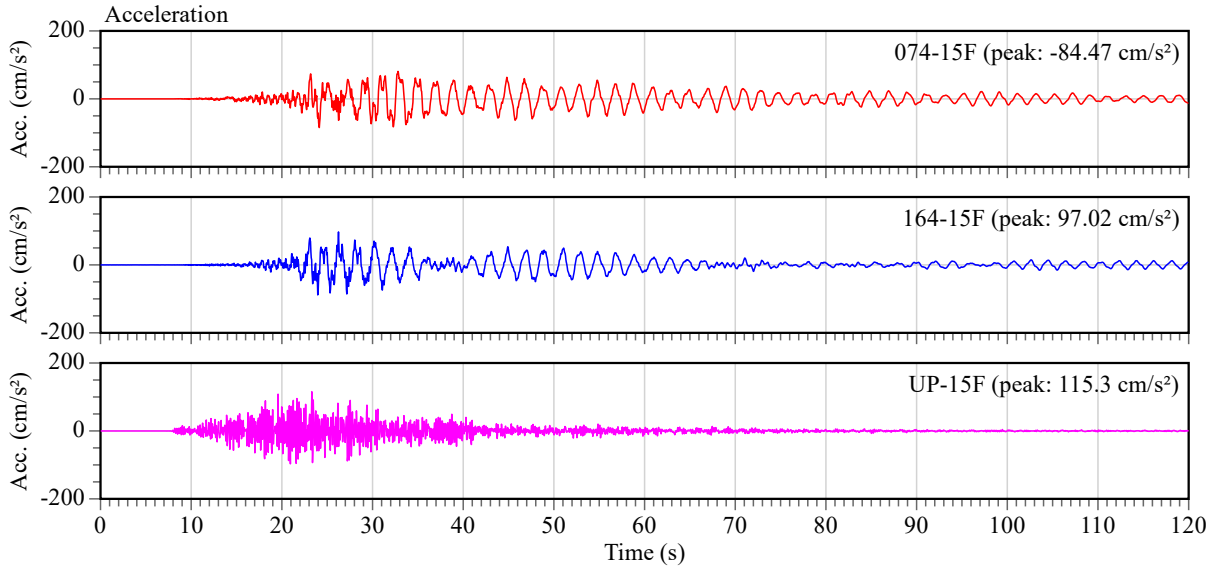

Fig. 2.2 Acceleration waveforms of 15F at the station SND

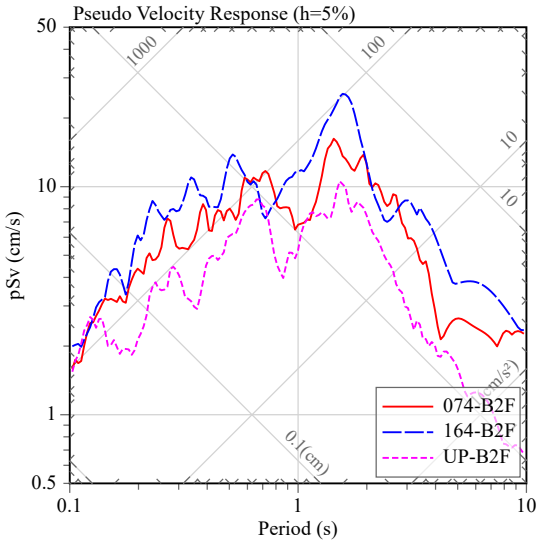

Fig. 2.3 Pseudo response spectra of B2F at the station SND (h=5%)

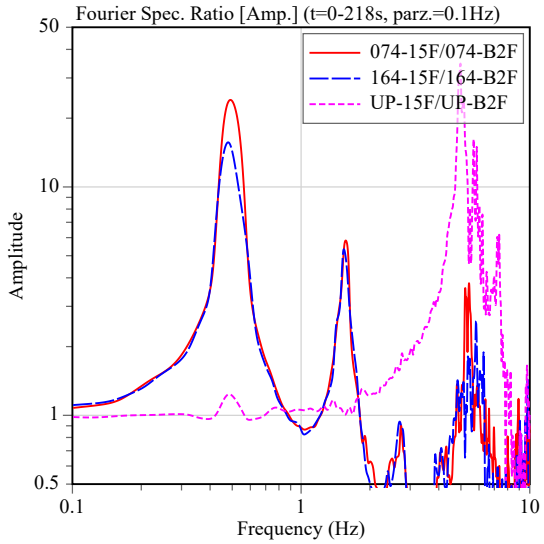

Fig. 2.4 Fourier spectral ratio of 15F/B2F at the station SND

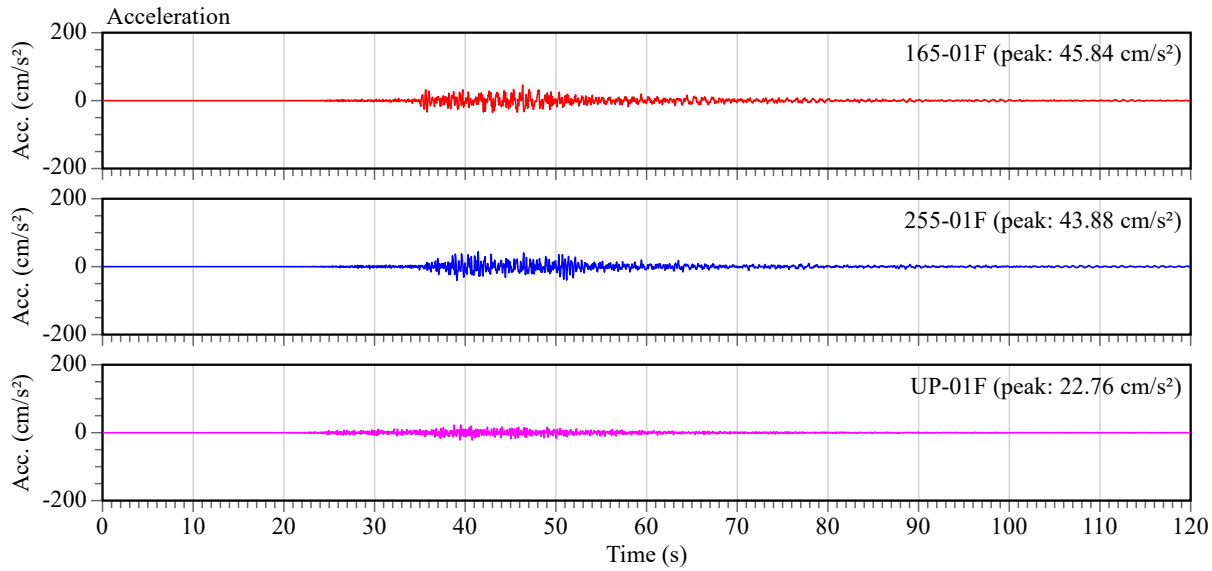

Fig. 3.1 Acceleration waveforms of 01F at the station MYKC

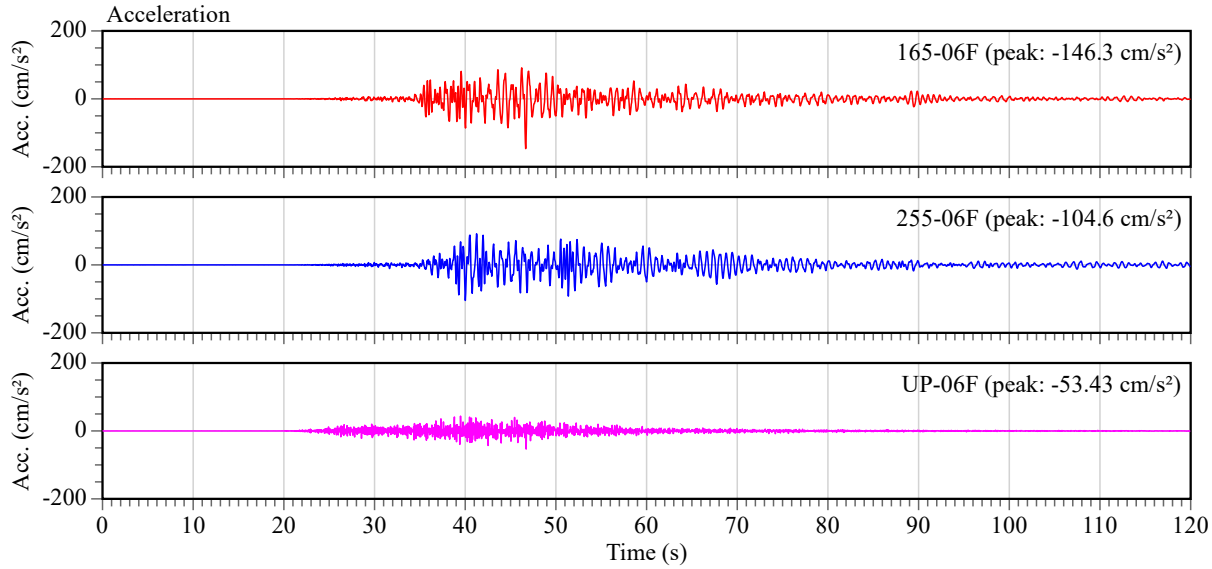

Fig. 3.2 Acceleration waveforms of 06F at the station MYKC

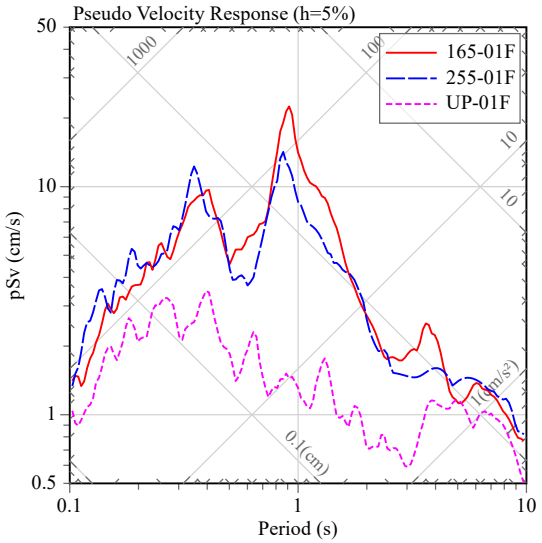

Fig. 3.3 Pseudo response spectra of 01F, GL at the station MYKC (*h*=5%)

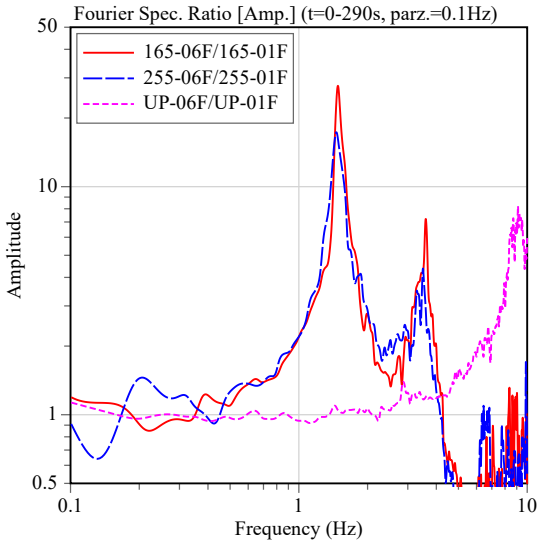

Fig. 3.4 Fourier spectral ratio of 06F/01F at the station MYKC