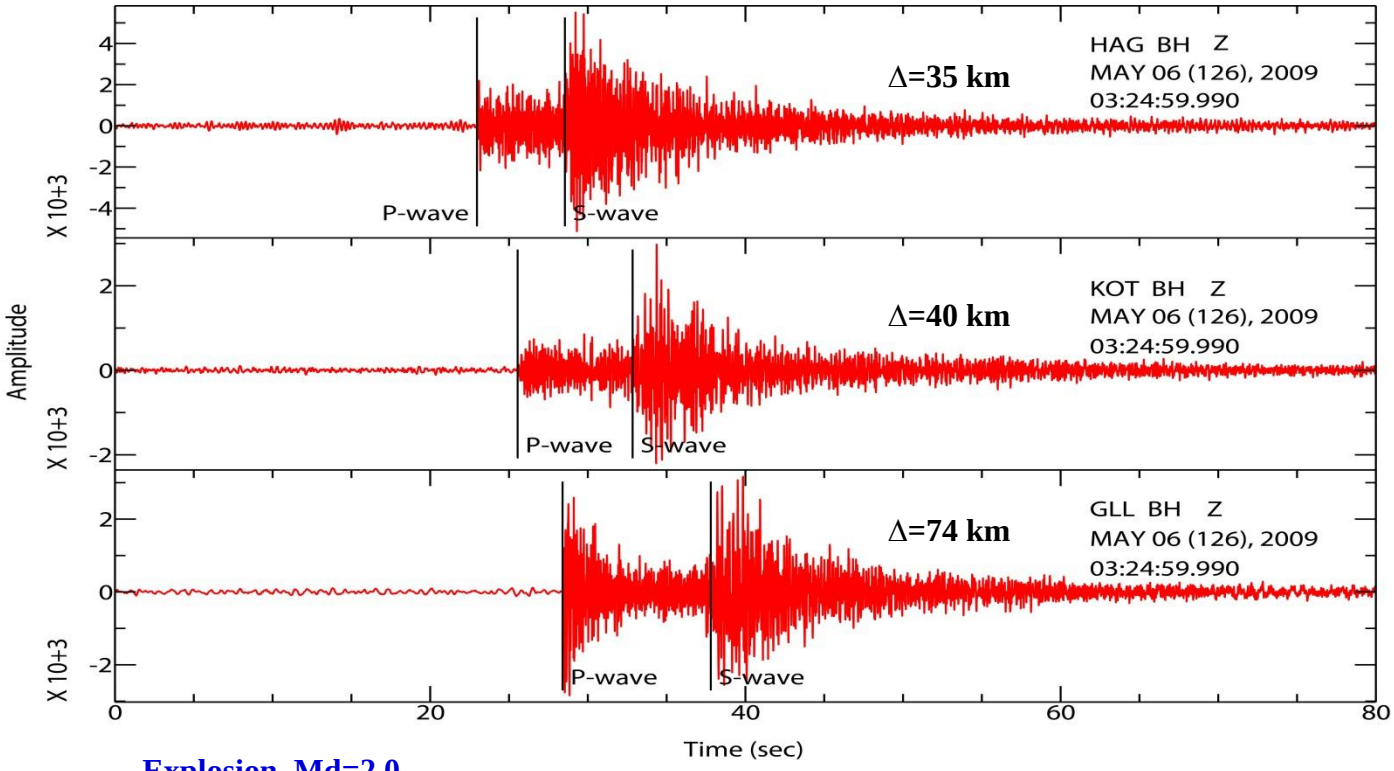
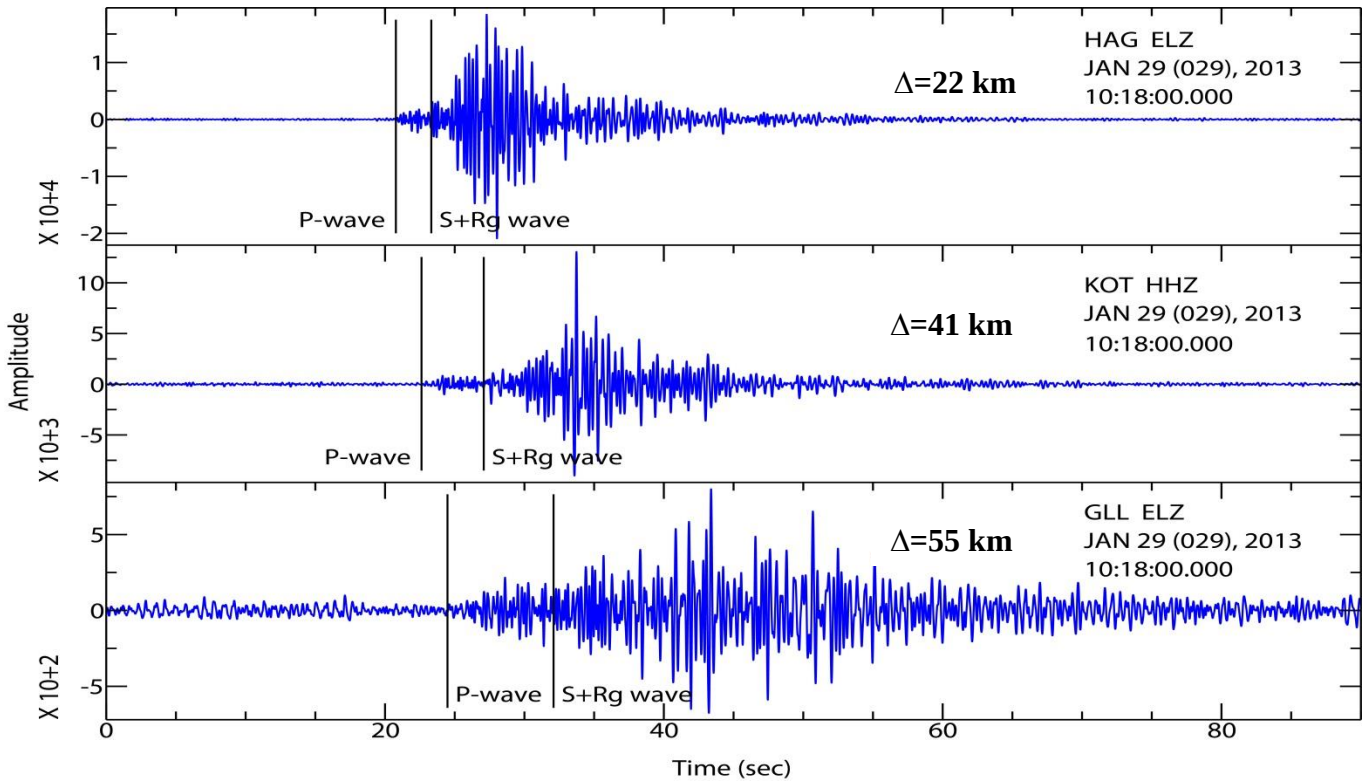
(a) **Earthquake, Md=2.0**

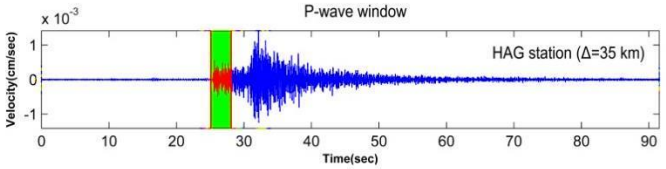


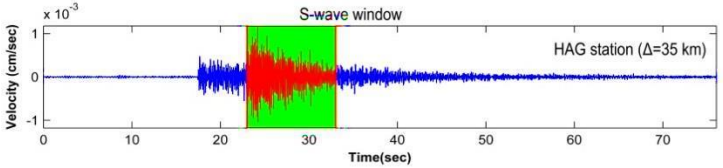
Explosion, Md=2.0

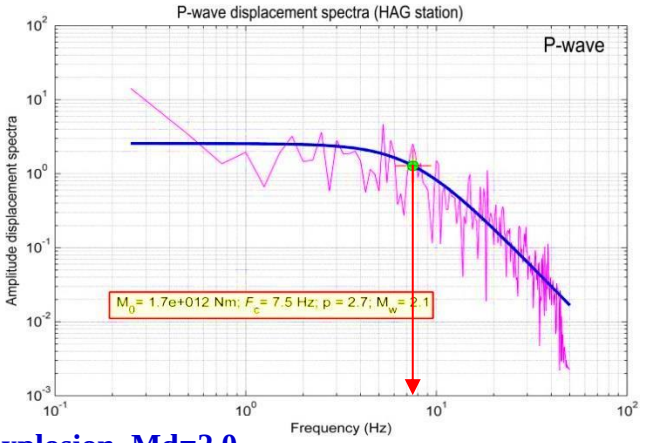


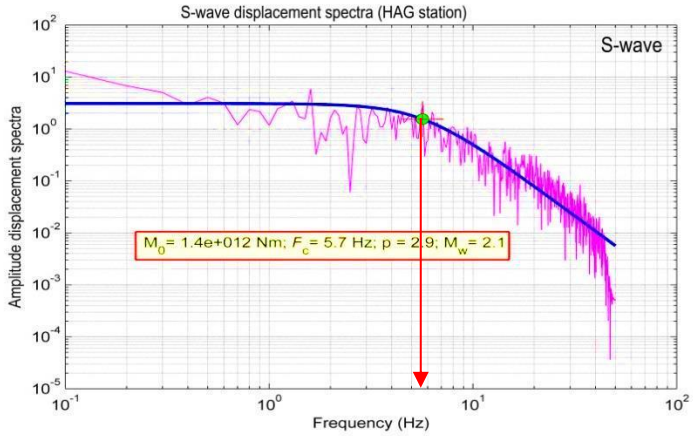
(b)

Earthquake, Md=2.0

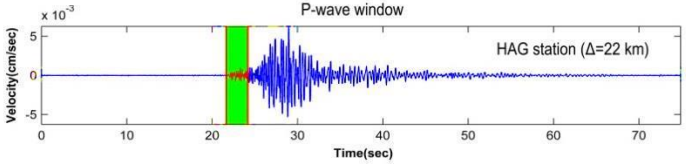


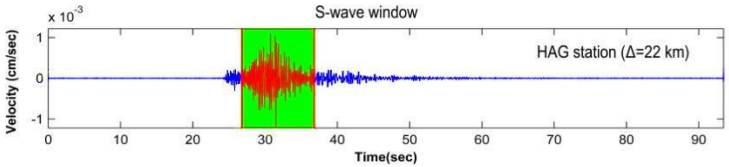


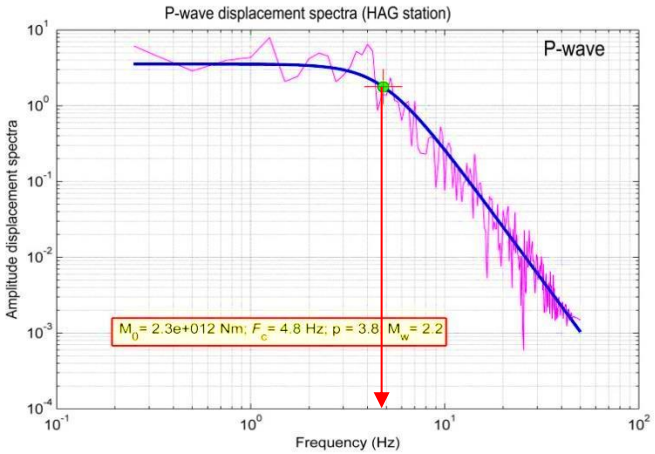


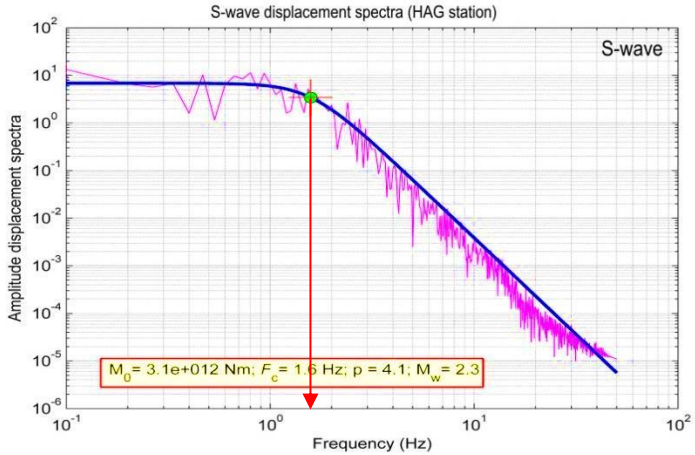


Explosion, Md=2.0



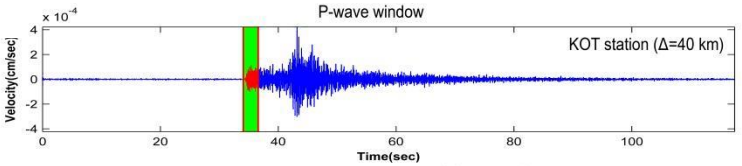


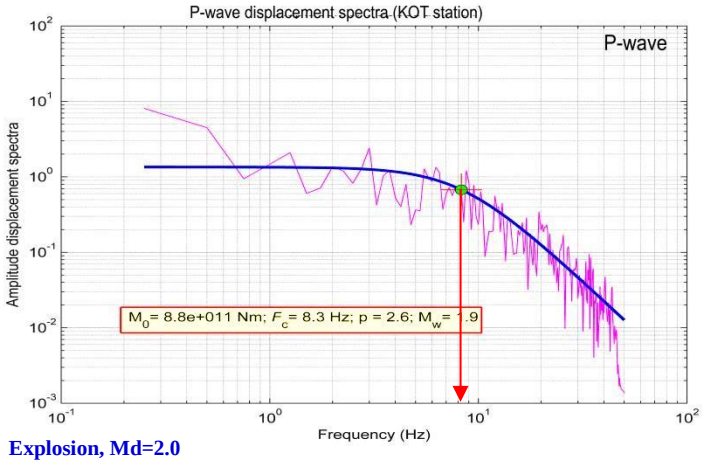


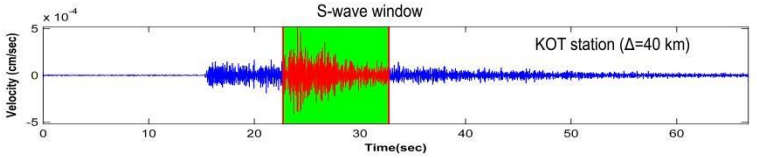


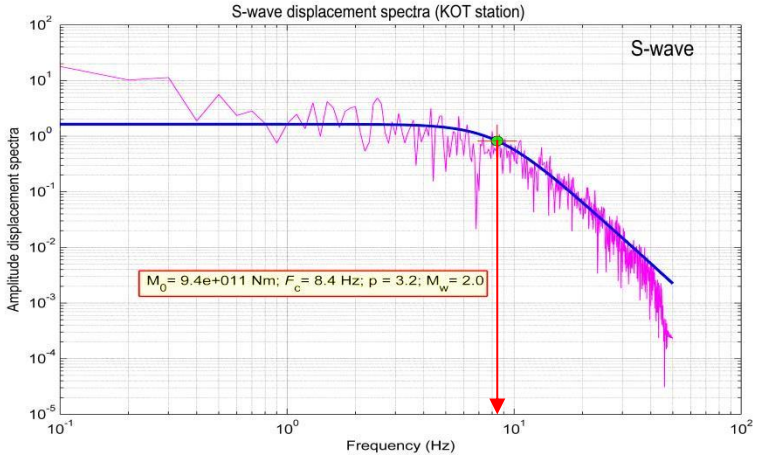
(c)

Earthquake, Md=2.0

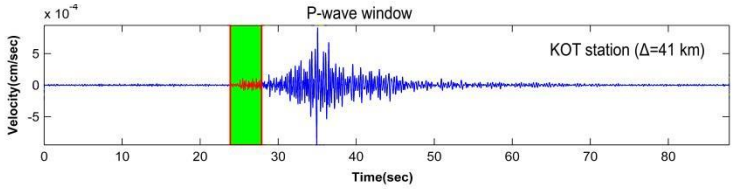


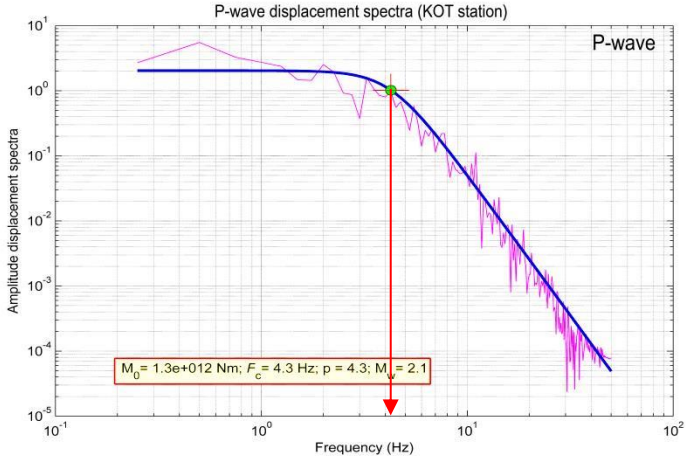


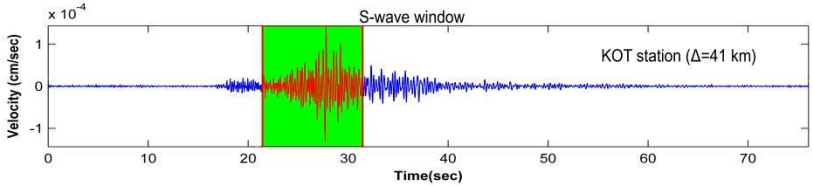


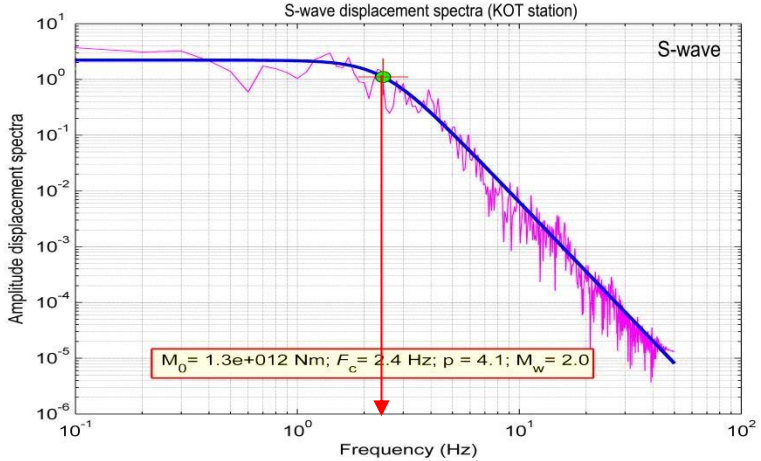


Explosion, Md=2.0



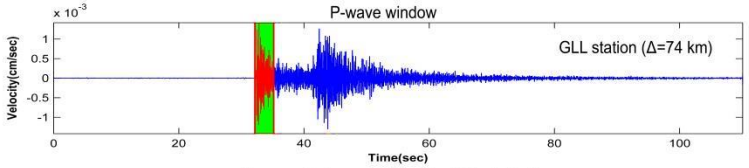


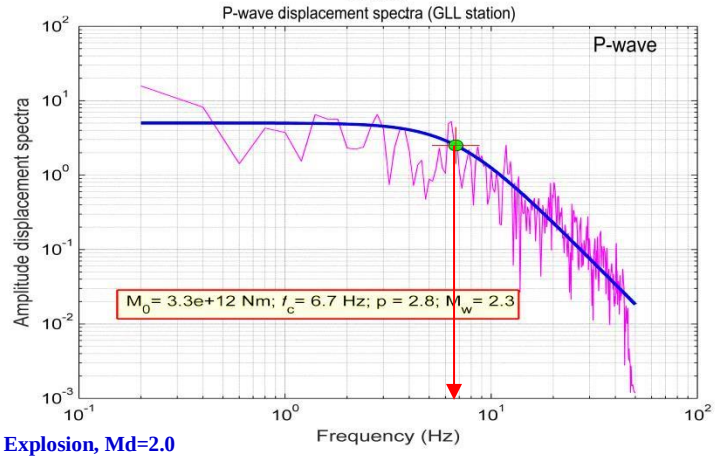


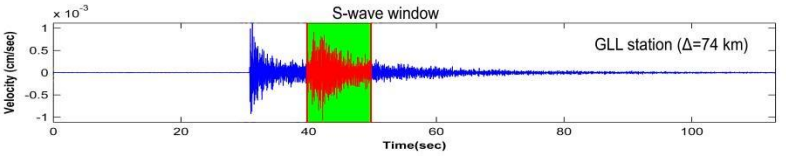


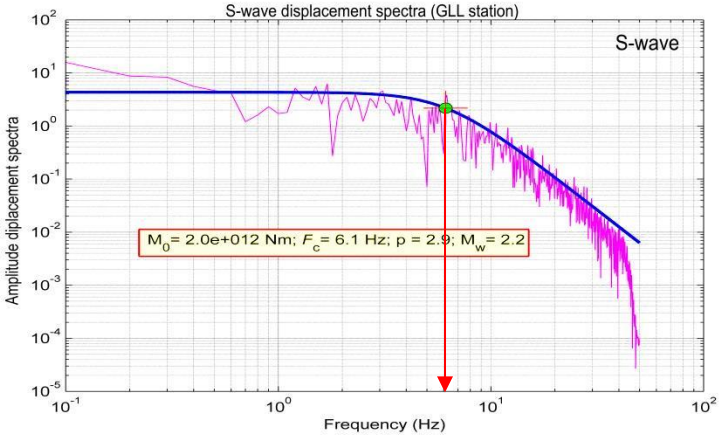
(d)

Earthquake, Md=2.0

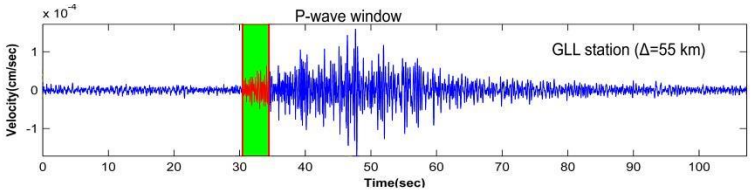


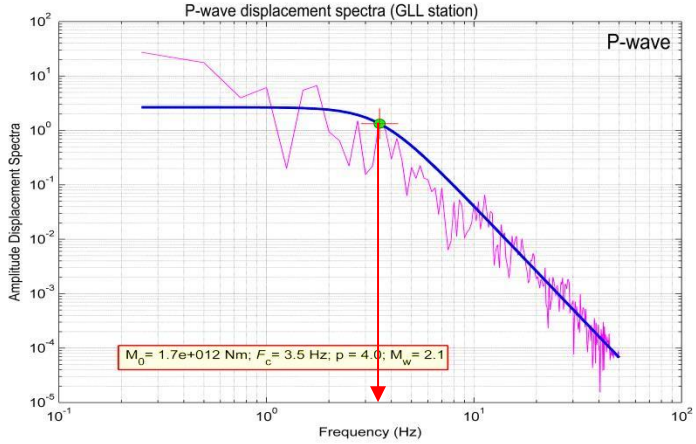


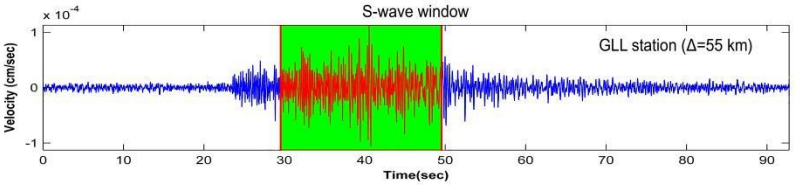




Explosion, Md=2.0







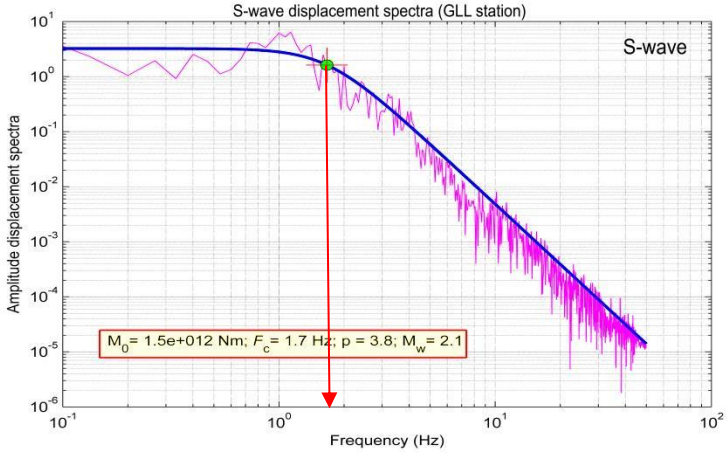
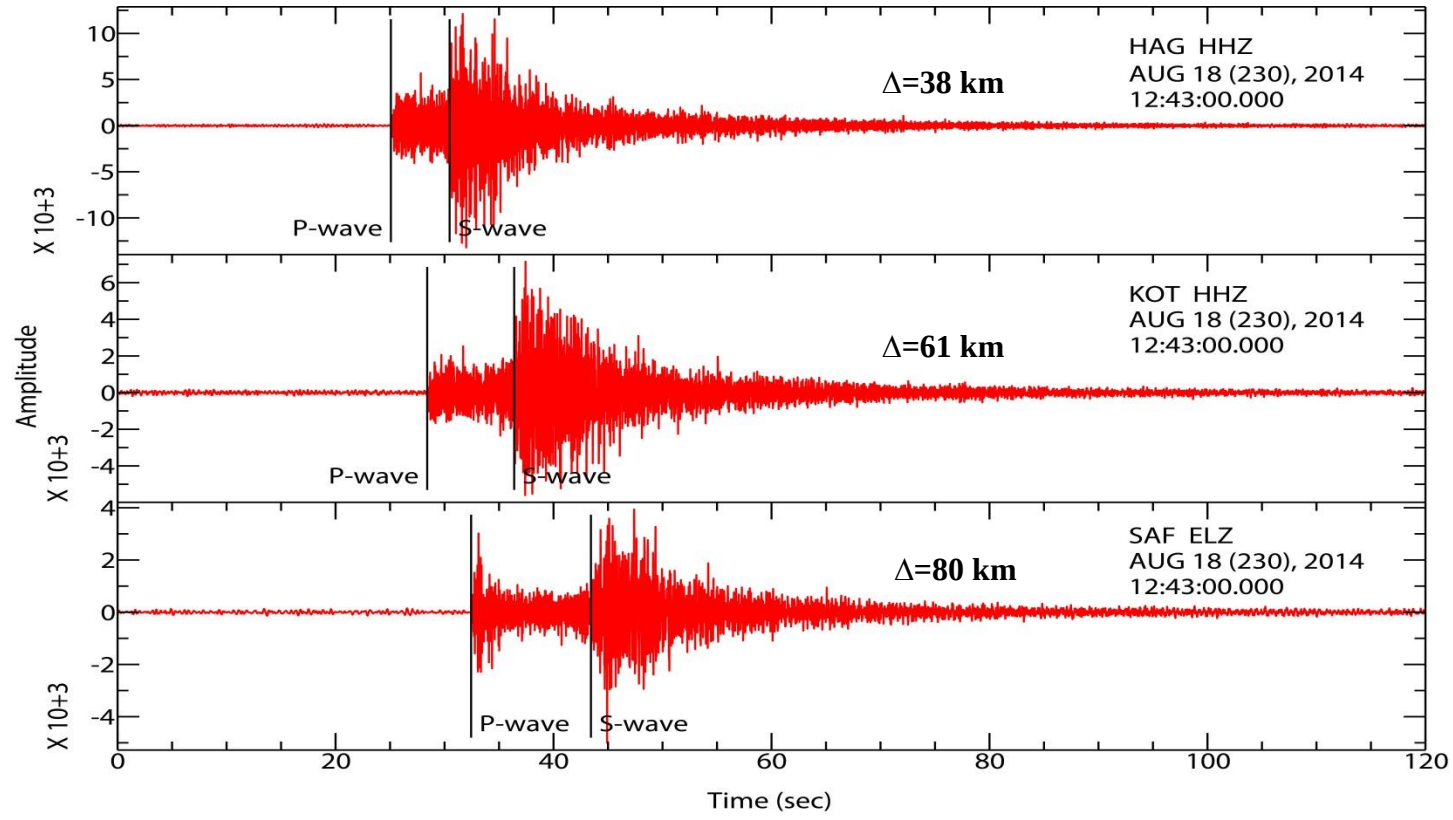
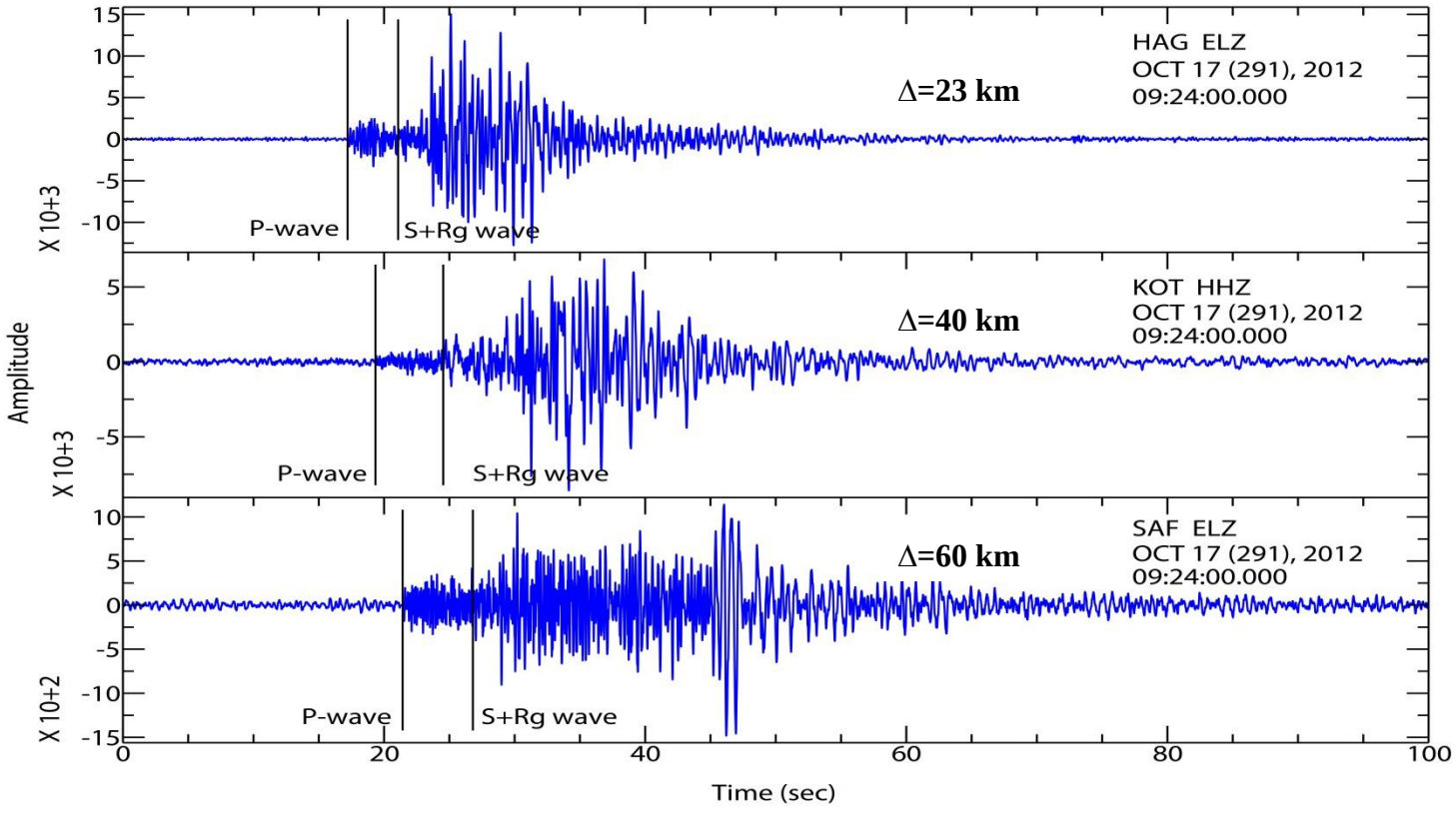


Figure 1: (a) The original vertical component seismograms before data processing of an earthquake of 06.05.2009, Md=2.0 (red) and of a quarry blast of 29.01.2013, Md=2.0 (blue), in subzone 1, Northern region in Figure 2. The arrival of P-wave, S-wave and epicentral distances values Δ of recorded stations (HAG, KOT and GLL) are also shown. The Vertical component velocity seismograms of both earthquake and quarry blast with their corrected P- and S-wave displacement spectra after data processing that calculated from seismograms of the stations: (b) HAG station located at a distance 35 km from the earthquake and 22 km from the quarry blast epicenter, (c) KOT station located at a distance 40 km from the earthquake and 41km from the quarry blast, and (d) GLL station located at a distance 74 km from the earthquake and 55 km from the quarry blast. The analyzed time windows of P- and S-wave are marked by highlight green rectangles. The best-fitting theoretical Brune's source model is marked in blue. Also, the measured Mo, fc, absolute value of spectral decay slope at high frequencies (P) and moment magnitude Mw are shown. The red line shows the value of the corner frequency fc.

(a) **Earthquake, Md=2.5**

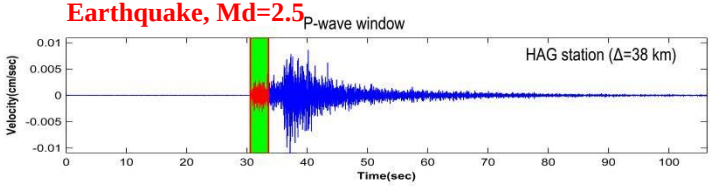


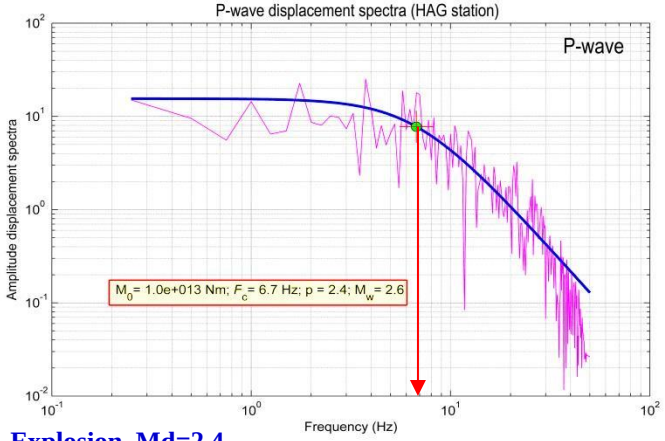
Explosion, Md=2.4

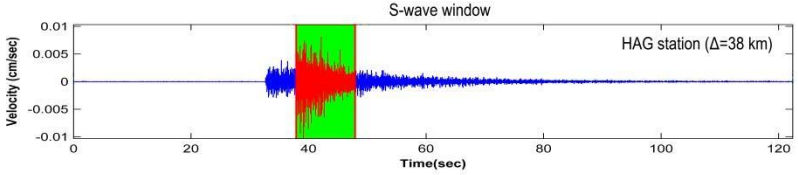


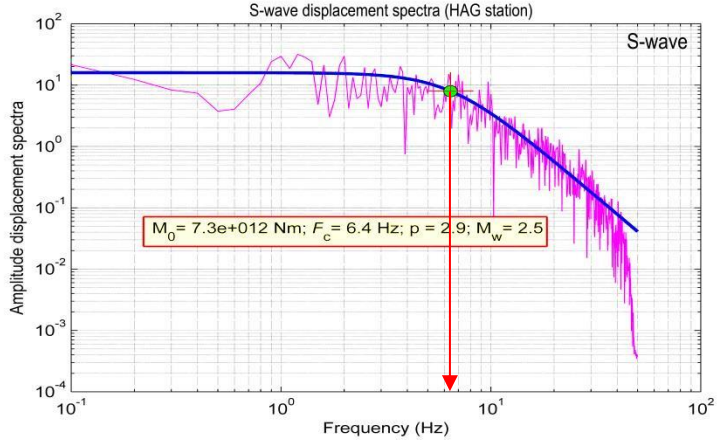
(b)

Earthquake, Md=2.5

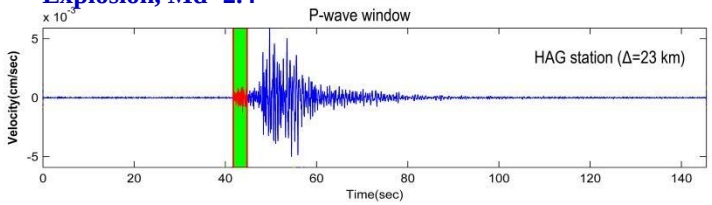


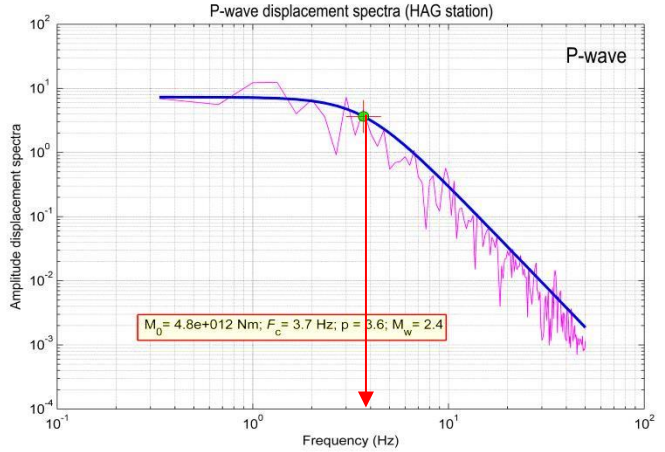


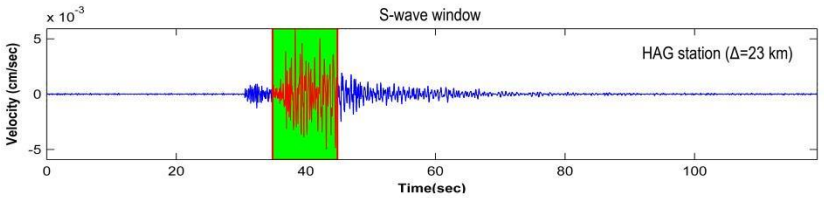


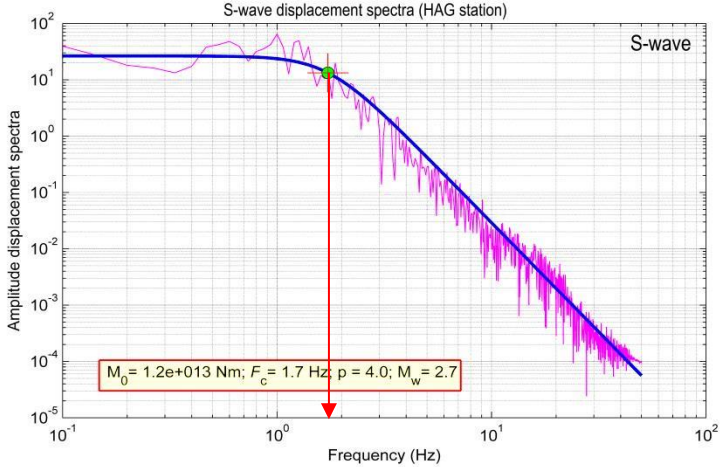


Explosion, Md=2.4

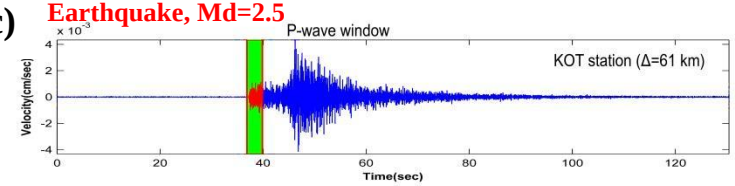


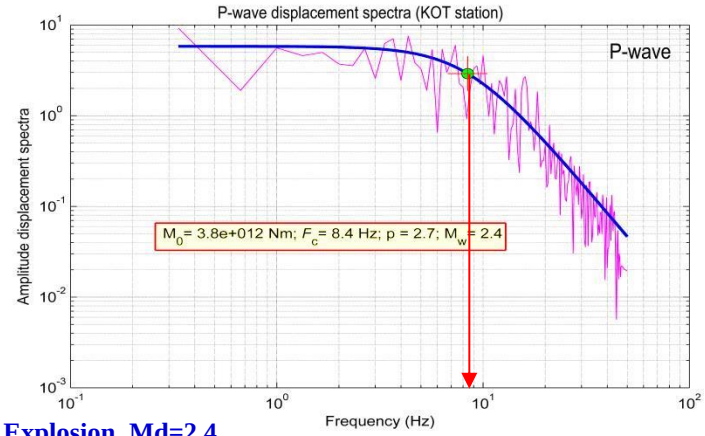


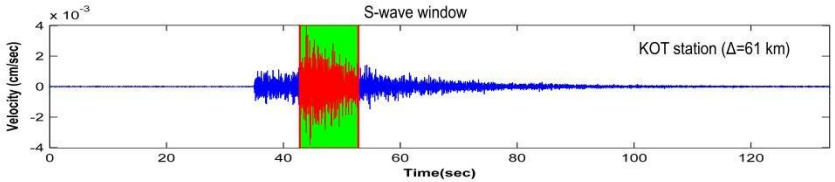


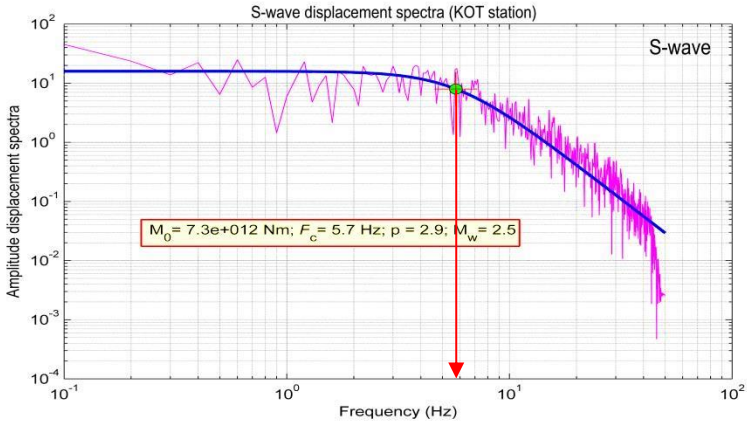


(c) **Earthquake, Md=2.5**

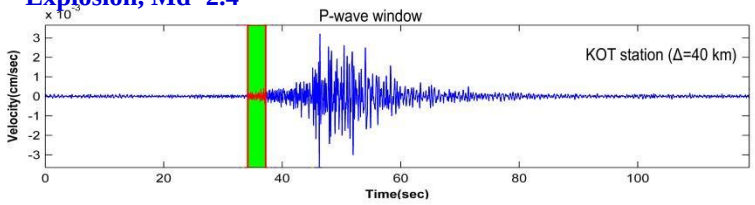


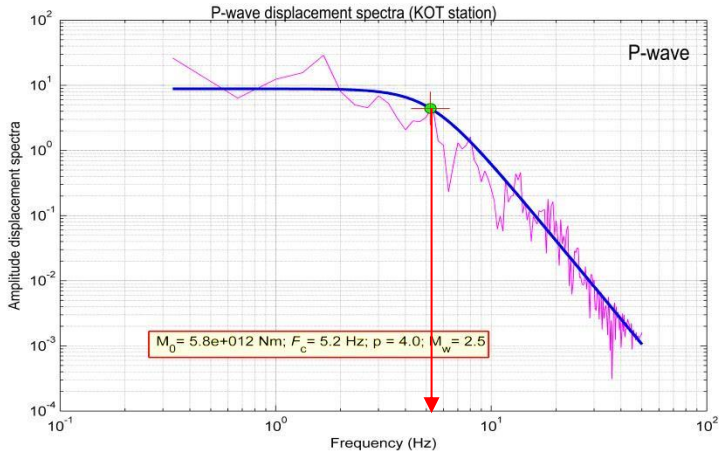


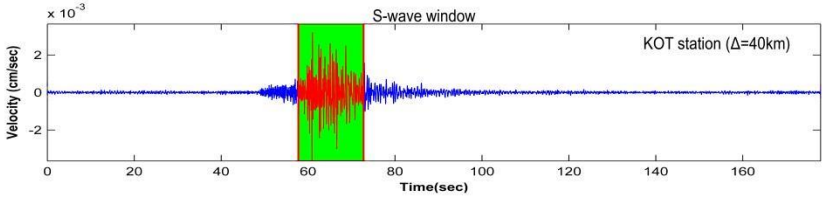


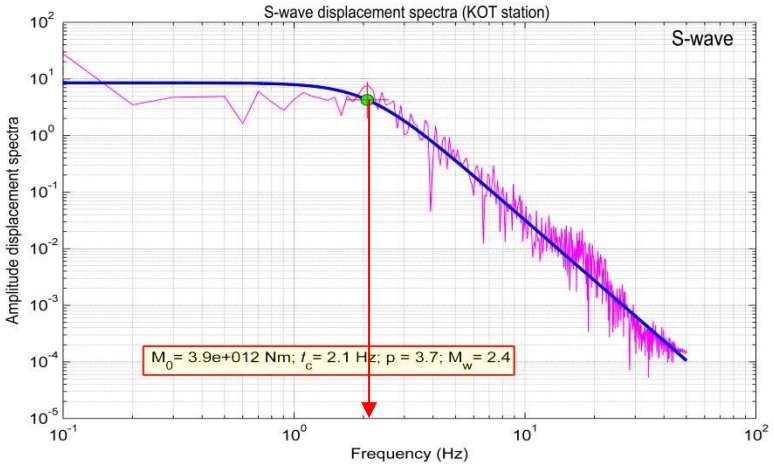


Explosion, Md=2.4

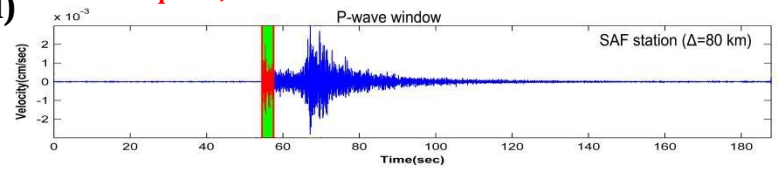


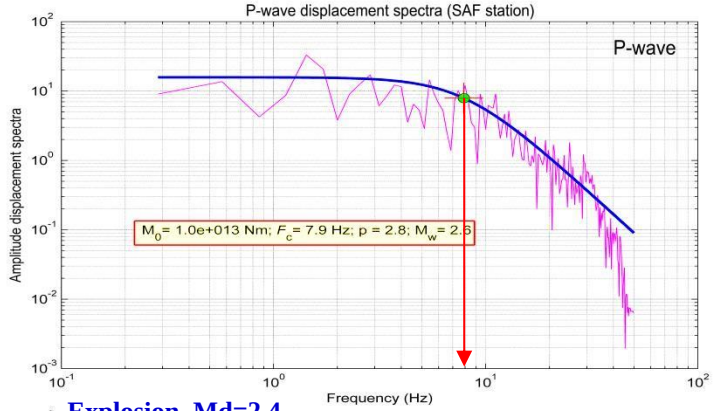


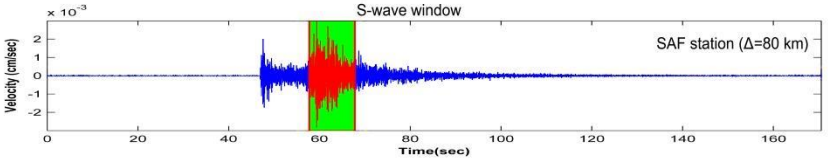


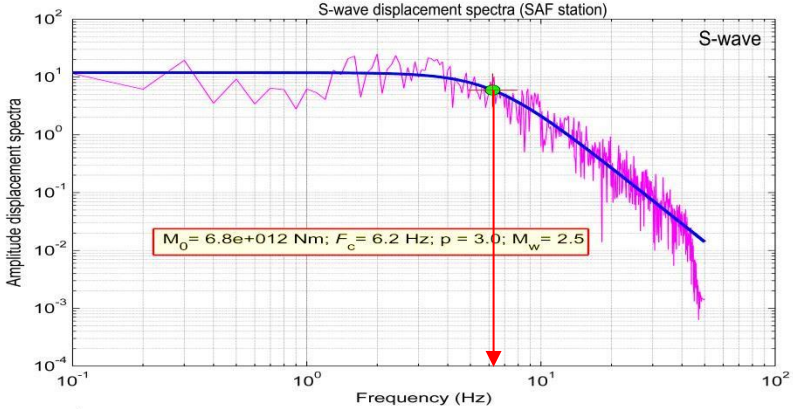


(d) **Earthquake, Md=2.5**

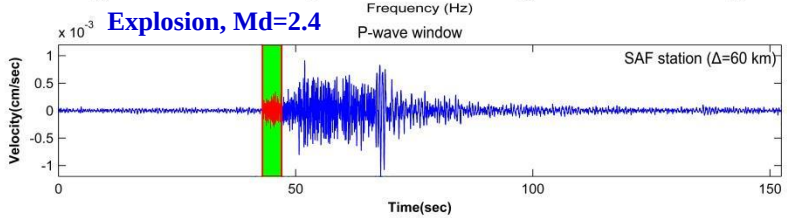


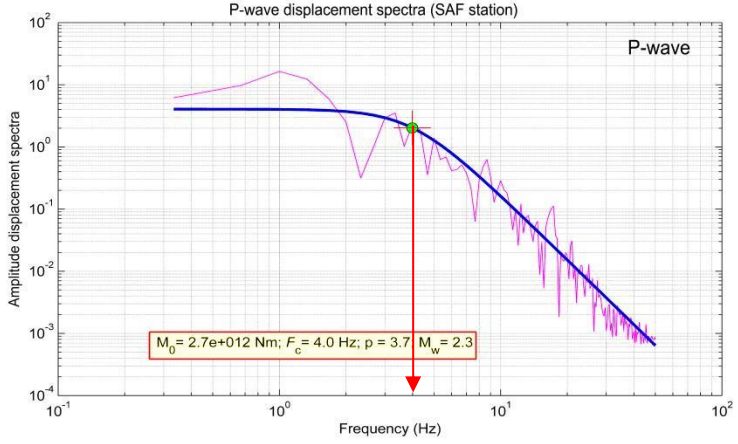


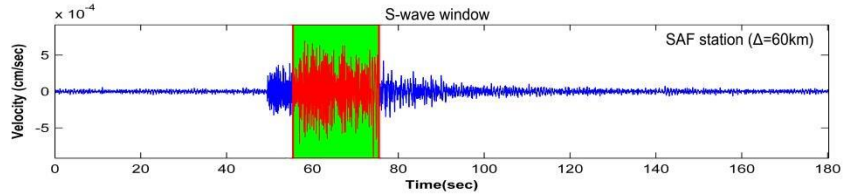




Explosion, Md=2.4







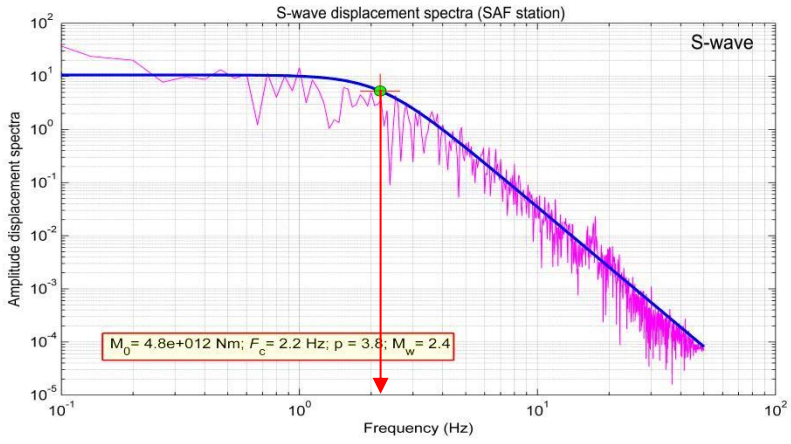
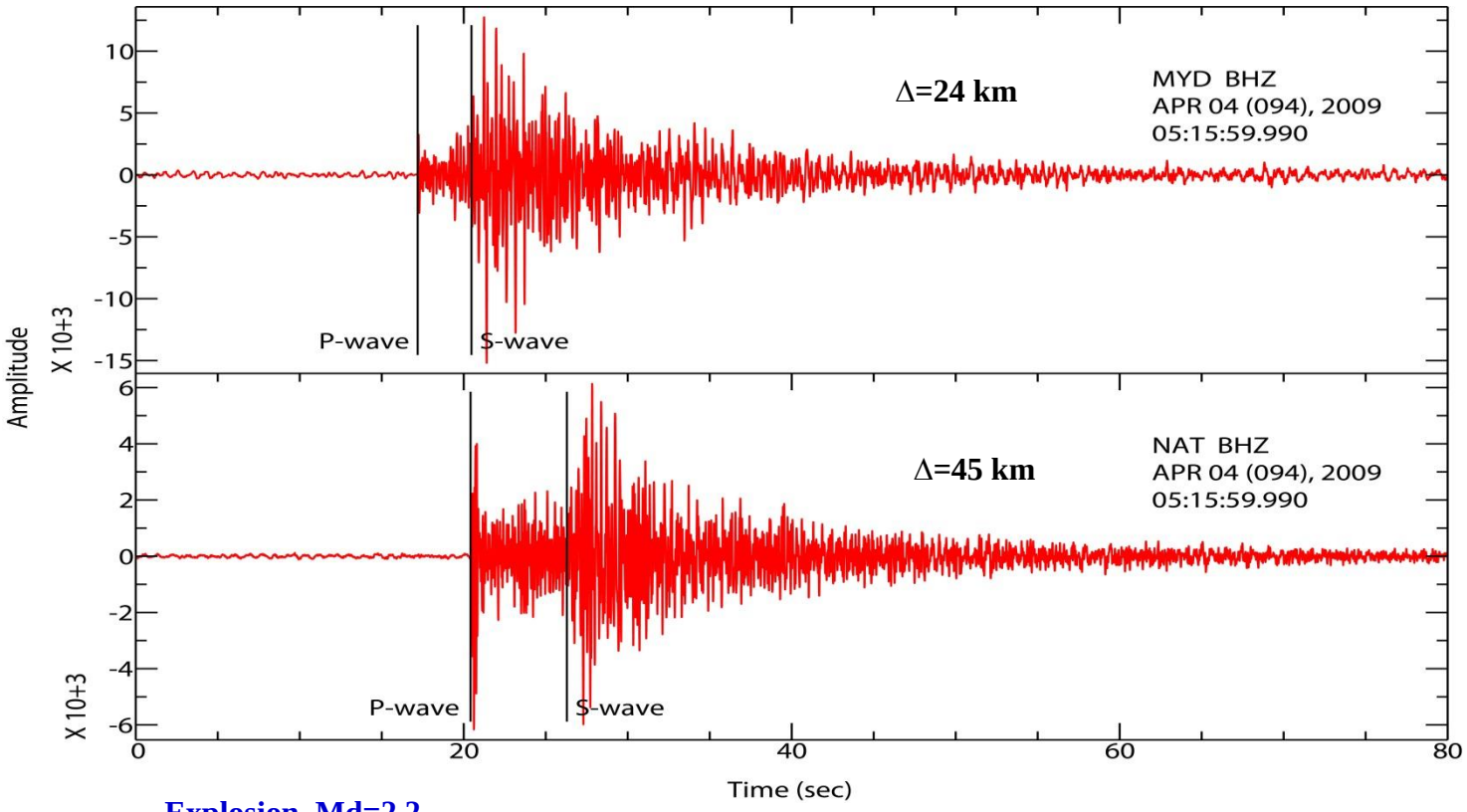
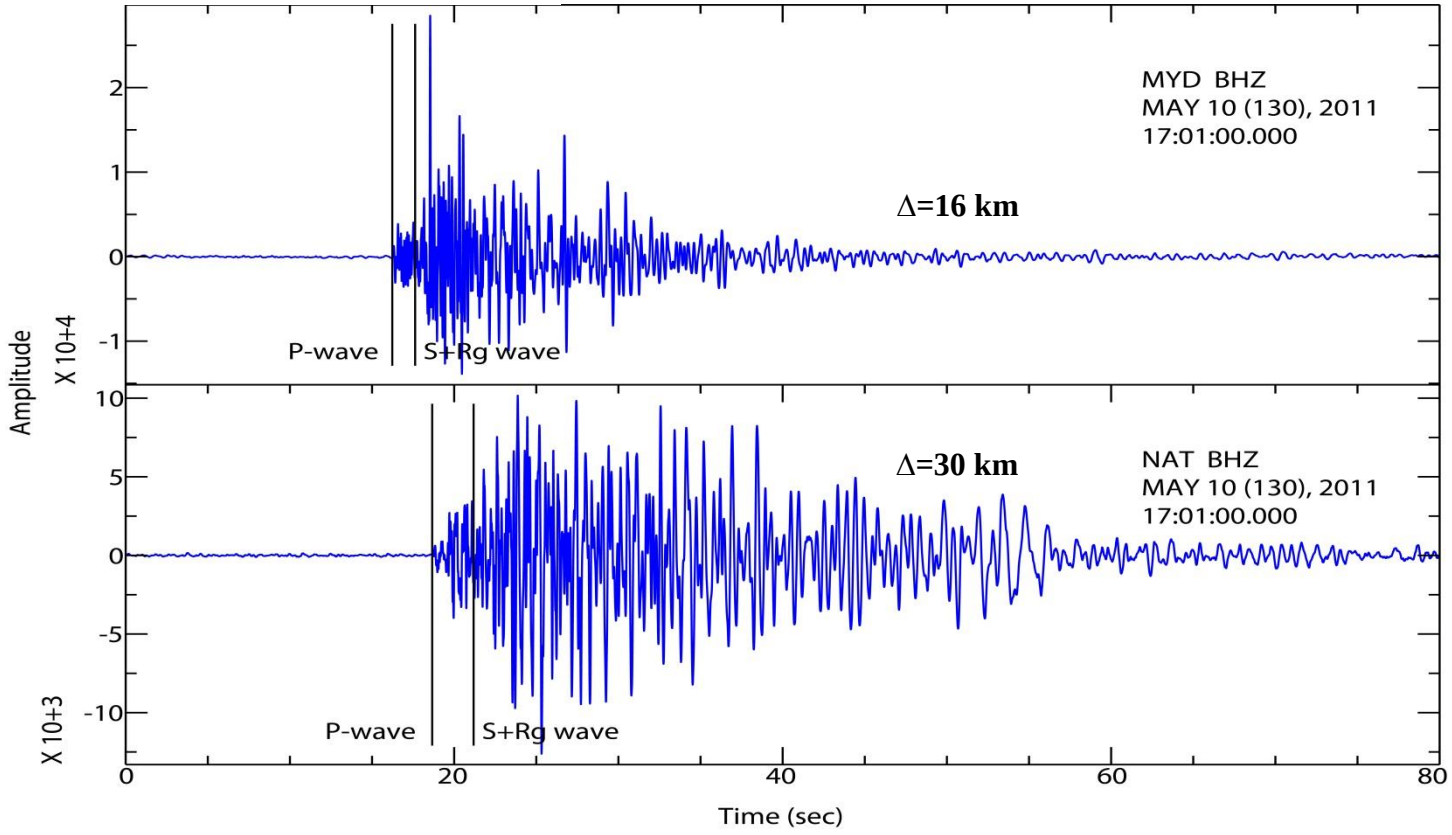


Figure 2: (a) The original vertical component seismograms before data processing of an earthquake of 18.08.2014, Md=2.5 (red) and of a quarry blast of 17.10.2012, Md=2.4 (blue), in subzone 1, Northern region in Figure 2. The arrival of P-wave, S-wave and epicentral distances values Δ of recorded stations (HAG, KOT and SAF) are also shown. The Vertical component velocity seismograms of both earthquake and quarry blast with their corrected P- and S-wave displacement spectra after data processing that calculated from seismograms of the stations: (b) HAG station located at a distance 38 km from the earthquake and 23 km from the quarry blast epicenter, (c) KOT station located at a distance 61 km from the earthquake and 40 km from the quarry blast, and (d) SAF station located at a distance 80 km from the earthquake and 60 km from the quarry blast. The analyzed time windows of P- and S-wave are marked by highlight green rectangles. The best-fitting theoretical Brune's source model is marked in blue. Also, the measured Mo, fc, absolute value of spectral decay slope at high frequencies (P) and moment magnitude Mw are shown. The red line shows the value of the corner frequency fc.

(a) **Earthquake, Md=2.2**

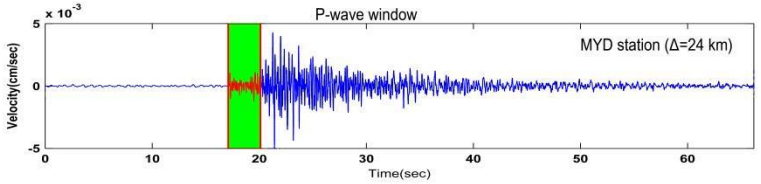


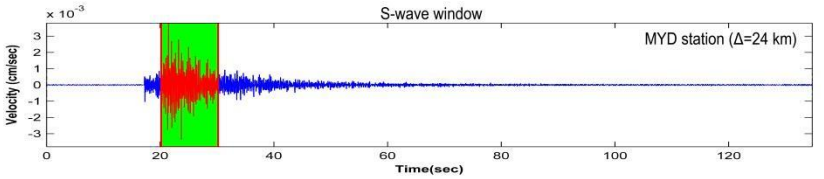
Explosion, Md=2.2

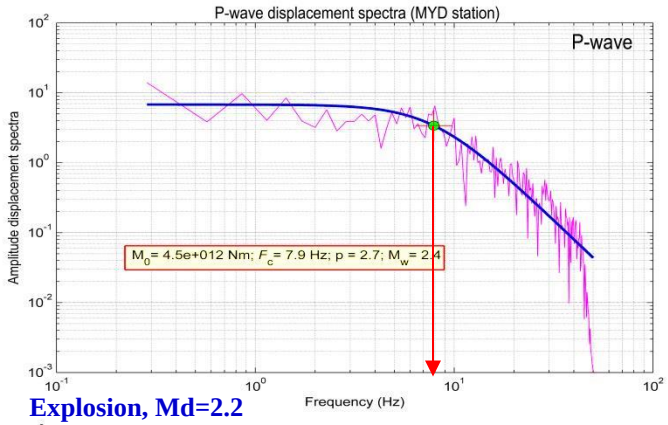


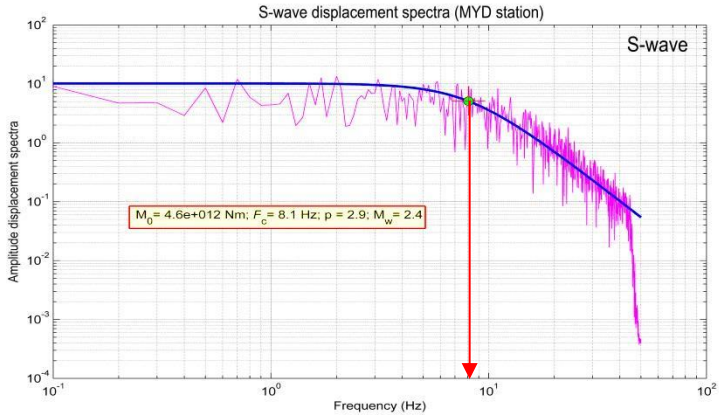
(b)

Earthquake, Md=2.2

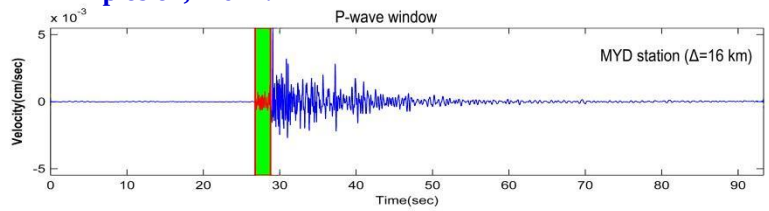


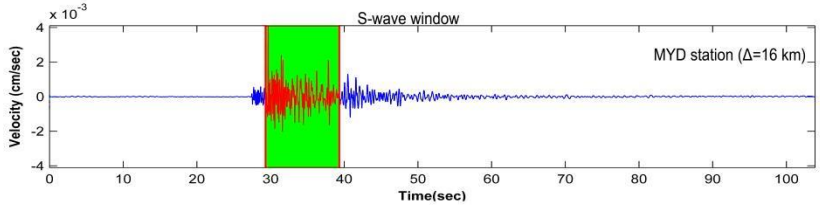


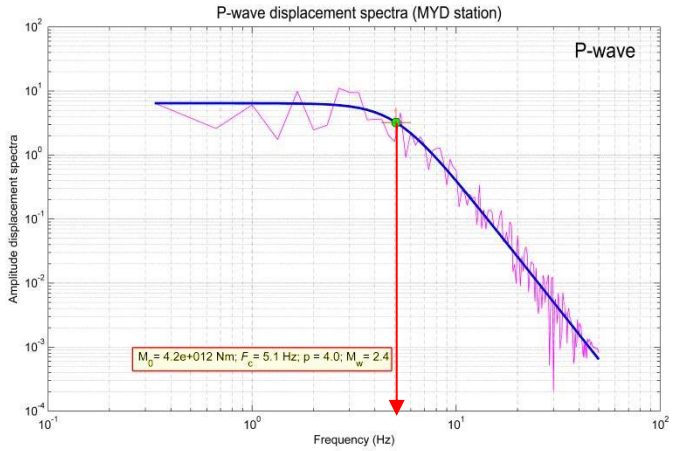


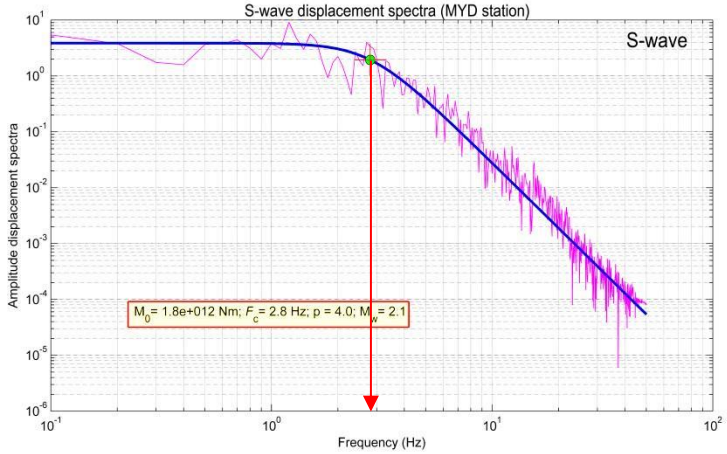


Explosion, Md=2.2



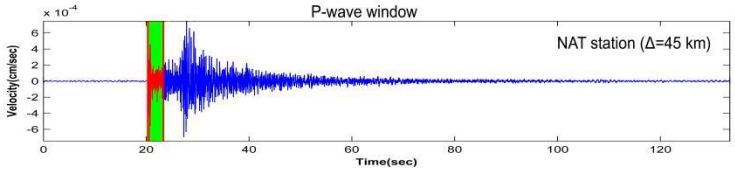


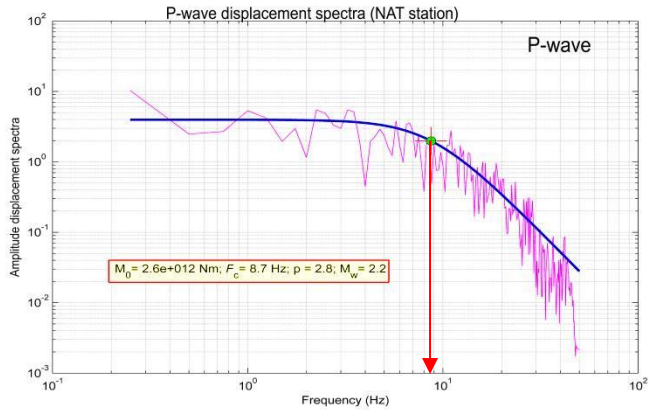


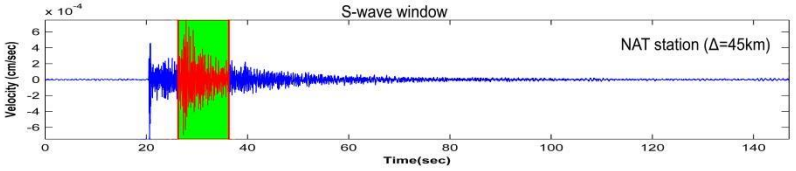


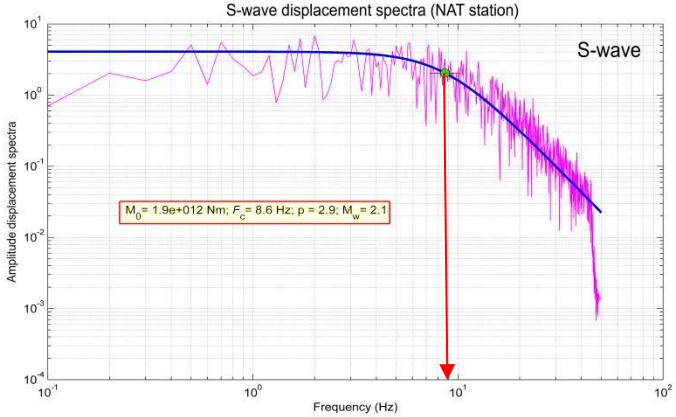
(c)

Earthquake, Md=2.2

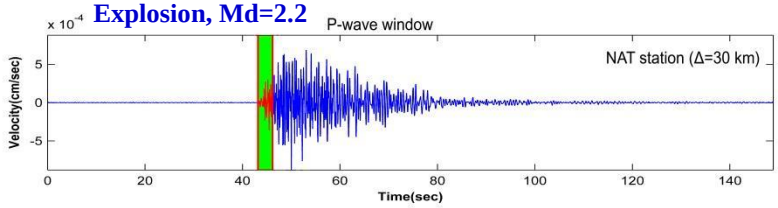


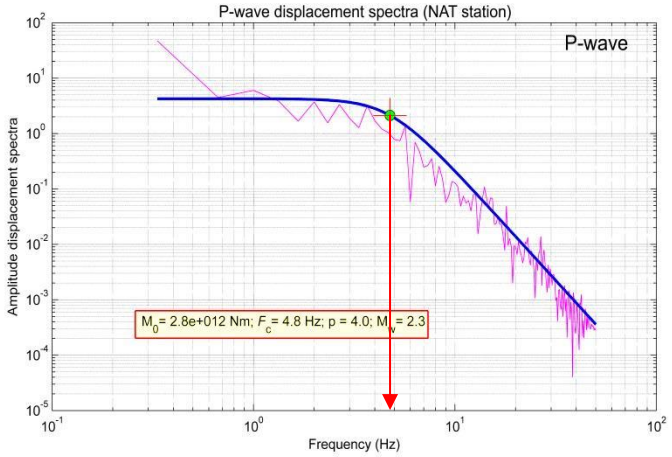


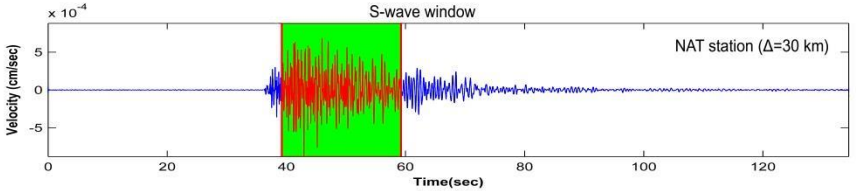




Explosion, Md=2.2







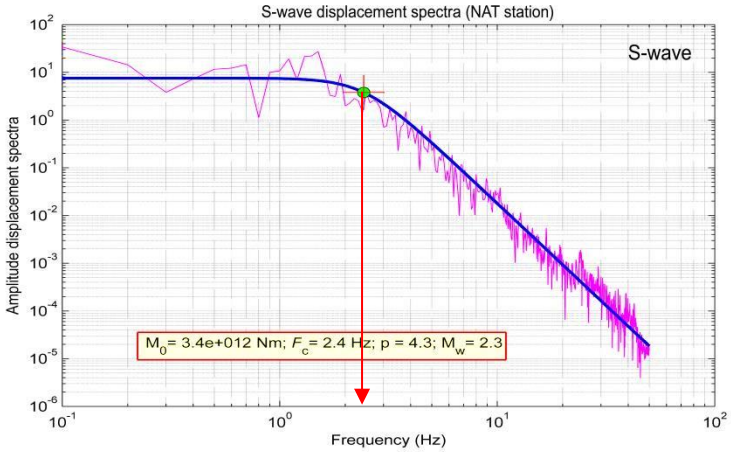
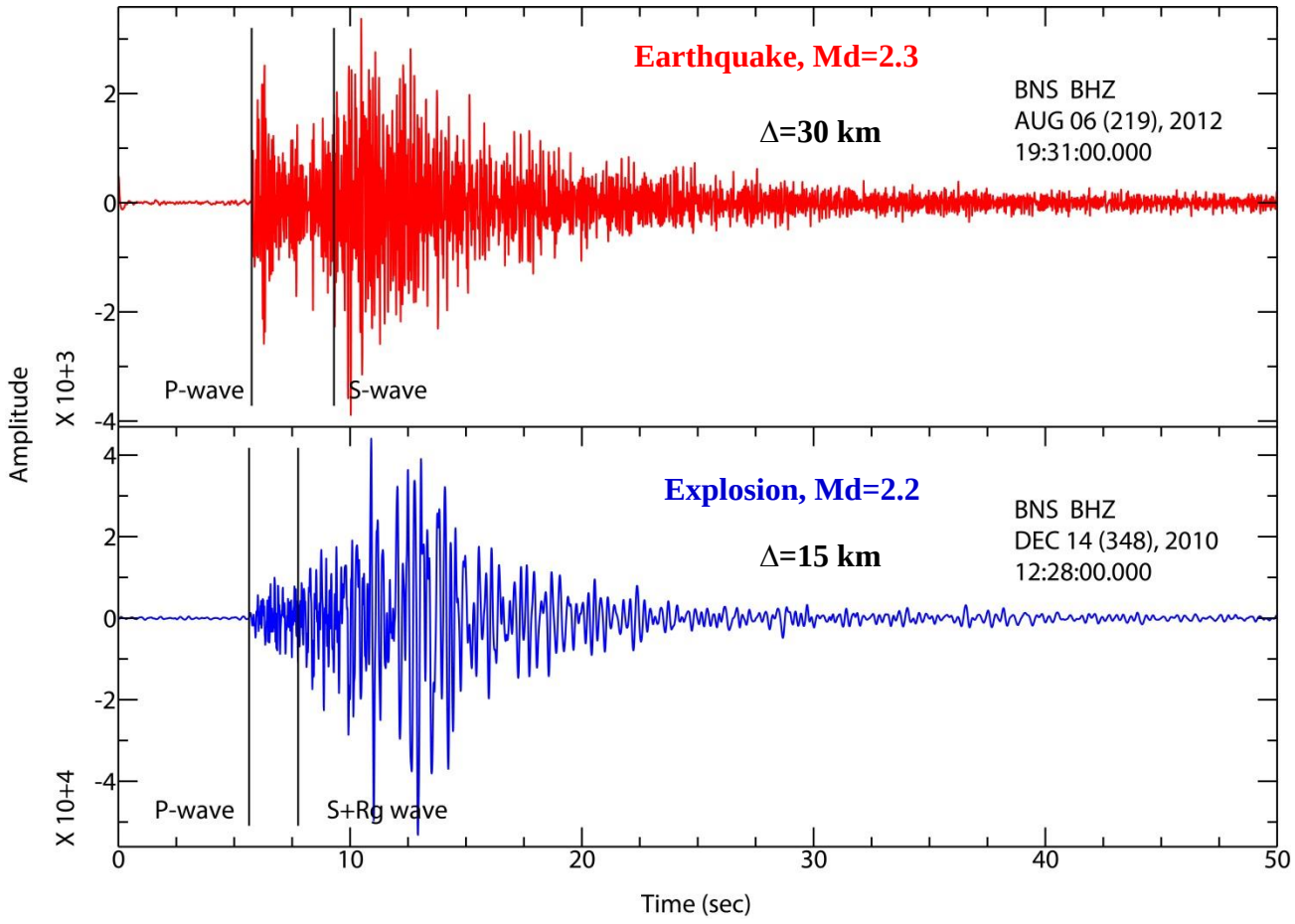


Figure 3: (a) The original vertical component seismograms before data processing of an earthquake of 04.04.2009, Md=2.2 (red) and of a quarry blast of 10.05.2011, Md=2.2 (blue), in subzone 2, Northern region in Figure 2. The arrival of P-wave, S-wave and epicentral distances values Δ of recorded stations (MYD, NAT) are also shown. The Vertical component velocity seismograms of both earthquake and quarry blast with their corrected P- and S-wave displacement spectra after data processing that calculated from seismograms of the stations: (b) MYD station located at a distance 24 km from the earthquake and 16 km from the quarry blast epicenter, (c) NAT station located at a distance 45 km from the earthquake and 30 km from the quarry blast. The analyzed time windows of P- and S-wave are marked by highlight green rectangles. The best-fitting theoretical Brune's source model is marked in blue. Also, the measured Mo, fc, absolute value of spectral decay slope at high frequencies (P) and moment magnitude Mw are shown. The red line shows the value of the corner frequency fc.

(a)


Earthquake, Md=2.3
Δ=30 km
BNS BHZ
AUG 06 (219), 2012
19:31:00.000
P-wave
S-wave
Explosion, Md=2.2
Δ=15 km
BNS BHZ
DEC 14 (348), 2010
12:28:00.000
P-wave
S+Rg wave
Amplitude
X 10+3
X 10+4
Time (sec)

(b) **Earthquake, Md=2.3**

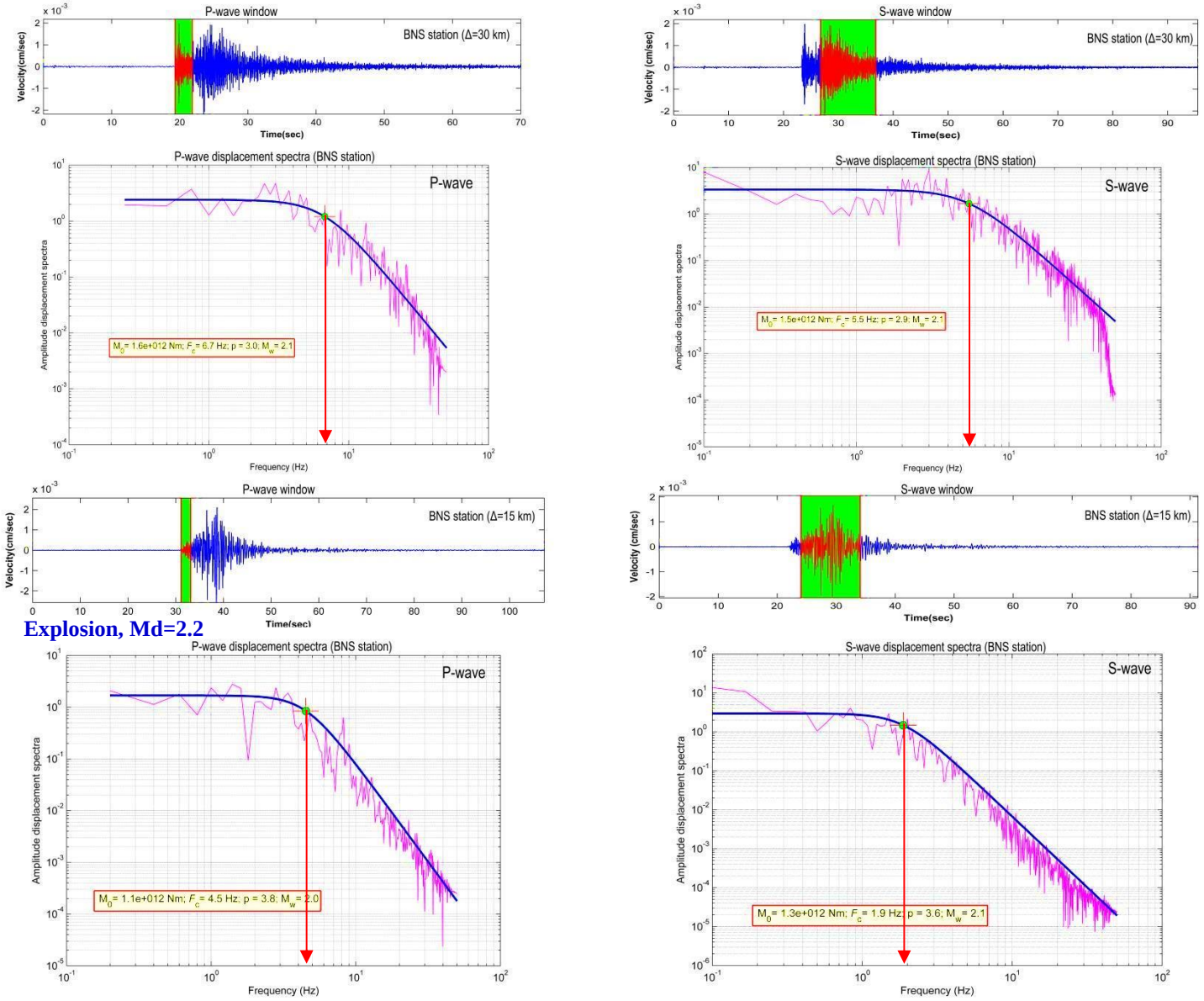
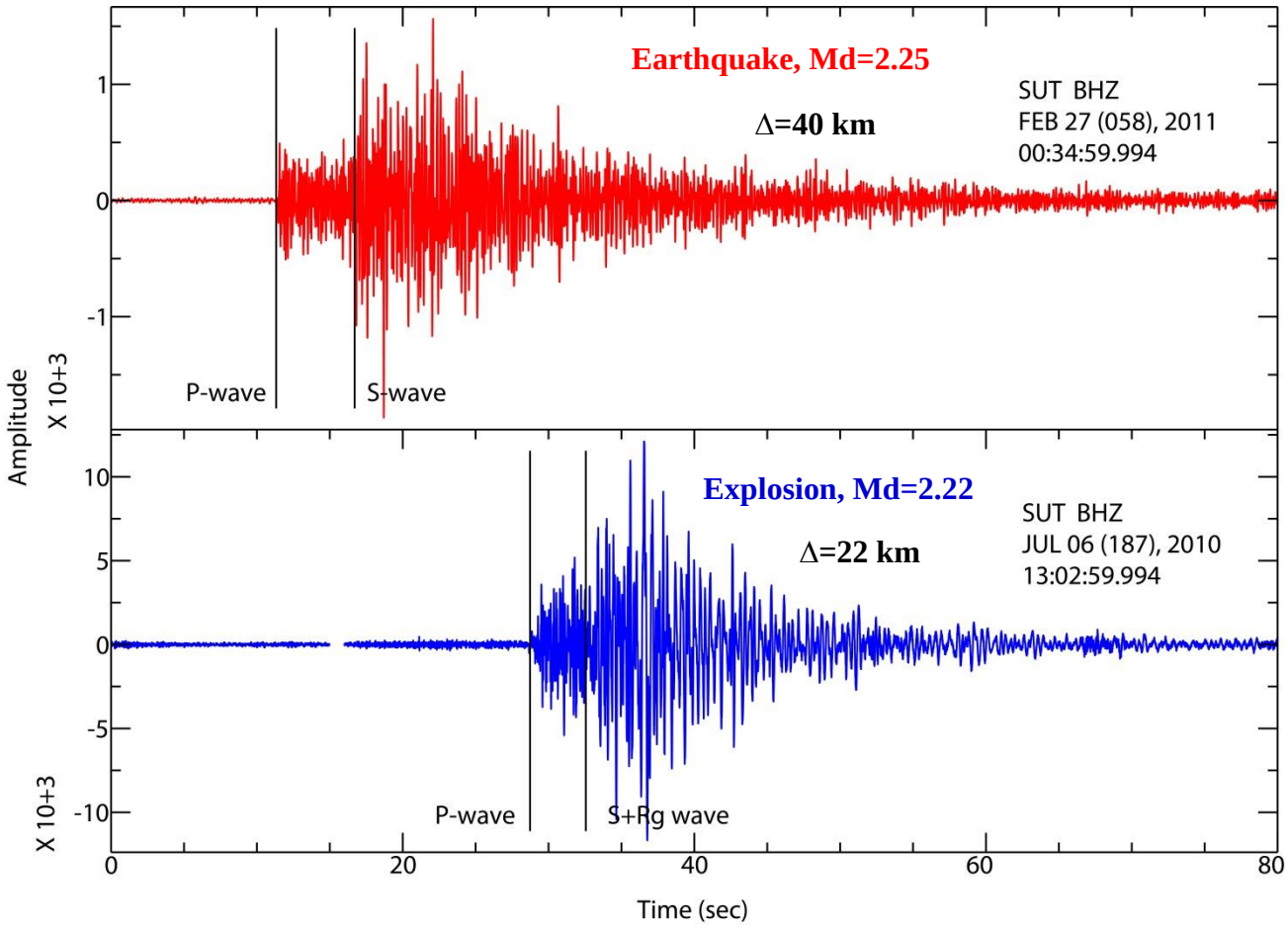


Figure 4: (a) The original vertical component seismograms before data processing of an earthquake of 06.08.2012, Md=2.3 (red) and of a quarry blast of 14.12.2010, Md=2.2 (blue), in subzone 3, Northern region in Figure 2. The arrival of P-wave, S-wave and epicentral distances values Δ of recorded BNS station are also shown. (b) The Vertical component velocity seismograms of both earthquake and quarry blast with their corrected P- and S-wave displacement spectra after data processing that calculated from seismograms of BNS station located at a distance 30 km from the earthquake and 15 km from the quarry blast epicenter. The analyzed time windows of P- and S-wave are marked by highlight green rectangles. The best-fitting theoretical Brune's source model is marked in blue. Also, the measured Mo, fc, absolute value of spectral decay slope at high frequencies (P) and moment magnitude Mw are shown. The red line shows the value of the corner frequency fc.

(a)


Earthquake, Md=2.25
Δ=40 km
SUT BHZ
FEB 27 (058), 2011
00:34:59.994
P-wave
S-wave
Explosion, Md=2.22
Δ=22 km
SUT BHZ
JUL 06 (187), 2010
13:02:59.994
P-wave
S+Rg wave
Amplitude
X 10+3
X 10+3
Time (sec)

(b) **Earthquake, Md=2.25**

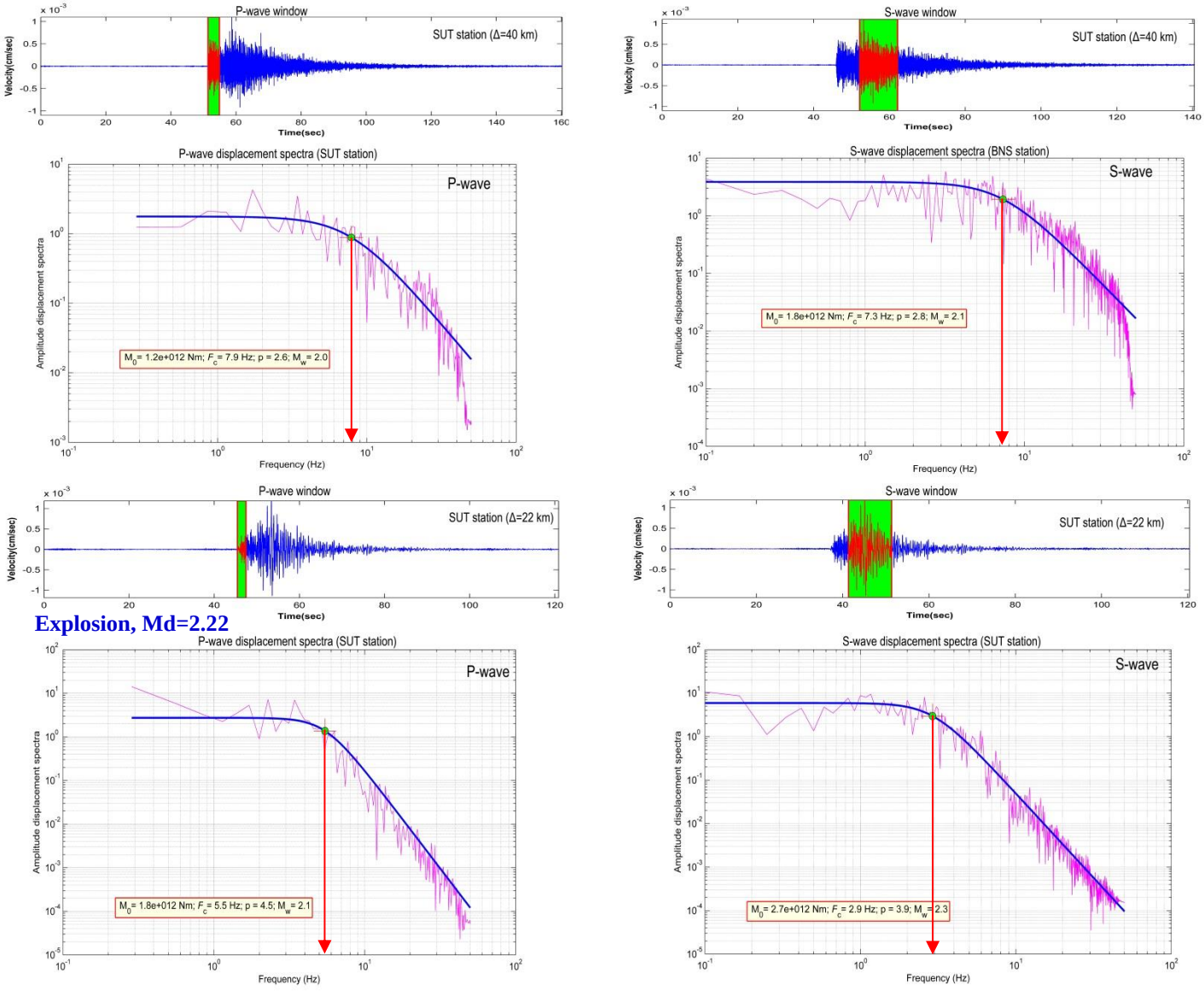
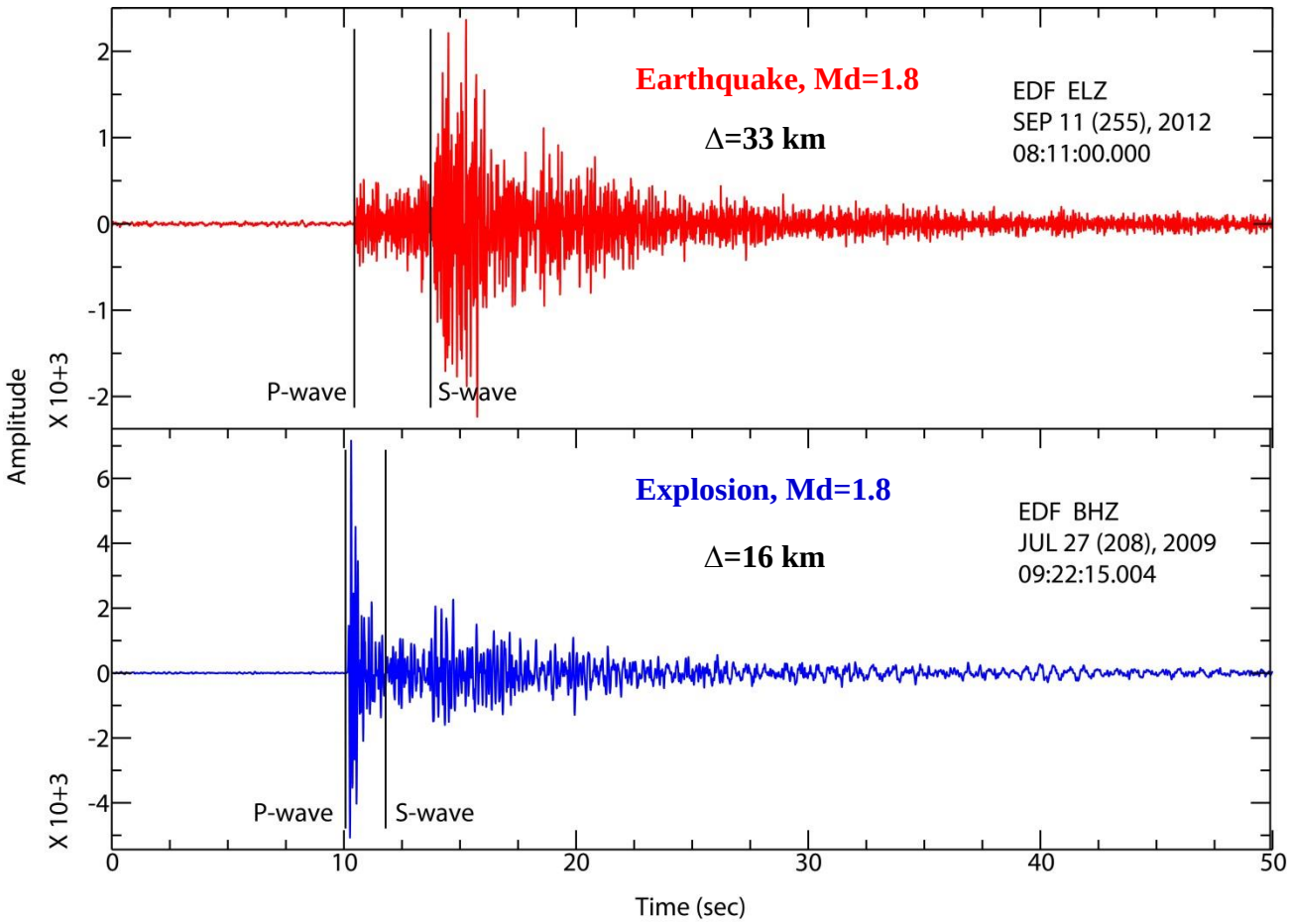


Figure 5: (a) The original vertical component seismograms before data processing of an earthquake of 27.02.2011, Md=2.25 (red) and of a quarry blast of 06.07.2010, Md=2.22 (blue), in subzone 4, Central region in Figure 2. The arrival of P-wave, S-wave and epicentral distances values Δ of recorded SUT station are also shown. (b) The Vertical component velocity seismograms of both earthquake and quarry blast with their corrected P- and S-wave displacement spectra after data processing that calculated from seismograms of SUT station located at a distance 40 km from the earthquake and 22 km from the quarry blast epicenter. The analyzed time windows of P- and S-wave are marked by highlight green rectangles. The best-fitting theoretical Brune's source model is marked in blue. Also, the measured Mo, fc, absolute value of spectral decay slope at high frequencies (P) and moment magnitude Mw are shown. The red line shows the value of the corner frequency fc.

(a)


Earthquake, Md=1.8
Δ=33 km
EDF ELZ
SEP 11 (255), 2012
08:11:00.000
P-wave
S-wave
Explosion, Md=1.8
Δ=16 km
EDF BHZ
JUL 27 (208), 2009
09:22:15.004
P-wave
S-wave
Amplitude
X 10+3
X 10+3
Time (sec)

(b)

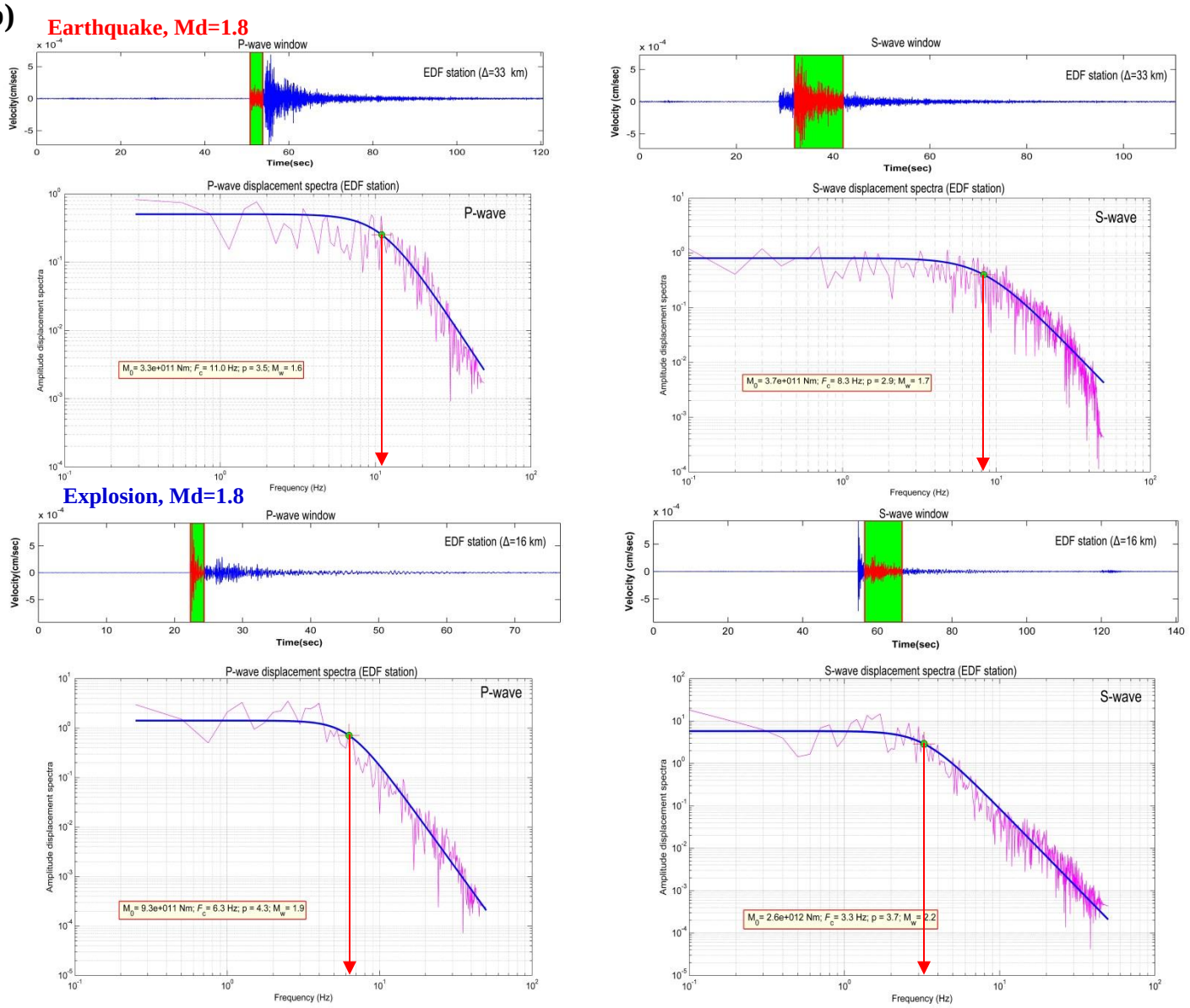


Figure 6: (a) The original vertical component seismograms before data processing of an earthquake of 11.09.2012, Md=1.8 (red) and of a quarry blast of 27.07.2009, Md=1.8 (blue), in subzone 5, Central region in Figure 2. The arrival of P-wave, S-wave and epicentral distances values Δ of recorded EDF station are also shown. (b) The Vertical component velocity seismograms of both earthquake and quarry blast with their corrected P- and S-wave displacement spectra after data processing that calculated from seismograms of EDF station located at a distance 33 km from the earthquake and 16 km from the quarry blast epicenter. The analyzed time windows of P- and S-wave are marked by highlight green rectangles. The best-fitting theoretical Brune's source model is marked in blue. Also, the measured Mo, fc, absolute value of spectral decay slope at high frequencies (P) and moment magnitude Mw are shown. The red line shows the value of the corner frequency fc.