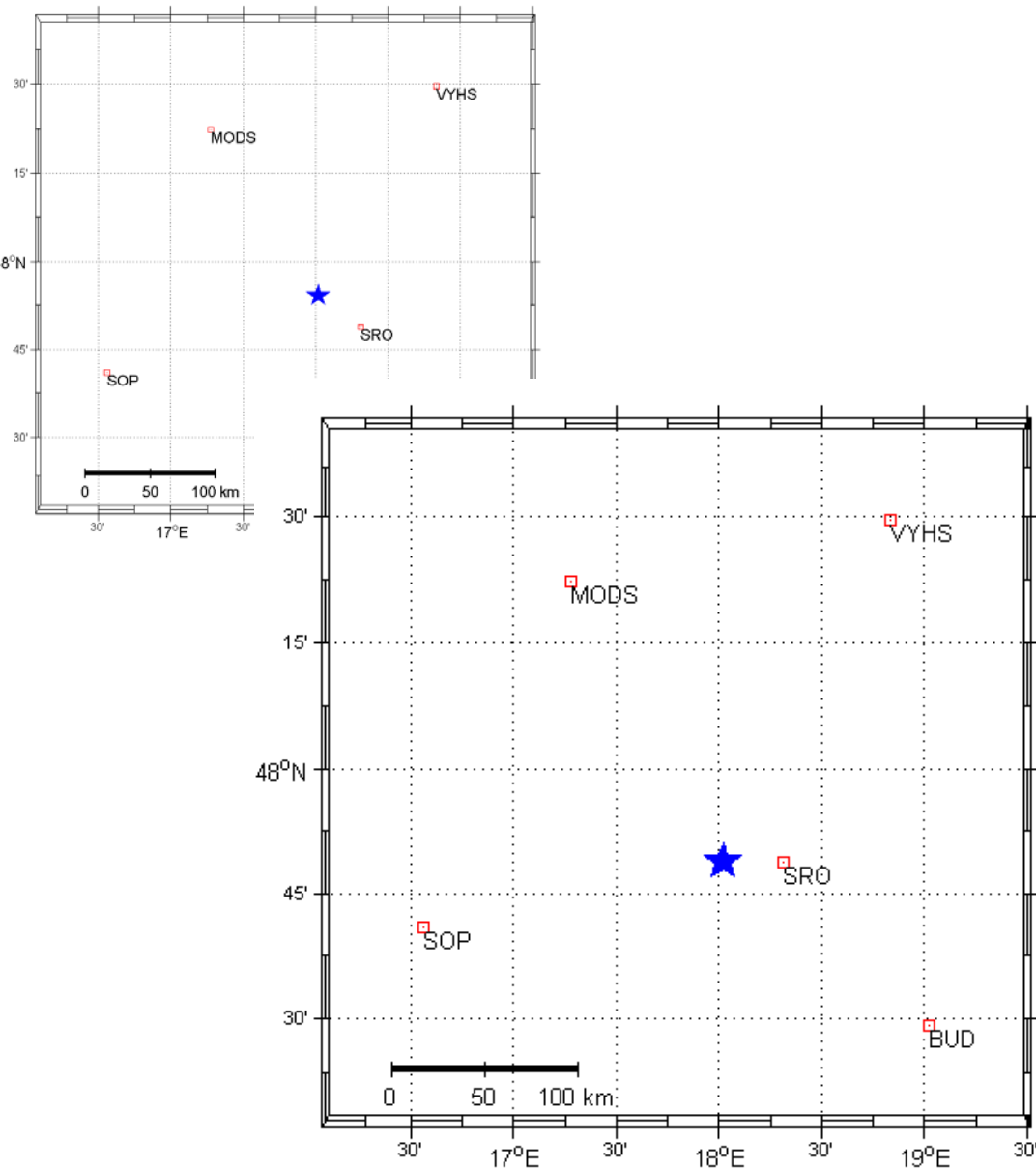


Lucia Fojtikova

Institute of Rock Structure and Mechanics
of the ASCR, v. v. i.,
Prague, Czech Republic

fojtikova@irms.cas.cz

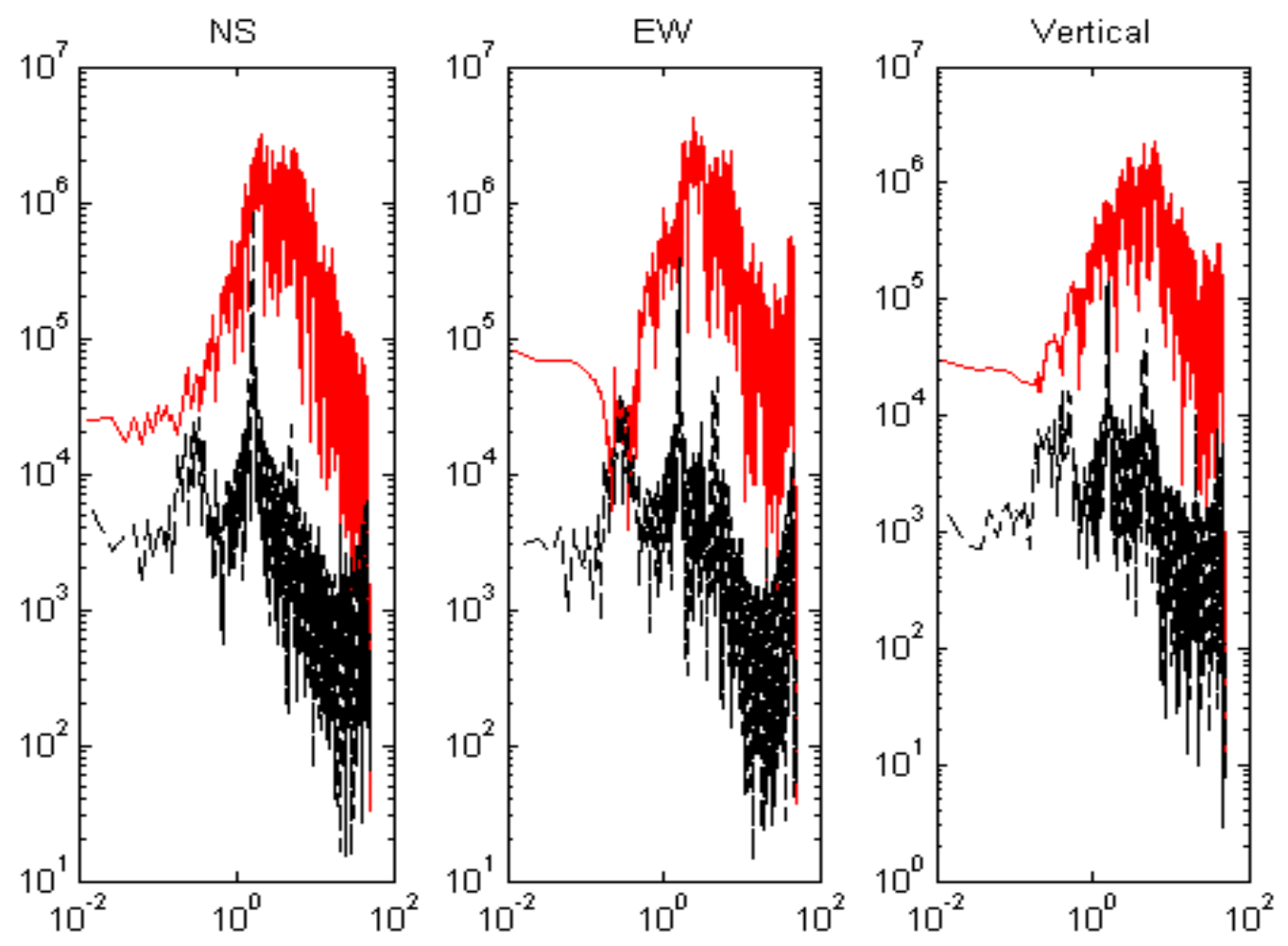


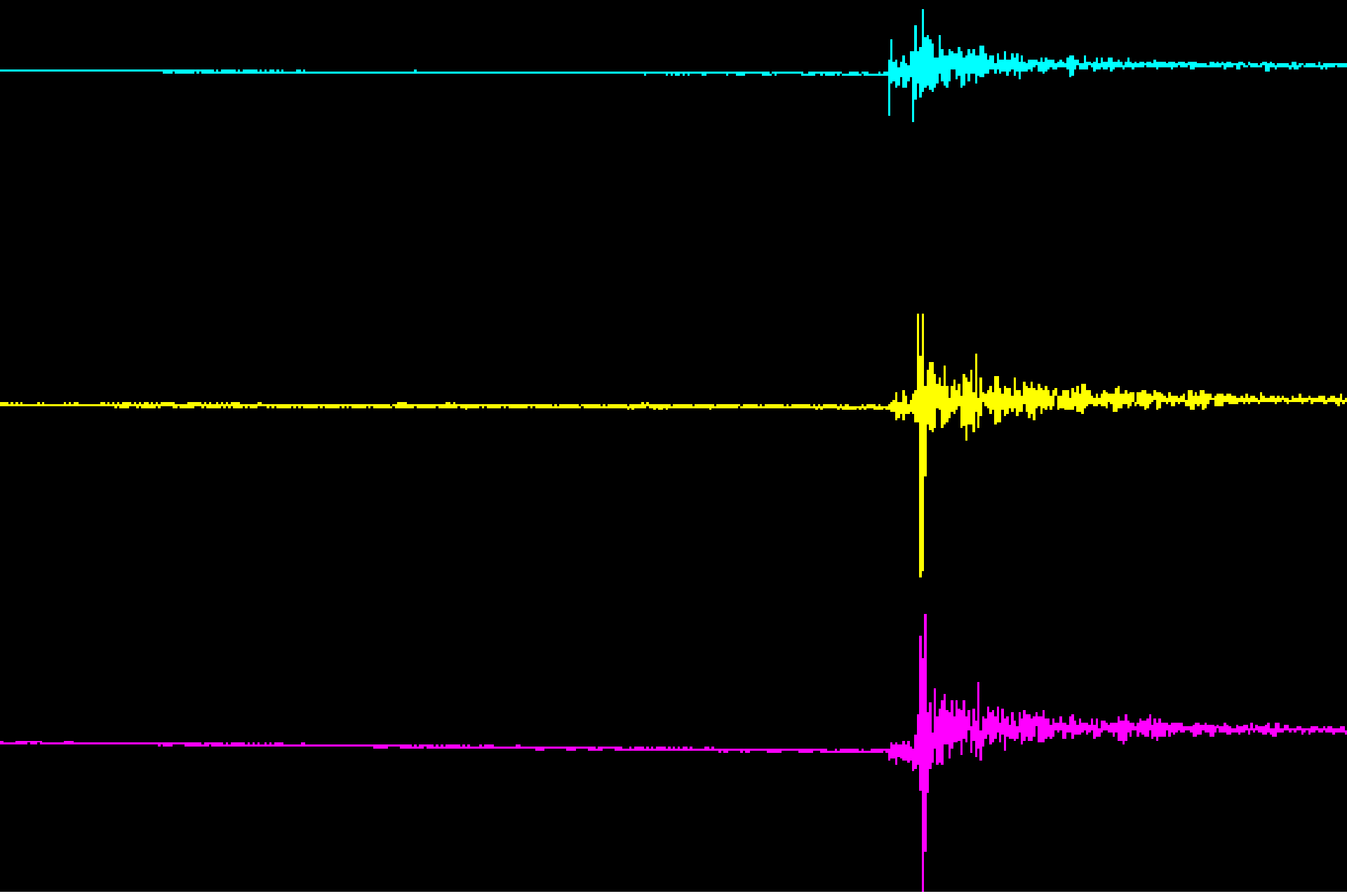
OT = OT -20s

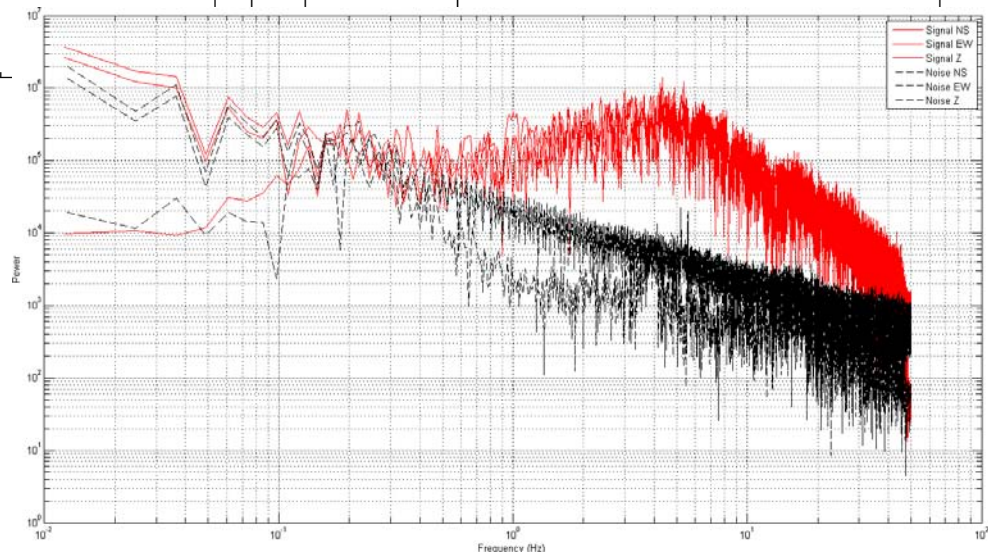
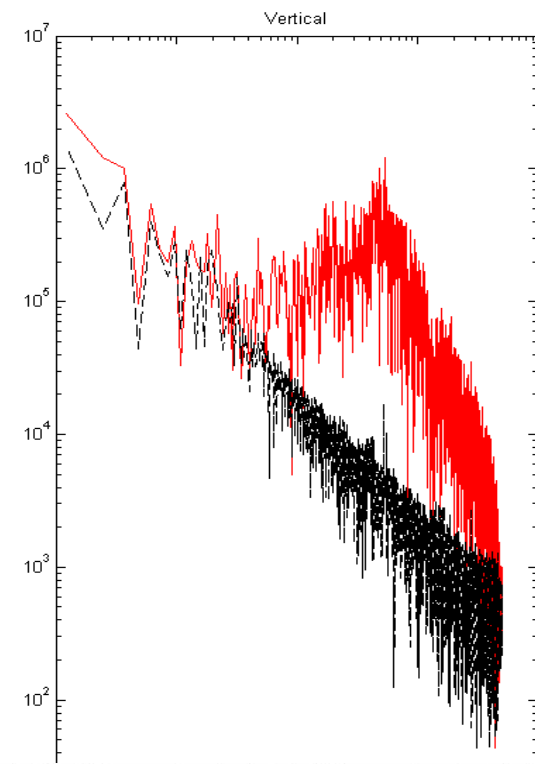
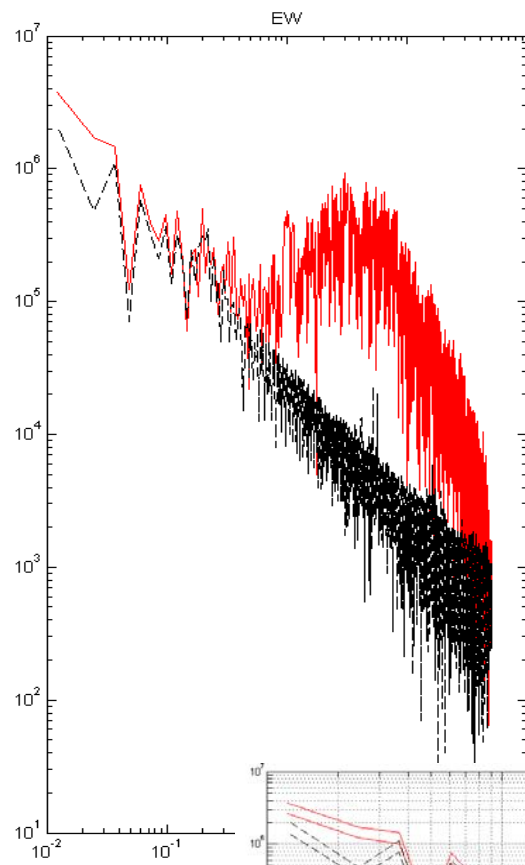
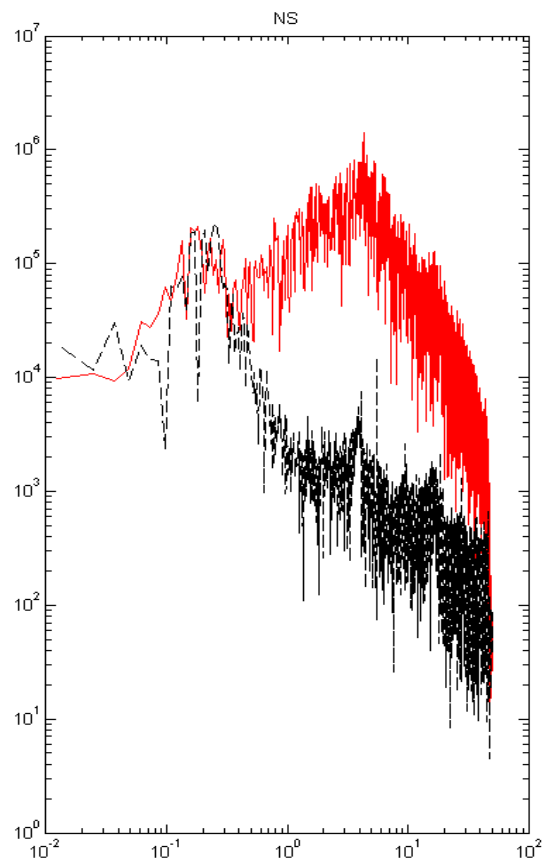
eventinfo

Date Date (YYYYMMDD) 20130117	Location Lat (Deg,Min) 38.00 50.00 DDMM->DDEG		Lat (N) (Dec.Degrees) 47.8133	Depth (km) 10
Origin Time Hour 10 Min 50 Seconds 40.00	Lon (Deg,Min) 21.00 50.00		Lon (E) (Dec.Degrees) 18.021	
Time Window Length (sec) 16.384 40.96 81.92 163.84 245.76 327.68 409.6 819.2 1638.4		Comments Maqnitute 2.9 Location agency BRA		
Automatic form fill e.g. 20100118 1556 8.38 38 25.19 21E55.44 8.29 5.23 Paste your EventInfo here				

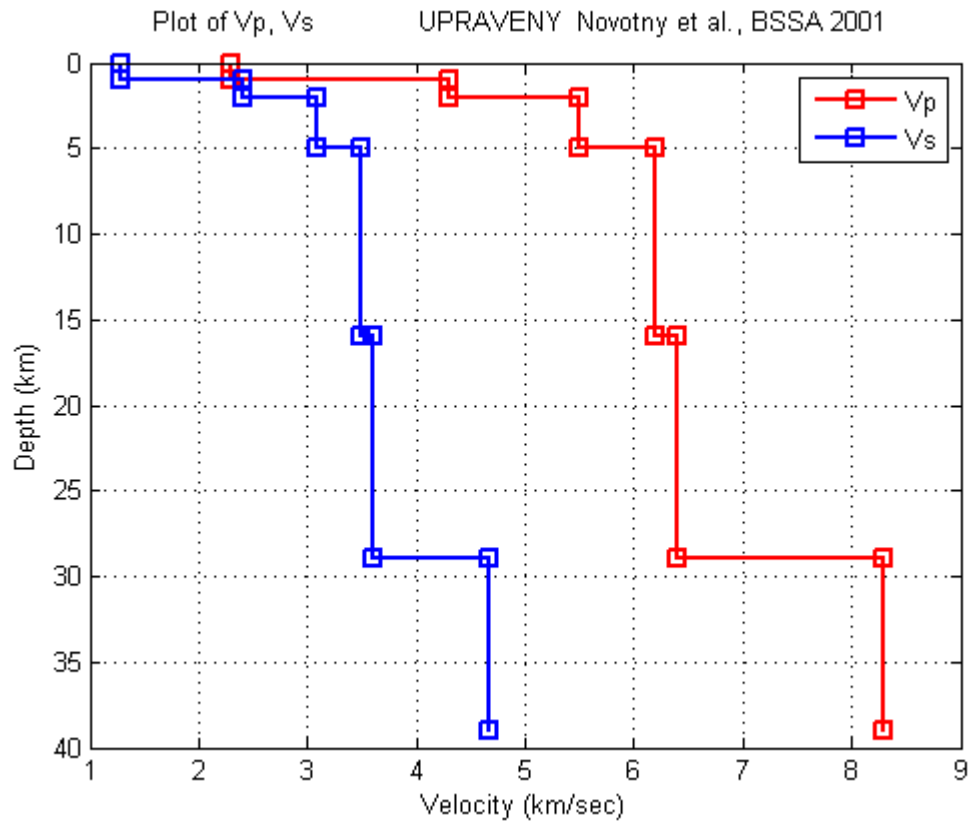
Epicenter shifted to agree with particle motion SRO







Green functions



Moho 29km

Green functions -> 1.4Hz

Starting depth (km)

Depth step (km)

No of Sources (< 99)

Calculate

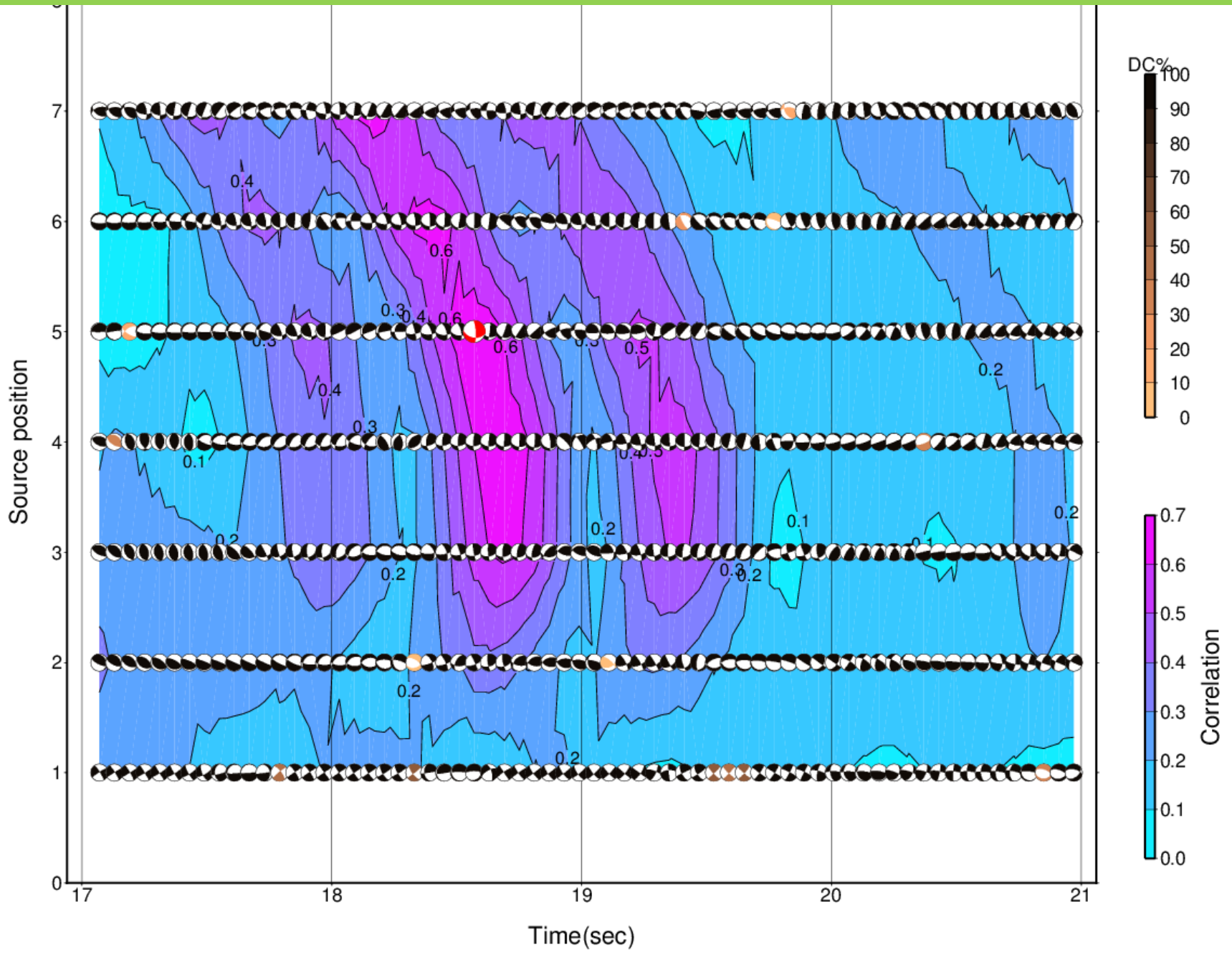
Exit

Figure 2: Select Stations - Filters

Stations	Components				f1	f2	f3	f4
SRO	<input checked="" type="checkbox"/> Use Station	<input checked="" type="checkbox"/> Use NS	<input checked="" type="checkbox"/> Use EW	<input checked="" type="checkbox"/> Use Z	0.4	0.4	1	1
MODS	<input checked="" type="checkbox"/> Use Station	<input type="checkbox"/> Use NS	<input checked="" type="checkbox"/> Use EW	<input checked="" type="checkbox"/> Use Z	0.7	0.7	1.2	1.2
BUD	<input checked="" type="checkbox"/> Use Station	<input type="checkbox"/> Use NS	<input type="checkbox"/> Use EW	<input checked="" type="checkbox"/> Use Z	0.4	0.4	1	1
VYHS	<input type="checkbox"/> Use Station	<input checked="" type="checkbox"/> Use NS	<input checked="" type="checkbox"/> Use EW	<input checked="" type="checkbox"/> Use Z	0.4	0.4	1	1
SOP	<input checked="" type="checkbox"/> Use Station	<input checked="" type="checkbox"/> Use NS	<input checked="" type="checkbox"/> Use EW	<input checked="" type="checkbox"/> Use Z	0.4	0.4	1	1

Exit Update and Exit

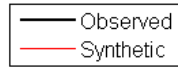
Inversion: **DC- constrained!**



All stations

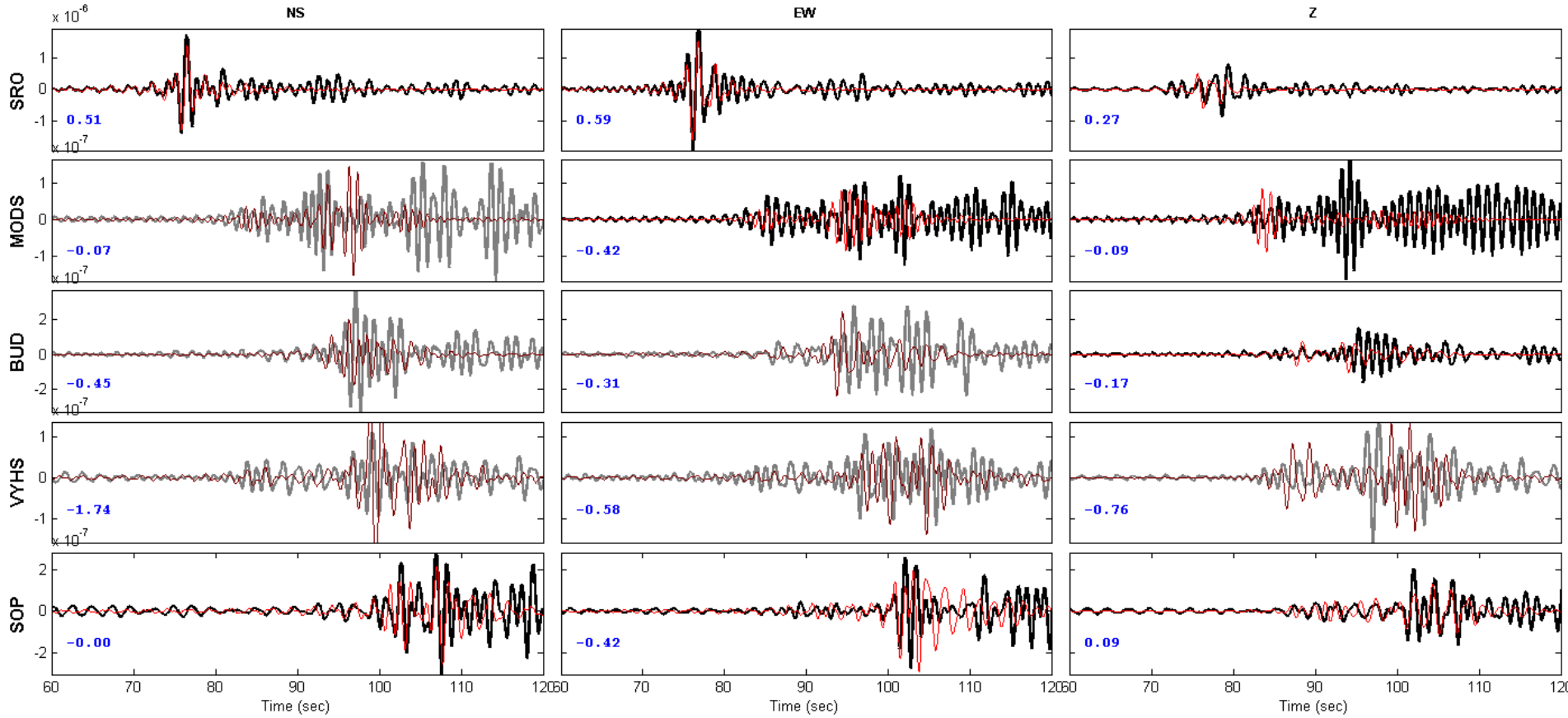
Event date-time: 130117_10_50_40.00

Displacement (m). Inversion band (Hz) 0.4 0.4 1 1

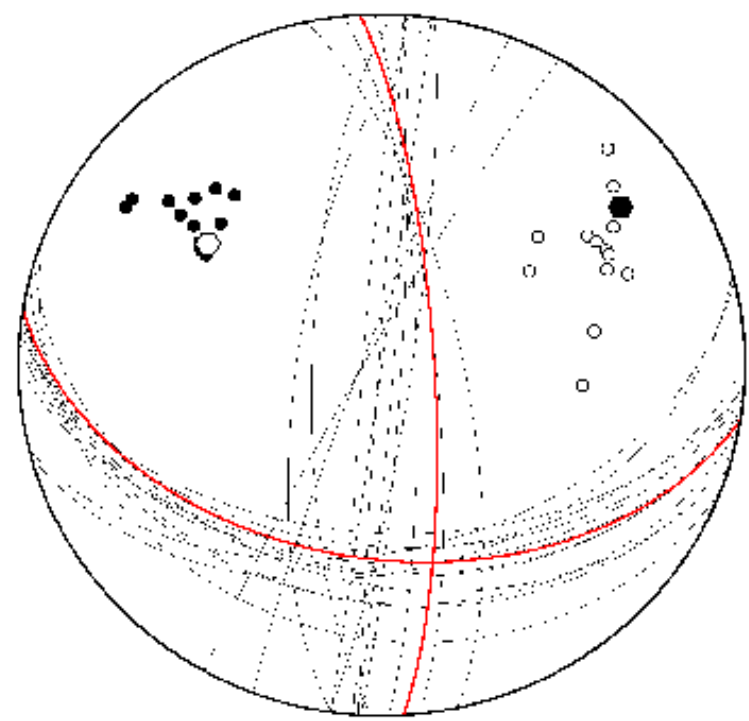
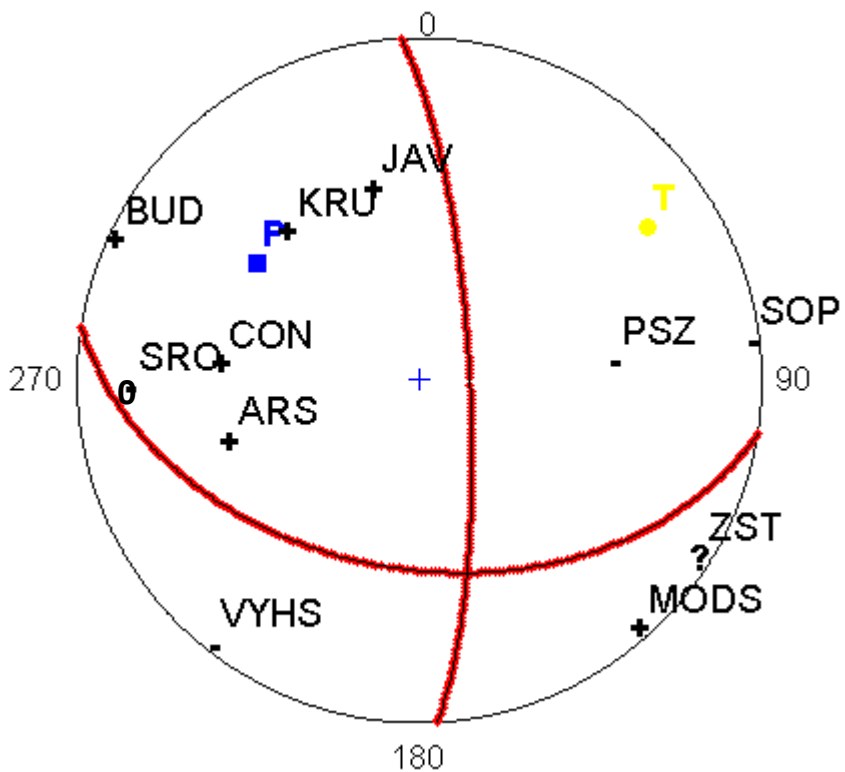


Gray waveforms weren't used in inversion.

Blue numbers are variance reduction

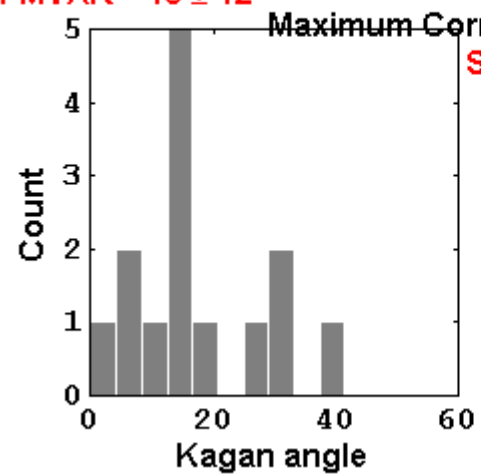


All stations



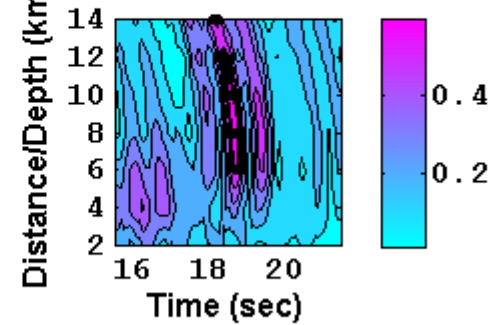
le for reference solution STR = 99 DIP = 44 RAKE = -163
 58 STD = 11.82 Median = 14.58 Var = 139.65

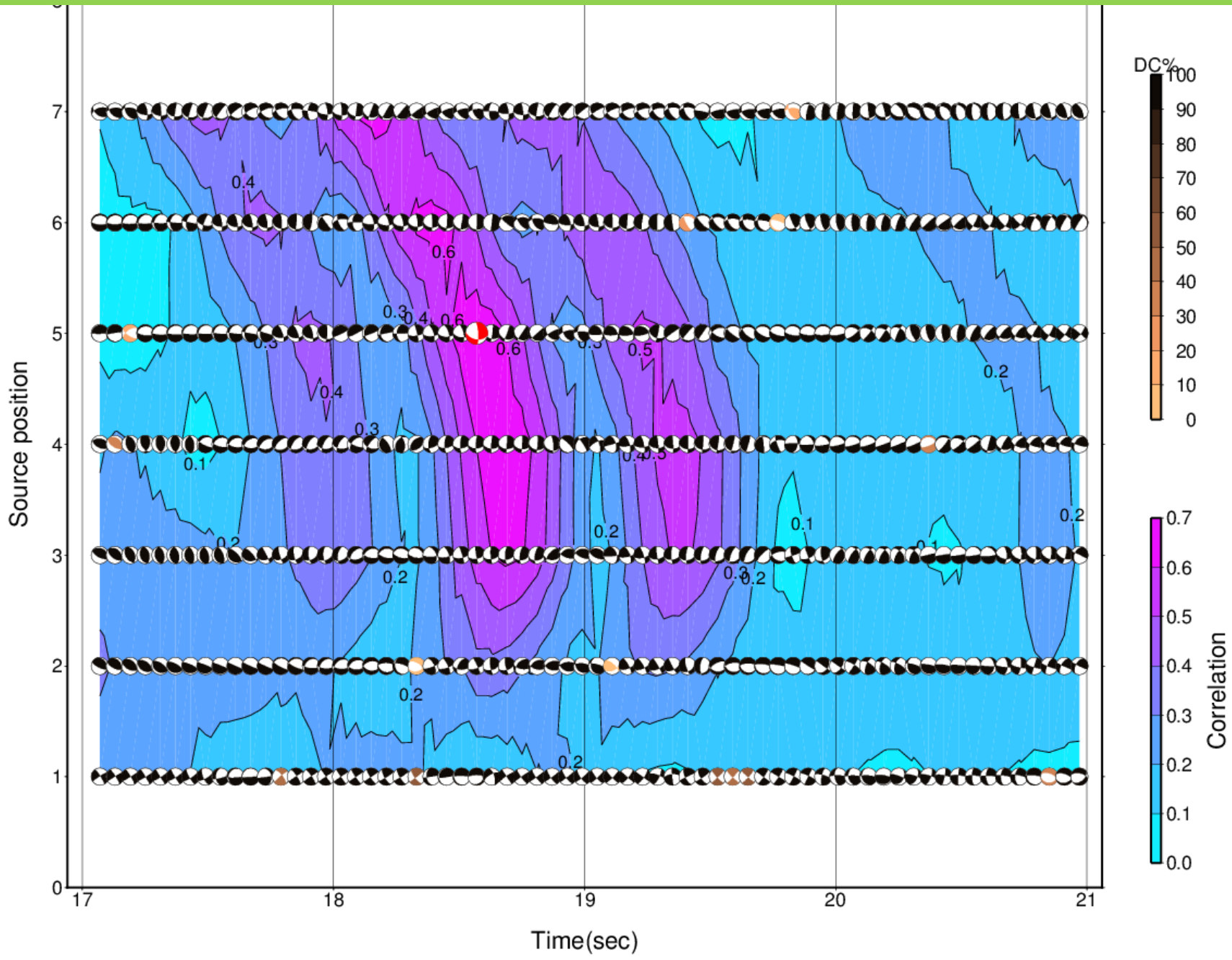
FMVAR = 18 ± 12



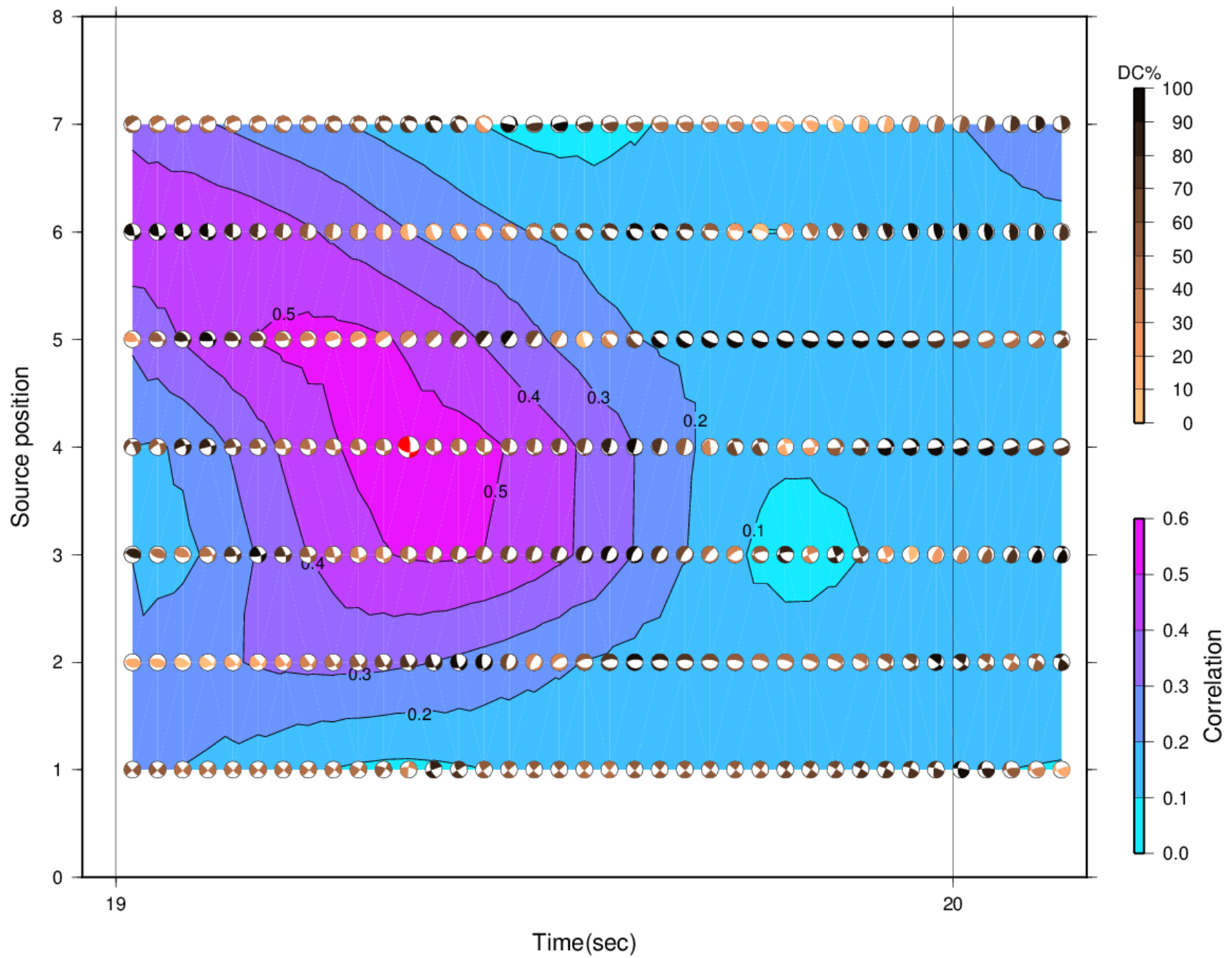
Maximum Correlation = 0.67 Correlation Threshold =

STVAR = 0.02





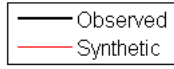
All station – selected interval



All station – selected interval

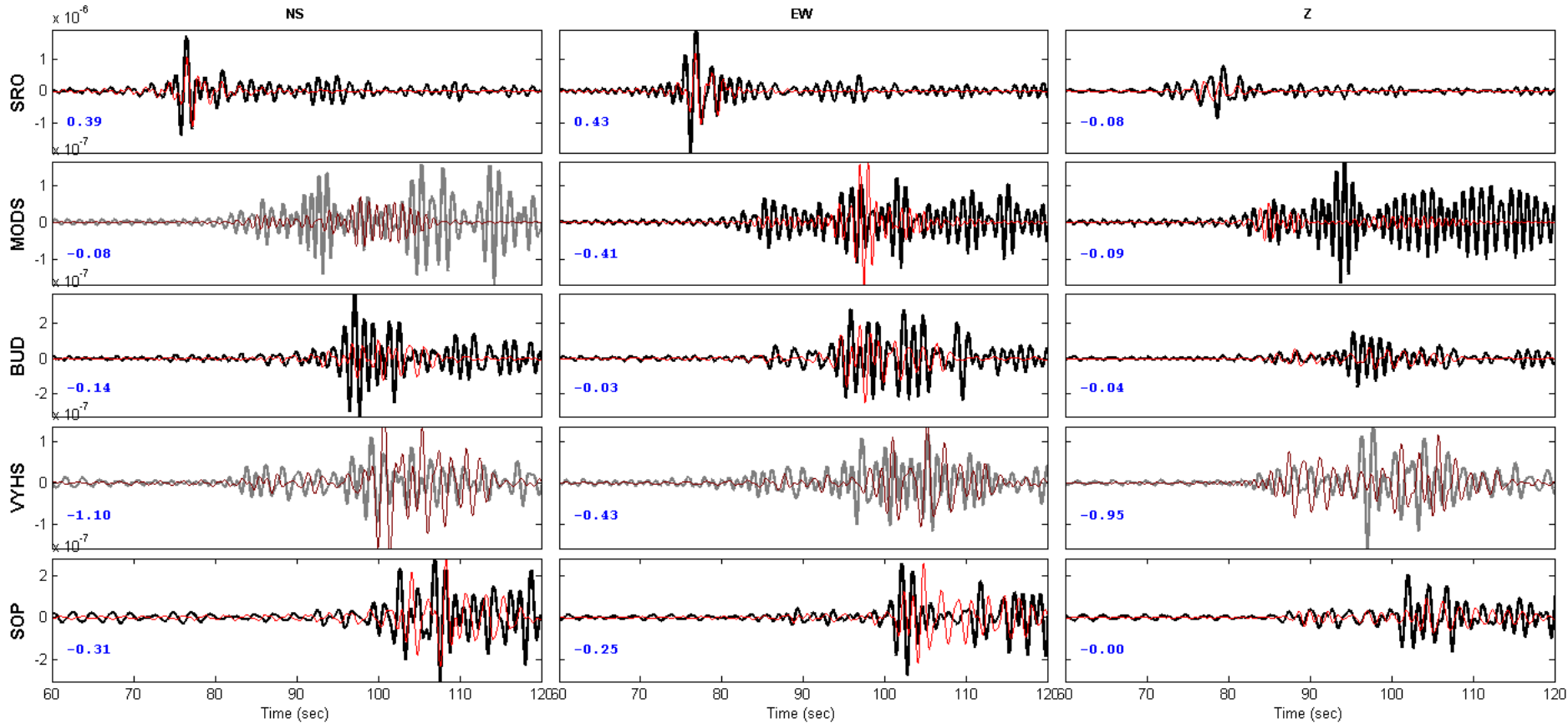
Event date-time: 130117_10_50_40.00

Displacement (m). Inversion band (Hz) 0.4 0.4 1 1

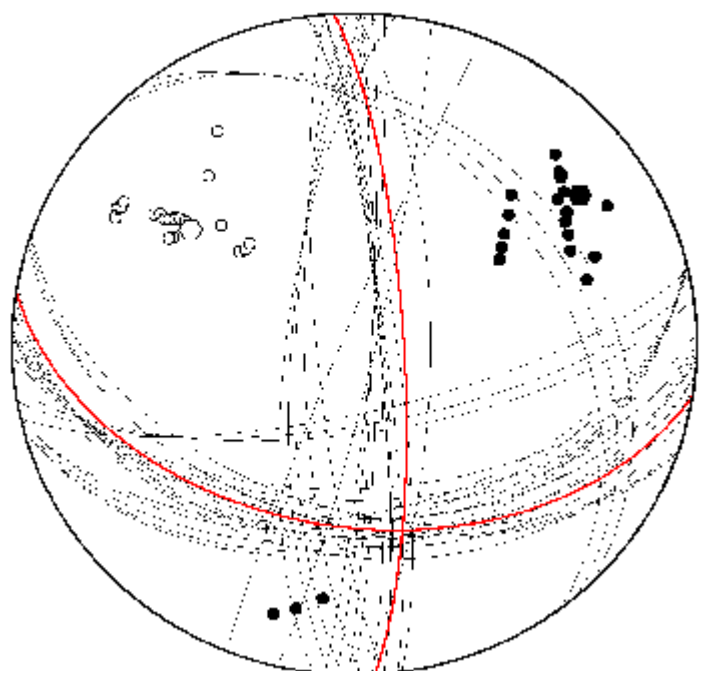
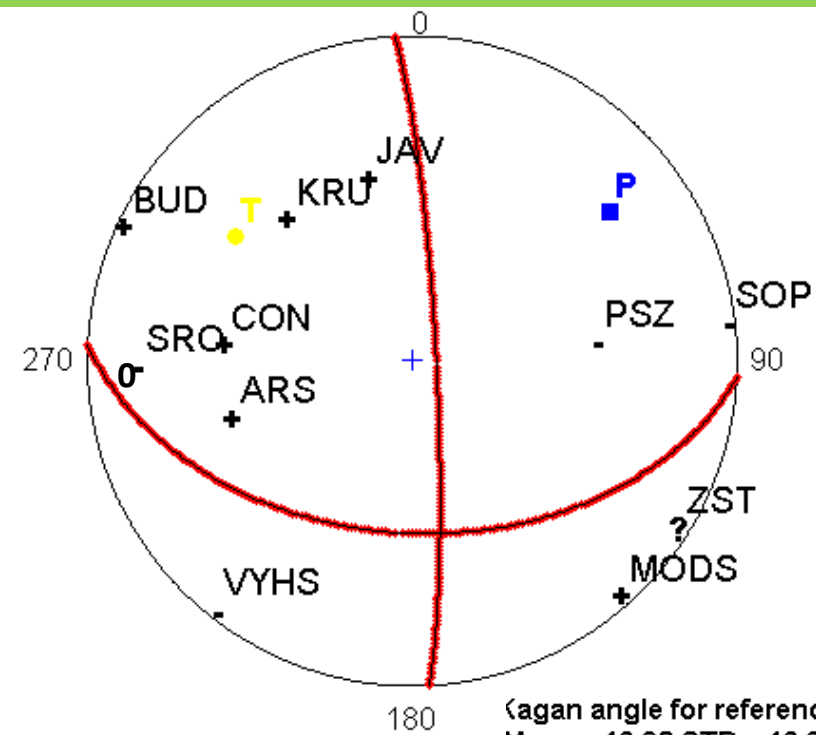


Gray waveforms weren't used in inversion.

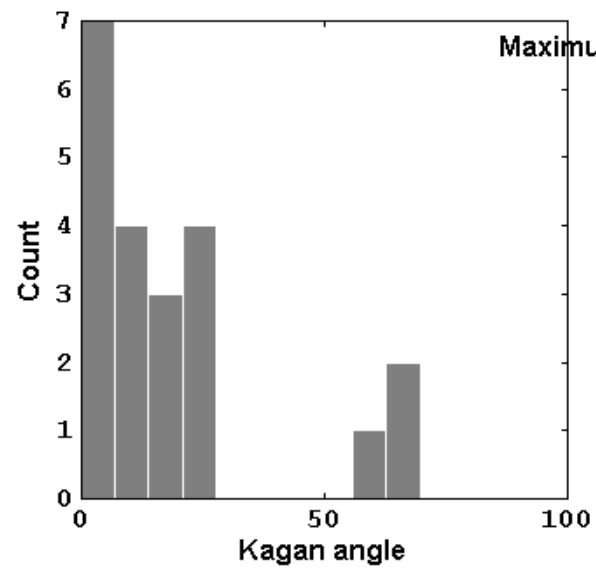
Blue numbers are variance reduction



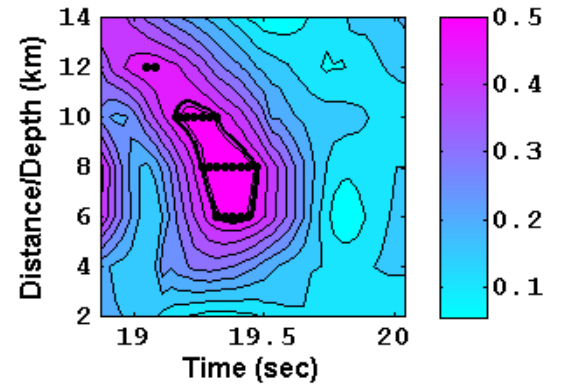
All station – selected time interval




Kagan angle for reference solution STR = 357 DIP = 84 RAKE = 136
 Mean = 19.86 STD = 19.99 Median = 13.48 Var = 399.71
FMVAR = 20 ± 20

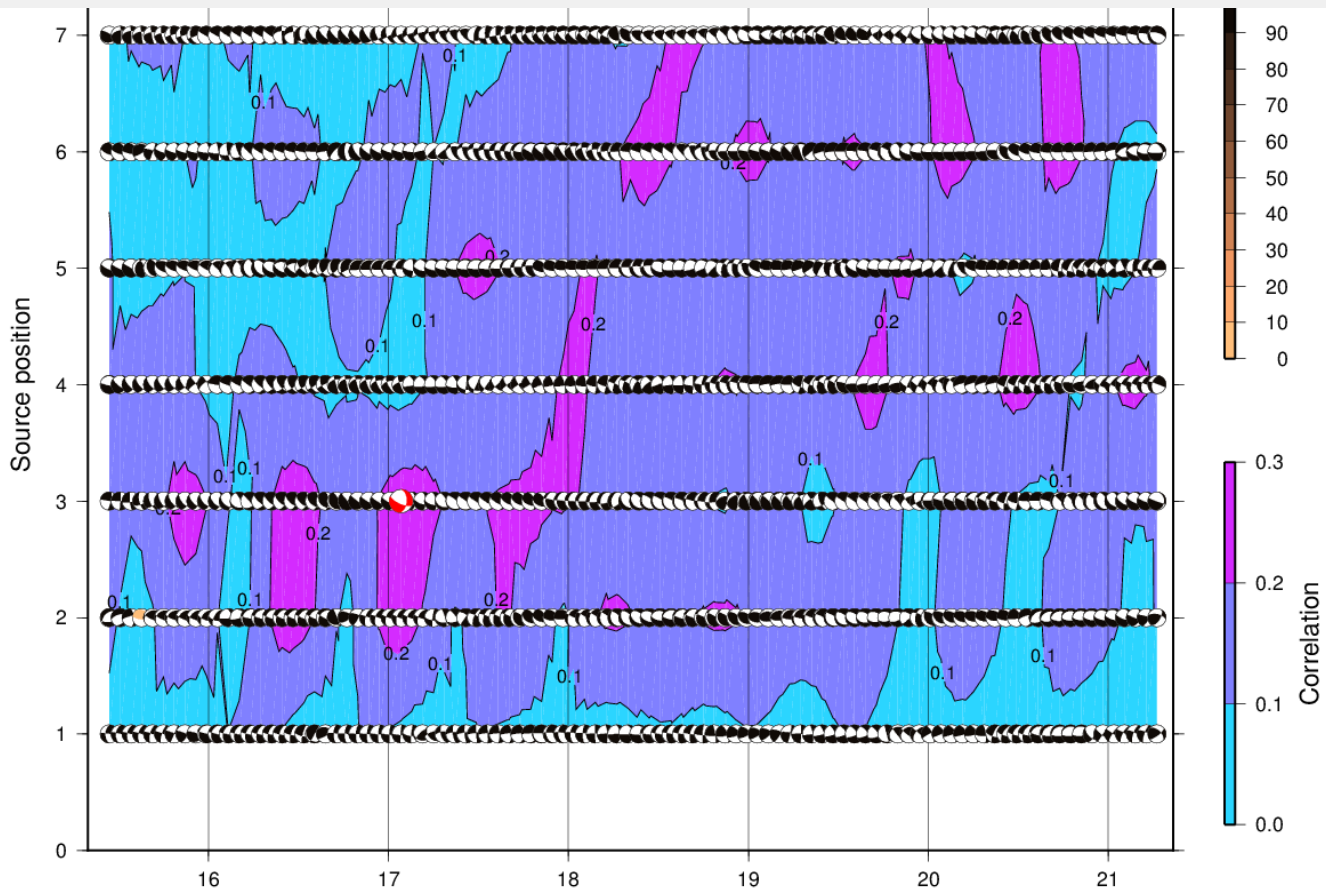


Maximum Correlation = 0.55 Correlation Threshold = 0.49
STVAR = 0.07








Inversion without SRO (closest station)

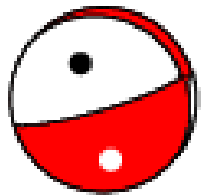
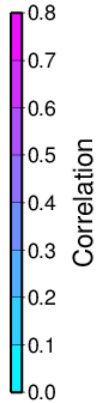
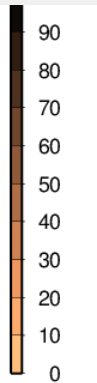
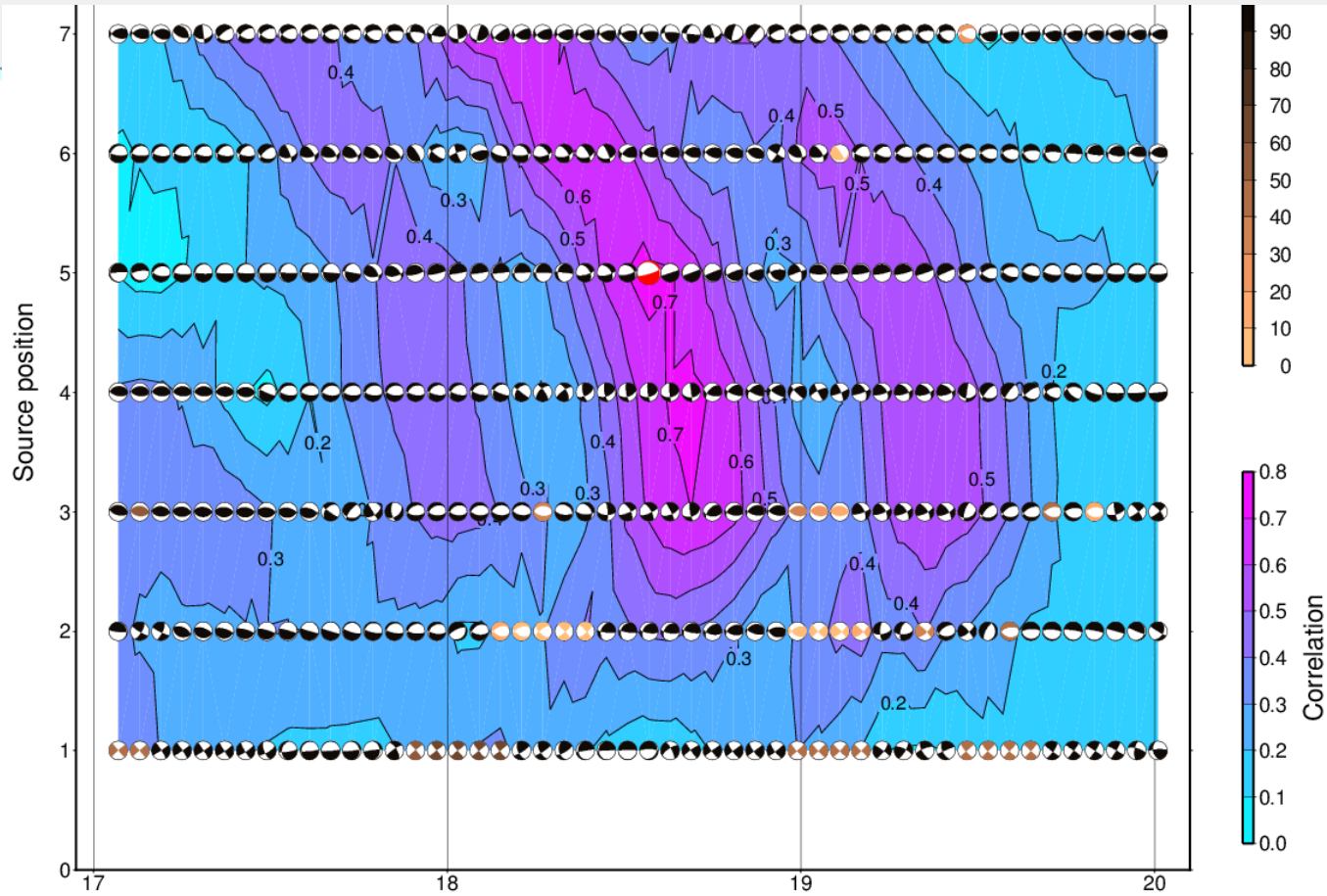
Stations	Components	f1	f2	f3	f4
SRO 	<input type="checkbox"/> Use Station <input checked="" type="checkbox"/> Use NS <input checked="" type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z	0.4	0.4	1	1
MODS	<input checked="" type="checkbox"/> Use Station <input type="checkbox"/> Use NS <input checked="" type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z	0.7	0.7	1.2	1.2
BUD	<input checked="" type="checkbox"/> Use Station <input checked="" type="checkbox"/> Use NS <input checked="" type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z	0.4	0.4	1	1
VYHS	<input type="checkbox"/> Use Station <input checked="" type="checkbox"/> Use NS <input checked="" type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z	0.4	0.4	1	1
SOP	<input checked="" type="checkbox"/> Use Station <input checked="" type="checkbox"/> Use NS <input checked="" type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z	0.4	0.4	1	1



Inversion only SRO (closest station)

Stations	Components	f1	f2	f3	f4
SRO 	Use Station <input checked="" type="checkbox"/> Use NS <input checked="" type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z <input checked="" type="checkbox"/>	0.4	0.4	1	1
MODS 	Use Station <input type="checkbox"/> Use NS <input type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z <input checked="" type="checkbox"/>	0.7	0.7	1.2	1.2
BUD 	Use Station <input checked="" type="checkbox"/> Use NS <input checked="" type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z <input checked="" type="checkbox"/>	0.4	0.4	1	1
VYHS 	Use Station <input checked="" type="checkbox"/> Use NS <input checked="" type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z <input checked="" type="checkbox"/>	0.4	0.4	1	1
SOP 	Use Station <input checked="" type="checkbox"/> Use NS <input checked="" type="checkbox"/> Use EW <input checked="" type="checkbox"/> Use Z <input checked="" type="checkbox"/>	0.4	0.4	1	1

Exit Update and Exit



CONCLUSIONS

- Very poor match of waveforms of real data and synthetics
- A result with agreement with polarities has been found
- The result is not determined only by the closest station
- The location has to be improved