

ELF seminar 28th of May, 2025

First results of May 2025 SR instruments tests in Bieszczady Mountains by Belsk group

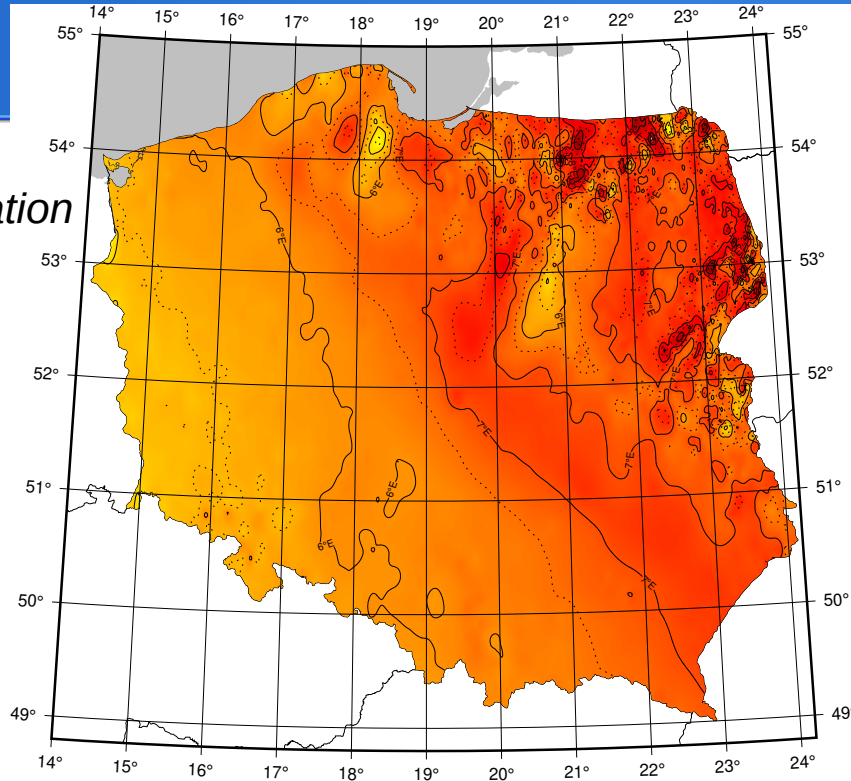
Anne Neska



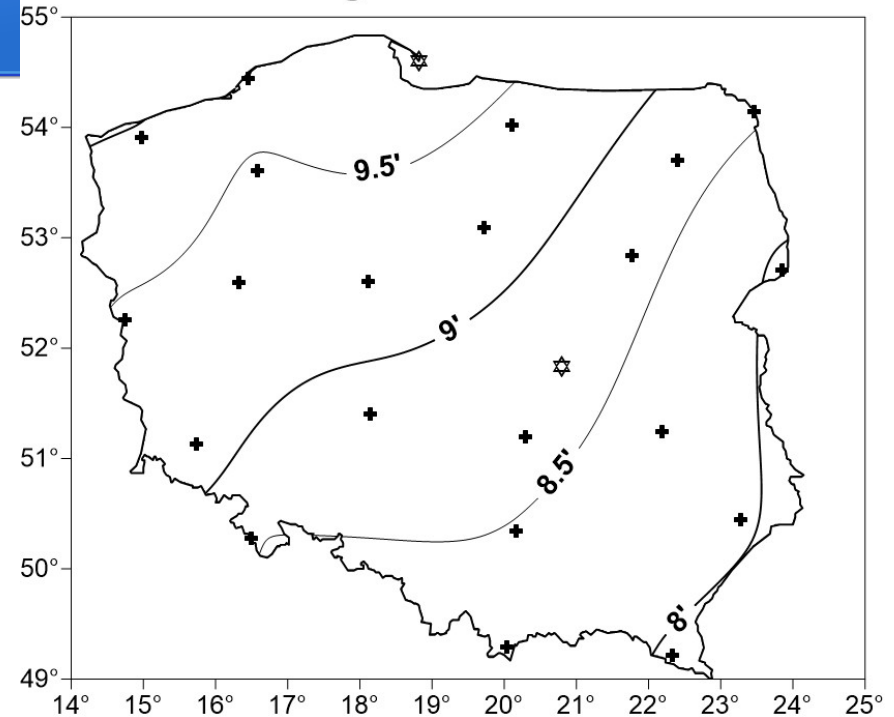
**Institute of Geophysics
Polish Academy of Sciences**

Some information on magnetic declination

*Declination
2022.5*



Annual changes of declination 2017-2021



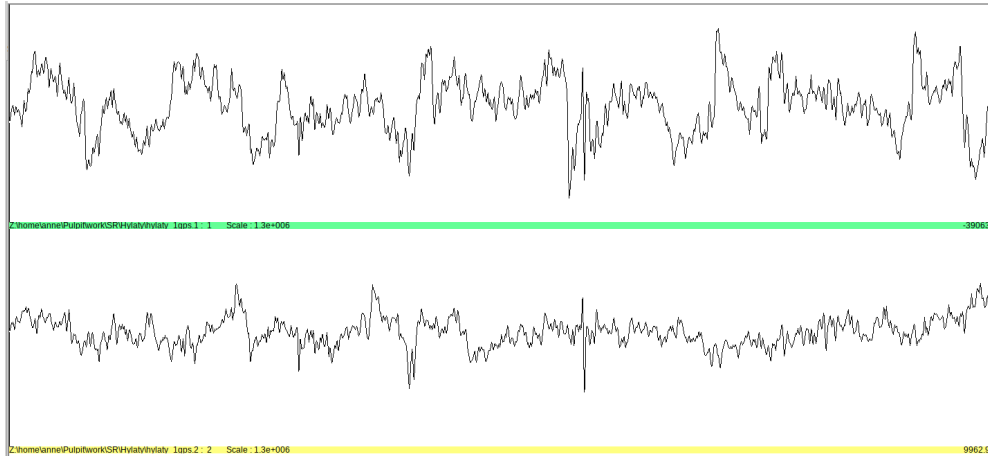
According to the magnetic model of Poland at 49.19 N, 22.55 E the declination for 2025.5 epoch is 6.91 degree (Courtesy A. Ejsmont, Institute of Geodesy and Cartography Warsaw)

What has been measured

- Used instrument MMS-1-2, sampling rate 100 Hz
- Parallel configuration of both coils in geomagnetic EW direction in the night of May 19/20 (13.5 h)
- Continuation in this configuration in the morning of May 20 while the impulse generator was on – its signals were not detected (5 h)
- Standard perpendicular (geomagnetic) configuration in the night of May 20/21 (15.5 h)
- Many great discussions, photo exchange
- Received MT data from Tibor today

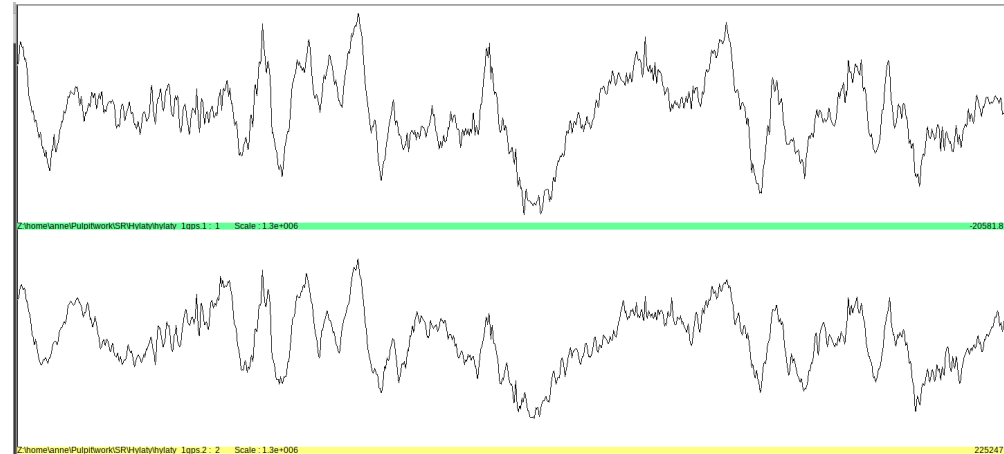


Parallel configuration (equal scale on y axes)

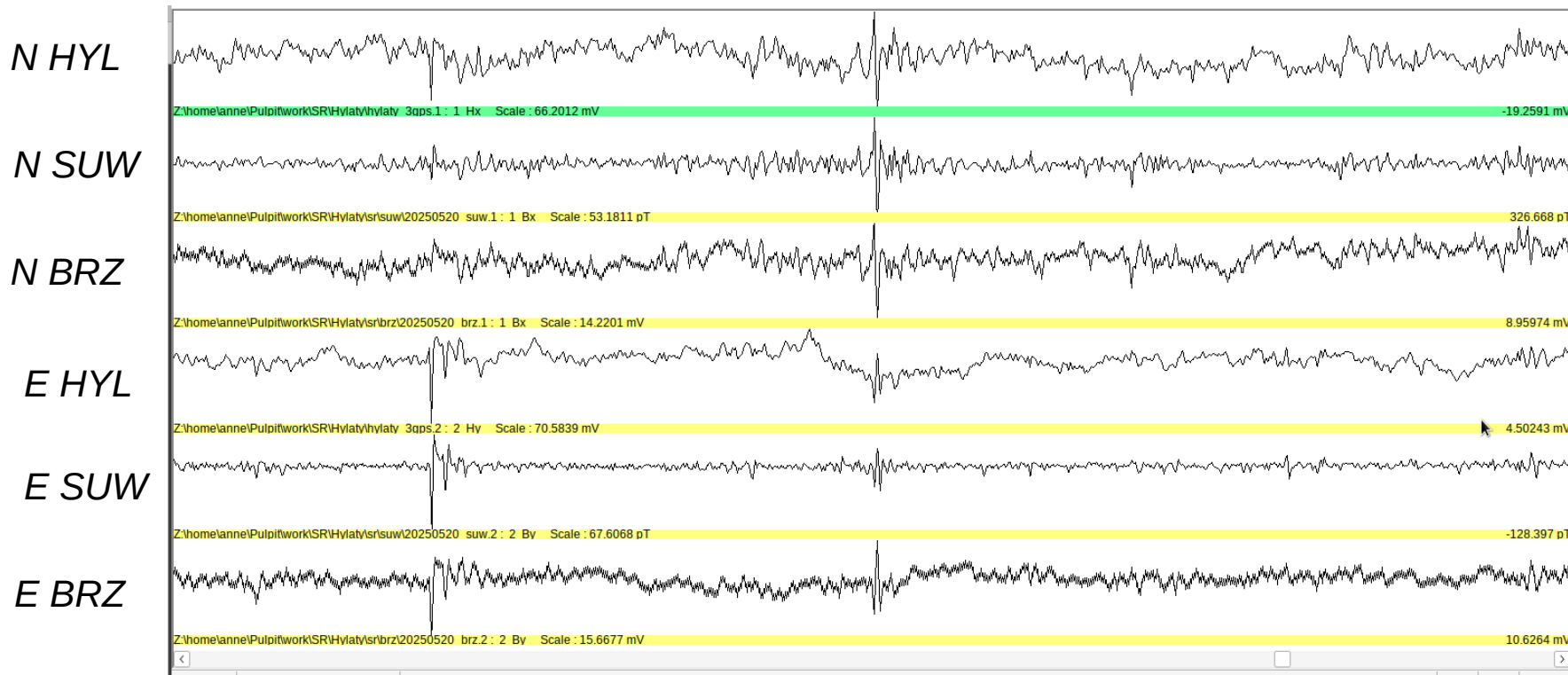


14 sec time series (May 19, 18:05:50.6 UT)

14 sec time series (May 20, 07:33:18.5 UT)



Perpendicular configuration & SUW / BRZ comparison

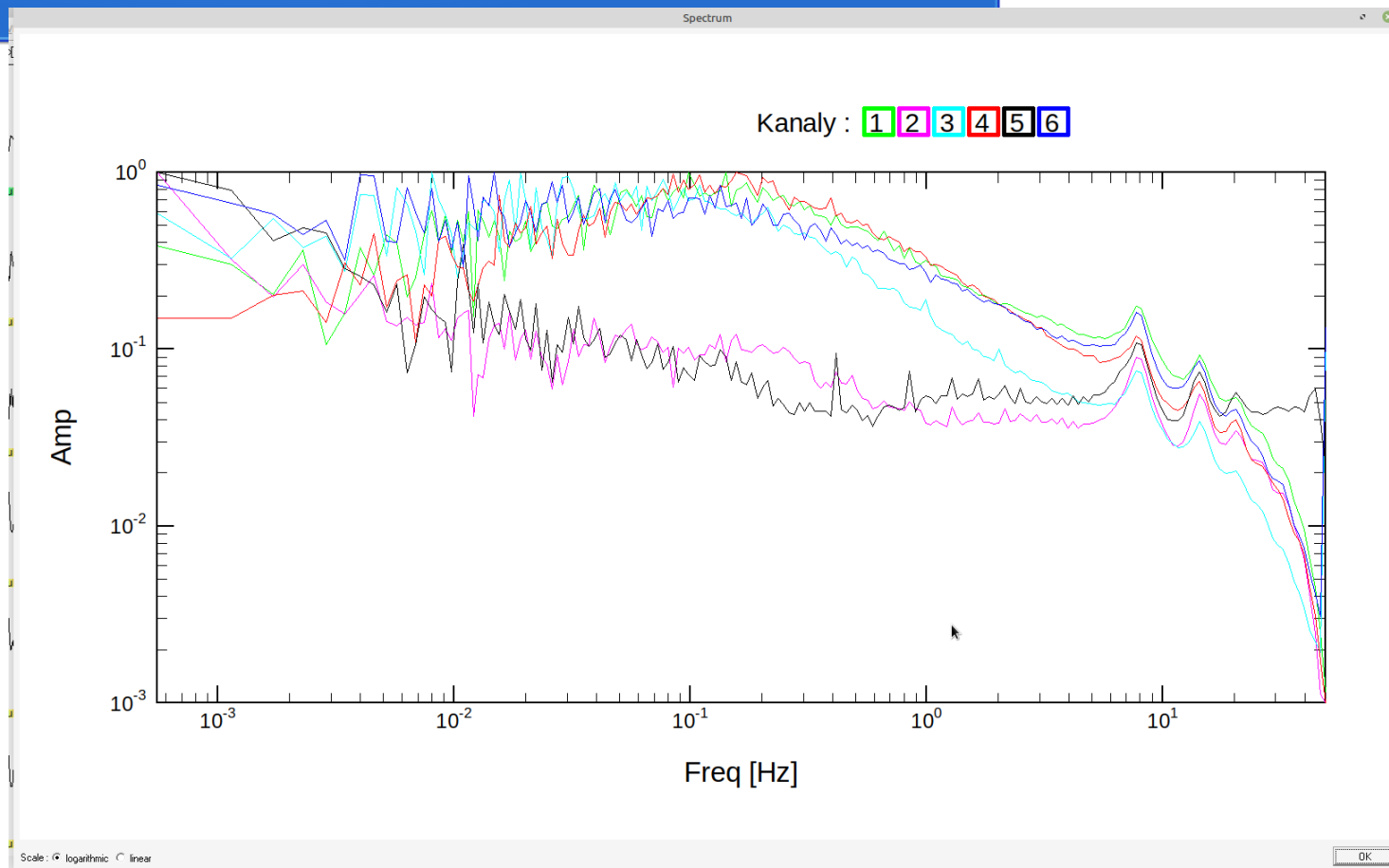


14 sec time series (May 20, 23:36:47 UT, vertical axes not to scale)

Spectra (not calibrated, each channel normalized to its maximum)

1, 4 – HYL N,E
2, 5 – SUW N,E
3, 6 – BRZ N,E

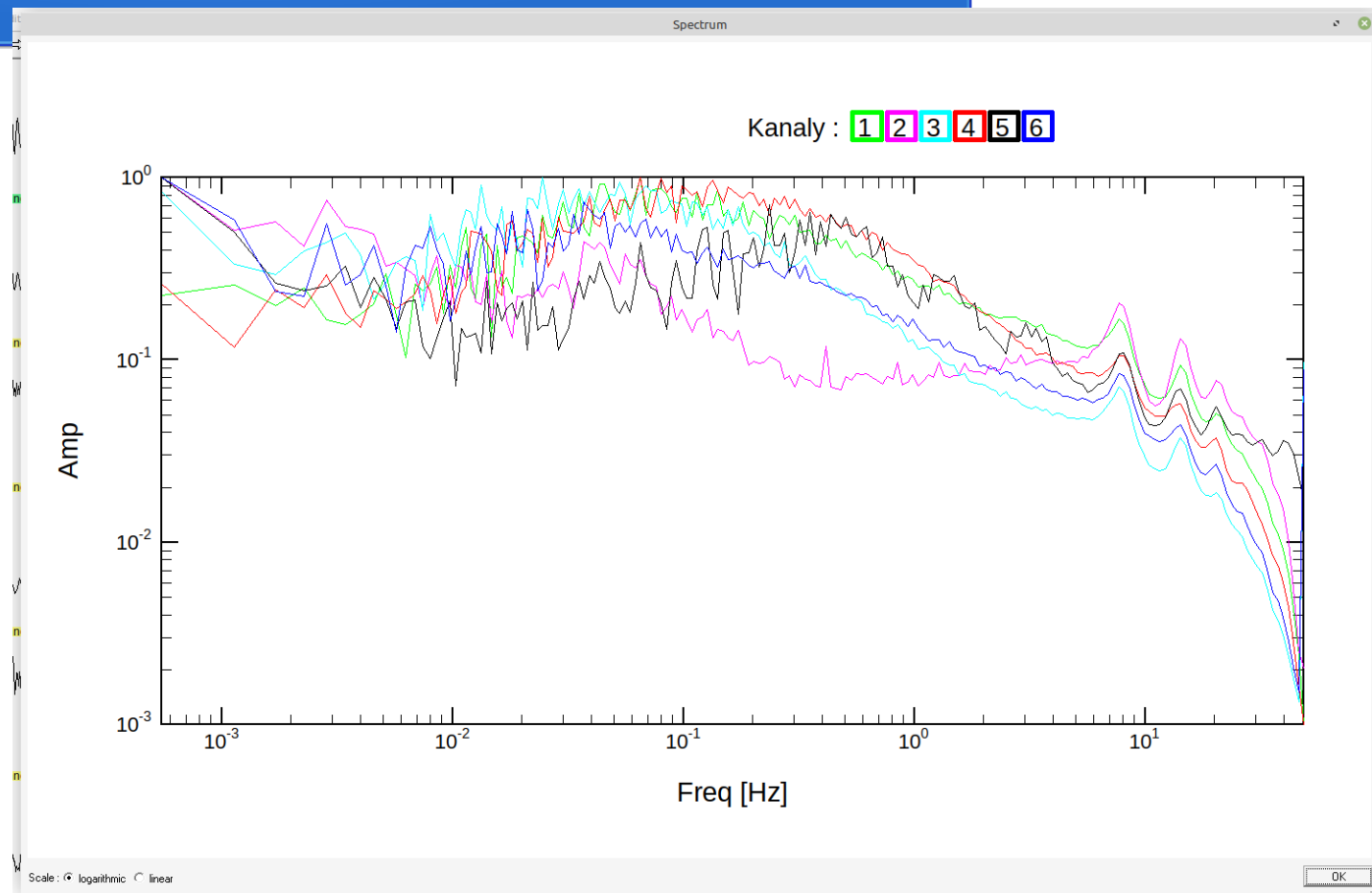
May 20 19-20 UT



Spectra (not calibrated, each channel normalized to its maximum)

1, 4 – HYL N,E
2, 5 – SUW N,E
3, 6 – BRZ N,E

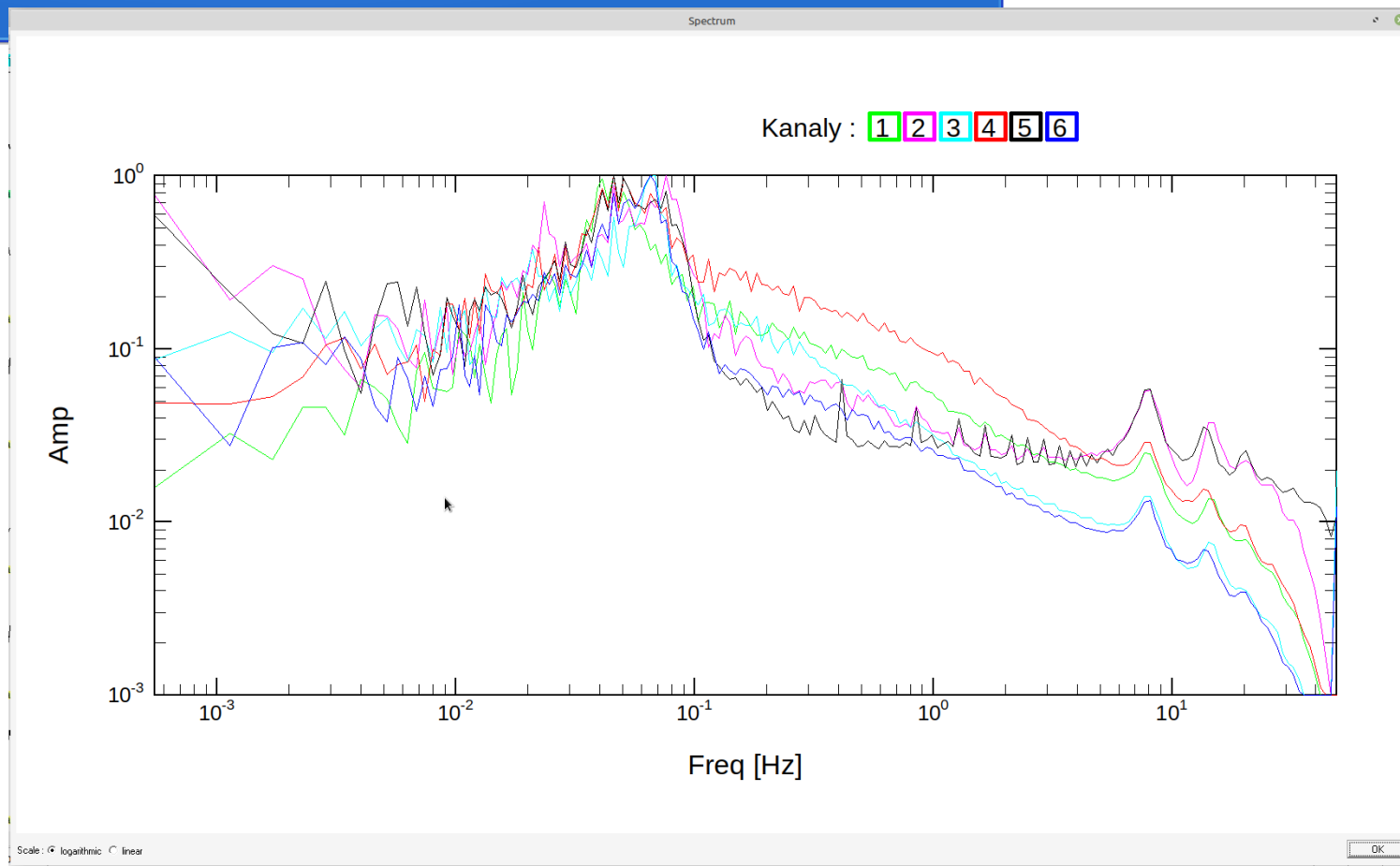
May 21 22-23 UT



Spectra (not calibrated, each channel normalized to its maximum)

1, 4 – HYL N,E
2, 5 – SUW N,E
3, 6 – BRZ N,E

May 21 04-05 UT



To-do list

- Calibrated spectra
- Magnetotelluric sounding curves & strike analysis
- Horizontal magnetic transfer functions
- Think how to join forces