

# Schumann Resonance (ELF) monitoring at IG PAS

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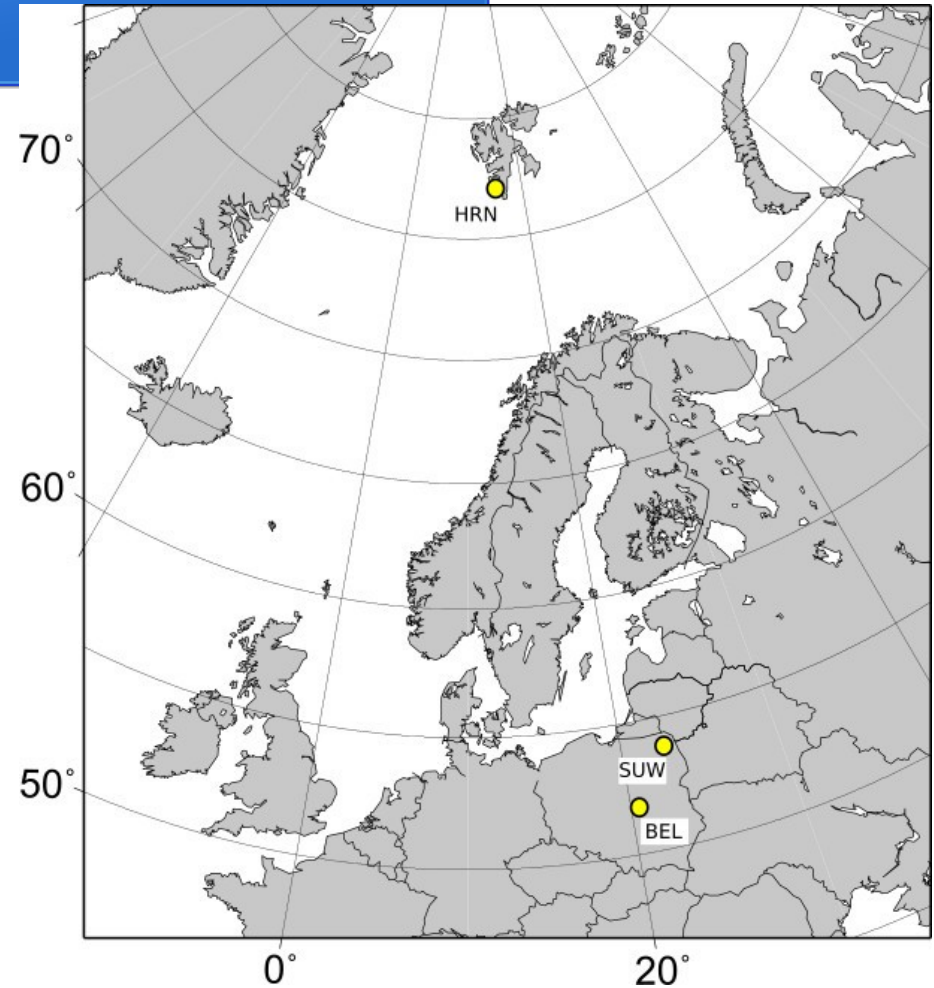
**Institute of Geophysics  
Polish Academy of Sciences**

# SR monitoring sites operated by IG PAS in Poland and on Svalbard

	BELSK	HORNSUND	SUWAŁKI
Station code	BEL	HRN	SUW
Latitude[°]	51.835° N	77.000° N	54.012° N
Longitude[°]	20.789° E	15.550° E	23.183° E
Elevation[m]	173	15	150
Start date	2005-02-21	2004-09-11	2016-06-19
End date	2016-05-03	—	—
Components	Bx, By, Ez	Bx, By	Bx, By

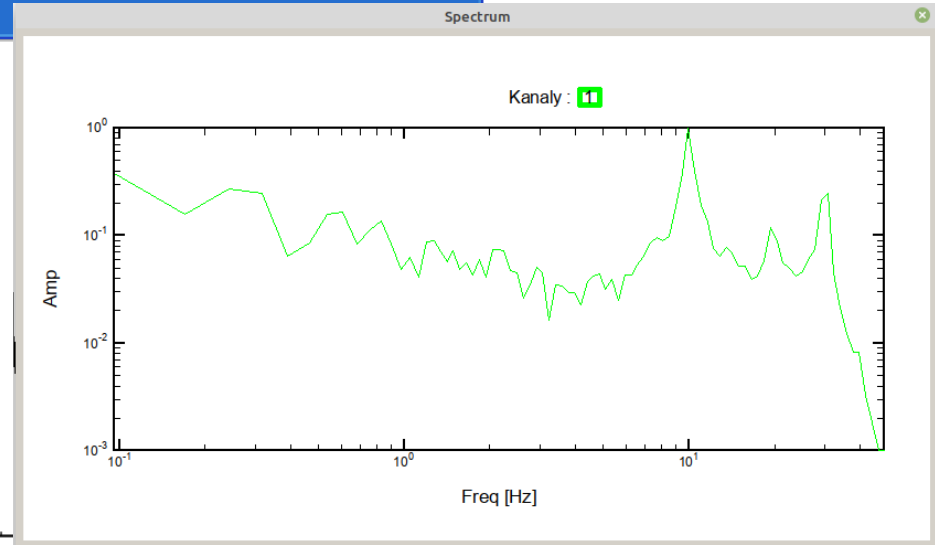
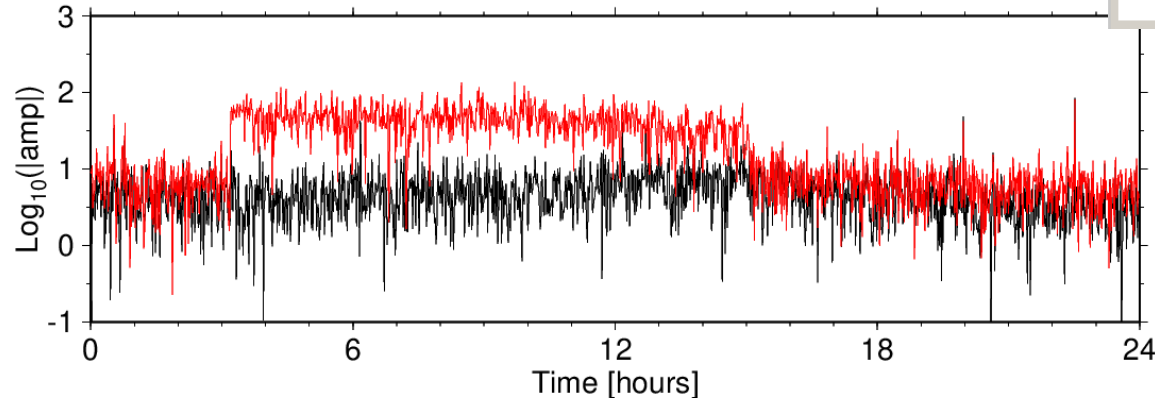
*Sampling rate: 100 Hz*

*In 2016 the Belsk station has been moved to Suwałki for reasons of noise*



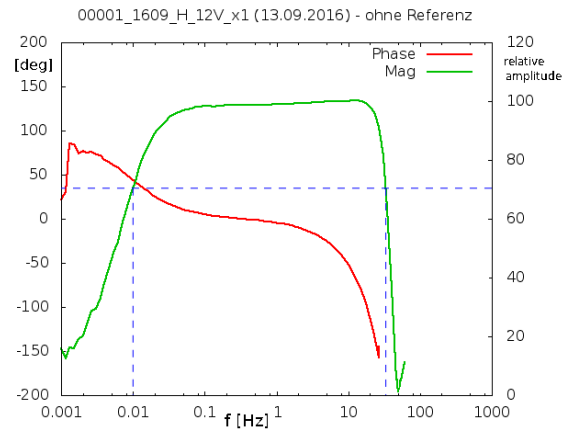
# What made us moving the Belsk monitoring site: Noise at 10 Hz in SR data in 2015/2016

*Hx component on 17.03.2016, 16:07:30 – 16:08:00*

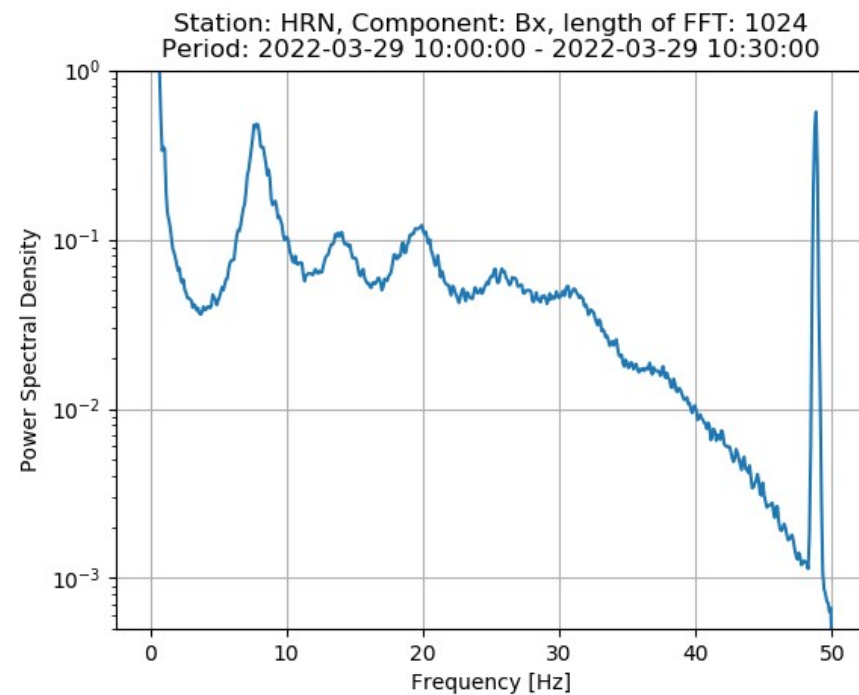
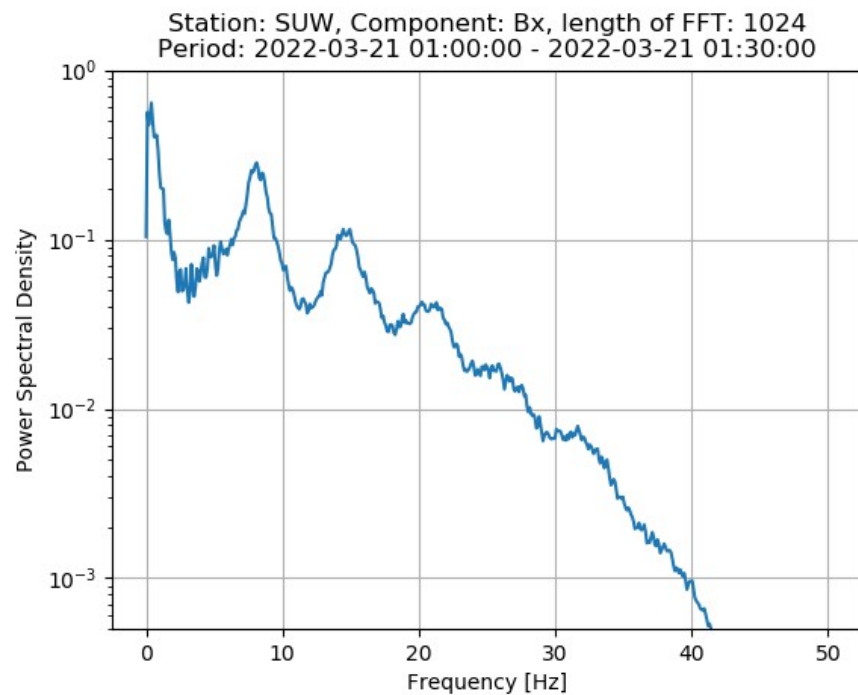


*Time dependency in the 8 Hz amplitude  
of the Hx component on a Sunday (black)  
and on a working day (red)*

# Measuring devices

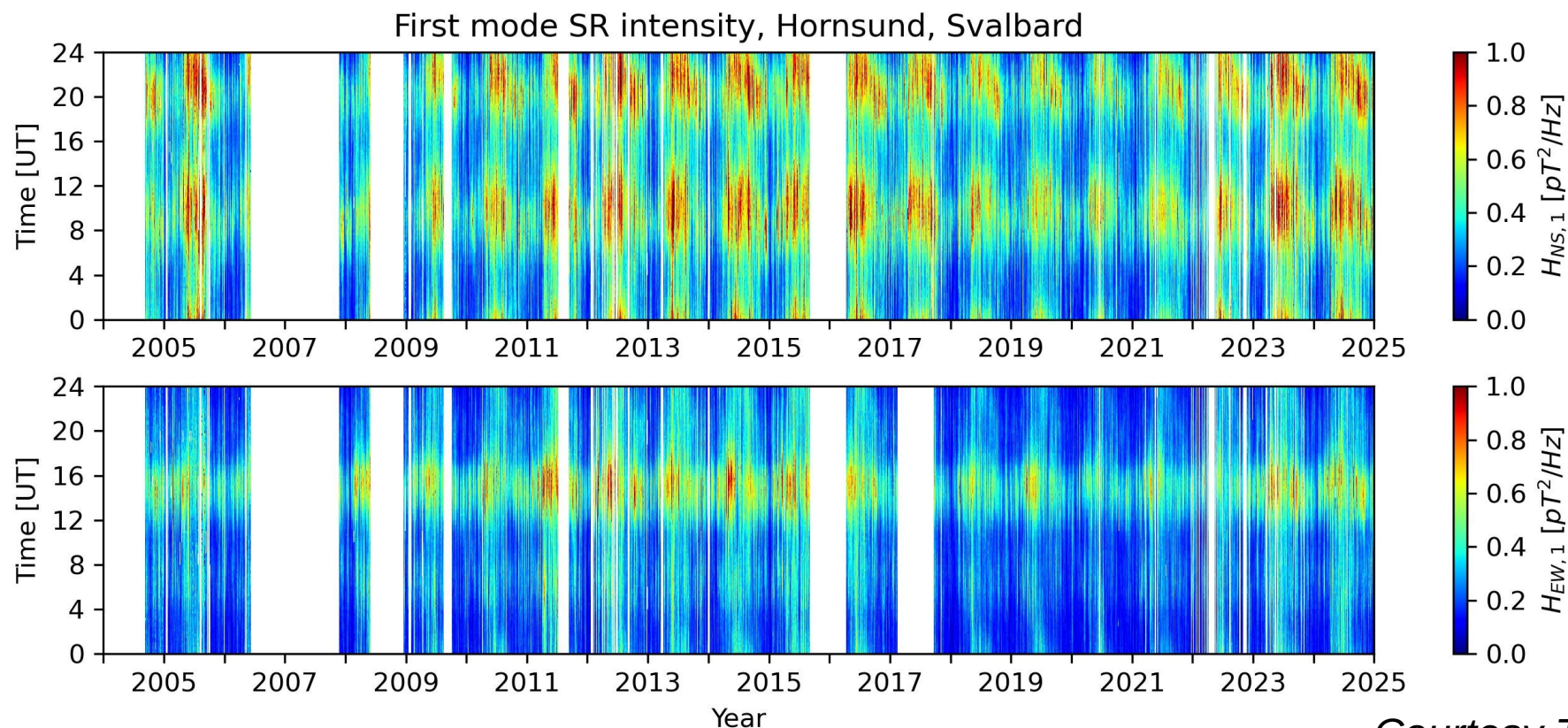


# Data examples





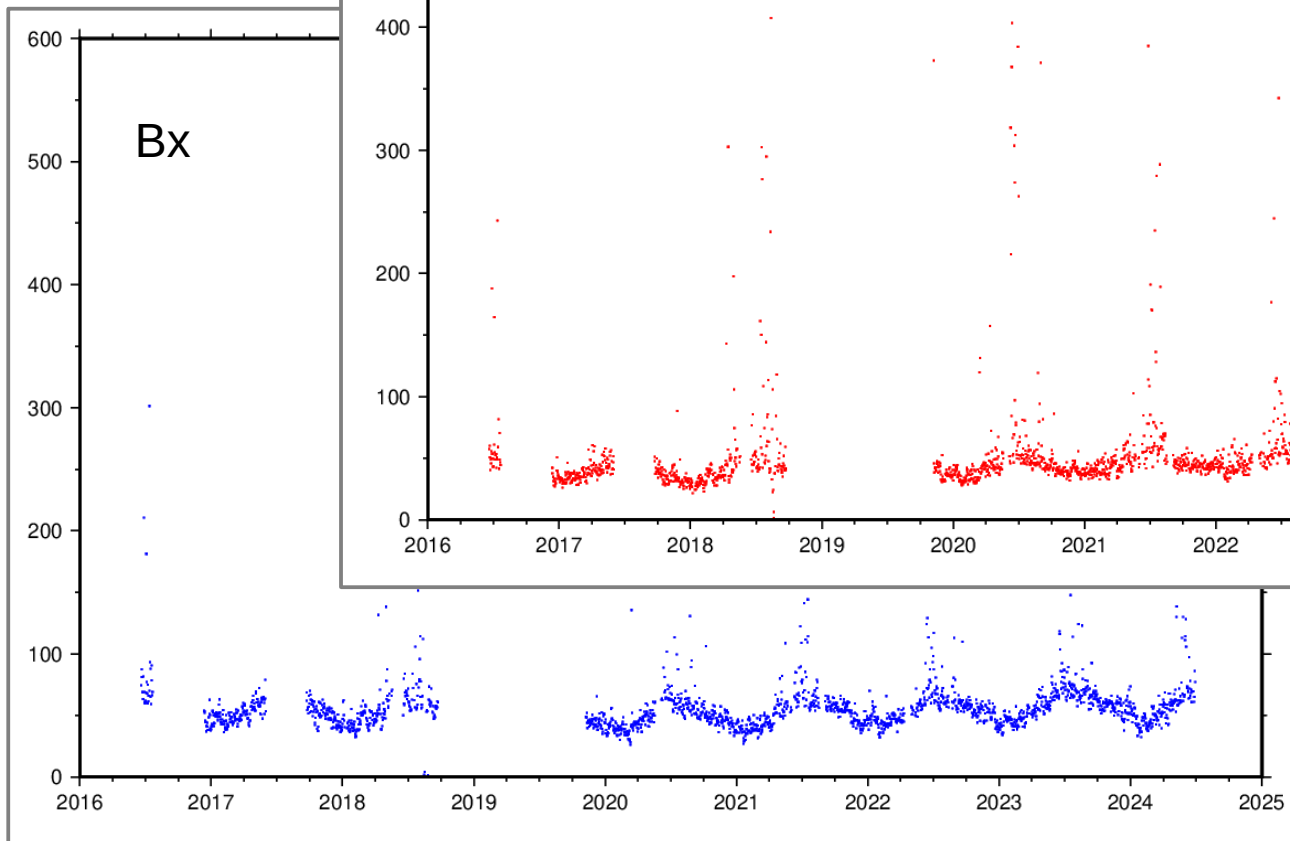
# Results from long-term data



*Courtesy T. Bozoki*

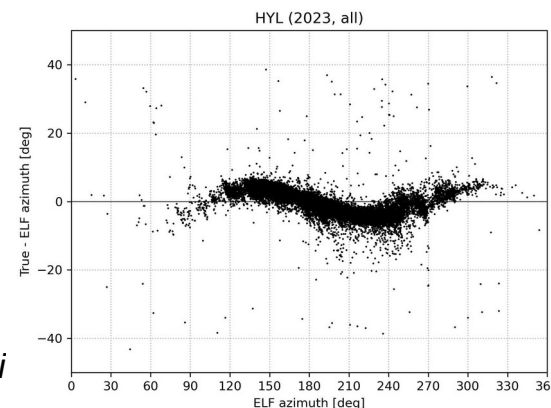
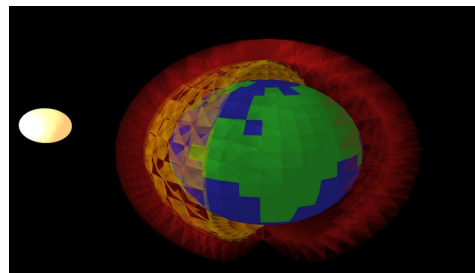
# Suwałki

1st mode  
amp [pT]



# Linking ELF and magnetotellurics

- ELF monitoring as auxiliary (so-called remote-reference) data in magnetotellurics – works fine
- SR damping by lithospheric resistivity:  
Grant proposal for 3D cavity modeling
- Azimuth deviation of ELF transients caused  
by ground resistivity distribution – ongoing work



*Hylaty station - Courtesy T. Bozoki*