

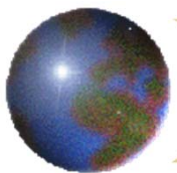


Pecný, station report

Vojtech Pálinkáš, Miloš Val'ko and Jakub Kostelecký

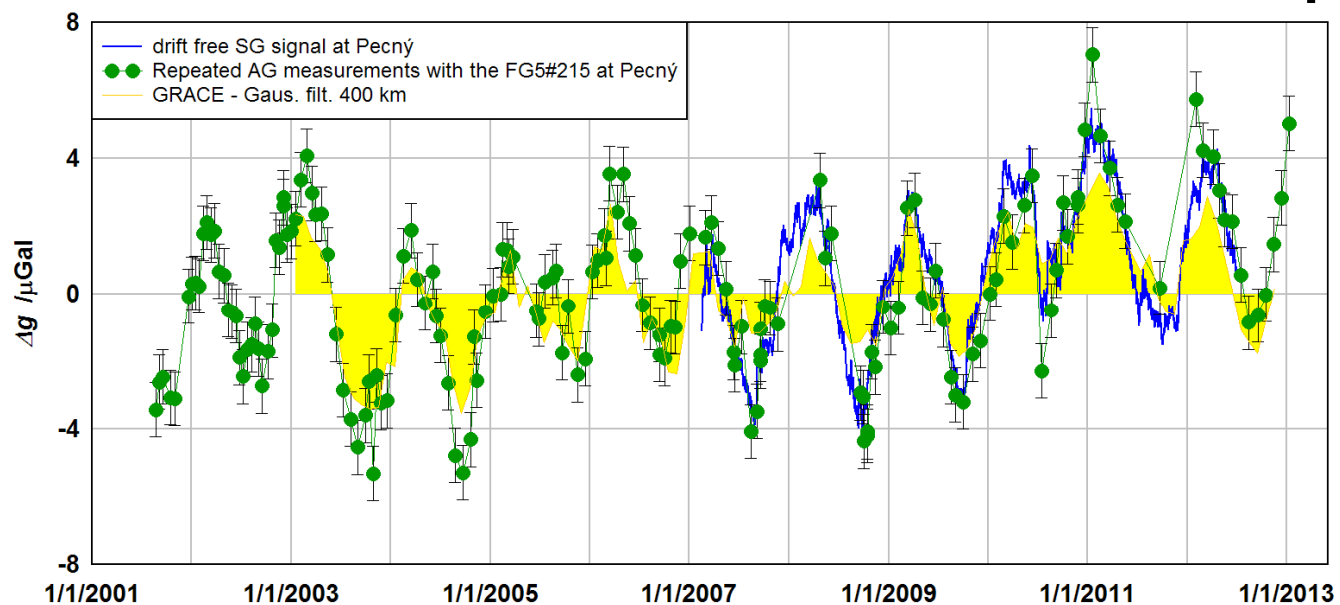


**Research Institute of Geodesy, Topography and Cartography,
Czech Republic**



Pecny station

OSG-050 running from February 2007



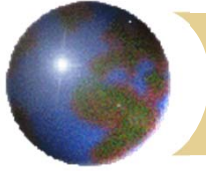
GGP European Stations 1997-2010

▲ stopped ● current ■ new ◆ planned



	Number of campaigns	Duration in total [days]	Average daily tidal variation [μGal]	Drops in total	Calibration factor
AG > 2 days	9	21	240	73650	-733.49 ± 0.28
AG < 2 days	35	37	180	103450	-733.52 ± 0.29

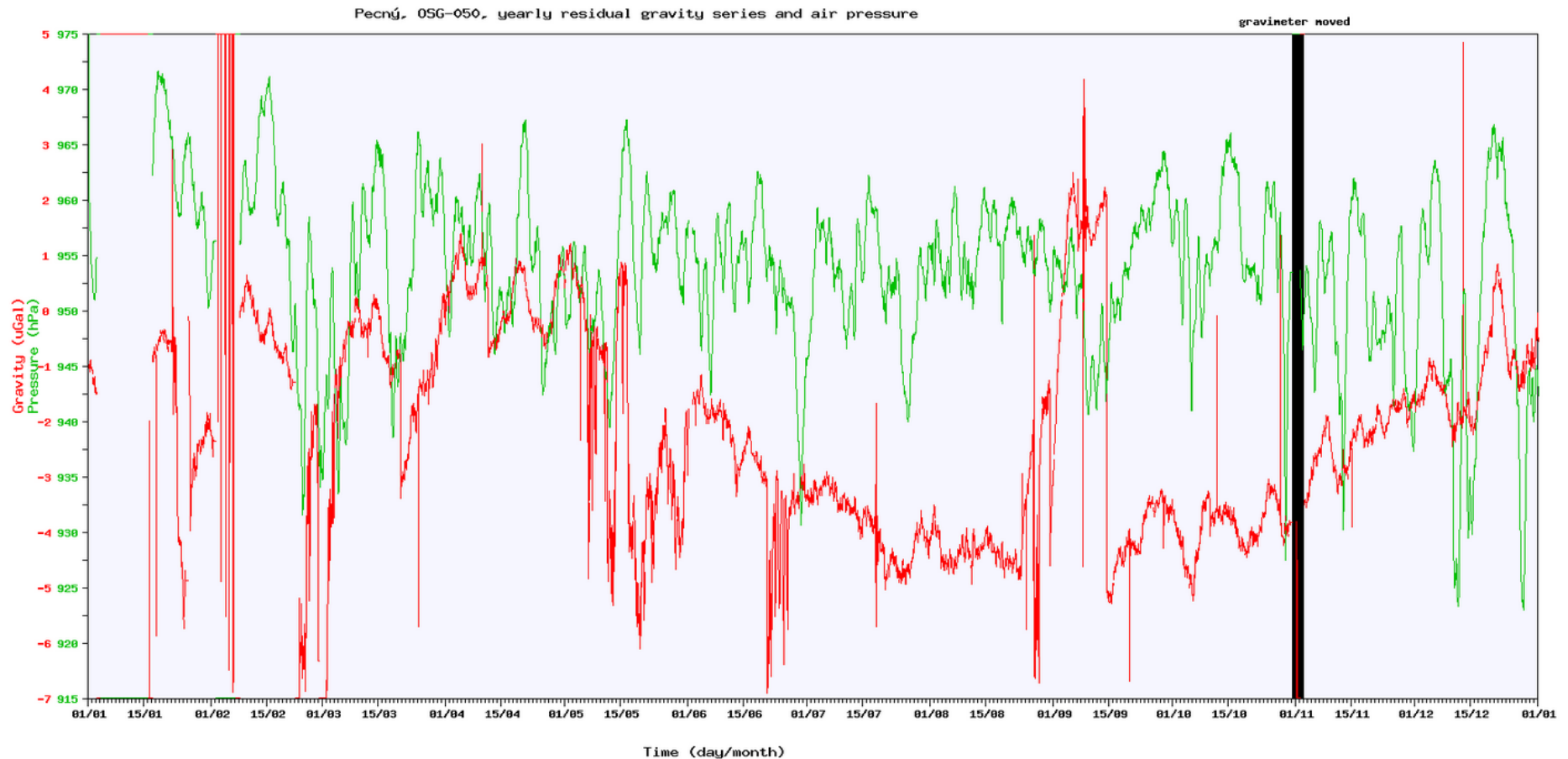


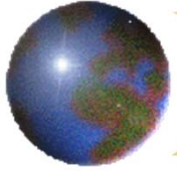


Troubles at the Pecny station

Since December 2016 we had several troubles with data storage, DAC and finally **with the tilt compensation system**. This system was out of operation since **25 January 2017**. Tilt corrections have been applied based on Tilt X and Tilt Y balances.

PE - 2017

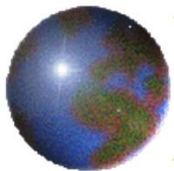




PE, new location

Gravimeter moved to the new laboratory in **1 November 2017**. Tilt compensations system repaired, too.





PE, NEW gravity lab



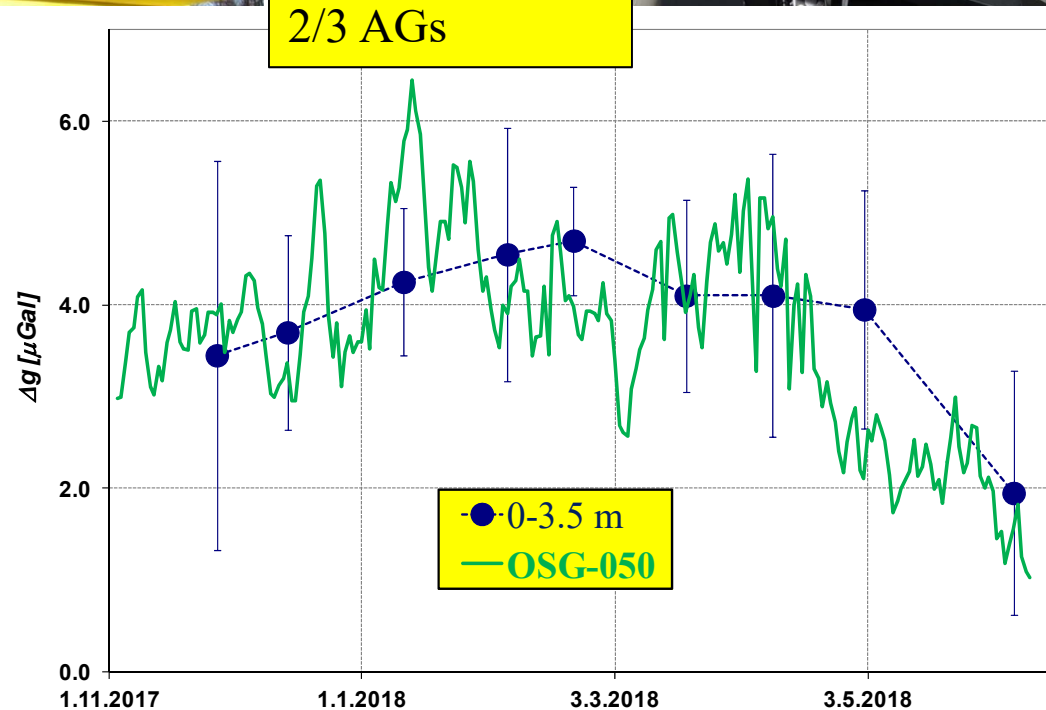
3.5 m

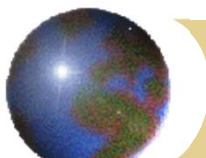


OLD - cellar
(sensor 1.5 m
below ground)

NEW -ground
station

Comparison of
2/3 AGs





Noise level monitoring, <http://oko.pecny.cz/grav/>

Each Day \Rightarrow Power Spectral Density from residuals

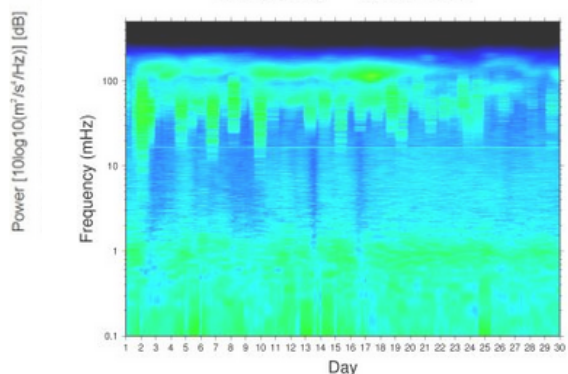
Each Month \Rightarrow Probability Density Function, Spectrograms

DATA QUALITY CONTROL Station: Year: Month: Day: Quantity:

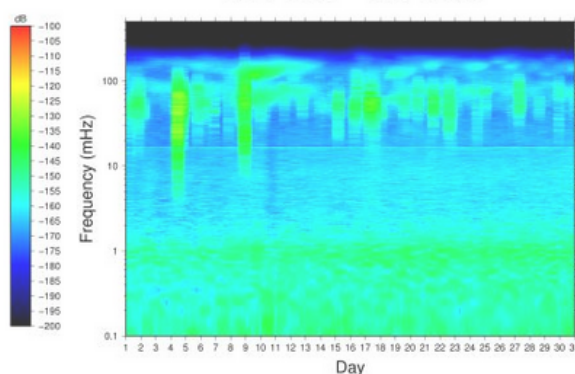
DATA QUALITY CONTROL Station: Year: Month: Day: Quantity:

MONTHLY AND YEARLY OVERVIEW Station: Quantity:

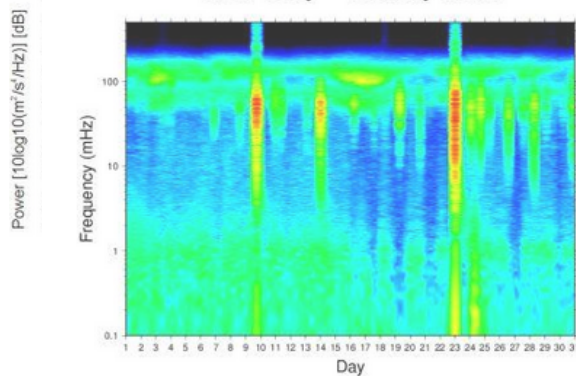
GO Pecný – April 2018



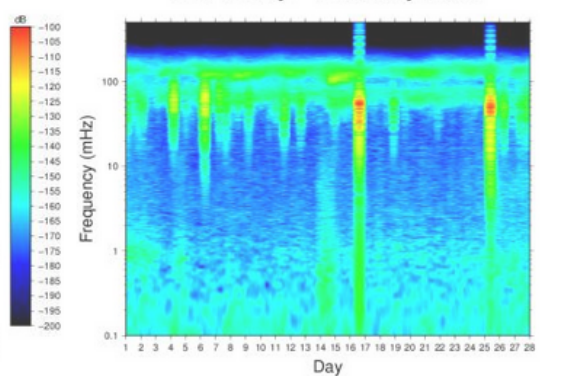
GO Pecný – May 2018



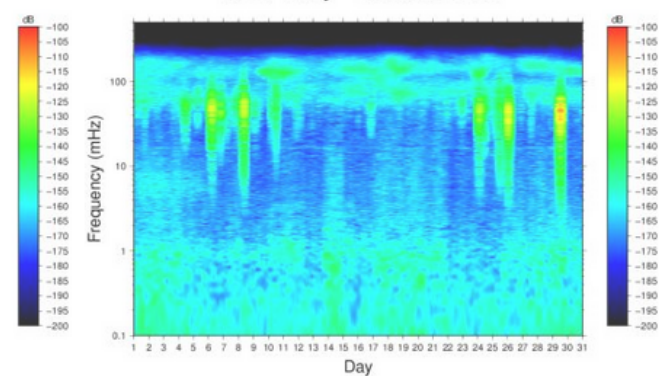
GO Pecný – January 2018

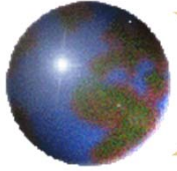


GO Pecný – February 2018



GO Pecný – March 2018



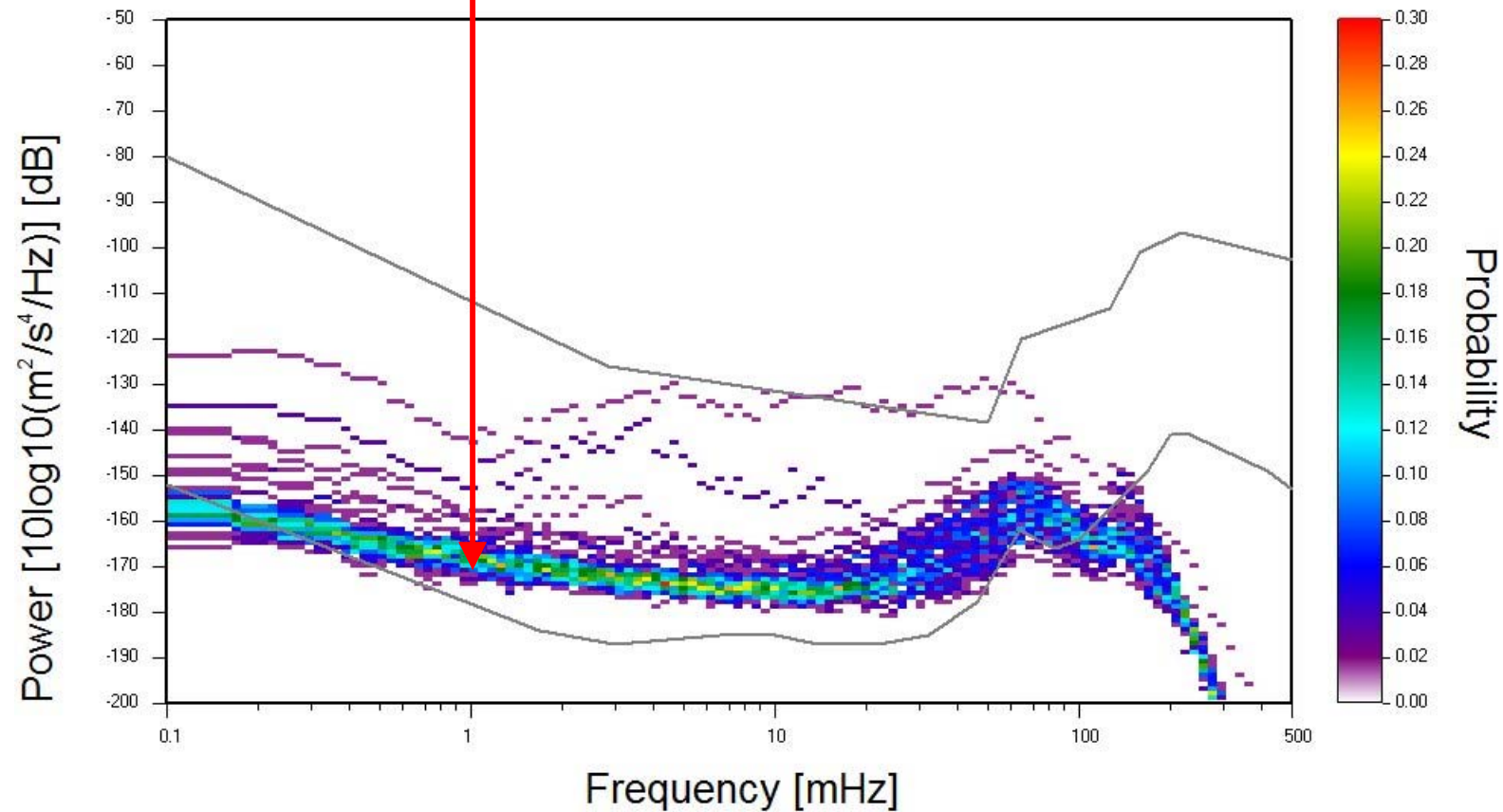


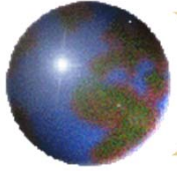
Noise level

PE, OLD lab -170 dB

Geodetic Observatory Pecný

September 2017 (59 PSD's)



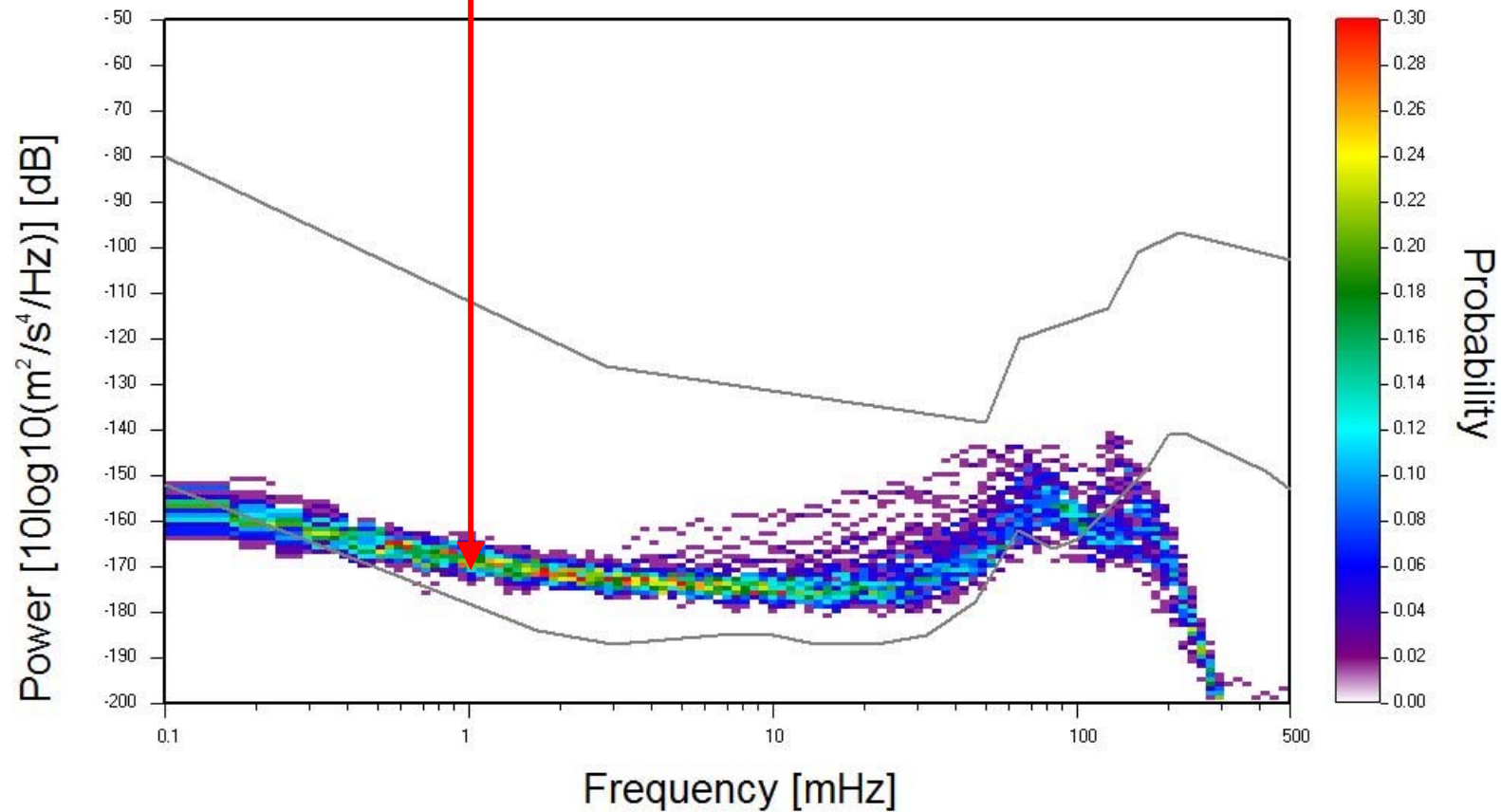


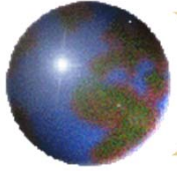
Noise level

PE, OLD lab -170 dB

Geodetic Observatory Pecný

October 2017 (57 PSD's)



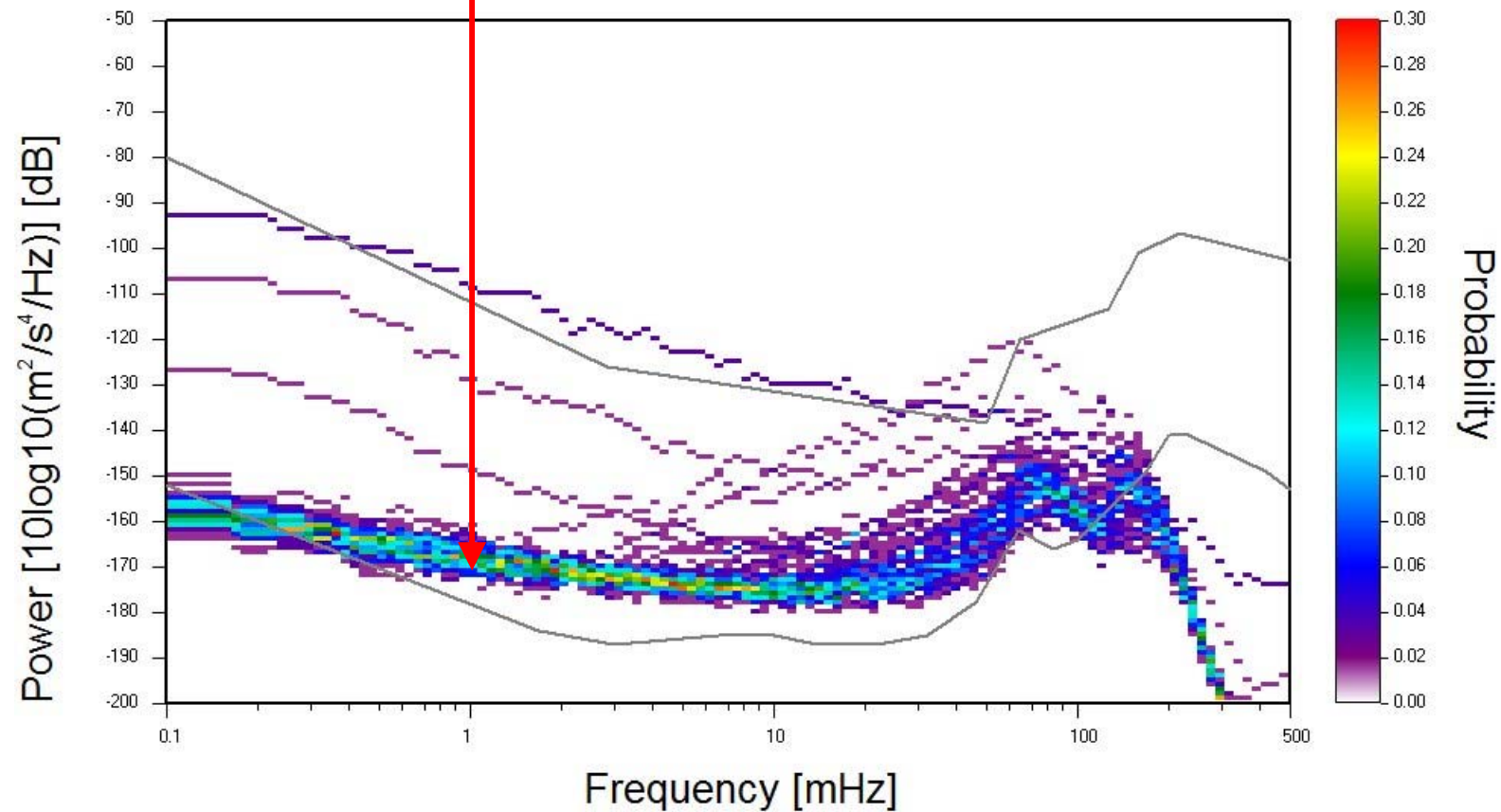


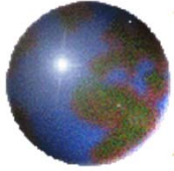
Noise level

PE, NEW lab -170 dB

Geodetic Observatory Pecný

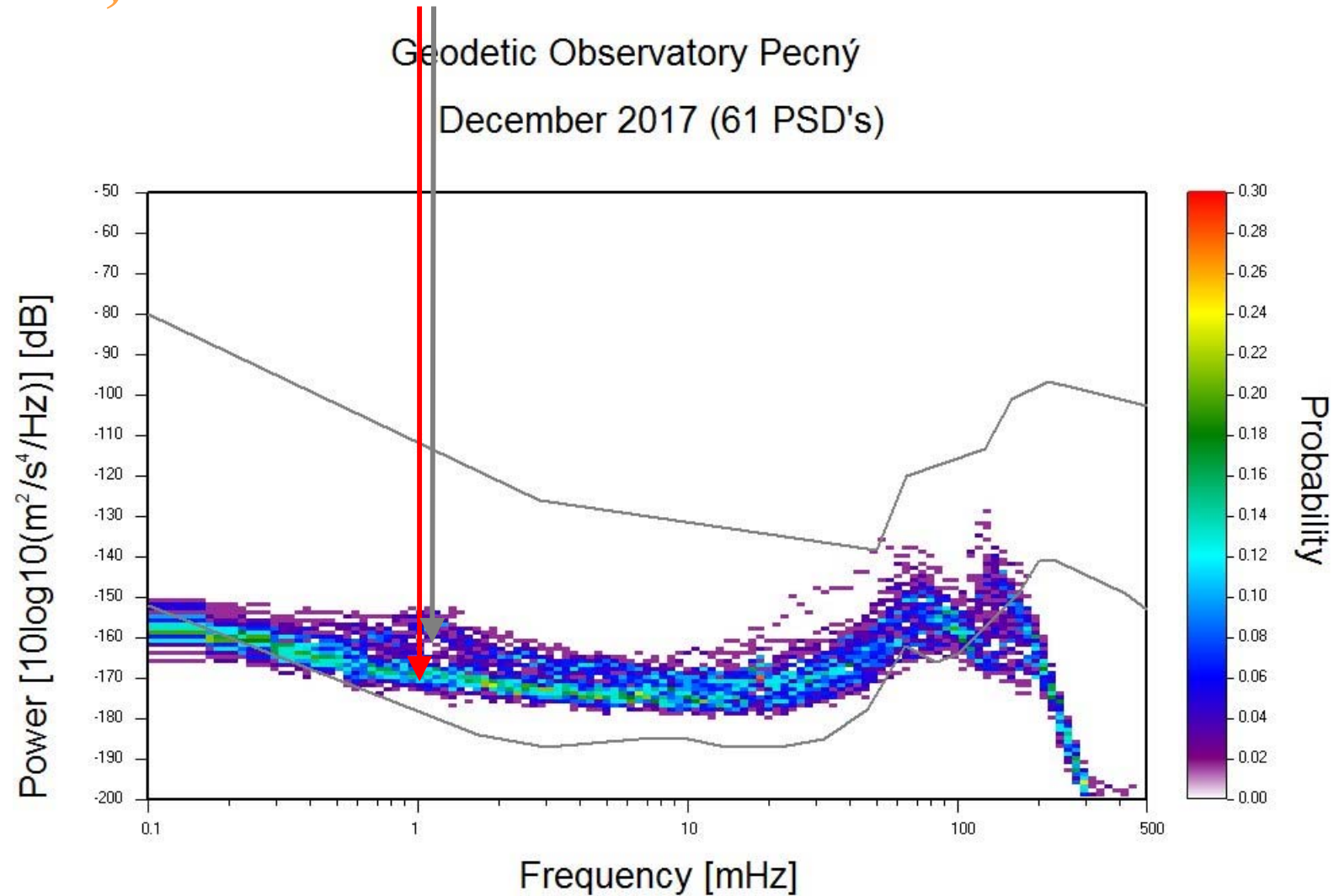
November 2017 (59 PSD's)

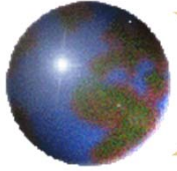




Noise level

PE, NEW lab -170/-160 dB



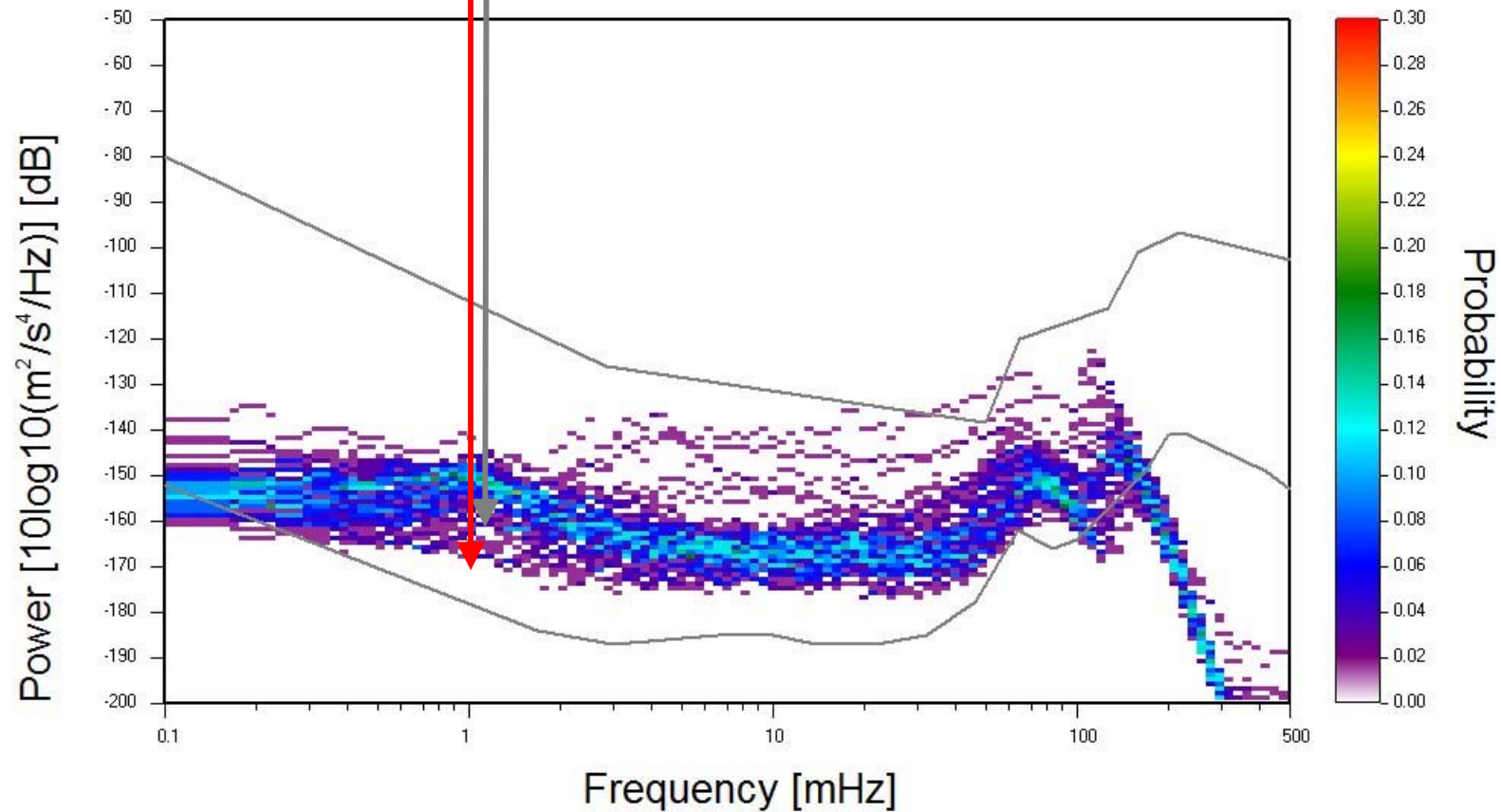


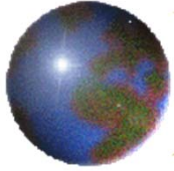
Noise level

PE, NEW lab -170/-160 dB

Geodetic Observatory Pecný

January 2018 (61 PSD's)



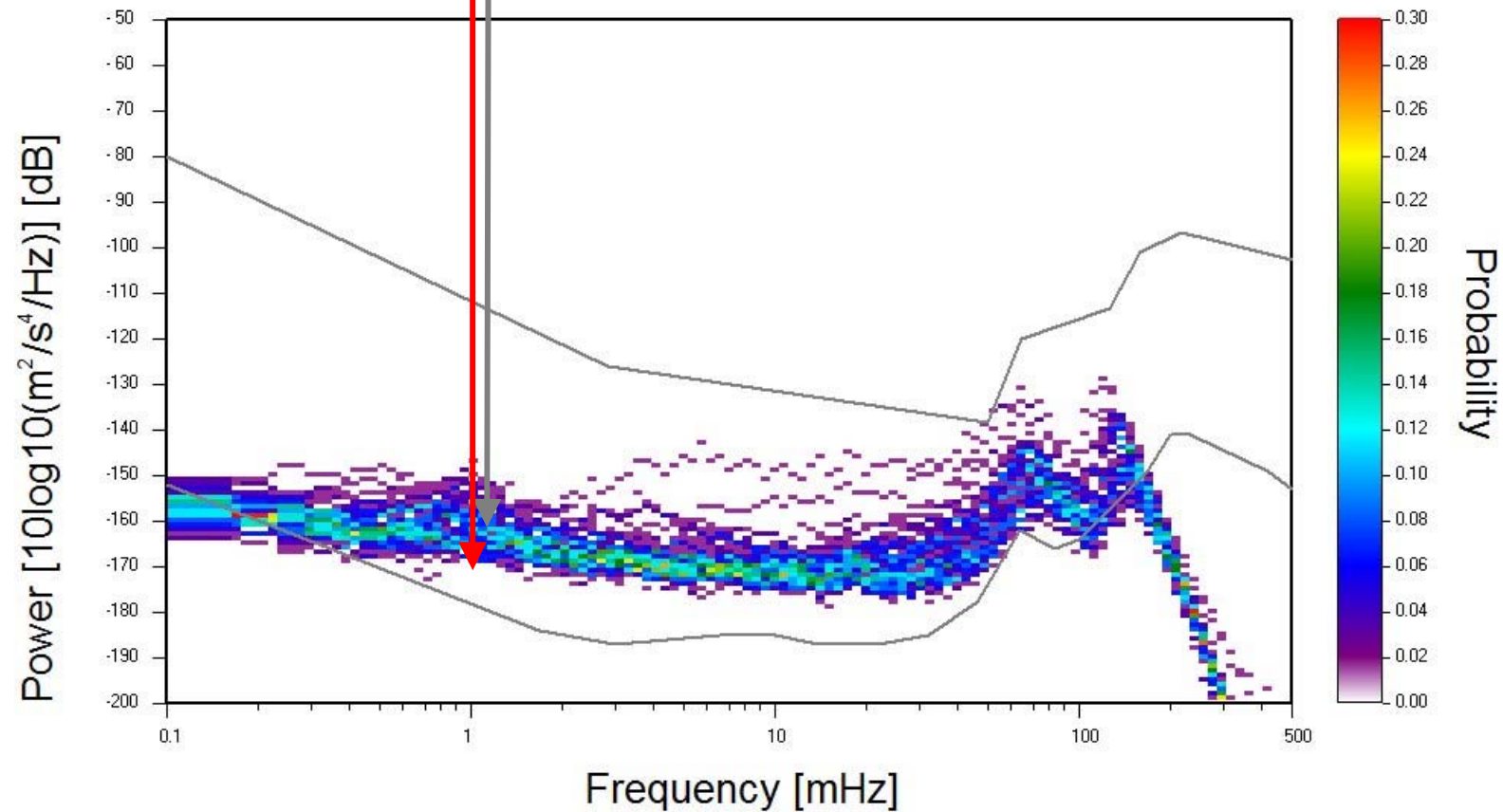


Noise level

PE, NEW lab -170/-160 dB

Geodetic Observatory Pecný

February 2018 (55 PSD's)



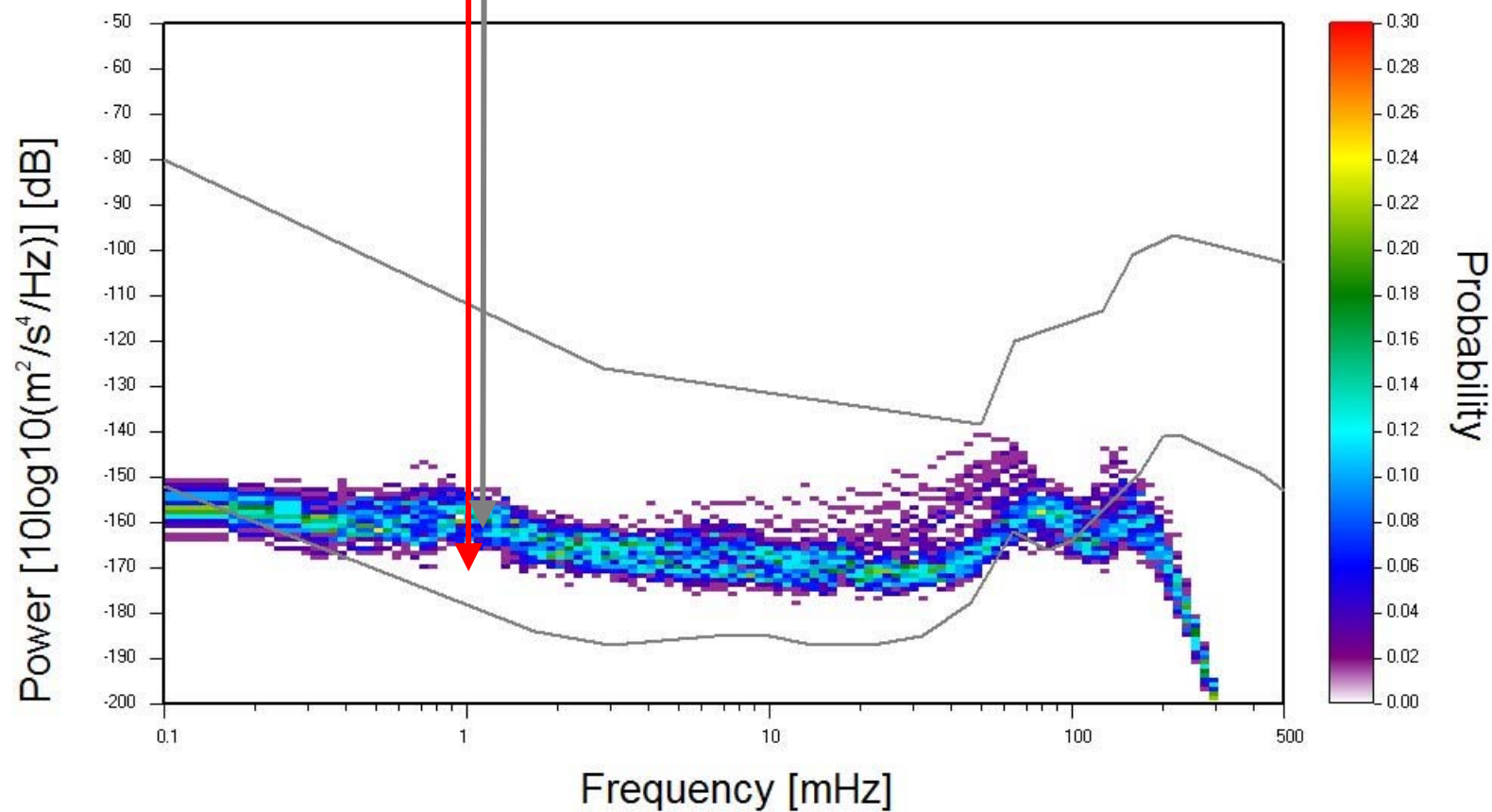


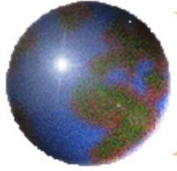
Noise level

PE, NEW lab -170/-160 dB

Geodetic Observatory Pecný

March 2017 (61 PSD's)



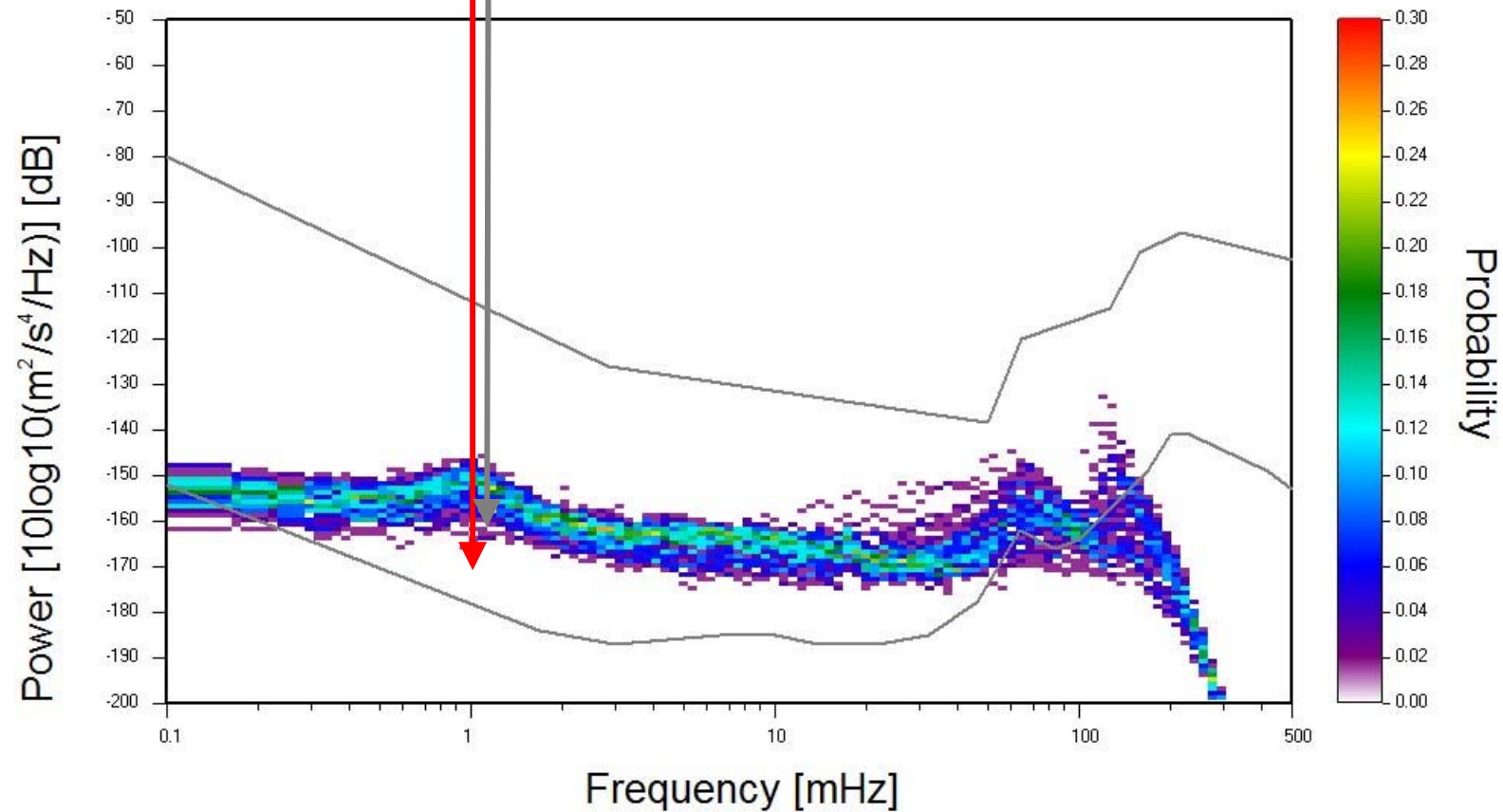


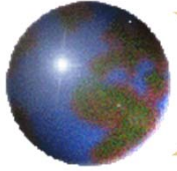
Noise level

PE, NEW lab -170/-160 dB

Geodetic Observatory Pecny

April 2018 (59 PSD's)



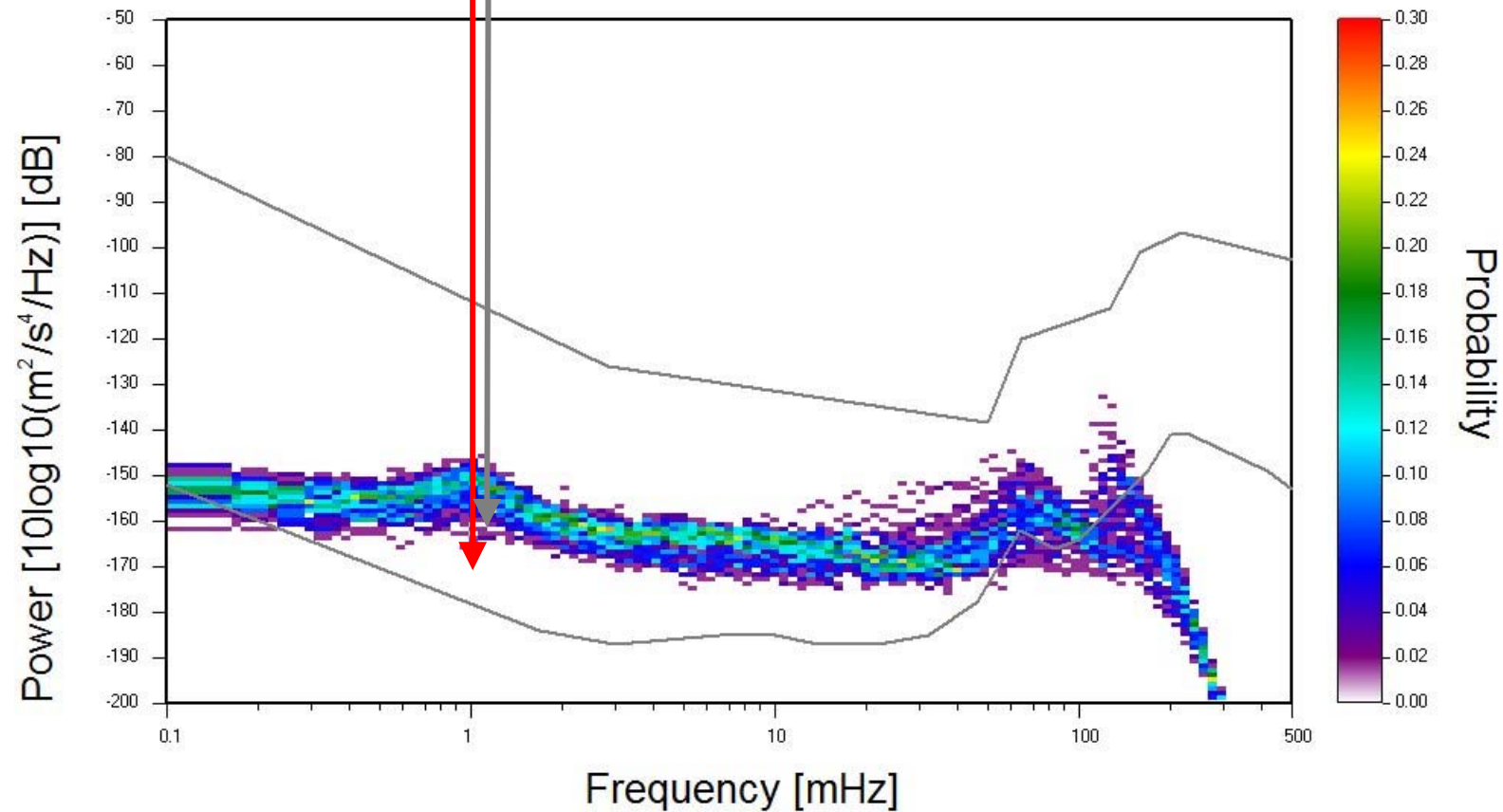


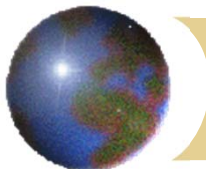
Noise level

PE, NEW lab -170/-160 dB

Geodetic Observatory Pecný

May 2018 (61 PSD's)

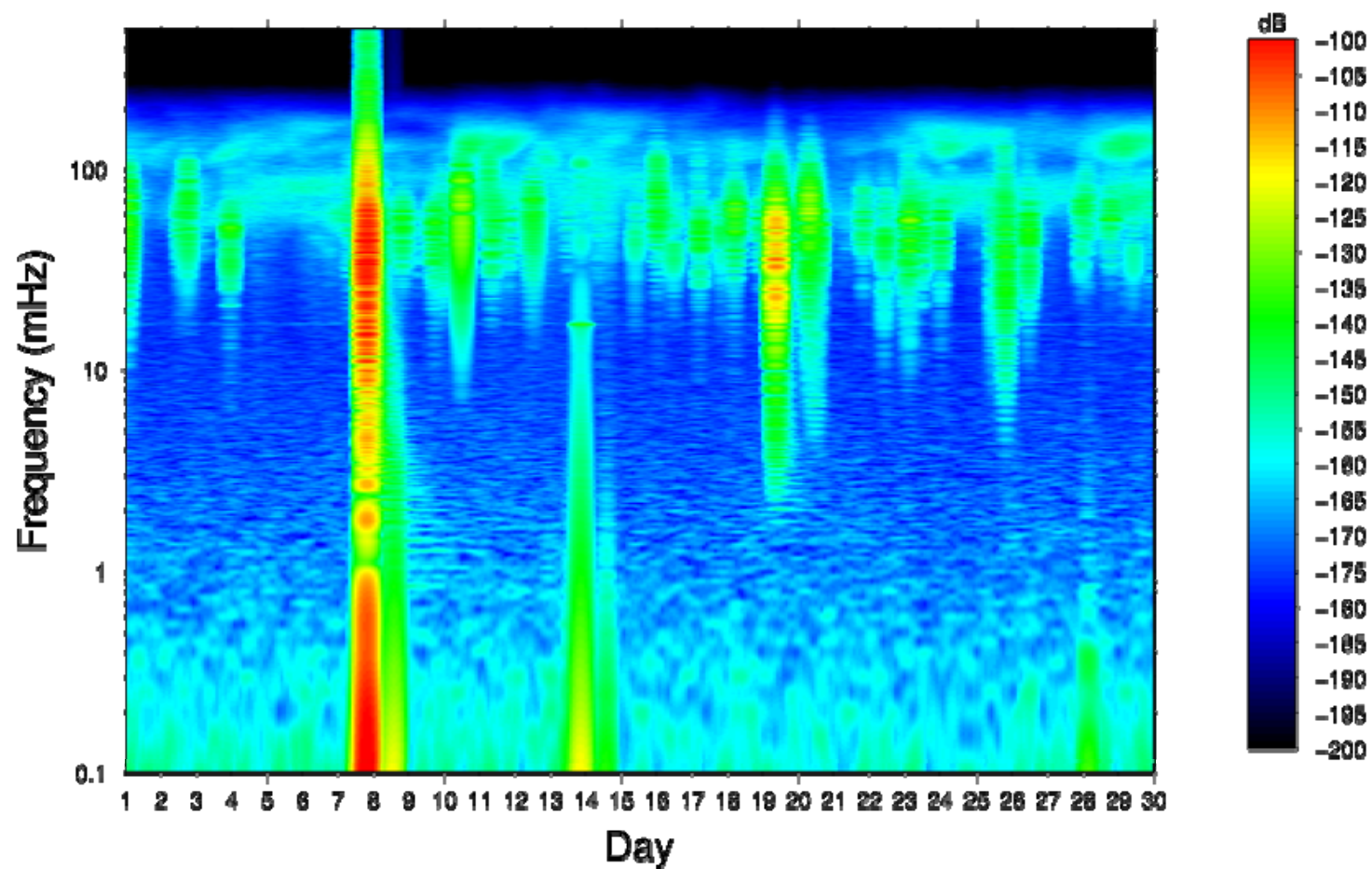


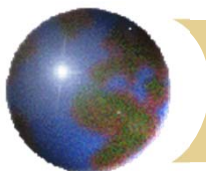


Noise level

PE, OLD lab

GO Pecný – September 2017

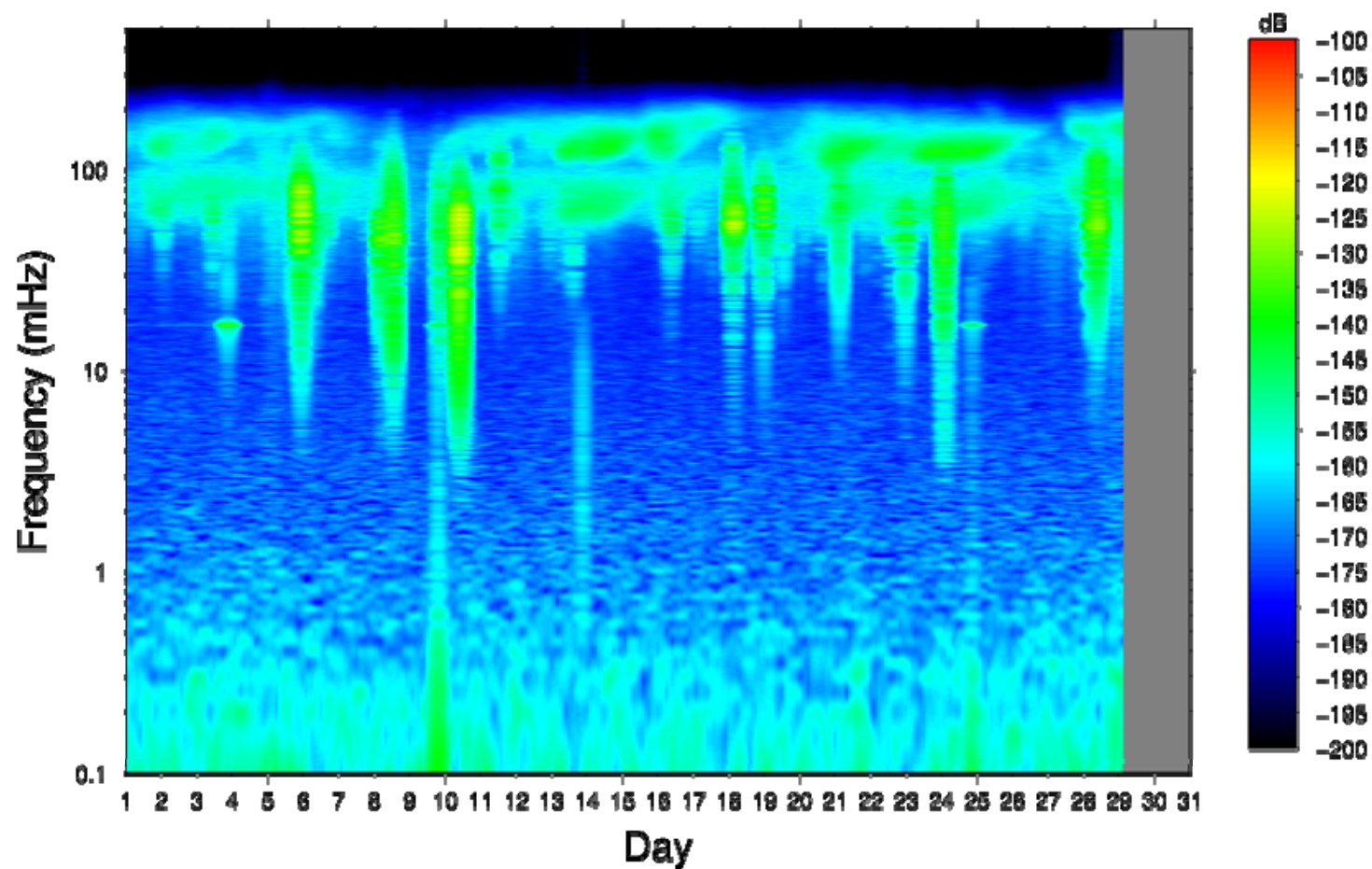


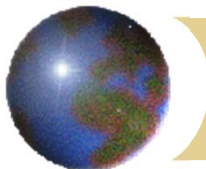


Noise level

PE, OLD lab

GO Pecný – October 2017

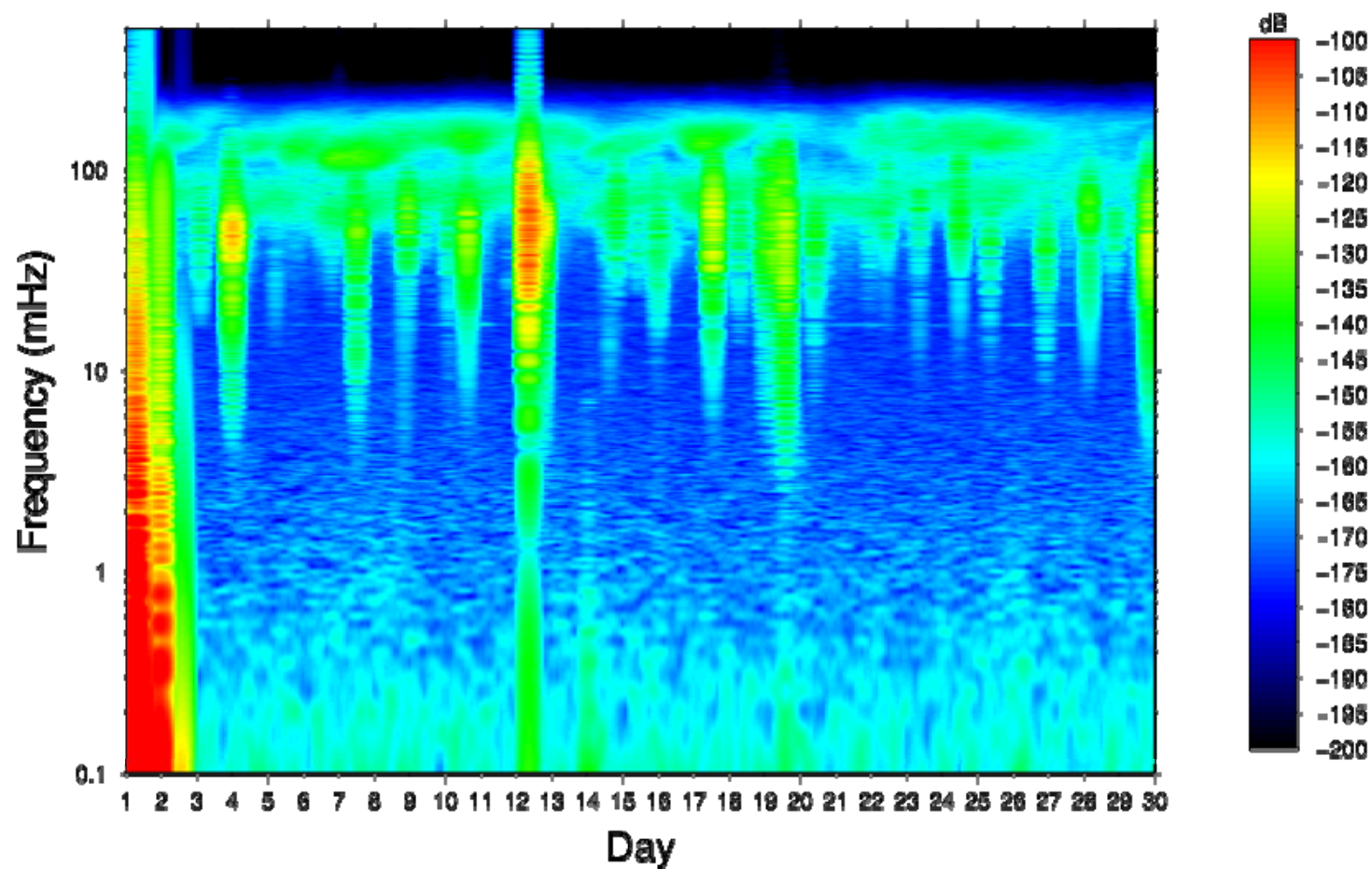


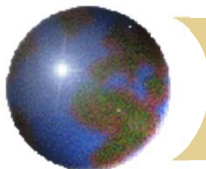


Noise level

PE, NEW lab

GO Pecny – November 2017

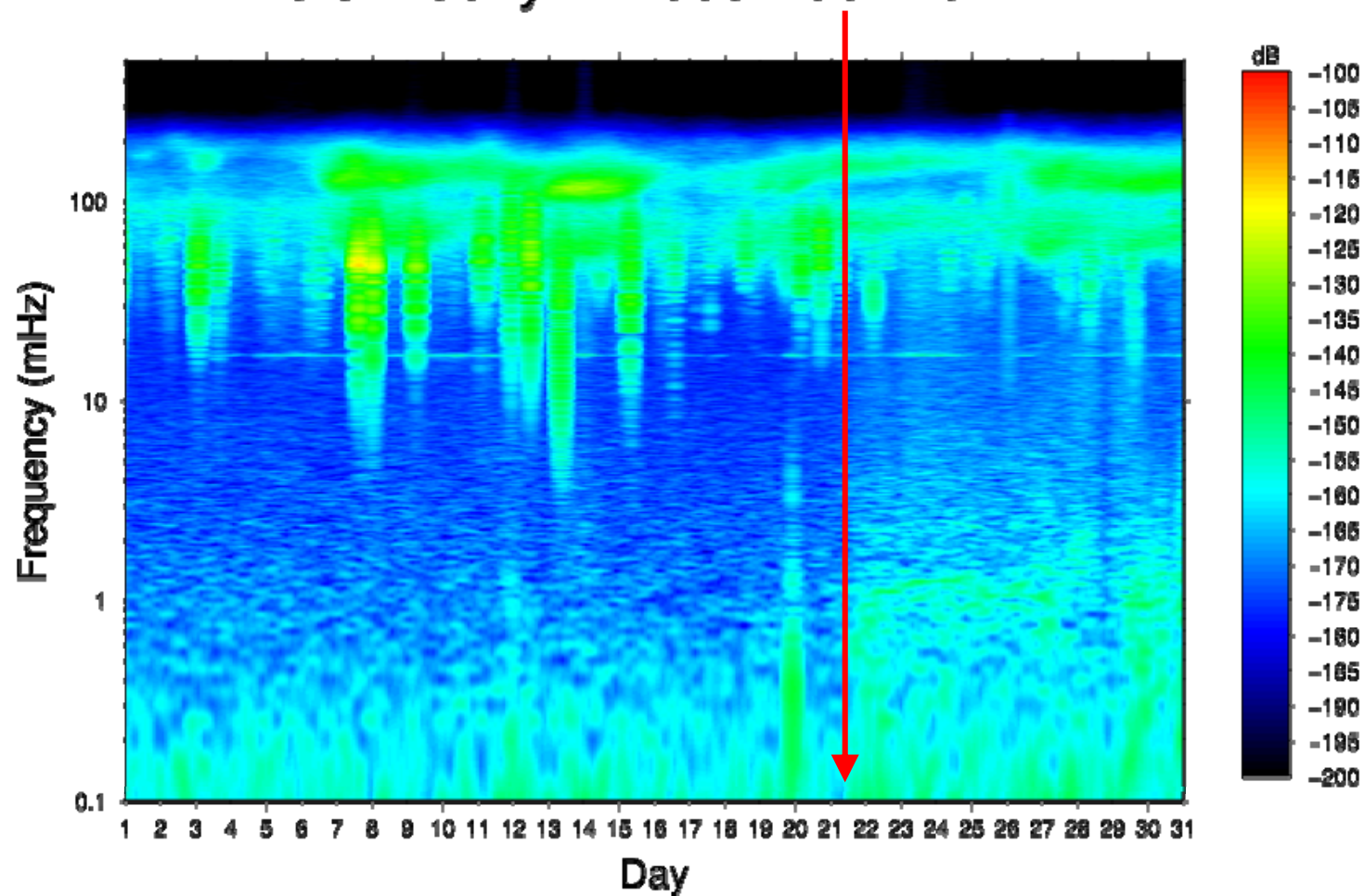


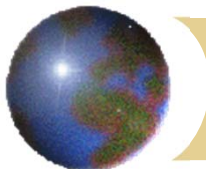


Noise level

PE, NEW lab

GO Pecný – December 2017

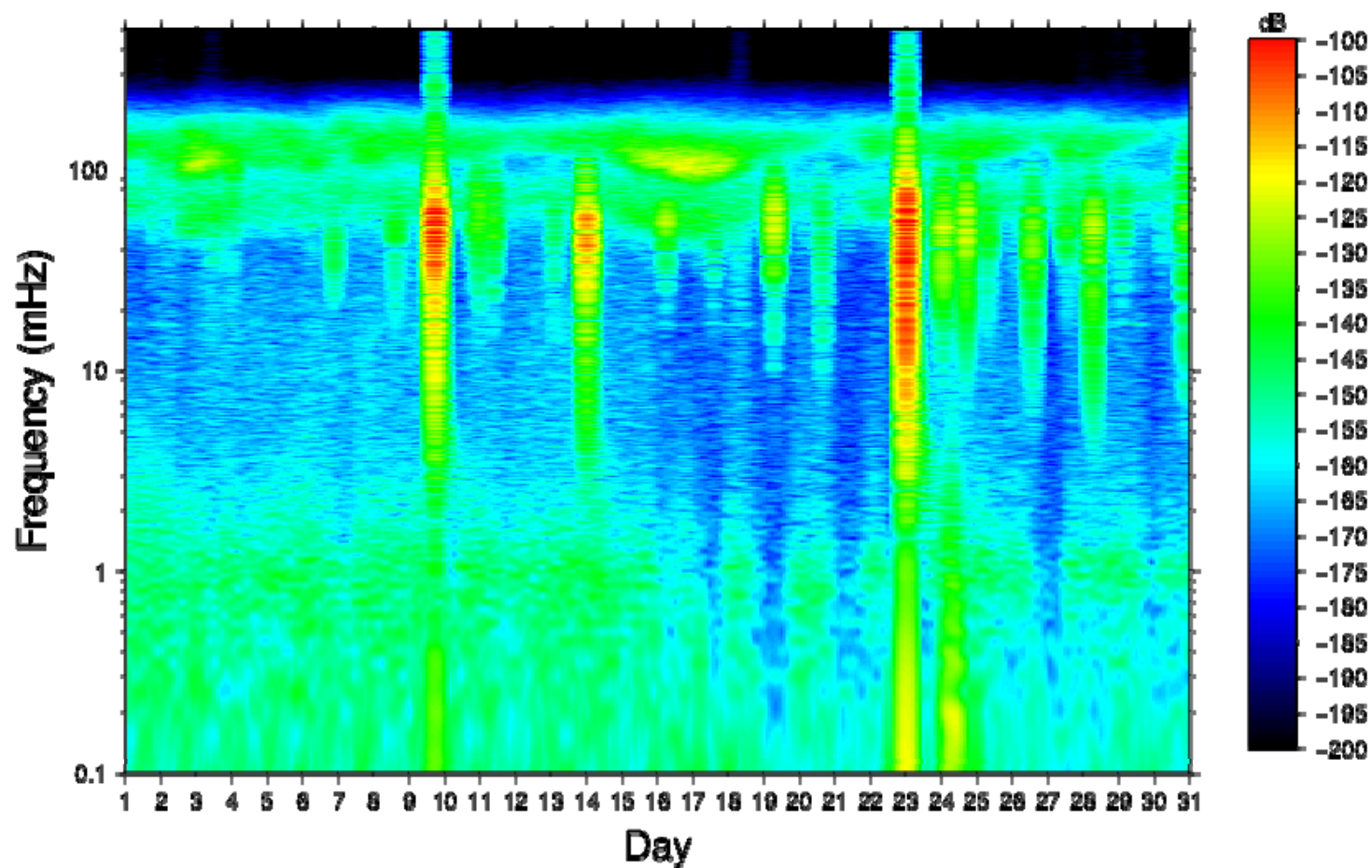


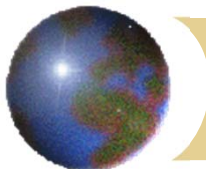


Noise level

PE, NEW lab

GO Pecný – January 2018

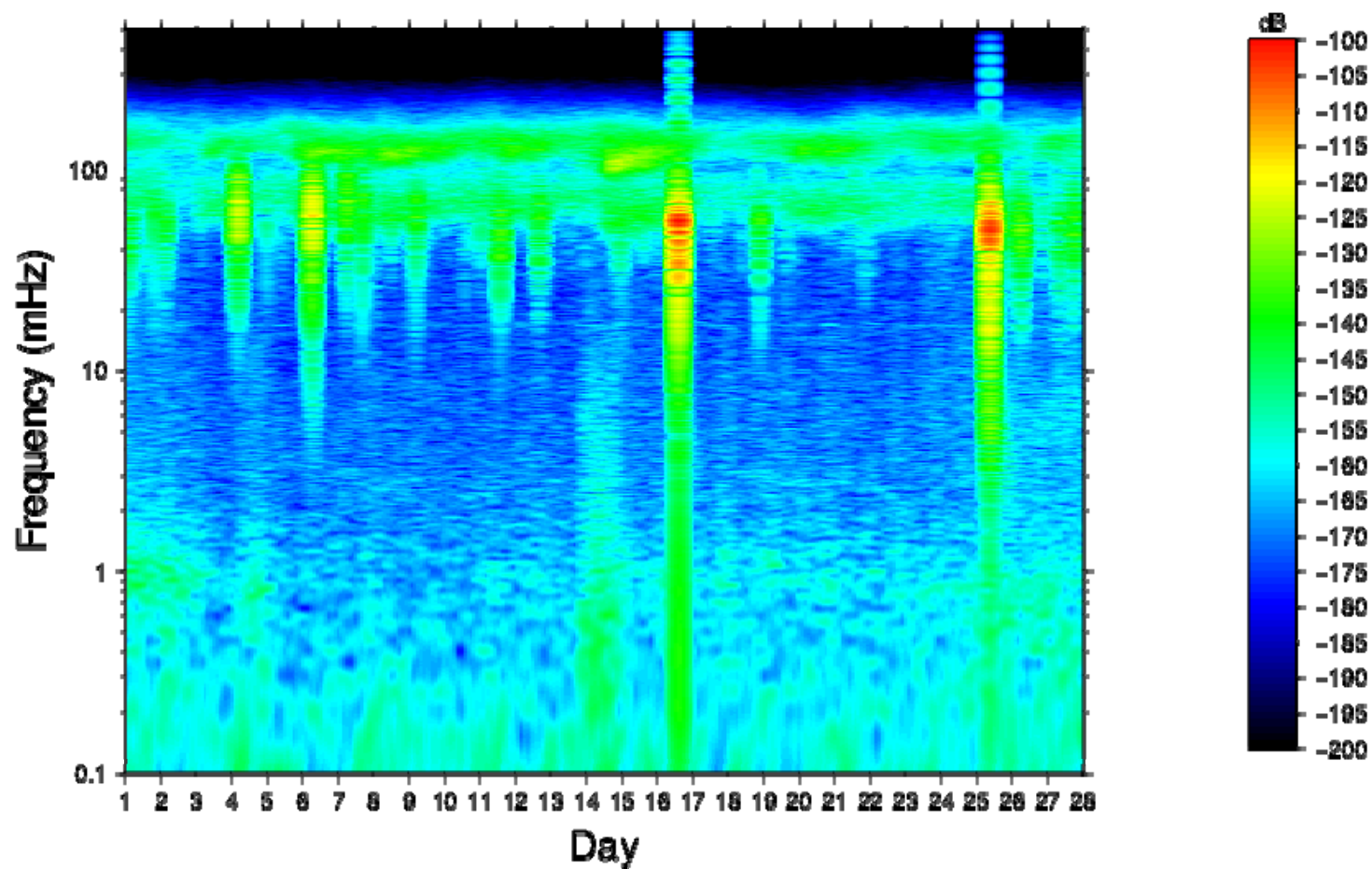


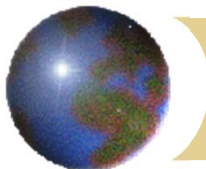


Noise level

PE, NEW lab

GO Pecný – February 2018

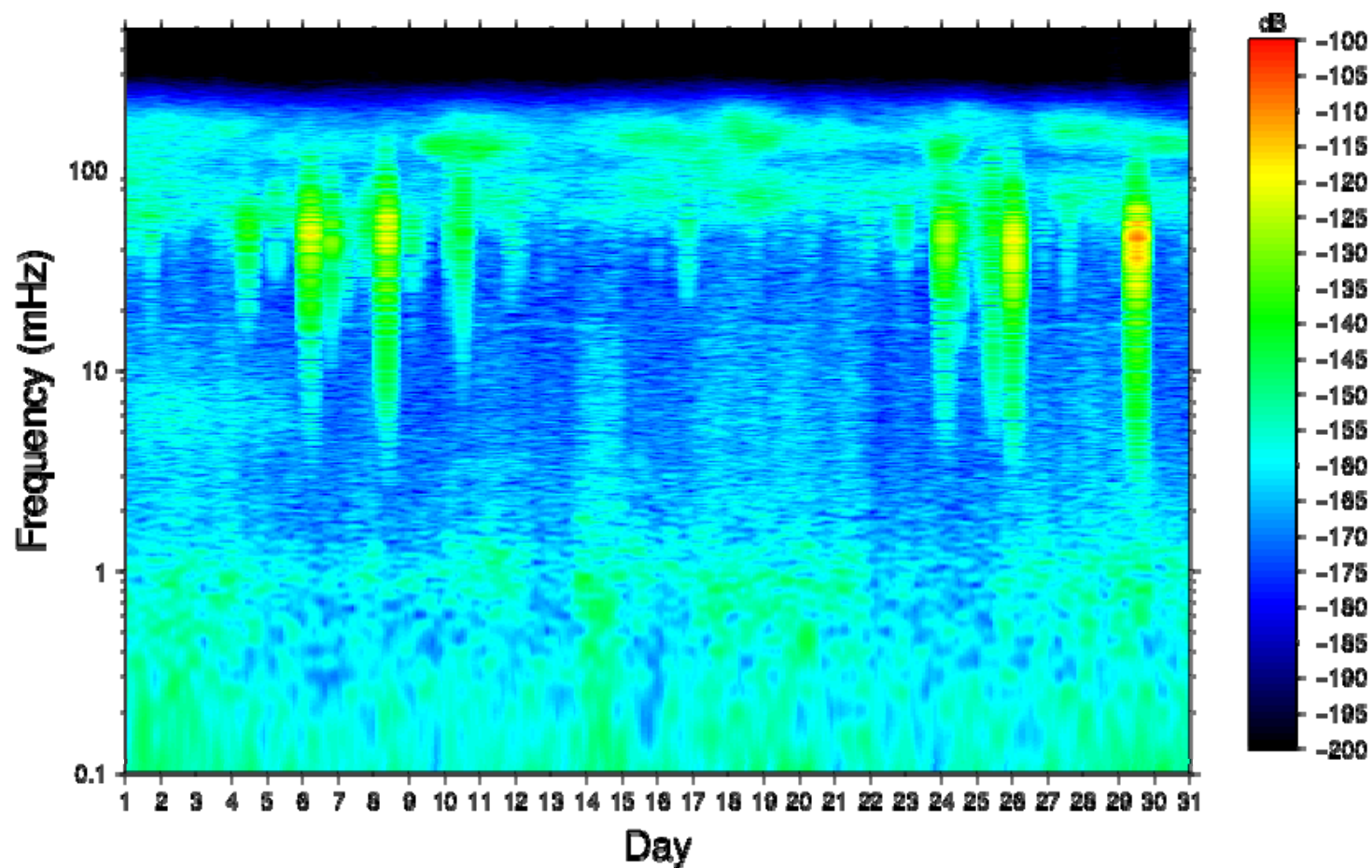


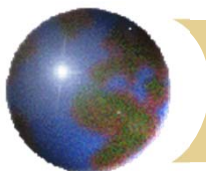


Noise level

PE, NEW lab

GO Pecný – March 2018

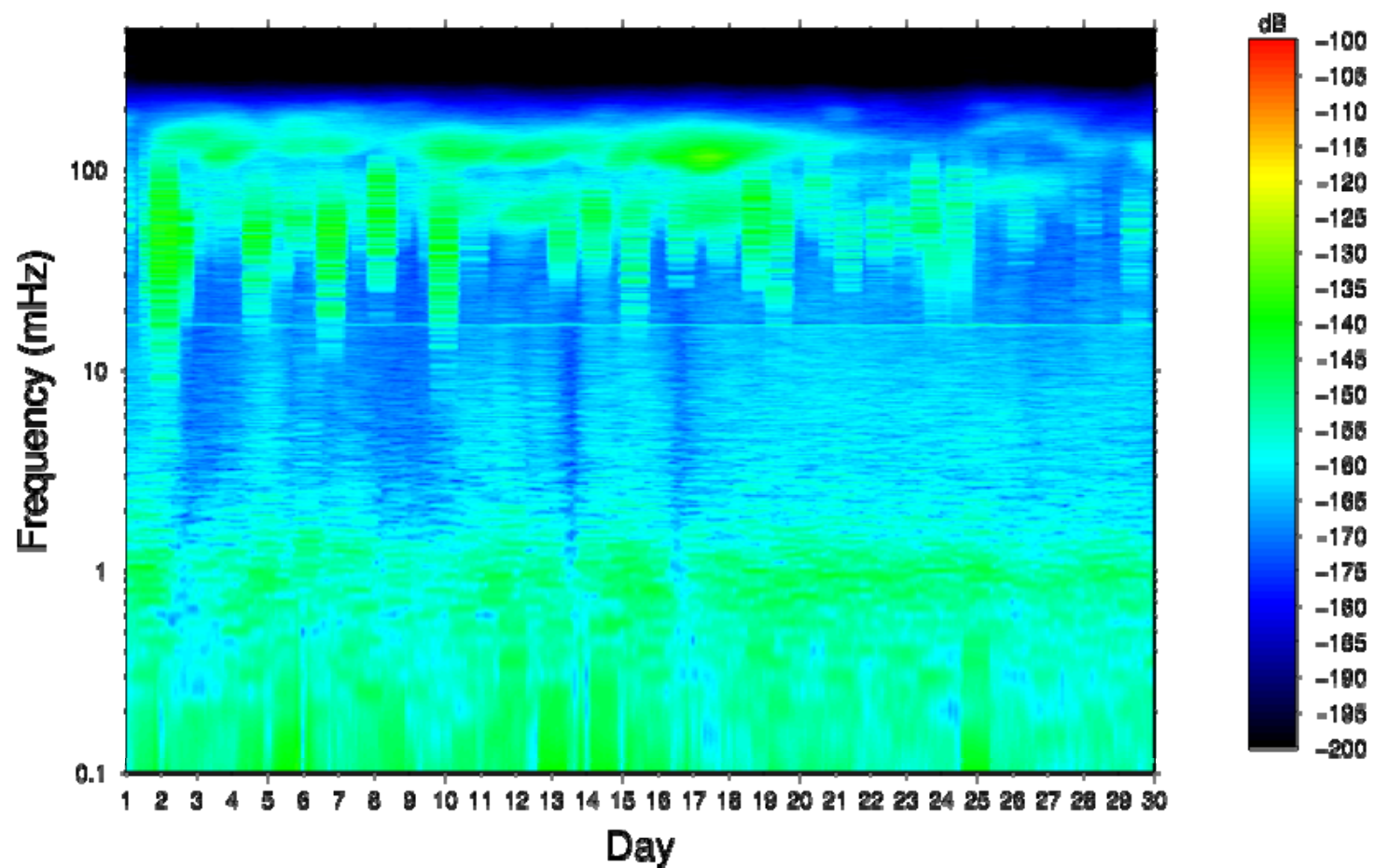


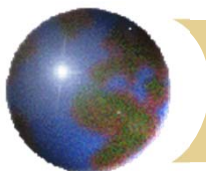


Noise level

PE, NEW lab

GO Pecný – April 2018

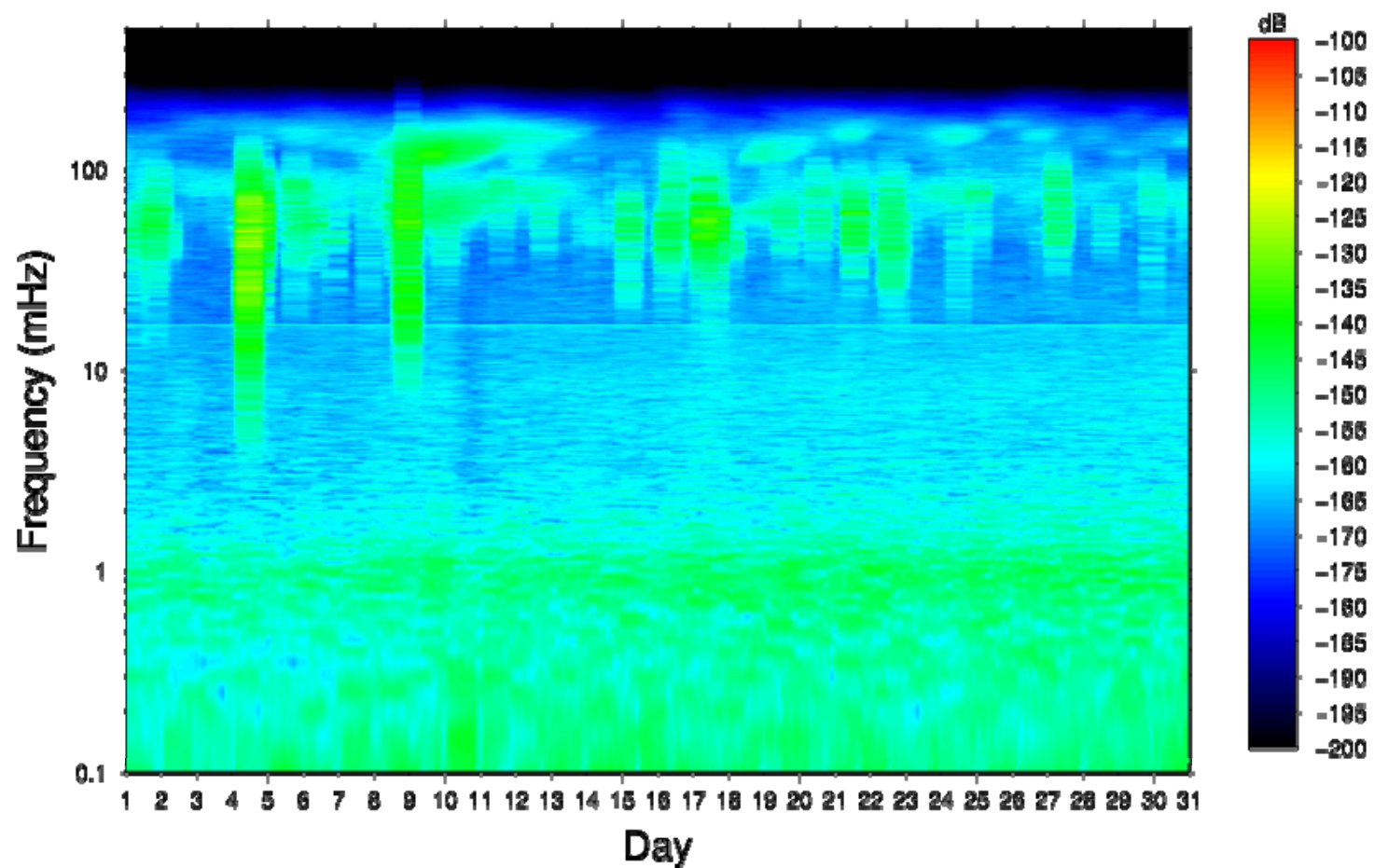


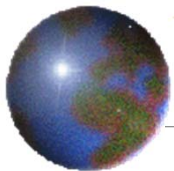


Noise level

PE, NEW lab

GO Pecný – May 2018



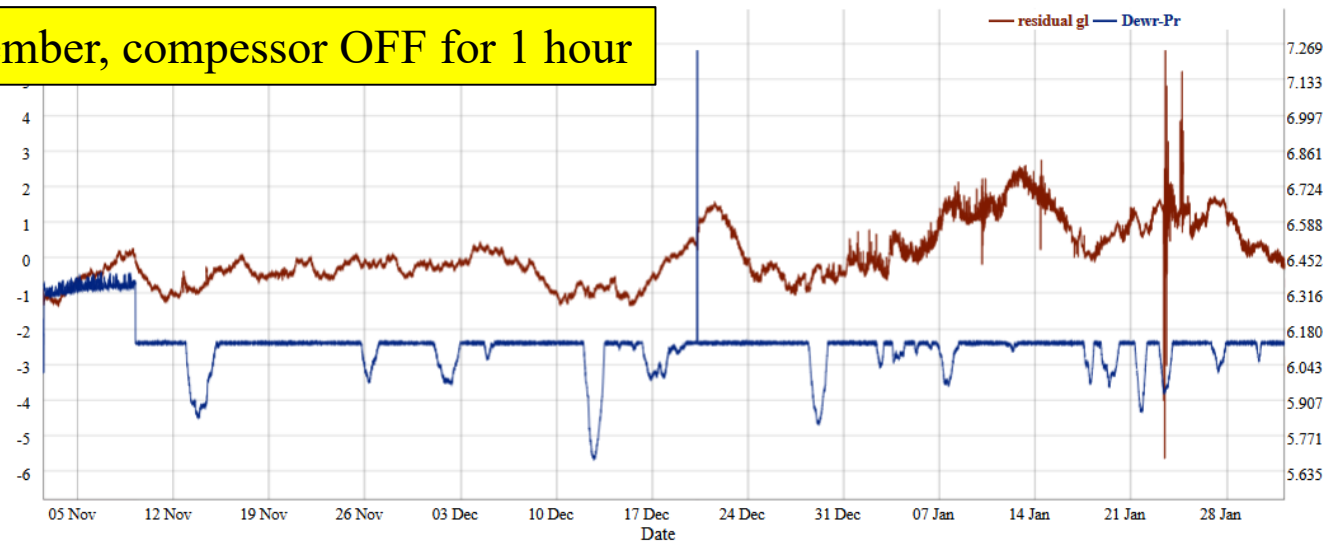


<http://oko.pecny.cz/grav/>

- ☒ ☐
- ☐ ☐
- ☐ ☐ LHe-Lvl (V)
- ☐ ☒ Dewr-P (V)
- ☐ ☐ GBal-1 (V)
- ☐ ☐ TX-Pwr (V)
- ☐ ☐ TX-Bal (V)
- ☐ ☐ NeckT-1 (V)
- ☐ ☐ NeckT-2 (V)
- ☐ ☐ TY-Pwr (V)
- ☐ ☐ TY-Bal (V)
- ☐ ☐ Tmp-Bal (V)
- ☐ ☐ HtrCntr (V)
- ☐ ☐ Dwr_Htr (V)

21 December, compressor OFF for 1 hour

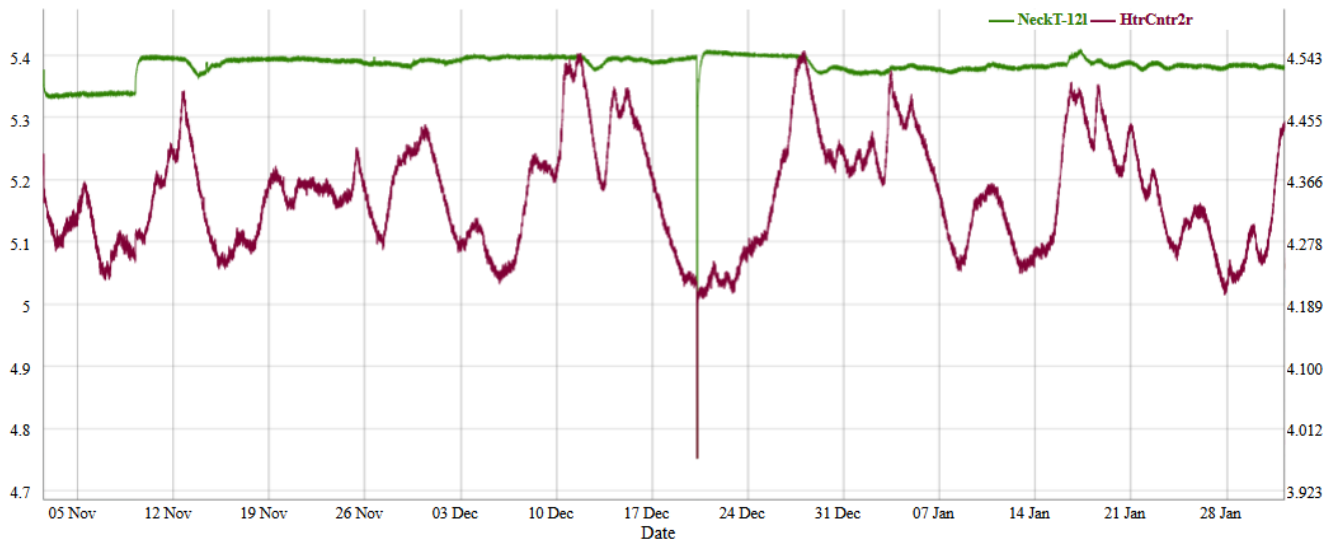
Plot of channels

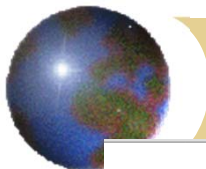


Select 2 channels

- ☐ ☐ residual g (μGal)
- ☐ ☐ residual p (hPa)
- ☐ ☐ LHe-Lvl (V)
- ☐ ☐ Dewr-P (V)
- ☐ ☐ GBal-1 (V)
- ☐ ☐ TX-Pwr (V)
- ☐ ☐ TX-Bal (V)
- ☒ ☐ NeckT-1 (V)
- ☐ ☐ NeckT-2 (V)
- ☐ ☐ TY-Pwr (V)
- ☐ ☐ TY-Bal (V)
- ☐ ☐ Tmp-Bal (V)
- ☐ ☒ HtrCntr (V)
- ☐ ☐ Dwr_Htr (V)

Plot of channels

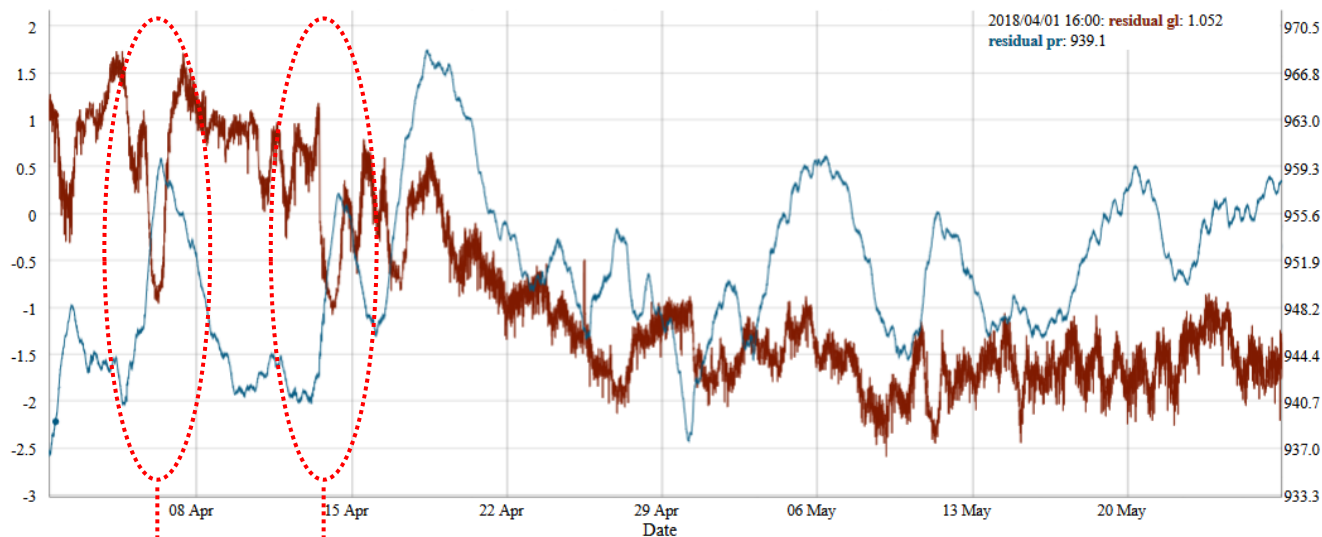




<http://oko.pecny.cz/grav/>

- ☒ ☐ residual g (μGal)
- ☐ ☒ residual p (hPa)
- ☐ ☐ LHe-Lvl (V)
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- ☐ ☐ TY-Bal (V)
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- ☐ ☐ HtrCntr (V)
- ☐ ☐ Dwr_Htr (V)

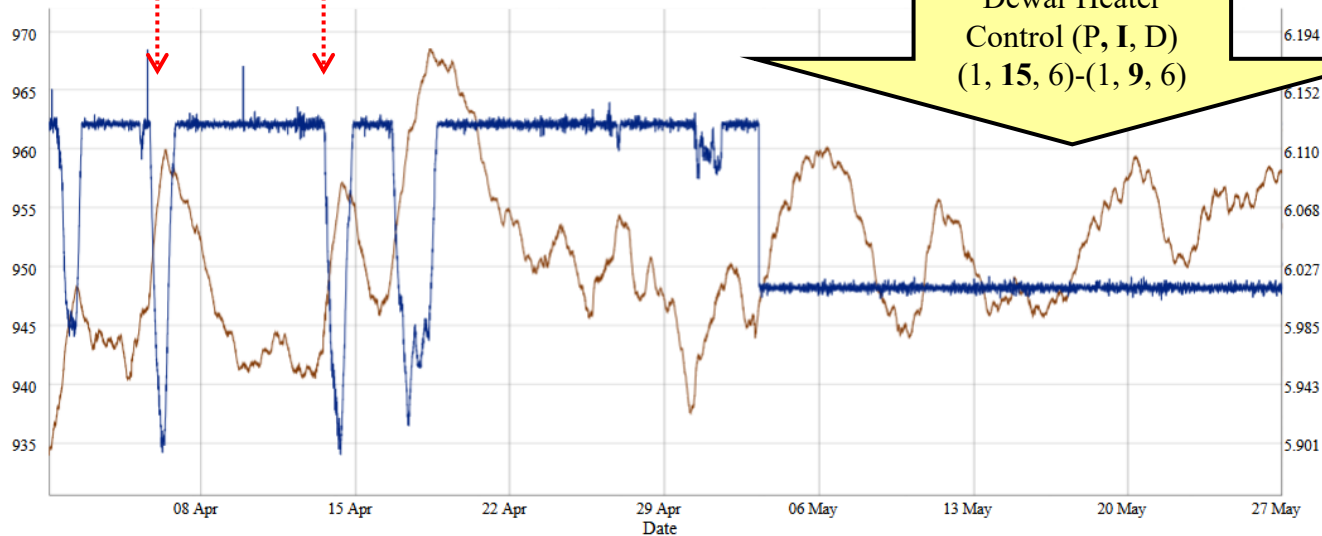
Plot of channels

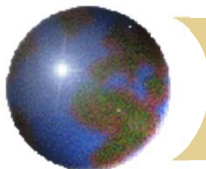


Select 2 channels

- ☐ ☐ residual g (μGal)
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- ☐ ☐ Dwr_Htr (V)

Plot of channels

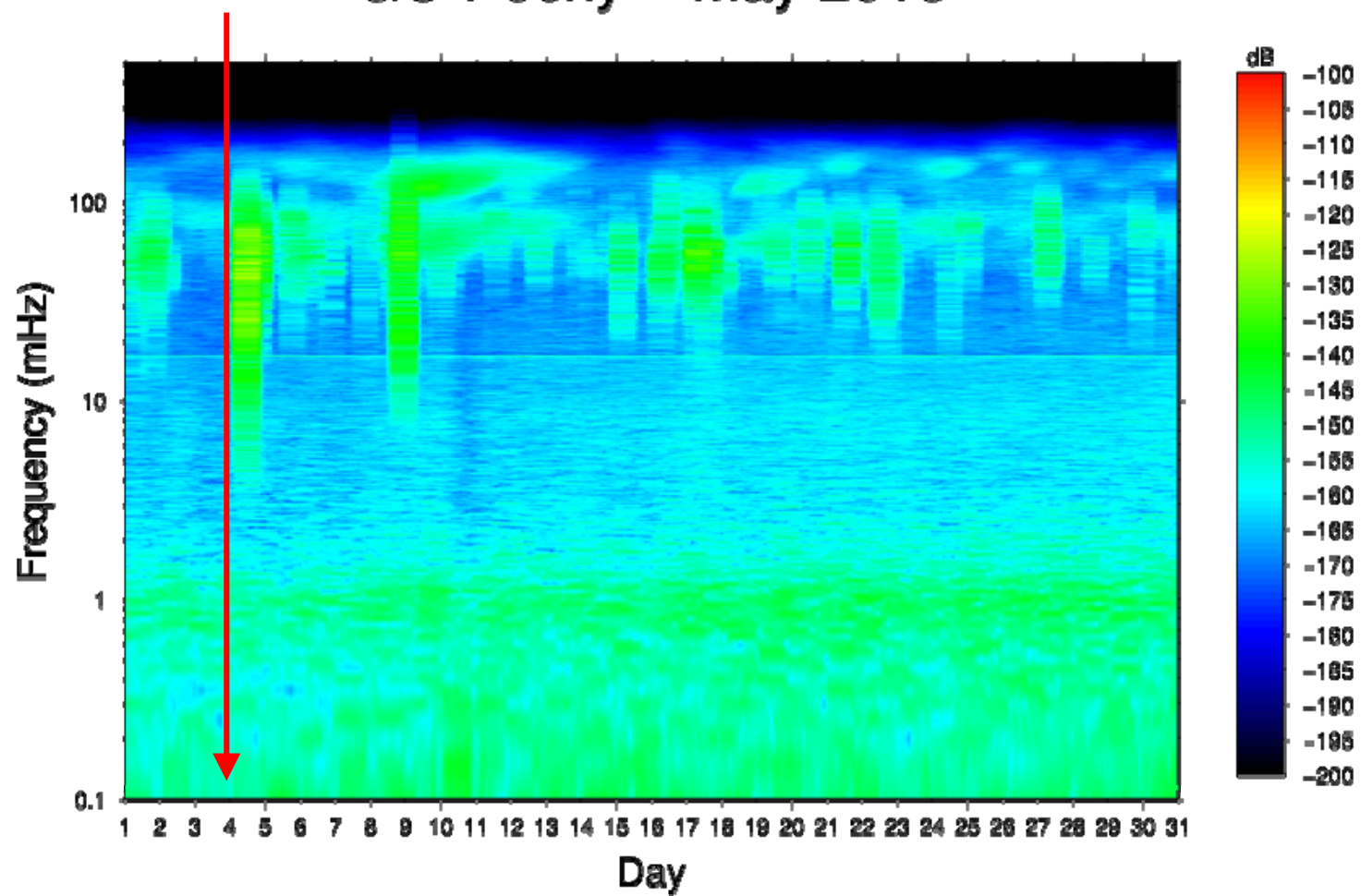


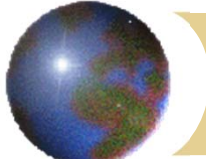


Noise level

PE, NEW lab

GO Pecny – May 2018





<http://oko.pecny.cz/grav/>

Last 30 days overview of residuals

Last week spectral overview

Yearly overview of residuals

Yearly overview of missing data

PE - 2018



Comparison of SG residuals with AG measurements in near real time

Thank you for your attention!