

Schumann Resonances measurements at Virgo

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VK PEM Meeting

Schumann Resonances Measurements at Virgo

Taksuki Washimi measurements at Virgo on 2022/11/11

- 900m W
- 3 different positions (door side, wall side, bottom)
- probe at 12 cm distance from Virgo tube (AI?)

Measurements on 2023/02/01 (February)

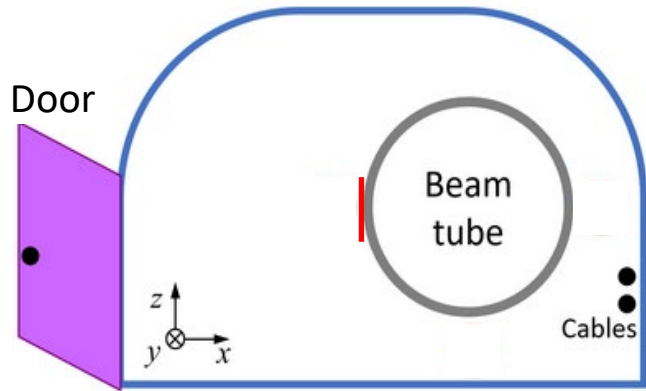
- 900m W
- 1 position (door side)
- probe in contact with the tube, at the junction, under thermal cover
- ~24h of collected data (day and night)

Measurements on 2023/03/02 (March)

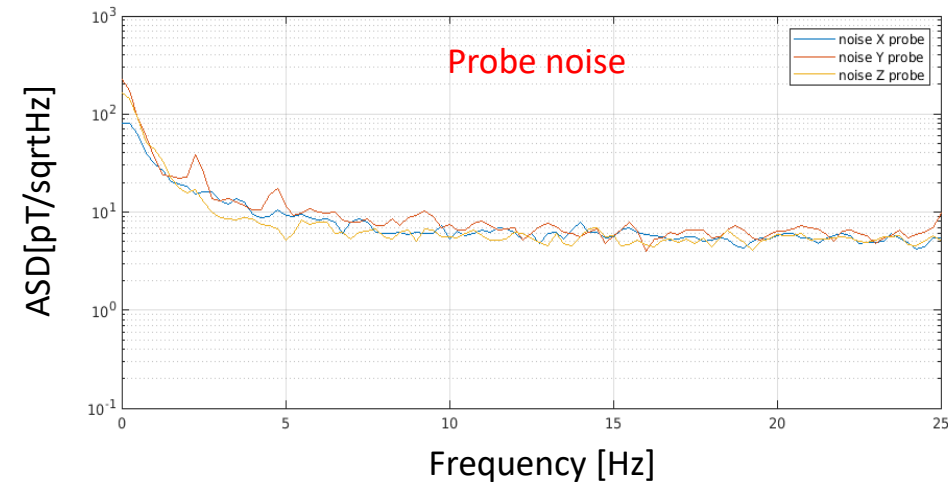
- 900m W
- 3 different positions (door side, wall side, bottom)
- probe at 13 cm distance from Virgo AI tube

February Measurements at 900W (door side)

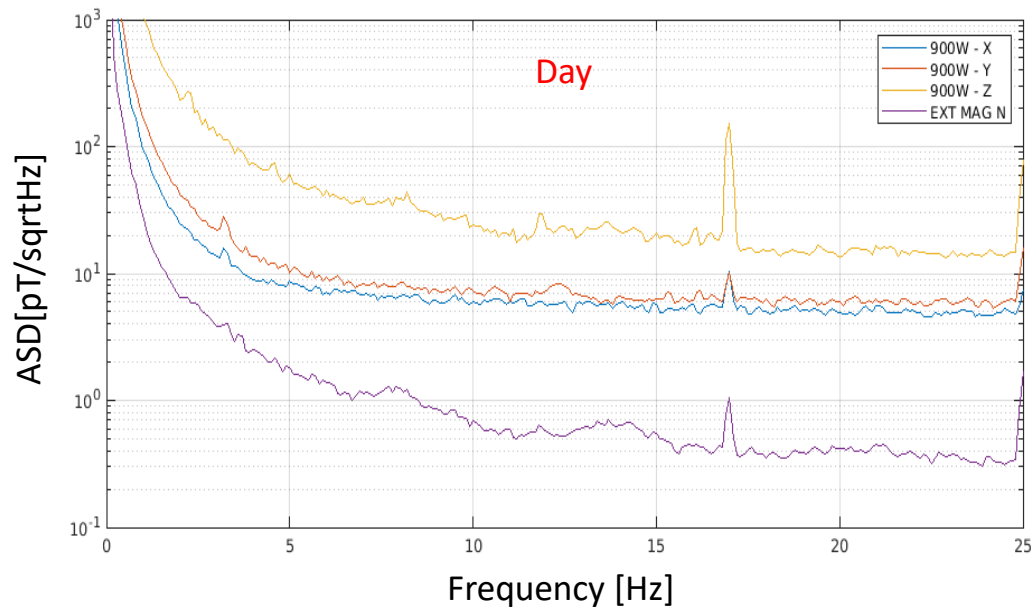
Probe in contact with Virgo tube under the thermal cover, Z along the vertical direction



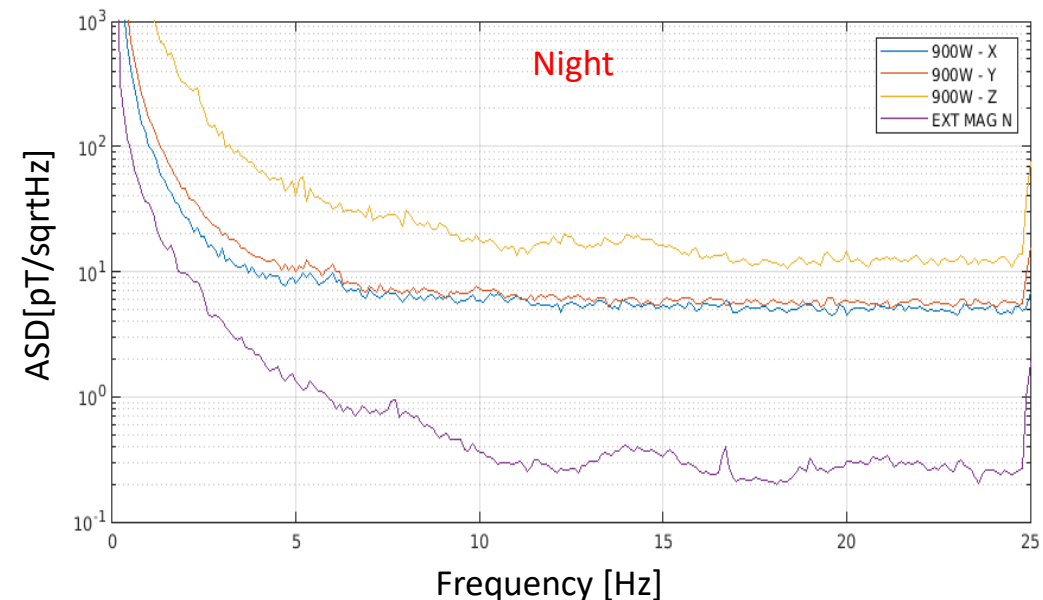
Sketch by Taksuki Washimi



Data collected on 01/02/2023 from 11:25 to 11:33



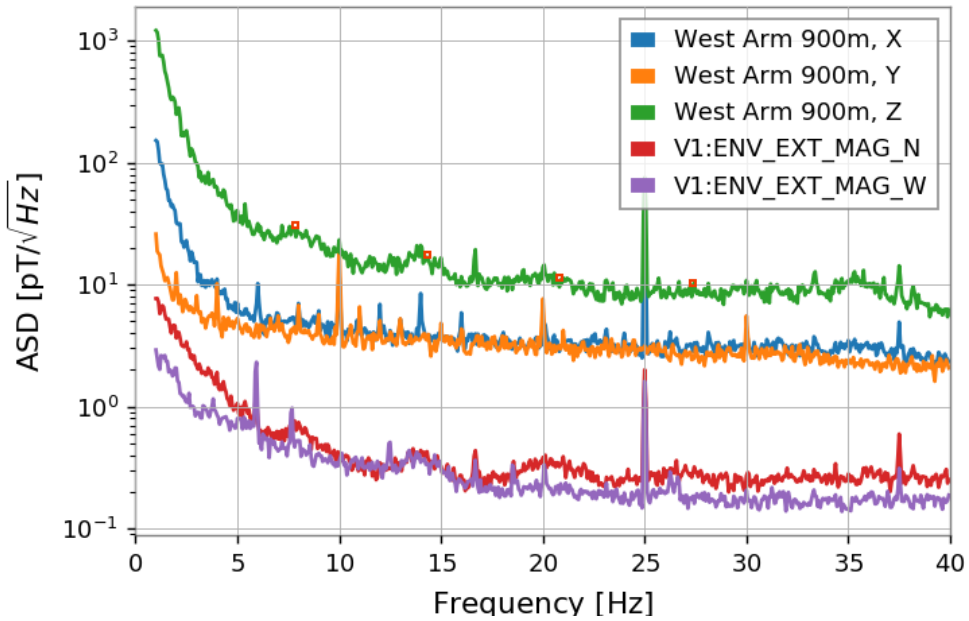
Data collected on 02/02/2023 from 01:08 to 01:16



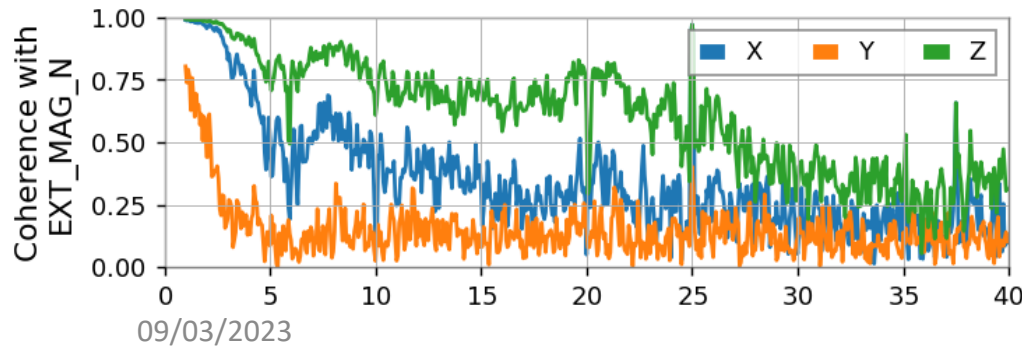
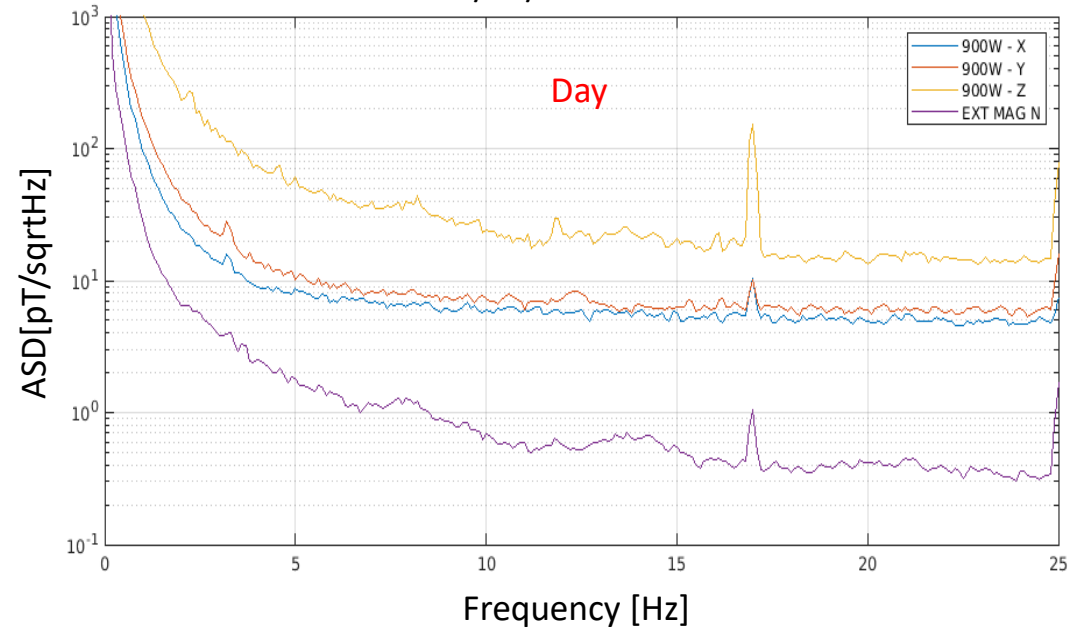
Comparison with Taksuki Measurements

Taksuki Washimi measurements

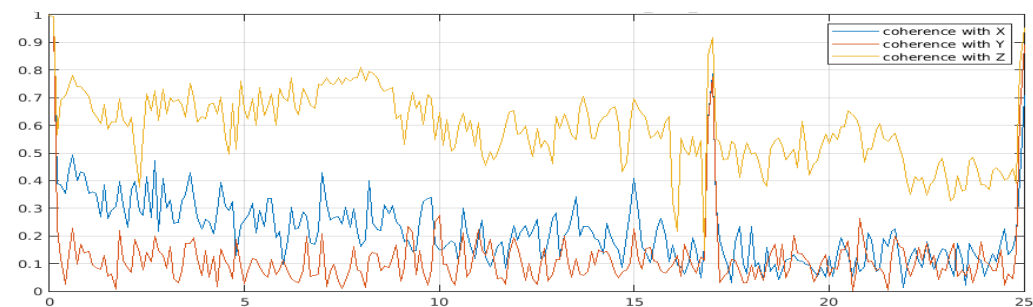
Virgo, 2022-11-11 09:54:42



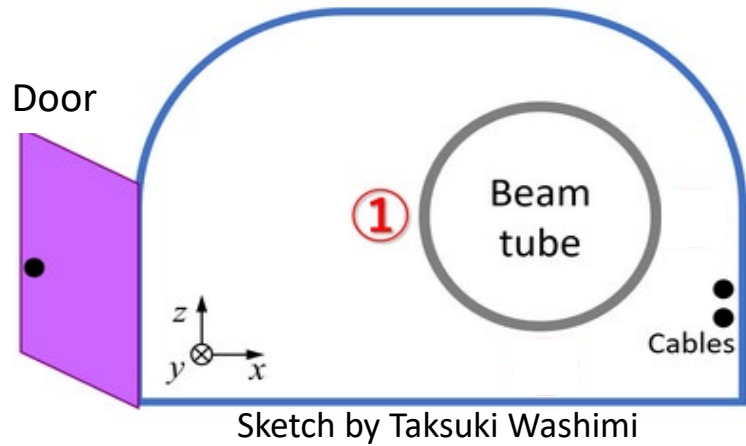
Data collected on 01/02/2023 from 11:25 to 11:33



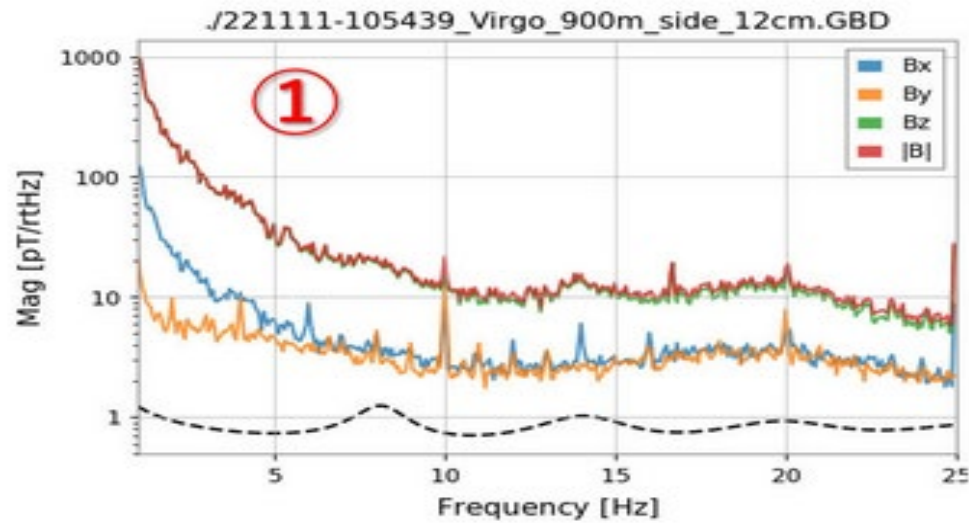
Coherence probe 900W – with ENV_ETX_MAG N



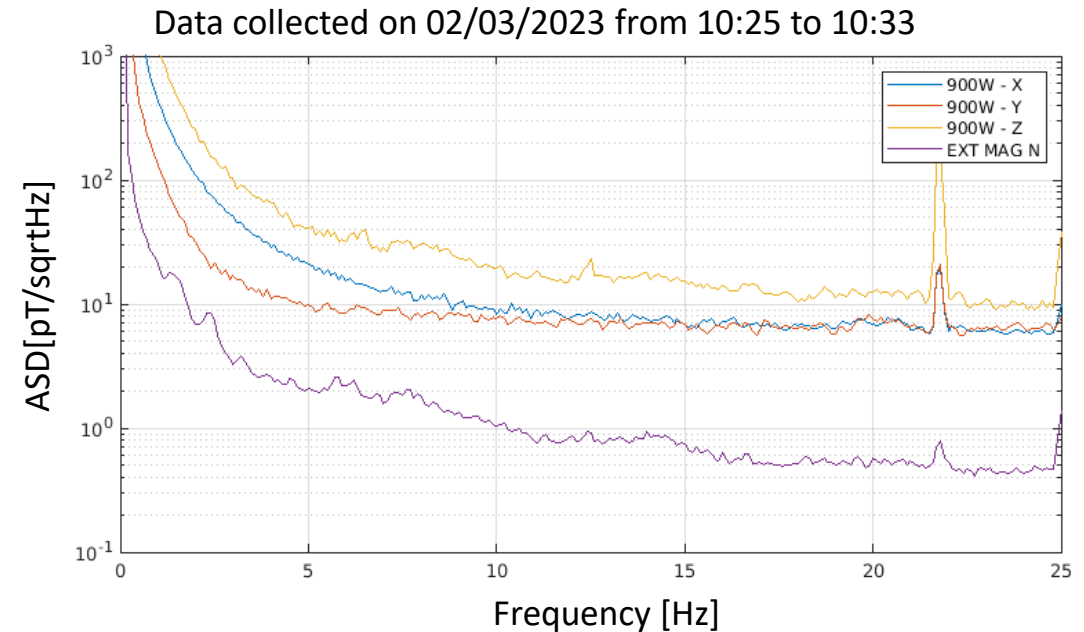
March Measurements at 900W (door side)



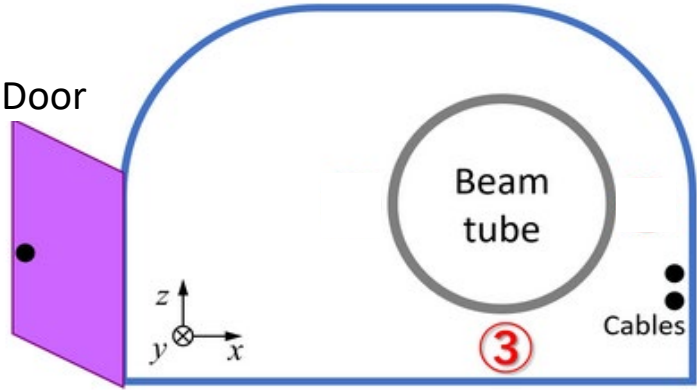
Z along the vertical direction
At 13cm distance from the Al tube



Taskuki measurement



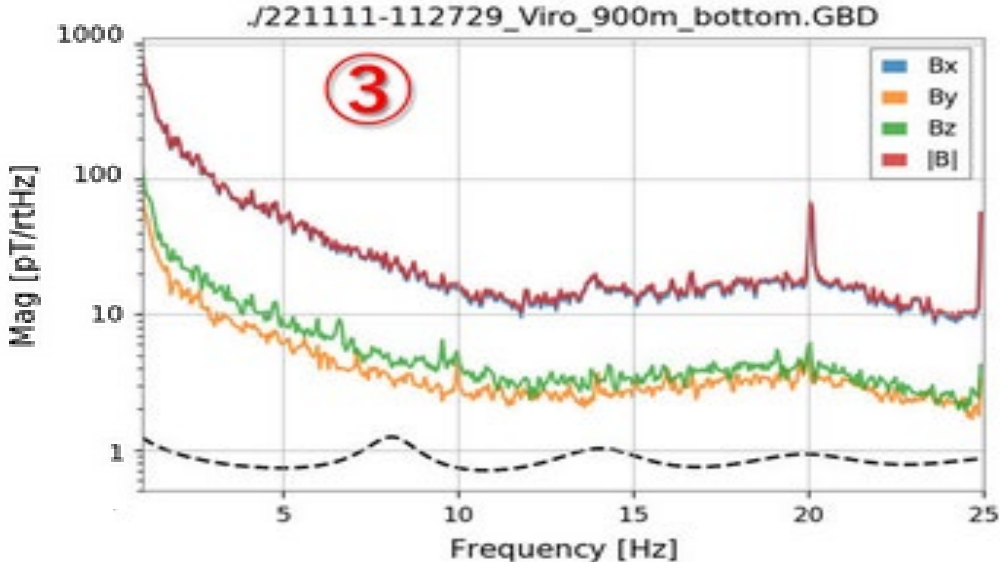
March Measurements at 900W (bottom)



Sketch by Taksuki Washimi

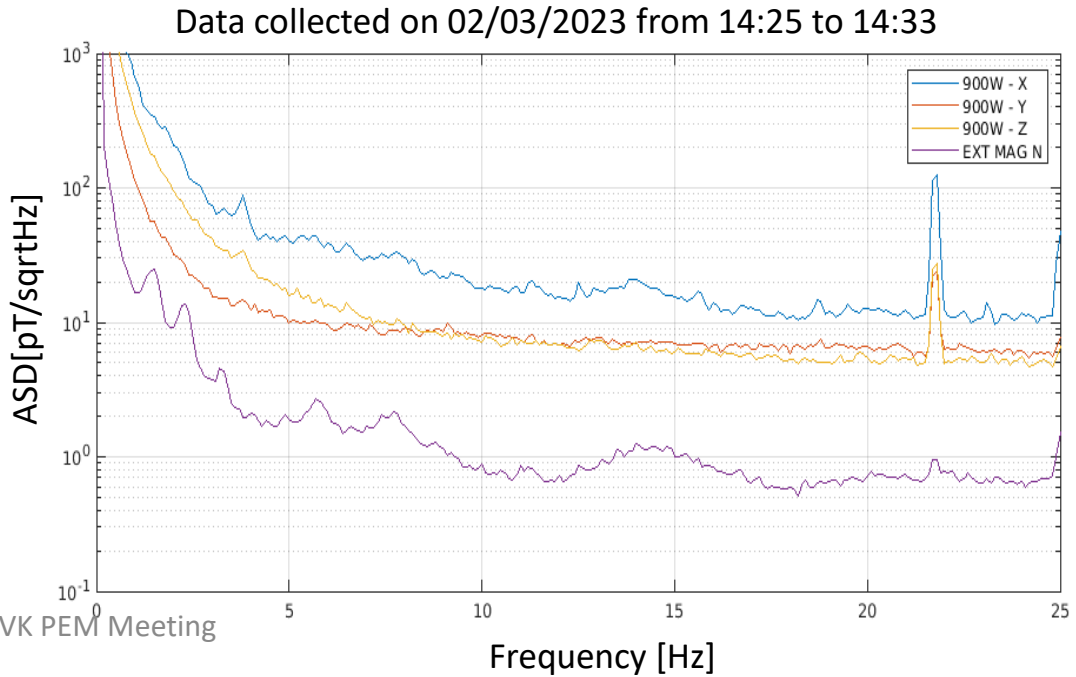


Z along the vertical direction
At 13cm distance from the Al tube



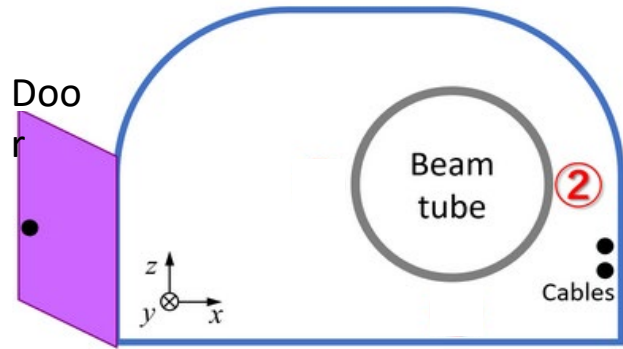
Taskuki measurement

09/03/2023



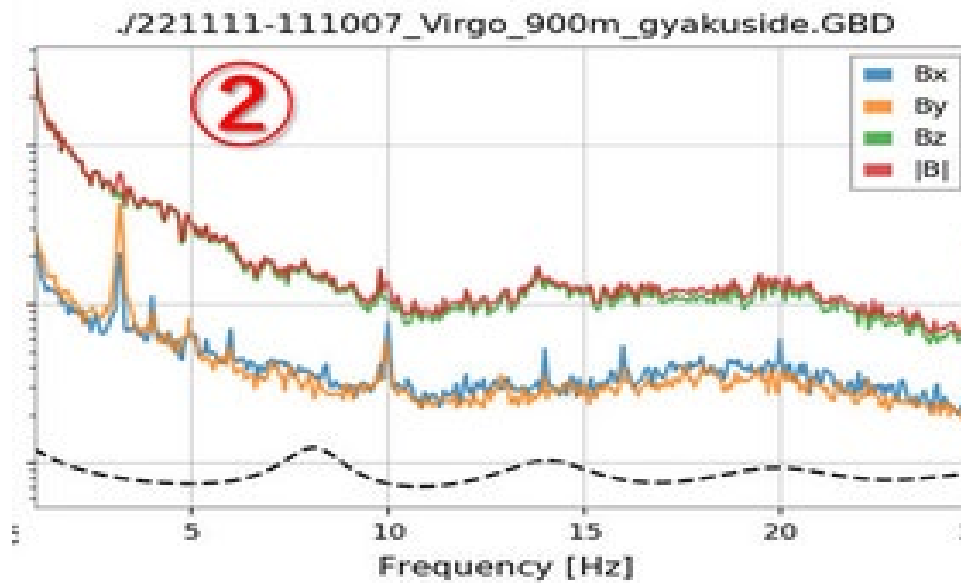
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March Measurements at 900W (wall side)

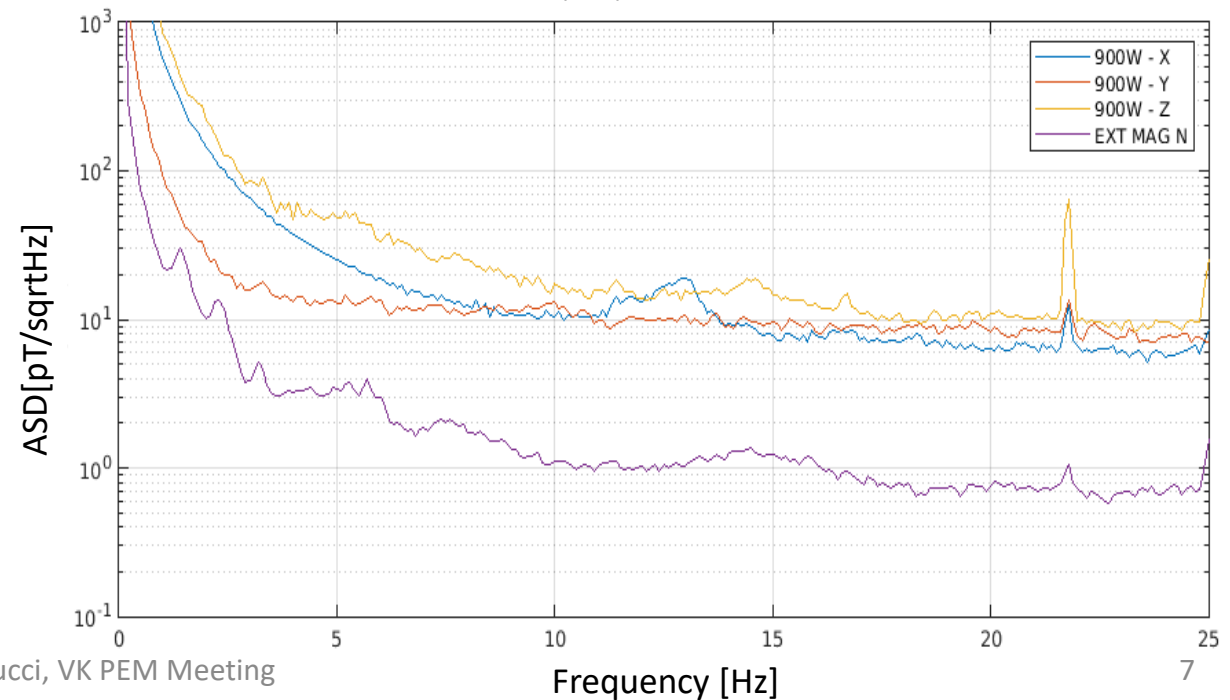


Z along the vertical direction
At 13cm distance from the Al tube

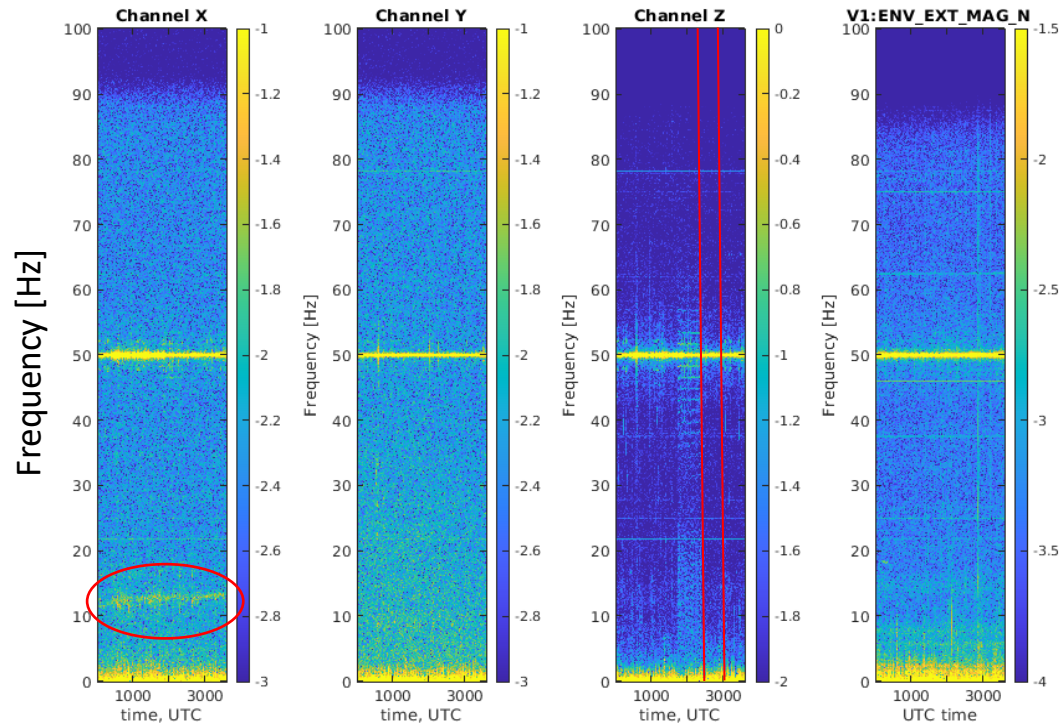
Data collected on 02/03/2023 from 12:40 to 12:50



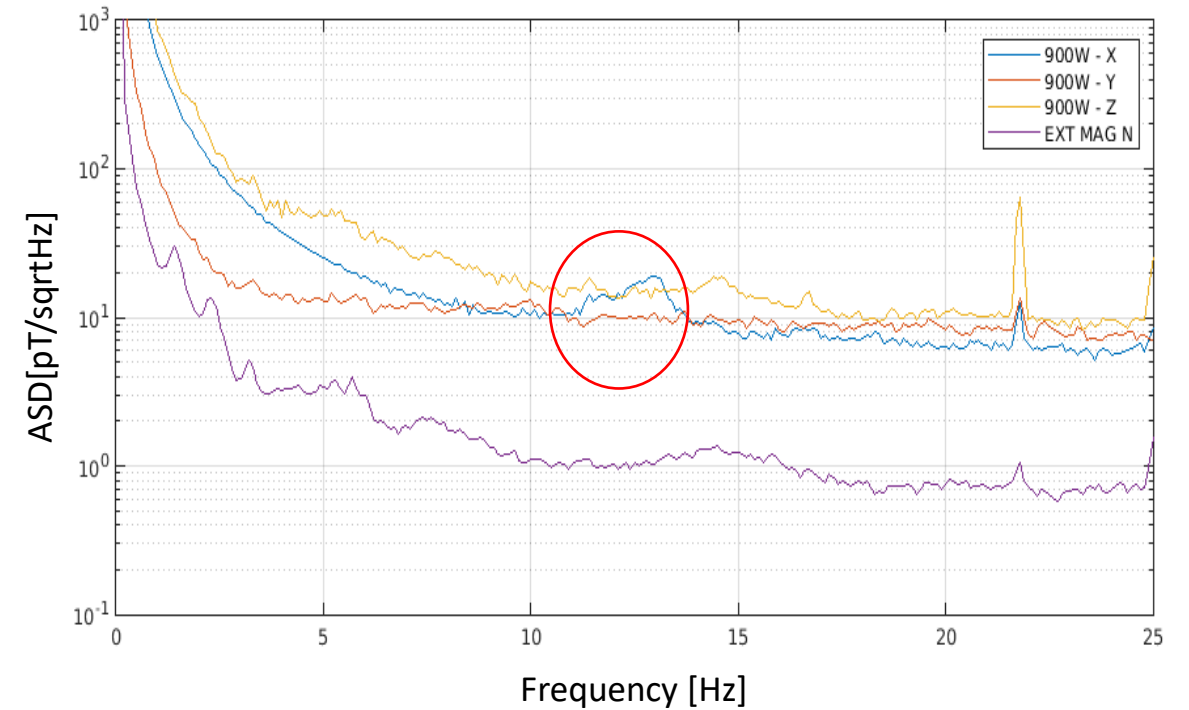
Taskuki measurement



March Measurements at 900W (wall side)



Data collected on 02/03/2023 from 12:40 to 12:50



Conclusions

- Try to reproduce measurements made in November by Taksuki.
- Schumann resonances observed with a factor 2 intensity difference with respect to Taksuki.
- Not far from probe noise level.
- Day intensity slightly larger than night.
- Component tangential to the tube larger than normal component.
- Measurements on wall side show ~ 12 Hz noise in the X direction.