

Summary of Virgo status

KAGRA PEM meeting
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Summary of Virgo status

History of issues:

- Thermal compensation sys for PR and SR mirrors RoC - July 2022
- WI mirror fall down - November 2022
- OMC damaged and replaced - December 2022
- Laser head replacement - January 2023
- Laser amplifier replacement - yesterday
- ITF tuning difficult because of Bistable behaviour (jumps)

Present:

- Input power from 33W to 24W (O3b)
- TCS tuning ongoing (helped by new alignment system of CO2 beams)
- Longest lock (not yet in low noise) is about 2 hours
- No more jumps (apparently)

Plan:

- Full recovery of ITF in low noise, and stable
- Reduce control noises which are presently limiting, also by tuning noises subtraction
- Reduce input common noise (SSFS tuning)
- ENV noise hunting will follow ASAP
 - Noise injections (magnetic and acoustic) in far field and near field
 - Acoustic and shaker noise injections (scattered light hunting)