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Cold aberrations and locking of Central Interferometer of Advanced Virgo+

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The target sensitivity of Advanced Virgo for O4 is about 90-120 Mpc for the BNS range. To achieve this, several hardware upgrades are under process. One of the most relevant concerns installation of the Signal Recycling Mirror, which forms an additional marginally stable cavity along with the power recycling cavity already present in Advanced Virgo. Therefore, to compensate for these (cold) optical aberrations, new Central Heating benches were installed by the TCS subsystem.

I will describe the installation and pre-commissioning of CO₂ central heating, which assists the lock of DRMI by compensating for the (cold) optical aberrations, and the procedure followed for locking the Dual Recycled Michelson Interferometer along with the tuning of CO₂ central heating.”

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Collaboration / Activity

EGO-Virgo

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