

KAGRA - Instruments status -

Digest for the past weeks

- All chambers closed and vacuuming has started.
 - A vacuum leak found in one area (SRM-OMM) → to be repaired in January.
- EY duct shield cooling started.
- Cryo-cooler at IX area repaired.
- Intensity Stabilization Servo improved.
- Higher power laser replacement ongoing. IMC lock achieved.
- FPML, PRML successfully locked → PRFPMI commissioning ongoing.
 - Auxiliary Laser System improvement is required.

Timeline (No major changes since the last report.)

- **O4a (1-3 Mpc)**
 - Join the observation in the first 1 month of O4a.
 - **Partial operation of cryocoolers for test mass mirrors.** (81K at ETMX/Y, 250K at ITMX/Y)
- **Mid-break**
 - Take a longer commissioning break
- **O4b (10 Mpc)**
 - Resume the observation in late O4b, 3 months-length at least.
 - **Cooling the test mass mirrors <100 K at least.** (20K supposing full operation of cryocoolers)

