IFO status

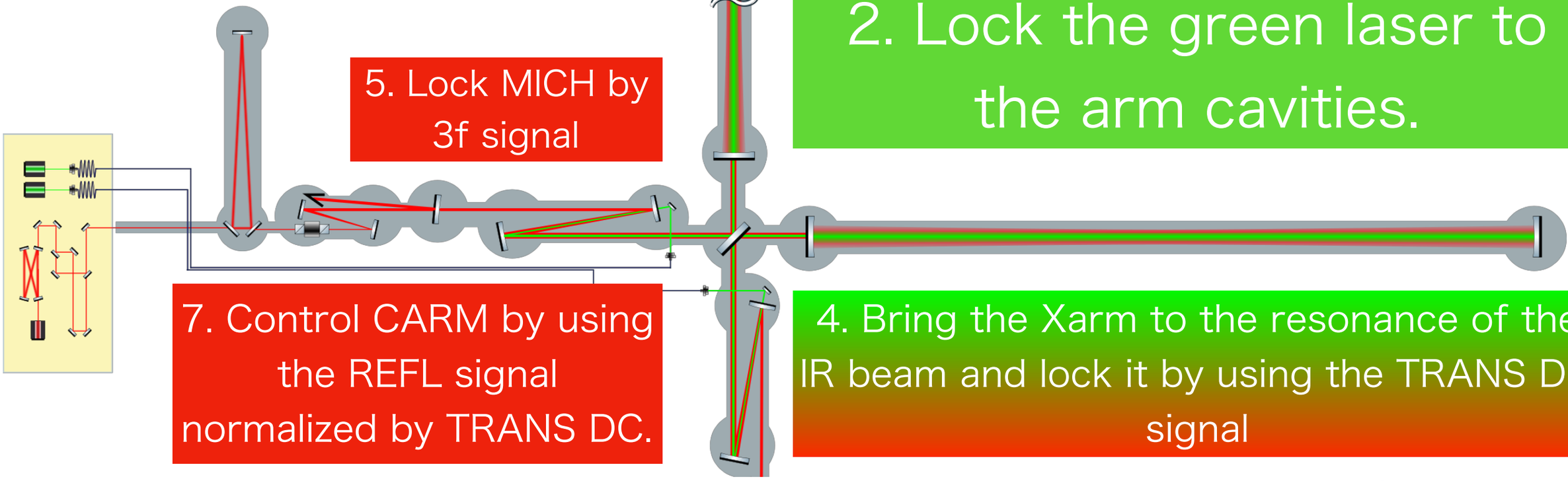
- **Fabry-Perot Michelson interferometer (FPMI) is (80 %) locked.**
  - ✓ Both arms are on resonance
  - ✓ Central Michelson is locked.
  - ✓ However, still the signal uses as the error signal is the one only for the lock acquisition.
  - ✓ We need to hand control off to the low-noise signal, and it would take several more days.
  - ✓ **Anyway basically, we can say that the lock of the FPMI is not far anymore**
- Dual-Recycling FPMI (DRFPMI) is the next step after the FPMI
  - ✓ Largest concern is the birefringence of the input test mass
  - ✓ We will see the stability of the DRFPMI next month and decide the IFO configuration
- Alignment control (ASC) will start soon
  - ✓ Kokeyama-san lead the ASC project.
  - ✓ Actuators (suspensions) is the essential part for the ASC, so the VIS and CRY are the key group for the ASC.

3. Hold the arm cavities at the off-resonance by feeding the GR control signal back to the main laser frequency and the ETMY suspension.

8. Hand off the DARM, CARM, and MICH control to the REFL, AS, and 1f signal.

2. Lock the green laser to the arm cavities.

5. Lock MICH by 3f signal



7. Control CARM by using the REFL signal normalized by TRANS DC.

4. Bring the Xarm to the resonance of the IR beam and lock it by using the TRANS DC signal

1. Phase lock the green laser to the main laser

6. Bring the Arm to the resonance and control DARM by using the AS signal normalized by TRANS DC.