MIF Status Report

Yuta Michimura

Department of Physics, University of Tokyo

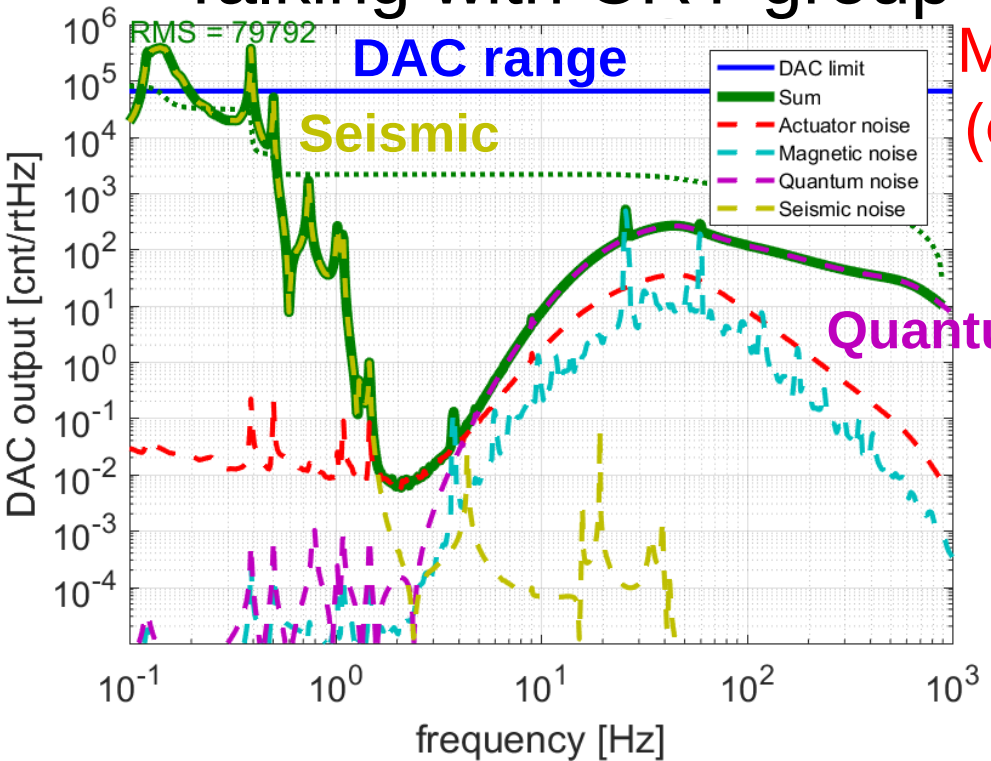
on behalf of the Main Interferometer subgroup

Updates from F2F Dec 2016

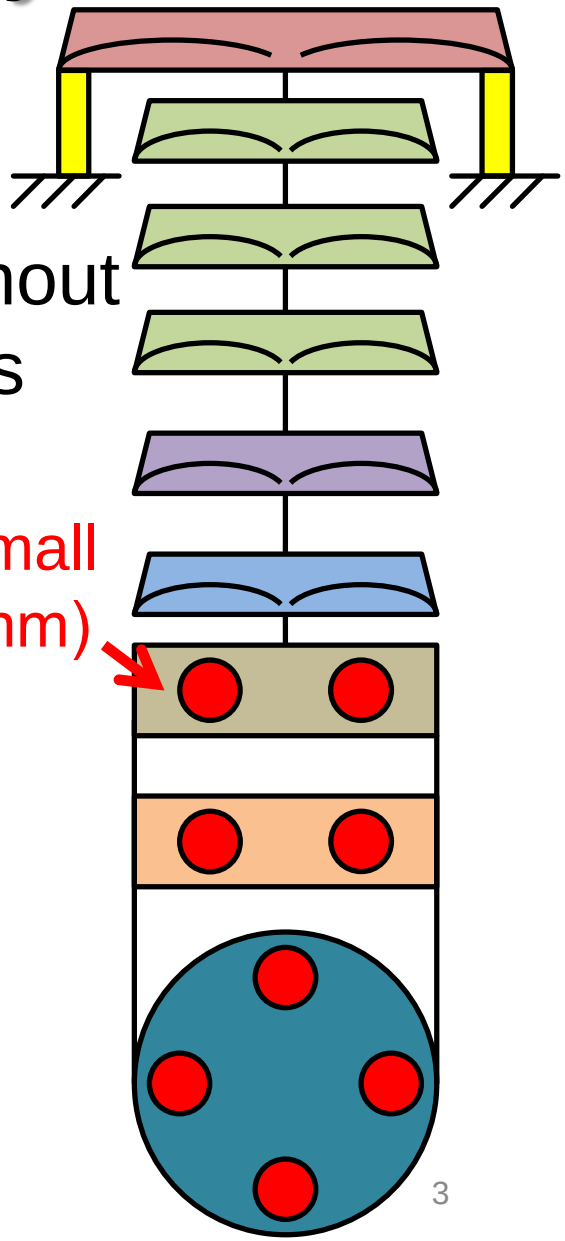
- Installed all the remaining output optical tables
  TRX (klog #2531)
  TRY (klog #2538)
  POS/AS (klog #2625)
- Updated mirror actuator noise/range modeling (JGW-T153453, JGW-G1706333)
- Optical layout around OFI and OMC almost fixed (JGW-T1706334)
- Cross-subgroup request of DC QPD and its whitening filter chassis to AEL (DCQPDList wiki, DCQPDDriverList wiki)

Actuators for Cryopayload

- Magnet for Marionette is too small
- Should be OK with local damping servo at upper stages (BF), but without it, feedback for Marionette saturates
- Talking with CRY group

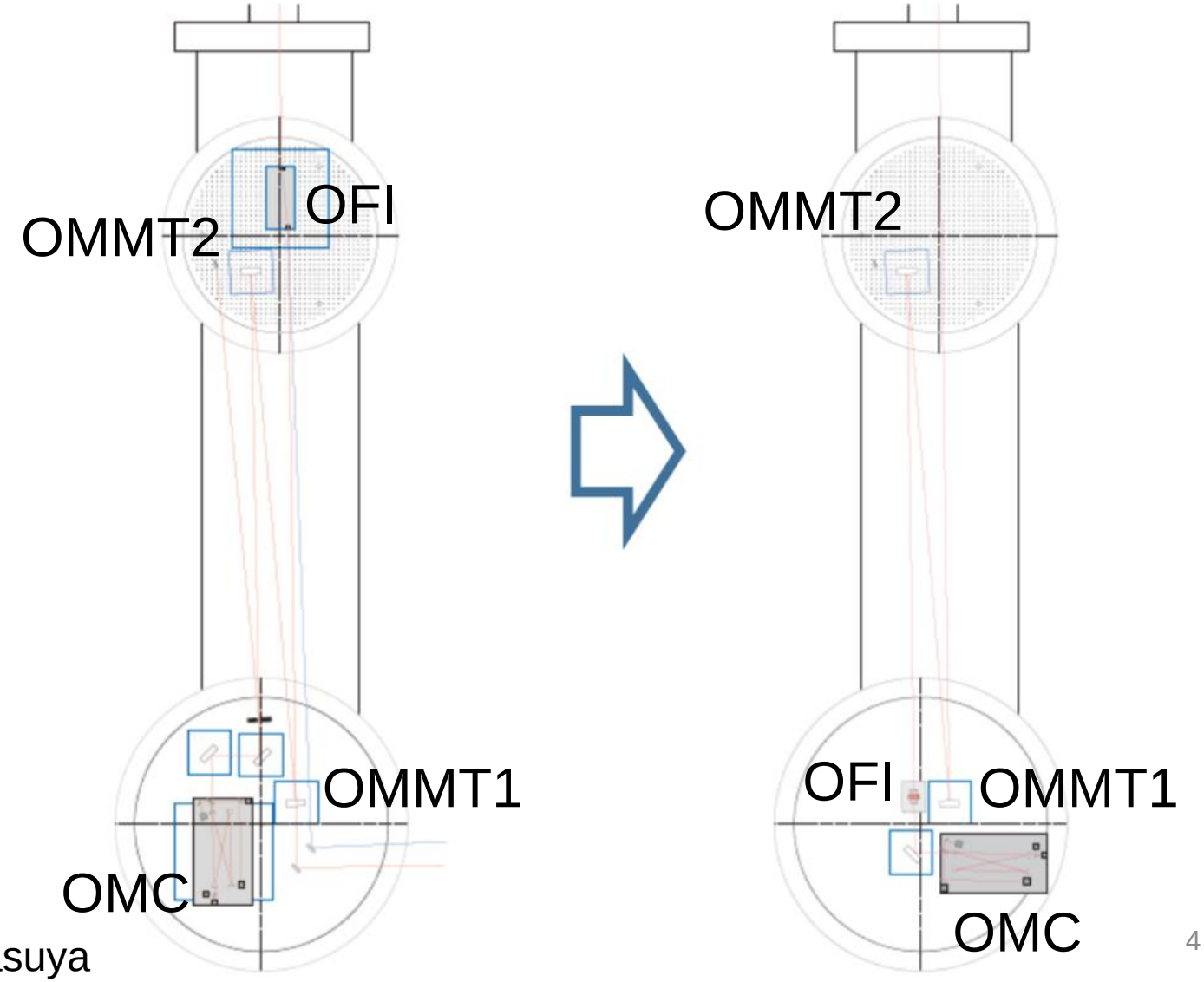


Magnet too small
(φ 2mm, L 2mm)



OFI and OMC Layout

- OFI after OMMT instead of before OMMT



Drawing by
K. Somiya, J. Kasuya

YOU can contribute

- Cryogenic IFO commissioning ★★★★★
- RF PD / QPD characterization ★★
- Electronics and cabling diagram ★
- Digital system (in collaboration with CAL?) ★★
- Better interferometer modeling for arm length stabilization (green lock) and intermediate configurations ★★★★
- RF generation scheme, RF AM scheme ★★★
- Fabrication of AS optics (OMC, OFI, OMMT) ★★★
- In-vacuum optics/electronics design ★★

Remind that we are making more advanced (or similarly advanced) interferometer than aLIGO.

Roughly in the order of priority.
Items with many stars are highly recommended.

貢献できるものリスト

- 低温干渉計の構築と動作 ★★★★★
- 光検出器の特性評価 ★★
- 回路と配線の設計 ★
- デジタル系 (較正グループと協力？) ★★
- 干渉計モデリング: 腕共振器の補助的制御(グリーンロック)や中間段階の干渉計 ★★★★
- RF信号、強度変調生成システム ★★★
- 重力波信号検出光学系の製作 (OMC, OFI, OMMT) ★★★
- 真空槽内光学系/回路系の設計 ★★

aLIGOと同等、またはそれ以上の
最先端の干渉計を作ろうとしていること
に留意。

だいたい優先度順。
星の数が多いほどおすすめ。

Contact me if interested

- 道村唯太 Yuta Michimura
- michimura@granite.phys.s.u-tokyo.ac.jp