Updates from MIF Subgroup

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on behalf of the Main Interferometer subgroup

Updates from FY2017

- Finalized suspension actuator parameters (CQG 34, 225001 (2017))
- Fixed the spec and ordered some electronics
  RF Doubler, PLL Board, Harmonic Generator, AOM for ALS
- Ordered some of green optics, installed POP optical table, installed GreenX optics
- Updated ALS configuration (ALS wiki)
- Counted and ordered all the SMA cables (JGW-T1707586)
- Updated the PSL EOM layout, calculated displacement noise requirements for MZI (JGW-T1706748, JGW-G1808029)
- Updated bKAGRA latest estimated sensitivity (JGW-T1707038)
- Fixed SRM reflectivity for the early phase of bKAGRA (JGW-T1707334)
- Summarized the sensitivity and feasibility of other IFO configurations for O3 (JGW-T1808126, JGW-T1808172)

Summary of Phase-1

- BS, ETMX, ETMY actuation transfer functions are measured and compared with the expectations
- Basic IFO parameters are measured
- Beam spot positions, IMC length and Schnupp asymmetry were measured to infer the installation accuracy
- Noise budget plot was made

→ all seem more or less reasonable

- See wiki page below for details
  http://gwwiki.icrr.u-tokyo.ac.jp/JGWwiki/KAGRA/Commissioning/Phase1/Operation/MeasurementsSummary

Towards Phase-2 and O3

- Fix initial alignment scheme for full IFO
- Finalize ALS scheme and RF AM generation scheme and finalize lock acquisition scheme
- ISC modeling, especially ASC modeling, for intermediate IFO configurations
- Cabling schematic
- In-vacuum RF PD and RF QPD
- Readout DC PDs and OMC
- Design output optics