Arm Length Stabilization Conceptual Configuration

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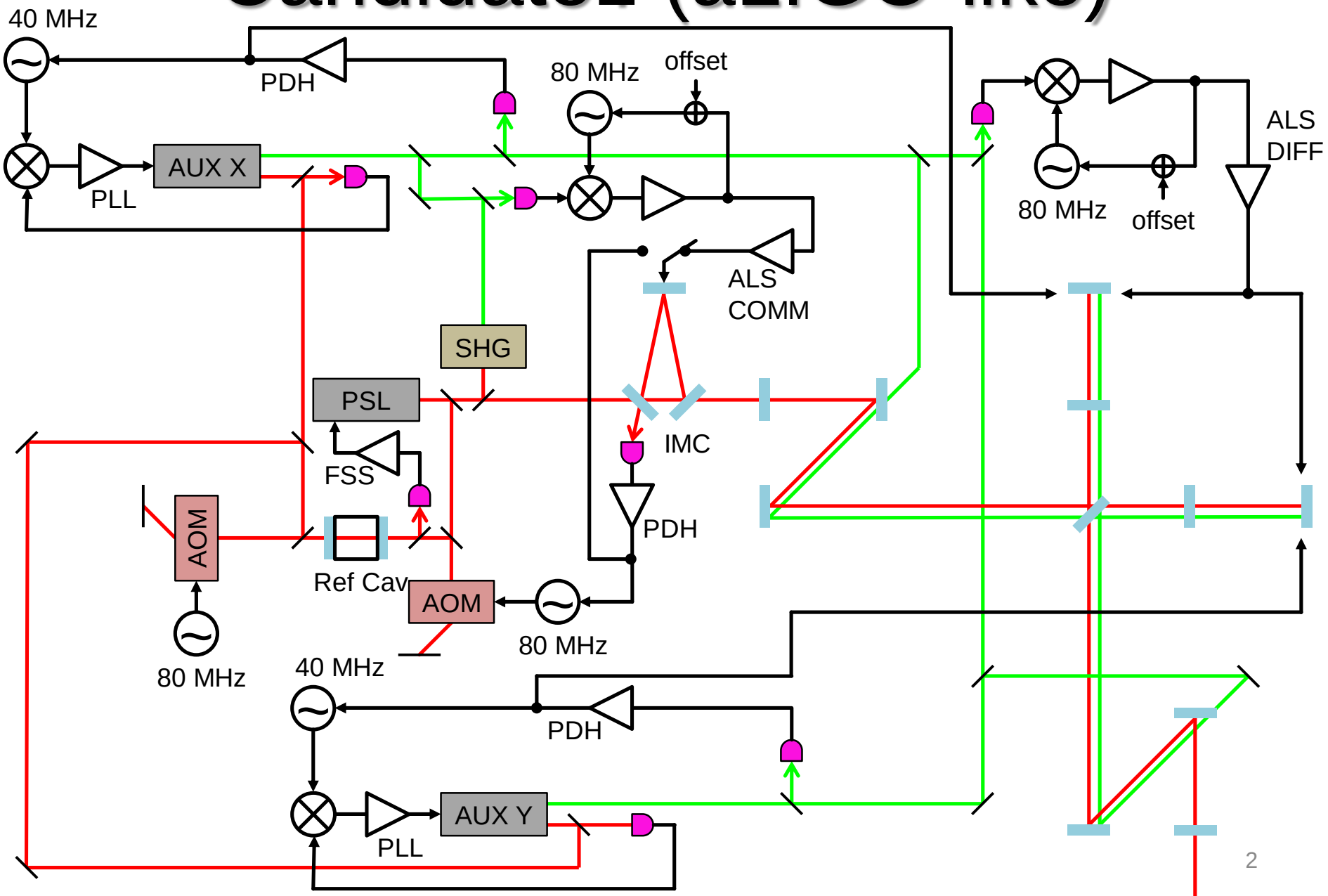
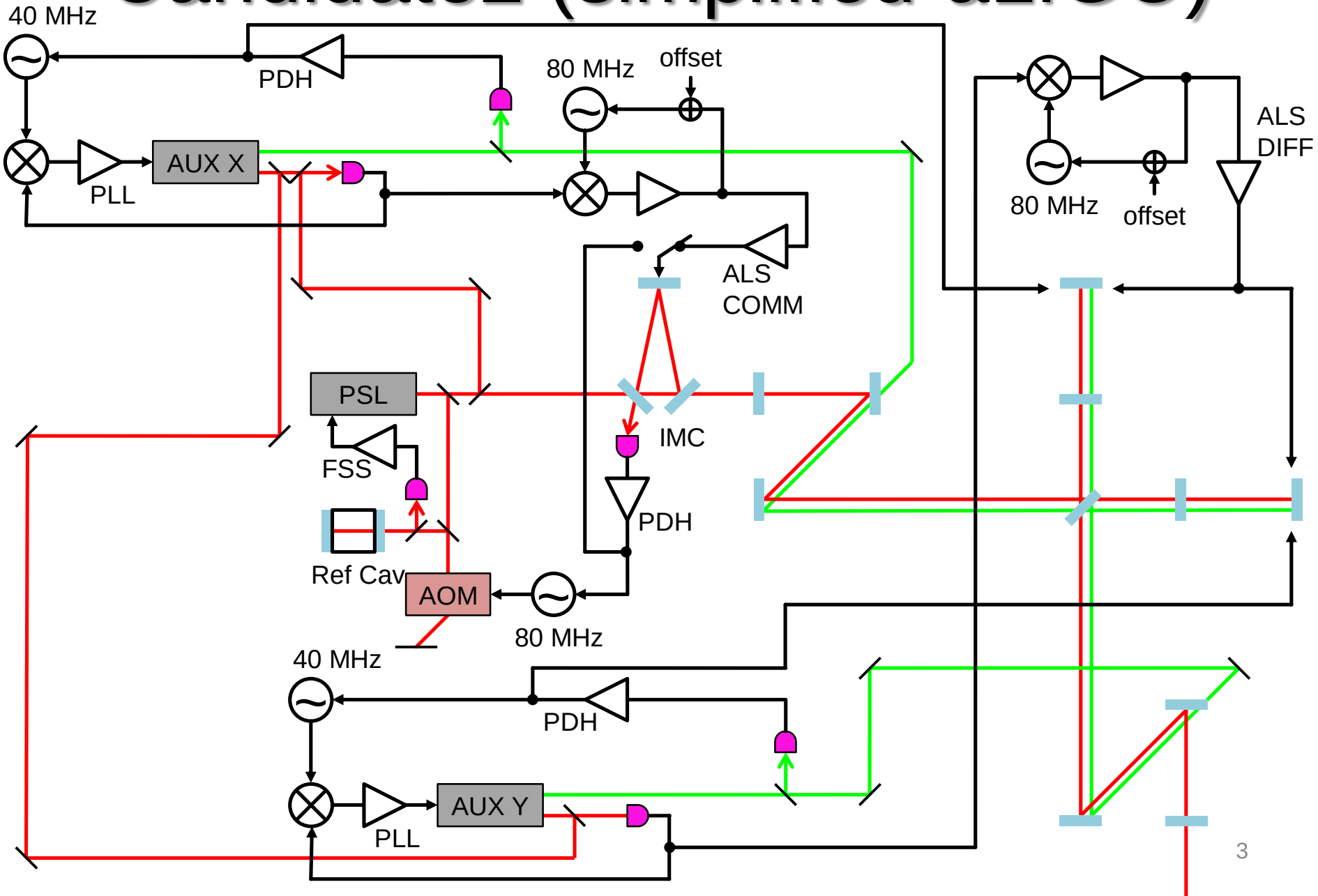
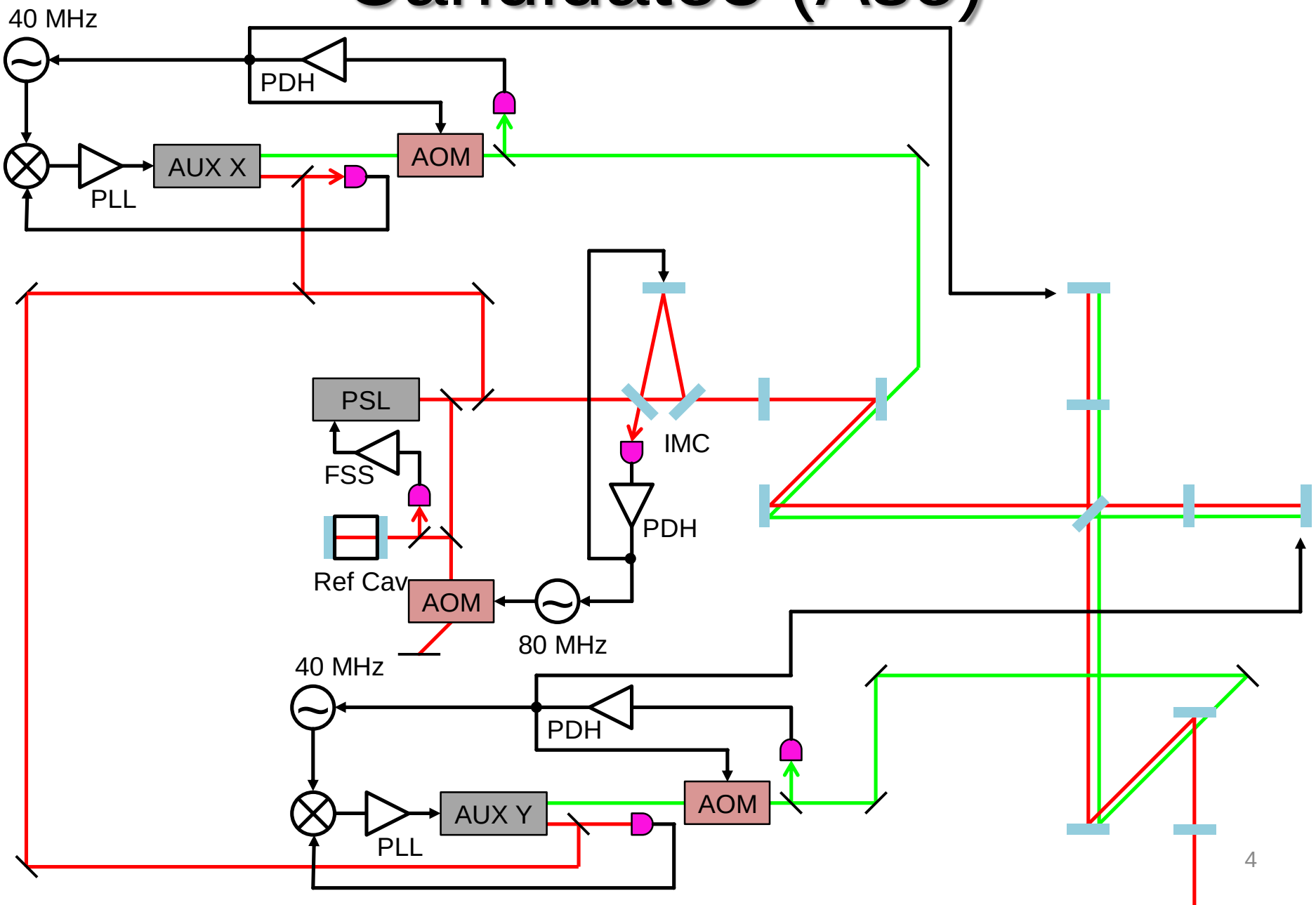
Candidate1 (aLIGO-like)



Candidate2 (simplified-aLIGO)



Candidate3 (Aso)



Considerations

- Where to put PLL setup for PSL vs AUX X/Y
- Where to put green beat setup for ALS COMM
- Where to put green beat setup for ALS DIFF

- Plan 1: All at PSL clean booth
  - need two fibers to send AUX green to POS/POP table
  - enough space for optics at PSL table? [Nakano]
  - enough space for electronics at IOO racks? [Michimura]
    -> yes
- Plan 2: AUX X at POP, AUX Y at POS
  - need two fibers to send PSL green to POS/POP table
    beat for PLL also with green?
  - need one fiber to send AUX X green to POS
  - enough space for electronics at ISC racks? [Michimura]
    -> yes

Setup for Table-Top Experiment?

- Conceptual drawing made by Kambara
- to be fixed [Kambara]

Schedule

- to be fixed [Matsushima]

- very rough schedule
  2016.7-10: ALS design
  2016.10-2017.9: Table-top experiment at Univ. Toyama
  2017.5-2017.6: BRT installation at Kamioka
  2017.10-2018.3: Green installation at Kamioka ?
  2018.8: ITM/ETM CRYp installation complete
  2018.9-: ALS experiment at Kamioka

Releated References

- aLIGO configuration
  https://alog.ligo-wa.caltech.edu/aLOG/index.php?callRep=11083
  http://gwdoc.icrr.u-tokyo.ac.jp/cgi-bin/private/DocDB/ShowDocument?docid=1895

- Study by Tasumi-san *et al.* in 2011-2012
  https://granite.phys.s.u-tokyo.ac.jp/svn/Private/trunk/LCGTbackup/GreenLock/