

E1900237-v4

In vacuum active elements for frequency-dependent squeezing (per site)

elements/electronics needed (green for existing, also listed separately below)

On VIP in HAM7:

- 4x Picomotors for co-aligning the filter cavity 532nm beam (FC532)
- 1x DC PD for FC532 polarization monitoring
- 1x Lens translation stage, PZT driven
 - Either get same model as before, or replace both with Slawek's type. -Peter
 - (would want closed loop, but that needs more wires, assume 2 wires and reusing the existing stage for now) – Lee
- OPO cavity:
 - 1 x Oven translation stage, PZT driven
 - 1 x Peltier heater
 - 3 x Thermistor, possibly more
 - 2 x Cavity PZT, avoid crosstalk with oven
- 2 Faraday thermal controllers (provided with SFI faradays, included due to cabling needs. Each should be 12 pins, can be joined to a single D25).

HAM7

- ZM4: 4x BOSEM + AWC w/ HDS
- ZM5: 4x BOSEM + AWC w/ HDS
- ZM1: 4x BOSEM w/ HDS (ditherable) without AWC, but it could re-use existing tip-tilt O3:ZM1
- ZM2: 4x BOSEM + AWC w/ HDS
- ZM3: 4x BOSEM w/ HDS (ditherable) without AWC, but it could re-use existing tip-tilt, spare or one of OMs if replaced with HDS.
- VOPO 6 x aOSEM
- 3x DCPD for fiber monitoring (2x taken from O3 VIP)
- 1x: Beam diverter (from HAM6)
- 4x: Picomotors (for aligning to QPDs)
- 2x DC QPDs (105kHz BW)

HAM5

- ZM6: 4x BOSEM w/ HDS without AWC, but it could re-use existing tip-tilt (ZM2 in O3) if one of the OMs is replaced by HDS
- 2x Filter cavity HSTS

HAM8:

- 4x picomotors for DC-QPD centering
- 2x 1064 DC-QPDs (high-transimp)

Existing elements/electronics that will be re-used (may need modified cabling)

On VIP

2x DCPD for fiber monitoring

1x Lens translation stage, PZT driven

OPO cavity

1 x Oven translation stage, PZT driven

1 x Peltier heater

3 x Thermistor, possibly more

2 x Cavity PZT, avoid crosstalk with oven

HAM7 (moved from HAM6):

1 Beam Diverter (currently in HAM6 between OPO and OFI)

Suspensions

VOPO 6 x aOSEM