# E1900237-v2

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

**Additional elements/electronics that need to be built**

*On VIP in HAM7:*

* 4x Picomotors for co-aligning the filter cavity 532nm beam (FC532)
* 1x lens translation stage  
           Either get same model as before, or replace both with Slawek's type. - Peter
* 1x DC PD for FC532 polarization monitoring

*HAM7*

* + SQZ\_TT1  4 x BOSEM + AWC 🡺 HDS
  + SQZ\_TT2  4 x BOSEM + AWC 🡺 HDS
  + FC\_TT1  4 x BOSEM 🡺 HDS without AWC, but it could re-use existing tip-tilt ZM1
  + FC\_TT2  4 x BOSEM +AWC 🡺 HDS
  + FC\_TT3  4 x BOSEM 🡺 HDS without AWC, but it could re-use existing tip-tilt ZM2

*HAM5*

* SQZ\_TT3  4 x BOSEM 🡺 HDS without AWC, but it could re-use existing tip-tilt 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)
* 2x 532  DC-QPDs

**Existing elements/electronics that will be re-used**

*On VIP*

2 x DCPD for fiber monitoring  
1 x 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):*  
   2 1064 DC-QPDs (w/ 100kHz BW) – these are the OMC QPDs  
   1 Beam Diverter (currently in HAM6 between OPO and OFI)

*Suspensions*

VOPO 6 x aOSEM