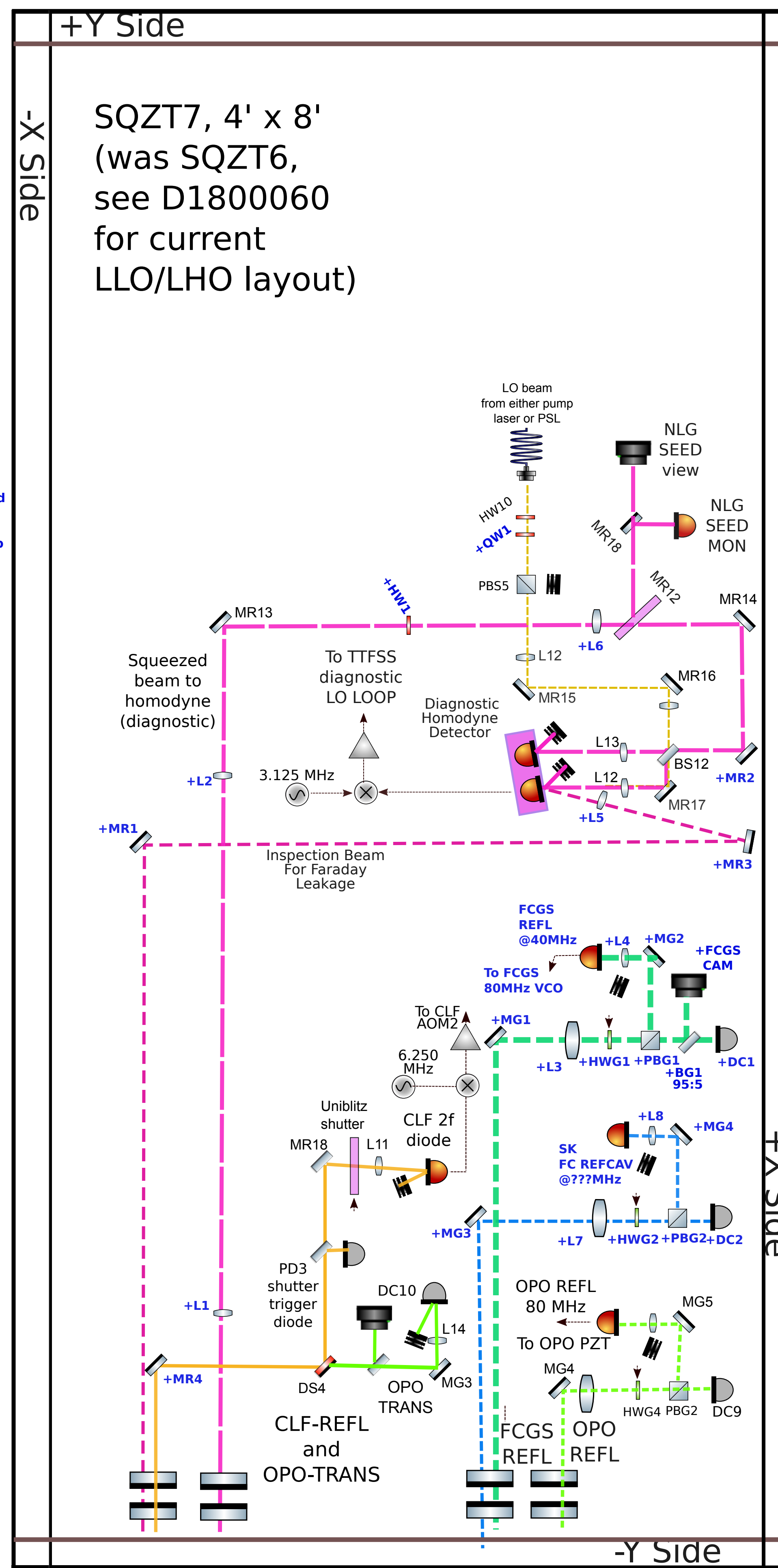
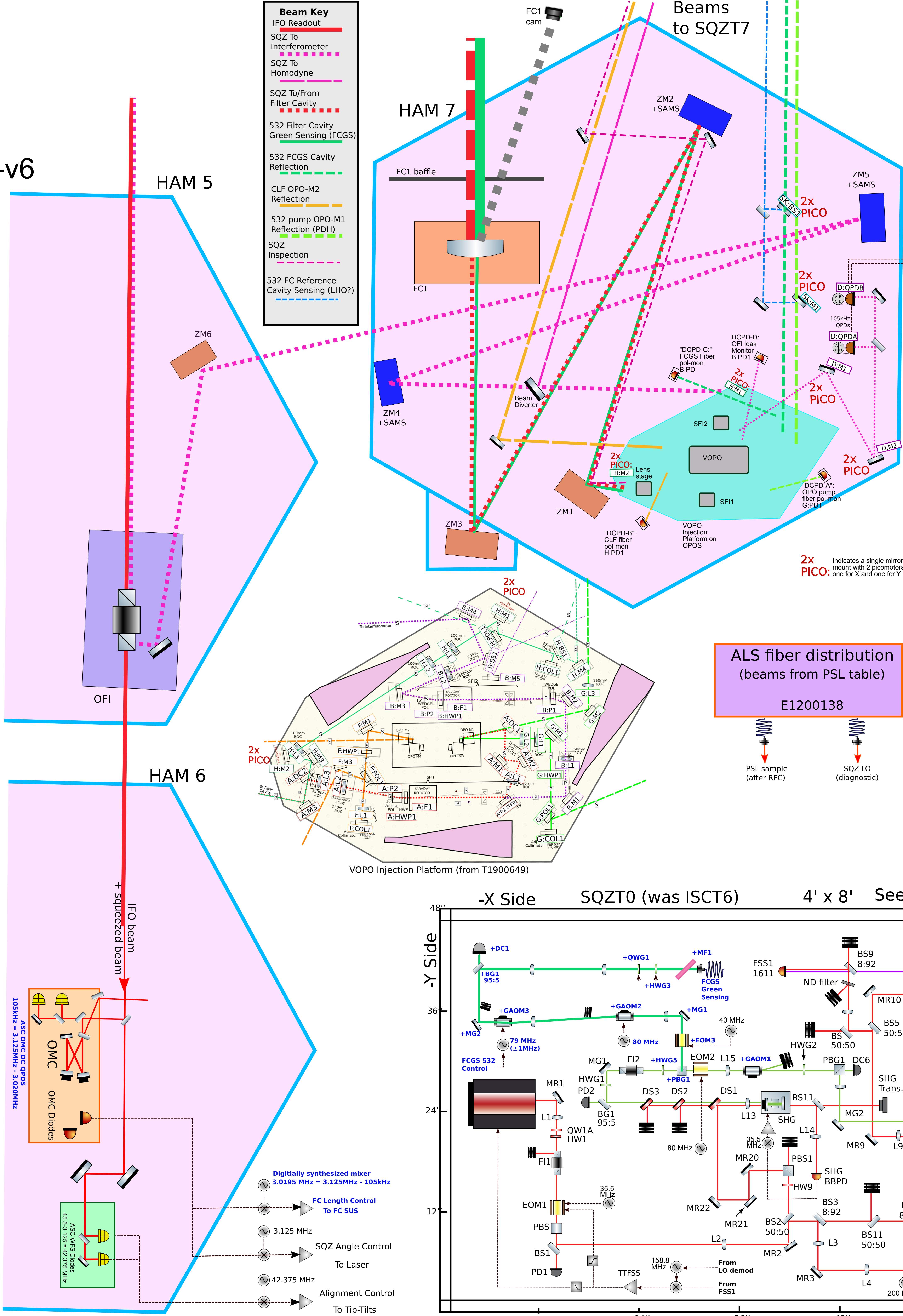
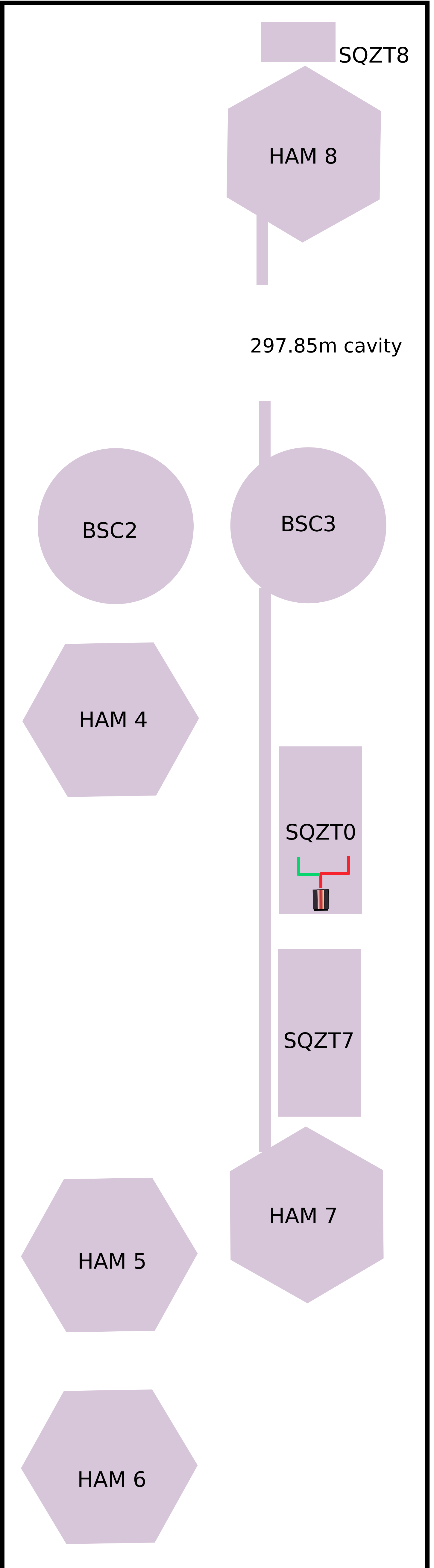


D1900281-v9

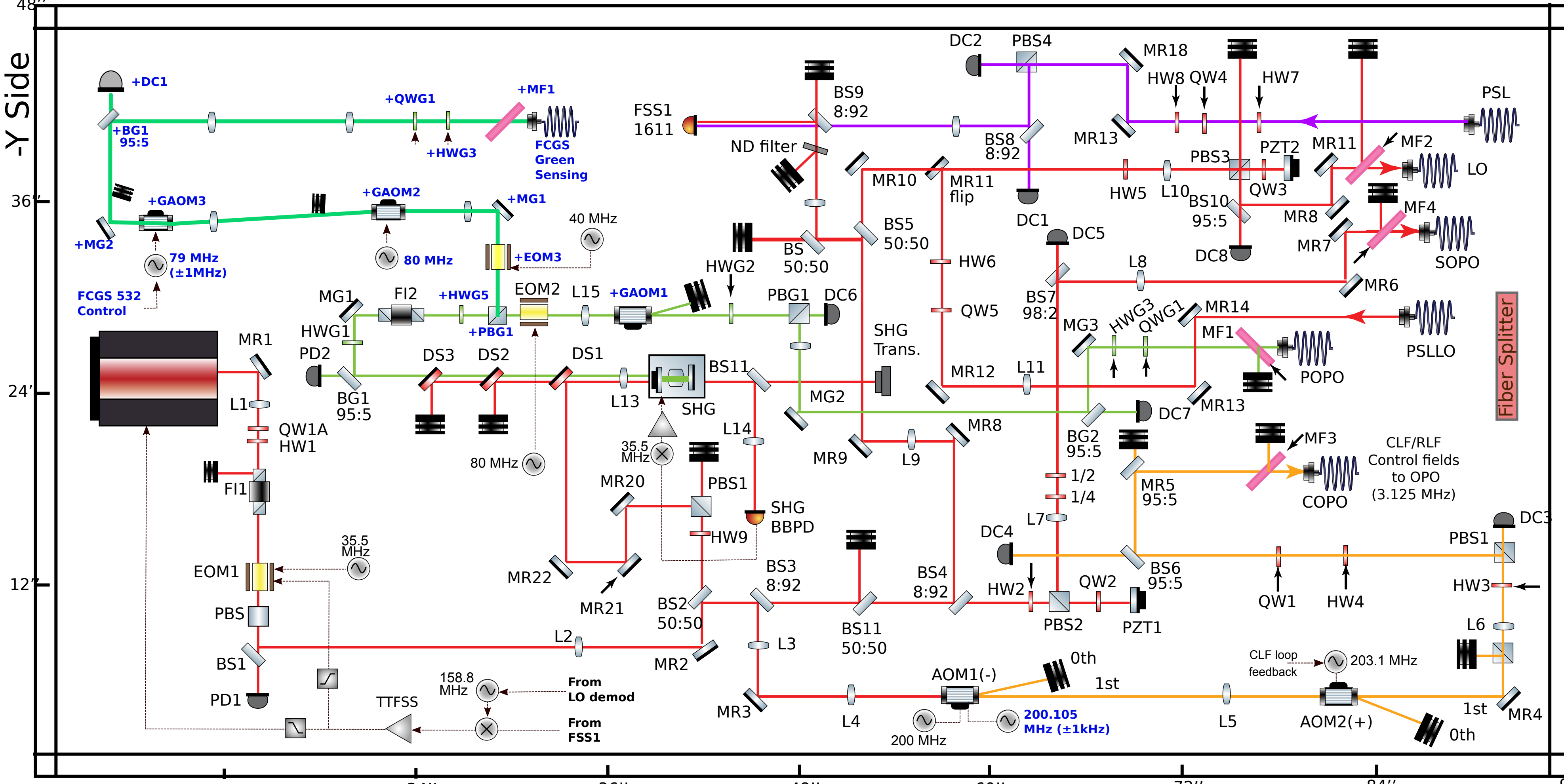
Filter Cavity Version of D1500297-v8

HAM7, VIP and HAM8 layouts from T1900649-v6

Overview



SQZT0 (was ISCT6) 4' x 8' See D1201210 for O3 LHO/LLO layouts



Electrical signals in HAM7 (was)T1700019

VOPO Injection Platform
1 x Lens translation stage, PZT driven
+2 Faraday TEC Controllers
+4 Picomotors (2x on 2 mirrors)

OPO cavity
1 x Oven translation stage, PZT driven
1 x Peltier heater
3 x Thermistor
2 x Cavity PZT, avoid crosstalk with oven

Suspensions
OPOS: 6 x aOSEM
+ZM1 4 x BOSEM HAM7
+ZM2 4 x BOSEM HAM7 +AWC
+ZM3 4 x BOSEM HAM7
+ZM4 4 x BOSEM HAM7 + AWC
+ZM5 4 x BOSEM HAM7 + AWC
+ZM6 4 x BOSEM HAM5
+FC1 HSTS

Optomechanics
+1 Beam diverter
+2 DC QPDs (105kHz readout)
+4 Picomotors (2x on 2 mirrors)
+4 Picomotors (2x on 2 mirrors) (LHO)
+4 DCPDs

SQZT7 active elements

Diodes (see T1600605)
PDA100 PD (#1, PD3)
Unamplified monitor PDs (#2, DC9-10)
LSC RF PDs (#2, CLF 2f and OPO REFL)

Cameras (#2, IT_TRANS and OPO TRANS)
Motorized waveplates (#1)
Uniblitz shutter (#1)

+1 40MHz silicon BBPD (FCGS 532 REFL)
+0-1 BBPD for SK-REFCAV
+1-2 Unamplified DC PD

Legend

MR High Reflector 1064nm
MG High Reflector 532nm
L Lens (dual AR coated)
BS Beam Splitter 1064nm
BS Beam Splitter 532nm
DS Dichroic mirror (HR 1064nm, HT 532nm)
HW Half-waveplate 1064nm
QW Quarter-waveplate 1064nm
HWG Half-waveplate 532nm
QWG Quarter-waveplate 532nm
PBS Pol Beam Splitter 1064nm
PBG Pol Beam Splitter 532nm
DC Monitoring DC diode
MF Motorized flipper
Motorized element

Blue text are filter cavity additions

SQZT0 active elements

Diodes (see T1600605)
PDA100A PDs (#2, PD1 and PD2)
Unamplified monitor PDs (#8, DC1-8)
BBPD (#1, SHG BBPD)
1611 (#1, FSS1 1611)

PZTs (#2, PZT1 and PZT2)
Cameras (#1, SHG TRANS)
Motorized waveplates (#9)
Motorized flippers (#4, MF)

+2 80MHz Green AOM
+1 200MHz Green AOM
+1 40MHz Green EOM
+1 Unamplified Monitor PDs
+2 Motorized Waveplates
+1 Motorized Flipper

HAM8 Trans active elements

2x 532 DC-QPDs
3x Cameras (2x for IR, 1x for 532)
1x DCPD (can be non-permanent, PDA100A or similar)
+4 picomotors (2x on 2 mirrors) for 532 DC-QPD centering

Near-Chamber Elements

2x Cameras, FC1 and FC2 imaging

Electrical signals in HAM8

+FC2 HSTS

