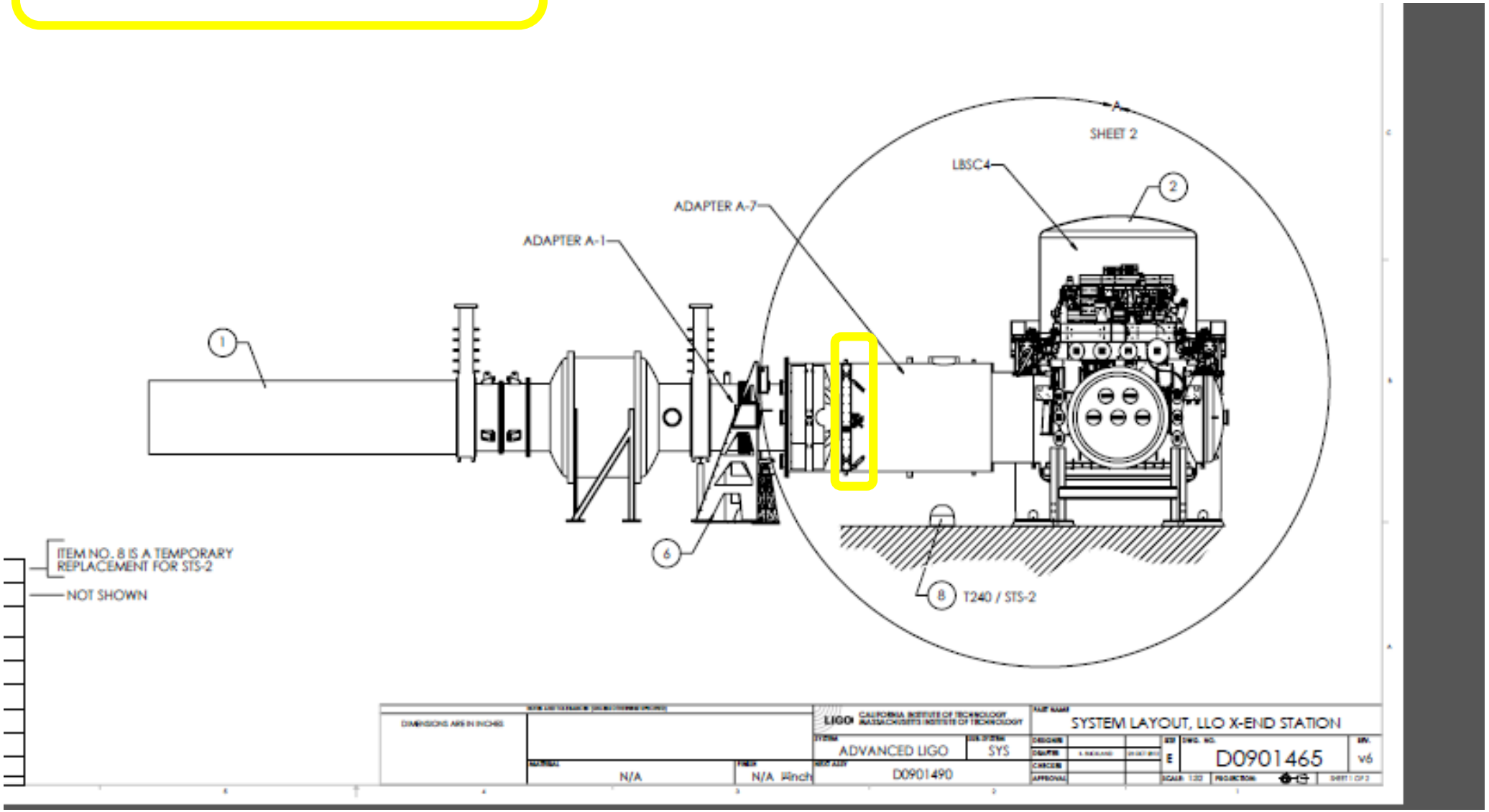
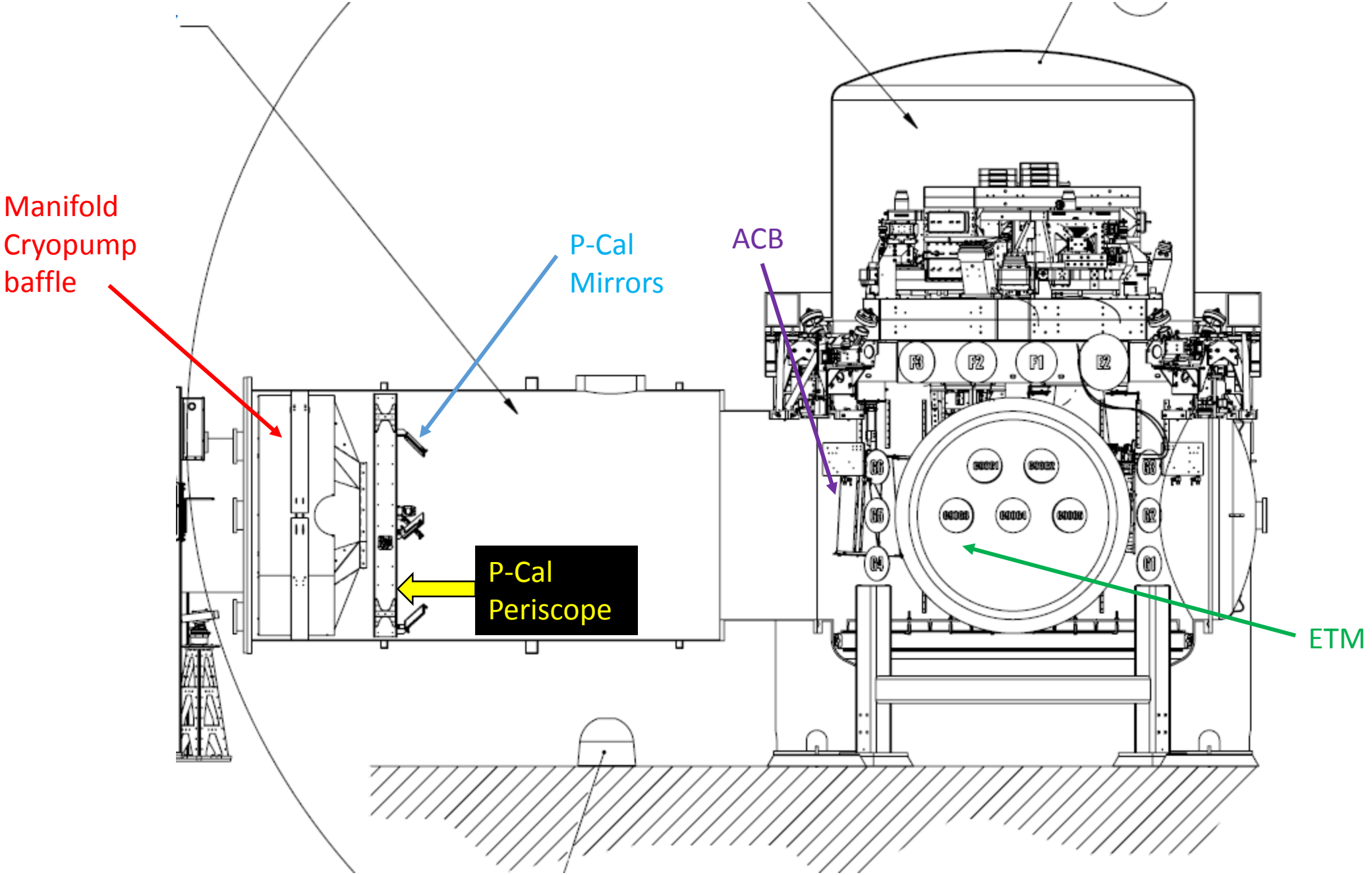
P-Cal Periscope Shields Concept

LIGO-D1600453-v5

P-Cal Periscope in end station (X end shown)



Refer to **aLIGO Systems Layout LLO X-End Station** (OR EQUIV) https://dcc.ligo.org/LIGO-D0901465 if more detail required.



Refer to **aLIGO Systems Layout LLO X-End Station** (OR EQUIV) https://dcc.ligo.org/LIGO-D0901465 if more detail required.

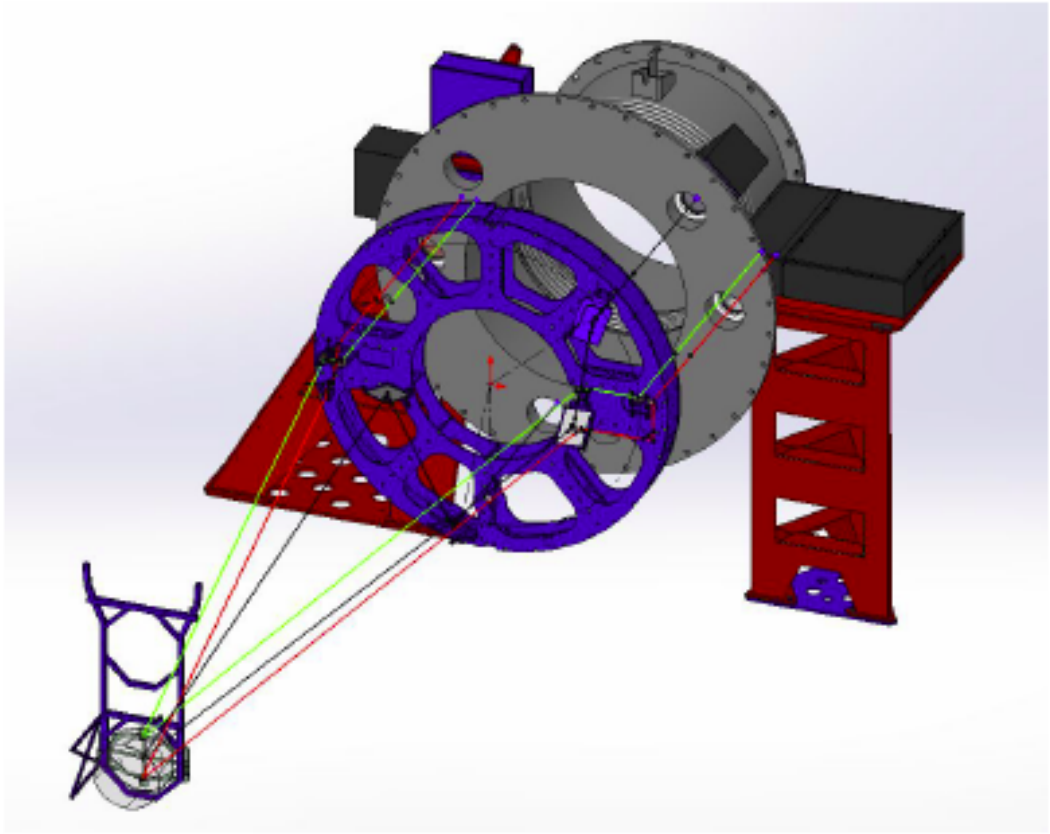
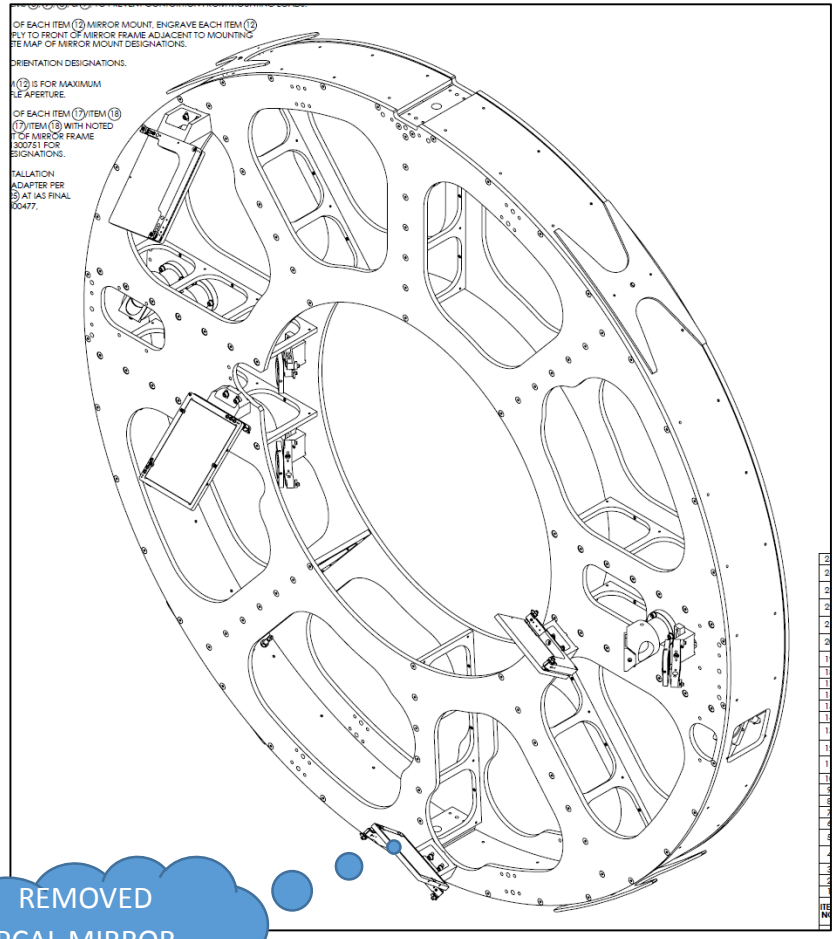


Figure 16 – In-Vacuum optical Paths of Pcal beams (green and red) and Pcal camera and optical lever (black) of H1, L1 Photon Calibrator Beams through the Pcal in-vacuum periscope.

Laser beam (optical path): Also refer to the optical layout in figure 16, page 19 of PCal final design doc: https://dcc.ligo.org/DocDB/0032/T1100068/023/PhotonCalibratorFinalDesign.pdf.

PROPOSED BAFFLES FOR PCAL Periscope:

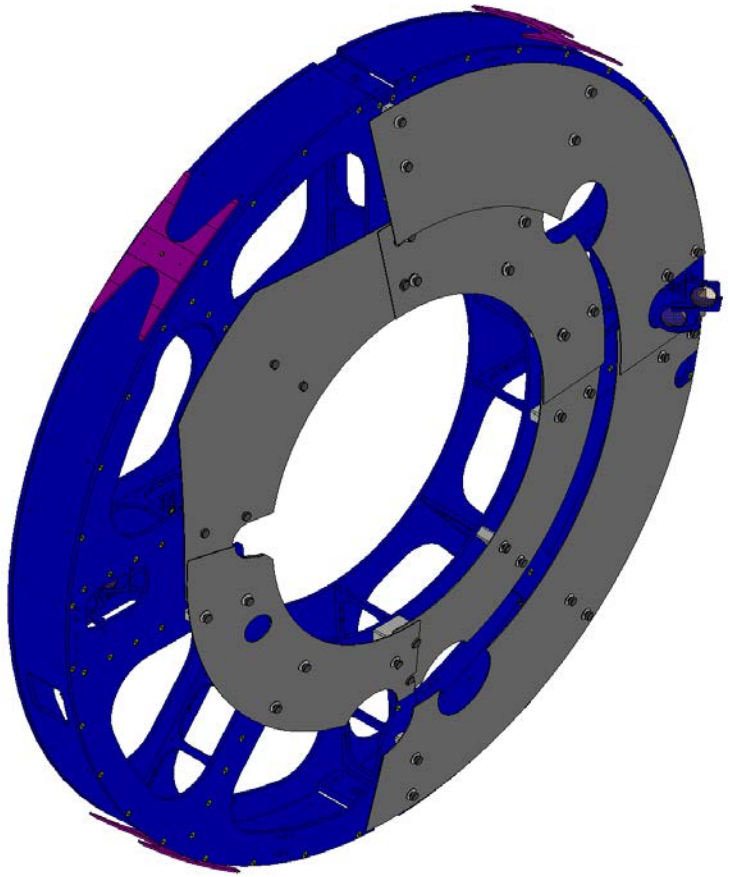
As built (Weight: 222 lbs)



REMOVED PCAL MIRROR MOUNTS ASSY. 4 PL.

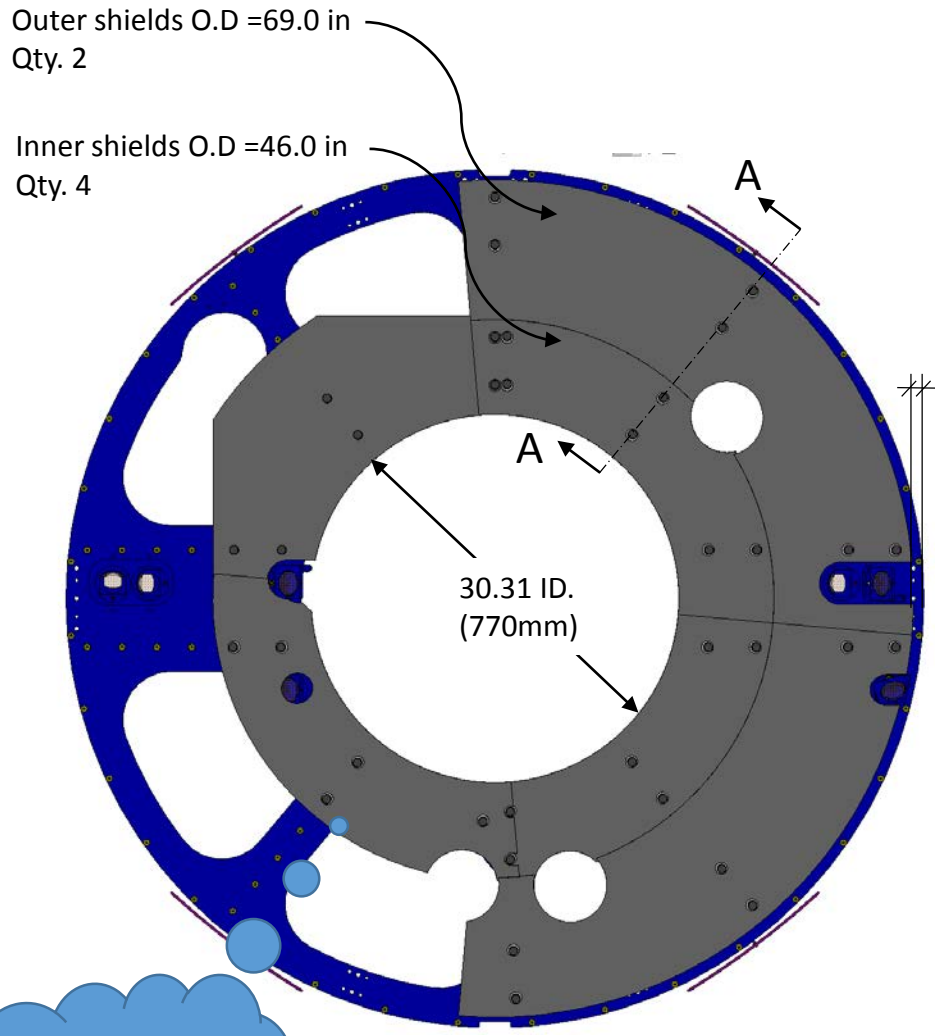
-01 SHOWN (Y-ARM)

Modified with SLC Shields (Weight: 250.00 lbs Approx.)



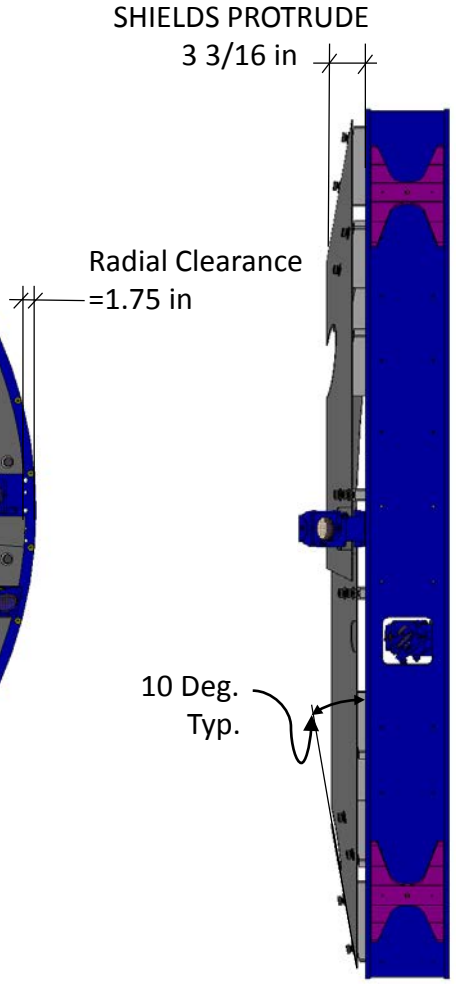
-01 SHOWN (Y-ARM)

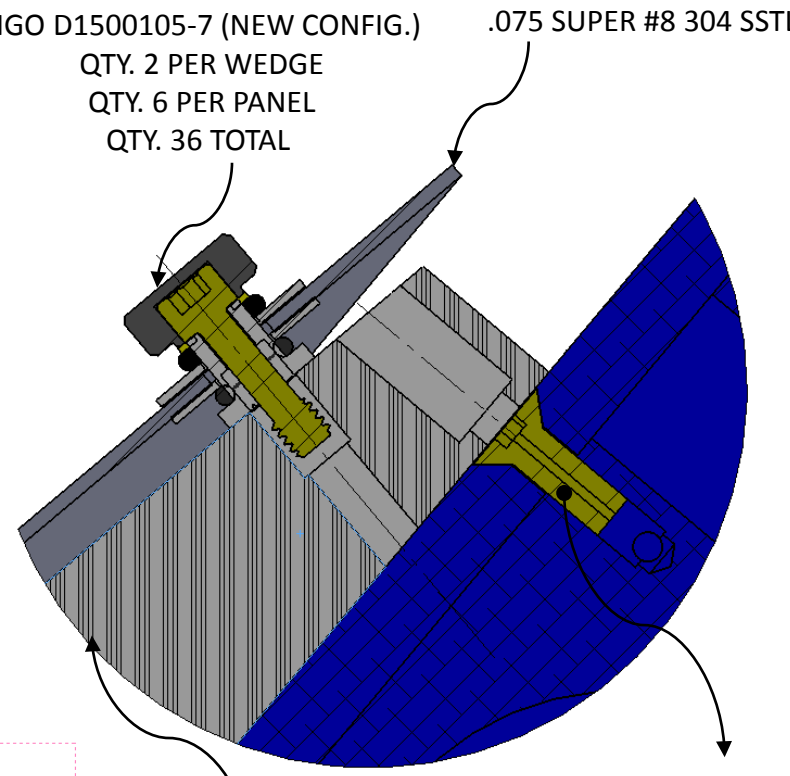
PROPOSED BAFFLES FOR PCAL Periscope:



FRONT VIEW
-01 SHOWN
(Y-ARM)

OVERLAPPING PANELS FOR COMPLETE COVERAGE

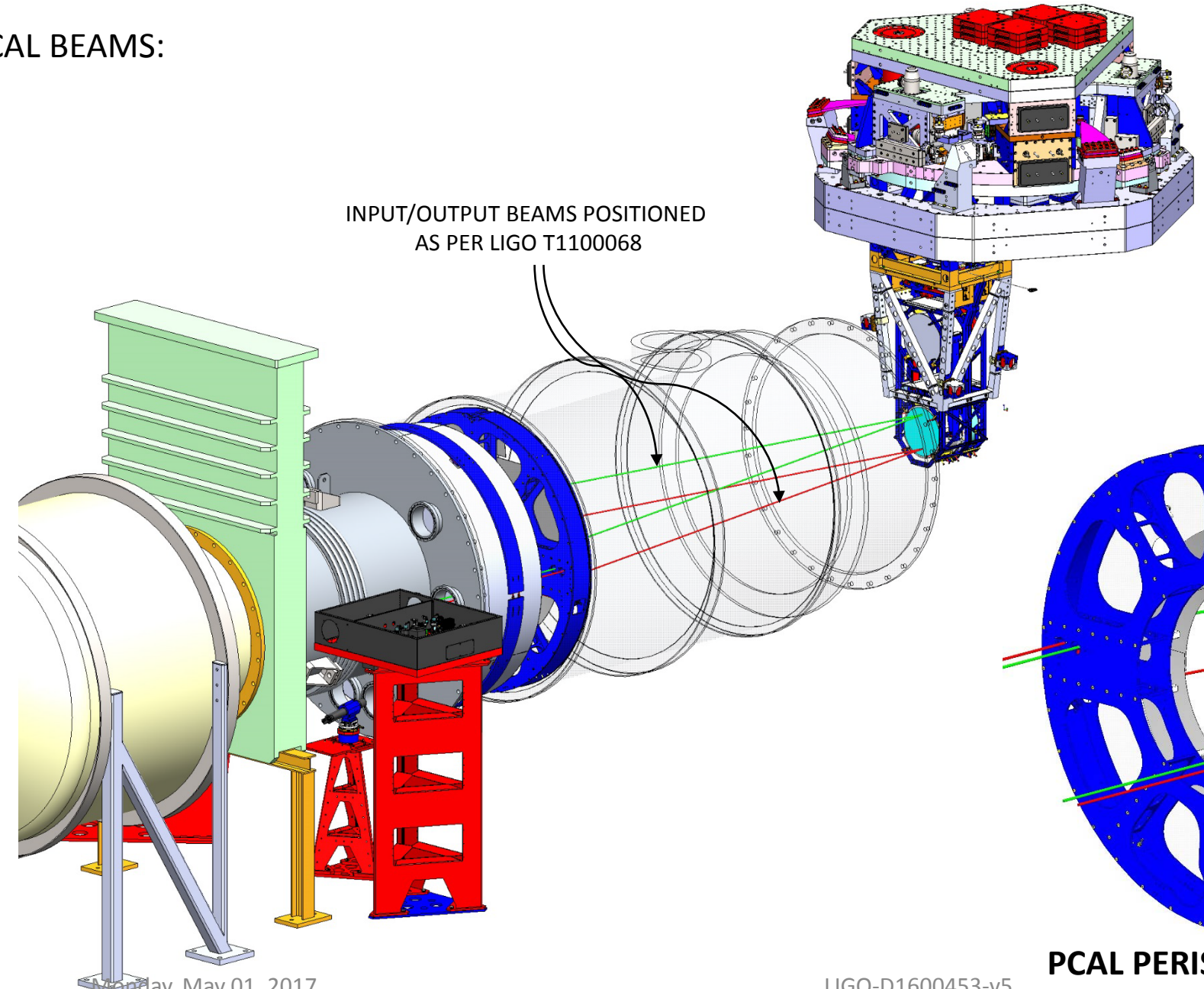


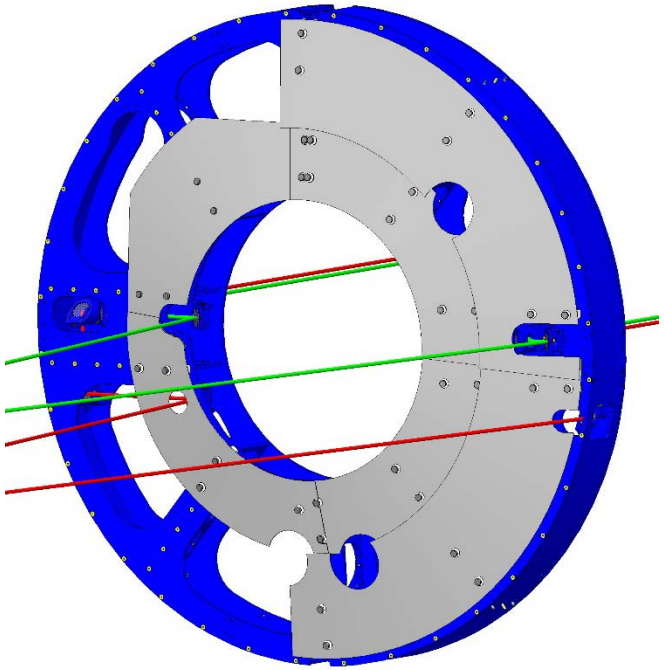


SECTION A-A
(PARTIAL VIEW)

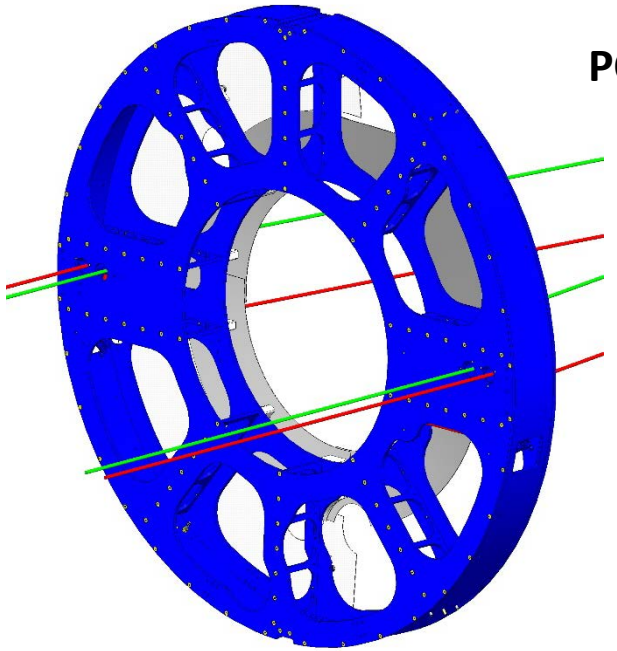
PROPOSED BAFFLES FOR PCAL Periscope:

PCAL BEAMS:





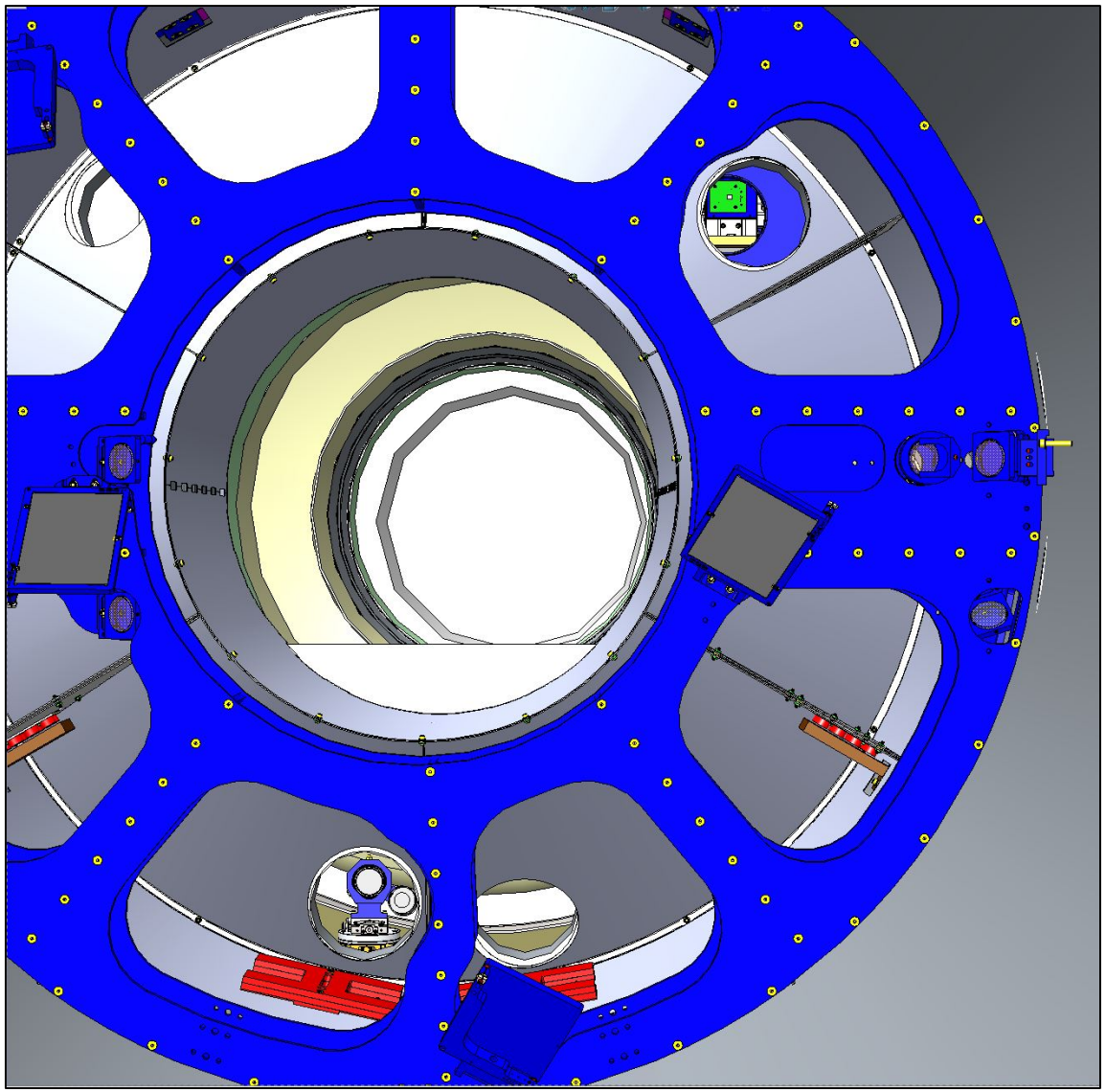
PCAL PERISCOPE, ISO VIEW (FRONT SIDE)



PCAL PERISCOPE, ISO VIEW (BACK SIDE)

PROPOSED BAFFLES FOR PCAL Periscope:

As built

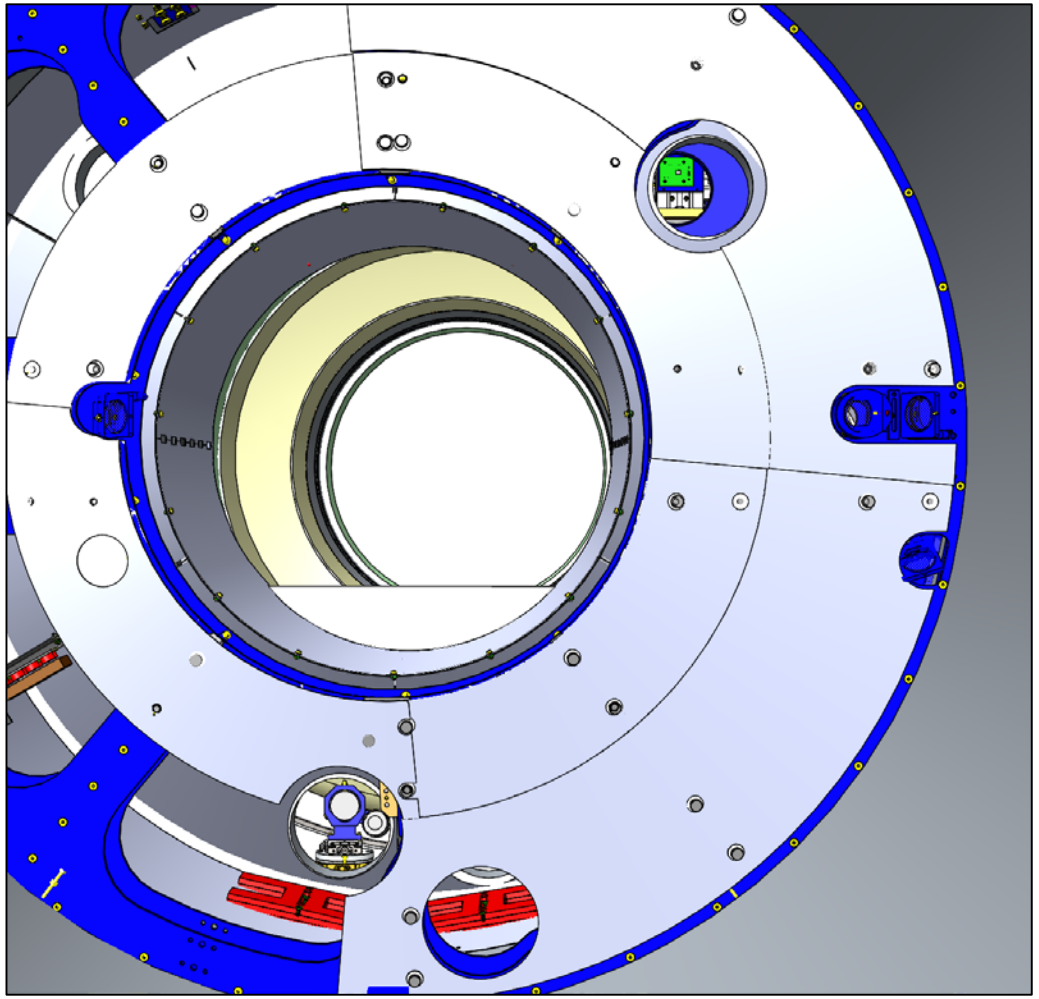


CAD image extracted from Solidworks of PCAL Periscope as viewed from a camera centered and perpendicular to the HR of ETMy face for a ± 11 deg field of regard (22 full Angle)

Refer to LIGO G1602132

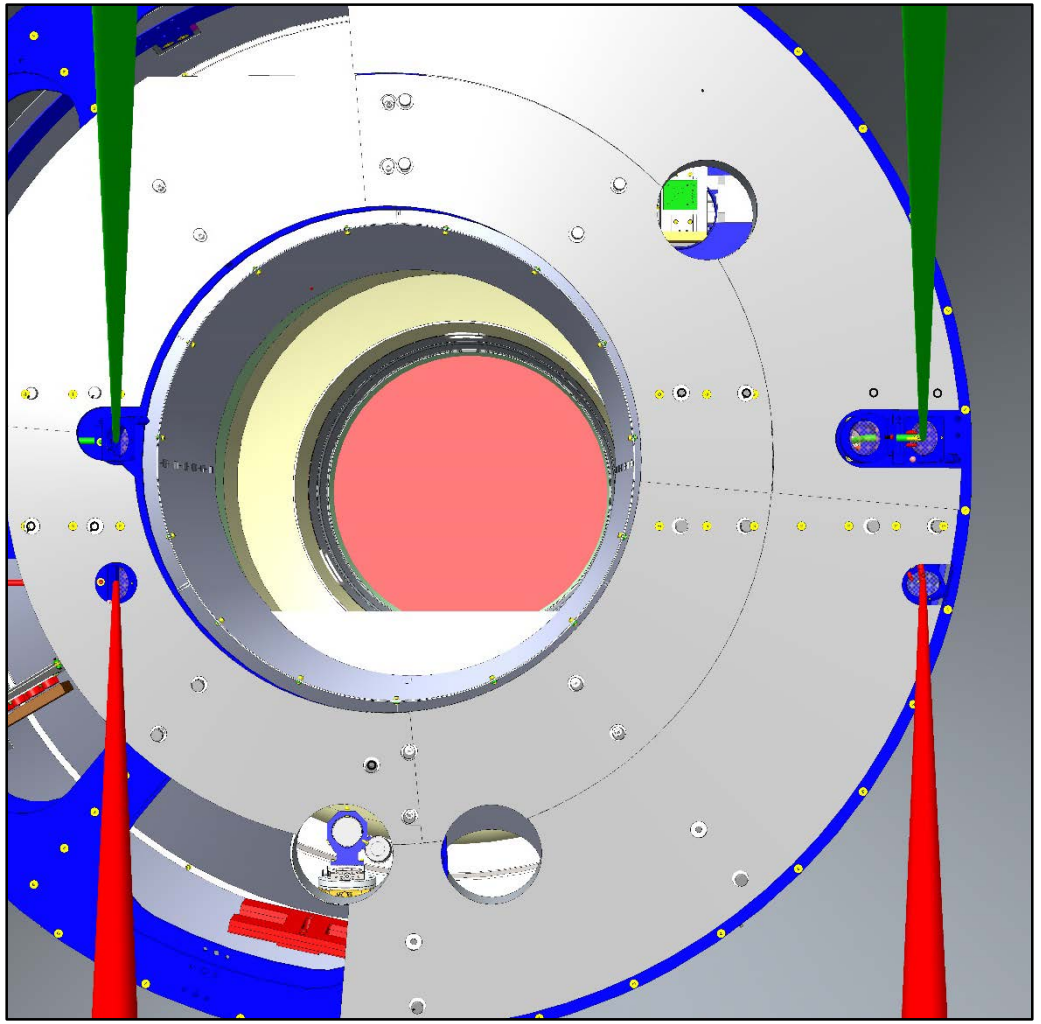
PROPOSED BAFFLES FOR PCAL Periscope:

WAS: With PCAL shields



CAD image extracted from Solidworks of PCAL Periscope as viewed from a camera centered and perpendicular to the HR of ETMy face for a ± 11 deg field of regard (22 full Angle)

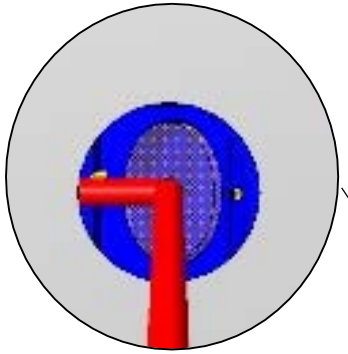
IS: With PCAL shields



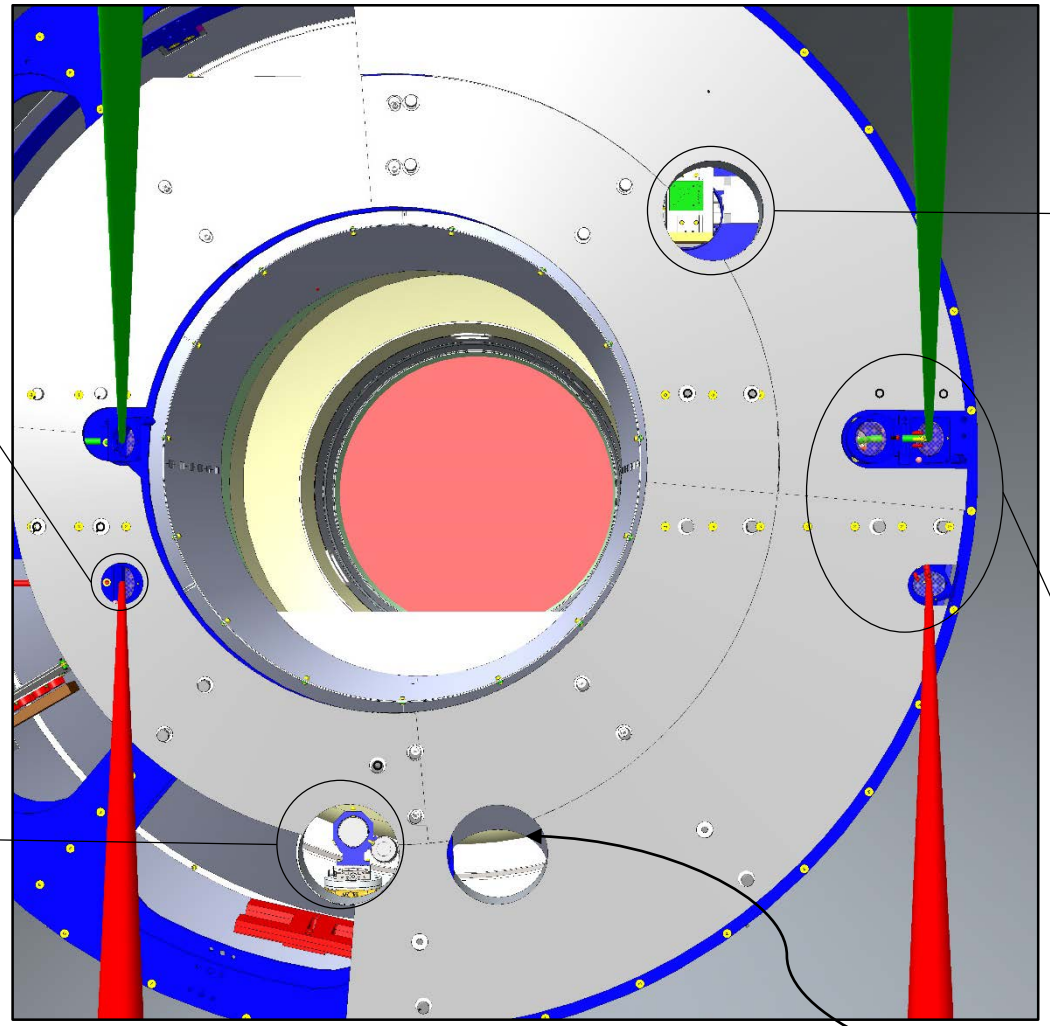
CAD image extracted from Solidworks of PCAL Periscope as viewed from a camera centered and perpendicular to the HR of ETMy face for a ± 11 deg field of regard (22 full Angle)

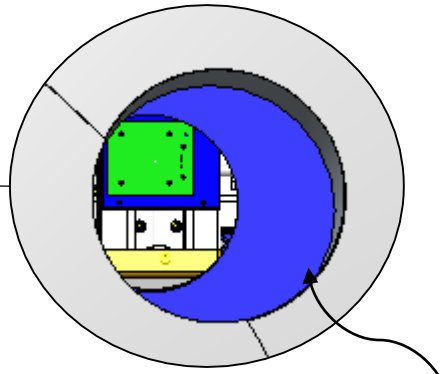
PROPOSED BAFFLES FOR PCAL Periscope:

With PCAL shields



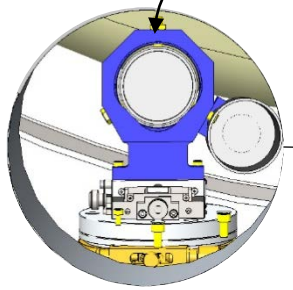
Aperture Size= 2.5in

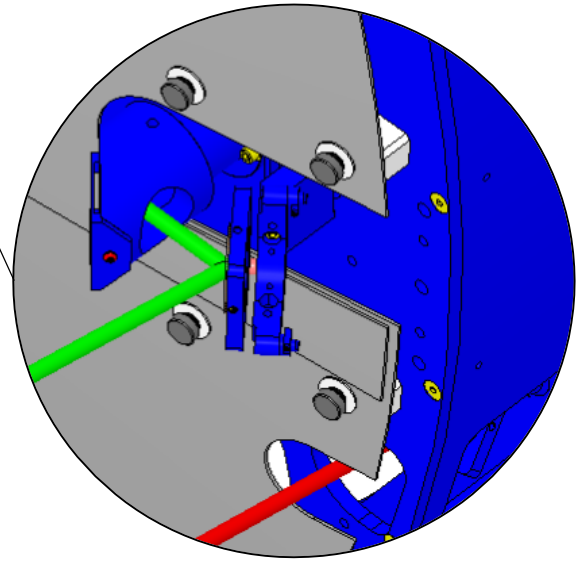




RCVR PYLON
(oplev enclosure)

OPLEV





VP4

CAD image extracted from Solidworks of PCAL Periscope as viewed from a camera centered and perpendicular to the HR of ETMy face for a ± 11 deg field of regard (22 full Angle)