

# Design Concept of Obelisk Post for POS

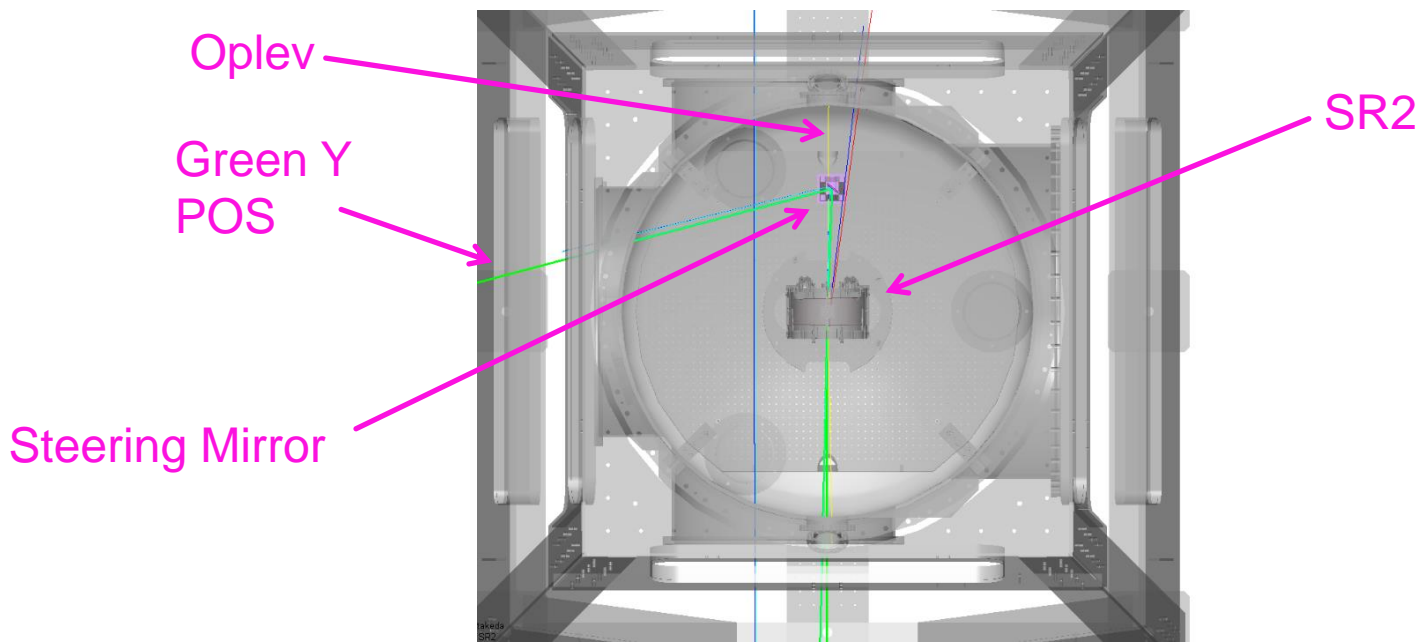
Yuta Michimura

Department of Physics, University of Tokyo

# Steering Mirror for POS

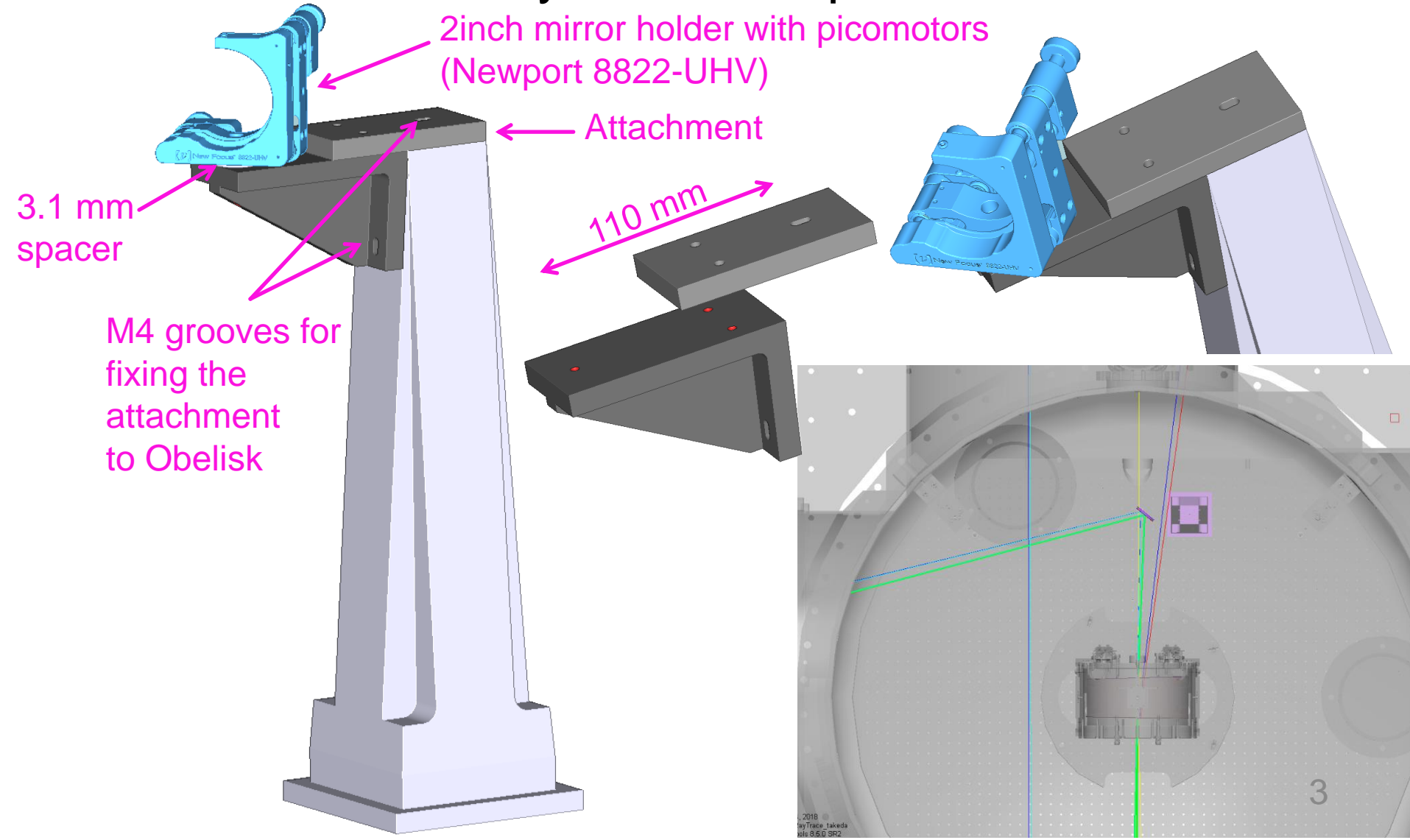
- Steering mirror for POS and green beam for Yarm interfere with SR2 oplev beam
- Two options for solution:
  - Obelisk post with an attachment
  - Obelisk post with a hole
- See [JGW-L1909580](#) by Takeda-kun for details

Obelisk Post  
[JGW-D1707299](#)

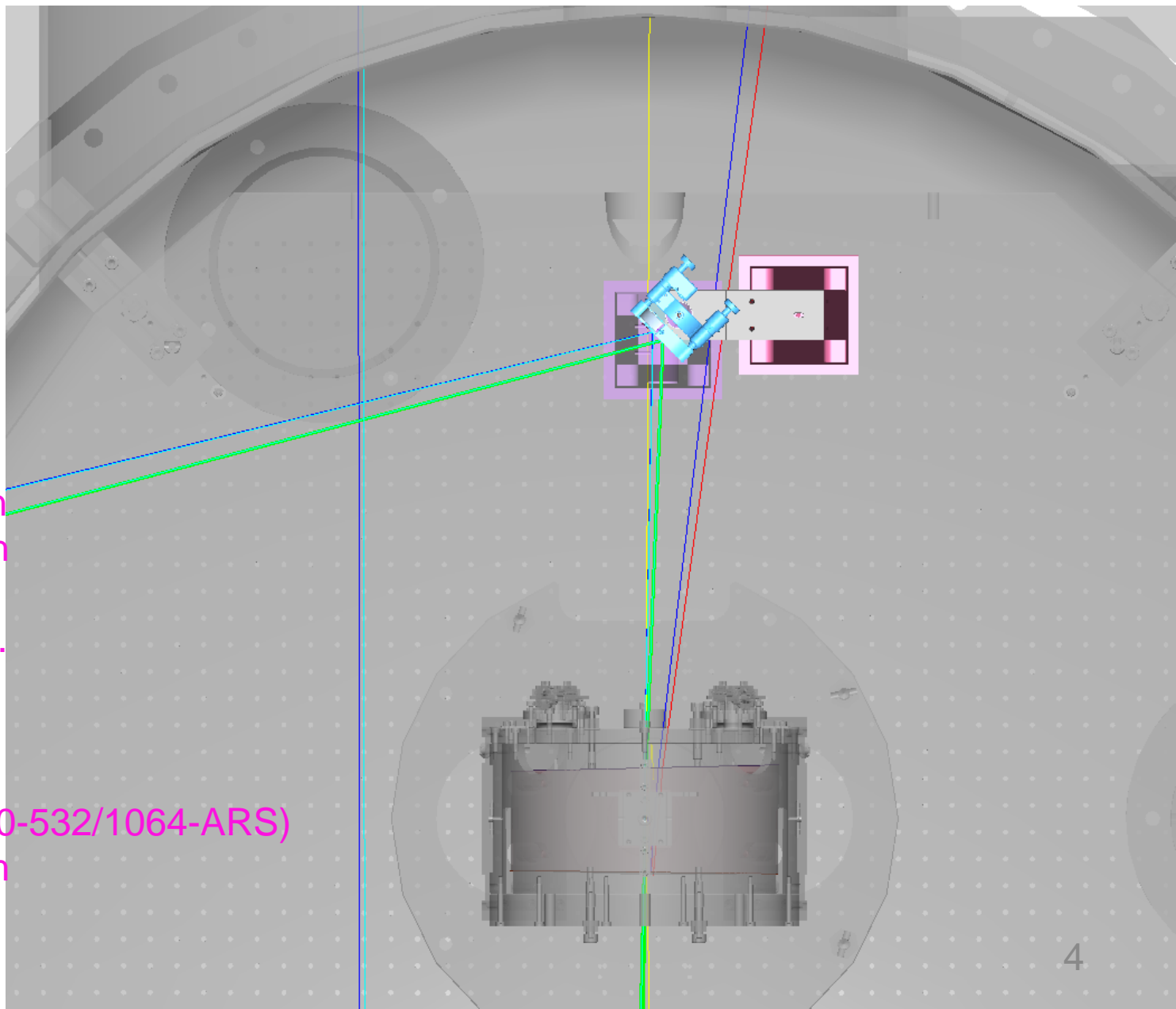


# Obelisk Post with Attachment

- Put Obelisk away from the oplev beam



# Obelisk Post with Attachment

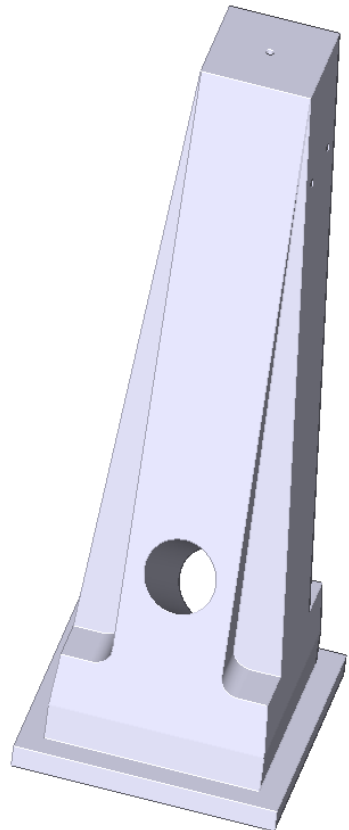


Obelisk with attachment should be placed as shown right to capture both green beam and IR beam from SRM.

The mirror has  
(Sigma-koki  
TFVMQ-50.8C10-20-532/1064-ARS)  
diameter: 50.8 mm  
thickness: 10 mm  
wedge: 1 deg

# Obelisk Post with Hole

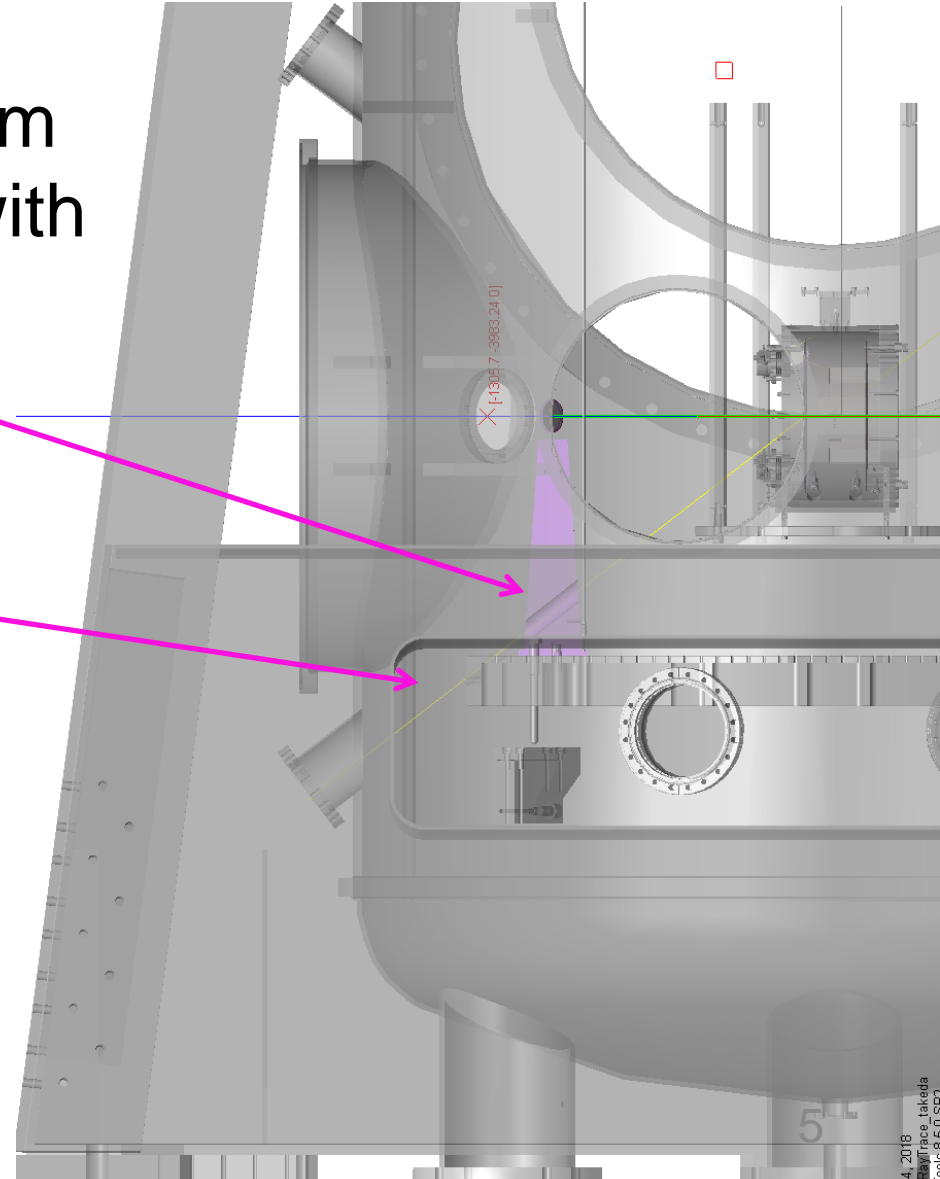
- Hole for oplev beam
- Checked that oplev beam goes through the hole with Lighttools



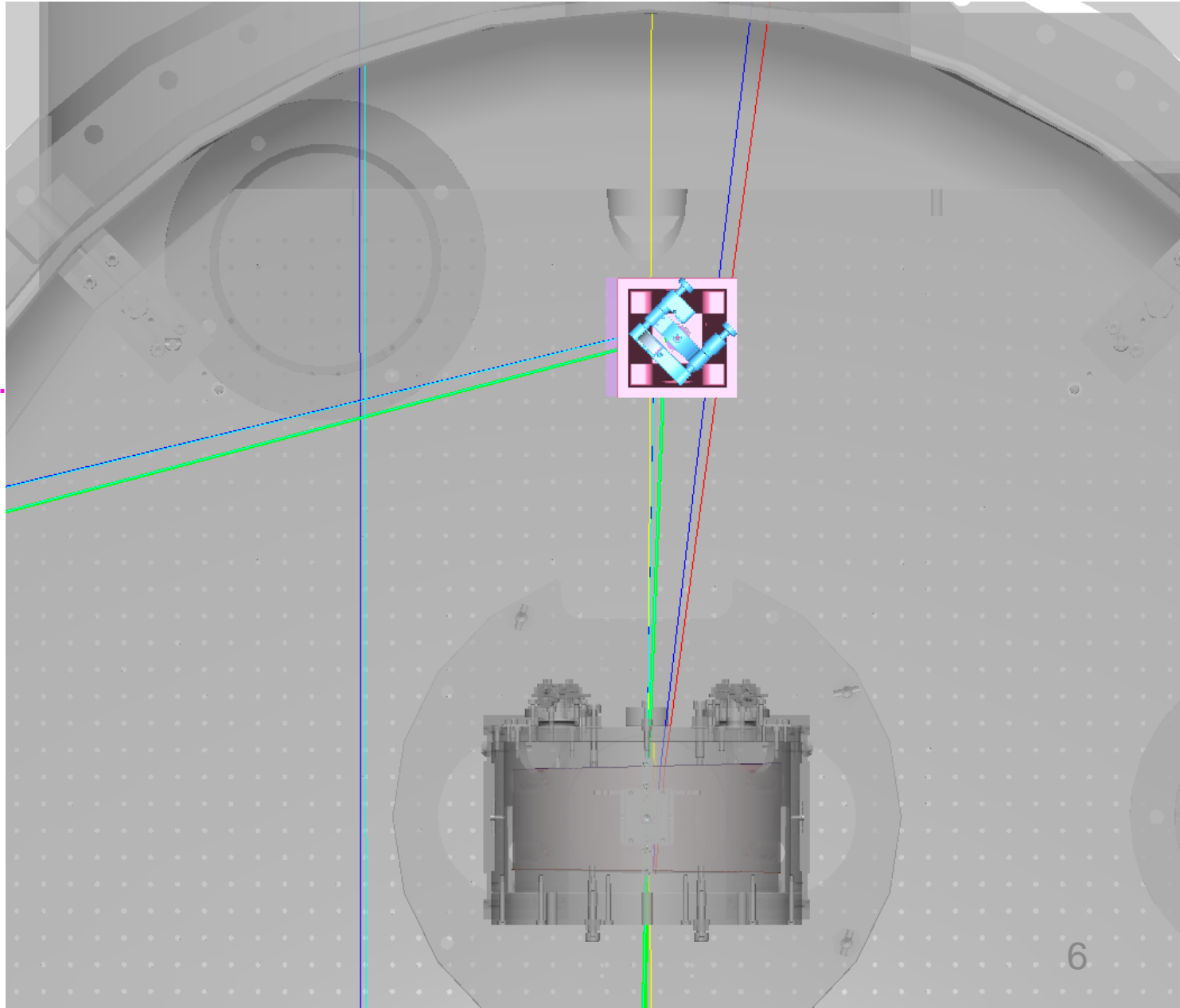
Hole  
 $\phi$  30 mm  
38 deg

Oplev

Note:  
Oplev beam radius is 0.1-1 mm and the size of the hole is enough. Larger hole is better for aligning the oplev beam.



# Obelisk Post with Hole



Obelisk position should be shifted by 10 mm towards +X to capture both green beam and IR beam from SRM. This shift is smaller than the radius of the hole (15 mm).