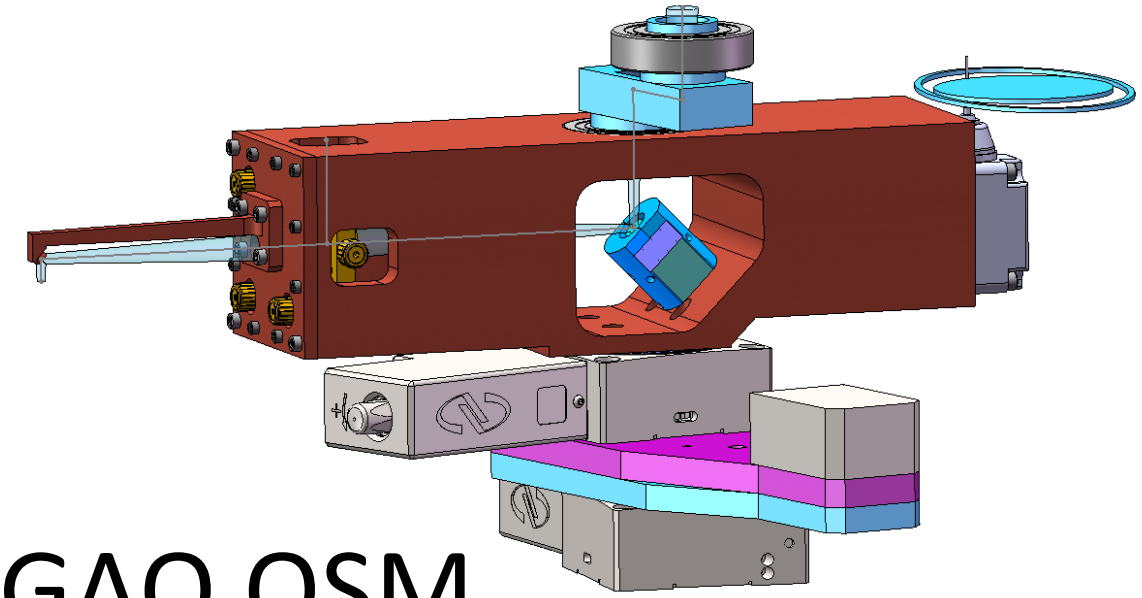
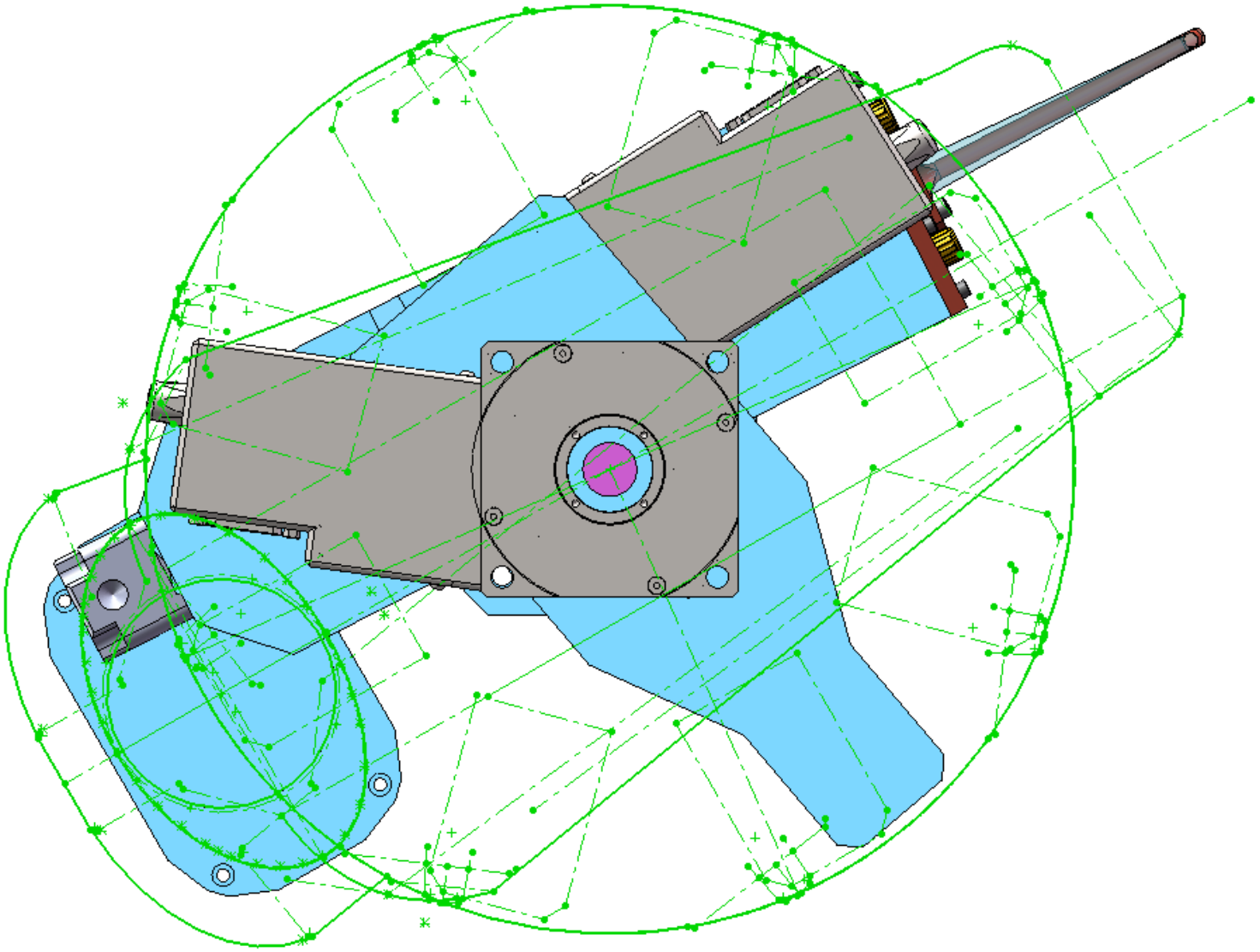


# NGAO OSM

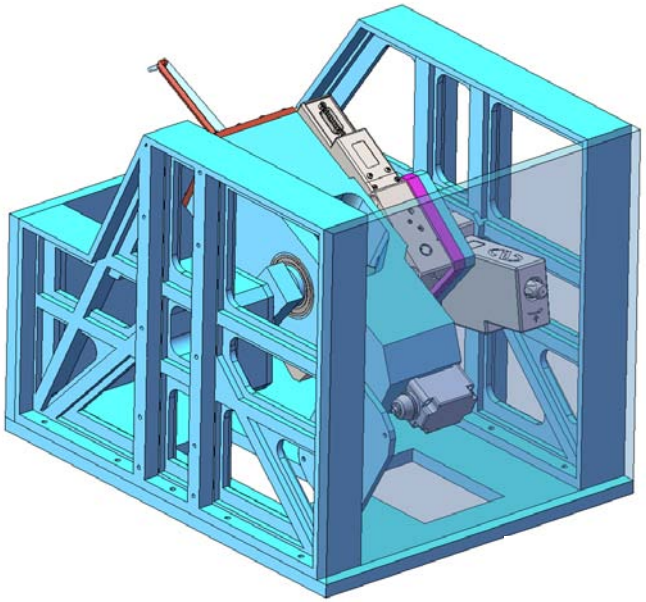
## Design Study Update

Alex Delacroix
08/25/2009
Version 13

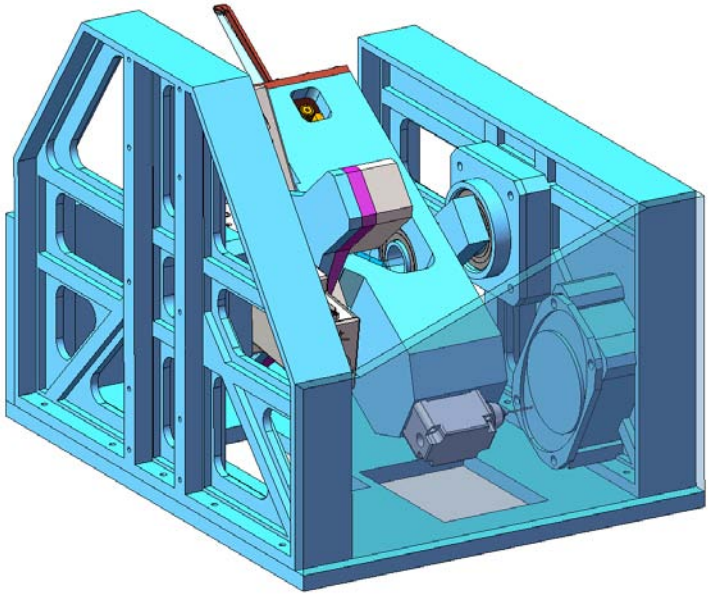
# RANGE OF MOTION ENVELOPE



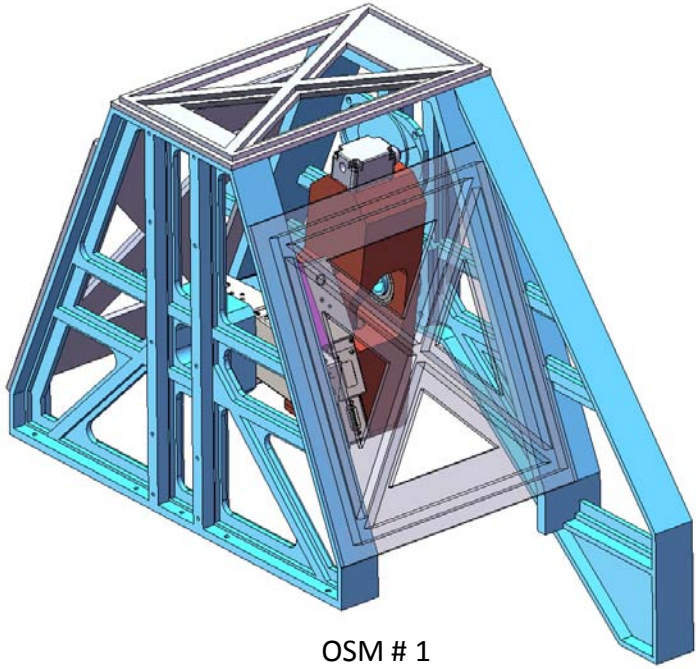
# OSM UNITS ASSY



OSM # 3
(a1 = -20)

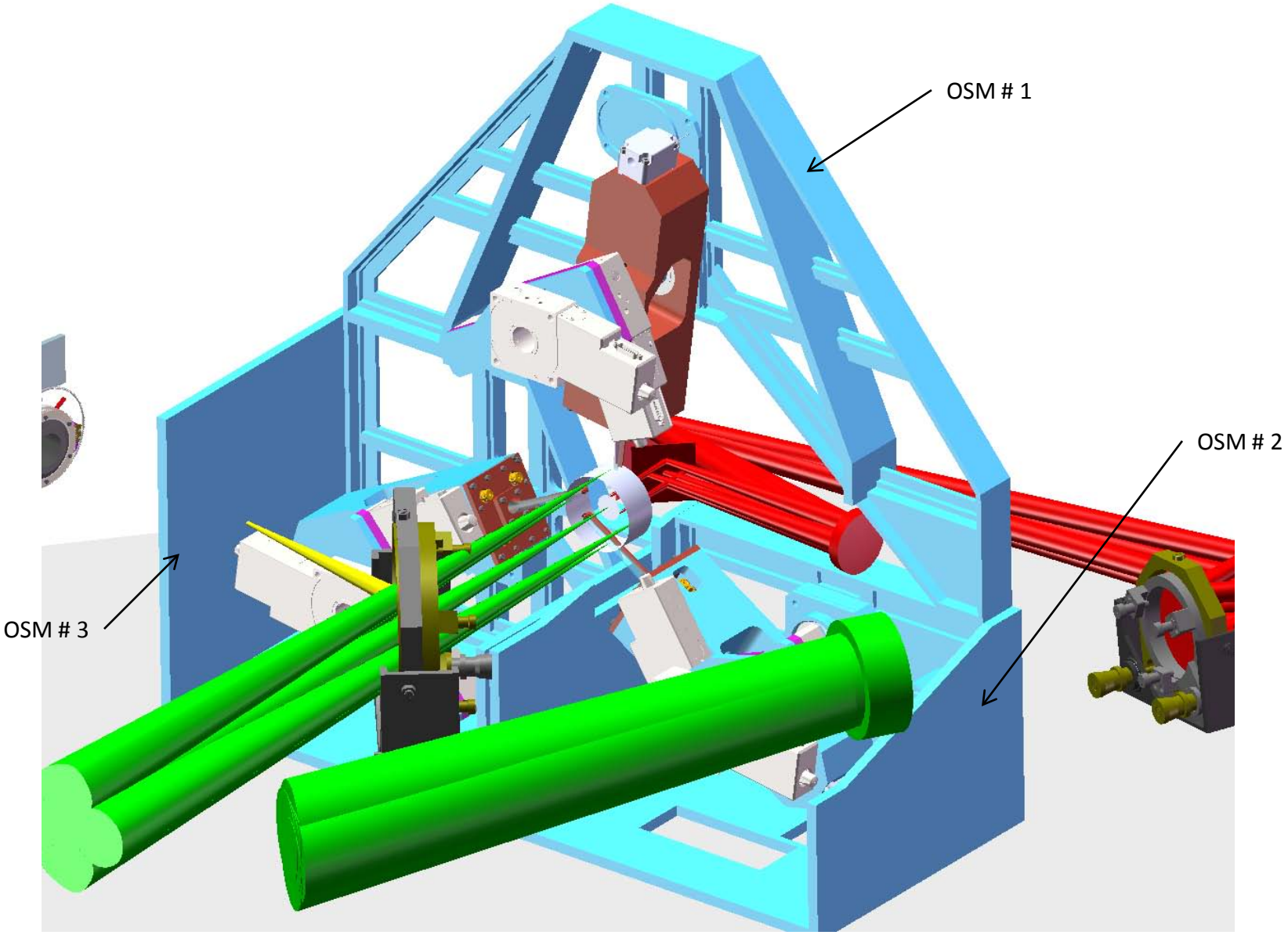


OSM # 2
(a1 = -5)

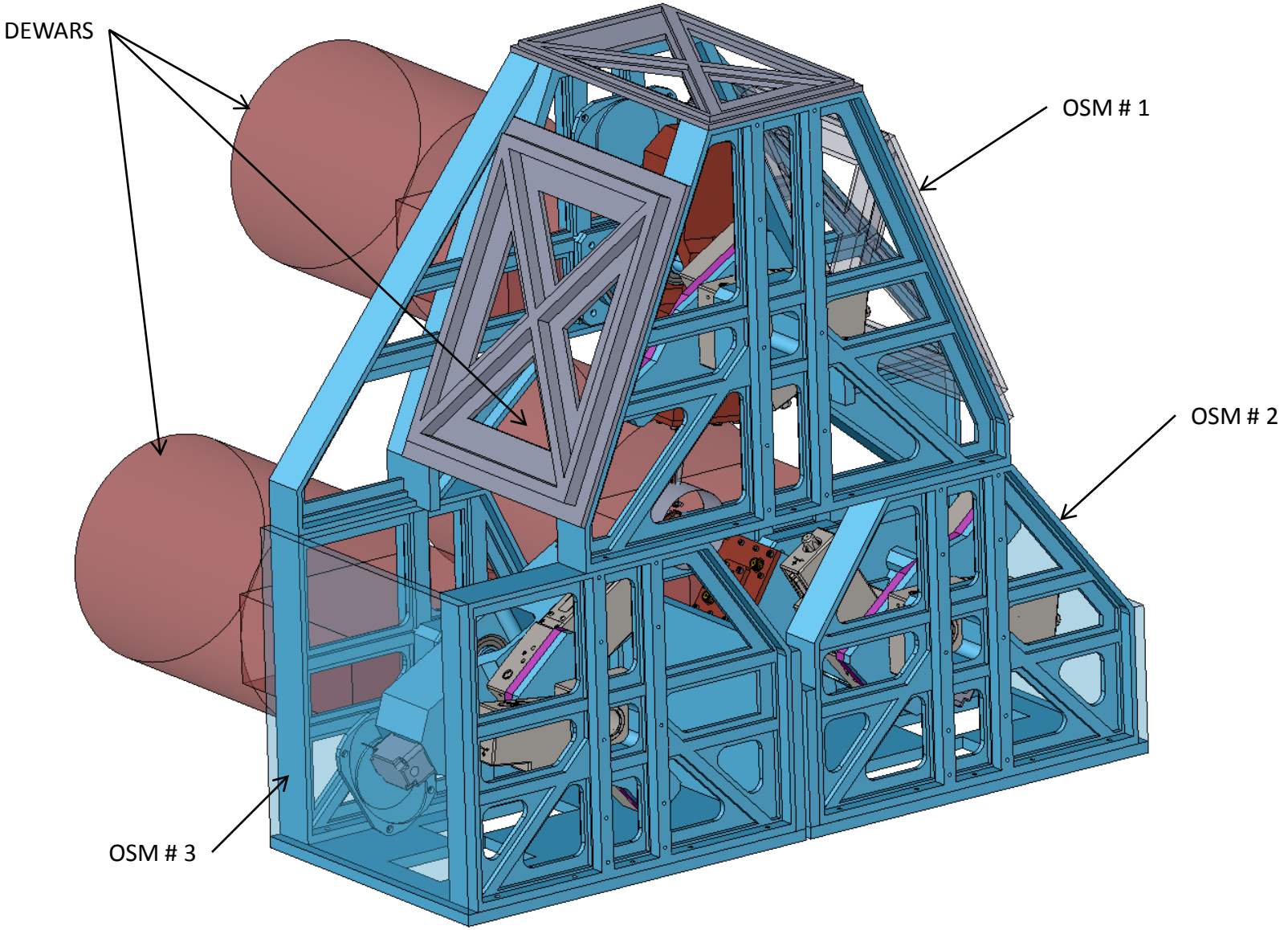


OSM # 1
(a1 = 10)

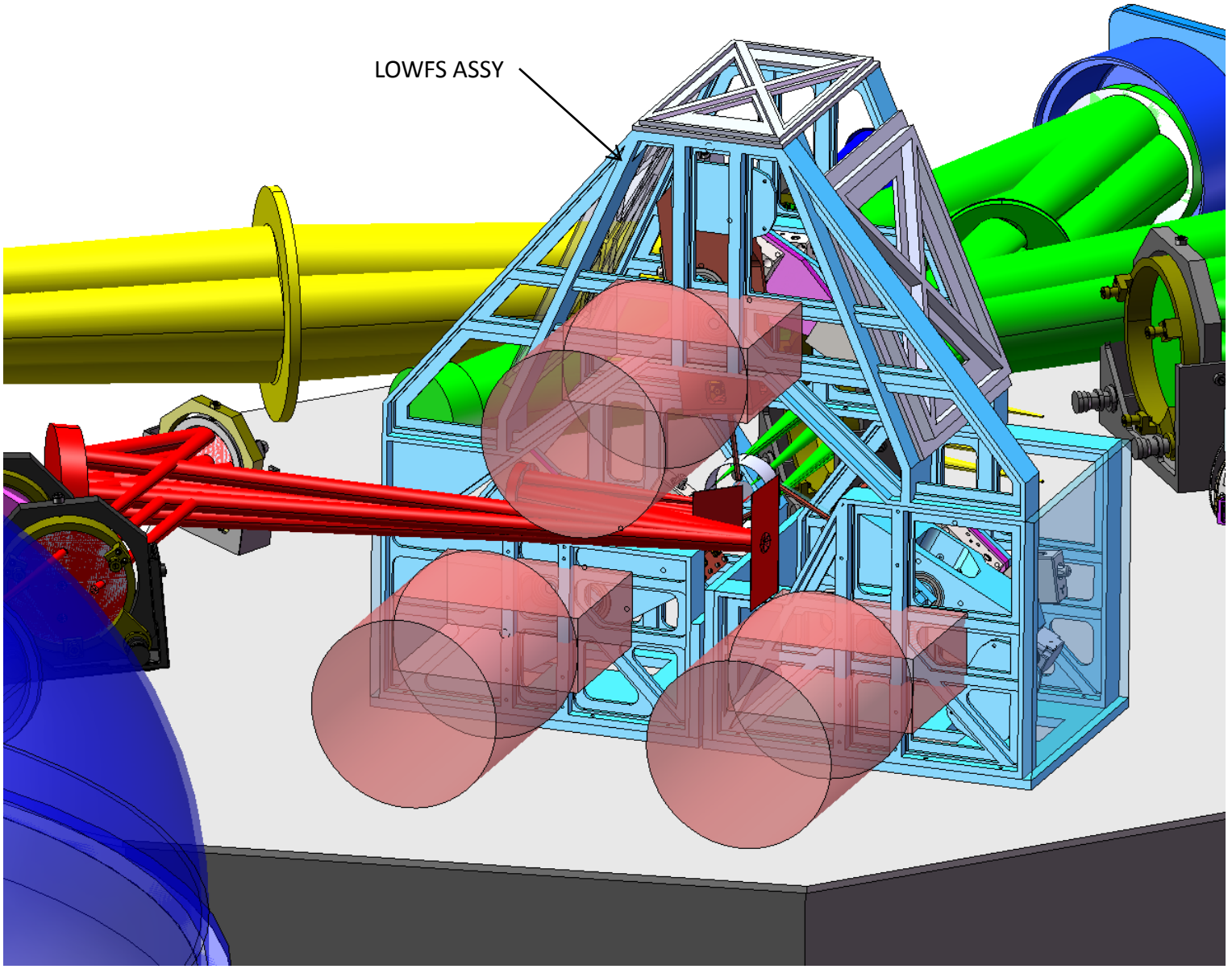
# LOWFS ASSY



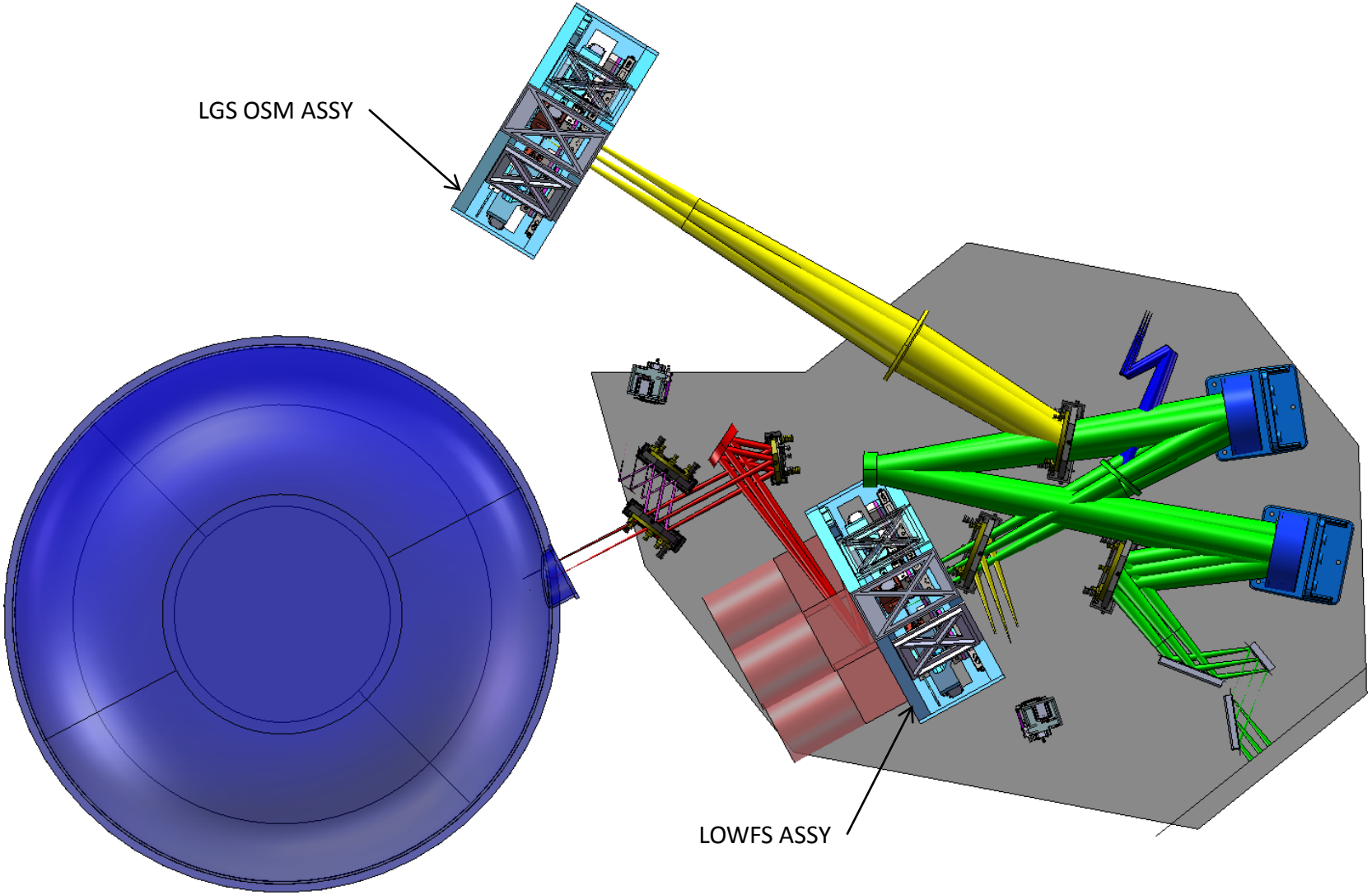
# LOWFS ASSY



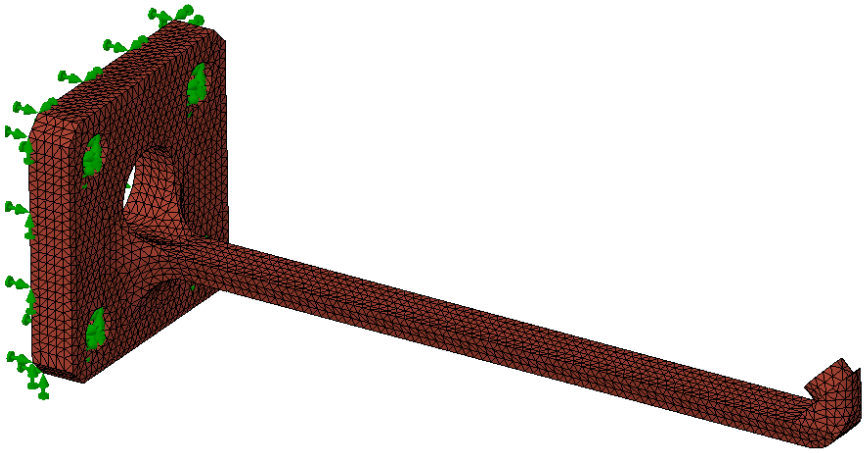
# KNGAO ASSY, ISO VIEW



# KNGAO ASSY, TOP VIEW



# FREQUENCY ANALYSIS



List Modes

Study name: Study 1

| Mode No. | Frequency(Rad/sec) | Frequency(Hertz) | Period(Seconds) |
|---|---|---|---|
| 1 | 1671.8 | 266.07 | 0.0037584 |
| 2 | 1939 | 308.6 | 0.0032404 |
| 3 | 10801 | 1719 | 0.00058174 |
| 4 | 12377 | 1969.9 | 0.00050764 |
| 5 | 24868 | 3957.9 | 0.00025266 |

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# Remaining work to be done

-Analyze Tip/Tilt Mirror Vibrations and Impact on Probe stabilization.
- System rigidity Analysis

# Questions:

-Probe position Accuracy: 40 (KAON 562) or 70 mas (Contour)
- Minimum Incremental motion ?
- Max Wobble?
- Position Stability (5 mas / 3600 s) TBC
- TT Requirements (Deflection, response, resolution,…)