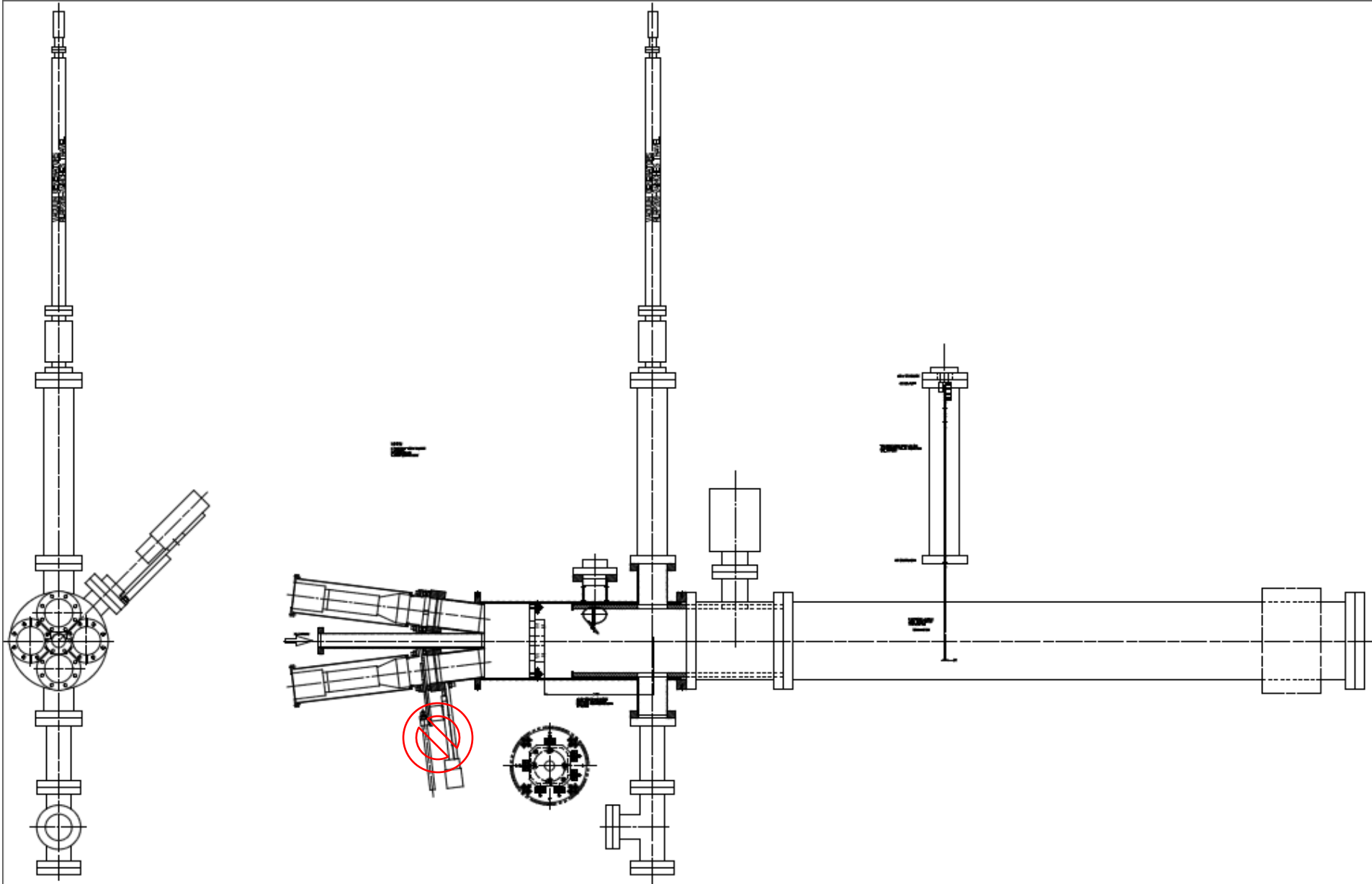
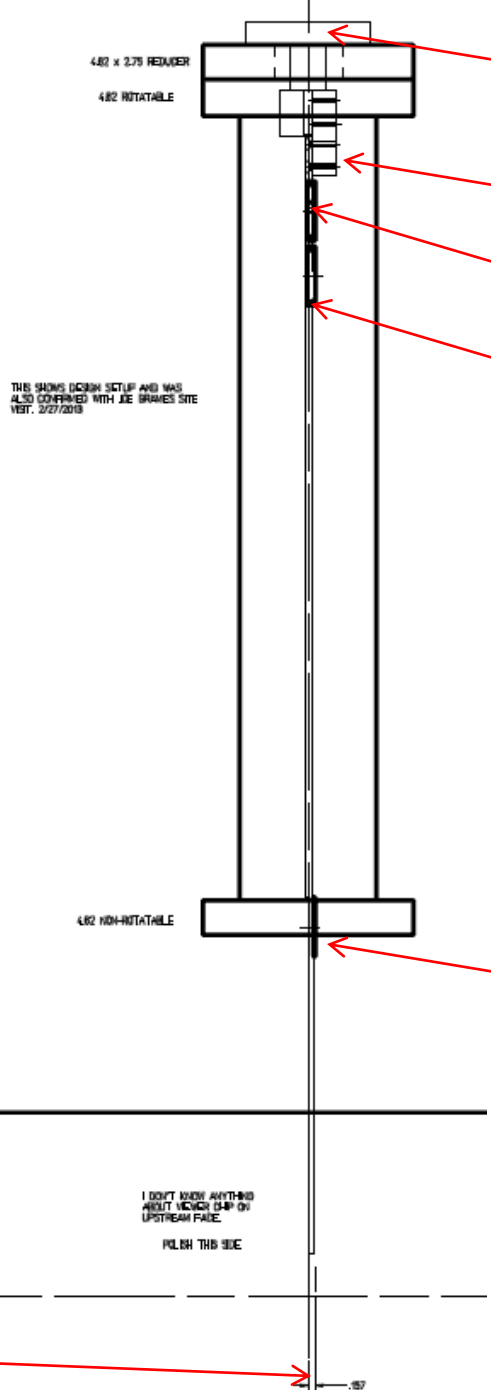


New Mott layout evolving ... almost there.



# Target Ladder



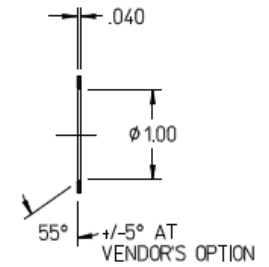
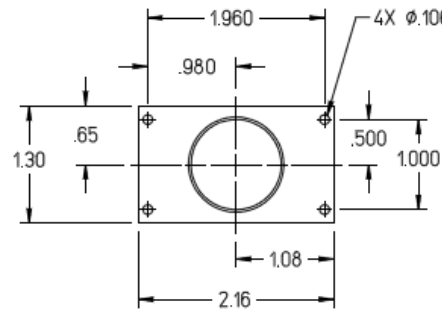
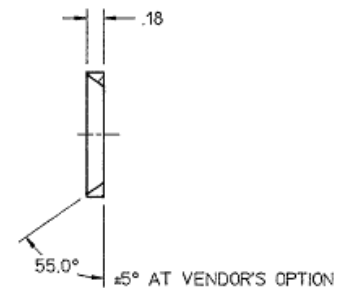
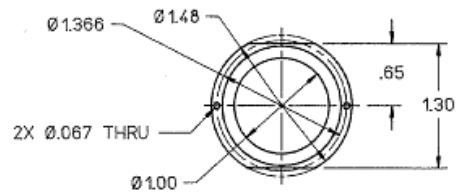
Manipulator axis

Coupling

Ladder

Round foil holder

Rectangular foil holder



Foil is located 0.157" after target flange center





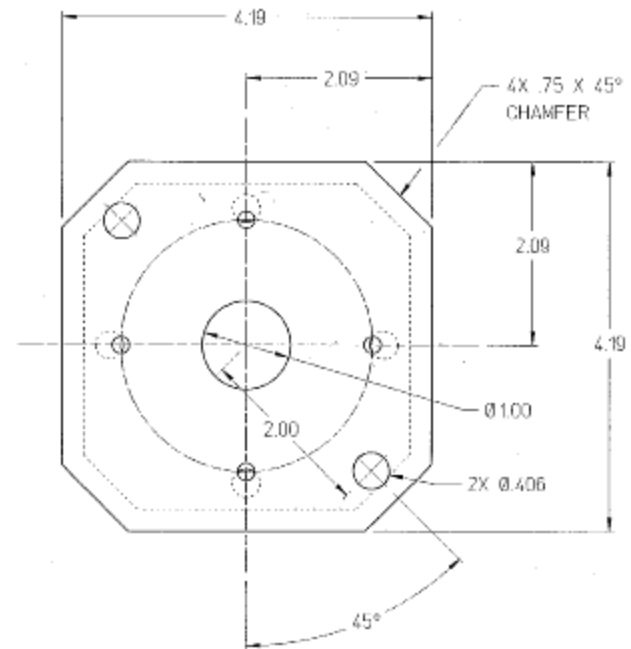
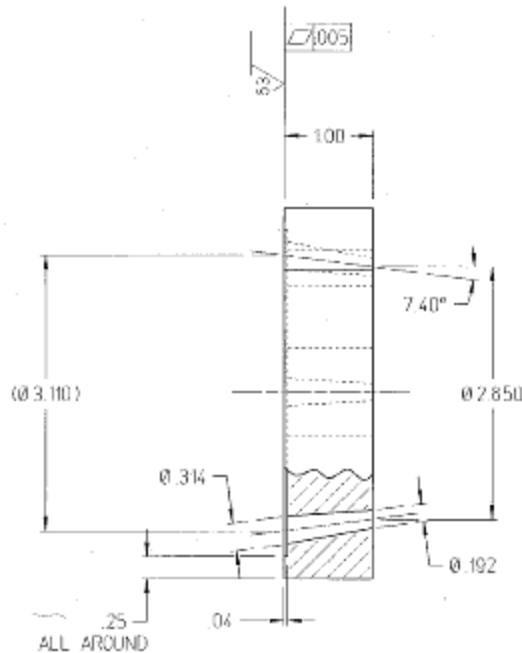
# New Collimator

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

A)  $7.40^\circ$  consistent w/  $172.6^\circ$  scattering angle

B) RADIUS ("Y") of entrance aperture is  $2.850 \frac{1}{2} = 1.425"$

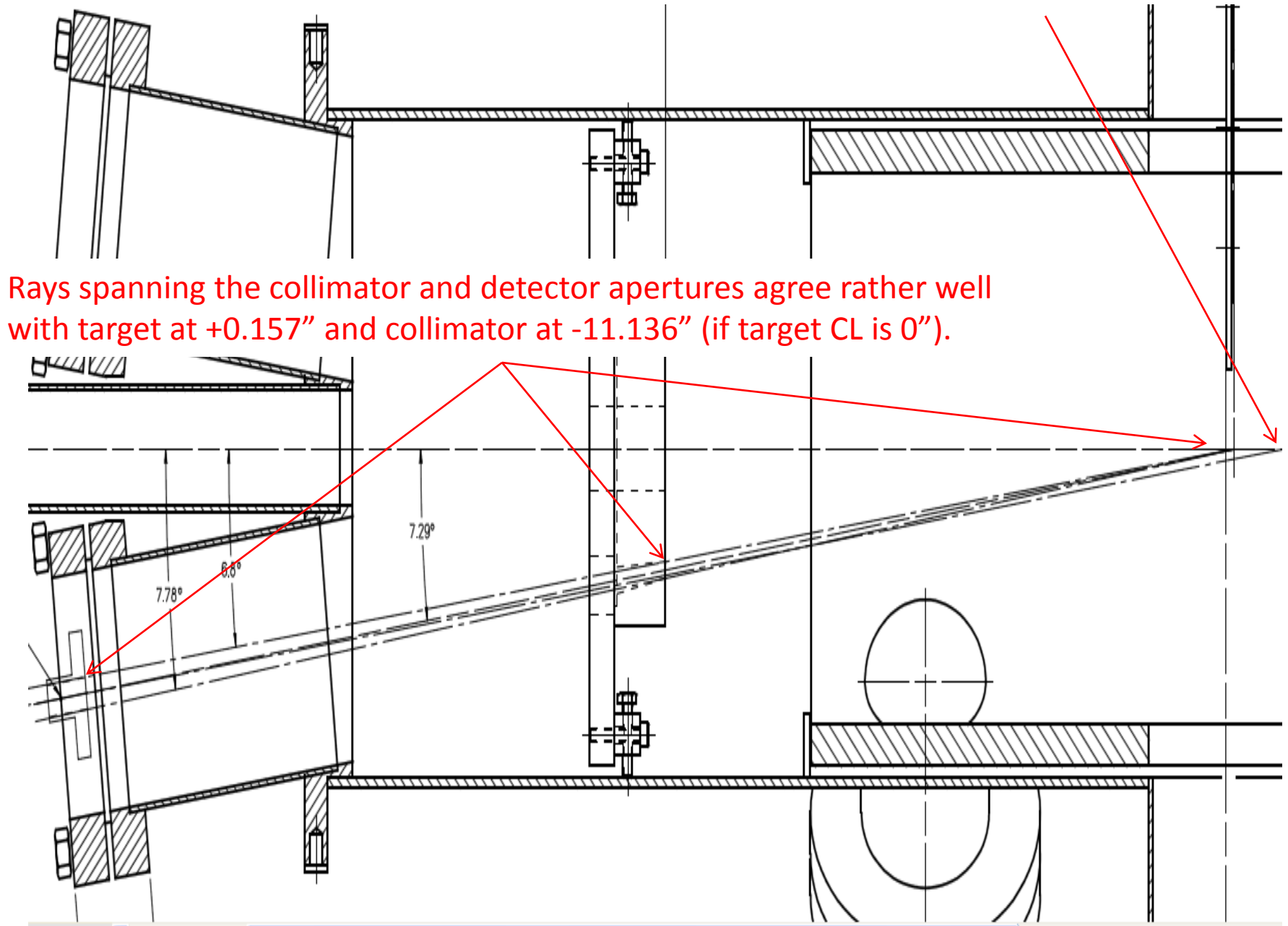
C) DISTANCE OF face to target ("X") is then  $X = \frac{Y}{\tan \theta} = \frac{1.425}{\tan 7.40^\circ} = 10.972"$



- Baffle is now a collimator. Geometry indicates ideal location is 10.972" upstream of target
- Designer has two different values: 10.972" and 11.136" (these differ by 0.164")
- I suspect the two dimensions are wrt to target flange center and target foil itself

Impact of parts used.

Port points about 1.2" downstream of target centerline



Rays spanning the collimator and detector apertures agree rather well with target at  $+0.157''$  and collimator at  $-11.136''$  (if target CL is  $0''$ ).

# Conclusions

- ✓ Target ladder parts and dimensions appear well understood.
- ✓ One scenario appears to be converging:
  - ❑ Targets at 0.157"
  - ❑ Detector acceptance centered on 7.0 deg port defines a 7.29 deg line to target
  - ❑ Collimator with 7.4 deg design positioned on 7.29 deg line at -11.136"
- ✓ Designer to demonstrate rays with collimator at -10.792" for comparison.
- ✓ I have asked alignment group for collimator and target positions.