KSO Lyot Filter Interface Control Document

5/13/21

Central Wavelength: 656.28 nm (H-alpha, see Figure 1)

 Passband fwhm: 0.05 nm

 Field-of-View: ±1.1 Rsun

 Tunable by temperature over a range of ±0.15nm from line center

 Compatible with the existing KSO H-alpha telescope (2000mm focal length, 100mm

diameter objective lens)

Figure 1 . Plot of the solar spectrum over a 0.5 nm range centered on H-alpha from the KPNO solar

atlas is shown for reference

Design

These requirements can be met with a 4-stage wide-field Lyot filter with pairs of calcite crystals

10.8, 5.4, 2.7 and 1.35 mm in thickness.

Size:

Weight:

Power:

Mount Interface:

Clear Aperture:

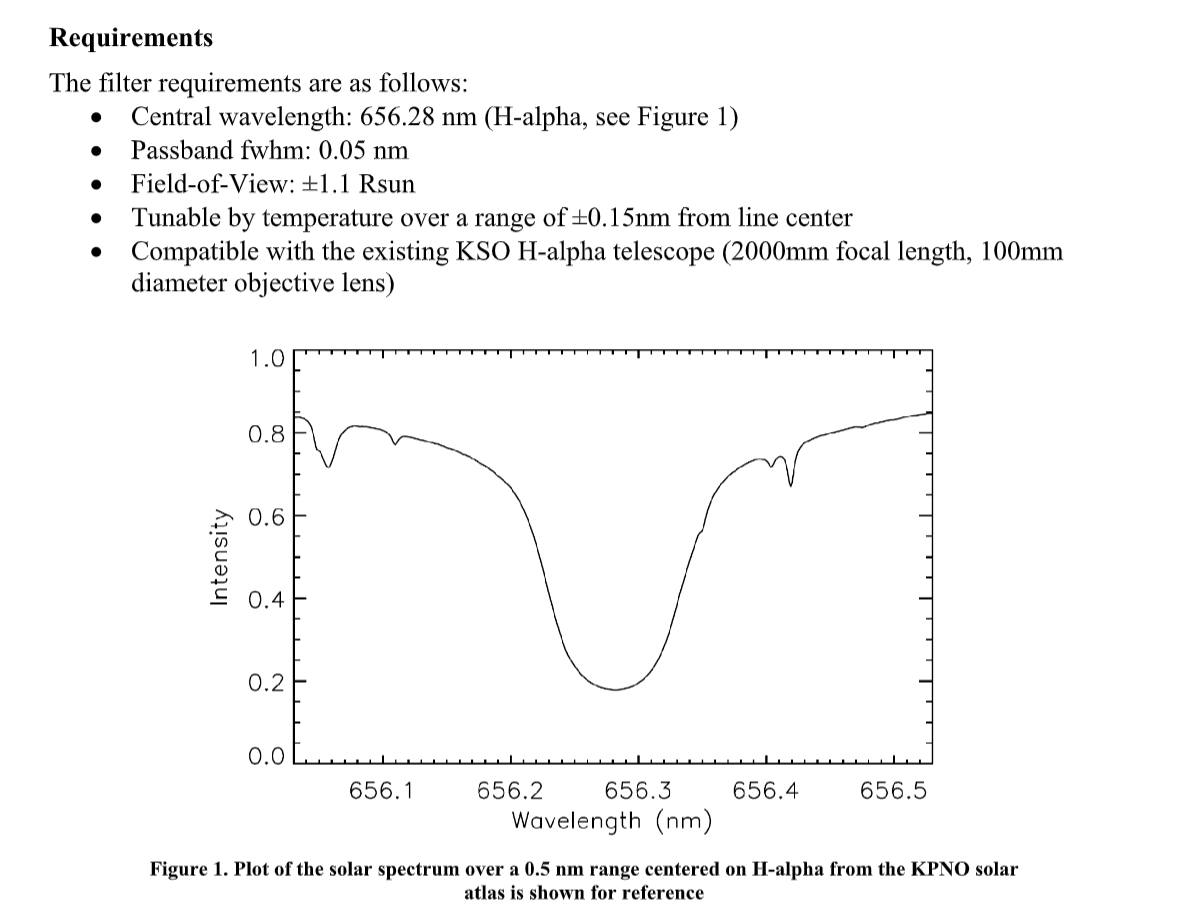
Angular FOV (design acceptance angle):

Temperature Controller

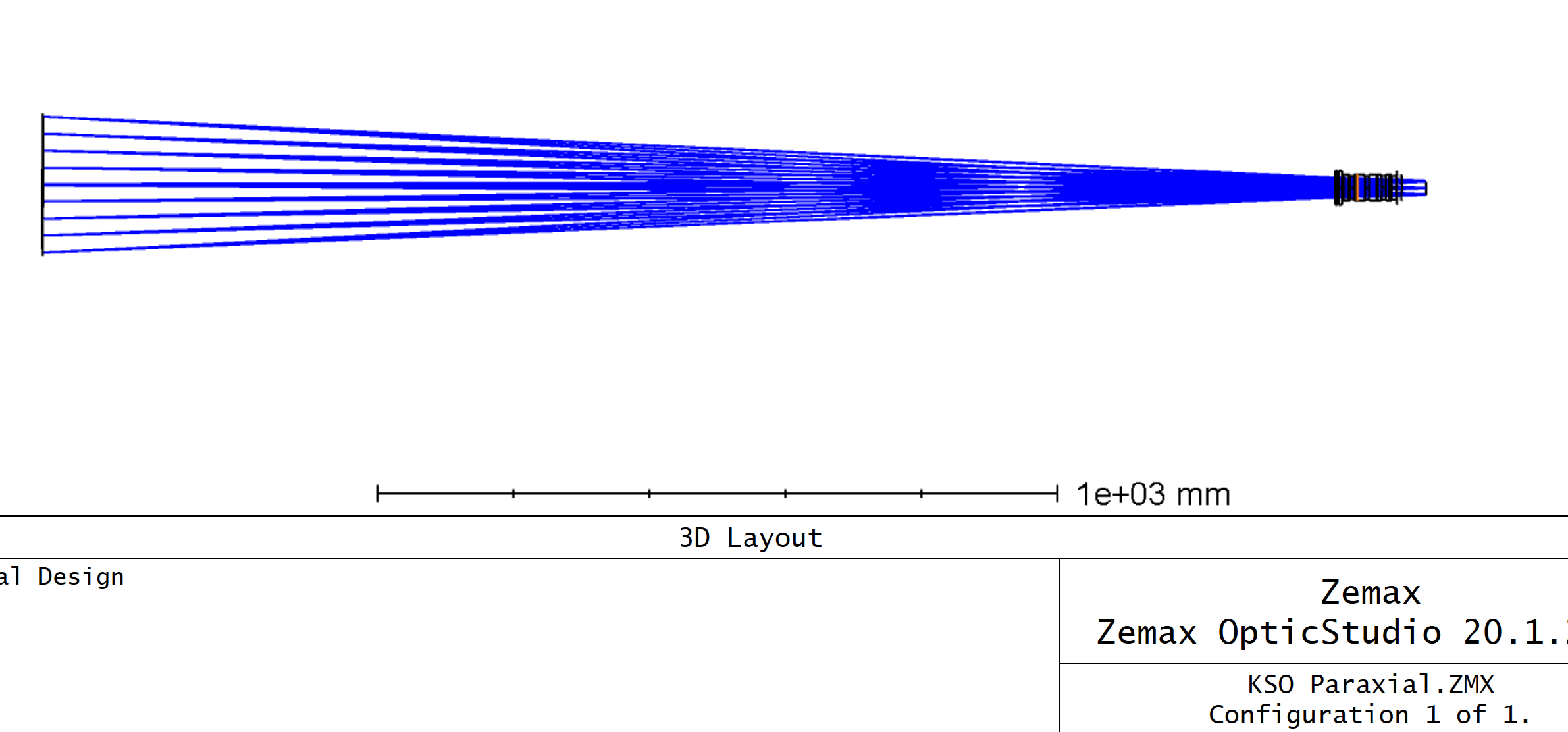
Questions

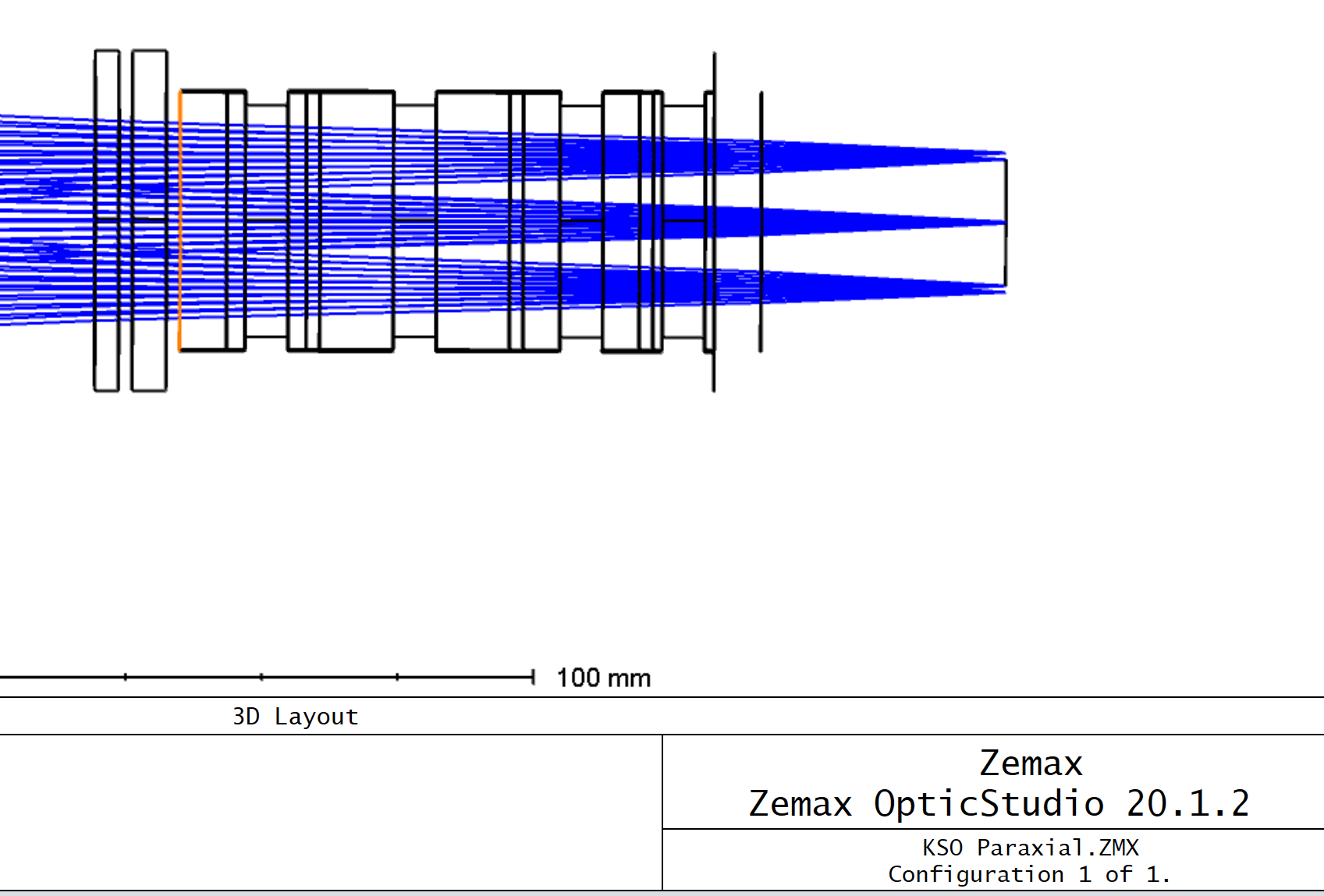
English or Metric HW?

ROHS Compliance



Just some graphics I am grabbing to get a feel for what we are building and what has been done.





The two leftmost optics are Heat Rejection Filter, then prefilter, highlighted surface begins 1st calcite of Lyot filter

