

Technical Evaluation Report

“Baseline Design for the COS Aperture Plate”

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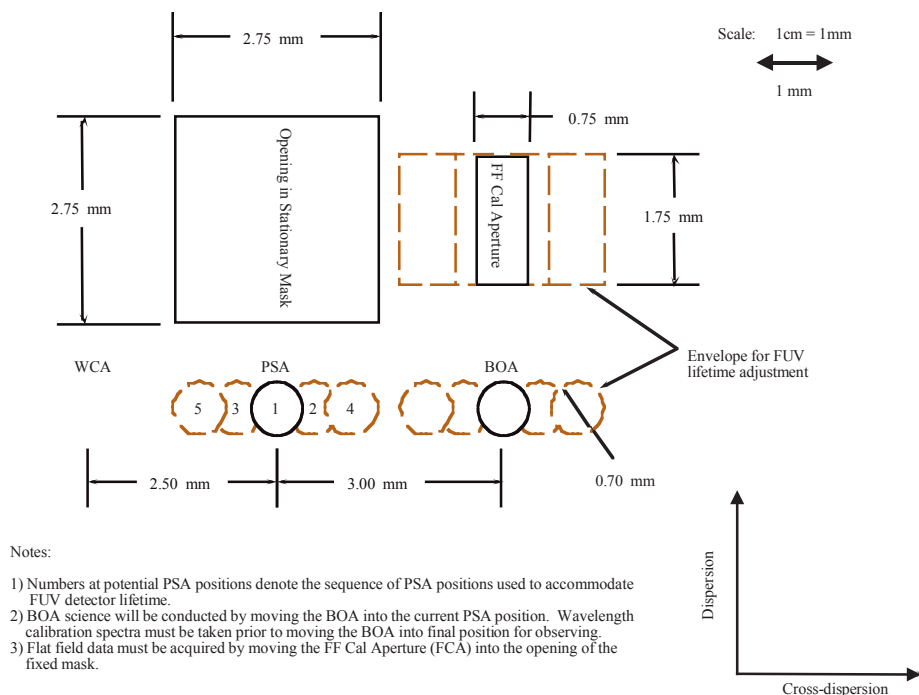
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The baseline design for the COS aperture plate is shown in the figure below. This design is based on an initial conceptual design by Brian Osborne (BATC). The design shown accomplishes two main goals: (1) the FF Cal Aperture (FCA) is masked from transmitting any light (e.g., from the wave cal lamps) unless it is moved into the Opening in the Stationary Mask (large box in figure); and (2) the Opening in the Stationary Mask is large enough to accommodate internal flat-field capability for up to 5 FUV detector lifetime adjustments. (All NUV science observations will be obtained through the PSA or BOA placed at PSA position 1 shown.) Mechanical constraints may require changes to the exact dimensions of the apertures and masks, and their relative positions. However, this will be the baseline as of October 1999, until such modifications are shown to be necessary through more detailed design work at BATC.



Notes:

- 1) Numbers at potential PSA positions denote the sequence of PSA positions used to accommodate FUV detector lifetime.
- 2) BOA science will be conducted by moving the BOA into the current PSA position. Wavelength calibration spectra must be taken prior to moving the BOA into final position for observing.
- 3) Flat field data must be acquired by moving the FF Cal Aperture (FCA) into the opening of the fixed mask.