

IBEX-Lo Collimator Point Spread Function

The IBEX collimator provides a hexagonal FoV, with $\approx 7^\circ$ FWHM in lo-resolution and $\approx 3.5^\circ$ FWHM in hi-resolution. That the hi-resolution section is also active in lo-resolution mode is negligible for the FoV function because it contributes only $\approx 5\%$ of the counts.

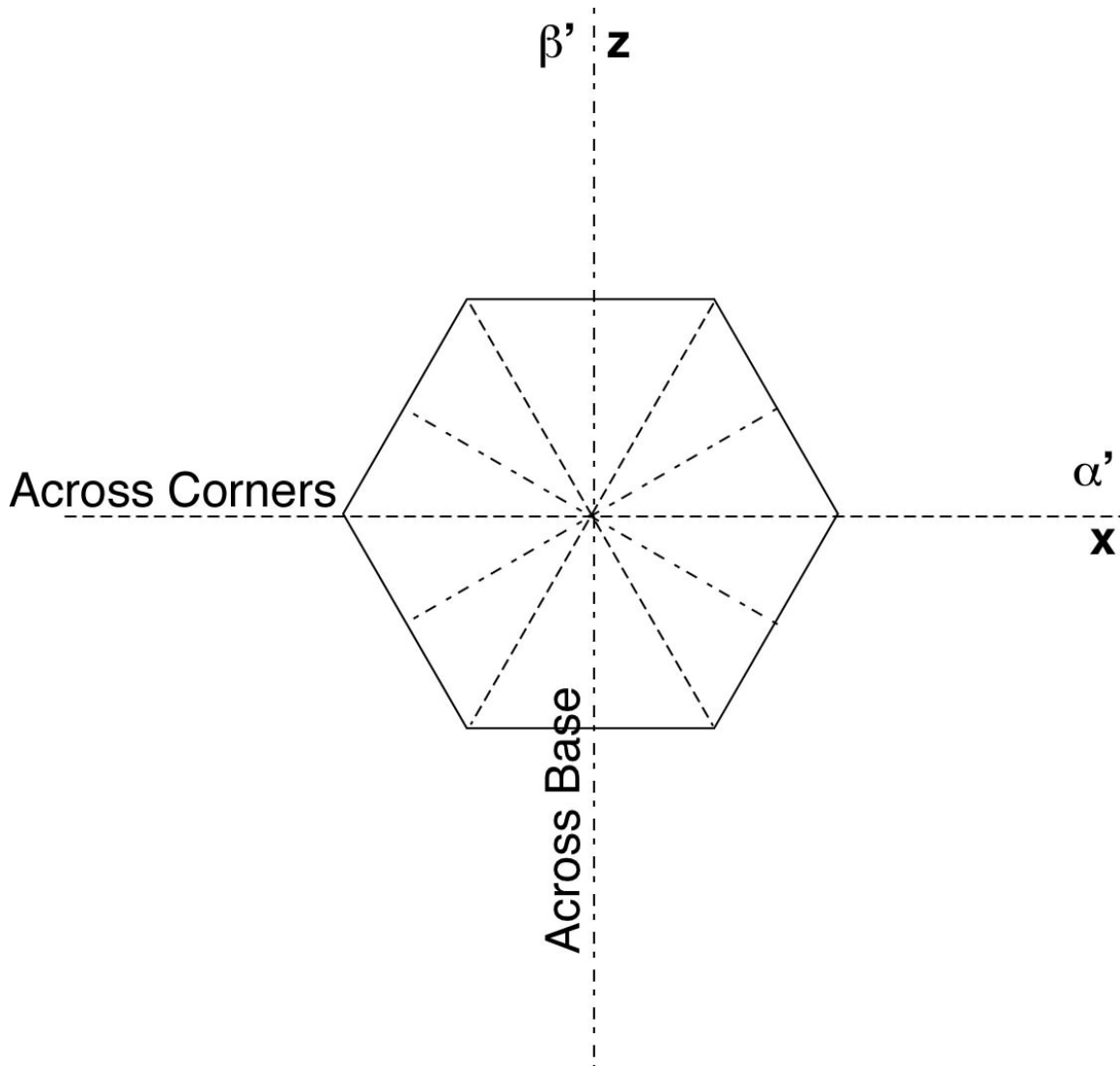


Figure 1: Hexagonal opening of the IBEX-Lo collimator, shown in spacecraft coordinates. The x-direction is along the spin axis, and the z-axis is in the spin direction.

The file "Coll-FoV_PointSpread.csv" contains the throughput function of the collimator as a function of angle θ , starting with 0° along the collimator boresight for the lo-resolution (columns B and C) and hi-resolution (columns D and E) aperture. Shown are the transparency values (Tr_{Base} in z and Tr_{Corner} in x) along the two principal axes of the hexagon as shown in Figure 1. The throughput is normalized to 1 for particles arriving along the boresight.