THE HOPKINS ULTRAVIOLET TELESCOPE

A. DAVIDSEN
Johns Hopkins University

Abstract. The Hopkins Ultraviolet Telescope (HUT) will make pioneering observations in the far ultraviolet (912–1850 Å) and extreme ultraviolet (420–912 Å) bands during its upcoming flight aboard the Astro-1 shuttle mission, currently scheduled for launch on May 9, 1990. HUT employs an iridium-coated 0.9-meter $f/2$ primary mirror, an osmium-coated grating, and a CsI-coated microchannel plate intensifer to achieve a resolution of about 3 A in first order, with a peak effective area of 15 cm^2 at 1100 Å, and time resolution of 2 milliseconds, HUT's EUV response is obtained in second order, with a peak effective area of 10 cm^2 at 600 Å.

HUT is expected to obtain several hundred spectra during its upcoming mission, ranging from Comet Austin to the quasar HS 1700+64 at a redshift of 2.7. The design and operation of the instrument are described, and simulated spectra are used to illustrate a sample of the problems that will be addressed during the Astro-1 mission. In order for HUT to be exploited fully, however, it would be desirable to convert it to a free-flying satellite mode.

Y. Kondo (ed.), Observatories in Earth Orbit and Beyond, 292.