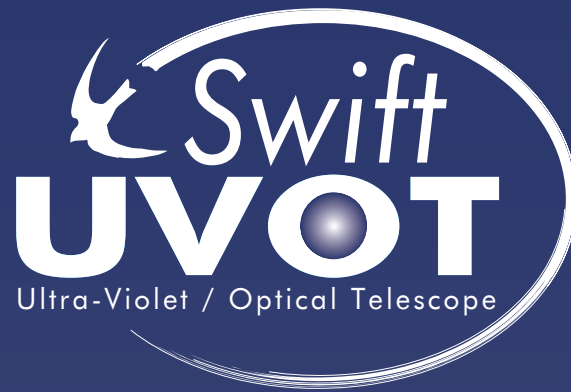


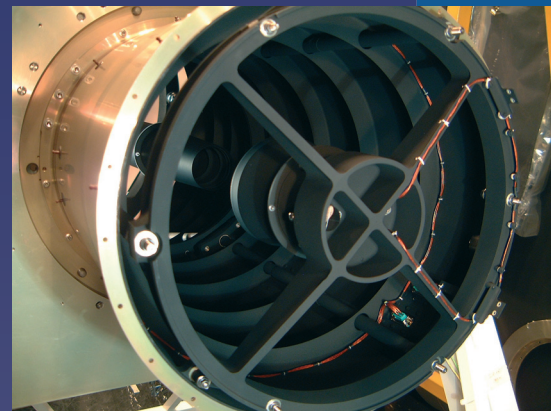
Swift UVOT

Ultra-Violet Optical Telescope

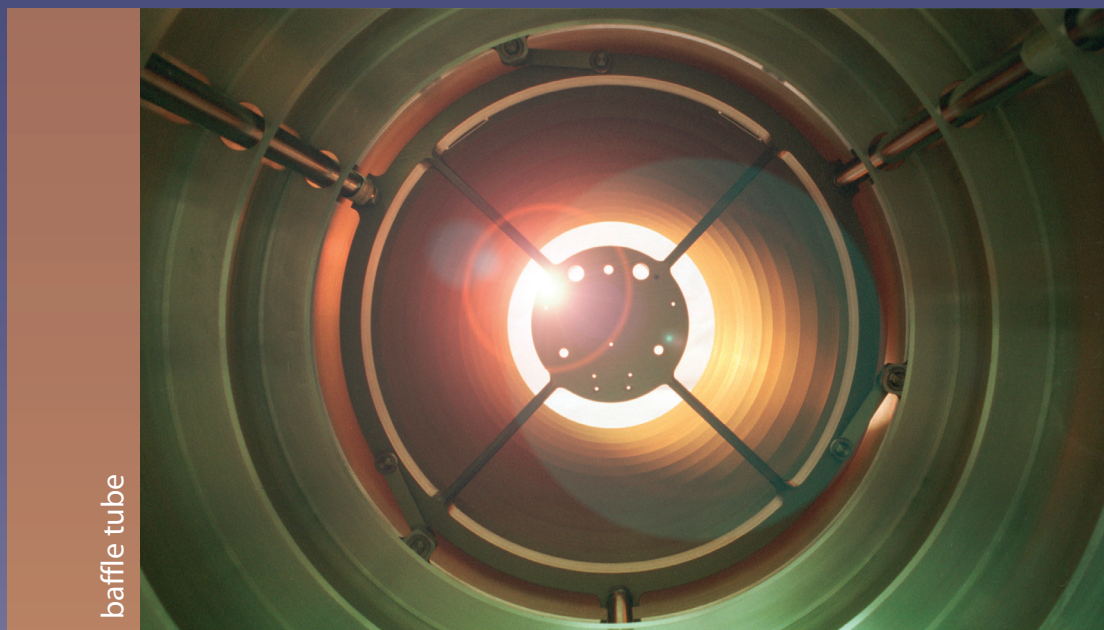


Swift UVOT Science Requirements

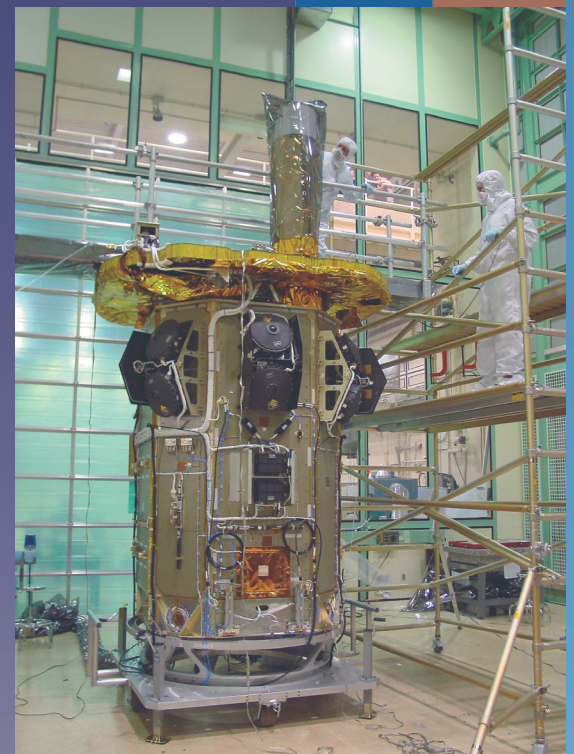
- Measure and monitor the prompt and afterglow emission from Gamma-ray bursts down to a magnitude of ~ 24 in unfiltered light
- Measure optical and ultraviolet colours of bursts in the 170-650nm band
- Determine the redshift of bursts using broadband colours (faint bursts) and low-resolution spectroscopy (bright bursts)
- Determine the location of bursts to sub-arc second accuracy
- Provide a finding chart of the burst location within about 5 minutes of the start of observing



secondary mirror



baffle tube



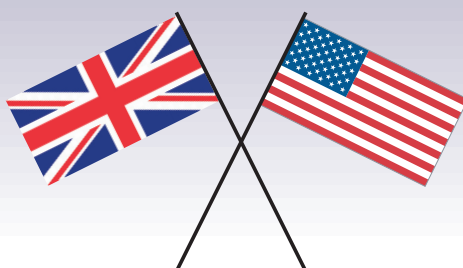
UVOT integration

Instrument Characteristics of Swift UVOT

- Modified Ritchey-Chretien telescope
- Intensified CCD: 2048x2048 pixels
- FOV: 17x17 arcmin
- Pixel: 0.5 arcsec
- Wavelength range: 170-650 nm
- Eff. Area: 90 cm² (250 nm)
- Wavelength discrimination: colour filters, Grisms (I/DI $\sim$ 300)
- Astrometry: <0.3 arcsec
- Sensitivity: B=24 (unfiltered)



cleanliness inspection



University College London
Department of Space & Climate Physics
Mullard Space Science Laboratory

PENNSTATE

