

# Background: UVIT

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Astrosat Calibration Meeting

Astrosat Science Support Cell

IUCAA, Pune

August 23-24, 2022

# Background

Background NOT Calibration-parameter

Background is Time & Direction dependent

# Sources of Background

Dark Current	FUV < 10/s	NUV < 50/s	
Geo Corona	Ly $\alpha$ (1216A)	OI (1304 A)	OI (1356 A)
Night	> 100000/s	860/s	64/s

***DEPEND on SOLAR ACTIVITY***

Sky Backgrounds- *depend on Gal LAT*

Filters	CaF2-FUV	BaF2-FUV	Sapphire-FUV	Silica-NUV
HZ4 (LAT -32 deg)	1200/s	...	500/s	7000/s
Dark field (LAT -54 deg)	...	110/s	...	1700/s

***NUV background is mostly Zodiacal light, and FUV is mostly Galactic***

***Cosmic-ray Showers give ~ 150/s; frames with Cosmic-ray Showers discarded  
for the Dark Field***

# Some Suggestions

- If faint sources are being observed with exposures  $> \sim 5000$  s in FUV, assess possible loss in S/N due to the Geocoronal lines for observing with CaF2 as compared to observing with BaF2.
- If faint sources are being observed with exposures  $> \sim 5000$  s in FUV, assess possible loss in S/N due to including the frames with Cosmic Ray Showers as compared to excluding these at the cost of  $\sim 15\%$  useful exposure time.