

National conference on REcent Trends in the study of Compact Objects  
(RETCO-V): Theory and Observation



Contribution ID: 75

Type: not specified

## Ultra-violet variability of compact objects observed with UVIT

*Wednesday, April 5, 2023 12:00 PM (15 minutes)*

The Ultra Violet Imaging Telescope (UVIT) is one of the payloads on board India's first multi-wavelength astronomical observatory AstroSat, launched by the Indian Space Research Organisation on 28th September 2015. Since its launch, UVIT has been observing several compact objects that includes X-ray binaries as well as active galactic nuclei (AGN). A systematic investigation is being carried out to characterize the UV flux variability nature of the compact objects observed with UVIT. As part of this investigation, we have initially focused on ten blazars, a category of AGN and one cataclysmic variable. All the blazars are found to show both flux and spectral variations on hour like time scales. Also, monitoring observations with the UVIT, has revealed UV variations in an intermediate polar cataclysmic star. Periodogram analysis of the UV light curves of the cataclysmic variable, lead to the detection of a prominent period of about 21 minutes in the UV, which is the spin period of the white dwarf. Analysis of the SXT and LAXPC light curves of the same object also reveals the presence of the 21 minutes period. Details of the work will be presented in the meeting.

### Presentation Type

Oral

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**Session Classification:** Cataclysmic Variables

**Track Classification:** Cataclysmic Variables