



भारतीय ताराभौतिकी संस्थान
INDIAN INSTITUTE OF ASTROPHYSICS
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स्नातक अध्ययन मंडल Board of Graduate Studies.

Ph.D Synopsis Seminar

Speaker: S.V.Manoj Varma

Title: The Solar Ultra-Violet Imaging Telescope: Detector characterization and on-board processing for flare studies

Abstract

The Solar Ultra-Violet Imaging Telescope (SUIT) is one of the payloads on the upcoming Aditya L1 mission. SUIT is an off-axis *Ritchey-Chretien* telescope which images the sun on to a 4k x 4k CCD covering a field-of-view of 1.5Ro with an image scale of 0."7/pixel. SUIT will take full disc and region of interest images of Sun in 200-400 nm wavelength range using 11 narrow- and broad-passband filters. In order to achieve its objective; performing high cadence flare observations, an intelligence algorithm is implemented on-board using FPGA. This is towards the aim of obtaining high cadence flare data from its initial stage of evolution, in NUV wavelength bands. In this talk, I will explain about the flare light curve properties in NUV, derived using SDO/AIA 1600 Å full disc images and IRIS Mg II 2796 Å slit-jaw images. The start time and peak time derived from this analysis are compared with that of soft and hard X-ray light curves. These results are used in developing the on-board intelligence algorithm for SUIT. I will explain this algorithm in detail and the efficiency of the algorithm will be discussed with the test results. I will also explain the SUIT detector calibration and testing of readout electronics. This testing is performed on the qualification model CCD sensor along with the flight model electronics.

शुक्रवार Friday 4, मार्च March 2022

Venue: online

Time: 11:00 AM

सभी का स्वागत है All are welcome.

Join Zoom Meeting

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