

The Imaging and Slitless Spectroscopy Instrument for Surveys (ISSIS) for the World Space Observatory–Ultraviolet (WSO-UV): optical design, performance and verification tests.

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Abstract

ISSIS is the instrument for imaging and slitless spectroscopy on-board WSO-UV. The baseline for ISSIS design, as approved at the PDR held in May 2012, consists of two acquisition channels, both of them provided with photon counting detectors with Micro-Channel Plates (MCP). These two channels are named the Far Ultraviolet (FUV) Channel covering the 1150-1750 Å wavelength range and the Near Ultraviolet (NUV) Channel in the 1850-3200 Å range. In this work, we present the current ISSIS design and its main characteristics. We present the main performance verification for ISSIS to ensure that the current design of ISSIS fulfils the scientific requirements and to ensure the feasibility of the in-flight calibration. We also define the facilities and technical characteristics for realizing the tests.