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Optomechanical design and analysis of SING spectrograph

The Spectroscopic Investigation of Nebular Gas (SING) payload is a near ultraviolet (NUV) imaging spectrograph, which is designed to operate in the wavelength range from 1400 Å to 2700 Å, with a spectral resolution of ~ 2 Å at 2200 Å. This spectrograph is designed to map the astrophysical spectrum at moderate spatial and spectral resolution in the NUV from a stable Chinese modular space station. The Observational Targets for SING are supernova remnants, planetary nebulae, star formation in nearby galaxies, and emissions from their extended halos. In this work, we will present the design modelling, optimization and analysis of the sub-assemblies and system-level assembly of the spectrograph.

Presentation type

Oral

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