

X-ray emission from the nuclear stellar disk based on SRG/ART-XC data

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The Nuclear Stellar Disk (NSD), along with the Nuclear Stellar Cluster (NSC) and the supermassive black hole Sgr A*, forms the central region of the Milky Way. Observations have well established that the Galaxy's X-ray emission is associated with the stellar population and predominantly arises from the integrated emission of accreting white dwarfs. This study focuses on the NSD emission in the 4-12 keV range, using data from the M.N. Pavlinsky ART-XC telescope of the SRG observatory, based on observations of the Galactic center in 2019. Stellar population models for the observed sky region were reconstructed. During this work, the specific X-ray emissivity of the NSD in various parts was measured, and the NSD luminosity in the 4-12 keV range was estimated.

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