SRG/ART-XC all-sky X-ray survey: an AGN census following in INTEGRAL's footsteps

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Abstract

The Mikhail Pavlinsky ART-XC telescope aboard the SRG observatory has been operating in orbit since 2019. Its main objective is to conduct an all-sky survey in the 4-12 keV energy band and thus fill the gap between existing soft X-ray and hard X-ray (in particular, INTEGRAL/IBIS) surveys. We have recently released a catalog of sources detected by ART-XC during its first 4.4 all-sky scans, between December 2019 and March 2022. It comprises 1545 sources, including 130 that were not known in X-rays before. Since then, ART-XC has conducted another four all-sky surveys, as well as a deep survey of the Galactic plane and many pointed observations. I will discuss our on-going efforts to maximize the scientific outcome of this new X-ray source database, with a focus on active galactic nuclei. In particular, I will present examples of extremely rare high-luminosity obscured AGN at relatively low redshifts ($z < 0.7$) discovered by ART-XC, which could be analogs of high-redshift quasars.

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