Neutron Stars in Galaxy Surveys from INTEGRAL to SRG/ART-XC

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Abstract

The INTEGRAL observatory has discovered a large number of new sources of hard X-ray emission, including new binary systems with neutron stars. This has allowed us not only to study the properties of individual objects but also to deepen our understanding of the properties of a population of such systems. Currently, the Mikhail Pavlinsky ART-XC telescope onboard the SRG observatory has conducted eight full-sky surveys, a deep survey of our Galaxy, and a significant number of observations of the most interesting regions and objects in the sky. Among the sources detected by ART-XC, several hundred are accreting neutron stars in binary systems, both previously known and new. This report presents the results of the ART-XC study of such systems, as well as the connections and continuity of research between the INTEGRAL and SRG observatories.

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