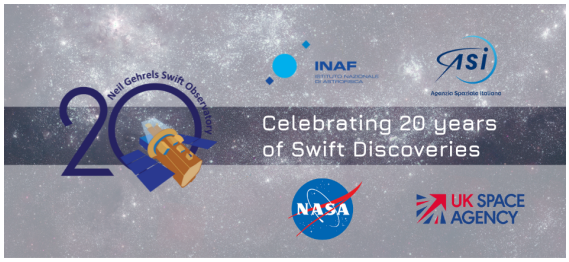

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Old novae in the eROSITA All Sky Survey

Tuesday 25 March 2025 14:16 (1 minute)

Nova explosions are thermonuclear events on top of an accreting white dwarf. The nova event results in the increase of the optical luminosity by 7-8 orders of magnitude that makes the nova outburst detectable at any distance in the Galaxy. However, due to the resulting distance distribution of novae in the Galaxy, the host system remains unknown for most cases. Accretion powers X-rays in the host system once the mass transfer is resumed and the white dwarf starts to accrete again as a cataclysmic variable. We have searched for old novae in the German data of the eROSITA X-ray All Sky Survey and have identified 16 new cataclysmic variables that have been hosted novae explosions. We can probe for the first time the evolution of the accretion rate during the first decades after the outburst and identify new Intermedate Polar candidates among old novae, increasing the fraction of known novae outbursts occurring in magnetic systems.

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