Sixteenth Marcel Grossmann Meeting



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A first complete X-ray view of the Magellanic system with eROSITA and X-ray observations of SN 1987A

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The Magellanic Clouds are an ideal site to study X-ray source population of a galaxy including supernova remnants, high mass X-ray binaries (HMXBs) and super-soft sources. This is facilitated by their well-determined distances and low foreground absorption conducive for performing detailed studies. The population of HMXBs in the Magellanic Clouds is especially overabundant owing to the relatively recent star-formation history of these tidally interacting galaxies. However, only a small-fraction of the entire Magellanic Cloud System (which covers nearly 200 square degrees on the sky) was covered in the X-ray regime, until recently. eROSITA onboard SRG has now completed nearly its first three all-sky surveys and has roughly doubled the number of X-ray sources discovered over the last 60 years history of X-ray astronomy. This has also allowed a complete coverage of the Magellanic Cloud system for the first time in X-rays in a broad energy band (0.2-10 keV) and with unprecedented sensitivity. The talk will present the first results on the eROSITA view of the Magellanic Clouds, with a special emphasis on the HMXB population and the flux and spectral evolution of SN 1987A traced by the latest observations.

Primary authors: MAITRA, Chandreyee (Max Planck Institute for Extraterrestrial physics); Dr HABERL, Frank (Max Planck Institute for Extraterrestrial Physics); Prof. SASAKI, Manami (Dr.Karl-Remeis-Sternwarte Bamberg - Astronomisches Institut); Dr CARPANO, Stefania (Max Planck Institute for Extraterrestrial Physics)

Presenter: MAITRA, Chandreyee (Max Planck Institute for Extraterrestrial physics)

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