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eROSITA - status and scientific prospects

Monday 8 May 2017 15:00 (30 minutes)

eROSITA (extended ROentgen Survey with an Imaging Telescope Array) is the core instrument on the Russian Spektrum-Roentgen-Gamma (SRG) mission which is currently scheduled for launch in fall 2017. eROSITA will perform a deep survey of the entire X-ray sky. In the soft band (0.5-2 keV), it will be about 30 times more sensitive than ROSAT, while in the hard band (2-8 keV) it will provide the first ever true imaging survey of the sky. The design driving science is the detection of large samples of galaxy clusters to redshifts $z > 1$ in order to study the large scale structure in the Universe and test cosmological models including Dark Energy. In addition, eROSITA is expected to yield a sample of a few million AGN, including obscured objects, revolutionizing our view of the evolution of supermassive black holes. The survey will also provide new insights into a wide range of astrophysical phenomena, including neutron stars and pulsars, X-ray binaries, active stars and diffuse emission from supernova remnants. The talk reports on the status of eROSITA and its scientific prospects with the main focus on pulsars and supernova remnants.

Author: BECKER, Werner (Max-Planck Institut for extraterr. Physics and Ludwig-Maximilians Universität München, Germany)

Presenter: BECKER, Werner (Max-Planck Institut for extraterr. Physics and Ludwig-Maximilians Universität München, Germany)

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