X-RAY ASTRONOMY 2019
Current Challenges and New Frontiers in the Next Decade
8-13 September 2019
CNR/INAF Research Area, Bologna, Italy

Contribution ID: **212** Type: **Poster**

Observation of the supernova remnant RX J1713.7-3946 in hard X-rays with INTEGRAL

During Galactic Center survey program by IBIS telescope on-board INTEGRAL the supernova remnant RX J1713.7-3046 was observed in hard X-ray band (17-60 keV) for the first time. The surface brightness maps of the supernova remnant in 17-27-36-50-120 and 17-60 keV energy bands will presented in this talk. The spectra of two brightest clumps of RX J1713.7-3946 are characterized by a power law spectrum with photon index ~3. The surface brightness map of RX J1713.7-3946 in soft X-ray band (1-10 keV), based on the XMM-Newton observations (2001–2017), demonstrates good agreement with that obtained by IBIS telescope, which points out to a single mechanism working in soft and hard X-rays. The XMM-Newton spectrum of RX J1713.7-3046 in the 0.8-10 keV band is well described by the power-law model with photon index ~2, which indicates a change of the spectral slope somewhere between 10 and 17 keV. The value of the slope change (or high-energy cutoff) contains important information about the acceleration efficiency of cosmic ray particles in the supernova remnant.

Topic

Compact and diffuse sources in galaxies and in the Galactic Center

Affiliation

Space Research Institute of the Russian Academy of Sciences, Profsoyuznaya 84/32, 117997 Moscow, Russia

Primary author: Ms KUZNETSOVA, Ekaterina (Space Research Institute of the Russian Academy of Sciences, Profsoyuznaya 84/32, 117997 Moscow, Russia)

Co-authors: KRIVONOS, Roman (Space Research Institute (IKI), Moscow, Russia); Ms LYSKOVA, Natalia (Space Research Institute (IKI), Profsoyuznaya 84/32, Moscow 117997, Russia); Dr LUTOVINOV, Alexander (Higher School of Economics, Myasnitskaya 20, 101000 Moscow, Russia); Dr CHURAZOV, Eugene (Max-Planck-Institut f¨ur Astrophysik, Karl-Schwarzschild-Strasse 1, 85741 Garching, Germany)

Presenter: Ms KUZNETSOVA, Ekaterina (Space Research Institute of the Russian Academy of Sciences, Profsoyuznaya 84/32, 117997 Moscow, Russia)

Session Classification: POSTER SESSION