



# - RAY ASTRONOMY 2019

*Current Challenges and New Frontiers in the Next Decade*

8-13 September 2019  
CNR/INAF Research Area, Bologna, Italy

Contribution ID: 303

Type: **Poster**

## Detailed study of X-ray binary system M33 X-6 behaviour with XMM-Newton

*Friday, 13 September 2019 15:34 (2 minutes)*

We are looking for changes of spectral states of X-ray binary system X-6 in Galaxy M33 and similarities with other known Z-sources. In our previous work (Nikolaeva et al., 2018) we showed that there is a neutron star as a compact object. And spectrum shape looks like the spectrum in one of the spectral states of Z-source (neutron star with low magnetic field) RX J0042.6+4115 in M31 - the first extragalactic Z-source found, others have been found in our Galaxy. Using 28 datasets of XMM-Newton data, we fitted spectrum with different models which describes emission from corona, boundary layer, and thermal disk, found system period and plotted HID diagram.

### Topic

Compact and diffuse sources in galaxies and in the Galactic Center

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**Session Classification:** POSTER SESSION