

***XMM-Newton* observations of the γ -ray pulsar J0633+0632**

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PSR J0633+0632 is a radio-quiet pulsar discovered with *Fermi*. Analysing *Chandra* data, we found evidence of an absorption feature in the pulsar spectrum at ≈ 0.8 keV though its nature remained unclear due to the low statistics [1]. To better study the J0633+0632 and its pulsar wind nebula properties, we performed *XMM-Newton* observations. Analysis of these data did not confirm the absorption feature existence. It revealed new details of the pulsar wind nebula unusual morphology. We also found diffuse emission in the pulsar field that is likely to be filaments of the supernova remnant Monoceros Loop. We report the results of timing and spectral analysis of J0633+0632 and spectral analysis of its nebula and the presumed filaments. The work is supported by RF Presidential Programme MK-2566.2017.2.

References

- [1] A. Danilenko, P. Shternin, A. Karpova, D. Zyuzin, Yu. Shibano, *PASA* 32, e038 (2015)

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