

Radio to GeV view of PSRB 1259-63 periastron passage in 2021.

Wednesday, 6 July 2022 17:45 (15 minutes)

PSR B1259-63 is a gamma-ray binary system hosting a radio pulsar orbiting around a massive young star, LS 2883, with a period of ~ 3.4 years. The interaction of the pulsar wind with the LS 2883 outflow leads to unpulsed broadband emission in the radio, X-ray, GeV, and TeV domains. One of the most unusual features of the system is an outburst of GeV energies around the periastron, during which the energy release substantially exceeds the spin down luminosity under the assumption of the isotropic emission. In this talk, we will present the results of a recent multi-wavelength campaign (radio, optical, and X-ray bands) including the unpublished yet evolution of radio polarization and spectral slope. The campaign covered a period of more than 100 days around the 2021 periastron and revealed substantial differences from previously observed passages. In this talk we will compare the obtained data set with the predictions of the emission cone model proposed by us previously.

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Session Classification: Contributed Talks