

Detection of the TeV Gamma-Ray Binary PSR J2032+4127/ MT91 213

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Abstract content

PSR J2032+4127 is a young gamma-ray pulsar located in the same direction as the extended TeV gamma-ray source TeV J2032+4130. The pulsar has recently been discovered to be in a 45-50 year period, highly eccentric binary orbit with the Be star MT91 213. Periastron occurred in November 2017 and over this period an intense observational campaign was conducted by the TeV gamma-ray telescope arrays VERITAS and MAGIC, and the Swift X-ray telescope. These observations detected a significant enhancement in the X-ray and TeV gamma-ray flux, with the emission reaching an order of magnitude higher than the historical level. I will present results of these campaigns, compare this system with other TeV gamma-ray binaries and explore the relationship between this system and TeV J2032+4130.

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