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Low power pulsed emission at the spin period of the WD in AR Scorpii?

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Previous studies indicate that AR Sco's surrounding region complicates the search for Gamma-ray emission from this source. The fact that AR Sco lies close to the Galactic plane and strong nearby VHE *Fermi* sources, make it difficult to constrain and quantify an upper-limit of the emission from AR Sco's location in the sky. In this study, a search for high energy gamma-ray emission was conducted to identify possible pulsed emission signatures within or above the noise level. A period analysis revealed low level but consistent emission at the spin period of the white dwarf (117 sec) over a period of 10 years. A control analysis also shows a decrease in signal strength at the spin period in regions further away from the coordinates centred on AR Sco, which may indicate the presence of low level pulsed Gamma-ray emission from AR Sco.

Abstract field

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