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Jet Formation in Transitional Millisecond Pulsars: Insights from ALMA Observations of 4FGL J0427.8–6704

Transitional millisecond pulsars (tMSPs) offer a unique opportunity to study jet formation in a low-accretion regime around fast-spinning, magnetized neutron stars. We analyzed archival spectral energy distributions of confirmed and candidate tMSPs to investigate their jet properties. In this presentation, I will focus on the candidate tMSP 4FGL J0427.8–6704, for which ALMA data revealed a low-frequency jet break, providing direct estimates of the jet base properties. Additionally, I will compare these properties with those of other neutron star accretors. These findings place new constraints on jet formation in tMSPs and highlight the need for multi-wavelength studies to fully characterize jet behavior in low-accretion systems.

Contribution

Oral talk

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