

Proposal Abstract:

Rotating Radio Transients (RRATs) are a type of pulsars that emit sporadic, individually detectable single pulses. We have discovered 40 new faint RRATs by conducting a single pulse search using data collected by the FAST Galactic Plane Pulsar Snapshot (GPPS) survey. Studying weak pulsars is crucial in determining whether they are below the death line and the radiation characteristics of older pulsars. However, due to the limited number of single pulses detected and observation sessions conducted for these sources, no timing solutions have been obtained for them. To address these, we propose to conduct years-long tracking observations using the FAST to gather more single pulse data and ensure the accuracy of time-of-arrival (TOA) measurements for precise timing solutions for these sources if possible.