

Proposal Abstract:

This project aims to observe the RRAT J0941+4537 (C45 discovered in CRAFTS) for single-pulse timing with FAST. FAST detected the radio source C45-J0941+4537 in a drift scan and has been confirmed as a Galactic rotating radio transient (RRAT) by using a 2-hour tracking observation of the FAST ultra-wide band receiver in 2018. Only nine pulses were detected in FAST 2-hour tracking observation, and a period of 2.73 s was derived from these nine pulses. The FAST timing KSP ZD2021_6 observed this pulsar in the L-band in 2021 for ten sessions with 5 minutes per session and detected a few pulses in M04 of the 19-beam receiver. Therefore the position of the pulsar has been localized to 3' precision. In this campaign, we corrected the direction of the central beam in anticipation of more single pulses and request 12 hours to timing this RRAT.