Proposal Abstract:

We propose to observe the RRAT J0941+4537 (C45 discovered in CRAFTS) and the RRAT J1928+1725 (discovered by Parks) for single-pulse timing with FAST. Based on the existing observational data, we have constrained the position of these two sources to within 3 arc-minutes and got their period. The nulling fraction of both these two RRATs is more than 99.5%, which is shown as extreme nulling pulsars. The radiation mechanism during the nulling phase for these long spin period extreme nulling pulsars remains unclear, they could also be magnetars or old pulsars located below the death line. So, we propose timing for these two extreme nulling pulsars to obtain the spin derivate and locate them in the P-Pdot diagram to infer their physical properties. Additionally, with the high sensitivity of FAST, we can measure the distinct pulse polarization profiles of these two RRATs and detect faint pulses that may exist in the nulling state, thereby further investigating the unclear radiation mechanism of RRATs.