

Proposal Abstract:

Although subpulse drifting phenomenon of pulsars has been discovered decades ago, the physical mechanism to produce such drifting is still not well understood. In addition, various drifting behaviors such as drifting mode changes, 'bi-drifting', drifting rate changes or 'drifting reversal' have been observed from a few pulsars, challenging the traditional carousel circulation model. We propose to observe 44 pulsars by FAST which likely exhibit unusual drifting features. Using the highest-quality pulsars data by FAST, we will identify more unusually driftings and also do detailed single-pulse analysis, enhancing our comprehension of subpulse drifting and emission mechanisms of pulsars.