Proposal Abstract:

It is still an open question whether the radio emission beam of pulsars is the fan beam or the conal beam. Recent observations of a precessing pulsar revealed that the emission beam has no stucture of cones and a core. In this context it is necessary to reinspect the canonical classification of the cone and core components, including the different behaviors of subpulse drifting in these two components. A vital way to test the carousel model of subpulse drifting is to check whether the subpulse drifting can occur close to the magnetic pole (i.e. in the core). We propose to observe a couple of drifting-subpulse pulsars of which the impact angle is very small. FAST will provide unprecedent sensitivity to improve the constraint on the impact angle and enable decisive test. We also propose to search for subpulse drifters in newly discovered pulsars.