Proposal Abstract:

Pulsars are born in supernova explosions, with a large kick velocity leading them going away from their birth place and going off from the Galactic plane. For nearby pulsars, due to the relative motion of the pulsars to our earth, their positions change with time, showing as significant proper motion. The study of proper motion enable enables us to better understand origins and velocity distribution of pulsars in the Milky Way. Over 600 pulsars have been discovered in the FAST GPPS survey, among them we select 9 GPPS pulsars with a DM less than 30 pc cm^{-3} which implies a short distance of < ~1 kpc and three other GPPS pulsars with significant proper motion. We request 64.8 hr FAST observations to follow up the 12 GPPS pulsars to obtain the timing solution of these systems and then constrain their proper motions. For some systems we also try to measure their distances with pulsar timing.