Proposal Abstract:

In this proposal, we aim to use FAST observations of the Globular Cluster (GC) NGC 6218 (M12) to refine the timing analysis of its pulsars. We have obtained preliminary orbital parameters of the two binary millisecond pulsars, M12A and M12B, from the archived FAST observations. M12A is notable for its narrow pulse (FWHM ~ 0.06P), which contributes to high-precision measurements of its kinematics within the GC. M12B exhibits scintillation phenomenon with the radio pulses appearing and disappearing over at least two hours of tracking. To conduct high-precision timing of these two GC pulsars, as well as searching for surrounding new pulsar candidates, will provide us the evolution history and the interstellar medium properties of their low-density host.