

Proposal Abstract:

This proposal aims to utilize the Five-hundred-meter Aperture Spherical radio Telescope (FAST) to monitor a repeating fast radio burst (FRB): FRB 20230607A. This FRB is currently in a state of sustained activity, with the majority of its bursts being faint and detectable only by FAST, but with a few bright bursts also present. These bright bursts exhibit deviations from the expected energy distribution of the faint bursts, suggesting a potential different burst morphology. The absolute RM of this FRB is about 12500 rad m⁻². We propose regular monitoring of FRB 20230607A with FAST that will allow us to capture more bursts and potentially discover their periodicity, facilitating a comprehensive study of their characteristics, e.g., energy distribution and burst morphology differences. Furthermore, continuous monitoring will enable the investigation of the FRB's activity, dispersion measure (DM), and RM variations.