

Proposal Abstract:

The discovery of new pulsars remains a primary objective in the field of pulsar astronomy. We propose the utilization of FAST, a very high sensitivity radio telescope, to search for pulsars in the high galactic latitudes. The exceptional sensitivity of FAST has the potential to detect previously undetected weak pulsar signals, thereby contributing valuable data to both pulsar science and the testing of general relativity. Our search strategy will concentrate on a small area of high galactic latitudes that has not been deep searched by FAST. This region is relatively unaffected by selection effects, making it more conducive to the detection of millisecond pulsars (MSPs). The successful identification of new MSP will significantly enhance the sensitivity of Pulsar Timing Arrays (PTAs).