FAST Proposal Coverpage

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Project Name:

Timing millisecond pulsars discovered by FAST

Project Summary:

We propose to use the Five-hundred-meter Aperture Spherical radio Telescope (FAST) to perform timing observations for 8 new millisecond pulsars (MSPs) discovered by FAST. These are high value pulsars from FAST and could lead to important scientific discoveries. We intend to time each pulsar for 6 to 9 sessions spanning six months in the commissioning phase obtain their initial timing ephemerides and identify any interesting binaries. This pulsar timing campaign would also enable the FAST pulsar search team to timely release these discoveries to colleagues in the Chinese and International Pulsar Timing Array community, facilitating further collaborations and contributing to the future detection of nanoHz gravitational waves.