

Proposal Abstract:

One of the most important puzzles related to supernova remnants (SNRs) is the "missing" SNRs problem. Over 1000 SNRs are predicted to exist in the Galaxy. However, only less than 400 have been identified. Identifying new SNRs in the Galaxy and studying their properties will help make the SNR catalog more complete and achieve a consensus on the global effects of SNRs in the Milky Way. Recently, a large number of SNR candidates have been identified by radio surveys, and most of them are yet to be confirmed. The next crucial step is to confirm the nature of these SNR candidates, for which the most sensitive radio single-dish telescope FAST provides a golden opportunity. The negative radio spectral index (typically ~ -0.5) and polarized measurements from radio observations are the key criteria to determine a true SNR. Here, we propose a pilot observation for identifying new SNRs from the 5 SNR candidates that have intensities much higher than the FAST continuum confusion level, requiring a total time of 18.72 hrs, including 30% overheads.