FAST Proposal Cover page

Last updated: 02/25/2019

Project Name:

Search for radio pulse in a few supernova remnants (pulsar wind nebulae)

Project Summary:

Searching for young pulsars in SNRs or PWNe is important for studying pulsar formation, supernova progenitors and explosion mechanisms, and late time evolution of the massive stars. Yet, only less than half of the known SNRs and PWNe are confirmed with pulsed emission signals. We propose an FAST observation of a sample of five northern-sky SNRs harboring point-like X-ray sources, which may potentially be candidates of compact stellar remnants. With the proposed observation, we aim to 1) Test if there is radio pulse for each candidate; 2) Constrain the physical properties of the target point-like sources, and 3) Seek observational clues to the nature of the SNR progenitor.