

Proposal Abstract:

PSR J1845 - 0306 is a newly discovered pulsar in a search for radio pulsars in five supernova remnants (SNRs) using FAST (project PT2020_0050). This pulsar is very close to the center of SNR G29.6+0.1, and they have consistent distances, which supports the hypothesis that they are associated. The association between them needs to be further confirmed by follow-up observations to determine key parameters of the pulsar, such as age and proper motion. Here, we request 24 hours of observation to follow up PSR J1845-0306. These observations will allow us to precisely measure the pulsar's spin and astrometric properties, and to characterize its polarization properties for the first time. Our ultimate goal is to verify the association between PSR J1845 - 0306 and SNR G29.6+0.1 through timing observations of several years.