

Proposal Abstract:

It is still an open question whether there is a large population of pulsars in the Galactic Bulge. We surveyed a small area towards the Bulge in the 2021 semester (PT2021_0043) and detected 13 pulsar candidates. Nine out of these 13 pulsar candidates (including four millisecond pulsars) are likely to be located in the Galactic Bulge region. Here we propose to carry out timing of six high S/N pulsar candidates (including four already confirmed) and confirm the other three weak candidates. The proposed timing campaign will enable us to obtain coherent timing solutions of these six pulsars and measure their positions, spin-down rate, orbital parameters if in binaries. The discovery and follow-up study of these pulsars are crucial for our understanding of the pulsar population in the Galactic Bulge, the origin of gamma-ray emission and the properties of the ionised interstellar medium in this region.