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Proposal Abstract:

Pulsar observations are categorized into two groups: searching for new pulsar systems and using pulsar timing, scintillation, and morphology to carry out high-precision astrophysical and fundamental physical explorations. The search was the basis for enlarging the pulsar study sample for subsequent astrophysical research. This proposal aims to conduct follow-up timing studies on 15 slow-period pulsars discovered by CRAFTS. We will determine accurate pulsar positions and motions, investigate timing irregularities, explore correlations between emission phenomena, examine rotational irregularities, and analyze changes in operational parameters related to the pulsar death line. This comprehensive study will utilize the advanced capabilities of FAST to enhance our understanding of pulsar physics, emission mechanisms, magnetospheric dynamics, and the theoretical limits of neutron star life cycles.