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Abstract:

We propose to use the Five-hundred-meter Aperture Spherical radio Telescope (FAST) to perform three pulsar-candidates confirmation and a timing observations for two new pulsars discovered by FAST, coincident with the Fermi-LAT unassociated gamma-ray source 4FGL J1225.9+2951 and FL8Y J0506.0+5028 (both discovered at L-band). Only FAST can achieve the required signal-to-noise ratio for solving the putative short-orbits of PSR J1225+29. FAST timing is crucial for obtaining a phase-connected timing solution, thus allowing us to better detect gamma-ray pulsations based more than 12 yrs Fermi-LAT data. The proposed observations will thus significantly improve the scientific value of these discoveries and can be published immediately after reduction along with the discovery paper.