Project name : Pulsar timing: Physics and evolution of pulsars

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In this project, we will carry out follow-up observations on the new pulsars discovered by FAST. The primary objective is to perform timing observations on the pulsars for 1-3 years. This will make possible for precise measurements and cataloging of their spin and astrometric parameters in order to obtain the population properties of the FAST new pulsars and investigate their birth and evolution in large sample. We will focus on sources with distinctive characteristics, such as binary pulsars, intermittent pulsars and very young pulsars. The information is useful for distinguishing the timing noise between internal and external origins in the pulsars, which is crucial for exploring the connection between pulsar braking and activities in the magnetospheres. We seek to optimize the astronomical and technical methods to improve the timing precision in examining the evolution of binaries, testing relativistic effect and studying the physical properties of interstellar medium and circumstellar matter.