

# FAST Proposal Coverpage

Last updated: 01/10/2019

---

**Project Name:** A Sensitive Study of the FAST-discovered pulsar C37 (J0344-0901), an Intriguing Close Binary Candidate

*(A 1-line title for your project)*

**Project Summary:**

*(A 1 paragraph summary of your project, including its scientific goals and how you will address them. This information will be potentially public.)*

This project aims to provide a detailed study of the FAST-discovered pulsar known as C37 / PSR J0344-0901. Follow-up observations with the Parkes 64-m radio telescope have indicated that this pulsar may be part of an unusually short-period binary system, but Parkes lacks the required sensitivity in order to either confirm this binary system or constrain its parameters. In order to obtain the high time-resolution sensitivity required to further study this pulsar, we propose to conduct a modest observing campaign with FAST, designed to both decisively confirm the orbit if it is indeed present, and to allow for the development of a full orbital solution. Should this orbit be confirmed, it will stand as a record-breaking discovery of very high scientific interest.