

# FAST Proposal Coverpage

Last updated: 01/10/2019

## Project Name:

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

**Exploring the non-thermal emission from exoplanets**

## 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.)*

**Detecting the radio emission from explanatory systems might revolutionize the area of explanatory studies, not only by opening up a new window, but also providing important information about the magnetic fields. The latter can be used to reveal the information about planetary interior structure and dynamics, and are also believed to play a crucial role in conditions for habitability and atmospheric retention. However, despite of numerous searches at long radio wavelengths (centimeters to decimeters) with large antenna arrays including VLA, VLBA, GMRT and the large single dish, Arecibo telescope, there are yet no solid evidence for detection of exoplanets. We estimated that FAST have a good chance to make the first direct detection of exoplanets, thanks to its largest collecting area, and the best sensitivity around or lower than 100 MHz radio band, where non-thermal emission from planets are believed to be strong in magnetized planets. We propose to conduct a pioneer observational studies of 3 planetary systems, which may be bright enough to be detected by FAST, and therefore opening a new window for the study of exoplanets and their habitability.**