



**The Five-hundred-meter Aperture
Spherical radio Telescope**

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The Five-hundred-meter Aperture Spherical radio Telescope (FAST), acclaimed as the China Sky Eye, is the world's largest single-dish and the most sensitive radio telescope. It is a 500-meter diameter active reflector radio telescope in a karst depression in Guizhou Province to achieve wide sky-coverage and high sensitivity for astronomical observations with China's intellectual property. The construction of FAST started on March 25, 2011 and finished on September 25, 2016 as planned. It is by far the largest single dish radio telescope in the world. On January 11, 2020, FAST passed the national evaluation and started the formal operation. All the technical specification met or exceeded the designed specification.

The main scientific fields of FAST include the neutral hydrogen survey, pulsar searching, dominating the VLBI network in low frequencies, detecting interstellar molecules, and Search for Extra Terrestrial Intelligence (SETI). Its unparalleled sensitivity and excellent survey speed will enable astronomers to vastly expand the observational parameter space of compact objects, gaseous galaxies and interstellar medium.

By May 31, 2022, the number of pulsars discovered by FAST reached 740, and a number of high-quality papers have been published on international journals including Nature and Science, resulting in remarkable breakthroughs in the areas of pulsar search, fast radio burst, interstellar medium and star formation research.