

Research Group of Five-hundred-meter Aperture Spherical radio Telescope (FAST) Project National Astronomical Observatories, Chinese Academy of Sciences



轻型索拖动馈源支撑系统
Light focus cabin suspension driven by cables



轻型索拖动馈源支撑系统和并联机器人二级联调
Light focus cabin suspension driven by cables plus a parallel robot as a secondary adjustable system

The Five-hundred-meter Aperture Spherical radio Telescope (FAST) is the most sensitive single-dish radio telescope in the world, of which China owns the exclusive intellectual property. It will provide unprecedented opportunities for China to achieve major breakthroughs in the related scientific forefront and maintain a leading position in the next 10~20 years. The FAST development and construction represent the independent innovation of China, and achieve the breakthrough from following and imitation to integrated innovation in the related area. The three outstanding innovations of the telescope include: the application of the unique karst giant depression as the telescope site, the independently invented active main reflector, and the light focus cabin suspension driven by cables plus a parallel robot as a secondary adjustable system. A series of key technologies have been developed: large span cable net structure in high strength and high precision, high performance moving optic fiber cable, and large scale and high precision real-time measurement system, and etc., which have promoted scientific and technological progress and industrial upgrades in many high-tech fields in China. FAST's exclusive innovations hold the important practical values that meet the major demands of our country. It will greatly push the economic prosperity and social progress in the western region of China.

Outstanding contributors of this research group

Nan Rendong

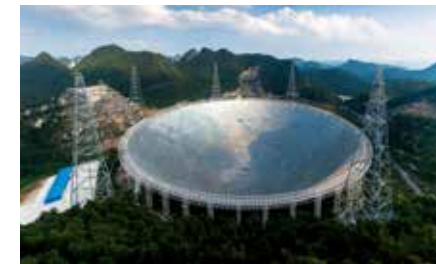
Chief scientist and chief engineer, project concept presenter. Lead the team, present three independent innovations, overcome a series of technical problems, complete the project construction.

Yan Jun

Project manager, is fully responsible for the construction of the project. Coordinate all parties to support and ensure the progress of the project. Solve the major key problems and ensure the smooth completion of the project.

Zheng Xiaonian

Executive vice manager, being responsible for the daily management of the project, established the project management system. Concentrating on the key nodes and promoting team building to ensure the project to be completed on schedule.



FAST鸟瞰全景图
Airscape on FAST site

500米口径球面射电望远镜（FAST）工程研究集体

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南仁东出席北京市科学技术奖励大会
Nan attend Beijing municipal science and technology award conference



主动反射面侧视图
Side view on active main reflector



索网结构
Cable-net structure

Major contributors

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索网结构及反射面单元安装
Cable-net structure and installation of reflector units



多周期重复弯曲光缆
Multi-cycle repeated bending optical cable