

# Similarity model of feed support system for FAST

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Received: 30 August 2010 / Accepted: 21 December 2010 / Published online: 7 January 2011  
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**Abstract** A new design of feed support system for Five hundred meter Aperture Spherical Telescope (FAST) is proposed in this paper. According to the similarity theory, a 1:15 scale model of feed support system has been built to make systemic research on the feasibility of the system. Then the control system and hardware structure of the feed support system are illustrated. A complete astronomical observation track is run by the scale model and the experiments results demonstrate that the new feed support system can satisfy the observation accuracy requirement of FAST.

**Keywords** Feed support system · Similarity model ·  
Large radio telescope · FAST

## 1 Introduction

In 1994, Chinese astronomers carried out the conceptual design of the Five-hundred-meter Aperture Spherical radio Telescope (FAST), which will be located in the Karst region of Guizhou Province, southwest in China [1, 2]. With the joint efforts of Chinese astronomers, the layout design of the FAST has already been accomplished and the prototype will be built before 2016 [3, 4].

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