
Introduction to the Chinese Giant Solar Telescope

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Abstract

In order to detect the fine structures of solar magnetic field and dynamic field, an 8 meter solar telescope has been proposed by Chinese solar community. Due to the advantages of ring structure in polarization detection and thermal control, the current design of CGST (Chinese Giant Solar Telescope) is an 8 meter ring solar telescope. The spatial resolution of CGST is equivalent to an 8 meter diameter telescope, and the light-gathering power equivalent to a 5 meter full aperture telescope. The results of simulation and analysis showed that the current design could meet the demand of most science cases not only in infrared band but also in near infrared band and even in visible band. The observations of the prominence and the filament are also very important science cases of CGST. CGST was proposed by all solar observatories in Chinese Academy of Sciences and several overseas scientists. It is supported by CAS and NSFC (National Natural Science Foundation of China) as a long term astronomical project.

Keywords: Chinese Giant Solar Telescope, Magnetic field, High resolution, Prominence

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