

The GREGOR Solar Telescope

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The 1.5-meter GREGOR solar telescope is a new facility for high-resolution observations of the Sun. The telescope is located at the Spanish Observatorio del Teide on Tenerife. The telescope incorporates advanced designs for a foldable-tent dome, an open steel-truss telescope structure, and active and passive means to minimize telescope and mirror seeing. Solar fine structure can be observed with a dedicated suite of instruments: a broadband imaging system, the »GREGOR Fabry-Pérot Interferometer«, and the »Grating Infrared Spectrograph«. All post-focus instruments benefit from a high-order (multi-conjugate) adaptive optics system, which enables observations close to the diffraction limit of the telescope. The inclusion of a spectrograph for stellar activity studies and the search for solar twins expands the scientific usage of the GREGOR to the nighttime domain. We report on the successful commissioning of the telescope until the end of 2011 and the first steps towards science verification in 2012.