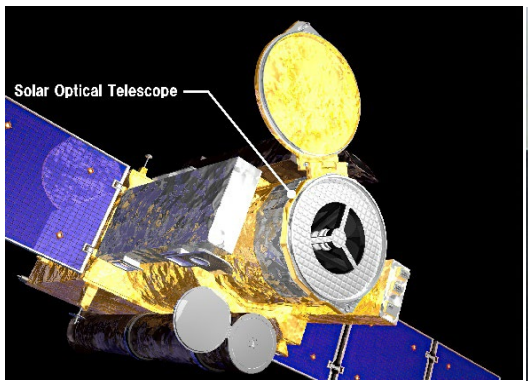
Japan's first full-scale space telescope for solar observation

Registration No.	Number 00394		
Registration Date	18 September 2025	Registration Category	Category 2

Name (Model, etc.)	0.5-meter Solar Optical Telescope installed on the Hinode satellite (SOLAR-B) (Displayed items: the primary mirror unit, secondary mirror unit, and heat dump mirror unit)
Location	Mitaka City, Tokyo, Japan Inter-University Research Institute Corporation, National Institutes of Natural Sciences, National Astronomical Observatory of Japan
Owner (Custodian)	Inter-University Research Institute Corporation, National Institutes of Natural Sciences, National Astronomical Observatory of Japan
Manufacturer (Company)	Inter-University Research Institute Corporation, National Institutes of Natural Sciences, National Astronomical Observatory of Japan; National Research and Development Agency, Japan Aerospace Exploration Agency, Institute of Space and Astronautical Science; Mitsubishi Electric Corporation
Year Manufactured	2006 (manufactured: 2001–2005)
Year first appeared	2006
Reason For Selection	These items comprise the 0.5-meter visible light telescope that is installed on the Hinode satellite (SOLAR-B), which conducts solar observation from an orbit at an altitude of 680 kilometers. As the first full-scale visible light space telescope manufactured in Japan, it was developed using nine of the 17 key technologies employed in the Subaru Telescope. Optical equipment installed in subsequent satellites inherited its world-first optical performance evaluation method, which was developed for simulating zero-gravity conditions. Although small in size, this visible light telescope has realized a resolution of 0.2 arcseconds and is important because it has achieved results such as observing solar flares and the magnetic structure of the Sun. The displayed items located at the National Astronomical Observatory of Japan, are engineering models, and were manufactured in the same method as the instruments in use on the satellite in orbit.
Registration Criteria	1-A (Shows an important aspect or stage in the development of science and technology.) 1-B (Shows a uniquely Japanese scientific or technological development from an international perspective.)

Open/Closed to the Public	Open to the Public

Photos



Hinode satellite (SOLAR-B) [Visualization]

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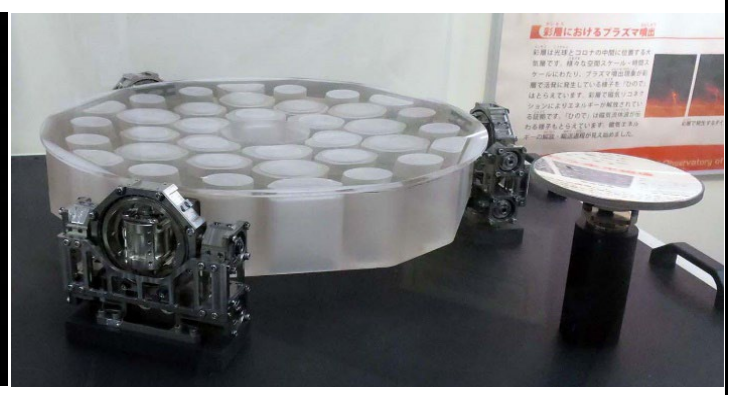
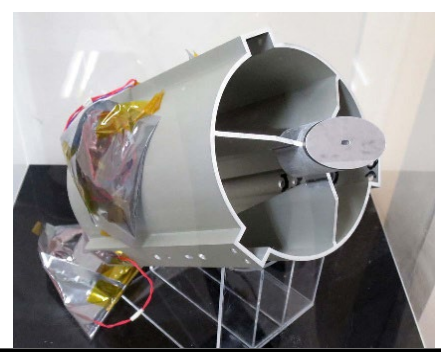


Primary mirror unit

Secondary mirror unit



Heat dump mirror unit