

RISING-2



Rising-2 is a microsatellite developed by Tohoku University and Hokkaido University. It was launched from the Tanegashima Space Center, Japan, on May 24, 2014, and has been conducting various test operations. Dayside cloud imagery and night views of city lights and air glow have been acquired so far using a Wide Field-of-view CCD camera (WFC), and high resolution imaging experiments using HPT have recently started.

The primary objective of the mission is Earth observation with a resolution of ~ 5 m. In particular, high-resolution cumulonimbus scenes will be observed using the LCTF (Liquid Tunable Multispectral Filter) technique. The secondary objective is the observation of sprite phenomena in the upper atmosphere. Sprites are so-called TLEs (Transient Luminous Events), which are rather frequent natural phenomena induced by lightning discharges. The Rising-2 project started in July 2009 and inherited the experiences gained in the design and development of the SpriteSat (Rising-1).

- A map was created of the Earth's surface at a resolution of approximately 10 m based on NDVI (Normalized Difference Vegetation Index) indicating the distribution and activity of vegetation derived from images captured at multiple monochromatic wavelengths.

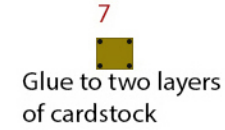
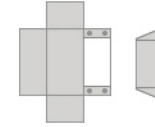
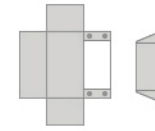
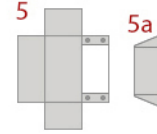
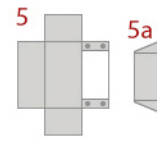
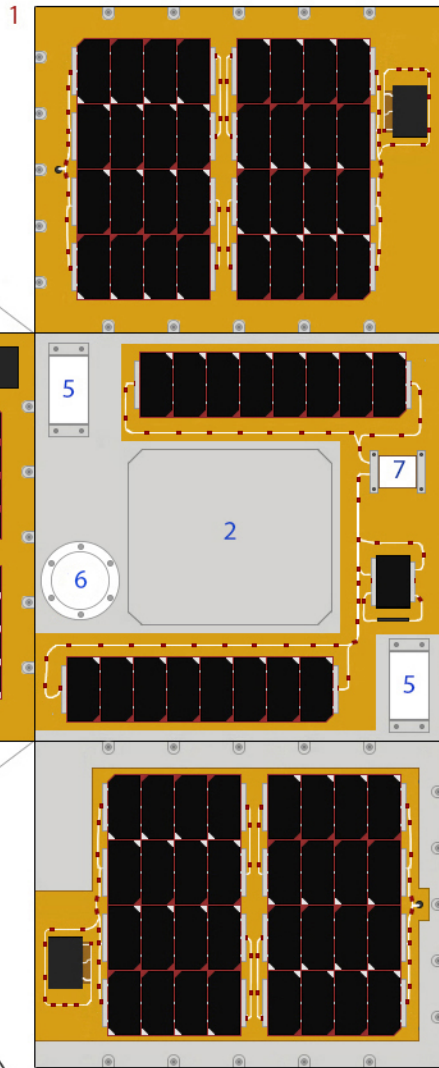
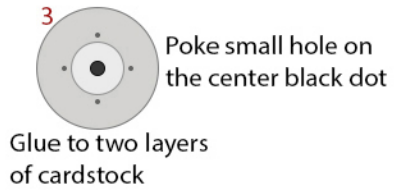
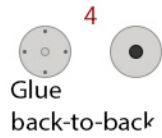
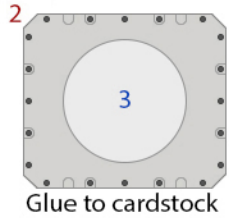
Monochromatic imaging technology at this resolution, with the ability to select from a few hundred wavelengths, is a world-first in satellite observations, even for large satellites.

- High-resolution spectral imaging opens the way to measure forests—data gathered forms the basic data for CO₂ emissions trading as well as monitor areas of disasters or pollution with high accuracy, and also allows for AI (Agricultural Informatics) to achieve higher efficiency and higher quality, and also begets highly energy-efficient fishing.

- The satellite proved successful in high-resolution spectral photography of the earth's surface using the world's first liquid crystal tunable filter for space applications incorporated in the high-precision telescope, and in creating a map of the earth's surface at a resolution of approximately 10m based on a NDVI derived from images observed at multiple monochromatic wavelengths.



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Cut a wooden rod around 2 mm diameter, the same length as the line below, colored light grey or silver for the main mast.

